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FACTORIES OF MODERNITY:
LABOR, AESTHETICS, AND THE RACIAL POLITICS OF HISTORICAL CAPITALISM

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When you collect marine animals there are certain flat worms so delicate that they are almost impossible to capture whole, for they break and tatter under the touch. You must let them ooze and crawl of their own will on to a knife blade and then lift them gently into your bottle of sea water. And perhaps that might be the way to write this book—to open the page and to let the stories crawl in.

— John Steinbeck, *Cannery Row*

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ABSTRACT

This dissertation argues that factories acted as decisive yet under-recognized stages for political thought and practice in the Atlantic world from 1688 to 1807. From this historical study, I develop a new conceptual framework for understanding contemporary capitalism and confronting its longstanding structures of political domination, especially as these relate to transformations in the categories of labor, aesthetics, and race. My project challenges two significant paradigms through which a range of critical theorists and historians of political thought tend to interpret capitalism. First, it questions the accepted view that advanced capitalist societies have entered a “postindustrial” phase in which the factory system has been displaced by automated technologies. Second, it contests prevalent formulations of the capitalist economy as a detached and discrete market system, showing on the contrary that it was historically enmeshed in shifting, historical ideologies of labor, aesthetics, and race. In order to address these shortcomings, I turn to the texts and spaces in which capitalism was originally articulated and practiced, both by modern political thinkers and a range of political actors in the long eighteenth century.

I organize my argument around four spaces of capitalist production as well as the discourses, practices, and ideas in their orbit. Each of these workplaces are an expression of what I call “factories of modernity:” the data center, the workhouse, the manufactory, and the colony. The rich reflections on the world economy and felt experiences of menial labor laid bare in these factories reveal that capitalism was and continues to be deeply imbricated in the development of discourses on aesthetics and race that propelled capitalist expansion by reconfiguring norms of artistic production and racial difference. By learning from these historical factories, I argue that contemporary critical theories of capitalist society can be made more responsive to the salient yet understudied sites, discourses, and mechanisms of capitalist exploitation in our present.

I open in Chapter 1 by situating my study in the context of twentieth-century discourses about postindustrial society, automation, and critical theories of advanced capitalism that frame the factory as an obsolete space of production. Against these accounts, Chapter 2 brings to light the covert ways in which data centers in Silicon Valley—a paragon of postindustrial capitalism—rely on the political cycles and technical systems of production characteristic of the industrial factory system to discipline, coerce, and control low-wage and unskilled data workers. While this feature of the contemporary labor process is vital to how we understand global patterns of exploitation and racialization today, it has been widely neglected by dominant accounts of advanced capitalism. As I go on to show, this oversight arises from the ahistorical framework animating theories of postindustrial society, which tend to rely on a conceptual paradigm that defines present-day capitalism in terms of a radical break with its past.

The ensuing chapters combine archival research with close textual readings to not only challenge standard narratives of capitalism, but also to offer an alternative understanding and critique of capitalist modernity from a genealogy of the factory system across the Atlantic world in the long eighteenth century. In Chapter 3, I offer a new interpretation of the relationship between John Locke's late economic thought and the nascent capitalist economy of his day. Drawing on an array of sources from social, economic, and intellectual history, I situate Locke's theoretical positions on industry, labor, production, and economic growth in the context of export-oriented cycles of commodity manufacturing in the English countryside. I interpret Locke as an early theorist of the political regimes of labor discipline, capital accumulation, and imperial commerce that incited and sustained the workhouse system.

In Chapter 4, I look to England's eighteenth-century manufactories of fine consumer goods to chart an alternative historical narrative of Enlightenment debates about luxury and political economy from 1752 to 1795. Reading David Hume against the background of emerging techniques

of mass production, new norms of taste, and the invention of the “fine arts,” I argue that he defined luxury as a link between two worlds that are often seen as irreconcilable: the economic realm of the factory system and the aesthetic domain of beauty, sentimentality, and art. Rather than an exercise in abstraction, I contend that Hume’s thought was a reflection of social transformations in Britain’s sprawling commercial empire. To illustrate this claim, I turn to the ways Josiah Wedgwood, one of the period’s most celebrated industrialists, brought art and labor, luxury and colonial trade, together in his ceramics factory.

Chapter 5 explores the eighteenth-century entanglement of the factory, the colony, and the plantation in order to rethink the conceptual relationship between race, capitalism, and empire during the British antislavery movement. I focus on an ambitious project by abolitionists and industrialists to end the slave trade by colonizing Sierra Leone with emancipated black workers from 1787 to 1807. In this period, Sierra Leone became a laboratory for key ideas in modern political thought, including the social contractarian conceit of a commercial society put up from bare nature. I argue that, instead of granting freedom to its workers, Sierra Leone furnished industrial capitalism and British imperialism with an allegedly “humane” set of discursive practices invested in advancing the global expansion of capitalism, empire, and abolition by connecting trading factories in West Africa and industrial factories in Britain to a network of colonial plantations throughout the tropics.

I conclude by bringing the project back to the present moment in order to reflect on how my historical narrative of capitalist modernity is vital to our understanding of global patterns of racial exploitation today, patterns reproduced within Amazon’s giant fulfillment centers, or what I call “factories of fulfillment.”

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PROLOGUE
POLITICAL THOUGHT IN THE CAPITALIST EPOCH

“I followed the lead of John Dunn, Michel Foucault, Edward Hundert, John Pocock, and Quentin Skinner, whose works were ceaselessly discussed by us as graduate students in those exciting years at Cambridge. They had all raised doubts about the ‘rise of capitalism’ as the governing framework for interpreting seventeenth-century political thought.”

— James Tully, 1993.¹

Tully’s anecdote reminds us of something that bears repeating: capitalism was vital to the interpretive debates that transformed political theory in the latter half of the twentieth century. Ushered in by the work of C. B. Macpherson in the early 1960s, the “rise of capitalism” stood in for the influential yet ahistorical hermeneutic against which a rising generation of scholars etched an alternative approach to the history of political thought.² In the hands of J. G. A. Pocock, John Dunn, and Quentin Skinner, Macpherson’s claim that a handful of seventeenth-century texts encased the intellectual sources of capitalist development became a benchmark for anachronism in the discipline.³ According to these critics, not only did Macpherson construct a narrative about a *historical* formation from a *philosophical* reading of certain ideas in a selection of otherwise unconnected texts, he did so by projecting onto this archive a set of contemporary assumptions, problems, and concepts that were unknown in the period when these works were originally written

¹ James Tully, *An Approach to Political Philosophy: Locke in Contexts* (Cambridge: Cambridge University, 1993), 127.

² For Macpherson’s early work, see C. B. Macpherson, *The Political Theory of Possessive Individualism: Hobbes to Locke* (Oxford: Clarendon Press, 1962). See also C. B. Macpherson, “Locke on Capitalist Appropriation,” *The Western Political Quarterly* 4, no. 4 (1951): 550–66.

³ J. G. A. Pocock, *Politics, Language, and Time: Essays on Political Thought and History* (1971; repr., Chicago and London: University of Chicago Press, 1989), 37, 91, 108–11; John Dunn, “The Identity of the History of Ideas,” *Philosophy* 43, no. 164 (1968): 85–104; John Dunn, *The Political Thought of John Locke: An Historical Account of the Argument of the Two Treatises of Government* (Cambridge: Cambridge University Press, 1969), 187, 213–19, 233, 262–63; Quentin Skinner, “The Limits of Historical Explanations,” *Philosophy* 41, no. 157 (1966): 199–215; Quentin Skinner, “Meaning and Understanding in the History of Ideas,” *History and Theory* 8, no. 1 (1969): 3–53.

and read. In place of what they denounced as Macpherson’s “non-history,” these critics advanced a historical method for understanding the meaning of political ideas that pressed interpreters to situate a text in the circumstances out of which it emerged, heeding, for instance, the particular problems it confronted, the debates to which it contributed, the interlocutors it addressed, and the range of linguistic conventions and concepts available to its author and audiences. It was thus in part by exposing the limitations of capitalism as a premise for parsing early modern political ideas that Pocock, Dunn, and Skinner forged a capacious approach to historical inquiry in political theory—one that significantly enhanced the critical force, analytic rigor, and interpretive possibilities of the field, setting it on a fruitful and interdisciplinary path that spiraled into the present. Meanwhile, the “rise of capitalism” lingered alongside comparably “unhistorical,” “non-histories” of political thought.⁴ Nearly half a century following this controversy, Istvan Hont attested to the sway of this contextualist framework when he remarked that many interpreters of eighteenth-century political economy—himself included—had sided with the term “commercial society” as a way of bypassing the “Marxist language” which rendered competing concepts like “capitalism” at once “loaded and disturbingly sloppy.”⁵

And yet, despite their vocal criticisms of Macpherson, many of the political theorists and intellectual historians who decried the “rise of capitalism” as a basic institution of modern European thought were more alive to capitalism than their Marxist antagonists realized. In a widely cited methodological essay from 1974, for instance, Skinner turned to the emergence of capitalism to fine-tune his position on the relationship between political ideas and historical transformations. In

⁴ On the categories of “non-history” and “unhistorical” as applied to Macpherson, see Skinner, “Meaning and Understanding in the History of Ideas,” 11; Quentin Skinner, “Motives, Intentions and the Interpretation of Texts (1976),” in *Meaning and Context: Quentin Skinner and His Critics*, ed. James Tully (Princeton: Princeton University, 1988), 78; Quentin Skinner, “Some Problems in the Analysis of Political Thought and Action,” *Political Theory* 2, no. 3 (1974): 280; Richard Ashcraft, “The Radical Dimensions of Locke’s Political Thought: A Dialogic Essay on Some Problems of Interpretation,” *History of Political Thought* 13, no. 4 (1992): 734.

⁵ Istvan Hont, *Politics in Commercial Society: Jean-Jacques Rousseau and Adam Smith*, ed. Béla Kapossy and Michael Sonenscher (2009; repr., Cambridge and London: Harvard University Press, 2015), 6.

reconstructing the meaning of Max Weber's thesis on the spirit of capitalism, Skinner argued that the political vocabulary of Protestantism "not only helped to increase the acceptability of capitalism, but arguably helped to channel its development in specific ways."⁶ Likewise, Hont positioned his major work *Jealousy of Trade* in relation to Albert Hirschman's 1977 classic, *The Passions and the Interests*, by noting that his own book revealed "not only the modern relevance of eighteenth-century political arguments for capitalism before its triumph, but their lasting durability thereafter."⁷ What historicists contested about the "rise of capitalism," then, was less the relevance of capitalism to political thought than what capitalism actually meant and when it began. For most of these interpreters, capitalism as such—rather than a semblance of it—rose to prominence in Western Europe around the turn of the nineteenth century, once wage-labor became the norm of industrial work, workers became divorced from the means of production, and the labor process fell under the absolute control of an emerging capitalist class.⁸ On this account, Europe's preindustrial economies and early modern societies were most accurately portrayed when preceded by the qualifiers "commercial," "market," or "mercantilist."⁹ Capitalism, on the other hand, defined an advanced industrial economy and a developed modern society virtually unknown before the late 1700s and early 1800s.

⁶ Skinner, "Some Problems," 300–301.

⁷ Istvan Hont, *Jealousy of Trade: International Competition and the Nation-State in Historical Perspective* (Cambridge and London: Belknap Press, 2005), 5n4.

⁸ For this particular definition of capitalism, see Tully, *An Approach to Political Philosophy*, 88–89; Ashcraft, "Radical Dimensions of Locke," 744–45. While Hont uses the term "capitalist," albeit sparingly, when dealing with texts published after 1750, he generally employs the term "commercial society" when dealing with the period prior to the nineteenth century, as does Gareth Stedman Jones. See Hont, *Jealousy of Trade*, 10–11, 84–89, 142, 155, 441, 451; Gareth Stedman Jones, *Languages of Class: Studies in English Working Class History, 1832–1982* (Cambridge: Cambridge University Press, 1982); Gareth Stedman Jones, *An End to Poverty? A Historical Debate* (New York: Columbia University Press, 2004), 6. Skinner, for whom capitalism predated Protestantism, is a notable exception to this view. See Skinner, "Some Problems," 300–301.

⁹ On commercial society, see Istvan Hont and Michael Ignatieff, eds., *Wealth and Virtue: The Shaping of Political Economy in the Scottish Enlightenment* (Cambridge: Cambridge University Press, 1983). On mercantilism and commercial market society, see Ashcraft, "Radical Dimensions of Locke," 722–23, 742–45.

While popular among these particular commentators, this position was not endorsed by all of Macpherson's critics. In time, the ahistorical overtones in the "rise of capitalism" also came under fire from historians and political theorists who shared Macpherson's conviction that capitalist society preceded the Industrial Revolution.¹⁰ From the late 1970s through the 1990s, a series of prominent studies on the history of early modern political thought upheld the claim that the emergence of capitalism was a pivotal context for understanding key political and economic ideas dating as far back as the 1500s.¹¹ By situating an array of early modern thinkers, concepts, and texts within rich and detailed historical accounts of preindustrial capitalism, scholars such as Joyce Appleby, Ellen Meiksins Wood, David McNally, Donald Winch, and Neal Wood crafted sophisticated and persuasive arguments in support of the mutually-constitutive relationship between the development of capitalism, political thought, and economic discourse from the sixteenth through the eighteenth centuries. Neal and Ellen Wood, in particular, responded directly to Macpherson and his historicist critics while also addressing a broader audience of political theorists.¹² Drawing largely on the work of economic historian Robert Brenner, the Woods contended that early modern England was

¹⁰ For an excellent overview of the literature on capitalism and intellectual history, see Richard F. Teichgraber III, "Capitalism and Intellectual History," *Modern Intellectual History* 1, no. 2 (2004): 267–82.

¹¹ A partial list includes Joyce Oldham Appleby, *Economic Thought and Ideology in Seventeenth Century England* (Princeton: Princeton University, 1978); Donald Winch, *Adam Smith's Politics: An Essay in Historiographic Revision* (Cambridge: Cambridge University Press, 1978); Neal Wood, *John Locke and Agrarian Capitalism* (Berkeley: University of California Press, 1984); David McNally, *Political Economy and the Rise of Capitalism: A Reinterpretation* (Berkeley: University of California, 1988); Ellen Meiksins Wood, *The Pristine Culture of Capitalism: A Historical Essay on Old Regimes and Modern States* (New York and London: Verso, 1991); Ellen Meiksins Wood and Neal Wood, *A Trumpet of Sedition: Political Theory and the Rise of Capitalism, 1509-1688* (New York: New York University, 1997). For two important and related works published in this period that focus respectively on preindustrial capitalism and early modern political economy, although not on both simultaneously, see Joan Thirsk, *Economic Policy and Projects: The Development of a Consumer Society in Early Modern England* (Oxford: Clarendon Press, 1978); Terence Hutchison, *Before Adam Smith: The Emergence of Political Economy, 1662-1776* (Oxford and New York: Basil Blackwell, 1988).

¹² Much of their interventions in this debate took place in disciplinary journals such as *Political Theory* and *History of Political Thought*, including the following articles: Neal Wood, "The Social History of Political Theory," *Political Theory* 6, no. 3 (1978): 345–67; Neal Wood, "Avarice and Civil Unity: The Contributions of Sir Thomas Smith," *History of Political Thought* 18, no. 1 (1997): 24–42; Ellen Meiksins Wood, "Locke Against Democracy: Consent, Representation and Suffrage in the Two Treatises," *History of Political Thought* 13, no. 4 (1992): 657–89; Ellen Meiksins Wood, "Radicalism, Capitalism, and Historical Contexts: Not Only a Reply to Richard Ashcraft on John Locke," *History of Political Thought* 15, no. 3 (1994): 323–72.

fundamentally shaped by the centralization of the English state and the emergence of “agrarian capitalism,” which replaced feudalism with a distinctive class structure and system of social property relations between landlords, capitalist tenants, and rural wage-laborers.¹³ Setting key works by Tudor and Stuart thinkers the likes of Thomas More, Thomas Hobbes, James Harrington, and John Locke within this socioeconomic background, the Woods designated these authors as political theorists of an emerging capitalist formation buttressed by a consolidated state apparatus. In this rendering, Locke’s *Second Treatise*, for instance, was recast as a robust theory of agrarian capitalism driven by the principles of a market economy organized around the tenets of profit, efficiency, frugality, and capitalist property relations.¹⁴ In tracing the consortium between political ideas and the history of capitalism, the Woods mounted a compelling case for the relevance of capitalism to early modern political thought.

And although this shift toward social and economic history was invaluable in dissociating the “rise of capitalism” from the epithet of “non-history,” the terms, sources, and stakes of the controversy remained practically unchanged since the 1960s. For the most part, the exchange continued to turn on whether a particular thinker, such as Locke, was a critic or champion of capitalist society—a radical democrat, as Richard Ashcraft insisted, or an apologist for the ruling classes and archenemy of the working poor, as the Woods retorted.¹⁵ Moreover, the discussion was chiefly confined to a familiar assortment of canonical figures and classic texts, which considerably

¹³ Meiksins Wood, “Locke Against Democracy,” 658n5; Meiksins Wood and Wood, *A Trumpet of Sedition*, 6.

¹⁴ Wood, *John Locke and Agrarian Capitalism*, 13; Meiksins Wood, “Radicalism, Capitalism, and Historical Contexts,” 352–53; Meiksins Wood and Wood, *A Trumpet of Sedition*, 132–36.

¹⁵ For this particular debate, see Ashcraft, “Radical Dimensions of Locke”; Richard Ashcraft, “Liberalism and the Problem of Poverty,” *Critical Review* 6, no. 4 (1992): 493–516; Ashcraft, “Radical Dimensions of Locke”; Martin Hughes, “Locke on Taxation and Suffrage,” *History of Political Thought* 11, no. 3 (1990): 423–42; Martin Hughes, “Locke, Taxation and Reform: A Reply to Wood,” *History of Political Thought* 13, no. 4 (1992): 691–702; Meiksins Wood, “Locke Against Democracy”; Meiksins Wood, “Radicalism, Capitalism, and Historical Contexts.” For related discussions of Locke and capitalism during this period, see Neil J. Mitchell, “John Locke and the Rise of Capitalism,” *History of Political Economy* 18, no. 2 (1986): 291–305; David McNally, “Locke, Levellers and Liberty: Property and Democracy in the Thought of the First Whigs,” *History of Political Thought* 10, no. 1 (1989): 17–40; Alan Craig Houston, “‘A Way of Settlement’: The Levellers, Monopolies and the Public Interest,” *History of Political Thought* 14, no. 3 (1993): 381–420.

restricted the scope of the debate and did little to shed new light on what capitalism actually was or how it emerged. The fact that slavery, ecology, global trade, colonialism, or empire were hardly mentioned attests to the limitations of this controversy. In the end, whichever context commentators relied on to interpret classic works, the many complex questions raised by the history of capitalism and their salient connections to political theory could not—and cannot—be accounted for solely by engaging the canon. Moreover, the approaches to political thought put forth by critics and proponents of the “rise of capitalism” alike proved to be especially inept as frameworks for understanding the spaces, things, experiences, practices, and people at the heart of a historical formation as ample and dynamic as capitalism.

By turning to these neglected yet foundational aspects of capitalist society, this dissertation offers an account of the modern histories of capitalism and political thought that stands decidedly at odds with the arguments and methods on both sides of the debate over the “rise of capitalism.” Throughout the ensuing chapters, I argue that factories acted as decisive yet under-recognized stages for the development of modern political ideas, practices, and institutions across Britain and the Atlantic world from 1688 to 1807. Moving between well-known texts and unpublished manuscripts, influential political thinkers and unfamiliar political actors, each chapter portrays the factory as a microcosm of capitalist modernity in which influential ideas and ordinary experiences of labor, aesthetics, and race were co-constituted. Rather than restricting my study to canonical thinkers and classic texts, I organize my argument around four spaces of capitalist production as well as the people, things, discourses, practices, and ideas in their orbit. Each of these workplaces are a historical expression of what I call “factories of modernity:” the data center (Chapter 2), the workhouse (Chapter 3), the manufactory (Chapter 4), and the colony (Chapter 5). Within these sites, raw materials were cultivated, wrought, stored, and sold; services were rendered and paid; and commodities were processed, manufactured, packaged, and shipped away to consumers in foreign

markets. In all of them, labor was performed, reproduced, and disciplined in accordance with ideologies and conventions of economic growth, cultural refinement, capital accumulation, progress, and freedom. The rich reflections on the world economy and felt experiences of menial work laid bare in these factories reveal that capitalism was and continues to be deeply imbricated in the development of discourses on labor, aesthetics, and race that propelled capitalist expansion by reconfiguring norms of production, artistic creation, and racial difference, from its colonial and agrarian inception to its latest digital transformation. From my study of capitalism and political ideas within preindustrial factories, I develop a conceptual framework for understanding our so-called “postindustrial” capitalist society and confronting its longstanding structures of economic, cultural, and racial domination. That is, by learning from the historical emergence of the factory system in the long eighteenth century, I contend that contemporary accounts of capitalism can be made more responsive to the salient yet under-studied sites, discourses, and mechanisms of capitalist exploitation in our present.

In pursuing this argument, my dissertation both departs from and contributes to the ongoing controversy over capitalism’s intellectual lineages and place in the history of political thought. Rather than thinking of capitalism as either “agrarian” or “industrial,” or dismissing the term altogether in favor of an allegedly more precise and less anachronistic designation such as “commercial society,” I chart an alternative narrative of capitalist modernity beyond these categories, demonstrating in turn that the long-running history of capitalism—as opposed to any one of its “phases” or features—is indispensable to our understanding of modern political thought. Throughout, I interpret what Oliver Cromwell Cox, Immanuel Wallerstein, and Giovanni Arrighi have dubbed the “modern world-system” as indissociable from the historical development of the capitalist world-economy, a

formation that spread across the globe from its embryonic nucleus in fifteenth-century Venice.¹⁶ Following these thinkers, I contend that capitalism is an essential historical category for understanding modernity—its political ideas, economies, cultures, and societies.¹⁷ As a concept, capitalism covers not only the mechanisms of production and exchange known as “the market,” but also, in Wallerstein’s words, “a complex political structure” involving the creation of sovereign imperial states and national allegiances as well as a “cultural sphere” defined by “a vast array of identities that are repeatedly being reconfigured and the political struggles that such identities entail.”¹⁸ Moreover, as the title of this prologue suggests, I view modern political thought as having developed historically across the temporal scale William Sewell calls “the capitalist epoch.” This ongoing period in modern history, defined by sustained economic growth, bred new forms of life, social dynamics, and temporalities that set it apart from earlier eras.¹⁹ And while economic growth led to significant material transformations throughout the capitalist world, it was also responsible for the rise of a particular historical consciousness in which time was experienced as both progressive and open-ended.²⁰ This pervasive feeling of living in a “new time,” aptly related by a host of European thinkers in the long eighteenth century, indexes a quintessentially modern temporal experience that, according to Reinhart Koselleck, apprehended the future through the twin concepts

¹⁶ Oliver Cromwell Cox, *Foundations of Capitalism* (New York: Philosophical Library, 1959); Oliver Cromwell Cox, *Capitalism as a System* (New York: Monthly Review Press, 1964); Immanuel Maurice Wallerstein, *The Modern World System: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*, vol. 1, 3 vols. (New York: Academic Press, 1976); Giovanni Arrighi, *The Long Twentieth Century: Money, Power and the Origins of Our Times* (London and New York: Verso, 2010). See also, Fernand Braudel, *Civilization and Capitalism: 15th-18th Century; The Wheels of Commerce*, trans. Siân Reynolds, vol. 2, 3 vols. (1979; repr., New York: William Collins Sons & Co, 1983).

¹⁷ Immanuel Wallerstein, “Capitalism as an Essential Concept to Understanding Modernity,” in *Capitalism: The Reemergence of a Historical Concept*, ed. Jürgen Kocka and Marcel van der Linden (London: Bloomsbury Academic, 2016), 188.

¹⁸ *Ibid.*, 189–90.

¹⁹ William H. Sewell Jr., “The Capitalist Epoch,” *Social Science History* 38 (2014): 1.

²⁰ *Ibid.*, 1, 4, 7.

of “progress” and “development”—two categories of universal history that mark indelibly what we have come to know as modernity.²¹

Additionally, during the modern heyday of the capitalist epoch, definitions of “labor,” “aesthetics,” and “race” underwent radical transformations. Throughout the long eighteenth century, these terms became constitutive concepts of political thought, concrete categories of economic life, and the axil structures of modernity. More than animating intellectual debates, their contested meanings reorganized the material world into a hierarchical spectrum of dialectical types, ranks, varieties, orders, groups, species, and classes—the artisan and the peasant, arts and crafts, freedom and slavery. As such, labor, aesthetics, and race are critical terms in this project for two reasons. First, the ideologies and practices that emerged out of the changing definitions of labor, aesthetics, and race lie at the crossroads of conceptual transformations in the history of modern political thought, on the one hand, and key developments in the social, economic, and cultural fabrics of capitalist societies on the other. Second, the modern meanings of these concepts evolved in large part from ideas, exchanges, and experiences surrounding the spaces I call “factories of modernity.” That is, labor, aesthetics, and race took up many of their modern ascriptions as a result of accounts, theories, observations, encounters, and experiments that played out within the three preindustrial spaces of production in this dissertation. For instance: the workhouse contributed to breakthroughs in the division of labor, the consolidation of production, and techniques of work discipline in the late seventeenth century (Chapter 3); the manufactory was a key site in which the modern separation between mechanical and artistic production was conceived and applied in the latter half of the eighteenth century (Chapter 4); and in the colony, new attitudes toward racial difference were mapped onto emerging theories of human equality and systems of wage-labor at the turn of the

²¹ Ibid., 1, 6–7; Reinhart Koselleck, “The Eighteenth Century as the Beginning of Modernity,” in *The Practice of Conceptual History: Timing History, Spacing Concepts*, by Reinhart Koselleck, trans. Todd Presner (Stanford: Stanford University Press, 2002), 165.

nineteenth century (Chapter 5). More than abstract concepts, then, labor, aesthetics, and race were historically bound up with practices of production and spaces of work that have exercised and—as my reading of the data center shows (Chapter 2)—continue to exercise real, lasting effects on political ideas and economic life.

In being dispersed across traditions, periods, themes, and continents, the history of capitalism has traditionally sat awkwardly alongside approaches to political thought that define the historical context of a work synchronically and punctually through narrow chronologies and exacting categories such as “agrarian capitalism” or “commercial society,” which tend to be, as David Armitage discerns, “implicitly discontinuous with other contexts.”²² Likewise, within an understanding of historical context informed by, say, J. L. Austin’s theory of performative utterances or Ludwig Wittgenstein’s ordinary language philosophy, the word “capitalism,” which in most European languages dates only to the nineteenth century, finds no place in early modern vocabularies.²³ By contrast to predominant determinations of historical context in political theory, I interpret the history of capitalism through a diachronic approach intended to capture the transformation of political ideas and social relations over the long eighteenth century rather than portraying them exclusively at a particular point in time.²⁴ In this wider context, the history of capitalism emerges as a useful inroad into foundational aspects of modern society and political ideas that inhere across—rather than squarely within—period-specific linguistic conventions, historical phases of economic development, biographical narratives, and classic texts. As a result, this dissertation probes pivotal elements of historical capitalism that are usually absent from the

²² David Armitage, “What’s the Big Idea? Intellectual History and the Longue Durée,” *History of European Ideas* 38, no. 4 (2012): 498.

²³ For an alternative, more capacious and instructive understanding of historical context that runs counter to definitions of context as “contemporaneously possible utterances,” see Patchen Markell, “Unexpected Paths: On Political Theory and History,” *Theory & Event* 19, no. 1 (2016).

²⁴ Hayden White, *Metahistory: The Historical Imagination in Nineteenth-Century Europe* (1973; repr., Baltimore: Johns Hopkins University Press, 2014), 4.

literatures on capitalism and political theory, including, for instance, the sprawling networks of global commerce that sustained Britain's imperial economy through proto-industrial labor, rural workhouses, and the intricate web of labor and capital that characterized the seventeenth-century commodity chain of woolen textiles (Chapter 3); the cultural and economic transformations propelled by the expansion of luxury industries and consumer demand in England, as well as the essential contributions they made to the rise of industrial capitalism, the fine arts, and modern aesthetics in the second half of the eighteenth century (Chapter 4); and, lastly, the ways in which the British movement to abolish the slave trade was of a piece with the global expansion of capitalism, the colonization of Atlantic Africa, and emerging climatic theories of racial difference that sustained projects for the conscription of free workers of color into a system of agrarian labor across the tropics at the turn of the nineteenth century (Chapter 5).²⁵

By moving beyond the constraints of the “rise of capitalism” debate, this dissertation challenges two broader frameworks through which a host of social scientists and political theorists have interpreted capitalism since the Second World War. First, it questions the accepted view that, sometime after 1945, advanced capitalist societies entered a “postindustrial” phase in which the factory system was effectively displaced by knowledge-based services and information technology—

²⁵ Unlike the “rise of capitalism,” the history of modern European empires and colonialism has yielded illuminating historical studies and productive debates in political theory. See, for instance, Jennifer Pitts, *A Turn to Empire: The Rise of Imperial Liberalism in Britain and France* (Princeton: Princeton University Press, 2006); Jennifer Pitts, “Political Theory of Empire and Imperialism: An Appendix,” in *Empire and Modern Political Thought*, ed. Sankar Muthu (Cambridge and New York: Cambridge University Press, 2012), 351–88; David Armitage, *The Ideological Origins of the British Empire* (Cambridge: Cambridge University Press, 2004); Barbara Arneil, *John Locke and America: The Defence of English Colonialism* (Oxford: Oxford University Press, 1996); Duncan Bell, *Reordering the World: Essays on Liberalism and Empire* (Princeton and Oxford: Princeton University Press, 2016); Adom Getachew, *Worldmaking After Empire: The Rise and Fall of Self-Determination* (Princeton: Princeton University Press, 2018); Onur Ulas Ince, *Colonial Capitalism and the Dilemmas of Liberalism* (Oxford: Oxford University Press, 2018); Jeanne Morefield, *Empires Without Imperialism: Anglo-American Decline and the Politics of Deflection* (Oxford and New York: Oxford University Press, 2014); Sankar Muthu, ed., *Empire and Modern Political Thought* (Cambridge: Cambridge University, 2012); Sankar Muthu, *Enlightenment Against Empire* (Princeton: Princeton University Press, 2003); James Tully, “Lineages of Contemporary Imperialism,” in *Lineages of Empire: The Historical Roots of British Imperial Thought*, ed. Duncan Kelly, Proceedings of the British Academy 155 (Oxford: Oxford University Press, 2009), 3–29.

or what I call the “postindustrial paradigm” (Chapter 1). Second, this study contests prevalent formulations of the capitalism as strictly economic phenomenon detached from cultural and political formations, showing on the contrary that capitalism was historically enmeshed in aesthetic and racial ideologies through which new meanings of art and race were articulated as essential economic categories. In order to address both of these shortcomings in dominant critiques, theories, and accounts of capitalist society, I turn to the texts and spaces in which capitalism was originally articulated and practiced, both by political thinkers at the center of the controversy over the “rise of capitalism,” such as Charles Davenant, John Locke, and David Hume, and a range of political actors left out of this debate, including the economist Malachy Postlethwayt, the imperial administrator Maurice Morgann, the celebrated potter Josiah Wedgwood, the botanist Henry Smeathman, and a host of other figures whose contributions to the development of both capitalism and modern political thought have been thus far entirely neglected, from sculptors and painters to workhouse pamphleteers, inventors, abolitionists, and black workers who escaped and resisted slavery in the late eighteenth century.

Reading these perspectives as forgotten archives of capitalist modernity, I argue that the factory was never a homogenous and static thing—such as the giant manufacturing plants that came to dominate nineteenth-century Britain—but a variegated assortment of sites that fundamentally transformed the modern world. Rather than being restricted to the conventional industrial workplace of machines and assembly lines, the historical spaces I call “factories of modernity” encompass an unfamiliar plurality of pre-industrial environments—workhouses, manufactories, colonies—where labor was performed, reproduced, and disciplined. In redefining the factory as a multiplicity of spaces where influential ideas and ordinary experiences of labor, aesthetics, and race were co-constituted, I provide an account of capitalist society that, unlike dominant theories of capitalism, discloses and confronts the ways “postindustrial” workplaces—such as data centers—are

organized through a concealed and repressive politics of factory production. In particular, I show how contemporary experiences of so-called “affective,” “creative,” or “cultural” labor—at corporations like Google, Amazon, and Apple—are thoroughly anchored in menial forms of factory production and racialized cycles of precarity (Chapter 2). As such, this dissertation makes visible the salient yet neglected ways in which the historical entanglement of labor, aesthetics, and race was, on the one hand, instrumental to the development of capitalism and modern political thought from the late seventeenth through the early nineteenth centuries and, on the other, how the relationship between them continues to inform capitalist expansion and exploitation in our present.

FACTORIES OF MODERNITY

Few sites can simultaneously lay claim to transparency and opacity like a factory. As giant monuments to the industrial age, factories seem invariably familiar—easily discerned and readily understood. The sight of their smokestack chimneys calls to mind clear images of time and space as might a period piece or an epic poem. For the most part, we know what factories are and what they mean. At the same time, factories are obscure and perplexing structures; their solid metal gates and red-brick walls keep the outside world apart. Even those who have ventured within a factory, who have inspected its hidden abodes and breathed its air, often relate contradicting accounts of what they felt and saw. Whereas factories were, for instance, “dark satanic mills” to William Blake, Andrew Ure described them as a “great palladium” to the comfort of workers.²⁶ Like its outer appearance, so too does the history of the factory oscillate between transparency and opacity. Although much has been written about how and why factories emerged and developed since the turn of the nineteenth century, we know significantly less about them before the 1800s. In fact, it is commonly believed that they did not exist before then. And yet, we have records of large factories

²⁶ William Blake, *Milton: A Poem in 2 Books*, ed. E. R. D. Maclagan and A. G. B. Russel (1804–1810; repr., London: A. H. Bullen, 1907), xix; Andrew Ure, *The Philosophy of Manufactures: Or, An Exposition of the Scientific, Moral, and Commercial Economy of the Factory System of Great Britain* (London: Charles Knight, 1835), 329.

going as far back as the 1500s, such as the dyehouses of capitalist clothiers in Newbury that employed hundreds of workers and mass-produced finished woolen cloths at industrial proportions through most of the sixteenth century.²⁷ But beyond its obscure early-modern past, an additional—and related—enigma haunts the factory: its etymology. While the word “factory” has existed in the English language since at least the sixteenth century, its modern meaning, as a space of industrial production, only became common parlance after the 1830s. Before then, the term defined a warehouse where raw goods were stored and from which they were distributed by merchants—or “factors”—to independent laborers who would work on these materials separately, dispersed across private households and cottages. Meanwhile, up to the 1800s, the workplace in which commodities were finished at a greater scale than in a workshop, a home, or a workhouse was called a “manufacture,” a “manufactory,” or a “mill.” Sometime in the nineteenth century, however, the meaning of “factory” transitioned. By 1832, Charles Babbage famously contrasted the factory to a manufacture, calling the “factory system” a large-scale, capital-intensive and industrial apparatus of production in which the labor process was scientifically divided, regulated, and mechanized.²⁸ In 1835, once the term had come into widespread use, Ure defined a factory as the “combined operation of many orders of work-people, adult and young, in tending with assiduous skill a system of productive machines continuously impelled by a central power.”²⁹ From here on out, the factory became indissociable from industrial assembly lines, heavy machinery, mass production, and mechanical power. This idea of a factory remains with us today, often portrayed through the familiar image of the smokestack chimneys and red-brick walls I reference above.

²⁷ David Peacock, “Dyeing Winchcombe Kersies and Other Kersey Cloth in Sixteenth-Century Newbury,” *Textile History* 37, no. 2 (2006): 187–202.

²⁸ Charles Babbage, *On the Economy of Machinery and Manufactures*, 3rd ed. (London: Charles Knight, 1832), 121, 240, 367.

²⁹ Ure, *Philosophy of Manufactures*, 13–14.

But how did the meaning of “factory” change so seamlessly from a warehouse to an assembly plant? In his comprehensive study of the factory’s place in the Industrial Revolution, Paul Mantoux offered his hunch in a footnote. “It is possible,” he reckoned, “that ‘factory’ owes its modern meaning to the word ‘manufactory.’”³⁰ On the surface, this makes sense. Perhaps as machines displaced human hands, the “manufactory” lost its connotation with “handicraft” and thus dropped its Latin root *manus*, meaning “hand.” But this story—logical though it may sound—is a conjecture all the same. Since Mantoux, not much progress has been made in solving this riddle. Understandably, most recent accounts of the factory circumvent the word’s ambiguity by either focusing on the industrial factory system of the nineteenth century or by relying on the more common user’s terms “manufacture,” “manufactory,” and “mill” when dealing with the early modern period.³¹

Part of the problem, I want to suggest, is that the very premise of this enigma is misleading. The widely-accepted, inferred, or presumed conceit that the factory only came to mean a space of production with the widespread application of machines in the 1830s is simply not true. As early as 1688, for instance, the ironmaster Ambrose Crowley repeatedly referred to his ironworks in Sunderland—where he employed over one hundred people—as “my *Factory*.”³² More substantively, the word “factory” was consistently used before the nineteenth century in connection to three important sectors of the British economy: the woolen, pottery, and slave trades. In 1780, Thomas

³⁰ Paul Mantoux, *The Industrial Revolution in the Eighteenth Century: An Outline of the Beginnings of the Modern Factory System in England* (1905; repr., Chicago and London: University of Chicago Press, 1983), 38n4.

³¹ See Maxine Berg, *The Age of Manufactures, 1700-1820: Industry, Innovation and Work in Britain*, 2nd ed. (London: Routledge, 1994); Maxine Berg, Pat Hudson, and Michael Sonenscher, eds., *Manufacture in Town and Country before the Factory* (1983; repr., Cambridge: Cambridge University Press, 2002); Thomas Max Safley and Leonard N. Rosenband, eds., *The Workplace before the Factory: Artisans and Proletarians, 1500-1800* (Ithaca: Cornell University Press, 1993); Keith Tribe, *Genealogies of Capitalism* (London: Macmillan Press, 1981); Joshua B. Freeman, *Behemoth: A History of the Factory and the Making of the Modern World* (2018: W. W. Norton & Company, 2018).

³² William Allen Young, “Works Organization in the Seventeenth Century,” *Transactions of the Newcomen Society* 4, no. 1 (1923): 86, 74, emphasis mine. See also Herman Freudenberger and Fritz Redlich, “The Industrial Development of Europe: Reality, Symbols, Images,” *Kyklos* 17, no. 3 (1964): 386.

Bentley, a London merchant and Josiah Wedgwood's business associate, wrote of the "woollen and cotton *factories*" in reference to England's booming textile industry.³³ Additionally, a petition to Parliament for a Turnpike Act in 1762 evoked the eminence of the potteries by noting that "the ware from these *factories* is exported in vast quantities [...] to our several colonies in America and the West Indies."³⁴ Finally, the word "factory" entered the English language most decisively as a result of Britain's growing involvement in the Atlantic slave trade in the long eighteenth century. From the late 1600s through most of the nineteenth century, English dictionaries defined a factory as Samuel Johnson had done in 1755: "A house or district inhabited by traders in a distant country."³⁵ Factories, in this sense, were trading outposts held by the joint-stock companies of European empires across Africa, the Americas, and Asia. In 1482, the Portuguese were likely the first to call their fortified entrepôt on the Gulf of Guinea a *feitoria*, from the Latin *facere* ("to make").³⁶ This set a precedent for equivalents in virtually every European language: *factoría* in Spanish, *fattoria* in Italian, *factorerie* in French, *factorij* in Dutch, *faktori* in Danish, *faktorei* in German, and so on. As the slave trade soared in the latter half of the eighteenth century, factories became the unmistakable symbol of Europe's imperial presence in Africa. Yet, in none of these languages did the word "factory" carry the double meaning and semantic slippage it conveyed in English. With the exception of English, the word for "manufacture" or "manufacturing plant" in all of these languages has, at one juncture or another since the seventeenth century, derived from the Latin *faber* ("smith") or *fabricare* ("to build"), such as *fábrica* in Portuguese and Spanish, *fabbrica* in Italian, *fabrique* in French, *fabrik* in

³³ Thomas Bentley, *Letters on the Utility and Policy of Employing Machines to Shorten Labour* (London: T. Becket, 1780), 20, emphasis mine.

³⁴ V. W. Bladen, "The Potteries in the Industrial Revolution," ed. John Maynard Keynes and David Hutchison MacGregor, *Economic History: A Supplement to the Economic Journal* 1 (1929): 125, emphasis mine.

³⁵ Samuel Johnson, *A Dictionary of the English Language*, 3rd ed. (1755; repr., Dublin: W. G. Jones, 1768).

³⁶ While foreign trading depots were common across Medieval Europe, the Portuguese were to my knowledge among the first European empires to both call their Atlantic outpost a "factory" and to establish such institution on the western coast of Africa.

German and Danish, and *fabriek* in Dutch.³⁷ The reason why “factory” came to signify both a trading outpost and a manufacturing plant in English can be explained by the historical contributions the early modern woolen, pottery, and slave trades made to the rise of England’s industrial factory system in the nineteenth century.

Further, the deep-seated association between these three industries and the industrial factory reveals that more is at stake in how the term came into its modern sense than nomenclature alone. Contrary to popular belief, the word “factory”—as a space of mass production—did not derive its meaning from “manufactory,” nor can its transition to a mechanized workplace in the nineteenth century be reduced to the advent of technology. In fact, as I will argue throughout the last three chapters of this dissertation, what transitioned in the 1800s was not the *word* “factory” but the *spaces* to which it referred. The transformation of trading factories into the factory system was laid open by the historical workplaces that make up the preindustrial sites I call “factories of modernity”—the workhouse (Chapter 3), the manufactory (Chapter 4), and the colony (Chapter 5). Moreover, each of these spaces were respectively associated with the woolen, pottery, and slave trades, which together accounted for a significant share of Britain’s public revenue in the long eighteenth century and made lasting contributions to the factory system before mechanical production came into vogue.³⁸ One of the earliest official documents to use the term “factory system” in its modern sense offers an

³⁷ There are exceptions and variations. In French, for instance, the modern term for an industrial establishment is “*usine*,” and while Jacques Savary de Brûlon’s *Dictionnaire Universel de Commerce* (1748) defined “*fabrique*” as “fabrication,” Roland de la Platière’s *Encyclopédie Méthodique* (1783) defined it as a “manufacture.” Meanwhile, in English, Malachy Postlethwayt referred to a “spinning house” as a “fabric” in his adapted translation of Savary’s *Dictionnaire* titled *Universal Dictionary of Trade and Commerce* (1752). See Freudenberger and Redlich, “The Industrial Development of Europe,” 388–91.

³⁸ The ascendancy of cotton factories in England at the turn of the nineteenth century changed this scenario dramatically. On the displacement of English wool by cotton in foreign markets, see Eric Williams, *Capitalism and Slavery* (1944; repr., Chapel Hill and London: University of North Carolina Press, 1994), 67–73. On the role of cotton in the development of capitalism and slavery, see Eric Williams, “The Golden Age of the Slave System in Britain,” *The Journal of Negro History* 25, no. 1 (1940): 60–106; Sven Beckert, *Empire of Cotton: A Global History* (New York: Vintage Books, 2014).

instructive account of the factory's bifurcation with these three spaces, which I will briefly outline before moving on.

From 1803 to 1806, the British Parliament set up a Committee on the woolen trade to arbitrate an ongoing dispute between master manufacturers and large-scale merchants over regulatory legislation affecting their businesses. The minutes from these Parliamentary sessions reveal that the then-emerging establishments which the Committee dubbed “great Factories” and “the Factory system” were the result not of machines but of prodigious sums of capital, a centralized production process, a vast workforce, access to colonial markets, foreign trade, and a fragmented labor process. According to the records, these elements of production and exchange were combined within one sizable establishment because merchants, rather than keeping to their preceding roles as traders or “factors,” had recently turned into “cloth makers on this large system.”³⁹ In other words, these former “factors” became mass producers—captains of industry—not only by leveraging their capital and access to colonial markets and global trade networks, but also by recasting the role of their warehouses, or “trading factories,” as substantial manufacturing plants. Unable to compete with this rising class of merchant producers, master manufacturers had few options besides working at the very factories that had run them out of business. When asked by a member of Parliament whether he could increase his buildings and “approach in magnitude to a factory,” a master manufacturer replied: “No, I cannot, I have not capital.”⁴⁰ Or at least nothing nearing the amount of capital his “factor” competitors possessed at the time. The capital which merchant factors had accumulated from foreign trade through connections in commercial outposts and colonies across Africa and the Americas allowed them to scale their operations, to pry open new markets, and to

³⁹ House of Commons, “Minutes of Evidence Taken before the Committee Appointed to Consider the State of the Woollen Manufacture of England” (London: Parliament of the United Kingdom, 1803-1806), 16. In Rare Books, Special Collections, University of Chicago, Record Number: 1716789.

⁴⁰ House of Commons, “Minutes of Evidence,” 78.

consolidate long-distant exchange with mass production, thus transforming trading factories into what became the factory system.

The Committee's final Report in 1806 is explicit about the benefits a factory system would yield to England's economic development. By contrast to the "Master Manufacturer," the Report discerned, the "Owner of a Factory" can "learn, by personal inspection, the wants and habits; the arts, manufactures, and improvements of foreign countries."⁴¹ For whereas "diligence, economy, and prudence" marked the boundaries of a manufacturer's province, this rising class of factory owners disposed of "invention, taste, and enterprize." Additionally, the Report continued,

The Owner of a Factory, [...] being commonly possessed of a large capital, and having all his Workmen employed under his own immediate superintendence, may make experiments, hazard speculation, invent shorter or better modes of performing old processes, may introduce new articles, and improve and perfect old ones, thus giving the range to his taste and fancy, and, thereby alone, enabling our Manufacturers to stand the competition with their commercial rivals in other Countries.⁴²

Each historical workplace in this dissertation contributed to this configuration of the factory: the textile workhouse made viable a system for the concentration of workers in one place and under a centralized command; the luxury manufactory combined invention, taste, and enterprise with fancy and experimentation to produce new and delicate articles of superior quality at lower costs; and the agrarian labor colony, the trading factory's alter ego in Atlantic Africa, allowed this new cohort of capitalists to conquer new markets for consumer goods and explore new raw materials while placing at their disposal the privileged opportunity to inspect, study, and mold the habits and consumer desires of foreign populations, exploiting their labor-power and natural resources without

⁴¹ House of Commons, "Report from the Committee on the State of the Woollen Manufacture of England" (London: Parliament of the United Kingdom, July 4, 1806), 12.

⁴² *Ibid.*, 12–13.

restrictions. As early as 1806, then, the trading factory—the English equivalent of the *feitoria* and the *faktori*—had combined the productive operations and global reach of the workhouse, the manufactory, and the colony in a single institution, under a common designation, which is to say, under its own name: the factory.

Leaving history aside for a moment, my own definition of the factory draws on and differs from the one I have just described. Throughout this dissertation, I define a factory by reference to three of its essential components: labor, control, and capital. First and foremost, a factory is a site where workers work; it is a space of productive labor in which people are organized by a superior authority to perform numerous menial tasks that generate value for their employer, whether or not the end product is a material commodity. Moreover, workers do not autonomously arrange themselves into this production process nor do capitalists extract value from their labor indirectly, such as a landlord might from a tenant. Rather, this workforce is brought into the factory, organized, and remunerated—with a wage, variously defined—directly by an external power that presides over them and their work. Second, a factory is a space of control. The entrepreneurs who brought workers into this space did so in order to derive value from labor, which in turn means that production measures must be, on the one hand, implemented, regulated, and supervised by overseers and, on the other, carried out methodically by workers. Situated at the bottom of the factory's chain of command and occupational hierarchy, workers are required to follow a script and obey the rules laid out by management. Third, and finally, this particular organization and control of the labor process is accomplished by the investment of capital and an adherence to the laws of capital accumulation. In all the historical factories I discuss below, the logic of capitalist accumulation is applied as a means to various ends, including increasing the “public fund” through the workhouse (Chapter 3), winning the favor of nobles and fine artists in the manufactory (Chapter 4), and securing freedom from slavery in the colony (Chapter 5). Each one of these goals entails

great amounts of capital, a vast number of workers, novel techniques of labor discipline, and the consolidated control of production.

Finally, not all factories in this dissertation are preindustrial workplaces. The data center (Chapter 2), for instance, figures in this study as a “postindustrial” illustration of the factory after its proclaimed demise. Indeed, the same logic employed to deny the existence of factories in the early modern period is also used to disavow their relevance in the present. That is, just as the factory system is traditionally understood as having emerged when the steam engine became the dominant legislating power of industrial production, so too is the factory said to have disappeared once mechanical technology was displaced by electronic control systems in the middle of the twentieth century. In this rendering, the year 1769—when James Watt and Richard Arkwright patented their steam engine—is widely accepted as the emblematic prelude to the Industrial Revolution and usually as far back into the past as standard histories of the factory system tend to venture.⁴³ By the same token, although harder to pin down to an exact year, the factory system is said to have vanished in the wake of the Second World War, sometime between the invention of the Colossus computer in 1943 and the rise of automation in the 1950s. On this account, the factory—a metonym for the industrial age—figures as a periodizing device not only of industrial capitalism, but of modernity itself. Western civilization is thus said to be “preindustrial” or “premodern” prior to the factory’s purported emergence and “postindustrial” or “postmodern” following its declared demise. This entire dissertation runs counter to this chronology. In doing so, it contends that factories were defining stages for political thought and practice during the precise time intervals from which factories remain conspicuously absent: 1688 to 1807 (Chapters 3-5) *and* 1945 to the present (Chapters 1-2). Part of the reason why it may seem anachronistic to call a data center or, say, a colony a factory is because the factory has been persistently associated with the historical

⁴³ For a recent illustration of this, see Carl Benedikt Frey, *The Technology Trap: Capital, Labor, and Power in the Age of Automation* (Princeton and Oxford: Princeton University Press, 2019), 97.

displacement of human labor first by steam power, then by electricity, and most recently by algorithms. The ensuing chapters contest this claim by redefining the terms through which we understand the factory system—its precursors before the nineteenth century and its successors since the middle of the twentieth. In short, the modern ideas, spaces, and social relations discussed throughout this dissertation emerged and developed neither before nor after industrial capitalism but during the capitalist epoch, which was as much John Locke’s and David Hume’s as it is our own.

§

This dissertation begins with a twentieth-century problem: the alleged demise of the factory. It moves forward into the present then retreats to the past in order to offer a solution. I open by situating my overall argument within dominant accounts of capitalist society in Chapter 1, “Absent Factories.” Here, I trace the development of what I call the “postindustrial paradigm” by interpreting three clusters of discourse about capitalism since the Second World War: automation, post-industrial society, and critical theories of capitalism. The unifying subject tying these narratives together is the idea that, throughout the latter half of the twentieth century, advanced capitalist societies were—and remain to this day—on the verge of a radical break with their historical course of industrial development since the turn of the nineteenth century. I contend that the perceived, imminent downfall of the factory system is the central motif underlying the postindustrial paradigm. Time and again, the authors in question turned to the displacement of the factory by technological innovations as a means of supporting their claim that Western societies had entered a new phase in the history of modern capitalism after 1945. As I demonstrate, across these otherwise distinct discursive traditions the factory is relentlessly portrayed as the “Other” against which advanced capitalism is defined as an affluent economy and a “post-industrial society” fueled by knowledge, services, skilled labor, information, and an immaterial, creative, and affective production process. As

the story runs, these developments amounted to a “great transformation” in Western civilization, one that begins where the factory ends. But the postindustrial paradigm, as I go on to argue, registered not so much the actual downfall of the factory system as its widespread absence from narratives about the present and future of capitalism. Whereas I have thus far, in the course of this prologue, positioned my intervention within a disciplinary academic debate in the history of political thought, my first chapter will lay out a much broader and pervasive framework about the factory and capitalist society that, rather than being limited to political theory, is strewn across a variegated cultural realm, from popular magazines and classic sociology monographs to the fields of business management, cybernetics, and mainstream economics. As it will soon become clear, it is in response to this sweeping paradigm that my dissertation as a whole advances an alternative interpretation of capitalism. It does so by focusing on the enduring relevance of the factory—before its purported rise and after its alleged demise—through the four historical sites I call “factories of modernity:” the data center, the workhouse, the manufactory, and the colony.

In Chapter 2, “Data Center,” I take the central contentions of the postindustrial paradigm to task. If, as these accounts propose, the factory is indeed irrelevant to our understanding of postwar capitalism, then this should be nowhere more evident than in the high-tech economy of Silicon Valley—a paragon of automation, postindustrial society, and advanced capitalism. Yet, as this chapter shows, the factory is nowhere more useful to our understanding of contemporary capitalism than in Silicon Valley. To elucidate this claim, I bring to light the covert ways in which corporations at the heart of postindustrial capitalism rely on the political cycles and technical systems of production characteristic of the factory system to discipline, coerce, and control low-wage and unskilled workers. Known as “data janitors,” the tech workers who digitize our Google books and moderate our social media feeds are predominantly sourced from “alternative labor pools” composed largely of undocumented immigrants and workers of color from low-income

communities, such as the working-class barrios of East San Jose in the outskirts of Silicon Valley. Not only does this industrial arrangement of high-tech work point to the enduring organizing power of the factory in contemporary capitalism, it also unveils vital yet hidden patterns of economic and racialized domination within our “postindustrial” labor process. As I go on to show, these aspects of present-day capitalism have gone mostly unheeded in recent years because most dominant accounts of advanced capitalist society continue to define the postwar era in terms of a rupture with its past. In foregrounding the persistence of the factory in our “immaterial” knowledge economy, this chapter lays bare the ways in which labor, aesthetics, and race are constructed in the “post-industrial” fold. Building on critical insights from political thought and social history, the ensuing chapters combine archival research with close textual readings to not only challenge the ahistorical premises governing the postindustrial paradigm, but also—and most importantly—to offer an alternative understanding and critique of capitalist modernity from a genealogy of the factory system across the Atlantic world during the long eighteenth century.

My history of the factory begins in Chapter 3, “Workhouse.” Here, I read John Locke’s late economic thought alongside theoretical treatises, pamphlets, and policy amendments written in the late seventeenth century by political economists such as Charles Davenant and other less familiar late Stuart figures, including the Bristol Merchant John Cary and the inventor of the “double-headed” spinning wheel Thomas Firmin. By setting Locke’s writings on the economy within the context of key social transformations at the time, I argue that his contributions to capitalism were neither a vested defense of bourgeois interests nor a vindication of commercial agriculture, as various commentators have suggested. Instead, I interpret Locke as an early theorist of the political regimes of labor discipline, economic growth, and capital accumulation that incited and eventually came to sustain the workhouse system through the conscription of landless farmers into the ranks of wage-laborers. I contend that Locke’s economic doctrine throughout the 1690s inheres in what

social and economic historians have called “proto-industrialization”—a phase in the historical development of modern capitalism characterized by the expansion of manufacturing in the countryside. Moreover, I claim that, because proto-industrialization was deeply enmeshed in the expansion of Britain’s colonial economy, Locke’s proto-industrial ideas offer new insights into his vision of empire. That is, Locke’s understanding of the world economy aligns with the central commitments of modern imperial ideologies: a hierarchical, stadial theory of economic progress and a commercial policy aimed at improving the colonies while favoring metropolitan trade through an unequal relation of production and exchange. My engagement with late seventeenth-century economic ideas stresses the point that the factory’s place in the histories of political thought and capitalism cannot be properly represented through an insular notion of the economy, such as “agrarian capitalism,” “commercial society,” and “possessive individualism.” Rather, the factory is part and parcel of political, imperial, and cultural configurations that connected capitalism and its labor politics to phenomena often seen as separate from the economy. The following chapters illustrate this point by turning to emerging formations of aesthetics and race that helped to reconfigure the ways artistic production and racial difference related to techniques of manufacturing, wage-labor, the classification of things, and the material lives of the workers who produced them.

In Chapter 4, “Manufactory,” I look to England’s eighteenth-century workshops and ateliers of fine consumer goods to probe the ways in which luxury commodities were conceived and produced from 1752 to 1795. I argue that, in contrast to Stuart political economists, David Hume articulated his ideas about political economy through a language of cultural progress, artistic refinement, and sensuous gratification that flowed out of his views on luxury as an assorted inventory of consumer objects that doubled as a medium for articulating theories on vice and virtue, order and entropy, progress and decay, growth and decline. Reading Hume against the background of emerging techniques of mass production, new norms of taste, and the invention of the “fine

arts,” I argue that he defined luxury as a link between two worlds that are often seen as irreconcilable: the *economic* realm of the factory system, industrial manufacturing, and material wealth, on the one hand, and the *aesthetic* domain of politeness, refinement, genius, beauty, sentimentality, and art on the other. Further, I contend that this entanglement of economic and aesthetic categories in Hume’s thinking was not a theoretical abstraction but a reflection of social transformations in Britain’s sprawling commercial empire. To illustrate this claim, I turn to the ways Josiah Wedgwood, one of the period’s most celebrated industrialists, brought art and labor together in his luxury ceramics factory. Combining his artistic goals and aesthetic judgment with an insatiable quest for profit, Wedgwood transformed artisanal handicraft into an industrial apparatus of production by imposing stricter divisions of labor, scaling output, streamlining manufacturing, and recasting legions of creative artisans as menial workers. To the extent that Wedgwood’s factory engulfed the traditional pottery industry and transformed craftsmen into assembly workers, it also advanced the agenda of a modern ideal of art by reconfiguring artisanal labor as a form of mechanical activity against which the work of fine artists was defined as creative and free.

In Chapter 5, “Colony,” I examine the ways in which emerging theories of race, global commerce, and empire across Britain and the Atlantic world set in motion an ambitious plan to end the slave trade by colonizing Sierra Leone with emancipated black workers from 1787 to 1807. Conceived by a cohort of abolitionist activists, imperial administrators, botanists, and industrialists, the Sierra Leone Colony—or “Province of Freedom”—was envisioned as a laboratory for key ideas in modern political thought, from the social contractarian conceit of a commercial society put up from bare nature to ideas of liberty and natural rights articulated as a moral critique of slavery. As I argue, rather than an experiment in freedom and civil society, the Sierra Leone settlement was a test-case for novel arrangements of racialized wage-labor, foreign trade, and colonialism championed by two thinkers whose writings captured the shifting eighteenth-century trends in and attitudes toward

imperial policy, anti-slavery discourse, and racial difference: Malachy Postlethwayt and Maurice Morgann. Despite being mostly neglected figures in the history of modern political thought, these authors, I propose, laid out the theoretical foundations for a new historical relationship between race, capitalism, and empire after slavery in two central ways: first, by formulating a systematic theory of settler colonialism in Africa devoted to civilizing African natives, cultivating cash-crops, and serving Britain's burgeoning factory system (Postlethwayt); and second, by attacking racial slavery through a climatic theory of racialized wage-labor in which black populations were constructed as naturally ordained to work in plantations across Britain's tropical colonies, from South Florida to West Africa and Australasia (Morgann). In tracking the interplay between ideas and history, I contend that Postlethwayt, Morgann, and the Sierra Leone project furnished industrial capitalism and British imperialism with an allegedly "humane" set of discursive practices that sought to advance the global expansion of capitalism, empire, and abolition by connecting trading factories in West Africa and industrial factories in Britain to a network of colonial plantations across all tropical regions of the world.

I conclude with an epilogue, "Factories of Fulfillment," that brings the project back to the present moment in order to meditate on the arc and range of the dissertation and reflect on how my historical narrative of capitalist modernity enriches our frameworks for understanding capitalism and confronting its enduring structures of economic and racial domination. Drawing on the arguments of my foregoing chapters, I close with a visit to the "fulfillment center," a contemporary instantiation of the factory system and a paragon of the postindustrial workplace. Somewhere between trading outposts and manufacturing plants, fulfillment centers—such as Amazon's giant warehouses—play on the elusive sense of satisfaction suggested by their very names; for they have carried into the present the systems of labor control, discursive claims of cultural progress, and racial politics of value extraction present across the various factories of modernity in this dissertation.

Focusing as much on what has endured as on what has changed about the capitalist epoch since 1688, I look to fulfillment centers as a means to foreground the ways in which postindustrial work is styled as aesthetically transformative and affectively fulfilling yet thoroughly anchored in disciplinary mechanisms of production, manual labor, and racialized cycles of precarity that define the global supply chains of digital commodities—from cobalt mines in the Democratic Republic of the Congo to lithium-rich saltwater brines in Chile, from Amazon warehouses in rural America to giant electronics assembly plants in China.

As our journey across the interconnected and persistent lives of the factories of modernity will soon reveal, the many stops on the road to fulfillment are not aberrations; they are inheritances.

CHAPTER ONE
ABSENT FACTORIES

Figure 1. A mechanical factory (c. 1946). International News Photos. Source: “The Automatic Factory,” *Fortune* 34, no. 5 (November 1946).



In November 1946, *Fortune* ran a lengthy portfolio entitled “The Automatic Factory.” It led with a provocative headline: “The threat-and-promise of laborless machines is closer than ever. All parts are here” (Figure 1).¹ The spread included an editorial preface, full-color illustrations, and the article “Machines Without Men,” written by two physicists engaged in wartime radar research, Eric Leaver and John Brown.² Their piece put forth a detailed vision of a fully automatic factory that

¹ “The Automatic Factory,” *Fortune*, November 1946.

² Eric W. Leaver and John J. Brown, “Machines Without Men,” *Fortune*, November 1946.

promised to usher society into a new machine age, “another industrial revolution.”³ While “the modern factory could well be automatic, scientific, flexible, and functional,” Leaver and Brown wrote, “it still depends too heavily on manpower, tradition, and rule of thumb.” Replacing human labor with machines, tradition with innovation, and rule of thumb with science, they imagine “a factory as clean, spacious, and continuously operating as a hydroelectric plant.” Above the production floor “barren of men,” only “a few engineers, technicians, and operators walk about on a balcony.” Facing a wall of electronic knobs and switches, they insert and check records, watch and adjust batteries of control instruments. They are also the only humans in sight—“all else is automatic.” From the moment raw materials arrive at the factory they are placed under the guise of a continuous, automatic assembly line which manufactures these materials into a stream of finished commodities that are then packaged and loaded into delivery trucks before being shipped out to consumers—all without ever being touched by a single human hand.⁴

In addition to providing industries with lower costs, higher output, cheaper and better products, and a faster rate of response to market fluctuations, an automatic factory system would have important benefits to society and politics, including, “the decentralization of industry, lessening of financial control, decline in value of sheer manpower, revision of military-security concepts, and acceleration of technological change.”⁵ Knowing that the automatic factory’s most immediate and controversial social effect—the displacement of human labor—would provoke the ire of industrial workers, unions, and segments of the broader public, Leaver and Brown nevertheless hold their ground.⁶ To make this vision a reality, the authors note, would require changing the way people

³ Ibid., 165.

⁴ Ibid., 199, 194–200.

⁵ Ibid., 192.

⁶ Indeed, the Research Director of the Industrial Hygiene Foundation of America wrote the editors of *Fortune* in response to Leaver and Brown’s piece: That the machine takes over physical labor is not enough, for in doing so there may be generated other stresses, more subtle and far-reaching in their effects upon the worker. [...] Machines must be designed to meet *human* as well as functional requirements. To this end, the designing

thought about, designed, and used machines, which, in 1946, was still predominantly determined by the mechanical, coal-and-iron technology of smokestack factories. “The new machines will force the issue,” they wrote, “force society to find a better use for men than to make them mechanical operators of machines.”⁷ Automation, they insisted, will create a demand for skilled labor, which will in turn drive society forward by developing the aptitudes, knowledge, and training of workers in addition to reducing their workload by half while raising their wages. As the story runs, the human workforce in an automatic factory would be confined to managers, charged with deciding what and how much to produce, and engineers tasked with carrying out management’s decisions.⁸ “Many of the ills of modern industrial society,” Leaver and Brown contended, “can be traced in large part to the regimentation of workers,” which tends to “degrade the worker to an unskilled and tradeless nonentity” as well as to destroy their skills and initiative “without a compensating measure of economic security.”⁹ Their envisioned automatic factory would reverse this scenario by “demanding a highly skilled force of technicians and operators” while new electronic machines would “emancipate the worker forever from degrading or monotonous toll.” The shocks associated with such a massive transition from an unskilled to a skilled factory workforce would be absorbed by training programs and an abridged workweek of only two or three days. Since this production system would be designed for a mass market, its economies of scale would be consequently “passed on in higher wages to the worker and greater value to the consumer,” leading to “a higher level of living than ever before.” In short, an economy that avails itself of this innovation, they concluded, “will be so different from the present it will constitute a new industrial order.”¹⁰

engineer should have the aid of the physiologist and psychologist.” Theodore F. Hatch, “Letter to the Editors: Men Versus Machines,” *Fortune*, March 1947, 40.

⁷ Leaver and Brown, “Machines Without Men,” 165.

⁸ *Ibid.*, 200.

⁹ *Ibid.*, 204.

¹⁰ *Ibid.*, 200.

This was a radical and provocative proposal. But visions of automatic factories went as far back as the early nineteenth century. What distinguished *Fortune's* version of automatic production from earlier accounts was its suggestion that technological innovation would bring the factory system—as it was then known—to an end, replacing it with a “new industrial order.” While today we may see it as a given fact that machine automation marked the demise of industrial factories, industrial thinkers in the 1830s believed the exact opposite to be true. On their view, the tendency of automation, or “self-acting machinery” as they called it, was rather to expand and prolong the factory system. In his influential 1832 study of industrial technology, *On the Economy of Machinery and Manufactures*, Charles Babbage claimed in no uncertain terms that machines “lead to the establishment of large factories.”¹¹ As he had it, the application of machinery to industrial production was “one cause of the great size of manufacturing establishments, which have increased with the progress of civilization.”¹² Likewise, Andrew Ure defined a factory in his 1835 *Philosophy of Manufactures* as “a vast automaton, composed of various mechanical and intellectual organs, acting in uninterrupted concert for the production of a common object, all of them being subordinated to a self-regulated moving force.”¹³ “Self-acting” or “automatic” machines were central to Ure’s optimistic outlook on the factory as both an agent of modern progress and a “grand palladium” to

¹¹ Babbage, *Machinery and Manufactures*, 213–14. This work builds on an earlier piece titled “An Essay on the General Principles which Regulate the Application of Machinery to Manufactures and the Mechanical Arts” published in 1827 and an expanded version of this essay, titled “An Introductory View of the Principles of Manufactures,” first appeared as an entry in the 1829 edition of the *Encyclopedia Metropolitana* (Vol. 8, pp. 1–84). The book was first published in 1832, selling over 3,000 copies in two months. By 1835 four editions had been printed in Britain along with American versions and translations into French, German, Spanish, and Italian. The second edition comprises the most substantive revisions and additions, including three new chapters, one of which—“On a New System of Manufacturing”—Babbage donated 100 copies to the London Mechanics Institute in March 1833. Renee Prendergast, “Charles Babbage (1791–1871),” in *The Palgrave Companion to Cambridge Economics*, ed. Robert A. Cord (London: Palgrave Macmillan, 2017), 279; Maxine Berg, *The Machinery Question and the Making of Political Economy, 1815–1848* (Cambridge: Cambridge University Press, 1980), 162.

¹² Babbage, *Machinery and Manufactures*, 213.

¹³ Ure, *Philosophy of Manufactures*, 13–14.

the material comfort of workers.¹⁴ “The most perfect manufacturer,” he argued in the entry to the term “Automatic” in his 1839 *Dictionary of Arts*, “is that which dispenses entirely with manual labour.”¹⁵ At the same time, most nineteenth-century industrial thinkers believed that the slow and gradual rate of technological change in industrial society facilitated the slow expansion of the factory while preventing workers from being displaced by new machines in too great a number all at once. As William Cooke Taylor noted in his 1844 *Factories and the Factory System*, the effect of mechanical power has been “to *facilitate*, not to *supersede*, labour.”¹⁶ Since then, however, automated technology had advanced in full tilt, making breakthroughs that these thinkers could not have imagined much less foreseen. As the twentieth century ran its course, the prospect that newer, superior machines would leave millions unemployed in one fell swoop seemed inevitable.

In December 1932, *Fortune* announced this day had arrived.¹⁷ In an essay aptly titled “Obsolete Men,” the magazine suggested that the engines that had powered industry for centuries, first by steam then by electricity, had been supplanted by more productive and efficient machines, making “obsolete men” of some two million workers in the United States. Two years earlier, the same publication had already hinted that this day was in sight by running a story on a Milwaukee factory—A. O. Smith Corporation—that turned out 10,000 car chassis every day through a semi-automatic assembly line supervised by a few skilled engineers and mechanics.¹⁸ According to the piece, automatic mills promised to transform not merely the way things were made, but also the

¹⁴ *Ibid.*, 329.

¹⁵ Andrew Ure, *A Dictionary of Arts, Manufactures, and Mines: Containing a Clear Exposition of Their Principles and Practice* (London: Longman, Orme, Brown, Green, & Longmans, 1839), 76. “AUTOMATIC, a term which I have employed to designate such economic arts as are carried on by self-acting machinery. The word ‘manufacture’ [...] has now come to signify every extensive product of art which is made by machinery, with little or no aid of the human hand, so that the most perfect ‘manufacture is that which dispenses entirely with manual labour.’”

¹⁶ William Cooke Taylor, *Factories and the Factory System; from Parliamentary Documents and Personal Examination* (London: Jeremiah How, 1844), 3.

¹⁷ “Obsolete Men,” *Fortune*, December 1932.

¹⁸ Stuart Chase, “Danger at the A. O. Smith Corporation,” *Fortune*, November 1930.

nature of work. Smith Corporation, lauded by *Fortune* as “the most advanced single exhibit of the automatic function in the world,” had done away with manual and menial work almost entirely.¹⁹ The automatic factory, the author suggested, was sure to end the scourge of menial workers; but in a more menacing respect it also threatened to “end industry itself—in the form that we have hitherto known it.” From where *Fortune* and its editors stood, the outcome of automation was nothing less than a full-blown transformation of modern society; it portended a world without poverty, drudgery, and waste in which the working day would be cut by half.²⁰ Automation, the article concluded, would usher society into “the era of the engineer.” For *Fortune*, the advent of “automatic mills” and “automatic fabrication” signaled the inevitable arrival of a new mode of production.

While the magnitude of unemployment and the technology believed to have caused it were certainly new in the 1930s, learned responses to both took on a familiar, nineteenth-century tone. A whole generation of industrial thinkers had already figured mechanical factories as the engines of progress, as the great paeans to modernity.²¹ This idea was still very much alive in the 1930s. “Modern industrialism,” *Fortune* declared in 1932, “is the undiscovered continent of our time.”²² Much like Ure, Babbage, and Cooke Taylor, the scientists, engineers, and economists of the 1930s were convinced that workers had no reason to fear technology.²³ This time around, however, the solution to the decline of industrial labor was not, as in the 1830s, the creation of new industrial jobs but of an entirely new industry—the service industry. Indeed, the statistics that recorded an

¹⁹ *Ibid.*, 62.

²⁰ *Ibid.*, 102.

²¹ Not only Babbage and Ure, but also Jacob Bigelow, William Cooke Taylor, Robert Owen, and Henri Saint-Simon. See Jacob Bigelow, *Elements of Technology* (Boston: Hilliard, Gray, Little, and Wilkins, 1829); Cooke Taylor, *The Factory System*; Robert Owen, *A New View of Society: Or, Essays on the Principle of the Formation of the Human Character, and the Application of the Principle to Practice* (London: Cadell, Davies, and Murray, 1813); Henri Saint-Simon, “De L’Industrie (1816),” in *Saint-Simon: Sa Vie et Ses Travaux*, ed. M. G. Hubbard (Paris: Guillaumin et Cie., 1857), 155–211. Ure, for instance, described the invention of the automatic spinning mule, or “power loom,” as having “sprung out of the hands of our modern Prometheus at the bidding of Minerva—a creation destined to restore order among the industrious classes, and to confirm to Great Britain the empire of art.” Ure, *Philosophy of Manufactures*, 367.

²² “Obsolete Men,” 26.

²³ Howard Scott and Paul Douglas are two such authorities referenced in the article.

unprecedented number of unemployed factory operatives from 1919 to 1929 were accompanied by another set of astonishing figures. Various surveys found that, during the same period, over half a million new positions had been created in “the medical and allied professions, and in hotels, restaurants, moving pictures, and banking” while millions of unemployed industrial workers forged alternative careers in service repair and life-insurance, as chauffeurs and teachers.²⁴ These numbers confirmed the theoretical models of mainstream economists at the time, which predicted that “the machine would inevitably create as many jobs as it destroyed,” or that, in lay terms, “even an automatic bulb maker which threw 10,000 men out of work would merely, in the long run, produce 10,000 surgeons or 10,000 insurance agents or 10,000 filling-station operatives or 10,000 poets.”

Before its fruits could be reaped in society, however, the seeds of technological progress had to be sown within the factory itself. That is, the transition from unskilled manual labor to skilled service and technical work—the indelible mark of postindustrial society—began in the automatic factory. According to *Fortune’s* 1930 piece on Smith Corporation, for instance, the automatic function in industry, which was then “steadily gaining ground,” had already begun to displace “machine-feeders and nut-screwers by skilled designers, inspectors, [and] dial-watchers.”²⁵ As a result, a critical mass of industrial workers—of proletarian “robots”—were then giving way to “workers with reasonably intelligent and independent jobs.” In other words, the idea was that the very technology that pushed industrial workers out of the *mechanical* factory would, after some time, bring a parcel of them back into the *automatic* factory as a new class of specialists, engineers, and technicians. A. O. Smith Corporation’s automatic factory, for instance, replaced “two thousand dreary jobs” with “200 amusing ones, for an identical output!”²⁶ The ennoblement in the nature of work—from dreary to amusing—sustained by automation was, on *Fortune’s* telling, as important as

²⁴ While these figures do not account for the increase in the wage-earning population at the time, of around two million, they illustrate the beginning of a shift from industry to service that spiraled into the 1960s.

²⁵ Chase, “Danger at the A. O. Smith Corporation,” 62.

²⁶ *Ibid.*, 65; emphasis mine.

the economy of labor it purveyed. This was because, as the article further claimed, workers in the automatic factory—skilled engineers and technicians—valued their work as “something different” and understood their jobs to be “far more independent and interesting than those in the hand mill.” Moreover, since this technology can be applied “almost everywhere,” in any industry “where the demand is great enough,” the tendency was that automatic factories would in time spread across society and eventually employ the millions of workers they had originally displaced. The advent of an automatic factory system had by the 1930s set the stage for a postindustrial future. And that future, as the story goes, is our present moment.

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Fortune's stories—of an emerging service industry and a new affluent society, of automatic factories teeming with amusing jobs, of poets and engineers—mark the early hours of two developments that, within a decade, would come to symbolize a watershed in the histories of capitalism and the factory system: “automation” and “post-industrial society.”²⁷ These stories index the emergence of various, drawn-out discourses and debates about postwar capitalism—what I call the “postindustrial paradigm”—that first predicted then confirmed the displacement of the factory system by automated technology and a knowledge-based service economy. *Fortune's* accounts of automatic factories and the “era of the engineer,” dramatized though they certainly were, offer a glimpse into how the conceit of a “post-industrial society” became the dominant lens through which technologists, entrepreneurs, social scientists, and critical thinkers continue to interpret postwar capitalism as a radical break with its industrial past. But before we can unravel how and why the factory fell out of favor among industrialists, journalists, engineers, scholars, and the public at large

²⁷ I use the contemporary spelling “postindustrial” throughout unless it is a direct quote from or reference to a text, author, or period in which the term was conventionally hyphenated—most often as “post-industrial” and in rare occasions as “post-Industrial.” Only in the latter cases the term will be in quotations.

we must first grapple with the central role the factory played in bringing about its own, allegedly fateful demise. As I argue throughout this chapter, the dawn of a postindustrial society had more to do with the factory than is generally believed. By engaging the shifting figurations of the factory in popular, scientific, and academic discourse on technological change following the Second World War, I contend that the political, cultural, and economic issues raised by the advent of automation and postindustrial society shed important light on the rise to prominence of the widely-held belief that the factory is neither a significant aspect of contemporary capitalism nor an important site for understanding or critiquing capitalist society and, as I argue in the ensuing chapters, the labor regimes, aesthetic fabric, and racial politics of historical capitalism.

This chapter traces a historical narrative of the ideas, inventions, and circumstances that register the factory's perceived obsolescence in a rapidly-changing capitalist society after 1945. In attending to diverse representations of the factory across a wide range of texts and traditions, from magazine articles and roundtables to classic works of midcentury social science, engineering, and critical theory, I argue that the disappearance of the factory from leading accounts of postwar capitalism is the governing feature of what I call the "postindustrial paradigm." I develop this argument in three sections, each on one instantiation of this paradigm: automation (Part 1), post-industrial society (Part 2), and critical theories of capitalism (Part 3). In so doing, however, I do not claim to punctuate the *actual* downfall of the factory, which, as I argue in Chapter 2, has not yet come to pass. Rather than the demise of real factories, this chapter foregrounds the emergence of "absent factories" in the imaginations, models, and theories of engineers, business experts, social scientists, and critical thinkers. In short, this chapter tracks the displacement of the factory by visions and metaphors of its foretold collapse—the uprooting of the factory first by the "automatic factory," then by the "social factory." And it is against the background of this powerful and dominant paradigm—put together by prophecies of an imminent future and theories of an

interstitial present—that the ensuing chapters educe an alternative historical narrative of the factory’s enduring relevance to modern political thought and practice, to modern culture and the world economy, as much before as after industrial capitalism. In doing so, this chapter sets the stage for everything that follows it: the digital drudgery of high-tech work in the data center (Chapter 2), the exploitation of peasants in the workhouse (Chapter 3), the invention of the fine arts and the toil of artisans in the manufactory (Chapter 4), and the racial domination of black workers in the colony (Chapter 5).

PART 1: AUTOMATION

The industrial boom of the late 1930s and early 1940s, galvanized in large part by the New Deal and the wartime economy, temporarily pushed fears and hopes over automatic factories to the margins of public discourse. After 1945, however, electronics and communications research undertaken during the Second World War brought to light and into circulation crucial developments in computer and machine technology that provided solutions to pressing problems of automatic control, lifting the idea of a fully automatic factory “from the realm of science fiction into that of serious discussion.”²⁸ Indeed, in the decade following the War, interest over the effects of automatic technology on society and its applications to industry grew at an unprecedented rate. In the postwar era, popular business magazines became staunch platforms for bringing the automation debate to public prominence. As I have already noted, *Fortune* led the way, running countless interviews, special issues, roundtables, interviews, and op-eds on the advent of the automatic factory. Meanwhile, numerous academic articles and monographs on computers and automated control systems were published in this period, notably Norbert Wiener’s 1948 *Cybernetics*, in which he

²⁸ John Diebold, *Automation: The Advent of the Automatic Factory* (New York: D. Van Nostrand Company, 1952), 3. During the war, Smith Corporation, whose semi-automatic car-frame plant I discuss above, built a new factory that produced 500-pound aerial bombs for the US military at a rate of 1,000 per day. See “A. O. Smith at War,” *Fortune*, October 1941.

announced that society was on the brink of a “second industrial revolution” whereby the human brain, rather than the hand, would be replaced by machines. “The automatic factory and the assembly line without human agents,” Wiener wrote, “are only so far ahead of us as is limited by our willingness to put such a degree of effort into their engineering.”²⁹ As journalists, the public, and academics thought about and discussed automation, research institutes, at MIT and the University of Michigan, as well as corporations, such as Ford, General Electric, and IBM, made considerable strides in designing new automatic machines and applying them to mass production. But it was in 1952, with the publication of John Diebold’s *Automation: The Advent of the Automatic Factory*, that the terms “automation” and “automatic factory” received their most thoroughgoing analytical treatment, marking the birth of the “automation movement.” The popularity of cybernetics and automation among journalists, scientists, industrialists, and the general public also captivated midcentury political thinkers. Martin Heidegger, for instance, stated in an interview from 1966 that “cybernetics was [a] form of technology replacing philosophy,” while Hannah Arendt and Herbert Marcuse, as I discuss below, commented explicitly on the social and political effects of factory automation.³⁰

As a discourse about scientific progress, the automation movement had two central features that bear directly on political theory: a focus on ideas and philosophy, on the one hand, and a concern with political economy, culture, and labor, on the other. Diebold expressed the movement’s theoretical focus most prominently in his 1952 book, claiming that “automation can often be achieved only by *rethinking*,” which he defined as an “attitude,” or “an ability to get outside of a problem that seems insoluble and approach it in a new and perhaps wholly different way.”³¹ While Diebold’s focus was largely on the applications of technology to industry, he insisted that, before it

²⁹ Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine*, 2nd ed. (1948; repr., Cambridge: MIT Press, 1961), 27.

³⁰ Martin Heidegger, “Nur Noch Ein Gott Kann Uns Retten,” *Der Spiegel*, May 31, 1976. Quoted in Brian Simbirski, “Cybernetic Muse: Hannah Arendt on Automation, 1951–1958,” *Journal of the History of Ideas* 77, no. 4 (2016): 596–97. The interview was conducted in 1966 and published in 1976.

³¹ Diebold, *Automation*, 45.

can be practiced, automation must be understood as a philosophy for “it is a way of thinking as much as it is a way of doing.”³² Indeed, automation, he discerned, was “a new *concept*—the idea of self-regulating systems—and a new set of principles.” The full benefits of automation in society required political, industrial, and labor leaders to understand it as a social and political theory. Yet, as we have seen with Babbage and Ure, neither was the idea of self-regulating systems particularly original nor was Diebold’s focus on philosophy entirely new.

Theories of management, based on scientific and technical models of production and governance, had already been proposed by Frederick Taylor in *Shop Management* (1903) and *Principles of Scientific Management* (1911) as well as, in a different light, by Thorstein Veblen in *The Engineers and the Price System* (1921). Recognizing the automation movement’s debt to Taylor’s business philosophy, Frank Shallenberger suggested in 1957 that, “before we term automation the second industrial revolution, we should recognize another contender for the title, the revolution in management philosophy and practice pioneered by Frederick W. Taylor at the turn of the century.”³³ In the same way Diebold and others understood automation as a battle over ideas, Taylor’s revolution “was not evidenced by material changes such as automatic conveyors, transfer machines, and workerless factories,” but by his introduction of “scientific planning and control as a substitute for off-the-cuff management,” which was in many ways “more fundamental than automation.” Still, as much in theory as in practice, early advocates of automation thought of their plan as decidedly distinct from Taylor’s insofar as their aim was not simply to reform or perfect production systems and management techniques; it was to completely reinvent the factory system and its meaning to society writ large. And it is precisely in this sense, due to its theoretical and social force, its promise

³² John Diebold, *Beyond Automation: Managerial Problems of an Exploding Technology* (New York: Praeger, 1970), vii.

³³ Frank K. Shallenberger, “Economics of Plant Automation,” in *Automation in Business and Industry* (London: John Wiley & Sons, 1957), 549.

to transform society, that automation was widely defined as a “new industrial order.”³⁴ Although in the mechanical factory system, propelled by the steam engine and the electric motor, “human physical labor is replaced by machine power,” in the automatic factory, called to motion by self-regulating systems and the computer, “the monitoring and control tasks now humanly performed,” Diebold wrote, “will be done by machines.”³⁵ Automation was thus the name given to the highest level of industrial mechanization; if the technological differential of the Industrial Revolution was power, that of the second was control. From the steam engine to automation, the factory was a place where theories and ideas converged with practice and out of which a new organization of society was born.

While the focus of automation was at first on manufacturing, the movement’s continued insistence on the “automatic *factory*” can be misleading given what many of its advocates understood by the term “factory.” The automatic factory they envisioned was not a manufacturing plant; in fact, as Diebold saw it, automation would only be applicable to a few manufacturing industries.³⁶ Rather, the effects of automation would be more “spectacular and far-reaching” in the “information-handling functions of business.”³⁷ Indeed, some of Diebold’s most detailed illustrations of automation pertain less to the assembling of materials than to the organization, processing, and flow of goods and data. Automation would thus be most useful to offices, insurance firms, small companies, and even the trading floor of the New York Stock Exchange; it would facilitate such tasks as transportation, accounting, ordering and inventory control, business management, and operations research.³⁸ “While ‘Detroit Automation’ may be peripheral,” he observed, “control and

³⁴ David F. Noble, *Forces of Production: A Social History of Industrial Automation* (New Brunswick and London: Transaction Publishers, 2011), 69.

³⁵ Diebold, *Automation*, 140.

³⁶ *Ibid.*, 142.

³⁷ *Ibid.*, 144.

³⁸ *Ibid.*, 93, 108–10, 112–13; 94–95; 46–50; 101–4; 116–18; 121–22; 122–26.

information technology is at the heart of the truly significant part of the automation development.”³⁹ This was itself a retort to the public hysteria over technological unemployment. When applied to these kinds of tasks, “mechanization rarely replaces labor, for the process does not become entirely automatic.”⁴⁰ Rather, “automatic machines will make it possible to render new, more comprehensive and more economic services.” As such, automation should accelerate and continue “the present trend toward expansion of the service industries in relation to other industries.”⁴¹

When applied to the assembly line, automation was seen as a solution to the debasement of workers and their subjugation to machines. Diebold recognized that in a typical factory, machines tended to subordinate workers and deprive them of making any creative contribution to their work.⁴² Diebold agreed with previous advocates of automation—such as Leaver and Brown’s take in *Fortune*—that much of the “psychological unrest and discontent in industry” ensues from “the attempt to adjust the worker to the machine that paces him and, in a broader way, of the mechanistic concept of the function of workers in *mass production*.”⁴³ By contrast, automatic machines handle all repetitive and dreary tasks, so workers will be free to engage only in those activities—inside and outside the workplace—that demand and develop their “inherent human capacities.”⁴⁴ Diebold does not claim that after automation every machine operator in a factory will become an engineer, but he does hold that they will be “happy or happier performing tasks that use their abilities more fully.” In a fully automatic factory, the tasks that will require most human labor are “semi-skilled and highly skilled maintenance and repair,” which, although more technically demanding than menial factory work, are “fully within the ability of the people who today work at

³⁹ John Diebold, *Man and the Computer: Technology as an Agent of Social Change* (New York: Praeger, 1969), 134.

⁴⁰ Diebold, *Automation*, 143.

⁴¹ *Ibid.*, 144.

⁴² *Ibid.*, 159–60.

⁴³ *Ibid.*, 160–61.

⁴⁴ *Ibid.*, 162, 163.

the simple repetitive tasks of the assembly line.”⁴⁵ The counterintuitive twist of automation, Diebold had it, is that it may “bring us back to the human and psychological values of the self-respecting craftsman.”⁴⁶ Mechanical and electrical repair work, he insisted, “can provide challenges, pleasures, and satisfactions very much like those enjoyed by the swordsmith or cabinetmaker of old.” Highlighting the “personal challenges” and “the great self-respect” mechanics “enjoy” as well as “the respect they earn from their fellow workers,” Diebold held that automation would add a significant psychological and affective premium to factory work. But as the corporations who would eventually develop and apply this technology made clear, the human side of automation was very much an afterthought.

In 1953, *Fortune* hosted a roundtable between sixteen experts on the automatic factory (Figure 2). Among the participants were representatives from companies with a large stake in its implementation, notably Ford, General Motors, IBM, and General Electric, as well as an expert on servomechanisms from MIT (William Pease), an eminent sociologist from the University of Chicago (David Riesman), and the authors of the 1946 piece “Machines without Men” (Leaver and Brown).⁴⁷ The roundtable was introduced by the moderator as a discussion on “the Second Industrial Revolution,” informing the reader: “if you want to know the future of American productivity,

⁴⁵ *Ibid.*, 163.

⁴⁶ *Ibid.*, 164. This was also how the sociologist C. Wright Mills thought of the ideal prospect of technology in culture. “Only by a craftsman-like style of life,” Mills argued in 1952, “can the split domains of work and leisure become unified; and only by such self-cultivation can the everyday life become a medium for genuine culture.” “As ideal,” he continued, “craftsmanship stands for the creative nature of work, and for the central place of such work in human development as a whole. As practice, craftsmanship stands for the classic role of the independent artisan who does his work in close interplay with the public, which in turn participates in it.” C. Wright Mills, “The Unity of Work and Leisure (1954),” in *Power, Politics and People: The Collected Essays of C. Wright Mills*, ed. Irving Louis Horowitz (New York: Oxford University Press, 1963), 348–49, 383–84.

⁴⁷ “The Automatic Factory: A Fortune Roundtable,” *Fortune*, October 1953.

Figure 2. Front page of *Fortune's* roundtable on the automatic factory (1953). Source: "The Automatic Factory: A Fortune Roundtable," *Fortune* 48, no. 4 (October 1953).

Technology

General Electric	Aluminium Ltd.	Cross Co.	General Motors	Ford Motor	I.B.M.	Pratt & Whitney	Electronic Associat
							
W. W. Beardslee <i>Mechanization</i>	J. J. Brown <i>Automatism</i>	R. E. Cross <i>Transfer machines</i>	R. J. Emmert <i>Manufacturing</i>	G. P. Hitchings <i>Economic analysis</i>	C. C. Hurd <i>Mathematics</i>	J. J. Jaeger <i>Machine tools</i>	E. W. Leaver <i>Electronics</i>

The Automatic Factory

A Fortune Round Table

Sixteen "multi-channel communicators" (i.e., men) exchange views on the Second Industrial Revolution. They don't always speak the same language, and not always yours, either. But if you want to know the future of American productivity, nothing is more revealing than the shoptalk of the men who ultimately determine it.

Historians will have to decide if a Second Industrial Revolution actually got under way sometime around the middle of the twentieth century. By popular definition the second revolution will replace man's sensory apparatus and brain—in doing routine jobs—as the first replaced human (and animal) muscle power. The first revolution, still continuing, *mechanized* manufacturing processes. The second will *automatize* them; i.e., it will remove man from the manufacturing operation itself and relegate him to maintenance and supervisory roles. According to this definition, automatization has made significant progress in the oil, chemical, and similar fluid-handling industries, but relatively little progress in industries that process metal.

To learn how automatization is progressing in the metalworking and assembly-line industries, FORTUNE invited representatives from ten companies, each with a large stake in the Automatic Factory, to participate in a round-table discussion. Also present: an authority on servomechanisms from M.I.T., an eminent sociologist from the University of Chicago, and E. W. Leaver and J. J. Brown, the authors of FORTUNE's November, 1946, article, "Machines Without Men." (The Round Table's sixteen members appear above.) Participants were sent a reprint of the 1946 article, which served as a take-off point for the discussion.

The Round Table seemed to agree that the next eight to ten years—because of a tight labor supply resulting from the low-birth-rate Thirties—will provide industry with an ideal opportunity to go all out on automatization. One estimate presented to the Round Table was that industrial productivity might need to be over 40 per cent higher in 1960 than in 1950 if the presently surging population is to enjoy a standard of living moving upward at the rate to which the U.S. is accustomed. Since manufacturing productivity in the past has risen only about 3 per cent per year, it is evident that the nation's engineers will have to exploit the potentialities of automatic production without stint.

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Photographs by Bernard Newman • scores

nothing is more revealing than the shoptalk of the men who ultimately determine it.”⁴⁸ The participants agreed that not only was the technology available for carrying out their vision of a fully automatic factory system, so were the necessary social and demographic conditions. In light of ongoing shortages in labor supply, the ensuing decade, they believed, would “provide industry with an ideal opportunity to go all out on automatization.” As a representative from General Electric put it, “we don’t think [automation] is experimentation. We think it is coming. We think it will probably be an evolution, not a revolution.”⁴⁹ Two important aspects of this debate anticipated the key transformations of postindustrial society: the replacement of manual labor by machines and the displacement of skilled labor by computers.

The role of the computer raised an important question for the automatic factory, which today, as I will discuss in Chapter 2, is at the center of debates on digital and affective labor: are machines able to perform the more delicate human labor of sensing, judging, and feeling? As had been popularized by Wiener’s period-defining *Cybernetics* and reaffirmed in Edmund Berkeley’s 1949 *Giant Brains, or Machines that Think*, the computer, electronic networks, and automatic systems foreboded an imminent revolution in industry and society.⁵⁰ This idea was likely to be familiar to *Fortune* readers from two articles published in 1949, which suggested, respectively, that the computer would be the artificial brain of a new industrial order and the key to the automatic factory.⁵¹ In one of these pieces, titled “Mechanical Brains,” the author reiterated Wiener’s well-known postulate: “while the first industrial revolution involved the substitution of machinery for man’s musculature,

⁴⁸ *Ibid.*, 168.

⁴⁹ *Ibid.*, 169.

⁵⁰ Wiener develops this position in Norbert Wiener, *The Human Uses of Human Beings: Cybernetics and Society* (1950; repr., London: Free Association Books, 1989). Berkeley founded the journal *Computers and Automation* that ran from 1951 to 1978, and under this title since 1953.

⁵¹ Louis N. Ridenour, “Mechanical Brains,” *Fortune*, May 1949; “A Key to the Automatic Factory,” *Fortune*, November 1949.

the second will replace by inanimate devices man's senses, nervous system, and brain."⁵² Four years later, the moderator of the automatic factory roundtable repeated the axiom: "The first revolution, still continuing, mechanized manufacturing processes. The second will automatize them; i.e., it will remove man from the manufacturing operation itself and relegate him to maintenance and supervisory roles."⁵³ There is however a subtle yet significant distinction in these two formulations of the second industrial revolution. In the former, even the most skilled workers would be replaced by the computer due to its superior intelligence and sensory capacity; in the latter, technology will offer skilled workers a new opportunity for exercising their expertise. Economists describe this distinction as "replacing" and "enabling" technologies.⁵⁴ To put it differently: if the automatic factory promised to make human work more enjoyable and skilled by eliminating drudgery, would the computer make that transition from unskilled to skilled labor unattainable by surpassing humans in their only competitive advantage over machines, namely, their intelligence, emotions, taste, and judgment? As noted by the representative for Raytheon, one of the largest manufacturers of military and commercial electronics at the time, humans are better than machines at handling solid objects because it is "pretty darned difficult to make a machine that can do what the ten fingers—along with the eyes—can do."⁵⁵ Yet, for this reason, humans are also "awfully poor at trying to handle liquids and gases." The founder of Cross Company, which specialized in automatic transfer machines, responded: "If we could find some way of doing mechanically what the man does now, that is, looking, listening, feeling—to detect that a tool is worn out—and if we could feed that information

⁵² Ridenour, "Mechanical Brains," 117.

⁵³ "The Automatic Factory: Roundtable," 168.

⁵⁴ Frey, *The Technology Trap*, x; Daron Acemoglu and Pascual Restrepo, "Artificial Intelligence, Automation and Work" (Massachusetts Institute of Technology, Department of Economics Working Paper Series, Cambridge, 2018).

⁵⁵ "The Automatic Factory: Roundtable," 185. Raytheon was founded by Vannevar Bush, one of the contributors to the Manhattan Project, whose invention "Memex" is widely regarded as a precursor of the hypertext. See Vannevar Bush, "As We May Think (1945)," in *From Memex to Hypertext: Vannevar Bush and the Mind's Machine*, ed. James M. Nyce and Paul Kahn (Boston: Academic Press, 1991), 85–110.

back to our control apparatus, we would be able to take a big step forward.”⁵⁶ Since high-speed electronic computers could perform prodigious feats of logical reasoning, “it seemed obvious that they ought to fit into the Automatic Factory somewhere. But where?”⁵⁷

The debate over the role of computers in the automatic factory brought to light the possibility that automation could be a threat not only to assembly-line operatives, but to skilled workers as well. One of the representatives from Ford tackled the question as a public relations problem. Since the prospect of a fully automatic factory raised public anxieties about technological unemployment, he noted that “a better selling job has to be done on the social desirability of increased mechanization.”⁵⁸ This made sense since Ford had just started production in its new, automatic engine foundry in Cleveland. In fact, the term “automation,” although theorized for the first time by Diebold, was coined by D. S. Harder, Vice President of manufacturing at Ford, to describe the automatic handling of car parts by machines (Figure 3).⁵⁹ Ford had done exactly what its representative suggested to the roundtable. In the early 1950s, the company made a promotional film titled *Technique for Tomorrow* (1953) aimed at introducing its cutting-edge application of automation at the Cleveland foundry. And although the overall focus of the video was on the new technology, its narrative arc opened and closed with the workers. At one point, after a detailed description of the automatic assembly, the narrator intervenes: “At first it looks like the machines are doing it all alone. That’s the automation. But look around the other side and you will see the

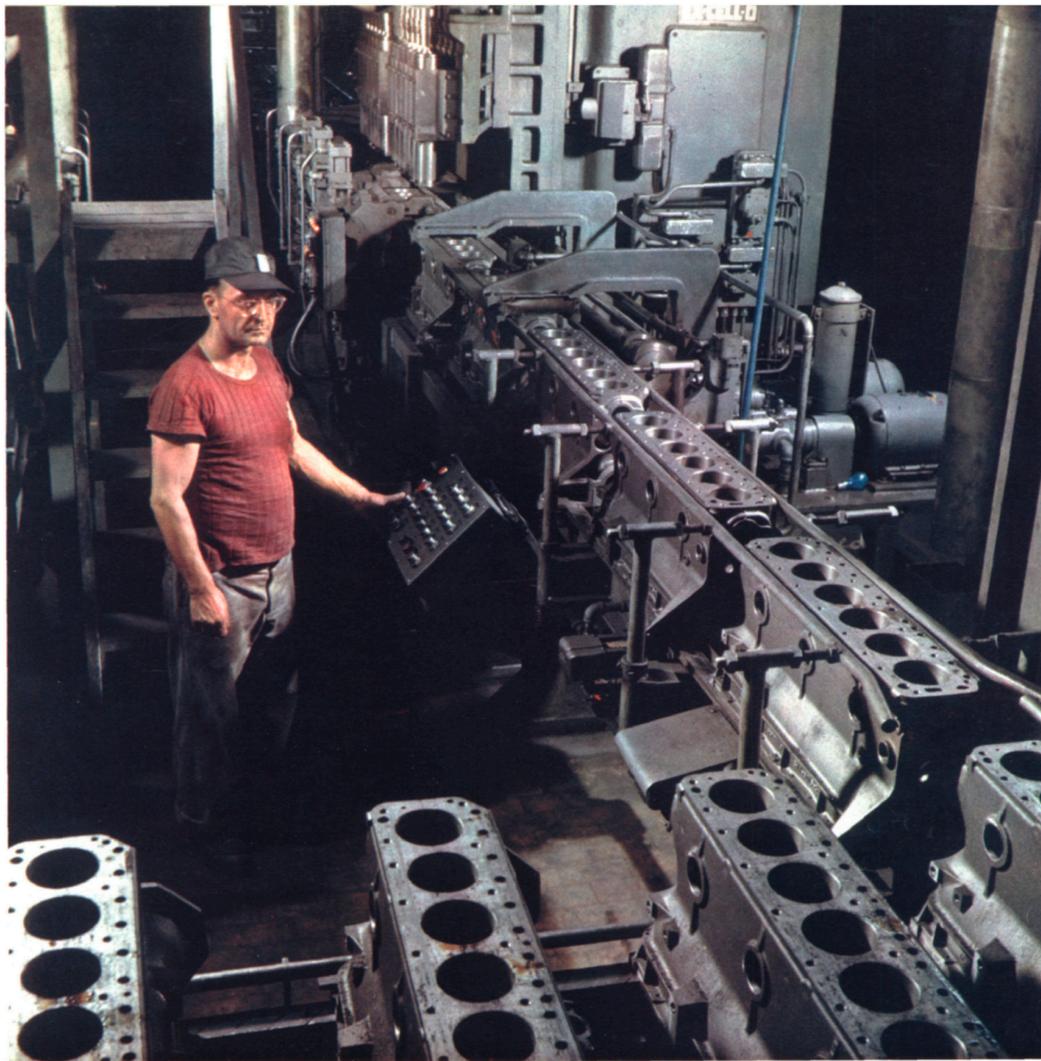
⁵⁶ “The Automatic Factory: Roundtable,” 187.

⁵⁷ *Ibid.*, 188.

⁵⁸ *Ibid.*, 190.

⁵⁹ Diebold, *Automation*, ix. Interspersed with the roundtable piece, *Fortune* printed a full-page and full-color advertorial on Ford’s new Cleveland plant (Figure 3). The caption beneath the operator reads: “A lonely job setter on the Ford engine-block line waits for the Second Industrial Revolution to replace even him.” See “The Automatic Factory: Roundtable,” 171.

Figure 3. A worker stands next to Ford's automatic production line in Cleveland, Ohio (c. 1953).
Source: "The Automatic Factory: A Fortune Roundtable," *Fortune* 48, no. 4 (October 1953).



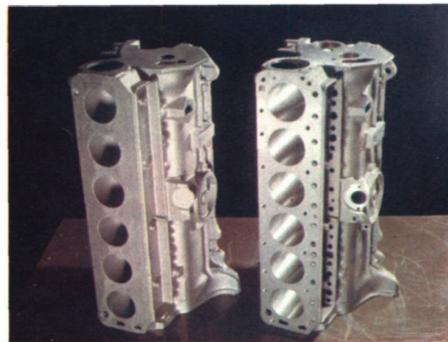
A lonely job setter on the Ford engine-block line waits for the Second Industrial Revolution to replace even him

Ford calls it automation

The most complex series of automatic machining operations in America today is probably the one above, conceived by Ford to turn rough castings into finished cylinder blocks (see right). This prodigious "automatic factory" for making six-cylinder blocks occupies about one acre of Ford's new \$30-million Cleveland foundry and engine plant.

The blocks are transported automatically—by a process Ford calls "automation"—into and out of twenty-odd different machines that perform a grand total of 532 broaching, milling, boring, honing, drilling, and tapping operations. Virtually the only men required on the automated line are job setters, who keep a sharp eye on the process and replace worn tools whenever a "toolometer" (opposite page) indicates a tool is nearing the end of its life expectancy.

Automation ends with machining. Assembly of the engine is left to the inscrutable coordination of the human hand and eye.



Engine blocks: transformation by automation

men. It takes men to keep these machines running.”⁶⁰ The crux of the message conveyed through the voiceover is precisely on the skilling of labor made possible by automation:

There’s no end to the opportunities for [workers] in new plants like these. They’re not all in production work either. You’ll see them in the powerhouse; on duty at the gates; they work in the metallurgy laboratory; they run complicated tests on metal and sand [...]. Everybody plays a vital part: the doctor and the nurses in the hospital; the girls on the switchboard; the men in the employment office; everyone.

The new factory is thus made of new ideas, new machines, and above all new skills. This is related through the life stories of real employees at the plant. Menial workers in the assembly line, we are told, have the opportunity to enter one of Ford’s many training programs where they receive expert instruction and, in a matter of a few months, can be promoted to better-paying positions that demand more skill, autonomy, and responsibility. As the film tells us, nearly half of all supervisors are trained in the factory, many of whom have risen through the ranks. And by way of a technical apprenticeship curriculum, young workers are instructed in “the trades of tomorrow as of today” and afforded “a bright future in modern industry” as “experts in a profession of their choice.” Juxtaposed by footage of workers leaving the factory, the narrator pivots to the conclusion, summarizing the crucial takeaway from the marvels of automation: “The men are the most important part of these plants. No matter how complex the machines, how miraculous their achievements, it takes men to run them and to keep them running, just as it took men to dream them up in the first place.” As workers retire from the production line, the classroom, the powerhouse, and the office, they converge in the parking lot where it is made clear that each of them is able to afford a model of the cars they helped to build. By setting “the pattern for future industrial progress,” Ford is producing far more than engines; what is being sold here is “a new way of

⁶⁰ Jerry McMechan, *Technique for Tomorrow*, 16mm, Corporate Video (Office of Public Relations, Ford Motor Company, 1953), <https://www.youtube.com/watch?v=PdIVK3R7JDI>.

industrial life.” The film ends with a moving image of a worker driving past the factory gates after his shift while cars are still parked on the lot. The factory in the background never stops running and, thanks to automation, it will never stop. As the narrator concludes, “It is still early morning in America, dawn of a new day in industry.”

Commenting on Ford’s promotional video, IBM’s Director of Applied-Sciences picks up on some remarks made by the narrator: “this requires skill and experience” and “this requires just the right touch.”⁶¹ “It seems that what we have got to get at,” he continues, “is replacing these human judgments, and in replacing human judgments, perhaps the crucial question, or the critical distinction between the human as the judger and the machine as the judger, is that the human is a multi-channel device.”⁶² The key difference between humans and computers, then, is that a human “feels, touches, smells and sees, and instantaneously takes all these factors into his brain, arrives at rationalization, and makes a decision.” Since the computer is only a single-channel communicator, it is at a disadvantage with the human unless it is very fast, “and if it is fast, it has got to be large,” which “means an expensive machine.”⁶³ No factory owner would be able to bear this expense.⁶⁴ The idea that automation required “just the right touch,” vividly conveyed by Ford’s marketing campaign, helped to create a paradigm for thinking about automation that endures into the present. As will become clear in Chapter 2, this is one of the main reasons why so much of the menial data labor performed today—especially in content moderation for social media websites—is overwhelmingly performed by humans rather than algorithms. Instead of “automation,” then, the

⁶¹ “The Automatic Factory: Roundtable,” 188.

⁶² *Ibid.*

⁶³ *Ibid.*, 188–90.

⁶⁴ *Ibid.*, 190.

transformations in contemporary digital labor have been termed “heteromation,” or the automation of human emotional, sensory, and cultural labor by humans themselves.⁶⁵

But for now, what is key to this discussion is the connection the automation movement made between the labor question and the computer question; that is, the displacement of menial and manual labor by automatic controls, on the one hand, and the displacement of skilled labor by computers, on the other. Recall that the author of the 1930 *Fortune* article on A. O. Smith Corporation described the transformation of work brought about by automation through an affective language—2,000 *dreary* jobs for 200 *amusing* ones. Those were the terms of the labor question. Yes, the argument goes, automation will displace some workers, but it will also wipe from the face of the economy all forms of drudgery, boredom, and physical exertion. The lives of workers will be more meaningful—they may even have fun at work—as a result. Human progress is thus the indelible yield of scientific achievement and technological innovation. Nearly a quarter century later, when Wiener and others raised fears that the computer could just as well displace those “amusing” jobs automation promised to create (the computer question), the IBM representative at the roundtable returned to the human sensorium, its unique claim to sensory and emotional intelligence, in order to draw a line between the types of skills and forms of work that have been and shall continue to be the ineluctable and perennial prerogative of human labor, even as the “second Industrial Revolution” loomed large.⁶⁶ Were computers capable of performing the sensory,

⁶⁵ Hamid Ekbia and Bonnie Nardi, “Heteromation and Its (Dis)Contents: The Invisible Division of Labor between Humans and Machines,” *First Monday* 19, no. 6 (2014), <http://firstmonday.org/ojs/index.php/fm/article/view/5331>.

⁶⁶ For Wiener, the new industrial revolution was neither about power nor energy but control, judgment, and communication; it “consists primarily in replacing human judgment and discrimination at low levels by the discrimination of the machine. The machine appears now, not as a source of power, but as a source of control and a source of communication. We communicate with the machine and the machine communicates with us. Machines communicate with one another.” Norbert Wiener, “Men, Machines, and the World About,” in *The New Media Reader*, ed. Noah Wardrip-Fruin and Nick Montfort (Cambridge and London: MIT Press, 2003), 71.

emotional, and cognitive labor of human beings, the prohibitive costs of such technology would be a safeguard against its application in the automatic factory.

For Diebold, the computer could not possibly replace human intelligence, emotions, and judgments. He was a harsh critic of Wiener, Berkeley, and other thinkers associated with cybernetics for anthropomorphizing the computer through animal-machine analogies in which the human and animal nervous system were deceptively likened to automatic electronic networks.⁶⁷ While the computer's capacity to solve mathematical problems resembled processes of human thought, "the resemblance is too superficial to warrant the conclusion that these machines *think* or are in any essential way *human*."⁶⁸ And, as Diebold pointed out, the fundamental human abilities to think, feel, and judge, along with our free will, autonomy, and agency, set us apart from computers; they are unsurmountable barriers to the so-called human-machine continuum, which no computer is able to cross. Insofar as the automatic factory is concerned, Diebold's answer was unambiguous: "We want flexibility in our machines, of course. We want multi-purpose machines, too. But the maximum degree of flexibility that could be industrially useful and economical falls very far short of anything even remotely approaching the fully human machine."⁶⁹ In his ideal scenario, if automation does anything to the human-machine relation, it is to make humans more distinct from computers by improving their uniquely human attributes and standard of living—not just in the workplace, but in all spheres of life. "The *upgrading* of labor that will accompany automation," he argued, "will not be limited to the acquisition of mechanical skills but will be a rounded process of fuller development of the whole man."⁷⁰ But this in turned raised a cultural problem. To the extent that it provides "more satisfying jobs that allow fuller human development, automation will heighten the problem of

⁶⁷ Diebold, *Automation*, 153–57.

⁶⁸ *Ibid.*, 154.

⁶⁹ *Ibid.*, 156.

⁷⁰ *Ibid.*, 164.

leisure.”⁷¹ Despite noting that this is “one of the most basic problems of our day,” Diebold does not offer an answer as to whether Americans are “capable of developing a culture that does not depend upon work to give meaning to [their] lives.”⁷² Indeed, as I will show in Chapter 3, the cultural transformations set in motion by the changing character of work predate the displacement of labor by technology and have accompanied the development of the factory system since the middle of the eighteenth century.

In the 1950s, the cultural problem posed by automation generated ample debate about what kind of society would ensue if all menial labor were to vanish and humans were required to work for only a fraction of the time they had been accustomed to. The scientist Richard Meier, whose work on the economy Diebold held in high esteem, agreed that automation would transform the menial factory worker into “a programmer, an overseer, a maintenance mechanic, or a salesman” and, as result, make human labor more fulfilling, flexible, and skilled.⁷³ Yet, Meier added, because this will “require marked improvements in education, health, and community organization, not only in automated activities but in all those which are closely related,” it is “difficult to see any leisure at all being provided by the transition to automation.” Rather, he claimed that the liberation workers would experience as a result of automation is far more likely to take on a psychological character. That is, while workers will behave “as if they were their own bosses,” they will probably work just as long in a fully automated society as they had before, “until the culture itself changes.”⁷⁴ For Diebold, however, automation *was* effectively and in essence a change in the culture. “What has always made machines truly important,” he argued in 1969, “is not their individual versatility and productivity—it is the fact they serve as agents of social change. They change our world. They change us.”⁷⁵ In

⁷¹ *Ibid.*, 165.

⁷² *Ibid.*, 165–66.

⁷³ R. L. Meier, “Automatism in the American Economy,” *The Journal of Business* 29, no. 1 (1956): 24–25.

⁷⁴ *Ibid.*, 25.

⁷⁵ Diebold, *Man and the Computer*, vii.

comparison to the social, political, and economic revolution occasioned by the cotton gin, the power loom, and the railway in the nineteenth century, Diebold suggested that automatic machines would “change society much more rapidly and profoundly [...] because they deal with the stuff of which society is made—information and its communication.”⁷⁶ In altering the means of communication, automation transforms the cultural fabric of modern society. And nothing illustrated the extent of this potential for change better than automation’s effect on leisure.⁷⁷ Automation was a revolution that would “take us *beyond* the civilization of an industrial society” and towards a world in which human beings are “largely freed from the bondage of machines,” “fewer and fewer people work in factories,” “the work week is greatly shortened,” and, above all, “leisure becomes the center of life, rather than the fringe.”⁷⁸

According to David Riesman, the only social scientist at *Fortune*’s roundtable on the automatic factory, the problem of leisure would be one of the key impediments to automation in the twentieth century. Just three years earlier, Riesman published a landmark study of American social character titled *The Lonely Crowd*.⁷⁹ Among its claims, the book suggests that the temperament, mentality, identity, and attitudes toward consumption, leisure, and work among middle-class Americans had been radically transformed since the Industrial Revolution. The shift in values from

⁷⁶ *Ibid.*, 3–4.

⁷⁷ *Ibid.*, 4; Diebold, *Beyond Automation*, 28.

⁷⁸ Diebold, *Beyond Automation*, 118–19. By 1960, Diebold toned down his earlier optimism regarding automation’s effect on leisure: “I do not expect that excessive leisure will be of concern to us in the near future. [...] In the same view, I would not expect any drastic reduction in the average work week figures.” See *Ibid.*, 135. In 1955, the Joint Economic Committee held a congressional hearing on “Automation and Technological Change,” in which Diebold was the first witness. In August 1960, the Committee requested all witnesses to update their original testimonies. Diebold revised his statement again in 1964 before publishing it in *Beyond Automation*. For all updated testimonies from 1960, see Joint Economic Committee, “New Views on Automation,” Papers Submitted to the Subcommittee on Automation and Energy Resources, 86th Congress of the United States, 2nd Session (Washington: United States Government Printing Office, 1960). For the transcript of the original hearings, see Joint Committee on the Economic Report, “Automation and Technological Change,” Congressional Hearings Before the Subcommittee on Economic Stabilization, 84th Congress of the United States, 1st Session (Washington: United States Government Printing Office, 1955).

⁷⁹ David Riesman, Nathan Glazer, and Reuel Denny, *The Lonely Crowd: A Study of the Changing American Character* (New Haven: Yale University Press, 1950).

the sphere of production to consumption, along with the mass transition of labor from industry into service, gave form to what Riesman dubbed an “other-oriented” social character. It was especially within the realm of mass consumption, but also within a new professional setting that blurred the traditional divide between work and play, that middle-class Americans came to pursue personal fulfillment and construct their identities. Based on this interpretation of postwar American society, Riesman raised an optimistic prospect for the automatic factory: its promise to relieve workers from the emotional hazards of contemporary work. Since middle-class Americans had recently come to view leisure as a liability, rather than an asset, and because they found in work those gratifications formerly attached to play, Riesman saw automation as a potential remedy to the affective and psychological strains of an increasingly service-based economy. Referencing William F. Whyte’s research on the restaurant industry, in which this emotional form of workplace hazard is conveyed in the image of a crying waitress, Riesman defended automation as a check on the affective toils of postindustrial work.⁸⁰ “When I see an Automat,” he declared, “I would like to bow down and salaam to it as a blessing, because it gets rid of the crying waitress.”⁸¹ Yet, he warned the scientists, businessmen, and engineers at the roundtable that the more unappeasable resistance to the automatic factory would be formed by this very class of service workers, many of whom, he believed, had “a vested interest in their miseries” and “a masochistic need to work too hard.”⁸² The question here was whether automation could deliver its promise of a more fulfilling life in a society

⁸⁰ William Foote Whyte, “The Social Structure of the Restaurant,” *American Journal of Sociology* 54, no. 4 (1949): 302–10. Whyte’s work points to a growing movement among sociologists at the time to shift the focus in studies of social organizations away from factories and toward alternative business structures. “Sociologists who are concerned with working out the comparative structures of economic organizations,” Whyte argued, must “look beyond as well as into the factory.” He saw the restaurant industry as a suiting sphere for this comparative approach since, in combining production with service, “it differs from the factory, which is solely a production unit, and also from the retail store, which is solely a service unit.” *Ibid.*, 302.

⁸¹ “The Automatic Factory: Roundtable,” 190.

⁸² *Ibid.*, 190–95.

where contentment was so intrinsically tied to economic determinants such as one's job, salary, and discretionary income.

As I have shown, the automatic factory was at the heart of a significant debate concerning the relationship between technology and society. And the problem of leisure—of a society that saw no role for itself beyond labor—was at the center of the automation debate. Moreover, the various social and political problems raised by the advent of automation were not only of interest to scientists, engineers, and managers; they were equally important to midcentury political theorists, notably Hannah Arendt and, as I discuss in Part 3, Herbert Marcuse. Recently, Brian Simbirski has argued that technological trends and debates associated with industrial automation in the 1950s were not only essential to the framework of Arendt's *The Human Condition*, but that the term “automation” itself was central to her formulation of political action.⁸³ Whether or not we accept this reading, Arendt is explicit in her view that the social consequences of modern scientific achievement imperiled the foundations of human life, politics, and culture. The growing “technicalization of our world,” she noted in the preface, could end by destroying all life on earth through total nuclear war or by rendering speech, the source of our political being, void of all meaning.⁸⁴ But perhaps a more imminent—“equally decisive” and “no less threatening”—prospect of modern technology was, as she put it, “the advent of automation, which in a few decades probably will empty the factories and liberate mankind from its oldest and most natural burden, the burden of laboring and the bondage to necessity.”⁸⁵ Yet, Arendt immediately dispelled the possibility that automation could be liberating. In a society where labor is exalted above all other higher and more meaningful activities, the threat of automation is rather that it would deprive humans of the only activity left to them—labor. The

⁸³ Simbirski, “Cybernetic Muse,” 590.

⁸⁴ Hannah Arendt, “Europe and the Atom Bomb (1954),” in *Essays in Understanding, 1930-1954*, by Hannah Arendt, ed. Jerome Kohn (New York: Harcourt Brace, 1994), 418–23; Hannah Arendt, *The Human Condition*, 2nd ed. (1958; repr., Chicago and London: University of Chicago Press, 1998), 3–4.

⁸⁵ Arendt, *The Human Condition*, 4.

danger of automation, then, inheres in its promise to, as she put it, create “a society of laborers without labor.” And surely, she concluded, “nothing could be worse.”⁸⁶ By engaging with Diebold’s *Automation* across her chapter on work, Arendt highlights that the automation movement tried desperately to rescue the psychological and human values of the self-respecting craftsman by focusing on technology’s promise to eradicate drudgery and thus transform labor into a skilled and fulfilling activity. Arendt derides the naiveté behind such a project, pointing out that, although workers in a factory—be it mechanical or automatic—may have excellent reasons for self-respect, “it certainly cannot arise from the work they do.”⁸⁷ And as the discourse around the automatic factory makes plain, that was precisely what its proponents had hoped: to replace “the interest in work and the satisfaction of craftsmanship” by “human relations” and by the respect workers “earn from their fellow[s].” As much for *Fortune* as for Diebold, the irresistible appeal of the automatic factory was not that it would put an end to human work, but that it would sacralize work by rendering it a source of fulfillment.

As a site of technological and cultural transformations, as a battlefield of theoretical disputes and as a stage in which people thought about and pursued change, the automatic factory of the 1950s may be read as a testament to the social clout of ideas. Whether a utopian or doom-laden vision of the future, a factory without workers was then only a vision of the future. And yet, the prospect of such a vision helped to shape some of the defining developments in the postwar era. In the intellectual realm, it was a focal point of the discourses—on labor and leisure, economic growth and cultural decay—that characterized midcentury debates about automation and technology. In the sphere of technological innovation, it was a testcase for the application of automatic control systems to manufacturing and a catalyst for advances in electronic computing. And in the economic domain, it was the model Arnold Beckman and William Shockley used to produce their silicon

⁸⁶ *Ibid.*, 5.

⁸⁷ *Ibid.*, 149n12.

semiconductors in 1956, marking the dawn of that paradigmatically postindustrial place we now know as Silicon Valley.⁸⁸ As such, the automatic factory paved the road towards a society not only fundamentally different but severed from its industrial past. Indeed, as I argue next, the advent of a “new economy” in which knowledge, machines, and services replaced the drudgery of manual labor was carried forth into the latter half of the century by a number of sociologists and economists. But rather than merely envisioning or anticipating the demise of the factory, as automation thinkers had done in the 1950s, social scientists of the 1960s and 70s watched it come apart—or so they have told us. What they witnessed and wrote about was the emergence of a “post-industrial society.”

PART 2: POSTINDUSTRIAL SOCIETY

While the phrase “post-industrial society” is widely associated with the publication of Alain Touraine’s *The Post-Industrial Society* in 1969 and Daniel Bell’s *The Coming of Post-Industrial Society* in 1973, the term had been employed by David Riesman in 1958 as well as by other social scientists, including Bell himself, since the late 1950s.⁸⁹ Likewise, although the concept of “postmodernism” is generally attributed to art historians, cultural theorists, and literary critics the likes of Ihab Hassan, Charles Jencks, Jean-François Lyotard, and Fredric Jameson, it too had been used by social scientists

⁸⁸ David C. Brock, “From Automation to Silicon Valley: The Automation Movement of the 1950s, Arnold Beckman, and William Shockley,” *History and Technology* 28, no. 4 (2012): 375–401.

⁸⁹ Bell borrowed the phrase “post-industrial society” from Riesman’s 1958 essay. See Daniel Bell, *The Coming of the Post-Industrial Society: A Venture in Social Forecasting* (1973; repr., New York: Basic Books, 1999), 37n45. For Riesman’s early use of the term, see David Riesman, “Leisure and Work in Post-Industrial Society,” in *Mass Leisure*, ed. Eric Larrabee and Rolf Meyersohn (Glencoe, IL: The Free Press, 1958), 363–85. The term “post-industrial” was first used by Ananda K. Coomaraswamy, a Sri Lankan Tamil philosopher, metaphysician, and art historian, and Arthur J. Penty, an English architect, critic, and socialist thinker influenced by the Arts and Crafts Movement and the writings of William Morris and John Ruskin. The earliest published works to define and employ the term in a significant way were: Coomaraswamy and Penty’s *Essays in Post-Industrialism: A Symposium of Prophecy Concerning the Future of Society* (1914); Penty’s *Old Worlds for New: A Study of the Post-Industrial State* (1917); and *Post-Industrialism* (1922), also by Penty. On the history of the term, see Margaret A. Rose, *The Post-Modern and the Post-Industrial: A Critical Analysis* (Cambridge: Cambridge University Press, 1991), Chapter 2, esp. 22–25, 169–71; Howard Brick, “Optimism of the Mind: Imagining Postindustrial Society in the 1960s and 1970s,” *American Quarterly* 44, no. 3 (1992): 350–62; Krishan Kumar, *From Post-Industrial to Post-Modern Society: New Theories of the Contemporary World*, 2nd ed. (1995; repr., Oxford: Blackwell Publishing, 2005), Chapter 2.

through the 1950s, including by C. Wright Mills in 1959.⁹⁰ I mention these precedents not to polemicize about the origins of “post-industrial society” and “postmodernism,” but only to point out that the widespread circulation and influence of these terms, which indexed a turning point in the histories of capitalism and modernity alike, were of a piece with midcentury debates about automation and the automatic factory. Throughout the 1960s and 70s, the factory remained central to how social scientists understood, explained, and characterized the momentous shifts in advanced capitalist societies since the Second World War. As the development of automation—and its perceived threat to industrial capitalism—continued apace, a range of scholars across sociology, political science, and economics departments turned their attention to some defining aspect of this new society as a means to unravel a plurality of transformations that ran the gamut from the economy and culture to politics and technology. Whether they chose to label it “post-industrial,” like Riesman, Touraine, and Bell, or “affluent,” like Kenneth Galbraith and Gunnar Myrdal, was less important than the fact that, whatever this society had become, whatever it was called, they all agreed that it was decidedly and irrefutably different from what it had been just a few years back.⁹¹ Although the automation debate of the 1950s was explicitly associated with—and in some regards even bound by—the future of the factory and its workers, the architects of the postindustrial turn cast a far broader net over the general significance of technological progress, arguing strongly that its

⁹⁰ Mills used the term in two works published in 1959: C. Wright Mills, “Culture and Politics (1959),” in *Power, Politics and People: The Collected Essays of C. Wright Mills*, ed. Irving Louis Horowitz (New York: Oxford University Press, 1963), 236–46; C. Wright Mills, *The Sociological Imagination* (1959; repr., Oxford and New York: Oxford University Press, 2000), 166, 180, 183. The term “post-modern” was used as early as the 1870s by the British artist John Watkins Chapman and in 1917 by the German author Rudolf Pannwitz in *The Crisis of European Culture*. Prior to its popularity among art historians, cultural theorists, and literary critics in the 1970s and 80s, the term was employed by Arnold J. Toynbee in 1954 to describe a new period in world history, from 1875 onwards, marked by the rise of an industrial urban working class, the proliferation of non-Christian religions, the growth of non-Western nations, and the emergence of “post-Modern” science. See Rose, *The Post-Modern and the Post-Industrial*, 180n1, Chapter 1, 171–75.

⁹¹ John Kenneth Galbraith, *The Affluent Society* (Boston: Houghton Mifflin, 1958); Gunnar Myrdal, *Challenge to Affluence*, Expanded and Revised (1963; repr., New York: Vintage Books, 1965). For a discussion of affluence and abundance as part of the common thread running through early discussions of postindustrial society, see Brick, “Optimism of the Mind,” 357–59.

effects accounted for a total overhaul of industrial society and modern life. But insofar as the factory is concerned, “post-industrial society” continued what automation had begun; it brought to bear, as the story runs, a prospect over which automation enthusiasts had mused for decades: “to make possible factories without workers.”⁹²

If the phrase “post-industrial society” is readily recognized today as a paradigmatic expression of our time, then this is in large part thanks to the work of Daniel Bell. Through a series of notable essays, edited volumes, and monographs published between the mid 1950s and early 1970s, Bell developed a far-reaching theoretical account of the key political, economic, and cultural developments that had, since the Second World War, unmistakably altered American society.⁹³ In this sense, his 1973 book, *The Coming of Post-Industrial Society*, may be read as the culmination of a sustained inquiry into the shifting character of modern life, a synthesis of the various changes he had written about and lived through in the previous two decades.⁹⁴ The end-result was an account of a society so essentially at odds with its industrial past as to warrant a new modifier: “post-industrial.” Indeed, “post-industrial society” was to Bell what the factory system had been to Ure and Babbage or what automation was to Diebold: a rupture with the past, a transformation of the present, and a path to the future. For Bell, the break, change, and promise for which “post-industrial society” stood were summed up in three related shifts: “in the economic sector, it is a shift from

⁹² Daniel Cohen, *Three Lectures on Post-Industrial Society*, trans. William McCuaig (2006; repr., Cambridge and London: MIT Press, 2009), 34.

⁹³ Among his monographs and edited volumes in this period are: Daniel Bell, ed., *The New American Right* (New York: Criterion Books, 1955); Daniel Bell, *Work and Its Discontents: The Cult of Efficiency in America* (Boston: Beacon Press, 1956); Daniel Bell, *The End of Ideology: On the Exhaustion of Political Ideas in the Fifties* (1960; repr., Cambridge and London: Harvard University Press, 2000); Daniel Bell, *The Reforming of General Education: The Columbia College Experience in Its National Setting* (New York: Columbia University Press, 1966); Daniel Bell, *Marxian Socialism in the United States* (1967; repr., Ithaca and London: Cornell University Press, 1996); Daniel Bell and Irving Kristol, eds., *Capitalism Today* (New York: Basic Books, 1971). For an account of Bell’s social thought and its intellectual context leading up to this period, see Howard Brick, *Daniel Bell and the Decline of Intellectual Radicalism: Social Theory and Political Reconciliation in the 1940s* (Madison: University of Wisconsin Press, 1986).

⁹⁴ Bell’s original manuscript for the book was over 1,000 pages long, approximately half of which was subsequently published as Daniel Bell, *The Cultural Contradictions of Capitalism* (New York: Basic Books, 1976).

manufacturing to services; in technology, it is the centrality of the new science-based industries; in sociological terms, it is the rise of new technical elites and the advent of a new principle of stratification.”⁹⁵ But if pressed, Bell could boil them down to just two categories: in the *material* realm, “post-industrial society” represented “a changeover from a goods-producing society to an information or knowledge society” and, in the *intellectual* sphere, it implied “a change in the axis of abstraction from empiricism or trial-and-error tinkering to theory and the codification of theoretical knowledge for directing innovation and the formulation of policy.”⁹⁶ Whichever way he cut it, the factory as it was then understood had no place in a “post-industrial society.”

In the late 1950s, Bell began to seriously entertain the possibility that technology was leading modern society further and faster astray from its foregoing, industrial course of economic development.⁹⁷ Before *The Coming of Post-Industrial Society* appeared in 1973, he developed this theory through a stream of lectures, conference papers, and articles from 1959 to 1967.⁹⁸ During this time, a range of social scientists also turned their attention to the transitions already afoot in American society, describing its distinctively new spirit by focusing on diverse aspects of change, including the growth of affluence, the rise of mass leisure, the emergence of a knowledge economy, and the shift from manufacturing to services.⁹⁹ The sense that the industrialized world was on the verge of a “great transformation” was pervasive, but whether this was a “post-capitalist” society, as Ralf

⁹⁵ Bell, *Post-Industrial Society*, 487.

⁹⁶ *Ibid.*

⁹⁷ Hunter Heyck, *Age of System: Understanding the Development of Modern Social Science* (Baltimore: Johns Hopkins University Press, 2015), 156, and Chapter 5: “Modernity and Social Change in American Social Science,” 143–158.

⁹⁸ These included a lecture series at the Salzburg Seminar in Austria (1959) and conference papers presented in Boston (1962), at Columbia University (1963), at Syracuse University (1966), and at the California Institute of Technology (1966). These were subsequently revised and published as: Daniel Bell, “The Post-Industrial Society,” in *Technology and Social Change*, ed. Eli Ginzberg (New York and London: Columbia University Press, 1964), 44–59; Daniel Bell, “Notes on the Post-Industrial Society (I),” *Public Interest*, no. 6 (Winter 1967): 24–35; Daniel Bell, “Notes on the Post-Industrial Society (II),” *Public Interest*, no. 7 (Spring 1967): 102–18.

⁹⁹ On affluence, leisure, knowledge, and white-collar labor, respectively, see Galbraith, *The Affluent Society*; Riesman, “Leisure and Work in Post-Industrial Society”; Fritz Machlup, *The Production and Distribution of Knowledge in the U.S.* (Princeton: Princeton University Press, 1962); C. Wright Mills, *White Collar: The American Middle Classes*, 50th Anniversary (1951; repr., New York: Oxford University Press, 2002).

Dahrendorf suggested in 1959, or, as Walt Rostow put it in 1960, a “post-maturity” economy, was still unclear.¹⁰⁰ While Bell’s understanding of “post-industrial society” was neither an all-out departure from capitalism nor simply another stage of economic growth, it nonetheless conformed to the general consensus of the age: “we are in the midst of a vast historical change.”¹⁰¹ Rather than an autopsy of the past and a vision of the future, Bell’s idea of “post-industrial society” is better understood as a diagnosis of the present, an articulation of a virtually ubiquitous postwar feeling of—as he aptly put it—“living in interstitial time.”¹⁰² Leaving aside its grand claims of a third technological revolution and the reshaping of economic life, we may come to see Bell’s “post-industrial society” as an expression of what Raymond Williams called a “structure of feeling;” that is, as an expression of a generation’s response to “the unique world it is inheriting, taking up many continuities” yet “feeling its whole life in certain ways differently.”¹⁰³ The “interstitial” feeling Bell describes was structural insofar as it was shared by thinkers across ideological and political spectra, from the techno-futurists of the automation and cybernetics movements to, as I argue in Part 3, New Left progressives in the United States, May-68 socialists in France, Frankfurt-school critical theorists, and Autonomist Marxists in Italy. For the moment, however, my focus will be on Bell’s particular treatment of these changes.

Although change in general was essential to Bell’s theory, it was the *rate of change* that struck him as particularly novel, as itself a new chapter in Western modernity. He observed, moreover, that society possessed a new self-consciousness of change in the postindustrial fold: “not only are we aware of, and trying to identify, processes of change,” but “the interval between the initial impetus

¹⁰⁰ Ralf Dahrendorf, *Class and Class Conflict in an Industrial Society* (Stanford: Stanford University Press, 1959); Walt Whitman Rostow, *The Stages of Economic Growth: A Non-Communist Manifesto*, 3rd ed. (1960; repr., Cambridge and New York: Cambridge University Press, 1990). Quoted in Bell, *Post-Industrial Society*, 37.

¹⁰¹ Bell, *Post-Industrial Society*, 37. On the contours of “postcapitalist” discourse in the 1950s and 60s, see Brick Howard, *Transcending Capitalism: Visions of a New Society in Modern American Thought* (Ithaca: Cornell University Press, 2006), Chapters 5, 6, 7.

¹⁰² Bell, *Post-Industrial Society*, 37.

¹⁰³ Raymond Williams, *The Long Revolution* (Cardigan, UK: Parthian, 2011), 69–70.

to change and its realization has been radically reduced.”¹⁰⁴ Bell argued that, as a result, “post-industrial society” brought about a new experience of and approach to change: more than simply recording, identifying, and understanding it, society now seeks to “anticipate change, measure the course of its direction and its impact, control it, and even shape it for predetermined ends.”¹⁰⁵ Rather than idly watching change follow its course, “post-industrial society” takes the reins; it prunes the dead stems and nurtures the fruits of change, prodding society into progress. Bell’s own discernment of the changes characterizing the “post-industrial” turn and the precise moment when it began was itself an expression of the new attitude towards change that he described. My focus here will be on three particular aspects of change that are equally central to Bell’s understanding of “post-industrial society” and my own argument that what I call the “postindustrial paradigm” was, from its inception, understood as an all-out rebellion against an industrial world defined and determined by the factory system. In order to illustrate this claim, I will probe three ruptures in Bell’s rendering of the “post-industrial” era: the first speaks to a break in the history of modern capitalism and the theoretical tools Bell deemed necessary to understand it; the second concerns a break in the mode of production from manufacturing to services; and, finally, the third break applies to the new role knowledge and technology would play in Bell’s “post-industrial society.”

A Break with History

In the foreword to the 1999 edition of *The Coming of the Post-Industrial Society*, Bell professed that “we are today on the rising slope of a worldwide third technological revolution.”¹⁰⁶ In order to contextualize the rupture introduced by the computer and the internet, he maps “post-industrial society” onto a tripartite historical schema concerning the relationship between technological

¹⁰⁴ Bell, “Notes on the Post-Industrial Society (I),” 24–25.

¹⁰⁵ Ibid., 25. For an account of the manifestation of this mindset in a “risk society” created by Cold War policy, see Joseph Masco, *The Theater of Operations: National Security Affect from the Cold War to the War on Terror* (Durham and London: Duke University Press, 2014).

¹⁰⁶ Bell, *Post-Industrial Society*, xxxii.

progress and economic development. If the first technological revolution, at the turn of the nineteenth century, was spurred by steam power and the second, at the turn of the twentieth, impelled by electricity and chemistry, the third one, which began around 1945, was—and continues to be—powered by computers and telecommunications.¹⁰⁷ “The concept of a post-industrial society,” he notes, “gains meaning by comparing its attributes with those of an industrial society and pre-industrial society.”¹⁰⁸ In doing so, he reveals the extraordinary extent to which postindustrial society breaks with the past: “post-industrial society turns its back on both” its forerunners, as much in regards to technology as to “the salient experience of work.”¹⁰⁹ Unlike the farmer and the factory operative, postindustrial workers “live more and more outside nature, and less and less with machinery and things; they live with and encounter one another.” Life in an agrarian, pre-industrial society, he notes, is “a game against nature [...] structured in traditional ways of routine and authority.”¹¹⁰ Industrial society, on the other hand, is a goods-producing society in which life is “a game against fabricated nature” paced by machines and nestled within a technical and rational world of mass production, organization, and coordination.¹¹¹ By contrast, a “post-industrial society” is “a game between persons”—educated, trained, and skilled professionals—based on services and powered by information. It is worth noting that in spite of these differences, certain characteristics of agrarian and industrial life carry over into the new paradigm, which combines the emphasis on the agrarian human “encounter” and interaction with the game-like character of social coordination in industrial society. Perhaps the largest difference heralded by the postindustrial world was a new quality of life, determined not by goods created and consumed but by “the services and amenities—health, education, recreation, and the arts—which are now deemed desirable and possible for

¹⁰⁷ Ibid., xxxiii–iv.

¹⁰⁸ Ibid., 126.

¹⁰⁹ Ibid., 488.

¹¹⁰ Ibid., 126.

¹¹¹ Ibid., 126–27.

everyone.”¹¹² Information becomes “a central resource” and, applied within organizations, it becomes a critical “source of power.”¹¹³

As the centrality of intangible resources like information suggests, Bell’s distinction between postindustrial and industrial society is as much conceptual as it is material. That is, postindustrial society represents a departure from industrial society not only in technological, social, and economic terms, but also in regards to the theoretical and analytical tools necessary to understand it. “If industrial society,” Bell wrote, “is based on machine technology, post-industrial society is shaped by an intellectual technology.”¹¹⁴ Moreover, he continued, “if capital and labor are the major structural features of industrial society, information and knowledge are those of the post-industrial society.” As Bell goes on to assert, while production functions and the labor theory of value are apt for an economy that produces material commodities and in which capital is embodied in labor, they are useless tools for understanding an economy based on services, knowledge, immaterial goods, and social products. The “economics of information,” Bell insisted, “is not the same character as the ‘economics of goods,’ and the social relations created by the new networks of information [...] are not the older social patterns—or work relations—of industrial society.” Thus, “a post-industrial society is characterized not by a labor theory but by a knowledge theory of value.”¹¹⁵

¹¹² Ibid., 127.

¹¹³ Ibid., 128.

¹¹⁴ Ibid., xcii.

¹¹⁵ Jürgen Habermas made a similar argument in 1968, noting that, within a “rational society,” technology and science “become a leading productive force, rendering inoperative the conditions for Marx’s labor theory of value. It is no longer meaningful to calculate the amount of capital investment in research and development on the basis of the value of unskilled (simple) labor power, when scientific-technical progress has become an independent source of surplus value, in relation to which the only source of surplus value considered by Marx, namely the labor power of the immediate producers, plays an ever smaller role.” Jürgen Habermas, *Toward a Rational Society: Student Protest, Science, and Politics*, trans. Jeremy J. Shapiro (1968; repr., Heinemann Educational, 1971), 104.

If the shift from manufacturing to knowledge-based services is the pivotal characteristic of Bell's "post-industrial society," the year 1956 is its "symbolic turning point."¹¹⁶ On this year, "the number of white-collar workers [professional, managerial, office and sales personnel], for the first time in the history of industrial civilization, outnumbered the blue-collar workers [craftsmen, semi-skilled operatives, and laborers] in the occupational structure."¹¹⁷ Bell linked this transition with the expansion of the service economy that had been predicted by the automation movement. Tracking the dissemination of the service sector into the spheres of "trade, finance, transport, health, recreation, research, education, and government," he observes that it "naturally brought about a shift to white-collar occupations."¹¹⁸ The growth of health, education, research, and government services, figured as decisive for post-industrial society, also facilitated "the expansion of a new intelligentsia—in the universities, research organizations, professions, and government" that fed the new white-collar market.¹¹⁹ In this scenario, "the most startling change," on Bell's view, was the surge in professional and technical employment requiring some college education, which grew twice as much as the national average, from 3.9 million in 1940 to 8.6 million by 1964.¹²⁰ Meanwhile, the growth rate among scientists and engineers, "who form the key group in the post-industrial society," was, during the same period, triple that of the average workforce.

For Bell, "post-industrial society," even if not yet fully developed, had by then already made strides into transforming both the place and the fundamental character of work. In his 1956 *Work and Its Discontents*, he once again sketched a portrait of the "post-industrial" period by contrasting it

¹¹⁶ Bell, "Notes on the Post-Industrial Society (I)," 28.

¹¹⁷ Bell, *Post-Industrial Society*, 17.

¹¹⁸ *Ibid.*, 15, 17. In 1967, Bell's definition of the service sector included: "trade; finance, insurance and real estate; personal, professional, business, and repair services; and general government." Bell, "Notes on the Post-Industrial Society (I)," 27.

¹¹⁹ Bell, *Post-Industrial Society*, 15.

¹²⁰ *Ibid.*, 17.

with an industrial one. For instance, he claimed that the archetypal and distinctive ethos of the industrial age lay in “the image of tens of thousands of workers streaming from the sprawling factories.”¹²¹ And if this image marked “the picture of industrial America,” it was not because the majority of the population worked in factories, which was no less true in 1956 than it is today, but rather because “its rhythms, in subtle fashion, affect the general character of work the way a dye suffuses a cloth.”¹²² While in 1956 Bell commented that the “mechanical and dronelike quality” of office work still served “the same pacing functions as assembly lines,” by 1973 he asserted that “post-industrial society” had completely done away with the “distinctive archetype” of the factory.¹²³ The rhythms of the factory were “no longer that pervasive,” and the void left by industrial drudgery became filled by the communicative and affective encounters between individuals that mediate service transactions—“from the irritation of a customer at an airline-ticket office to the sympathetic or harassed response of teacher to student.”¹²⁴ Whether or not such conversations are “sympathetic” or irritating, “the fact that individuals now talk to other individuals, rather than interact with a machine,” Bell concluded, “is the fundamental fact about work in the post-industrial society.”

Importantly, the vacuum following the demise of the factory demanded new theories and class politics corresponding to a world in which factory workers were no longer the agents of human emancipation. Until it could be reworked and “updated,” so to speak, by a generation of postwar Marxists, Marx’s original vision of the proletariat seemed to Bell to have been warped by the trajectory of industrialization itself, which, to the extent that it tends to replace human labor by machine power, leads “logically to the erosion of the industrial worker himself.”¹²⁵ In fact, Bell maintained, “the entire area of blue-collar work may have diminished so greatly that the term will

¹²¹ Bell, *Work and Its Discontents*, 3. Quoted in Bell, *Post-Industrial Society*, 162.

¹²² Bell, *Work and Its Discontents*, 36, 3. Quoted in Bell, *Post-Industrial Society*, 162.

¹²³ Bell, *Post-Industrial Society*, 162.

¹²⁴ *Ibid.*, 163.

¹²⁵ *Ibid.*, 125.

lose its sociological meaning as new categories, more appropriate to the divisions of the new labor force, are established.” Where Marx had envisioned the dominance of the industrial worker, Bell saw that of the professional and technical class. This renewed character of production and employment was a central aspect of Bell’s “post-industrial society,” one that represented not only a transformation in the formal features of most occupations but a “revolution in the class structure of society.”¹²⁶ In short, the central inadaptability of Marx’s critical theory of capitalism, and any theory that takes labor to be a source of value or understands the economy in terms of material production, is that “the ‘labor issue’ *qua* labor is no longer central, nor does it have the sociological and cultural weight to polarize all other issues along that axis.”¹²⁷ By this fact alone, “the changes which are summed up in the post-industrial society may represent a historic metamorphosis in Western society.”

The Knowledge Economy

According to Bell, three postwar developments were primarily responsible for the character of postindustrial society: the growth of science and theoretical knowledge, the advancement of intellectual technology, and the expansion of research institutions.¹²⁸ At its root, Bell notes, postindustrial society represents the most powerful expression of modernity’s quest to replace a natural order with a technical order since the Industrial Revolution.¹²⁹ The sense and spirit of postindustrial society—“its areas of conflict, of advance, of engagement”—assume an intellectual character.¹³⁰ The fundamental transformation that defines postindustrial society inheres in “some specifically defining characteristic of a social system, which becomes the axial principle, that one

¹²⁶ Ibid., 125–26.

¹²⁷ Ibid., 164.

¹²⁸ Bell, “The Post-Industrial Society,” 44. For an overview of postindustrial theories of the knowledge economy, see Steven Brint, “Professionals and the ‘Knowledge Economy’: Rethinking the Theory of Postindustrial Society,” *Current Sociology* 49, no. 4 (July 2001): 101–32.

¹²⁹ Bell, *Post-Industrial Society*, 45.

¹³⁰ Bell, “The Post-Industrial Society,” 44.

establishes a conceptual schema.”¹³¹ And if the nerves of this new system are lodged in its defining characteristics, then “the ganglion of the post-industrial society is knowledge.”¹³² While “the axial principle” of industrial society was the “coordination of machines and men for the production of goods,” in a postindustrial society it is the organization of knowledge used “for the purpose of social control and the directing of innovation and change” that, in turn, “gives rise to new social relationships and new structures which have to be managed politically.”¹³³ And while knowledge has been, in some form, a crucial characteristic of all modern societies, what is distinctive about postindustrial society is not simply the role of knowledge as a new source of power and capital, but “the change in the character of knowledge itself.”¹³⁴ Here, a new type of knowledge emerges and takes center stage—“theoretical knowledge,” the efficacy and importance of which lies in “the primacy of theory over empiricism, and the codification of knowledge into abstract systems of symbols that can be translated into many different and varied circumstances.”¹³⁵ Due to its versatile applicability and rigor, theoretical knowledge becomes the most essential resource for organizing decisions and controlling the direction of change; it is the matrix of innovation and growth in all realms of postindustrial society.¹³⁶

But in order for theoretical knowledge to be spread throughout society it needs to be applied or embodied in technology and, moreover, it needs a home where it can be cultivated, learned, taught, and developed. The first of these requirements is solved by a new type of technology, which Bell calls “intellectual technology.” What renders this technology “intellectual,” according to Bell is the “substitution of algorithms (problem-solving rules) for intuitive judgments.” These algorithms, he continues, “may be embodied in an automatic machine or a computer program or a set of

¹³¹ Bell, *Post-Industrial Society*, 18–20.

¹³² Bell, “Notes on the Post-Industrial Society (I),” 28.

¹³³ Bell, *Post-Industrial Society*, 20.

¹³⁴ *Ibid.*, 20, 343.

¹³⁵ *Ibid.*, 343–44.

¹³⁶ Bell, “Notes on the Post-Industrial Society (I),” 20, 29.

instructions based on some statistical or mathematical formula.”¹³⁷ In this way, complex problems can be dealt with by formalizing a set of decision rules through statistical and logical techniques.¹³⁸ As predicted by some in the *Fortune* 1953 roundtable, human judgements were being supplanted by computation. For on Bell’s account multivariate analyses, simultaneous calculations, and comprehensive numeracy in general “are possible only with a tool of intellectual *technology*, the computer.” From the perspective of the automated mind, in all situations where a choice must be made amidst constraints, alternatives, risks, and uncertainty, “the desirable action is a strategy that leads to the optimal or ‘best’ solution; i.e. one which either maximizes the outcome or, depending upon the assessment of the risks and uncertainties, tries to minimize the losses.”¹³⁹ Technology thus takes on the role of judging and reasoning, of determining the optimal course of action; all humans are left to do is act upon the machine’s assessment.

To the extent that theoretical knowledge becomes “the axial principle” of postindustrial society and intellectual knowledge its foundation, old institutions, suited only for obsolete knowledge and technology, give way to new establishments where the emerging types of knowledge and technology can proliferate and flourish. Those establishments where theoretical knowledge is codified and enriched—universities, research organizations, intellectual institutions—become the new “axial structures of the emergent society.”¹⁴⁰ The university in particular serves as the “primary institution of the new society” because it is able to create, codify, and test theoretical knowledge in “a disinterested way.”¹⁴¹ Just as the image of factory work was replaced by the encounter and communication of individuals, the business enterprise loses its predominance over society and is replaced by the new major institutions of society: “a vast new array of conglomerations of

¹³⁷ Bell, *Post-Industrial Society*, 29–30.

¹³⁸ *Ibid.*, 30.

¹³⁹ *Ibid.*, 30–31.

¹⁴⁰ *Ibid.*, 26.

¹⁴¹ Bell, “Notes on the Post-Industrial Society (I),” 30.

universities, research institutes, research corporations.”¹⁴² As we will see in Chapter 2, this shift from the corporation to the university is expressed in all its force by Google’s “knowledge campus.”

Turning to the spaces of intellectual production that came to structure and be structured by the new knowledge economy, I will now examine critical theories of the “interstitial” moments in which they were conceived. In the next section, I track significant theoretical accounts and penetrating critiques of capitalism that register the alleged displacement of real factories and material labor by “social factories” and “immaterial labor,” of *historical* capitalism by “cognitive” and “informational” capitalism. In doing so I foreground a series of significant misconstruals about capitalist society, factories, and their histories that the following chapters will remedy.

PART 3: CRITICAL THEORIES OF CAPITALISM

In 1959, the socialist journal *Monthly Review* published a special issue on “New Capitalism” that included contributions by economist Paul Sweezy, historian Leo Marx, sociologist Ralph Miliband, and physicist Philip Morrison, among others. Such multidisciplinary roster of contributors was itself an index of the remarkably diffuse and comprehensive character of the transformations in capitalist society at the time, ranging from the culture industries of advertising and television to the innovation industries of antibiotics and antiballistic missiles.¹⁴³ And while it was clear that capitalist societies in the 1950s looked conspicuously different from just a few decades earlier, there was a sense in which this was to be expected; after all, change was hardwired into the very nature of the system. This is how Sweezy opened his essay in the *Monthly Review*’s special issue, “Theories of the New Capitalism,” noting that “capitalism is always and inevitably a ‘new capitalism’ in relation to what went before.”¹⁴⁴ Yet, he added that the great mass of social scientists and theorists who found

¹⁴² Bell, “The Post-Industrial Society,” 44.

¹⁴³ Leo Marx, “Notes on the Culture of the New Capitalism,” *Monthly Review* 11, no. 3 (August 1959): 111–16; Philip Morrison, “The Innovation Industry,” *Monthly Review* 11, no. 3 (August 1959): 103–10.

¹⁴⁴ Paul M. Sweezy, “Theories of the New Capitalism,” *Monthly Review* 11, no. 3 (August 1959): 65.

something entirely new about capitalism in the postwar era meant not just that “the system continues, as in the past, to evolve in various unspecified ways,” but rather that “it has undergone a number of specific changes which have decisively altered its mode of functioning.” And if this was the case, critics of capitalist society were then beginning to weigh in on the nature and meaning of this change.

So far, the discourse I have traced about the factory’s shifting figuration in public and academic discourse has turned, for the most part, on the writings of liberal sociologists, scientists, journalists, entrepreneurs, and technologists. But as theories of postindustrial society gained ground among social scientists, as engineers and managers applied automatic technology across factories, offices, and warehouses, and as *Fortune* editors fanned the flames of a second industrial revolution, critics of capitalism reflected on what was indeed new about “new capitalism” and whether the theoretical tradition they had inherited from the nineteenth century remained a useful resource for understanding and confronting whatever it was they were suddenly up against. The rise of a critical theory of postindustrial capitalism was an undeniable corollary of what its proponents deemed a cataclysm that accompanied and followed the Second World War. It was a response to the productive and cultural rearrangements in capitalist societies influenced as much by the advent of automated and networked technologies as by the postwar surge in financial speculation and the ubiquity of mass broadcast media, not to mention the widespread political and social upheaval in liberal democracies impelled by the breakdown of Bretton Woods and neoliberal juridical reforms in corporate taxation, market regulation, and labor legislation. Since the late 1950s, when these transformations seeped into the public imaginary with unprecedented force, critical thinkers across France, Germany, Italy, and the United States began to theorize and critique the postindustrial turn in advanced capitalism from a variety of perspectives that drew on Marx and currents of Marxist thought through a series of original and creative re-readings and re-imaginings. So, while the

socioeconomic developments of the postwar period heralded a new era for global capitalism, they also marked a decisive turning point in critical theories of capitalism, variously defined. Above all, this reinvigorated critique of capitalism held a promise which this rising generation of thinkers felt orthodox Marxism had been unable to deliver: to contend with the constant and sweeping changes of a capitalist society that was yet unnamed and undefined. And here again, the alleged fateful and imminent demise of the factory system became a pivotal object of inquiry.

The New Left: Class Composition and the Cultural Apparatus

It is important to note that “post-industrial society,” as sociologists and economists had originally defined it, was a far cry from a neoliberal economy blindly ruled by the market.¹⁴⁵ Rather than a techno-capitalist vision of the future, “post-industrial society,” at least for thinkers such as Touraine, Riesman, and Bell, implied a progressive, social-democratic vision of progress in which, as Howard Brick put it, “new forms of community emerged as counterweights to market-based norms of organization.”¹⁴⁶ The inception of postindustrial society as a political and social theory was therefore “unabashedly progressive in spirit, imagining a future based on modern, cosmopolitan ethics and achievements of advanced technology.”¹⁴⁷ In many ways, this optimistic disposition toward a postindustrial future was carried forth into the latter half of the twentieth century by a wide range of critical thinkers. At the same time, however, the key difference between the sociological and critical approaches to postindustrial society lay in their diverging diagnoses of the present. Here,

¹⁴⁵ Through the course of the 1990s and early 2000s, neoclassical economists advanced their own equivalent of postindustrial society, focusing on the positive contributions to economic growth and development made by the diffusion of knowledge, the rise in digital technologies, the proliferation of finance capital, and the emergence of a “weightless economy.” See, for instance, Matti Pohjola, ed., *Information Technology, Productivity, and Economic Growth: International Evidence and Implications for Economic Development* (Oxford: Oxford University Press, 2001), especially: Sergio Rebelo, “The Role of Knowledge and Capital in Economic Growth;” Danny Quah, “The Weightless Economy in Economic Development;” and Matti Pohjola, “Information Technology and Economic Growth”.

¹⁴⁶ Brick, “Optimism of the Mind,” 350.

¹⁴⁷ *Ibid.*, 351.

Bell's favorable rendering of technological progress and scientific achievement was met with skepticism by the left. This is not to say there was no heavy dosage of wishful prognoses about the future of technology among critics of capitalism. But this optimism, they contended, could not be attained through a liberal reformist approach to the capitalist market. While critics of capitalism recognized that the composition of the working class and the character of their work had been transformed by technology and affluence, they maintained that this had not, nor would it eventually, in and of itself, put an end to capitalist exploitation. Much the contrary, in fact, drudgery and alienation were as prominent as ever before and would only grow more oppressive unless intentionally subverted. But something other than capitalism and technological progress stood in the way of revolution: Marxism itself, or at least as it had been understood and practiced until then. Only a broader and more contemporary understanding of class, labor, and the workplace could face the challenge of confronting the new, all-embracing character of capitalist domination across a vast array of spaces, subjects, and relations. One of the central domains for this emerging critical theory of capitalism was culture.

Throughout the 1950s, C. Wright Mills was among the first social theorists on the American left to think extensively about the ways in which technological and cultural developments in industrialized societies had radically altered the composition of the working class and the character of work.¹⁴⁸ While Mills wrote at length about an emerging, middling class of white-collar professionals, there was more to his thought than the transition from the factory to the office. The grounds for a new analysis of capitalism were, on his telling, laid open by a rising class of cultural workers. In a 1960 letter addressed to the New Left, Mills was emphatic about the need for an alternative approach to the study of capitalism in the postwar era. "What I do not quite understand about some New Left writers," he wrote, "is why they cling so mightily to 'the working class' of the

¹⁴⁸ Mills, *White Collar*.

advanced capitalist societies as *the* historic agency, or even as the most important agency, in the face of the really impressive historical evidence that now stands against this expectation.”¹⁴⁹ Rather than writing off the working class entirely, Mills summoned the left to reconsider the category “freshly.” His suggestion was to dislocate critical theories of capitalist society from their industrial footing in the factory and anchor them instead in what he called the “cultural apparatus,” whose workers—mostly intellectuals and artists—were a “possible, immediate, radical agency of change.”

For Mills, the cultural apparatus designated a hybrid sphere of production, distribution, and consumption composed of “all the organizations and *milieux* in which artistic, intellectual and scientific work goes on, and of the means by which such work is made available to circles, publics, and masses.”¹⁵⁰ Its labor process inhered in the production, exchange, distribution, and circulation of art, science, learning, information, and entertainment organized across an elaborate ensemble of institutions in which factories had no place: “schools and theaters, newspapers and census bureaus, studios, laboratories, museums, little magazines, radio networks.” The cultural apparatus was to him both the lens through which society sees and the medium through which it interprets and reports what it sees.¹⁵¹ Yet, inside this apparatus, cultural workers were losing control over the means of cultural production while the condition of intellectual work and the distribution of its products were becoming “increasingly bureaucratic.”¹⁵² This was in large part because, within capitalist societies, “all that has happened to work in general—in a word, alienation—is now rapidly happening to cultural, scientific, and artistic endeavors.”¹⁵³ That is, all forms of intellectual, scientific, and cultural labor had become a part of society predominantly “as a set of bureaucracies and as a great

¹⁴⁹ C. Wright Mills, “Letter to the New Left,” *New Left Review*, no. 5 (October 1960): 22.

¹⁵⁰ C. Wright Mills, “The Cultural Apparatus (1959),” in *Power, Politics and People: The Collected Essays of C. Wright Mills*, ed. Irving Louis Horowitz (New York: Oxford University Press, 1963), 406.

¹⁵¹ *Ibid.*, 406–7.

¹⁵² C. Wright Mills, “The Decline of the Left (1959),” in *Power, Politics and People: The Collected Essays of C. Wright Mills*, ed. Irving Louis Horowitz (New York: Oxford University Press, 1963), 266.

¹⁵³ *Ibid.*

salesroom.”¹⁵⁴ The overall consequence of these changes, Mills had it, was nothing short of a watershed in the history of capitalism, placing the industrialized world at the brink of a post-modern period.”¹⁵⁵ In this context, Mills defined a capitalist society such as the United States as an “Overdeveloped Society” in which “the economic emphasis moves from production to merchandizing,” from the factory to the “great sales-room.”¹⁵⁶ In the postwar era, he continued, “the new economy has flowered like a noxious weed” and “the distributor becomes ascendant over both the consumer and the producer.”¹⁵⁷ These developments at once set the stage for and demanded an original critique of capitalist society rooted in the discovery and analysis of new working-class subjects, new spheres of work, and new forms of cultural and mental labor. Yet, the fact that Mills contrasted the industrial society to the cultural apparatus, the factory to sales-room, and production to merchandizing reveals the limits of his historical understanding of what industrial factories actually were. As I argue in the following chapters, however, factories fundamentally shaped culture, art, and aesthetics in the eighteenth century and were, at the same time and during the same period, trading outposts in West Africa—not unlike an Amazon warehouse—in which goods were merchandized as in the “great sales-room” described by Mills.

What Mills saw as the ascendancy of technology and the cultural apparatus in the postwar era was in fact the culmination of a process set in motion earlier in the century. According to Michael Denning, for instance, a cohort of American Marxist critics had called for the inclusion of cultural workers, intellectuals, and professionals into the ranks of a new proletariat as early as the 1930s. As Denning notes, this American current of Western Marxists was inaugurated by a 1932 pamphlet titled “Culture and the Crisis,” which articulated an explicit and original “appeal to the

¹⁵⁴ Mills, “The Cultural Apparatus (1959),” 418.

¹⁵⁵ Mills, “Culture and Politics (1959),” 236.

¹⁵⁶ C. Wright Mills, “The Structure of Power in American Society (1958),” in *Power, Politics and People: The Collected Essays of C. Wright Mills*, ed. Irving Louis Horowitz (New York: Oxford University Press, 1963), 240.

¹⁵⁷ C. Wright Mills, “Man in the Middle: The Designer (1958),” in *Power, Politics and People: The Collected Essays of C. Wright Mills*, ed. Irving Louis Horowitz (New York: Oxford University Press, 1963), 378.

‘brain workers’ of the United States to join the ‘muscle workers’ in building a new civilization,” marking the left’s first attempt to “theorize the social and political significance of modern mental labor.”¹⁵⁸ Denning construes the pamphlet’s vision of a new working class made up of professionals, intellectuals, and artists as the linchpin of Depression-Era Marxism in the United States.¹⁵⁹ Indeed, one of its authors, Lewis Corey, anticipated key elements in the critical approach to postindustrial capitalism and class composition that, as I argue below, became popular among Marxist critics in the latter half of the century.¹⁶⁰ From Corey in the 1930s to Mills in the 1960s, the concept of “mental labor,” later reformulated as “cognitive” and “immaterial” labor by Autonomist Marxists, was from its inception seen as being dispersed across all realms of economic, social, and cultural production. That is, as the cultural apparatus appeared to engulf society as a whole, it was said to blur the divide between forms and processes of production, distribution, and consumption that had up to that point remained distinct. “Not only did the Taylorism of modernity accentuate the division between design and execution, mental and manual labor,” Denning discerns, “but it created entire industries and classes built on ‘mental labor’ and the appropriation of the skills of the craftworker.”¹⁶¹ Categories such as mass culture, the new working class, and the culture industry were thus “attempts to understand the emergence of modern mental labor.”¹⁶² Denning points to the convergence of European and American critiques of Western capitalism’s new cultural and technological plane by highlighting salient political and theoretical synergies between, for instance, Kenneth Burke’s “Revolutionary Symbolism in America” (1935) and Walter Benjamin’s “The Author as Producer” (1934) as well as the many resonances in the works of Antonio Gramsci and Lewis Corey published

¹⁵⁸ Michael Denning, *The Cultural Front: The Laboring of American Culture in the Twentieth Century* (London and New York: Verso, 1997), 98.

¹⁵⁹ *Ibid.*, 99.

¹⁶⁰ Lewis Corey, *The Crisis of the Middle Class* (1935; repr., New York: Columbia University Press, 1992).

¹⁶¹ Denning, *The Cultural Front*, 38–39.

¹⁶² *Ibid.*, 96.

that decade.¹⁶³ All these thinkers, in the United States and Europe alike, attempted to theorize a new cultural politics “summed up in the phrase ‘the cultural front.’”¹⁶⁴ Importantly, this cultural critique of capitalist society opposed both the avant-garde politics of working-class culture and classic communist currents—going as far back as Marx—that aimed to study and organize the industrial proletariat while assimilating high European culture and art to a socialist future in which labor pertained exclusively to manual work in factories and culture to the fine arts in museums and galleries.¹⁶⁵ By contrast, this new approach to capitalist culture broke with earlier theories that privileged the industrial proletariat, mass production, and the factory, choosing instead to reflect on immaterial forms of labor, an emerging middle class composed of artists and intellectuals, and new means of communication.¹⁶⁶ Much like with Mills, critics associated with this new wave of cultural criticism understood the industrial factory as the antithesis of an emerging culture sphere; that is, the separation between the economic sphere of the factory and the aesthetic realm of art and culture was essential to the development of a new critical theory of capitalist society that, as I argue below, became increasingly influential and dominant throughout the latter half of the twentieth century. Indeed, this early formulation of culture as the grounds for a renewed approach to critical thought intensified considerably in subsequent decades. After the Second World War, as Denning remarked recently, mass culture became “part of the wealth of nations, an engine of what those intoxicated by the new discovery called a ‘postindustrial’ society.”¹⁶⁷

¹⁶³ Ibid., 103.

¹⁶⁴ On Denning’s account, “the cultural front” was a metaphor that combined “two meanings of the word ‘front’: the military metaphor designating a place, a site of struggle or battlefield; and the political metaphor designating a group, a coalition with a common purpose. Thus, the ‘cultural front’ referred both to the cultural industries and apparatuses—a ‘front’ or terrain of cultural struggle—and to the alliance of radical artists and intellectuals.” Ibid., xix.

¹⁶⁵ Ibid., 97.

¹⁶⁶ Ibid.

¹⁶⁷ Michael Denning, *Culture in the Age of Three Worlds* (London and New York: Verso, 2004), 1.

Indeed, the reformulation of class composition and immaterial work continued apace in the postwar era when automated and electronic technologies were included, alongside the cultural apparatus, as one of the emerging spheres for understanding capitalist society and class composition. Here again, the factory and the old, industrial proletariat were among the first features of the conventional Marxian schema to be excised from a budding critique of capitalist society. In this regard, the three Marxist theories to take seriously the framework of postindustrial society were developed by the French thinkers Serge Mallet, André Gorz, and Alain Touraine in the late 1950s and 60s. Through a series of articles in *Les Temps Modernes* and *La Nef* in 1959, which were subsequently published in his 1963 *The New Working Class*, Mallet shifted the domain of radical working-class politics from unskilled manual labor to the most technically advanced forms of work within technological and chemical industries. His study was centered on heavily automated factories, such as La Compagnie des Machines Bull, France's IBM equivalent, the Thomson-Houston Electronics Group, and the oil refinery Caltex.¹⁶⁸ Whereas Mallet restricted the new working class to engineers and technicians, Gorz and Touraine expanded it to include professional, cultural, and intellectual workers within an equivalent of Mills's cultural apparatus. "The struggle for a meaningful life," Gorz wrote in 1964, "is the struggle against capital [within] the whole social sphere, from the union level to the political realm, from technology to culture."¹⁶⁹ Likewise, Touraine argued in his 1969 *The Post-Industrial Society* that economic growth, rather than resulting only from capital accumulation, "depends much more directly than ever before on knowledge, and hence on the capacity of society to call forth creativity. All the domains of social life—education, consumption, information, etc.—are being more and more integrated into what used to be called production

¹⁶⁸ His 1959 study of La Compagnie des Machines Bull was removed from the fourth French edition of 1969, on which the 1975 English translation is based.

¹⁶⁹ André Gorz, *Strategy for Labor: A Radical Proposal*, trans. Martin A. Nicolaus and Victoria Ortiz (1964; repr., Boston: Beacon Press, 1967), 104–5.

factors.”¹⁷⁰ Mallet, Gorz, Touraine, like Mills before them, opposed a purist Marxist approach to thinking about class, labor, and capitalism, which on their views failed dramatically to heed Marx’s repeated warnings about the constant evolution of work and the ceaseless renewal of the instruments, conditions, and social relations of production that characterize the historical development of capitalist societies.¹⁷¹

In contrast to Gorz’s focus on culture, artists, and intellectuals and Touraine’s emphasis on education, knowledge, and information, Mallet’s theory of postindustrial society and the new working class centered almost entirely on the labor process of high-tech industries. This was because, throughout his studies, Mallet found that the political action of technical workers was always situated in “the world of production, and more generally at the heart of technical society.”¹⁷² Commenting on how most new industries had by then become automated, Mallet argued that the general application of this technology across production, distribution, and service “necessarily entails a renewal of the very notion of working-class.”¹⁷³ But the question at hand, as he understood it, was not that “of knowing whether the working class exists or no longer exists,” but of determining which groups within it “have the possibility of clearly formulating the future of the workers” and those whose cannot, in light of their objective situation, “psychologically escape from their present condition.”¹⁷⁴ The radical agents of change within a postindustrial society, Mallet insisted, were those workers most integrated to its technological mode of production: technicians, engineers, and researchers in the chemical, oil, aeronautic, aerospace, electronics, and electromechanical

¹⁷⁰ Alan Touraine, *The Post-Industrial Society: Tomorrow’s Social History: Classes, Conflicts and Culture in the Programmed Society*, trans. Leonard F. X. Mayhew (1969; repr., New York: Random House, 1971), 5.

¹⁷¹ Serge Mallet, *The New Working Class*, trans. Andrée Shepherd and Bob Shepherd (1963; repr., Nottingham: Spokesman Books, 1975), 14, 17–18; André Gorz, *Farewell to the Working Class: An Essay on Post-Industrial Socialism*, trans. Michael Sonenscher (1980; repr., London and Sydney: Pluto Press, 1982); Touraine, *The Post-Industrial Society: Tomorrow’s Social History: Classes, Conflicts and Culture in the Programmed Society*, 17–25, 61.

¹⁷² Mallet, *The New Working Class*, 11.

¹⁷³ *Ibid.*, 59.

¹⁷⁴ *Ibid.*, 13.

industries.¹⁷⁵ Unlike traditional industries, such as textile and coal, these sectors had entered into that phase of advanced technology which forms the foundation of “the new consciousness of the modern working class.”¹⁷⁶

On Mallet’s account, most predictions made by automation enthusiasts of the 1950s had come to pass; the nature of production was entirely altered such that “overseers” and “operators” had completely replaced assembly-line workers in the automatic factory, and intellectual advances in the spheres of invention and control had displaced menial labor.¹⁷⁷ As Mallet saw it, this new workforce was generally divided in two segments: manual workers and intellectual workers, both of which were highly skilled.¹⁷⁸ Even manual workers, such as those assigned to automated production units and those charged with repairing and supervising machinery, required a heightened level of sensory skills and a comprehensive knowledge of synthetic production processes.¹⁷⁹ The intellectual workers, the most numerous group in automatic factories, were employed in research activities that preceded and followed production, from research and development to market studies and commercialization.¹⁸⁰ The expansion of these research units, Mallet remarked, led to the formation of “intellectual production units, in which working conditions grow increasingly similar to those of a modern workshop, but devoid of physical strain, dirt and stink—though with the same planned timing and mechanisation of office work.”¹⁸¹ Although Mallet recognized that automation had completely divorced workers from the things they produced, he insisted that it also destroyed the

¹⁷⁵ Ibid., 12.

¹⁷⁶ Ibid., 13.

¹⁷⁷ Ibid., 59, 60.

¹⁷⁸ Ibid., 66–68.

¹⁷⁹ Ibid., 66–67.

¹⁸⁰ In the “laboratory-cum-factory” of the electronics manufacturer Thomson-Houston, for instance, 30% of the labor force was composed of manual workers and 70% of engineers, technicians, and white-collar employees. This is representative of what Mallet took to be the general labor composition in these industries: most workers are employed in non-manual labor and even the manual workers are skilled, trained, and engaged in production tasks that are intellectually rewarding and not physically demanding. Ibid., 152.

¹⁸¹ Ibid., 67–68.

traditional fragmentation of the labor process, replacing the division of labor with “the synthetic vision of a complex task at the level of the team, or even of the whole work force.”¹⁸² Mallet further emphasized the strong social and affective ties between employees and the company, which were cultivated through benefits, learning, and cooperation.¹⁸³ As a result of these conditions, Mallet concluded, workers in automated industries were then in a privileged political position to formulate and pursue new possibilities “for a human liberation which does not reject technological progress, and which rises against its distortion,” moving society toward “superior forms of development.”¹⁸⁴ In short, Mallet embraced the technological innovations of postindustrial capitalism and weaved its innovations into an optimistic, critical outlook in which the factory, as it was then known and understood, was nowhere to be found.

Critical Theory: From Factory to Society

In one of the more biting slights to bourgeois consciousness in *Capital*, Marx ridicules enthusiastic apologists of the factory system for having “nothing more damning to urge against a general organization of labour in society than that it would turn the whole of society into a factory.”¹⁸⁵ In the eyes of twentieth-century interpreters of Marx, however, the damning cry of factory apologists had become a reality. Early in the century, for instance, Max Weber and György Lukács responded to the dominant transitions in the capitalist economy of their day by offering new directions for understanding the function of the factory system beyond the immediate sphere of production. For Weber, the separation of workers from the means of production was the product of

¹⁸² Ibid., 67.

¹⁸³ Ibid., 113.

¹⁸⁴ Ibid., 12, 14.

¹⁸⁵ Karl Marx, *Capital: A Critique of Political Economy*, trans. Ben Fowkes, vol. 1 (1867; repr., London: Penguin Books, 1990), 477.

an “inescapable universal bureaucratization” strewn over the whole of society.¹⁸⁶ From a social-scientific standpoint, he wrote, “the modern state is an ‘organisation’ (*Betrieb*) in exactly the same way as a factory; indeed this is its specific historical characteristic.”¹⁸⁷ All institutions within the state, from culture and politics to research and war, operate under the same principle applied in and perfected by the factory system, namely, “the ‘separation’ of the worker from the material means of conducting the activity of the organisation—the means of production in the economy, the means of war in the army, or the means of research in a university institution or laboratory, and the financial means in all of them.”¹⁸⁸ As early as 1918, Weber remarked that the structure and class composition of industrial society were significantly shifting as “the numbers of office workers in private firms [were] growing faster than manual workers.”¹⁸⁹ Even within factories, Weber claimed that machine technology had not resulted in an immiserated mass of unskilled workers as Marx and Engels had predicted in the *Communist Manifesto* (1848). Rather, Weber maintained that the fastest growing industrial class at the time was composed of semi-skilled workers, whose specialization and aptitudes were acquired through several years of technical training.¹⁹⁰ On the higher echelons of the factory, “professional specialisation and the need for specialist education [were] growing at all levels in production above that of the workers.”¹⁹¹ For Weber, this meant that, unlike what had been prophesied by doctrinaire Marxists, “the development of the entire stratification is far from being unequivocally proletarian.” Additionally, the standardization and uniformity of the labor process was destabilized by the rise of a new “social stratum, that of the officials, who [had] to be educated in a

¹⁸⁶ Max Weber, “Socialism (1918),” in *Weber: Political Writings*, ed. Peter Lassman and Ronald Speirs (1994; repr., Cambridge: Cambridge University Press, 2003), 279.

¹⁸⁷ Max Weber, “Parliament and Government in Germany under a New Political Order (1918),” in *Weber: Political Writings*, ed. Peter Lassman and Ronald Speirs (1994; repr., Cambridge: Cambridge University Press, 2003), 146.

¹⁸⁸ *Ibid.*, 147.

¹⁸⁹ *Ibid.*, 146.

¹⁹⁰ Weber, “Socialism (1918),” 292–93.

¹⁹¹ *Ibid.*, 293.

quite definite way,” and who had, as a result of their education and status, acquired “the character of a definite *estate*.”¹⁹² This explains, he continued, the many “commercial high schools, trade and technical colleges springing up like mushrooms everywhere.”¹⁹³ Given how nothing was “further from the minds of this class than solidarity with the proletariat,” Weber concluded, “one cannot say that an unambiguous trend towards proletarianisation exists today.” Finally, just as the composition and character of work were set on a different footing by technology, education, and specialization, the pervasive bureaucratic nature of modern society had likewise replaced the pioneering spirit of business with a science of management. The entrepreneur and the individual genius of the capitalist figure had given way to a class of commercially and technically trained managers or “officials,” as well as to an emergent class of “rentiers,” whose incomes derived from dividends and who took up roles in companies that were totally divorced from both management and production.¹⁹⁴ Against the beliefs of orthodox Marxists, then, Weber contended that what capitalist societies were in fact witnessing in the early decades of the twentieth century was less the dictatorship of the proletariat than “the dictatorship of the official.”¹⁹⁵

In his 1923 *History and Class Consciousness*, Lukács built on Weber’s comparison between the industrial factory and modern society in his own critical theory of capitalism through a revisionist reading of Marx.¹⁹⁶ Inside the factory, Lukács argued, time becomes “abstract, exactly measurable, physical space.”¹⁹⁷ As a result, the factory is, on his account, the site of two further transformations: the labor process—the production of commodities—becomes scientifically specialized and

¹⁹² Ibid., 293–94.

¹⁹³ Ibid., 294.

¹⁹⁴ Ibid., 291–92.

¹⁹⁵ Ibid., 292.

¹⁹⁶ On the reception of this work, its importance to “Western Marxism,” and its break with the scientific doctrine of Soviet Marxism, see Martin Jay, *Marxism and Totality: The Adventures of a Concept from Lukács to Habermas* (Berkeley: University of California Press, 1984).

¹⁹⁷ György Lukács, *History and Class Consciousness: Studies in Marxist Dialectics*, trans. Rodney Livingstone (1923; repr., Cambridge: MIT Press, 1971), 90.

mechanically parceled while its subjects—the workers—become rationally fragmented, wrested and estranged from their total personality. Here, the objectification of workers, which began with the sale of their labor-power as a commodity, is rendered “the permanent ineluctable reality of their daily life.” Yet, the organization of the factory, Lukács discerns, “could not possibly have such an effect—even within the factory itself—were it not for the fact that it contained in concentrated form the whole structure of capitalist society.” Inside the factory, then, time becomes space while the labor process and the laborer’s life are torn asunder; but most of all, the factory is the medium through which “the fate of the worker becomes the fate of society as a whole.”¹⁹⁸ This implies, in turn, that the association of factory and society flows in both directions, such that not only does the factory contain the whole of society, but society itself becomes, as Weber had suggested, a factory. For both thinkers, nowhere was this indistinguishability of the factory from society clearer than in bureaucracy, which, far from being limited to state politics, was on their view the organizing principle of modern life. In the same way that the lived reality of a factory worker was determined by the imperatives of profit, so too did bureaucracy rearrange life, work, and consciousness according to, as Lukács put it, the “general socio-economic premises of the capitalist economy.”¹⁹⁹ That is, the rational fragmentation, scientific specialization, and mechanical standardization that condition the private lives of workers in the factory also govern all matters of public life.

As much for Weber as for Lukács, the entanglement of factory and society becomes more salient as work becomes more skilled, informational, and intellectually demanding—well before the accelerations of these transitions in the “post-industrial” period of the postwar era. Even in the context of office work, Lukács notes, it is not only the “completely mechanical, ‘mindless’ work of the lower echelons of the bureaucracy which bears such an extraordinarily close resemblance to

¹⁹⁸ Ibid., 91.

¹⁹⁹ Ibid., 98.

operating a machine and which indeed often surpasses it in sterility and uniformity.”²⁰⁰ Rather, he continues, *all* issues have become “subjected to an increasingly *formal* and standardised treatment [...] in which there is an ever-increasing remoteness from the qualitative and material essence of the ‘things’ to which bureaucratic activity pertains.” Lukács even goes so far as to claim that Marx’s portrayal of factory work, a process through which “the individual, himself divided, is transformed into the automatic mechanism of a partial labour,” becomes clearer and more accurate when the division of labor is exacted on “more *elevated, advanced* and ‘*intellectual*’” planes.²⁰¹ So much so in fact that the alienation of workers and the fragmentation of production were, according to Lukács, at their “most grotesque in journalism,” an intellectual and informational profession he deemed “the apogee of capitalist reification.”²⁰² In the case of the reporter, he observes, “it is precisely subjectivity itself, knowledge, temperament and powers of expression that are reduced to an abstract mechanism functioning autonomously and divorced both from the personality of their ‘owner’ and from the material and concrete nature of the subject matter in hand.” Journalists are thus estranged both from the means of production—the linguistic, cognitive, and creative powers involved in thinking, writing, and researching—and the content of the commodity they produce—knowledge and information. Rather than being restricted to the production of commodities and the sphere of material necessity, capital’s “transformation of the commodity relation into a thing of ‘ghostly objectivity’” stamps its imprint upon “the whole consciousness of man.” The entirety of this process, a precursor of what a later generation of Marxists would call the “social factory,” was to Lukács the feat of the industrial factory system rather than a return to handicraft or a leap to postindustrial work.²⁰³

²⁰⁰ Ibid., 99.

²⁰¹ Ibid., 99, emphasis mine.

²⁰² Ibid., 100.

²⁰³ Ibid.

Weber's and Lukács's attention to social transformations that had previously been considered epiphenomenal to social relations of production would prove invaluable to critical thinkers in the latter half of the twentieth century, at a time when unprecedented rates of technological and economic change pressed them to rethink the connection between the factory and society even further. It was against this background, in the midst of society steeped in automation and affluence, that Herbert Marcuse developed the ideas at the core of *One-Dimensional Man* (1964). His perception that the displacement of the mechanized factory by automation was imminent helped to confirm his view that industrial society was entering a new phase. In a letter to the humanist Marxist Raya Dunayevskaya in 1960, Marcuse related the key issues motivating his project. "One of my problems," he wrote, "will be the transformation of the laboring class under the impact of rationalization, automation and particularly, the higher standard of living."²⁰⁴ Indeed, throughout *One-Dimensional Man*, Marcuse draws on numerous primary and secondary sources from the automation debates of the 1950s, as well as on the works of C. Wright Mills and Daniel Bell, in order to advance his claim that the governing condition of capitalist society was the totalization of a capitalist rationale from the factory to society.²⁰⁵ In Marcuse's schema, automation epitomized the process by which "technological rationality [had] become political rationality."²⁰⁶ The automatic factory, which as he argued defined the productive apparatus of advanced capitalism, determined "not only the socially needed occupations, skills, and attitudes, but also individual needs and

²⁰⁴ Herbert Marcuse, "Letter to Raya Dunayevskaya (August 8, 1960)," in *Collected Papers of Herbert Marcuse: Towards a Critical Theory of Society*, ed. Douglas Kellner, vol. 2 (London and New York: Routledge, 2001), 219.

²⁰⁵ Some of Marcuse's sources on automation included a report titled *Automation and Major Technological Change* (1958) by the American Federation of Labor and Congress of Industrial Organizations, Charles Walker's *Toward the Automatic Factory* (1957), Floyd C. Mann and L. Richard Hoffman's *Automation and the Worker: A Study of Social Change in Power Plants* (1960), and Charles Denby's pamphlet *Workers Battle Automation* (1960), among others.

²⁰⁶ Herbert Marcuse, *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society* (1964; repr., Boston: Beacon Press, 1991), xlvii.

aspirations.”²⁰⁷ According to Marcuse, technology played a central role in blurring the divide between private and public life, individual and social needs, as it instituted “new, more effective, and more pleasant forms of social control and social cohesion”—the very forms of control that would, as I note below, divert the attention of theorists from the actual factories underlying these emerging mechanisms of surveillance and domination.²⁰⁸

For Marcuse, the rise of this society, molded by “the spread of automation, mass production, and standardization in the daily business of life,” made individual development the prerogative of creative labor, of the “production of things, services, works, and spaces which are not only useful but also beautiful, satisfying not only material but also spiritual needs, enhancing the liberty, joy, and richness of the human existence.”²⁰⁹ Yet, much like Mills had asserted, Marcuse did not believe this process was in itself conducive to liberation from alienated labor. Rather, he observed, “individuals must go on spending physical and mental energy in the struggle for existence, status, advantage; they must suffer, service, and enjoy the apparatus which imposes on them this necessity.”²¹⁰ The advent of new spheres, activities, spaces, and subjects susceptible to capitalist domination, added to the new role of capitalists as bureaucrats and administrators rather than direct agents of order, discipline, and control, reinforced Marcuse’s conviction that both the working class and capitalist exploitation had acquired a new and more expansive form.²¹¹ Technology, problematically, had become a conduit for fusing cultural aspects of modern society—leisure, amusement, contentment, fulfillment—with the workplace itself; the private space in which “man may become and remain ‘himself’” had been “invaded and whittled down by technological reality.”²¹² As a result, Marcuse concluded, “mass

²⁰⁷ Ibid., xlv–xlvi.

²⁰⁸ Ibid., xlvi.

²⁰⁹ Herbert Marcuse, “The Individual in the Great Society (1966),” in *Collected Papers of Herbert Marcuse: Towards a Critical Theory of Society*, ed. Douglas Kellner, vol. 2 (London and New York: Routledge, 2001), 72.

²¹⁰ Ibid., 65.

²¹¹ Marcuse, *One-Dimensional Man*, 35.

²¹² Ibid., 12.

production and mass distribution claim the *entire* individual, and industrial psychology has long since ceased to be confined to the factory.”

It was within a similar context, in response to the prodigious levels of economic growth and scientific achievement in the industrialized West, that Theodor Adorno addressed the 1968 Congress of German Sociologists in a keynote lecture aptly titled “Late Capitalism or Industrial Society?” Adorno opened his speech by noting that the question at hand was not merely a dispute over nomenclature.²¹³ Rather, a crucial matter of substance was at stake, namely, “whether it is true that Marx is out of date.” According to mainstream sociologists, he noted, “the world is so completely determined by the unprecedented growth in technology that the social relations that once characterized capitalism [...] have now lost their relevance or can even be consigned to the realm of superstition.”²¹⁴ While conceding some truth to this claim, noting the increased affluence of workers and their participation in bourgeois culture, Adorno insisted that the recent radical changes in technology, economics, and social relations neither warranted a renunciation of capitalism as an analytic category nor indicated that the working class had ceased to exist as such. Turning to the question posed in his titled, Adorno argued that the “social relations” analyzed by many members of his audience failed to address a renewed interdependence between two aspects of production that were previously distinct: its *forces* and its *relations*. “Everything now is one,” Adorno wrote, “material production, distribution, and consumption are administered jointly” and their boundaries “flow into one another.”²¹⁵ More than “interlocking phenomena,” the social relations of production have acquired the upper hand over its forces such that the former now “appear to be the essence; they

²¹³ Theodor W. Adorno, “Late Capitalism or Industrial Society?: The Fundamental Question of the Present Structure of Society,” in *Can One Live After Auschwitz?: A Philosophical Reader*, ed. Rolf Tiedemann, trans. Rodney Livingstone (1968; repr., Stanford: Stanford University Press, 2003), 111.

²¹⁴ *Ibid.*

²¹⁵ *Ibid.*, 124.

have become second nature.”²¹⁶ “The signature of the age,” he concluded explicitly, “is the predominance of the relations of production over the forces of production.”²¹⁷ The forces and relations of production, once divided and confined within the factory, now overflowed and coalesced across the whole of society, “spread out universally over mankind.”²¹⁸ Relations of production were no longer only relations of property; they had acquired an immanent social quality that encompassed all forms of human association, “from those of the administration on up to those of the state, which functions now as an all-inclusive capitalist organization.”²¹⁹ And while the “social fate that befalls the individual is as arbitrary as it ever was,” this totalizing character of capitalist society also freed the social connections among human beings which a previous age had “buried beneath the relations of production.”²²⁰ Critical theory, Adorno proposed, must recognize this contradiction of late capitalism—its tendency toward domination and latent potential toward liberation—and take on the task of demystifying a system which social scientists failed to understand through facts, data, and science alone. And given the totalizing character of the situation, the site and subject of critical theory’s project of rethinking domination and freedom under a new capitalist regime could not be limited to the factory. But did this mean the factory had to be left behind, that it was no longer relevant for Marxist critiques of capitalism? Or was the factory’s definition just in flux, caught in the “interstitial,” “post-industrial” present of automation and affluence?

Autonomist Marxism: The Rise of the Social Factory

Some answers to these questions began to take form in Italy. Here, from the 1960s to the 1980s, a group of thinkers, workers, and activists set out to redraft the terms of the factory’s relationship to a capitalist society in transition. This current of critical thought and practice, known

²¹⁶ Ibid., 121.

²¹⁷ Ibid., 119.

²¹⁸ Ibid., 116.

²¹⁹ Ibid., 119.

²²⁰ Ibid., 123, 125.

as *operaismo* or “workerism,” was originally conceived by a faction of Marxist dissidents in the orbit of Italy’s Communist and Socialist parties, which included such notable thinkers as Mario Tronti, Antonio Negri, and Mariarosa Dalla Costa. This movement, segments and ideas of which would in time spiral into what became known as “Autonomist Marxism,” centered on the shared commitment of its members to not only re-read Marx’s thought but to confront it with, as they put it, “the *real* study of a *real* factory.”²²¹ Its driving impetus was, as Steve Wright put it in his recent history of the tradition, to “apply Marx’s critique of political economy to an Italy in the midst of a rapid passage to industrial maturity.”²²² This reinvigorated encounter with Marx involved above all a disavowal of abstract theory in favor of “grasping concepts within that concrete totality of struggle.”²²³ While the ideas that emerged out of *operaismo* first played out in the pages of the journal *Quaderni Rossi* from 1961 to 1963, the workerist stream of Italian Marxism only emerged “fully blown” with the inaugural issue of *Classe Operaia* in 1963, under the editorial and intellectual leadership of Mario Tronti.²²⁴ Looking back on this period half a century later, Tronti defined workerism as “an experience that tried to unite the thinking and practice of politics, in a determinate domain, that of the modern factory.”²²⁵ Indeed, the factory was so fundamental to Italian Marxism that the fault lines of most splits within its various factions revolved around the meaning of industrial factories to critical thought, the labor movement, and postwar capitalism in general.²²⁶

In his 1962 essay “La fabbrica e la società” (“The Factory and Society”), Tronti laid out a novel approach to thinking about the factory and capitalist society, suggesting that “when the factory

²²¹ Antonio De Martinis and Alessandro Piazzi, “Alle Origini Dell’autonomia Del Politico,” in *Soggetti Crisi Potere/Mario Tronti: Antologia Di Scritti e Interventi*, ed. Antonio De Martinis and Alessandro Piazzi (Bologna: Cappelli, 1980), v. Quoted in Steve Wright, *Storming Heaven: Class Composition and Struggle in Italian Autonomist Marxism*, 2nd ed. (2002; repr., London: Pluto Press, 2017), 3.

²²² Wright, *Storming Heaven*, 2–3.

²²³ Harry Cleaver, *Reading ‘Capital’ Politically* (Leeds: Antitheses, 2000), 30. Quoted in Wright, *Storming Heaven*, 3.

²²⁴ Wright, *Storming Heaven*, 29.

²²⁵ Mario Tronti, “Workerism and Politics,” *Historical Materialism* 18 (2010): 186.

²²⁶ Wright, *Storming Heaven*, 30.

seizes all of society—when all of social production becomes industrial production—the specific traits of the factory dissipate into the general traits of society.”²²⁷ Much like Weber, Lukács, Marcuse, and Adorno before him, Tronti argued that the social relations of production in an advanced stage of capitalist development take on both the industrial character of factory work and the political character of labor’s struggle against capital while, by the same token, the socialization of labor intensifies and the relations of production within the factory acquire a categorically social character. As he put it in an emblematic phrase, “when the whole of society is reduced to a factory, the factory—as such—appears to disappear.”²²⁸ With this, it seemed as though the fear of those industrial capitalists Marx dubbed “apologists of the factory system” had at last come to pass: the solid rift between the factory and society had caved and an all-encompassing “social factory” was formed in its wake. Yet, while Tronti certainly coined the term “social factory,” his version of it remained attached to mass-production, large-scale industry, and manual labor and thus did less to broaden the study of labor beyond the realm of direct production than is generally believed.²²⁹ It was only later, in the hands of Antonio Negri and the Autonomist wing of Italian Marxism, that the “social factory” would become a keyword in the Marxian lexicon, signaling the total and complete disappearance of the “real factory”—the space of assembly lines and automatic machines—from both capitalist society and the various attempts by critical theorists to understand it.

In his 1971 “Crisis of the Planner State,” Negri drew on Marx’s *Grundrisse* to articulate a theoretical account of a more comprehensive category of the proletariat that was bound neither by

²²⁷ Mario Tronti, *Operai e Capitale*, Nuova edizione accresciuta (1962; repr., Turin: Giulio Einaudi, 1971), 52.

²²⁸ Ibid.

²²⁹ Wright, *Storming Heaven*, 37. Tronti was skeptical of the postindustrial hypothesis. He argued in 1967, for instance, that the growth of the “immense mass of industrial labour-power, and within it the internal passage from proletarians to workers, will be the true challenge of the final days of the second millennium, and not the technological futurism of those who see in the automated factory all labour being transferred to machines.” Quoted in Ibid., 78.

factory workers nor the direct production of commodities.²³⁰ He subsequently elaborated this position in a 1976 pamphlet titled *Proletari e Stato*, in which he advanced a robust and theoretically sophisticated alternative to workerist accounts of the working class, replacing the “mass worker” of *operaismo* with a new revolutionary subject dubbed the “socialized worker,” or “*operaio sociale*,” who represented “the whole proletariat” rather than just the segment tied to the factory.²³¹ At this point, Negri abandoned the widely-held workerist idea that the sphere of production was the stage of class struggle *par excellence*. Likewise, he began to move away from conventional categories of the Marxist schema, including the industrial labor process, real subsumption, and the wage form.²³² But as many of his critics pointed out at the time, Negri offered very little evidence that his ideas corresponded to the lived experience of workers, much less that the factory had indeed become an obsolete object for the study of advanced capitalist society.²³³ According to Steve Wright, Negri only discussed the socialized worker “in a very general, indeed generic manner,” proclaiming “its profoundly social nature” and “massive revolutionary potential” without detailing the actual transformations in the character of factory workers that could lead to the emergence of a new subject.²³⁴ By interpreting “all moments of the circulation process as productive of value,” Negri sought to, in Wright’s words, “resolve workerism’s longstanding tension around the factory-society relationship by a theoretical

²³⁰ Antonio Negri, “Crisis of the Planner-State: Communism and Revolutionary Organisation (1971),” in *Revolution Retrieved: Writings on Marx, Keynes, Capitalist Crisis and New Social Subjects (1967-83)*, by Antonio Negri (London: Red Notes, 1988), 91–148. Negri’s position was then championed by the group “Potere Operaio,” of which Negri was a member. The faction was a hybrid current of Italian Marxism composed of workerists, radicals, and students. Active from 1967 to 1973, it was a precursor of *Autonomia Operaia* formed in 1976. Wright, *Storming Heaven*, 86–92, 127.

²³¹ Antonio Negri, *Proletari e Stato: Per Una Discussione Su Autonomia Operaia e Compromesso Storico*, 2nd ed. (Milan: Feltrinelli, 1976); Wright, *Storming Heaven*, 150–51. After 1971, Negri briefly returned to the conventional workerist position that took the factory as the epicenter of revolutionary theory and practice, following the resurgence of factory-based conflicts over industry contracts in 1972 and a mass occupation of FIAT’s Mirafiori plant in 1973. See *Ibid.*, 129, 141–44.

²³² Wright, *Storming Heaven*, 152–53.

²³³ Among those to voice their dissent were Negri’s former collaborator, Sergio Bologna, and the Roman wing of the *Autonomia* movement, see *Ibid.*, 157–58.

²³⁴ Negri, *Proletari e Stato*, 36. Quoted in Wright, *Storming Heaven*, 151.

sleight of hand.”²³⁵ This was symptomatic of what was in Wright’s view the central weakness of *operaismo* as a whole, namely, “its penchant for all-embracing categories that, in seeking to explain everything, too often would clarify very little.”²³⁶ And the “social factory” was among the more salient illustrations of this tendency: it “always alluded to a significant rethinking of the process of class composition, yet rarely seemed to deliver on its promises.”

Be that as it may, Negri’s ideas gained significant traction in Marxist circles within and beyond Italy. That Negri’s outlook had radically departed from the established strictures of Marxism was, in my view, a promising development. One of its most fruitful prospects was the potential to broaden the ambit of work, workers, and the workplace to include activities, people, and spaces previously excluded from critical thought, including, for instance, housework, women, and the domestic sphere. This was indeed how some feminist thinkers, such as Silvia Federici and Mariarosa Dalla Costa, understood the radical potential of a break with prevailing critiques of capitalism that centered on large factories and a predominantly white male proletariat culture.²³⁷ Donna Haraway signaled a promising way forward in her 1985 essay “A Cyborg Manifesto,” which feminist theorists, critics, and artists took up in important and compelling ways throughout the 1990s and 2000s.²³⁸ Nevertheless, Negri’s ideas were most influential among a group of thinkers who persisted in

²³⁵ Wright, *Storming Heaven*, 159.

²³⁶ *Ibid.*, 208.

²³⁷ See, for instance, Silvia Federici, “Wages Against Housework (1975),” in *Revolution at Point Zero: Housework, Reproduction, and Feminist Struggle*, by Silvia Federici (Oakland and Brooklyn: PM Press, Common Notion, Autonomedia, 2012), 15–22; Mariarosa Dalla Costa and Selma James, *The Power of Women and the Subversion of the Community*, 3rd ed. (1972; repr., Bristol: Falling Wall Press, 1975).

²³⁸ Donna Haraway, “A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century,” in *Simians, Cyborgs and Women: The Reinvention of Nature*, by Donna Haraway (1985; repr., New York: Routledge, 1991), 149–81. For example within feminist theory, see Tiziana Terranova, “Free Labor: Producing Culture for the Digital Economy,” *Social Text* 18, no. 2 (2000): 33–58; Lisa Nakamura and Donna Haraway, “Prospects for a Materialist Informatics: An Interview with Donna Haraway,” *Electronic Book Review*, 2003, <https://electronicbookreview.com/essay/prospects-for-a-materialist-informatics-an-interview-with-donna-haraway/>. For a recent account of how moving away from factories can be productive and useful in capturing forms of domination and exclusion outside traditional workplaces, see Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy* (Cambridge and London: Belknap, 2014). I thank Chiara Cordelli for bringing this latter reference to my attention.

shrouding particular and marginalized realities within real industrial factories under new generalized abstractions, such as “cognitive capitalism,” “immaterial labor,” and the “general intellect.”

Cognitive Capitalism and Immaterial Labor

The term “social factory,” as I have shown, grew out of a multifaceted political and intellectual context. Cutting across theoretical traditions and social movements going back to the early twentieth century, the “social factory” posited a new affinity between the social relations and forces of production inherently at odds with both classical political economy and orthodox Marxism.²³⁹ But from the 1980s onward the term’s previous connotation with industrial society and the factory system waned and withered. Henceforth, the “social factory” took on the character of a metaphor, a rhetorical representation of bygone workers, types of work, forms of domination, and spheres of production. What Tronti called “the factory as such” in 1962 had by the 1980s really disappeared in the minds of many critics of capitalism, and industrial capitalism was, on their account, slated to follow suit. As Negri put in an interview from 1980, “capitalist society has become—really, not by analogy—a ‘social factory.’”²⁴⁰ The “walls of the ‘factory’ fell down long ago,” he wrote in 1989, and “because it encourages one to think only in terms of material products, the term ‘factory’ should be abandoned.”²⁴¹ Having been liquidated from the material world altogether, the factory was now excised from critical thought plain and simple. As Rosalind Gill and Andy Pratt note, the decline of Fordist industrial production, followed by the mass worker’s transition into the “socialized worker,” cleared the way for “a new epoch in which the factory is

²³⁹ For a detailed account of the social factory’s historical trajectory within Italian Marxism, see David P. Palazzo, “The ‘Social Factory’ in Postwar Italian Radical Thought from Operaismo to Autonomia” (Ph.D. Dissertation, Graduate Center, City University of New York, 2014).

²⁴⁰ Antonio Negri, “Interview with Tony Negri (1980),” in *Revolution Retrieved: Writings on Marx, Keynes, Capitalist Crisis and New Social Subjects (1967-83)*, by Antonio Negri (London: Red Notes, 1988), 245–52.

²⁴¹ Antonio Negri, *The Politics of Subversion: A Manifesto for the Twenty-First Century*, trans. James Newell (Cambridge: Polity Press, 1989), 215.

increasingly disseminated out into society as a whole.”²⁴² What Negri calls “the factory without walls” became one of the guiding theoretical frameworks for an emerging generation of critical thinkers who employed it as a focal resource for theorizing and confronting yet a new purported phase in the development of capitalist society: “cognitive capitalism.”²⁴³

During the 1990s and 2000s, works by thinkers associated with the Autonomist tradition of Italian Marxism made their way to the United States.²⁴⁴ Not incidentally, the widespread uptake of this literature by American social, cultural, and political theorists coincided with the acceleration of deindustrialization, the explosion of finance capital, and the development of networked technologies, including the World Wide Web in 1992 and Web 2.0 in the early 2000s. At the turn of the twenty-first century, the reception of postwar Italian Marxism in the United States inspired a second, “post-Autonomist” wave of Marxist theories and critiques of contemporary capitalism. This recent turn in critical thought, led largely by the joint work of Michael Hardt and Antonio Negri, put forth a politically optimistic view of “cognitive capitalism” rooted in its salient and uncompromising departure from industrial manufacturing. The repercussions of this development in Marxist thought extended well beyond critical accounts of the factory itself. While its effects on the study of industrial labor and manufacturing were minimal, the most important implication of this approach was that it significantly reorganized the terms through which critical theorists understood those

²⁴² Rosalind Gill and Andy Pratt, “In the Social Factory? Immaterial Labour, Precariousness and Cultural Work,” *Theory, Culture & Society* 25, no. 7–8 (2008): 6.

²⁴³ For influential theories of “cognitive capitalism,” see Michael Hardt and Antonio Negri, *Assembly* (Oxford: Oxford University Press, 2017), 28, 117, 122, 143, 172, 187–89, 232; Carlo Vercellone, “The Hypothesis of Cognitive Capitalism,” in *Towards a Cosmopolitan Marxism* (Historical Materialism Annual Conference, Birkbeck College and SOAS, London, 2005), 1–11; Carlo Vercellone, “Wages, Rent and Profit: The New Articulation of Wages, Rent and Profit in Cognitive Capitalism,” trans. Arianna Bove, *Generation Online*, 2008, http://www.generation-online.org/c/fc_rent2.htm; Carlo Vercellone, “From Formal Subsumption to General Intellect: Elements for a Marxist Reading of the Thesis of Cognitive Capitalism,” *Historical Materialism* 15 (2007): 13–36; Mateo Pasquinelli, “Google’s PageRank Algorithm: A Diagram of the Cognitive Capitalism and the Rentier of the Common Intellect,” in *Deep Search: The Politics of Search Beyond Google*, ed. Konrad Becker and Felix Stalder (Innsbruck, Wien, and Bozen: StudienVerlag, 2009), 152–62.

²⁴⁴ Paolo Virno and Michael Hardt, eds., *Radical Thought in Italy: A Potential Politics* (Minneapolis: University of Minnesota Press, 1996).

segments of capitalist society declared by popular decree as fundamentally not industrial and thus irrevocably removed from factories, manufacturing, and manual labor.²⁴⁵ This included all forms of cultural, intellectual, service, professional, and knowledge-based occupations originally spawned by automatic factories. Above all, post-Autonomist theorists were interested in the knowledge economy as it related to the rise of online, cultural, intellectual, and high-tech economies. What is central to theories of “cognitive capitalism,” then, is not merely the argument that a novel and dematerialized form of labor emerged out of technological innovation, but that immaterial production became “hegemonic over all the other valorization processes.”²⁴⁶ This is not to say that they believed industrial production had been completely decimated. Rather, their contention is that immaterial labor became the predominant—the most politically relevant, economically significant, widespread, and important—type of productive activity within the postindustrial, “cognitive” spheres of the economy. In other words, their formulation of immaterial labor embodied the overall character and essence of postindustrial production. Indeed, the notion that immaterial labor has become the hegemonic input of capitalist production has become an axiom of contemporary critiques of political economy. The burgeoning academic literatures on “digital labor,” “postcapitalism,” and “postwork futures” are particularly illustrative of the popular and wide-ranging purchase of “cognitive capitalism,” especially among contemporary critics invested in theorizing what they take to be the distressing yet promising transformations in capitalist societies enacted by networked technologies such as the internet.²⁴⁷

²⁴⁵ On the relevance of manufacturing in advanced capitalism, see Gary Herrigel, *Manufacturing Possibilities: Creative Action and Industrial Recomposition in the United States, Germany, and Japan* (Oxford: Oxford University Press, 2010).

²⁴⁶ Michael Hardt and Antonio Negri, *Commonwealth* (Cambridge: Belknap Press, 2009), 25.

²⁴⁷ On digital labor, see Trebor Scholz, ed., *Digital Labor: The Internet as Playground and Factory* (New York and London: Routledge, 2013). For recent studies of “postwork” and “postcapitalist” futures, see include Paul Mason, *Postcapitalism: A Guide to Our Future* (New York: Farrar, Straus, and Giroux, 2015); Nick Srnicek and Alex Williams, *Inventing the Future: Postcapitalism and a World Without Work* (London and New York: Verso Books, 2015). For a more sophisticated, compelling, and critical account of a “postwork” future that is not

According to a host of critical thinkers who took up such approaches to understanding present-day capitalism, the interplay between the accelerated growth and diffusion of technology, education, knowledge, and finance led to the following postindustrial transformations: first, the development of immaterial labor characterized by affective, intellectual, and creative activity; second, a shift in the organization of labor away from the capitalist sphere of production; third, the emergence of what Marx had called the “general intellect” as an autonomous online site for immaterial labor; and finally, the rise—or return—of indirect forms of capitalist domination and value extraction which Marx had termed “formal subsumption.” Put briefly, the new formal subsumption referred to the availability of subtle and pervasive mechanisms of labor organization and exploitation that, unlike in the factory system, employers could exercise over workers without having to bring them all together in one place, without having to pay them a fixed wage, and without having to control or coerce them through authoritarian means. Together, these new circumstances and developments set the stage for a new form of struggle and resistance against capitalism, a harbinger of total revolution—what Hardt and Negri call “elementary communism.”²⁴⁸

To be sure, the narrative of industrial decay and high-tech renewal offered by contemporary critical theorists is more nuanced than, and therefore irreducible to, the untenable position that manufacturing and material production have become altogether irrelevant. As I mention above, their argument is that, insofar as the high-tech economies of developed Western democracies are concerned, modern industry and the factory system have ceased to be “hegemonic.” On the surface, this stance appears to be substantiated by recent quantitative studies on the state of American manufacturing. Before the tech bubble burst in the year 2000, for instance, 21 percent of California’s

constrained by the tenets set out by “cognitive capitalism,” see Kathi Weeks, *The Problem with Work: Feminism, Marxism, Antiwork Politics, and Postwork Imaginaries* (Durham and London: Duke University Press, 2011); Kathi Weeks, “The Problems with Work,” *New Labor Forum* 23, no. 2 (2014): 10–12.

²⁴⁸ Michael Hardt and Antonio Negri, *Commonwealth* (Cambridge: Belknap Press, 2009), 294.

manufacturing workforce was employed in the high-tech sector, amounting to 306,400 workers.²⁴⁹ In the seven years following its collapse, the tech industry lost a total of 115,000 jobs, 70,200 of which were in manufacturing.²⁵⁰ Not only does this scenario corroborate the standard postindustrial narrative championed by the postindustrial paradigm, it also seems to explain the sudden eruption of giant factories in China over the same period. We are thus told that the demise of the factory has been caused by the growth of knowledge-based service industries and high-technology. Upon closer inspection, however, this account presents one central problem that undercuts its logical premise: what, if anything, renders emerging knowledge-based service economies so categorically distinct from industrial factories? According to Gary Herrigel, the answer is unclear since “much of what we call services are in fact either outsourced functions that were formerly conducted by industrial firms, or are functions that continue to be dependent directly on industrial customers.”²⁵¹ Indeed, the division of labor in advanced capitalism, as I will show in the following chapter, is far thornier than the postindustrial paradigm can account for. As we come to grips with central elements in the social relations of production in the high-tech “service” sector, we will find ourselves before a labor process at once thoroughly continuous with and severely dependent on political regimes of factory production.

CODA: FROM ABSENT FACTORIES TO FACTORIES OF MODERNITY

The emergence of postindustrial society also had a lasting impact on a cohort of critics and thinkers credited with bringing “postmodernism” to the center of academic discourse around the 1970s and 1980s. Postmodernism is often defined by reference to a stream of artistic, literary, and theoretical responses to modernity, from pop art’s desacralization of high modernism to the foray

²⁴⁹ Ross C. DeVol et al., *Manufacturing 2.0: A More Prosperous California* (Santa Monica: Milken Institute, 2009), 29.

²⁵⁰ Ibid.

²⁵¹ Herrigel, *Manufacturing Possibilities*, 4.

against analytic philosophy by so-called “French theory.” But beyond this, or before it became associated with these cultural practices and intellectual traditions, postmodernism should be understood as a periodizing trope, the function of which, according to Frederic Jameson, is “to correlate the emergence of new formal features in culture with the emergence of a new type of social life and a new economic order.”²⁵² In this sense, postmodernism corresponds explicitly to the rise of “postindustrial or consumer society, the society of the media or the spectacle, or multinational capitalism.” Like all three articulations of the postindustrial paradigm discussed above, postmodernism seems to register a new phase in the capitalist epoch without offering a clear or detailed sense of what preceded it. As an expression of certain formal features in art, literature, and theory, postmodernism ends by replicating and reproducing the “deeper logic” of the very social system it introduces as a periodizing concept.²⁵³ In light of its ahistorical tendencies, postmodernism articulates one of the more salient aspects of our current moment, one that Jameson aptly identifies as “the disappearance of a sense of history.” Indeed, the utterance “postmodernism”—to which we might add “automation,” “post-industrial society,” and “cognitive capitalism”—is in the first instance the announcement of a rupture with the past that is almost entirely based on that ubiquitous postwar feeling of “living in interstitial time.”²⁵⁴ And only in a society living in a “perpetual present” and in “perpetual change” could such qualifiers as “post-industrial” and “postmodern” attain the traction and purchase they undeniably have in the last half century.²⁵⁵

One suggestive illustration of this postmodern tendency to proclaim a new age that is both a break in and with history—and the factory—is Gilles Deleuze’s brief yet memorable 1990 essay

²⁵² Frederic Jameson, “Postmodernism and Consumer Society,” in *The Anti-Aesthetic: Essays on Postmodern Culture*, ed. Hal Foster (Port Townsend: Bay Press, 1983), 113.

²⁵³ *Ibid.*, 125.

²⁵⁴ Bell, *Post-Industrial Society*, 37.

²⁵⁵ The terms “perpetual present” and “perpetual change” come from Jameson, “Postmodernism and Consumer Society,” 119, 125.

“Postscript on the Societies of Control.”²⁵⁶ In Deleuze’s formulation, the factory finds no place except as a rhetorical gauge of change that marks the transition from a “disciplinary society” to a “society of control.” In the older social arrangement, he writes, “the factory was a body that contained its internal forces at a level of equilibrium, the highest possible in terms of production, the lowest possible in terms of wages.”²⁵⁷ By contrast, in our contemporary society of control, he continues, “the corporation has replaced the factory, and the corporation is a spirit, a gas.” Much like with Diebold, Bell, and Negri, all that is solid, industrial, and modern melts into air. The factory is, on Deleuze’s rendering, surface and transparency while the corporation is depth and gravitas. Whereas the factory exercised direct discipline at arm’s length, the corporation “works more deeply” in states of “perpetual metastability that operate through challenges, contests, and highly comic group sessions.” The factory, Deleuze claims, “constituted individuals as a single body to the double advantage of the boss who surveyed each element within the mass and the unions who mobilized a mass resistance.”²⁵⁸ The corporation, on the other hand, “constantly presents the brashest rivalry as a healthy form of emulation, an excellent motivational force that opposes individuals against one another and runs through each, dividing each within.”²⁵⁹ The sense of transition, “that we are at the beginning of something,” is always exclusively a reflection on the present.²⁶⁰

Deleuze’s understanding of history is an uncanny re-staging of the “post-industrial paradigm” that, as I have demonstrated, influenced corporate, mass cultural, and academic discourses from as early as the 1930s through the present. In fact, his tripartite sketch of technological development bears more than a passing resemblance to Diebold, Bell, and *Fortune*. While the “old societies of sovereignty made use of simple machines” and the more recent

²⁵⁶ Giles Deleuze, “Postscript on the Societies of Control,” *October* 59 (Winter 1992): 3–7.

²⁵⁷ *Ibid.*, 4.

²⁵⁸ *Ibid.*, 4–5.

²⁵⁹ *Ibid.*, 5.

²⁶⁰ *Ibid.*, 7.

“disciplinary societies” were equipped with “machines involving energy,” Deleuze writes, “societies of control operate with machines of a *third* type, computers.”²⁶¹ He then proceeds to map this schema back onto historical transitions in the capitalist mode of production. In the nineteenth century, Deleuze argues, “capitalism is a capitalism of concentration, for production and for property;” industrial capitalism thus “erects the factory as a space of enclosure.”²⁶² “In the present situation,” however, he claims that “capitalism is no longer involved in production”—although, congruous with postindustrial thought, Deleuze sees the changes of the new “dispersive” capitalism of the corporation to be inseparable from structures in the social sphere.²⁶³ His society of control manifests, like the rise of automation, postindustrial society, and cognitive capitalism, “not just in the system we live under but in the way we live and in our relations with other people too.”²⁶⁴

Together, the texts, theories, predictions, and circumstances I trace above account for the historical disappearance of the factory from a series of discourses about capitalist society since the Second World War. While critical theorists of capitalism in particular have given us useful models to think about the political and social structures of our present, they have, like the other two currents of the postindustrial paradigm, given a remarkably short shrift to the reproduction of dreary, menial, and disciplined work that crucially hold up the kinds of corporations imagined by Deleuze or the automatic factories described by Diebold. As I show in Chapter 2, mainstays of our high-tech, “free-floating” sector depend on a racialized and menial labor process obscured by the ideologies of work-as-play that emphasize the creative and aesthetic character of professional life in the digital age. And as I show in subsequent chapters, the periodizations that situate the industrial factory in the long nineteenth century likewise eclipse crucial continuities in capitalism’s relation to labor, aesthetics, and race at earlier historical moments.

²⁶¹ Ibid., 6, emphasis mine.

²⁶² Ibid., 6.

²⁶³ Ibid.

²⁶⁴ Ibid., 7.

As I elaborate on the four case studies that make up the factories of modernity, I both take up and adapt the projects laid out by critical theories of capitalism, including the connections between ideas and social formations or, as Tronti put it, the effort “to unite the thinking and practice of politics, in a determinate domain, that of the modern factory.”²⁶⁵ The factories of modernity that I examine are, indeed, determinate insofar as they have physical, restricted zones, demarcated and disciplined spaces and schedules of labor, and purposefully constructed, keen senses of their own designs towards profit, progress, and freedom. The contribution of my work is to extend the idea of the factory not, as critical theory has tended to, across the entirety of society to the point of invisibility, but within the factory’s concrete, past and present instantiations. This particular understanding of what a factory is also indexes missed yet crucial connections between modern political thought and historical capitalism over a longer and quite different history of capitalist modernity than those presented to us by the “rise of capitalism” debate. On my definition, the factory is not only a space of confinement, of gates and assembly lines. Insofar as it is portable across time periods, geographies, political vocabularies, “phases” of economic development, theoretical traditions, and institutions, the factories that emerges throughout the following chapters have existed and continue to exist beyond the gates, walls, and technologies of what we imagine a “real factory” to be. More than metaphors or analogies, the factories of modernity are concrete manifestations of capitalism and modernity, of their entwined ideas, people, spaces, and things.

²⁶⁵ Tronti, “Workerism and Politics,” 186.

CHAPTER TWO
DATA CENTER

“I like to think
(right now, please!)
of a cybernetic forest
filled with pines and electronics
where deer stroll peacefully
past computers
as if they were flowers
with spinning blossoms.

I like to think
(it has to be!)
of a cybernetic ecology
where we are free of our labors.”

— Richard Brautigan, 1967.¹

“Thank you for your interest in a position as a Seasonal Associate at Amazon Distribution GmbH. We have vacancies in the following areas:
Stock storage: walking activity, working with hand scanner
Order fulfillment: walking activity, working with hand scanner
Packaging: standing activity, packaging items, working with scanner.”

— Human Resources Department, Amazon, 2014.²

At an Amazon warehouse, somewhere in “flyover country,” a worker shifts her attention when an electronic device lights up with a question: “How do you feel about working at Amazon?”³ Of four possible answers, she selects the “correct” response—“Great! I’m proud to work at Amazon!”—and clocks in for a ten-hour shift. The device then tells her to fill a cart with miscellaneous objects: children’s toys, clothes, a book. It flickers again sending her back to another shelf for more items. Once her tote is filled, she places it on a conveyer belt and returns to the

¹ Richard Brautigan, “All Watched Over by Machines of Loving Grace” (1967) in Richard Brautigan, *The Pill Versus the Springhill Mine Disaster* (San Francisco: Four Seasons Foundation, 1968).

² Heike Geissler, *Seasonal Associate*, trans. Katy Derbyshire (2014; repr., South Pasadena: Semiotext(e), 2018).

³ Outis Philalithopoulos, “Working for Amazon (Part 1),” *Naked Capitalism*, March 2, 2017, <https://www.nakedcapitalism.com/2017/03/working-for-jeff-bezos-part-1.html>.

shelves. She works as a “picker” and management has set her daily “pick-rate” target between 100 and 120 items, which has her walking twelve miles around the warehouse every day for a total of 60 hours, 72 miles, and 700 items each week. The software issuing these commands also tracks her movement and oversees her productivity—she is never more than ten feet away from a surveillance camera. By daybreak in Silicon Valley another tech worker arrives at Google from East San Jose; around him are all kinds of gadgets, including a scanner he uses to digitize printed pages for Google Books. Three directives summarize the hours ahead: “press button, turn page, repeat.”⁴

The Amazon picker and the Google scanner are joined by other data workers worldwide. In Fuzhou, China, over one hundred workers crowd the basement of a warehouse, a “makeshift factory,” to play the online game *World of Warcraft*.⁵ They are at various points through their twelve-hour shifts. Their job is to battle onscreen monsters in return for virtual gold coins, which they “harvest” for a fixed piece rate—hence their moniker “gold farmers.” They are given strict quotas and watched over by their boss, Mr. Yu, who claims his workers “all know how to play online games, but [are] not willing to do hard labor.”⁶ At another facility nearby, above the “factory floor” where computers are lined up side by side, several gamers sleep on bunkbeds in “unkempt, closet-size dormitory rooms.”⁷ As early as 2005, this online business had spawned thousands of “gaming factories” across China, employing more than 100,000 full-time workers. In central Henan Province, one factory had 300 computers; at another in western Gansu Province, gamers logged up to eighteen hours a day.⁸ Like industrial factory workers in the vicinity, “gold farmers” begin their shifts by punching a clock and end it by handing the product of their labor—virtual coins—to their

⁴ Laurel Ptak and Andrew Norman Wilson, “Andrew Norman Wilson: ScanOps; Conversation with Laurel Ptak,” *Aperture*, Spring 2013, 129.

⁵ David Barboza, “Ogre to Slay? Outsource It To Chinese,” *New York Times*, December 9, 2005, A1.

⁶ *Ibid.*, C4.

⁷ *Ibid.*

⁸ *Ibid.*

employer in exchange for a wage.⁹ Their boss sells the virtual coins they “harvested” to an online retailer for real money. The retailer then sells these coins to gamers, mostly in Europe and North America, who have less time and patience to play, yet more money to spend on the game, than “gold farmers.” By recent estimates, over 400,000 “gold farmers” are employed fulltime worldwide—80 to 85 percent in China—for an average of US\$4.80 a day.¹⁰

In Bacoor, a Filipino suburb southwest of Manila, yet another group of online workers clocks in for the day. Past security, they convene in a large and crowded room where they work cheek by jowl on long tables, moderating seemingly endless torrents of user-generated content uploaded to social media websites around the clock.¹¹ Their labor is to sanitize the mainstream web, to purge our social media feeds and search engine results of material deemed offensive, gruesome, violent, and explicit. They belong to a rising class of low-wage data workers scattered across data centers and workstations the world over. Some of them perform the work of “cleaning” the incomplete, obsolete, duplicated, or inaccurate bits of digital information specialists have dubbed “dirty data.”¹² Others are employed in the completion of small, atomized online tasks known as “microwork,” a term that epitomizes the extreme level of labor fragmentation in the digital

⁹ Julian Dibbell, “Invisible Labor, Invisible Play: Online Gold Farming and the Boundary Between Jobs and Games,” *Vanderbilt Journal of Entertainment & Technology Law* 18, no. 3 (Spring 2016): 421.

¹⁰ These estimates are from 2008-2009. Other countries with high volumes of gold farmers include Mexico, Romania, Indonesia, India, Malaysia, and the Philippines. For both statistics, see Richard Heeks, “Understanding ‘Gold Farming’ and Real Money Trading as the Intersection of Real and Virtual Economies,” *Journal of Virtual Worlds Research* 2, no. 4 (2010): 3–27; Richard Heeks, “Understanding ‘Gold Farming’: Developing-Country Production for Virtual Gameworlds,” *Information Technologies & International Development* 5, no. 3 (Fall 2009): 95. For a recent ethnographic study of thirteen gold-farming factories in China, see Zixue Tai and Fengbin Hu, “Play Between Love and Labor: The Practice of Gold Farming in China,” *New Media & Society* 20, no. 7 (2018): 2370–90. For a critical assessment of racialized representations of “gold farming” in the online gaming community as a Chinese cheating practice and a form of sweated digital labor, see Lisa Nakamura, “Don’t Hate the Player, Hate the Game: The Racialization of Labor in World of Warcraft,” in *Digital Labor: The Internet as Playground and Factory*, ed. Trebor Scholz (New York: Routledge, 2013), 187–204.

¹¹ Adrien Chen, “The Laborers Who Keep Dick Picks and Beheadings Out of Your Facebook Feed,” *Wired Magazine*, October 23, 2014, <https://www.wired.com/2014/10/content-moderation/>.

¹² David Drai, “Avoiding the Perils of ‘Dirty’ Data,” *Information Management*, September 4, 2018, <https://www.information-management.com/opinion/avoiding-the-perils-of-dirty-data>; Verne Kopytoff, “Big Data’s Dirty Problem,” *Fortune*, June 30, 2014, <https://fortune.com/2014/06/30/big-data-dirty-problem/>.

economy.¹³ Microwork platforms, such as Amazon Mechanical Turk, TaskUs, Upwork, and the aptly named CloudFactory offer their clients—from freelancers and graduate students to LinkedIn and Google—the service of delegating the completion of a given project to a massive, undefined group of online workers among whom the work is divided into minute clusters of short and simple tasks. While they require little technical skill, these micro-tasks often demand high levels of cultural fluency and aesthetic sensibilities from workers. Microworkers may be engaged to transcribe a hand-written text or rate a search engine result, but they may just as easily be called to compare a spread of images or categorize “the sentiment expressed in a comment.”¹⁴

Content moderators and microworkers are known throughout Silicon Valley as “data janitors.”¹⁵ Insofar as the region’s custodial services have been historically and disproportionately performed by racialized and immigrant populations, the moniker is a marker of the structural economic and racial inequalities that undergird Silicon Valley’s record of wealth. Taken at face value, however, the term conveys the character and substance of low-wage data work. It suggests an analogy between the services that janitors provide in physical space and those that content moderators and microworkers perform on and to the internet—the work of cleansing our digital culture from its impurities, of organizing and cleaning the mess left by others, of mopping beneath our screens, of clearing the ground, as it were, so others may work and play.¹⁶ One content

¹³ Dominique Kost, Christian Fieseler, and Sut I Wong, “Finding Meaning in a Hopeless Place? The Construction of Meaning in Digital Microwork,” *Computers in Human Behavior* 82 (2018): 101–10; Jean-Michel Dalle et al., “Microwork Platforms as Enablers to New Ecosystems and Business Models: The Challenge of Managing Difficult Tasks,” *International Journal of Technology Management* 75, no. 1–4 (2017): 55–72; Lilly Irani, “The Cultural Work of Microwork,” *New Media and Society* 17, no. 5 (2013): 720–39.

¹⁴ Kost, Fieseler, and Wong, “Finding Meaning in a Hopeless Place?,” 101.

¹⁵ Lilly Irani, “Justice for ‘Data Janitors,’” *Public Books*, January 15, 2015, <http://www.publicbooks.org/nonfiction/justice-for-data-janitors>; Steve Lohr, “For Big-Data Scientists, ‘Janitor Work’ Is Key Hurdle to Insights,” *The New York Times*, August 17, 2014, http://www.nytimes.com/2014/08/18/technology/for-big-data-scientists-hurdle-to-insights-is-janitor-work.html?_r=0.

¹⁶ Irani, “Justice for ‘Data Janitors’”; Irani, “The Cultural Work of Microwork.”

moderator described his job in just such terms: “Think like that there is a sewer channel and all of the mess/dirt/waste/shit of the world flow towards you and you have to clean it.”¹⁷

Although they spend their days doing quite different things, pickers, scanners, “gold farmers,” content moderators, and microworkers are the backbone of our global “postindustrial” economy.¹⁸ They are parties to a vast, largely invisible yet indispensable class of digital laborers. And the conditions under which most of them work are precarious in both new and familiar ways. Their contracts tend to be mediated by temporary staffing agencies or microwork platforms that distribute them across a series of menial data jobs, often for low wages, long hours, and short-time arrangements with little to no benefits or security. In the United States, they are not only underpaid and overworked, but also disproportionately sourced from communities euphemistically labeled “alternative labor pools,” which include—as I discuss in Part 3—workers of color and migrants, many of them undocumented, living in low-income and inner-city neighborhoods.¹⁹ In short, these workers compose a new class of digital wage-labor largely employed in the physical, fragmented, and repetitive tasks of decoding, organizing, transcribing, labeling, digitizing, and moderating the streams of data that incessantly besiege the internet.²⁰ As one commentator put it, the internet economy is

¹⁷ Tarleton Gillespie, *Custodians of the Internet: Platforms, Content Moderation, and the Hidden Decisions That Shape Social Media* (New Haven and London: Yale University Press, 2018), 121.

¹⁸ Given the great extent to which their physical labor involves responding to and interacting with digital data and online devices, such as hand scanners, Amazon pickers are just as much “data workers” as content moderators and microworkers. I discuss the relation of pickers to data workers in the Epilogue, “Factories of Fulfillment.”

¹⁹ In an educational forum organized by the Warehousing Education and Research Council, Scott Whiting, a “long-time warehousing practitioner,” shared “how one 3PL [third-party logistics company] succeeded in resolving their labor shortage challenge by embracing a new hiring approach based on collaboration and flexibility.” He also offered insight into how companies can “tap into a new pool of potential employees” and “gain access to local programs that help employers with training costs.” Scott Whiting, “The Value of Providing a Second Chance: Alternative Workforce Options” (Educational Forum, Warehousing Education and Research Council, Bolingbrook, IL, January 17, 2019), [https://werc.org/events/EventDetails.aspx?id=1174885&hhSearchTerms="warehouse"](https://werc.org/events/EventDetails.aspx?id=1174885&hhSearchTerms=).

²⁰ While I make references to Amazon pickers throughout this chapter, mostly for the purposes of comparison and context, I discuss their work and workplace in depth in the Epilogue, “Factories of Fulfillment.”

“powered by media transcription, spam farms, and data entry.”²¹ In light of their prodigious number as well as the importance of their work to internet corporations and users, data workers and the data centers in which they work enunciate a set of rarely-examined realities about advanced capitalist societies that have been neglected by the dominant frameworks through which capitalism has been understood, critiqued, and imagined for over half a century.²² Data workers, data work, and data centers impart a new story about the historical aspects of capitalist society that have been transformed in the recent past and those that have persisted into the present. By following that story, this chapter begins to chart an alternative account of the factory’s enduring presence in and relevance to historical capitalism.

To be sure, capitalism today is undeniably new, digital, and informational. The ubiquitous postwar feeling of imminent technological and economic revolution, which overwhelmed midcentury experts and publics alike, has persisted into the present. Today, it is felt as the coming of a “second machine age” or the “fourth industrial revolution.”²³ Not even John Diebold or Daniel

²¹ Irani, “The Cultural Work of Microwork,” 735.

²² On the size and importance of content moderators, see Gillespie, *Custodians of the Internet*, 111–40. According to the Pew Research Center’s 2016 report *Gig Work, Online Selling and Home Sharing*, during 2015 approximately 20 million adults earned money completing on-demand tasks in the United States. By 2025, informational service work delivered and sourced through online platforms is projected to reach 2% of global GDP or US\$2.7 trillion. Mary L. Gray and Siddharth Suri, *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass* (Boston and New York: Houghton Mifflin Harcourt, 2019), x. Recent estimates place the number of fulltime content moderators in the United States above 100,000. Sarah T. Roberts, *Behind the Screen: Content Moderation in the Shadows of Social Media* (New Haven and London: Yale University Press, 2019). Regarding the economic value of the work undertaken by “data janitors,” David Drai has noted that, in the United States, companies spend an estimated US\$600 million a year with “dirty data,” which has recently become a “key cause behind 40% of business initiatives that fail to achieve their targets, costing organizations some US\$14.2 million annually.” Drai, “Avoiding the Perils of ‘Dirty’ Data.” On Amazon MTurk microworkers, see Lily Irani and M. Six Silberman, “Turkopticon: Interrupting Worker Invisibility in Amazon Mechanical Turk,” in *Proceedings of the 2013 SIGCHI Conference on Human Factors in Computing Systems* (CHI 2013, 2013; repr., Paris, France: University of California, San Diego, 2015), 611–20, <https://escholarship.org/uc/item/10c125z3#?>

²³ Erik Brynjolfsson and Andrew McAfee, *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies* (London and New York: W. W. Norton & Company, 2014); Klaus Schwab, *The Fourth Industrial Revolution* (New York: Crown Business, 2017). Taking Silicon Valley as his case-study, Peter Hall argued in 1985 that advanced capitalist societies such as the United States were then transitioning between the fourth and fifth Kondratieff cycles of economic development. See Peter Hall, “The Geography of the Fifth

Bell could have predicted the astounding developments in automation or the prodigious growth in the service and knowledge industries of the last two decades.²⁴ Yet, even within the most technologically-advanced sectors of our economy, those in which artificial intelligence and algorithms should have prevailed, human bodies, brains, and emotions continue to bear the toils of digital drudgery.²⁵ And even with respect to those jobs that symbolize our informational service economy, such as online retail, the manual labor of “pickers” has overtaken the “immaterial” production and exchange of knowledge. Once we scrutinize the divisions and distinctions within the digital economy, certain patterns emerge that force us to reconsider the postindustrial paradigm outlined in Chapter 1. According to the U.S. Bureau of Labor Statistics, in 2017 one out of ten workers in the United States, or 15.5 million people, were primarily employed through “alternative work arrangements” as independent contractors, on-call workers, temporary help agency workers, and workers provided by contract firms.²⁶ Since temporary help agency workers—who are paid and employed through third-party staffing firms—account for most low-wage data workers, two statistically salient trends within this segment form a relevant context for the argument that follows. First, as the report states, workers in this arrangement—contrary to what adherents to the postindustrial paradigm believe—are “heavily concentrated in the production, transportation, and material moving occupations and in manufacturing industries.”²⁷ In comparison to 2005, the data registers a recent shift in temporary help agency work from office and clerical service to manual

Kondratieff,” in *Silicon Landscapes*, ed. Peter Hall and Ann Markusen (Boston, London, and Sydney: Allen & Unwin, 1985), 1–19.

²⁴ Carl Benedikt Frey and Michael A. Osborne have predicted that approximately 47% of all existing jobs in the United States will be automated within one or two decades. Carl Benedikt Frey and Michael A. Osborne, “The Future of Employment: How Susceptible Are Jobs to Computerisation?,” *Technological Forecasting & Social Change* 114 (2017): 254–80. See also: Acemoglu and Restrepo, “Artificial Intelligence, Automation and Work.”

²⁵ Roberts, *Behind the Screen*; Gillespie, *Custodians of the Internet*; Lilly Irani, “The Hidden Faces of Automation,” *XRDS: The ACM Magazine for Students* 23, no. 2 (Winter 2016): 34–37.

²⁶ Bureau of Labor Statistics, “Contingent and Alternative Employment Arrangements: News Release” (Washington, D. C.: U. S. Department of Labor, June 7, 2018), <https://www.bls.gov/news.release/conemp.htm>.

²⁷ *Ibid.*, 7.

occupations that carry “higher than average workplace injury and fatality rates.”²⁸ Here again, the movement from production to services, from manufacturing to knowledge, that was so central to Bell’s theory of “post-industrial society” fails to capture the situated realities lodged in the lower echelons of our present-day “gig economy.” Second, these workers are, as the report states, “much more likely than workers in traditional arrangements to be Black or Hispanic or Latino.”²⁹ And although statistics such as these compose a useful context for rethinking the postindustrial paradigm, other more specific, lived aspects of the online service economy—such as those related at the outset of this chapter—cannot be conveyed by numbers. In these cases, accounts of data workers, their workplaces, their work, and their working conditions become invaluable sources for understanding capitalism today. These accounts, as I argue below, reveal that certain elements of capitalist society have endured across the historical transformations of capitalism since the Second World War, and that these aspects inhere in what I call “factories of modernity.”

By turning to the covert ways in which data centers rely on the political cycles and technical systems of production characteristic of the factory system to discipline, coerce, and control a massive workforce, this chapter will advance an account of contemporary capitalism that is radically different from the three alternatives outlined in Chapter 1. While “data janitors” and data centers are vital to global patterns of exploitation and racialization today, they have gone mostly unheeded by critics interested in understanding and confronting capitalist domination in the present. As I argued in the foregoing chapter, this oversight arises from the ahistorical framework animating most

²⁸ “America’s Nonstandard Workforce Faces Wage, Benefit Penalties, According to U.S. Data,” *Targeted News Service*, June 7, 2018, <https://search.proquest.com/docview/2051647111?accountid=14657>.

²⁹ The report also states that they were “less likely than traditional workers or workers in other arrangements to have attended college.” Bureau of Labor Statistics, “Contingent and Alternative Employment Arrangements,” 7. “While black workers comprise 12.1 percent of the overall workforce, they comprise 25.9 percent of temporary help agency workers; Latinx workers are 16.6 percent of all workers, but 25.4 percent of temporary help agency workers. The share of temporary help agency workers identifying as non-white increased by 10 percent between 2005 and 2017.” Quoted in “America’s Nonstandard Workforce.”

dominant theories of capitalist society, which tend to rely on a conceptual paradigm that defines advanced, postwar capitalist societies in terms of a radical break with its past. In short, if the previous chapter was concerned with absent factories in the realm of ideas, this chapter turns to absent and invisible factories in physical space and on the internet. As such, what follows is a reassessment of contemporary capitalism through its concealed—and deliberately erased—sources of value: the data factory; racialized and coercive regimes of production and control; an underpaid and overworked class of “data janitors;” capital’s hidden mechanisms of domination; and an endless stream of data that never reaches our screens. The image of contemporary capitalism we are left with at the end contrasts starkly with dominant accounts of the internet age. The material politics of raw data I chart below speaks to a menial, repetitive, manual, and alienated form of digital work that, while ubiquitous and indispensable to most forms of creative, affective, artistic, and intellectual production today, is never seen nor heard. Throughout this chapter, the labor of “data janitors” emerges as an essential yet overlooked specter of contemporary capitalism, as a mute, invisible, racially-marked, and omnipresent form of human labor, eminent in every Google search, tacitly presumed in every unconscious scroll down our social media feeds. I contend that the factory—as a system of digital and online production—is not only present at the heart of the high-tech economy, but that it is also a productive site through which political theorists and social scientists may begin to formulate a new understanding of contemporary capitalism, to which questions of menial labor, culture and aesthetics, and racialized exploitation are integral.

My argument is organized in three sections, each on one of the three respective themes that structure my historical study of preindustrial factories in subsequent chapters: labor, aesthetics, and race. I begin in Part 1 by probing the working spaces and conditions of low-wage data workers employed in Google’s Silicon Valley headquarters. Contrary to popular renderings of Silicon Valley’s consent-based corporate culture, I contend that Google sustains a regime of discipline and control

targeted at its unskilled digital workforce, composed predominantly by subcontracted and unskilled workers of color. Moreover, I argue that the company engages in these labor practices secretly, by hiding its “data janitors” and the work they perform within a concealed, highly monitored, and virtually invisible data center at the fringes of its corporate compound. In Part 2, I examine the ways in which the division between “creative” and “menial” labor in online data work is produced through Amazon’s Mechanical Turk platform (MTurk). This platform relies on a vast class of underpaid and unskilled data workers to perform the various “micro-tasks” I describe above. I claim that, much like in the eighteenth-century manufactory I discuss in Chapter 4, MTurk subsumes the cultural fluencies and aesthetic sensibilities of microworkers through the mechanisms and principles of factory production. In Part 3, I argue that low-wage, flexible, and unskilled work in Silicon Valley is organized through and sustained by structural and historical cycles of racialization and migratory labor that solidified during the expansion of the region’s agrarian economy in the first half of the twentieth century. I draw on ethnographies of Latino and Mexican janitors at Apple to illustrate that, since the 1990s, Silicon Valley’s high-tech corporations have relied on a replenishable, abundant, and cheap stream of labor from racially-marked immigrant communities in the eastern barrios of San Jose. As I further claim, the latest instantiation of Silicon Valley’s racial politics has given rise not only to a class of Latino and Mexican custodians but also to so-called “data janitors.” These patterns lay bare the racialized structure that underlies the high-tech labor market, one that has persisted and strengthened throughout the many transitions of the local economy. Overall, these case studies point to the obstinate organizing power of the factory in contemporary capitalism. As I go on to argue in the next three chapters, the factory is as useful to understanding the organization of labor, aesthetics, and race in preindustrial capitalism as it in our allegedly “post-industrial society.”

PART 1: LABOR AND THE DATA FACTORY

“California is very important for me because nowhere else has the upheaval most shamelessly caused by capitalist centralization taken place with such speed.”

— Karl Marx, 1880.³⁰

Silicon Valley is a striking case-study in capitalist economic development. From Depression-era farms to New-Deal canneries, from postwar microchip factories to dot-com startup offices, its historical spaces of production encase the many transitions of American capitalism over the last century. Located in the southern tip of Northern California’s San Francisco Bay, Santa Clara Valley—the geographical core of Silicon Valley—covers about 1,312 square miles, enclosing most of Santa Clara County and parts of the adjacent San Mateo and Santa Cruz counties.³¹ Its largest city is San Jose, the seat of Santa Clara County, while Cupertino, Menlo Park, and Mountain View are the fulcrum of its high-tech economy. Today, Silicon Valley is a microcosm of the full-blown “post-industrial society” Daniel Bell imagined in 1973. Before that, it was a fertile ground for automatic factories not unlike those John Diebold described in 1952. Indeed, in the minds of many, the first silicon transistors to roll out of the automated production line at Shockley Semiconductors Laboratory in 1956 marked the dawn of “Silicon Valley” as such.³² More recently, the region has

³⁰ Letter from Marx to Friedrich Sorge from 1880. Quoted in Carey McWilliams, *Factories in the Field: The Story of Migratory Farm Labor in California* (1939; repr., Berkeley, Los Angeles, and London: University of California Press, 2000), 56. I thank Patchen Markell for first bringing Carey McWilliams’s work to my attention.

³¹ Christian Zolniski, *Janitors, Street Vendors, and Activists: The Lives of Mexican Immigrants in Silicon Valley* (Berkeley, Los Angeles, and London: University of California Press, 2006), 21–22.

³² While the term “Silicon Valley” was coined by journalist Don Hoefler in 1971, its origins go back to the 1950s. Multiple accounts exist as to when and how Silicon Valley came to prominence. For the version I mention above, centered on Arnold Beckman and William Shockley’s silicon semiconductors, see Brock, “From Automation to Silicon Valley.” For an alternative although related starting point, which centers on Robert Noyce’s planar process and the founding of Fairchild Semiconductor in 1957, see Christophe Lécuyer, *Making Silicon Valley: Innovation and the Growth of High Tech, 1930–1970* (Cambridge and London: MIT Press, 2006), Chapter 4, “Revolution in Silicon,” 129–168. Another lineage traces the genesis of Silicon Valley to 1951 when Hewlett-Packard, already based in Santa Clara, hired the industrial designer Carl Clement as a “draftsman” in its electronics line, which included test oscillators, waveform analyzers, and vacuum-tube

become an embodiment of what critical theorists of capitalism called “cognitive capitalism,” which Silicon Valley aptly illustrates through its post-Fordist regimes of production and management, its online knowledge economy, or “general intellect,” its highly skilled and creative workforce, its “immaterial” and “affective” labor process, and its consent-based corporate culture.

Lately, standard accounts of Silicon Valley have picked up where automation, post-industrial society, and critical theories of capitalism left off, portraying the area as a metonym for digital modernity—the new economy’s engine of progress and wealth *par excellence*.³³ Yet, such figurations of Silicon Valley are necessarily selective about the present and myopic about the past. Like the dominant tendency of the postindustrial paradigm, they sense the “information age” as an interstitial time, as a break with history and a portal to the future.³⁴ Venturing further back into the twentieth century, to a moment when it was still called the “Valley of Heart’s Delight,” this bucolic crest of Santa Clara County was known neither for its vacuum-tube voltmeters nor for its staggering density of billionaires but for its apricot orchards and walnut groves, for its alfalfa meadows and “verdant fields of lima beans.”³⁵ Then, the Valley’s Edenic images of natural beauty and plenty belied the toil

voltmeters. For this rendering, see Barry Kätz, *Make It New: A History of Silicon Valley Design* (Cambridge and London: MIT Press, 2015). Others have linked the rise of Silicon Valley to Frederick Terman, Professor of Electrical Engineering at Stanford University, including, for instance, Annalee Saxenian, “The Genesis of Silicon Valley,” in *Silicon Landscapes*, ed. Peter Hall and Ann Markusen (Boston, London, and Sydney: Allen & Unwin, 1985), 20–34. For a critical social history of Silicon Valley going back to the eighteenth century, see David Naguib Pellow and Lisa Sun-Hee Park, *The Silicon Valley of Dreams: Environmental Injustice, Immigrant Workers, and the High-Tech Global Economy* (New York and London: New York University Press, 2002), 23–84.

³³ For an example of this account of Silicon Valley, see Deborah Perry Piscione, *Secrets of Silicon Valley: What Everyone Else Can Learn From the Innovation Capital of the World* (New York: Palgrave MacMillan, 2013).

³⁴ For a recent illustration of these tendencies, see “To Fly, to Fall, to Fly Again: The Tech Boom May Get Bumpy, But It Will Not End in a Repeat of the Dotcom Crash,” *The Economist*, July 25, 2015, <https://www.economist.com/briefing/2015/07/25/to-fly-to-fall-to-fly-again>.

³⁵ Kätz, *Make It New*, 1. On Silicon Valley’s agrarian history, see Margaret Pugh O’Mara, *Cities of Knowledge: Cold War Science and the Search for the Next Silicon Valley* (Princeton and Oxford: Princeton University Press, 2005), 97–141; Curtis Marez, “Cesar Chavez, the United Farm Workers, and the History of Star Wars,” in *Race After the Internet*, ed. Lisa Nakamura and Peter A. Chow-White (New York: Routledge, 2012), 85–108; Pellow and Park, *Silicon Valley of Dreams*, 46–58; Stephen J. Pitti, *The Devil in Silicon Valley: Northern California, Race, and Mexican Americans* (Princeton and Oxford: Princeton University Press, 2003), Chapters 1-3.

of Latino peons and Mexican *braceros* across farm fields and inside canneries.³⁶ Now, the celebratory representations of the region as a mecca of the “second-machine age” shroud the labor of Chicano “data janitors” and Mexican custodians who commute in and out of Silicon Valley every day from the barrios of East San Jose.

Google, a paragon of Silicon Valley’s claim to technological achievement, enterprising spirit, and inordinate affluence is also a singular demonstration of the region’s forgotten past and secret present. Throughout the twentieth century, the site that is now the company’s corporate seat transitioned, along with each shift in Santa Clara Valley’s economy, from a farm to a factory to an office. Before it went by “Googleplex,” the five-acre parcel of land on Mountain View’s Charleston Road, then known as “Farmer’s Field,” was occupied by contiguous tracts of farmsteads (Figure 4).³⁷ In 1997, these still fruitful plots gave way to the assembly plant and corporate headquarters of Silicon Graphics Incorporated (SGI), a high-performance hardware manufacturer specializing in 3D graphics computers (Figure 5). And in 2003, after it had been a farm, a factory, and an office, “Farmer’s Field” became Google’s “campus.” But despite its attempt to leave the site’s agrarian and industrial past behind, the Googleplex represents a new chapter in—rather than an end to—the historical cycles of manual labor on Charleston Road.

Although the internet has made remote work both practical and common, in 2018 over 1.6 million people were employed on-site across Silicon Valley’s tech companies.³⁸ Google, one of the

³⁶ On my use and definitions of the terms “ethnic Mexican,” “Mexicano/a,” “Latino/a,” “Mexican immigrant,” and “Chicano/a,” see footnote 139 of this chapter (Part 3). The term “*bracero*” (“people who work with their arms”) refers to, in this context, seasonal Mexican migrants who work in farming.

³⁷ Nicholas Perry, *Images of America: Mountain View* (Charleston: Arcadia Publishing, 2006), 95. The Googleplex is adjacent to Charleston Road on 1600 Amphitheater Drive.

³⁸ See “Silicon Valley Index” (San Jose: Joint Venture Silicon Valley and Institute for Regional Studies, 2019), 22. The Index is based on data from the State of California’s Employment Development Department (EDD), the Quarterly Census of Employment and Wages collected by the United States Bureau of Labor Statistics, as well as the private research companies BW Research and Emsi. See also Silicon Valley Institute for Regional Studies, “Total Employment by Tier, Silicon Valley,” *Silicon Valley Indicators*, 2018, <https://siliconvalleyindicators.org/data/economy/employment/employment-by-tier/total-employment-by-tier-silicon-valley/>.

Figure 4. Farmer's Field, Charleston Road, Mountain View, CA (1992). Photograph by Joe Melena. Source: Nicholas Perry, *Images of America: Mountain View* (Charleston: Arcadia, 2006).



Figure 5. Silicon Graphics Inc., Charleston Road, Mountain View, CA (1997). Photograph by Robert Weaver. Source: Nicholas Perry, *Images of America: Mountain View* (Charleston: Arcadia, 2006).



region's largest high-tech employers, hosts most of its workforce at the Googleplex, spread out sparsely across 3.1 million square feet of office space. Beyond offices, however, "Googlers" also dispose of a lush recreational network composed of gourmet restaurants, loaner bicycles, luxury shuttle services to and from San Francisco, a gift shop, athletic facilities, organic vegetable gardens, and sculptures by the Finish designer Eero Aarnio. Seen from this vantage, the Googleplex is a physical expression of postindustrial capitalism's "immaterial" and "affective" labor regime, of a work ethic centered on personal fulfillment, teamwork, and amusement—an almost perfect elision of labor and leisure. That Google is at present widely regarded as the epitome and the apex of postindustrial society, whether in praise or in disdain, illustrates the latest turn in the postindustrial paradigm, which remains a dominant orientation within interpretations of contemporary capitalism.³⁹ This is especially true of critics who have taken on the postulates of "immaterial labor," "cognitive capitalism," and "social factories" laid out by the postindustrial stream of Marxian thought.⁴⁰ On this account, Google is said to squeeze its workers through a consent-based—rather than authoritarian—labor regime rooted in the company's "don't-be-evil" ideology and leisurely

³⁹ For accounts of the what I call the "postindustrial paradigm" with respect to Silicon Valley in particular, see Chris Benner, *Work in the New Economy: Flexible Labor Markets in Silicon Valley* (Oxford: Blackwell Publishing, 2002); Martin Carnoy, Manuel Castells, and Chris Benner, "Labour Markets and Employment Practices in the Age of Flexibility: A Case Study of Silicon Valley," *International Labour Review* 136, no. 1 (1997): 27–48. For an array of perspectives on the "postindustrial paradigm" with respect to informational or knowledge-based work in general, see Peter Nolan, ed., *The Meaning of Work in the New Economy* (Basingstoke and New York: Palgrave Macmillan, 2007); Martin Carnoy et al., *The New Global Economy in the Information Age: Reflections on Our Changing World* (University Park, PA: Pennsylvania State University, 1993). For critical perspectives on the knowledge economy and information society, see Catherine McKercher and Vincent Mosco, eds., *Knowledge Workers in the Information Society* (Lanham and Plymouth: Lexington Books, 2007).

⁴⁰ For an example of the Marxist "postindustrial paradigm" in relation to Google in particular, see Christian Fuchs, *Digital Labour and Karl Marx* (New York and London: Routledge, 2014), Chapter 8, "The Silicon Valley of Dreams and Nightmares of Exploitation: The Google Labour Aristocracy and Its Context," 213–232. For a range of examples related to digital labor in general, see Scholz, *Digital Labor*. For an early illustration of this approach, see Ursula Huws, *The Making of a Cybertariat: Virtual Work in a Real World* (New York: Monthly Review Press, 2003). For an alternative Marxian approach to the critique of postindustrial capitalism that is also critical of the ones cited above, see Nick Dyer-Witthford, *Cyber-Proletariat: Global Labour in the Digital Vortex* (London: Pluto Press, 2014); Nick Dyer-Witthford, *Cyber-Marx: Cycles and Circuits of Struggle in High-Technology Capitalism* (Urbana: University of Illinois Press, 1999).

infrastructure.⁴¹ In other words, proponents of this view contend that Google’s exploitative management of its workforce is mediated, on the one hand, by the *idea* of work as “fun, contacts, reputation, creativity, and self-determination,” and, on the other, by the *materiality* of work as “free food, sports facilities, restaurants, cafés, events, tech-talks and other perks.”⁴² This recent critical approach to postindustrial capitalism holds that Google’s corporate culture conceals abuse and injustice by dressing grueling work routines in the garbs of play; it subjugates labor by enforcing the maxim that “there is no life outside Google,” that Google becomes in short “synonymous with life itself.”⁴³ Google instills this labor regime, the story runs, by deploying “soft” and “social” forms of managerial control—a horizontal organizational structure, an entertainment complex—to make its employees work longer and harder for the same wage.⁴⁴ As early as 1958, David Riesman had already taken note of this development. Commenting on the corporate melding of work and play, he remarked that, in high-wage industries given over to “conspicuous production,” management tended to invest in the amenities of work and the leisure of workers through “a whole range of extracurricular pleasures and benefits,” from interior design and bowling teams to golf courses and adult education classes.⁴⁵ According to Luc Boltanski and Ève Chiapello, the recent progressive and anti-authoritarian trends in corporate culture and management discourse are characteristic symptoms of what they have termed the “new spirit” of capitalism.⁴⁶ These accounts of postindustrial management practices do well to describe Google’s treatment of and attitude toward skilled

⁴¹ On Google’s corporate culture and ideology, see Steven Levy, *In the Plex: How Google Thinks, Works, and Shapes Our Lives* (New York: Simon & Schuster, 2011), Chapter 4, “Don’t be Evil: How Google Built its Culture,” 121-166. See also Siva Vaidhyanathan, *The Googlization of Everything (And Why We Should Worry)* (Berkeley: University of California Press, 2012), Introduction, “The Gospel of Google,” 1-12.

⁴² Fuchs, *Digital Labour and Karl Marx*, 223–26. Fuchs recognizes that low-wage and unskilled workers, who are also disproportionately people of color, “do not have the privileges that other Google workers enjoy” (228). My point in citing Fuchs here is not to discuss the merits or weaknesses of his work, but only to illustrate a recent and representative view of the Marxian stream of the “postindustrial paradigm.”

⁴³ *Ibid.*, 228.

⁴⁴ *Ibid.*, 228–30.

⁴⁵ Riesman, “Leisure and Work in Post-Industrial Society,” 373.

⁴⁶ Luc Boltanski and Ève Chiapello, *The New Spirit of Capitalism*, trans. Gregory Elliott (1999; repr., London and New York: Verso, 2005).

Googlers. But this is not the whole story. The company employs knowledge workers of varying skill levels and qualifications, some of whom experience Google and the Googleplex in terms quite disparate from those described above. As I argue below, Google takes explicit measures to discriminate between different classes of workers, resulting in a series of inequalities regarding access to amenities, workspace quality, personal liberties, and benefits. Additionally, beyond this disparity in material provisions, Google deploys distinct management strategies, labor regimes, and work philosophies to preside over workers in different tiers within the company's organizational hierarchy and in different workspaces within the Googleplex.

“Another Googleplex”

Before she joined the Department of Communication at the University of California, San Diego, Lilly Irani worked for Google as a user experience designer from 2003 to 2007. While there, she recalls witnessing “another Googleplex” come to light after hours, “at the edges of campus.”⁴⁷ These secluded and covert workplaces, she remarks, concealed scan workers, who “flipped pages in time to a rhythm-regulated soundtrack,” and content moderators who sanitized Google's ad results by filtering explicit and violent content.⁴⁸ Despite working within the confines of the Googleplex, these workers were invisible to Google's knowledge-based workforce; they “never showed up in the lavish, celebrated spaces where Googlers drank, ate, and brainstormed.” And their absence was all but incidental. Indeed, as Irani continues, “Google's abundantly productive, nonhierarchical, and playful workplace seemed to depend on hidden layers of human data work: subcontractors who were off the books, out of sight, and safely away from both central campus and technological entrepreneurship's gleaming promise of job creation.” In 2007, Andrew Norman Wilson, a critic and artist then employed part-time by Google, had a similar encounter with the hidden data workers

⁴⁷ Irani, “Justice for ‘Data Janitors.’”

⁴⁸ Irani refers to these content moderators as “Indian workers I never met,” hinting at the underlying patterns in the employment of unskilled digital labor among telemarketing agents and content moderators.

Irani describes. Every day, at exactly 2:15 PM, he watched a group of workers leave a secluded building on the outskirts of the Googleplex. Looking back on these sightings, Norman Wilson recently noted that the people he saw “walking out of the exit like a factory bell had just gone off” were always “the same group of workers, mostly black and Latino, on a campus of mostly white and Asian employees.”⁴⁹ Four years later, the artist presented these encounters in an eleven-minute video exposé titled *Workers Leaving the Googleplex* (2011).⁵⁰ Much like his description, the piece captures clusters of workers as they leave a heavily guarded data center at the fringes of the Googleplex, from the security gates to the parking lot. The men and women who come and go on the screen, disproportionately people of color, were subcontractors whose labor was to crunch data for Google Analytics, to moderate graphic content for Google ad results, and, above all, to digitize swaths of printed matter for Google Books—“scanning books, page by page.”⁵¹ These workers, employed in ten-hour shifts for US\$10 an hour from 4:00 AM to 2:00 PM, went by the codename “ScanOps” and were identifiable in the Googleplex by unique yellow badges, which they were required to wear at all times.

Google’s corporate hierarchy is represented through a system of color-coordinated badges—green, white, red, and yellow—that determines the extent to which workers may, or may not, avail themselves of the company’s recreational services and facilities. Badges are in sum the markers of inclusion and exclusion.⁵² Part-time workers, wearing red badges, as well as fulltime Googlers and interns, carrying white and green badges respectively, enjoy unrestricted and complementary access

⁴⁹ Andrew Norman Wilson, “The Artist Leaving the Googleplex,” *E-Flux* 74 (2016), <https://www.e-flux.com/journal/74/59791/the-artist-leaving-the-googleplex/>.

⁵⁰ Andrew Norman Wilson, *Workers Leaving the Googleplex*, HD Video, 2011, <http://www.andrewnormanwilson.com/WorkersGoogleplex.html>.

⁵¹ Ibid. As Norman Wilson writes, “They were mostly black and Latino—a rare sight on Google’s predominantly white campus. They worked for ScanOps, the team that did the painstaking work of scanning texts that make up Google Books.” Quoted in Shawn Wen, “The Ladies Vanish,” *The New Inquiry*, November 11, 2014, <http://thenewinquiry.com/essays/the-ladies-vanish/>.

⁵² On Google’s corporate culture, see Levy, *In the Plex*, Chapters 3 and 4.

to all leisurely amenities throughout the Googleplex. Workers in these three tiers are also highly educated and skilled; they are employed in one of Google’s many knowledge-based projects, including software development, computer systems analysis, programming, coding, design, and user-experience research. In Norman Wilson’s video, they are shown moving freely about the Googleplex, transiting between steel-and-glass buildings, riding across campus on loaner bikes, boarding the Google limo to San Francisco, circulating in and out of gyms, and walking into campus, perhaps for a free meal at one of twenty gourmet cafés “after a day of working at home.”⁵³ These concessions, resources, provisions, and facilities were all foreclosed to yellow-badge workers, who, being “purposefully kept separate,” were “not allowed [to] set foot anywhere else on campus, except for the building they worked in.”⁵⁴ “They stood out on the Google campus,” Norman Wilson clarifies, “because of their race—many are people of color—and their attire, which was not that of the usual tech worker.”⁵⁵ In light of their physical exclusion from recreational and professional activities and spaces marked by skill, knowledge, status, and whiteness, the subject of yellow-badge workers goes largely unmentioned by employees around campus. As Norman Wilson put it,

The yellow badge signified ‘not worth the price of integration,’ considering the high turnover rate, the accounts of physical attacks between employees, the criminal records, the widespread lack of credentialed education. It meant getting paid \$10 an hour, going to the bathroom only when a bell indicated it was permissible to do so, and being subject to a behavioral point system that could lead to immediate termination.⁵⁶

Certain details in Norman Wilson’s exposé, as well as his account of its production and reception, shed light on the authoritarian—rather than horizontal, consent-based, and playful—labor regime

⁵³ Ptak and Norman Wilson, “ScanOps,” 126.

⁵⁴ Norman Wilson, *Workers Leaving the Googleplex*.

⁵⁵ Ptak and Norman Wilson, “ScanOps,” 126.

⁵⁶ Norman Wilson, “The Artist Leaving the Googleplex.”

Google deploys toward its yellow-badge workforce. In the course of shooting the video, Norman Wilson was approached by a security guard from the data center who warned him that unauthorized personnel were not allowed in or around Google's restricted data center. The guard also noted that yellow-badge workers were "extremely confidential people, doing extremely confidential work [...] in an extremely confidential area."⁵⁷ Moments following this confrontation, the same security guard detained Norman Wilson and reported him to his Google supervisors. Norman Wilson later learned that a yellow-badge worker was also reprimanded for talking to him in the parking lot. In fact, it was a ScanOps employee who alerted security of Norman Wilson's project by following the protocol on the back of her yellow badge, which instructed all yellow-badge workers to notify management if anyone asked about any aspect or detail of their work and workplace. This also explains why all yellow-badge workers he attempted to interview turned down his invitation.

As a result of his inquiries and the release of his film, Norman Wilson was eventually fired from Google. These events are telling of the type of labor regime and management philosophy practiced by Google at the data center. That a yellow-badge worker was punished and reprimanded by management attests to the punitive mechanisms Google used to helm its data workers; that Norman Wilson was reported to managers by a yellow-badge worker attests to the efficacy of the company's disciplinary system and the extent to which workers feared the consequences of breaching the rules; and, finally, the fact that Norman Wilson was detained by security and ultimately fired foregrounds the company's secrecy about and surveillance of the data center and its workers. Reflecting on these events, Norman Wilson explained that "any attempt to draw attention to the fact that this supposedly revolutionary company contained a decidedly unrevolutionary caste system would be dealt with in the old-fashioned way."⁵⁸

⁵⁷ Norman Wilson, *Workers Leaving the Googleplex*.

⁵⁸ Norman Wilson, "The Artist Leaving the Googleplex."

At the crossroads of the knowledge, service, and digital economies, Google Books is a hallmark of a “network society” in the “information age.”⁵⁹ When it began in 2002, this mass digitization venture was seen as the ambitious attempt by a rising upstart tech company to render all books ever written searchable and accessible online.⁶⁰ At the time, Google’s co-founders Sergey Brin and Larry Page envisioned “people everywhere being able to search through all of the world’s books to find the ones they’re looking for.”⁶¹ Their ambition lives on in the company’s mission “to organize the world’s information and make it universally accessible and useful.”⁶² Likening Google Books to a “digital Alexandria,” Jeff Roberts recently suggested that the project left two crucial aspects of a library undefined: “who will staff the circulation desk and how hard it will be to get a library card.”⁶³ But since unlike Alexandria, this library in particular inevitably involves the digitization of billions of pages, Google Books begs another pressing question: who will scan all these books? As material objects in the physical world, algorithms and web crawlers cannot scan them; automatic machines, for their part, lack the dexterity and delicacy to handle, say, an

⁵⁹ Manuel Castells, *The Rise of the Network Society* (Malden: Blackwell, 2000); Robert Harding, “Manuel Castells’s Technocultural Epoch in ‘The Information Age,’” *Science Fiction Studies* 33, no. 1 (March 2006): 18–29.

⁶⁰ According to Leonid Taycher, a Google engineer working on the project in 2010, the total number of existing books ever written and published was at the time nearly 130 million. See Leonid Taycher, “Books of the World, Stand up and Be Counted! All 129,864,880 of You,” Blog, *Google Books Search*, (August 5, 2010), <https://booksearch.blogspot.com/2010/08/books-of-world-stand-up-and-be-counted.html>. By 2016, the initiative had digitized 20 million books, see Jeff John Roberts, *The Battle for the Books: Inside Google’s Gambit to Create the World’s Largest Library*, Kindle (2012; repr., San Francisco: GigaOM Books, 2016). The project was caught up in a decade-long legal battle with authors and publishers over copyright, one that ended in 2016 with Google coming out on top. See Scott Rosenberg, “How Google Book Search Got Lost,” *Wired*, April 11, 2017, <https://www.wired.com/2017/04/how-google-book-search-got-lost/>.

⁶¹ “Google Books History,” *Google Books*, 2012, <https://books.google.com/intl/en/googlebooks/about/history.html>.

⁶² “About Google,” *Google*, 2019, <https://about.google/>.

⁶³ Roberts, *The Battle for the Books*.

eighteenth-century edition of Milton's *Paradise Lost*.⁶⁴ These books must be and have thus far been scanned by humans.

In the early 2000s, Google Books was inspired by a comparable, nonprofit initiative called the "Million Book Project," an international effort that comprised "research and scanning centers in several countries, especially India and China."⁶⁵ The logistical challenges taken on by the Million Book Project illustrate the massive scale of manual labor a "digital Alexandria" perforce entails as well as the industrial infrastructure upon which it necessarily depends. From thirty-four scanning factories rendering thirty-four million pages a day in India and China to transcontinental container ships ferrying hard-drives and printed materials halfway across the world, the mass digitization of books and the workers who digitize them lie at the heart of our modern-world economy. The scanning process in the Million Book Project begins with books being

pulled from the shelves, boxed with a packing list, loaded into containers, and shipped to scanning centers in India and China. Scanning centers are staffed to have a capacity of one million pages per day in India and China. [...]. One scanning center in China is in a free trade zone so that books will not have to go through Chinese customs. [...] Because air freight is quite expensive, books are packed and sent by container ship. Transferring data from India and China has proven difficult [however] many files have been transferred by carrying hard drives from continent to continent.⁶⁶

⁶⁴ For a fully digitized 1750-edition of *Paradise Lost* available through Google Books, see John Milton, *Paradise Lost: A Poem, in Twelve Books*, 2nd ed. (1667; repr., London: J. and R. Tonson and S. Draper, 1750), <https://books.google.com/books?id=jlMCAAAAQAAJ&pg=PR60&dq=%22paradise+lost%22&hl=en&sa=X&ved=0ahUKEwiDuezozf3jAhXQAp0JHeOrDd44zAMQ6AEIMTAC#v=onepage&q&f=false>.

⁶⁵ Gloriana St. Clair, "Million Book Project vs Google Print," *Journal of Zhejiang University* 6A, no. 11 (2005): 1196.

⁶⁶ *Ibid.*, 1197.

The irony of Google Books is that its digitization process is exceedingly more labor-intensive and fragmented than the manufacturing of physical books by present-day printing presses.⁶⁷ In fact, industrial printing has been at the forefront of automation since the nineteenth century.⁶⁸ Commenting on the technical skill and mechanical power employed by the *Times* newspaper in the 1830s, Charles Babbage wrote: “It is scarcely imagined, by the thousands who read that paper in various quarters of the globe, what a scene of organized activity the factory presents during the whole night, or what a quantity of talent and mechanical skill is put in action for their amusement and information.”⁶⁹ Additionally, Google’s ScanOps operation relies on an assembly line production method long since abandoned by commercial publishers. Google Books thus represents the emergence of “digitization on an industrial scale” in which “books are digitized *en masse* rather than cherry-picked.”⁷⁰ So, while in principle Google Books symbolizes digital culture and the online knowledge economy at their most advanced state, in practice it illustrates how the factory, manual production, labor discipline, precarity, drudgery, and the assembly line have become indispensable elements of “post-industrial society” and “cognitive capitalism.”

Inside Google’s data factory, ScanOps workers are employed in the quintessentially “post-industrial” labor of digitizing knowledge and information. And yet, their work requires “no cognitive

⁶⁷ For examples of automated technology applied to industrial printing since the early 2000s, see Jill Roth, “Direct Imaging: The Future of the Printing Press,” *American Printer* 227, no. 2 (2001): 70–71; Cristofer Englund and Antanas Verikas, “Ink Feed Control in a Web-Fed Offset Printing Press,” *International Journal of Advanced Manufacturing Technology* 39 (2008): 919–30; Y. M. Wang et al., “Study on Vibration Signal Marginal Spectrum of Paper-Transferring System in Printing Press Based on EMD,” *Advanced Materials Research* 139/141, no. 3 (2011): 2464–68; Mark Andy, Inc., “Press Release: Printing Press Adapts to Virtually All Plate Tooling,” *Thomas Network*, July 14, 2015, <https://news.thomasnet.com/fullstory/printing-press-adapts-to-virtually-all-plate-tooling-20046386>.

⁶⁸ On the application of steam power to industrial book production in the nineteenth century, see Aileen Fyfe, *Steam-Powered Knowledge: William Chambers and the Business of Publishing, 1820-1860* (Chicago and London: University of Chicago Press, 2012), Chapter 4, “Production and Steam Power,” 55-64.

⁶⁹ Babbage, *Machinery and Manufactures*, 270.

⁷⁰ Ronald Milne, “From ‘Boutique’ to Mass Digitization: The Google Library Project at Oxford,” in *Digital Convergence—Libraries of the Future*, ed. Rae Earnshaw and John Vince (London: Springer, 2008), 5.

involvement with the content of those materials.”⁷¹ Rather than interacting with and producing knowledge, yellow-badge workers mediate its mass dissemination. Instead of sharing in the cultural and intellectual qualities of the digital objects their services yield, in a way that postindustrial thinkers would describe as edifying or affectively rewarding, yellow-badge workers are estranged from the subject matter of their work and the commodities they produce. In moderating, digitizing, and classifying information, the labor of “data janitors” is engineered to enable skilled tech workers and internet users to “meaningfully” and “creatively” interface with the substance of digital knowledge.

By unveiling a factory regime beneath illusory narratives of Google’s utopian knowledge campus, *Workers Leaving the Googleplex* offers compelling visual evidence of the industrial realities of digital labor. As it captures the contrasting movements of a fragmented workforce within a stratified space, the video shows predominantly white workers carrying green, white, and red badges pacing leisurely across the Googleplex, while a continuous stream of yellow-badge workers, mostly people of color, move in a fast-paced stride, unidirectionally, from the data center—an opaque building with dark-tinted windows—to the parking lot. Beyond representing motion, moving images can also “grasp for concepts.”⁷² In this sense, the footage of ScanOps workers moving away from the physical space of production, far from evoking a postindustrial vision of an autonomous workforce unfettered by authority, apprehends instead a familiar, industrial picture of capital’s direct hold on labor. As Norman Wilson put it, by contrasting “the movement of the Google book ‘factory’ workers with other classes of employees,” the video lays bare “how corporate hierarchy scripts different forms of movement.”⁷³ Here, the movement that stands for the uneventful and ordinary ritual of workers leaving work renders palpable their unpronounced resentment of having to return the next day at 4:00 AM. From the metal detector to the door to the parking lot, workers walk

⁷¹ Ptak and Norman Wilson, “ScanOps,” 129.

⁷² *Ibid.*, 126–29.

⁷³ Norman Wilson, “The Artist Leaving the Googleplex.”

together in a brisk pace that languishes gradually as they move away from the data center, calling to mind both the exhaustion of factory work and the relief of leaving it behind (Figure 6). This is a familiar image; it bears likeness, for instance, to the motion of industrial workers seen pouring through the gates of Lyon’s Lumière factory in the 1895 film *Workers Leaving the Lumière Factory* by Auguste and Louis Lumière (Figure 7); it echoes the crowds of men and women shown leaving workshops and assembly plants in Harun Farocki’s 1995 video essay *Workers Leaving the Factory*. By drawing our attention to something new about Google’s labor regime, Norman Wilson has forcefully reminded us of something we already knew about capitalism. Despite efforts by Google to stylize the work of its employees as affective, flexible, skilled, and fun, its data factory discloses instead a disciplinarian labor regime, an assembly line of repetitive and unskilled digital tasks—the manual work of turning and scanning pages for ten hours, hemmed in a room without windows. The *digital* labor conveyed in the image of ScanOps workers flipping through books and pushing a button marks less the *digital* tools they employ than the *digits* of their hands (Figure 8).⁷⁴ The reality of data workers contrasts starkly with the “fine equipment, campus-like plants, and company-paid university courses” that John Diebold had described as the general material conditions of the high-tech workplace in 1969.⁷⁵

Above all, Google’s secret data center reveals that closed-off spaces of production and distribution—factories by another name—are constructive sites through which political theorists and social scientists in general may begin to reconsider what capitalism is and what it does. Contrary to the widely-held postulates of postindustrial society and cognitive capitalism, Google brings labor under its material domain by directly organizing the production process, by subjecting workers to a Fordist regime of labor, and by discriminating between its “creative” and “menial” workforce—a

⁷⁴ Bill Brown, “All Thumbs,” *Critical Inquiry* 30, no. 2 (Winter 2004): 452–57.

⁷⁵ Diebold, *Man and the Computer*, 140.

Figure 6. Yellow-badge workers leaving a data center at Google's headquarters in Mountain View, California (c. 2007). Source: Andrew Norman Wilson, *Workers Leaving the Googleplex* (2011).



Figure 7. Workers leaving the Lumière factory in Lyons, France (c. 1895). Source: Louis and Auguste Lumière, *La Sortie de l'usine Lumière à Lyon* [*Workers Leaving the Factory*] (1895).



Figure 8. ScanOps worker digitizing printed materials for Google Books. Andrew Norman Wilson
“The Inland Printer – 164,” *ScanOps* (2012). Source: Laurel Ptak and Andrew Norman Wilson,
“Andrew Norman Wilson: ScanOps; Conversation with Laurel Ptak,” *Aperture*, Spring 2013.



division that, as I argue in the following two sections is also constructed through cultural discourses about online work (Part 2) and historically enmeshed in regimes of race in Santa Clara Valley (Part 3). Through its hierarchical fragmentation of workers and their work, its direct control over labor, and its disciplinarian management regime, Google has made plain that the key mechanisms and principles of the factory system are as useful and applicable to digital production as they were to industrial manufacturing. In this way, Google’s data center and the data workers in it are a testament to the factory’s ongoing relevance to contemporary capitalism and our efforts to understand it. The factory, in short, remains a revealing place for political theorists, economic historians, and social scientists who continue to wonder, after all, “what do bosses do?”⁷⁶ Part of the answer, I argue next, takes place on the internet.

PART 2: AESTHETICS AND THE MICROWORK FACTORY

“I have been turning models & preparing to make such *Machines* of the *Men* as cannot err.”

— Josiah Wedgwood, 1769.⁷⁷

As I discussed in the previous chapter, one of the most anticipated benefits of automation since the 1930s has been its promise to end the scourge of human drudgery on the assembly line, to usher industrial society into the “era of the engineer.”⁷⁸ Yet, the fully automated society that seemed inevitable to midcentury commentators never arrived.⁷⁹ While automatic machines have been increasingly applied to industrial manufacturing in the postwar period, the high-tech sector still relies

⁷⁶ See Stephen A. Marglin, “What Do Bosses Do? The Origins and Functions of Hierarchy in Capitalist Production,” *Review of Radical Political Economics* 6 (1974): 60–120; Stephen A. Marglin, “What Do Bosses Do? Part II,” *Review of Radical Political Economics* 7 (1975): 20–37. For a critical response to Marglin, see David S. Landes, “What Do Bosses Really Do?,” *The Journal of Economic History* 46, no. 3 (1986): 585–623.

⁷⁷ Letter to Bentley, October 7, 1769, Ann Finer, George Savage, and George Savage, eds., *The Selected Letters of Josiah Wedgwood* (London: Cory, Adams & Mackay, 1965), 82–83.

⁷⁸ Chase, “Danger at the A. O. Smith Corporation,” 62.

⁷⁹ For a recent account of automation’s perils, see Frey and Osborne, “The Future of Employment.”

on a vast supply of human workers to perform repetitive digital tasks that require little technical skill and training.⁸⁰ Rather than automation, then, the growing trend in data work today is best described as “heteromation”—the practice of delegating to humans the digital equivalent of the menial jobs industrial factories assign to machines.⁸¹ As a result, human microworkers have become indispensable mediators of and appendages to computational technologies.⁸² Silicon Valley’s attempt to ameliorate the shortcomings of automated systems by bringing humans to a digital assembly line is exemplified by Jeff Bezos’s 2006 announcement of Mechanical Turk (MTurk)—a microwork platform that assigns small and simple tasks to scores of online workers on standby—as a form of “artificial intelligence,” or “humans-as-a-service.”⁸³ Amazon’s attempt to spin human microlabor as an automated technology points to a latent anxiety among tech-world billionaires over the unfulfilled promises of automation. Amazon has tried to compensate for the inadequacies of technology by stacking more and more low-paid workers behind its “artificial intelligence.” Indeed, much of the content moderation and data work that takes place online and in data centers today is done by humans. Moreover, given that much of this labor requires a level of cultural fluency currently unattainable by algorithms, in addition to the availability of on-demand workers willing to complete these micro-tasks for low rates, Silicon Valley is in no haste to automatize microwork.

In contrast to skilled software engineers and programmers, websites such as MTurk source their labor from a pool of “unemployed, underemployed, or unemployable workers” whose piecemeal compensation for completing simple tasks tend to fall “well below minimum wage

⁸⁰ On automation and industrial manufacturing, see Noble, *Forces of Production*. For a skeptical take on automation’s replacement of human labor, see David H. Autor, “Why Are There Still So Many Jobs? The History and Future of Workplace Automation,” *The Journal of Economic Perspectives* 29, no. 3 (2015): 3–30.

⁸¹ Ekbria and Nardi, “Heteromation and Its (Dis)Contents.”

⁸² *Ibid.*

⁸³ Lilly Irani, “Difference and Dependence among Digital Workers: The Case of Amazon Mechanical Turk,” *The South Atlantic Quarterly* 114, no. 1 (2015): 225.

levels.”⁸⁴ The internet has enabled a feasible, cheap, and simple relationship between employers and workers that would have been nearly impossible to implement in the physical space of a factory or an office. As the CEO of the microwork platform CrowdFlower noted: “Before the Internet, it would be really difficult to find someone, sit them down for ten minutes and get them to work for you, and then fire them after those ten minutes. But with technology, you can actually find them, pay them a tiny amount of money, and then get rid of them when you don’t need them anymore.”⁸⁵ But what is it that these workers do for ten minutes at a time and what gets them to do it for pennies?

The Microwork Factory

Although online microwork platforms do not appear before us in physical space, they operate under similar principles as data centers in the real world. Like Google’s data factory, MTurk brings microworkers, or “Turkers,” together in one place, organizes and subdivides production, and provides users who employ Turkers—known as “Requesters”—with the technical means to manage microworkers, systematize tasks, tend workflow, evaluate output, monitor performance, and decide how much to pay or whether to pay at all for the services they are provided. That is, although Google’s data center applied mechanisms, principles, and regimes of factory production within physical space, Amazon’s microwork platform stages them on the internet. This does not mean that MTurk is a metaphor for a factory. Rather, MTurk’s implementation of a factory regime affects the material lives and working conditions of Turkers in ways that are just as real and salient as in Google’s data center.⁸⁶ In this regard, MTurk’s infrastructure is an illustration of the diverse,

⁸⁴ Ekbia and Nardi, “Heteromation and Its (Dis)Contents.”

⁸⁵ Jeremias Prassl, *Humans as a Service: The Promise and Perils of Work in the Gig Economy* (Oxford: Oxford University Press, 2018), 4.

⁸⁶ For social scientists who use microwork websites to conduct experiments on human subjects, these platforms “allow for analogues to physical labs on the Internet, proving to be just as reliable in many instances.” Qiushi Mao, “Experimental Studies of Human Behavior in Social Computing Systems” (Doctoral

historical forms in which factories operate within capitalist societies, independent of the technology they employ. As I argue in the three subsequent chapters, the factory did not come into being because of steam power or self-acting machines, and, as I have been suggesting in this chapter, it did not end with automation, algorithms, or the internet. What defines a factory is not its use of technology but the ends to which it deploys a range of mechanisms and principles—not only technology—to organize production and manage workers in a way that, within a capitalist system, yields the greatest attainable revenue and incurs the least possible expenses. Steam power, for instance, was a source of energy that, once applied to mechanical machines, became a new industrial technology in the nineteenth century. The factories that ran on the steam engine, however, were social organizations in spite of this technology.⁸⁷ In their capacity as social organizations, factories preceded and outlived the period in which industry ran on steam. Similarly, a distributed human-computer network acts as the technology that powers MTurk’s infrastructure, but the specific way in which Amazon organizes its workers through this technology is a social, political, and economic arrangement chosen by the company. In other words, MTurk combines human labor and its technological infrastructure in a particular association that is neither predetermined by nor the necessary outcome of the technology it uses. The platform’s production process is instead Amazon’s optimal approach toward fulfilling a set of financial objectives.

By rendering microworkers invisible, and by replacing physical workspaces and human workers with on-screen representations, MTurk offers Requesters the convenient illusion that they are “technologists and innovators engaged in non-hierarchical peer production,” rather than

Dissertation, Harvard University, 2015), 21. See also Laura Germine et al., “Is the Web as Good as the Lab? Comparable Performance from Web and Lab in Cognitive/Perceptual Experiments,” *Psychonomic Bulletin & Review* 19, no. 5 (2012): 847–57.

⁸⁷ Daniel Bell has made this point when distinguishing between an industrial and a technological revolution. See Bell, *Post-Industrial Society*, xxxiii.

“managers of global data factories.”⁸⁸ Through these processes, MTurk transforms “a style of computing into a style of management” by offering its users, from technology startups to new media artists, an “expanded agency to act upon the world.”⁸⁹ MTurk thus provides a crucial ideological service to employers; it distances them from the working conditions and workplaces of the microworkers they employ. This distance affords employers a certain peace of mind, an assurance that microwork, however mindless it may be, does not unfold through the same coercive labor politics of physical data centers and “click farms” in South and East Asia.⁹⁰ As one crowdsourcing CEO noted, “it’s really hard to coerce people to do something through a computer screen, [...] people are choosing to do this.”⁹¹ The screen, advocates of microlabor insist, “protects workers from employer coercion.”⁹² In other words, rendering workers invisible allows crowdsourcing entrepreneurs to project the progressive, horizontal, and anti-authoritarian principles of Silicon Valley’s ideology of work onto microwork platforms; it allows them to imagine that the microworkers they employ are “in a better place” than, say, the yellow-badge workers at Google’s data factory.⁹³ Removed from Turkers and their real-life work, Requesters are able to preserve a non-hierarchical, knowledge-based work culture within their own offices while outsourcing the drudgery of data labor to some vague, mystical “entity” beyond their studios and incubators, hidden beneath their screens.

At the screen-level, MTurk is an immaterial, virtual space somewhere on the internet. But the web is part of the infrastructure’s sleight of hand. In addition to stowing away its human

⁸⁸ Irani, “The Cultural Work of Microwork,” 721.

⁸⁹ *Ibid.*, 728.

⁹⁰ On the racialization of spaces and practice of menial data work as “Asian,” see Nakamura, “Don’t Hate the Player, Hate the Game: The Racialization of Labor in World of Warcraft.”

⁹¹ Ellen Cushing, “Dawn of the Digital Sweatshop,” *East Bay Express*, August 1, 2012, <https://www.eastbayexpress.com/oakland/dawn-of-the-digital-sweatshop/Content?oid=3301022>. Quoted in Irani, “The Cultural Work of Microwork,” 734.

⁹² Lukas Biewald, CEO of the microwork platform Figure Eight, Inc., formerly CrowdFlower. Quoted in Irani, “The Cultural Work of Microwork,” 735.

⁹³ *Ibid.*

workers, MTurk also conceals the physical spaces on which the whole platform depends, including data storage facilities spread across server farms and computer systems inside electronics assembly plants. As MTurk's 2007 patent explicitly states: "A permanent copy of the programming instructions to practice the present invention, in one embodiment, may be loaded into non-volatile storage associated with Junta Server, Task Server, similar task servers, or any computer system associated with Junta Computer *in a factory*."⁹⁴ Moreover, MTurk is a product of Amazon's sprawling commercial complex; it was born out of the company's internal demand to flag duplicated items on its retail website.⁹⁵ Rather than hiring, managing, and hosting temporary workers in-house, Amazon engineers built a website to delegate these tasks to a multitude of online users across the world's time zones working simultaneously to keep the production line running without pause. Today, Amazon leverages the global scope of its business conglomerate, from its currency and retail website to its warehouse network and delivery capabilities, as a means to "assemble a sufficiently massive workforce to fuel its platform 24 hours a day, seven days a week."⁹⁶

In fact, Amazon uses the same systems to organize data microworkers on MTurk as it does to hem in pickers at its warehouses: large-scale networked data management systems of surveillance, control, and productivity known as Computing Business Systems.⁹⁷ The ends to which this technology has been applied both online and in physical space have transformed the workplace of data workers into "the factory floor of the service economy."⁹⁸ These systems mirror those applied in Fordist assembly lines where automated machines were deployed to steer workflow. In physical data centers and warehouses, algorithms operate to track the movement of workers through body-

⁹⁴ Venky Harinarayan, Anand Rajaraman, and Anand Ranganathan, Hybrid Machine/Human Computing Arrangement, United States Patent 7,197,459 B1 (Mountain View and Palo Alto, California, filed October 12, 2001, and issued March 27, 2007), Sections 6-7, emphasis mine.

⁹⁵ Irani, "The Cultural Work of Microwork," 723.

⁹⁶ *Ibid.*, 726.

⁹⁷ Ekbia and Nardi, "Heteromation and Its (Dis)Contents."

⁹⁸ Irani, "Justice for 'Data Janitors.'"

worn GPS technology, thus “heightening the effects of earlier strategies of scientific management and assembly line factory organization.”⁹⁹ Online, these technologies monitor fulfillment rates and output quality, allowing employers to withhold payment from microworkers who do not meet quality, accuracy, and delivery targets.¹⁰⁰ By structuring the market for micro-contracts, MTurk’s infrastructure leaves the amount of tasks assigned to microworkers, the time microworkers have to complete them, and the compensation for completion entirely to the employer’s discretion.¹⁰¹ Within this environment, working conditions are set by employers, who can deny payment if they deem the output is subpar or fails to meet their stipulations and expectations; they can even do this retroactively, after microworkers have been engaged and completed the task, without providing any justification to workers or Amazon.¹⁰² As contractors, microworkers are “excluded from the protections of minimum-wage laws and bear greater tax responsibilities than employees.”¹⁰³ Amazon and large-scale employers can monitor and rate the output of workers through objective and subjective assessments of the accuracy and quality of completed tasks, the speed at which tasks have been carried out, and the percentage of tasks for which workers were accepted and paid.¹⁰⁴ The performance rates for all microworkers are recorded in datasets kept by both Amazon and employers as a means to discriminate among workers based on their performance statistics. Large-scale Requesters, who employ anywhere between ten to sixty thousand microworkers at a time, “maintain databases of how workers, known by their alphanumeric ID, have performed on past tasks, where their network IP maps to, and other parameters to create filters, blacklists, or whitelists of workers.”¹⁰⁵

⁹⁹ Ibid.

¹⁰⁰ Gray and Suri, *Ghost Work*, 13, 124–27.

¹⁰¹ Ibid., 79–80; Irani, “The Hidden Faces of Automation,” 36.

¹⁰² Irani, “The Cultural Work of Microwork,” 727; Gray and Suri, *Ghost Work*, 92.

¹⁰³ Irani, “The Hidden Faces of Automation,” 36.

¹⁰⁴ Gray and Suri, *Ghost Work*, 70–71, 80–81, 130; Irani, “The Cultural Work of Microwork,” 725, 727.

¹⁰⁵ Irani, “The Cultural Work of Microwork,” 725.

Like call center attendants, electronic ticketing agents, Amazon warehouse pickers, and yellow-badge operatives, MTurk microworkers work around a strict script set up by their employers.¹⁰⁶ These practices and technologies of labor fragmentation, surveillance, control, and high productivity mean that microworkers have little latitude to express any kind of creativity or meaningfully engage the content of the new media objects with which they work.¹⁰⁷ Thinking about MTurk as a foil to Google’s data factory makes visible the significant yet hidden ways in which this particular organization of the digital labor process at once depends on and undermines the cultural fluencies and aesthetic sensibilities of its workers. MTurk’s version of a secret data assembly line transforms the otherwise cultural work of microworkers into menial data labor through an extremely divided and systematically organized production process in which workers are monitored, rated, and ultimately divorced from the cultural content of their labors.

The Microwork of Art

The category of “menial labor,” which is often used to describe microwork, tends to obscure the critical role data workers play in supporting online creative economies and digital cultures. The distinction between a “creative” internet worker, such as a new media artist, and a “menial” data worker employed by MTurk or Google Books is not only a product of the physical and material differences between their respective activities, but also of the discourses, mechanisms, and relations that designate them as belonging to one or the other category. Google’s physical data center and Amazon’s online equivalent do more than hide human labor behind opaque buildings or computer screens. They also subsume the cultural and aesthetic qualities of data work, transforming the activity of workers into a type of mindless, fragmented “ghost-work” that is later appropriated—in

¹⁰⁶ Ekbia and Nardi, “Heteromation and Its (Dis)Contents.” On working and living conditions of microworkers, see Gillespie, *Custodians of the Internet*, 123–24; Mary L. Gray, “Your Job Is About to Get ‘Taskified,’” *Los Angeles Time*, January 8, 2016, <https://www.latimes.com/opinion/op-ed/la-oe-0110-digital-turk-work-20160110-story.html>.

¹⁰⁷ Irani, “Justice for ‘Data Janitors.’”

terms of authorship, content, and meaning—by a class of “innovators” and “creative” online workers.¹⁰⁸ The cultural meanings ascribed to online micro-tasks and the microworkers who perform them are produced by a combination of the social contexts, technical constraints, and economic circumstances that condition their work, all of which are embodied in and played out through MTurk’s infrastructure. Insofar as MTurk is used to process cultural content, Turkers are rendered menial laborers in the course of their experiences within the technology that mediates their encounters with “creative” Requesters and their engagements with cultural objects. The sociotechnical configuration of this infrastructure performs a type of cultural work that, as Irani writes, “happens not only through talk or co-present social interaction, but also through the relational politics of interface and systems design.”¹⁰⁹

Today, the internet turns on the production, dissemination, and consumption of cultural content, from social media platforms, such as Facebook and Twitter, to video streaming websites like Netflix and YouTube. As these businesses grow, or as they “attempt to expand the scope of culture they mediate,” they must in turn attend to “new kinds of language, images, sounds, and sensor data.”¹¹⁰ And before this data can be consumed, posted, or shared, it needs to be prepared and processed, moderated and classified, transcribed, formatted, or edited.¹¹¹ This type of work demands an assorted set of cultural fluencies—a grasp of the particular contexts in which it is made and shared—and an array of aesthetic and emotional sensibilities, from judgment to empathy.¹¹² So, while the technical requirements of microwork tend to be minimal, the interpretation of cultural data it requires calls for a disproportionately high number of subjective aptitudes as well as human sensory capacities. This much is clear in the patent for MTurk’s infrastructure, which stipulates the

¹⁰⁸ Gray and Suri, *Ghost Work*.

¹⁰⁹ Irani, “The Cultural Work of Microwork,” 721.

¹¹⁰ Irani, “Justice for ‘Data Janitors.’”

¹¹¹ Pasquinelli, “Google’s PageRank Algorithm.”

¹¹² Irani, “Difference and Dependence among Digital Workers,” 228.

division of labor between computers and workers by foregrounding the unrivalled proficiency with which human beings handle cultural objects. Among the patent's illustrations of the online data labor to which human workers are indispensable, it lists "speech to text conversion, speech recognition, image comparison, and music comparison."¹¹³ "While it may be a straightforward task for a human to describe the differences and similarities between two pictures," the document continues, "automating the same task on a computer is overly complex and can appear insurmountable."¹¹⁴ As a result, the computer is assigned the role of fragmenting tasks, delegating them to workers, and collecting the finished output: "a computer system decomposes a task, such as, for example, image or speech comparison, into subtasks for human performance, and requests the performance."¹¹⁵ In this regard, the labor of microworkers is the labor of "calibrating algorithms to culture."¹¹⁶

Menial Labor and Creative Work in the MTurk Factory

While microworkers may exercise judgment and empathy in their work, and although they might spend their workdays parsing through images or editing videos for a new media artist, the aesthetic character of their labor and the artistic qualities of the materials they work on are not adequate means through which they might develop an intellectual and emotional attachment to, or an artistic and personal investment in, their assignments. Cultural fluencies and aesthetic sensibilities, when embedded in a labor process torn asunder by an online assembly line, cannot elevate menial tasks to the realm of creative or social activity. What is important here are the techniques, discourses, and mechanisms used to *hide* human workers from view, to *divide* the labor process into

¹¹³ Harinarayan, Rajaraman, and Ranganathan, Hybrid Machine/Human Computing Arrangement, Section 1.

¹¹⁴ Ibid. Other tasks include: "classifying text into one of many categories, comparing music samples, comparing images, and converting speech into text. A more specific example of a Subtask is the act of determining whether two images are photographs of the same person." Ibid., Section 3.

¹¹⁵ Harinarayan, Rajaraman, and Ranganathan, Hybrid Machine/Human Computing Arrangement, abstract.

¹¹⁶ Irani, "The Hidden Faces of Automation," 36.

minute tasks, and to *systematize* production into a set of commands. As a result of this production process, the ‘author’ of the project is always the employer. By enshrouding workers within its infrastructure, MTurk offers programmers and “innovators” the possibility to “treat workers like bits of code and continue to think of themselves as builders, not managers.”¹¹⁷ These “innovators” however do manage MTurk’s protocols and workers in order to hone the quality, increase the speed, and scale the quantity of their projects, such that, collectively, they “develop an infrastructure to advance their own craft.”¹¹⁸ The division of labor that arises from this is a “redistribution of tedium” in which microworkers take on the “tedious work necessary but unbecoming of idealized ‘creative’ workers,” allows employers to “reshape their roles to more closely align with images of creative work.”¹¹⁹ Through the division of creative and menial labor purveyed by its infrastructure, MTurk operates as an instrument for the mediation of cultural and creative work in the digital economy; that is, it facilitates the “boundary work” of new media producers who rely on the menial labor of microworkers as the “Other” against which their own work is defined as creative.¹²⁰ Once they enter MTurk’s platform, microworkers become an abstract and distant mass, a task-completing capability, a “tool to be employed by the intentional and expressive hand of the programmer.”¹²¹ Indeed, technologists, bloggers, and programmers often refer to microworkers through terms that mark them as the technical instruments of cultural or innovative production, including “Remote Person Call” and “Human Application Program Interface,” or “Human API” for short.¹²²

¹¹⁷ Ibid.

¹¹⁸ Irani, “The Cultural Work of Microwork,” 728.

¹¹⁹ Ibid., 729. Jeff Howe, a contributing editor for *Wired* and crowdsourcing enthusiast, argues that microworkers perform the “dull, brainless, low-paid tasks that keep the internet economy, for better or for worse, firing on all pistons ... Mechanical Turk allows clients to farm out the kinds of menial clickwork that we all wish computers could do, but can’t.” Jeff Howe, “Mechanical Turk Targets Small Business,” *Crowdsourcing.Com*, 2008, <http://www.crowdsourcing.com/cs/2008/08/index.html>. Quoted in Irani, “The Cultural Work of Microwork,” 728.

¹²⁰ Irani, “The Cultural Work of Microwork,” 729–30.

¹²¹ Ibid., 730.

¹²² Ibid., 731. As Prayag Narula, founder of the microwork platform MobileWorks, put it, microlabor offers employers “a stack as reliable as their software stack so they can do innovative things.” Quoted in Ibid., 729.

The organization of MTurk is prefigured by Josiah Wedgwood’s eighteenth-century ceramics manufactory where, as I argue in Chapter 4, independent artisans became mere “hands.”

Wedgwood enacted a division of labor in which creative workers, such as celebrated molders, designers, and painters, were segregated from menial workers charged with reproducing luxury vases in an assembly line. By entering the factory, the artisans—formerly “creative” workers in their own right—were stripped of their artistic freedom, their contact with the cultural objects they produced, and their authorship over their work. Today, cultural microworkers have become menial data laborers, “digital hands” consolidated within MTurk’s infrastructure. Much like in the eighteenth-century manufactory, the division of labor into small and repetitive tasks, the disciplining of workers, and the control of the production process by MTurk severs cultural online workers from the cultural content of the commodities their labor yields and the creative process that making such a commodity would otherwise entail. This is not only a question of owning the instruments of production—many cultural workers own the tools with which they work—since the key distinction here exists at the level of the particular characteristics of the labor process. That is, the parallel with Wedgwood lies in the extent to which the protocols established by MTurk set the terms of how Turkers work, are paid, and relate to the Requesters for whom they work. In the same way MTurk transforms cultural microworkers into “Human APIs” and “bits of code,” the objective of Wedgwood’s factory was not so much to make workers out of artisans but “to make such *Machines* of the *Men* as cannot err.”¹²³

To the extent that they encounter digital culture through a production process in which they never experience the final outcome of their work and over which they have no creative influence, microworkers are precluded from developing intellectual or creative investments in the cultural

¹²³ Letter to Bentley, October 7, 1769, Finer, Savage, and Savage, *Letters of Wedgwood*, 82–83.

content of the services they provide and the finished commodities their labor helped to wrought.¹²⁴ Since their attachments to and interests in data work are exogenous to the allegedly “autonomous” pool of online knowledge that some critical thinkers call the “general intellect,” companies like Google and Amazon must *directly* organize data workers by bringing them into online infrastructures or physical data centers, assigning them explicit tasks, overseeing their productivity, and rating their performance.¹²⁵ In concealing and distancing the reality of its factory regime beneath a networked infrastructure, MTurk has perfected the assembly line according to the technical possibilities laid open by recent advances in computing, software, data storage, and the online connectivity capabilities of Web 2.0. The separation between the “knowledge campus” and the data center that Google achieved through physical confinement, restricted access, and a system of color-coordinated badges, MTurk made possible through the opacity and anonymity inherent to the internet. Microworkers are thus always “at hand but at a distance,” present on computer screens only when summoned to “task requests and data inputs into the code” and absent from the incubators, hackathons, media labs, and studios where “creative” work is undertaken by “innovators.”¹²⁶ MTurk complements my account of yellow-badge workers and Google’s data centers by showing that the inequality and drudgery that characterize the factory can take up many forms within the networked information workplace and forms of work across different domains of the online economy, from the digitization of knowledge to the mediation of digital culture. Together, these two complementary images of the data center, online and in physical space, illustrate my claim that the rise of automation, algorithms, the internet, and a service-economy based on knowledge and information

¹²⁴ Ekbia and Nardi, “Heteromation and Its (Dis)Contents.”

¹²⁵ Vercellone, “From Formal Subsumption to General Intellect”; Crawford Spence and David Carter, “Accounting for the General Intellect: Immaterial Labour and the Social Factory,” *Critical Perspectives on Accounting* 22, no. 3 (2011): 304–15.

¹²⁶ Irani, “The Cultural Work of Microwork,” 736.

were fertile grounds for the continued development of the factory system, including the labor politics it sustains and the cultural boundaries it cultivates between creative and menial work.

Thinking about data centers as factories, both at the Googleplex and on MTurk’s platform, allows us to make inroads into the multiple ways in which data workers endure the weight of an industrial workplace, from a Fordist assembly line to cultural work rendered menial by a technical division of labor. The following section will offer another perspective on the hierarchies of data work by revealing the ways in which historical regimes of racialization organize the division of labor and occupational structure in Silicon Valley’s high-tech sector. For all its leisurely infrastructure and so-called horizontal organizational structure, Google, as Norman Wilson aptly discerns, “remains committed, first last and always, to accumulation. And that means it wasn’t going to let a little thing like structural racism slow its roll.”¹²⁷

PART 3: RACE AND INVISIBLE FACTORIES

“While the early part of the twentieth century saw an employment shift in the United States from the farm to the factory, the 1950s and 1960s brought a shift from the factory to the office.”

— John Diebold, 1969.¹²⁸

“My mother’s folk, during my childhood, sat poised on that thin edge between the farmer and the menial. The surrounding Irish had two chances, the factory and the kitchen, and most of them took the factory, with all its dirt and noise and low wage. The factory was closed to us.”

— W. E. B. Du Bois, 1920.¹²⁹

¹²⁷ Norman Wilson, “The Artist Leaving the Googleplex.”

¹²⁸ Diebold, *Man and the Computer*, 139.

¹²⁹ W. E. B. Du Bois, *Darkwater: Voices from Within the Veil* (New York: Harcourt Brace, and Howe, 1920), 110.

What is the place of race in the advanced capitalist society imagined and critiqued by the thinkers and social scientists discussed in Chapter 1? Among their many claims about capitalist society, race is rarely discussed. Yet, two observations about race and capitalism emerge from my reading of the postindustrial paradigm, one based on the rare but existing mentions of race and the other on the implications of its omission. The first of these was framed by Daniel Bell, who noted that a fundamental impediment to racial equality in a “post-industrial society” was the slow pace at which black American workers had, by the 1960s and 70s, transitioned from agrarian and unskilled jobs to technical occupations requiring knowledge-based training.¹³⁰ “This agrarian population,” he wrote, “has been relatively excluded from society.”¹³¹ On Bell’s telling, the movement of black Americans from the South to join the industrial workforce of cities like Detroit, Chicago, and New York was a way for them “to enter modern society.”¹³² Even Christopher Lasch, one of the few theorists of postindustrial society to explicitly recognize and critique racial domination in the information age, shared Bell’s diagnosis of economic inequality among racial groups in the United States. In a postindustrial society characterized by systemic affluence, Lasch wrote, “poverty is the lot of those whom the industrial system has failed to absorb: migrant and seasonal workers, the chronically unemployed, and workers in the shops of petty capitalism.”¹³³ As much for Bell as for Lasch, the racial organization of postindustrial society inheres in its inability to assimilate racial minorities. In a postindustrial economy driven by information and technology, then, racial equality is contingent on whether, as Bell suggested, workers of color are given opportunities to transition from agriculture to industry and then from industry to the knowledge-based service sector.

¹³⁰ Bell, *Post-Industrial Society*, 145, 163–64. As Bell writes, “only 22 percent of black males are professional, technical, and clerical, as against 43 percent of white males.” *Ibid.*, 145.

¹³¹ Bell, “The Post-Industrial Society,” 50.

¹³² *Ibid.*

¹³³ Christopher Lasch, “Toward a Theory of Post-Industrial,” in *Politics in the Post-Welfare State: Responses to the New Individualism*, ed. M. Donald Hancock and Gideon Sjoberg (New York and London: Columbia University Press, 1972), 37.

The second point regarding the racial politics of postindustrial society is, unlike the first, based on a pervasive neglect of race, one that is present both in midcentury discourses about automation and recent Marxist theories of cognitive capitalism. The problem with this omission of the racial structure of postindustrial capitalism ensues from the assumption that the widespread dispersion of knowledge and technology will bring affluence to the whole of society, placing education and information—central prerequisites to integration in the knowledge economy—at everyone’s reach. The automatic factory, for instance, promised to improve the standards of living, leisure, and work not only of technicians and engineers but also of assembly line operators and indeed of all workers.¹³⁴ Likewise, according to Marxist theorists of cognitive capitalism, the socialization of and widespread access to education, information, technology, and the internet promised to erode previous hierarchies of knowledge, yielding a freely accessible pool of online information—the “general intellect”—to which all workers in the digital economy contribute and from which they all benefit.¹³⁵ The potential of full automation was nothing less than, as Marcuse put it, a revolution in “the whole society,” one that would cut “the chain that ties the individual to the machinery—the mechanism through which his own labor enslaves him.”¹³⁶ The prospects of affluence, better working conditions, and liberation laid open by technology and the internet were thus construed not only as comprehensive but also as universal conditions of postindustrial capitalism.

¹³⁴ See, for instance, Leaver and Brown, “Machines Without Men,” 204; Diebold, *Automation*, 159–63.

¹³⁵ Hardt and Negri, *Assembly*, 7, 41, 110–18, 144, 185, 279, 283; Spence and Carter, “Accounting for the General Intellect”; Gill and Pratt, “In the Social Factory?”; Vercellone, “From Formal Subsumption to General Intellect”; Michael Hardt, “Immaterial Labor and Artistic Production,” *Rethinking Marxism: A Journal of Economics, Culture & Society* 17, no. 2 (2006): 175–77; Michael Hardt, “Affective Labor,” *Boundary 2* 26, no. 2 (1999): 89–100; Maurizio Lazzarato, “Immaterial Labor,” in *Radical Thought in Italy: A Potential Politics*, ed. Paolo Virno and Michael Hardt, trans. Paul Colilli and Ed Emery (Minneapolis and London: University of Minnesota Press, 1996), 133–47.

¹³⁶ Marcuse, *One-Dimensional Man*, 40.

This section offers a critical perspective on both of these premises. By turning to the historical patterns of racialization in Silicon Valley, I argue that ideologies of race and racial formations are salient organizing mechanisms in the low-wage sectors of the region's high-tech economy. Silicon Valley, as Stephen J. Pitti wrote, "must be understood as a place shaped by deeply entrenched, although changing, labor and race relations."¹³⁷ Indeed, Silicon Valley provides, in concentrated form, a historical counterpoint to the ways in which the postindustrial paradigm saw and, for the most part, failed to see the force of racialized inequality and spatial segregation in the arrangements of its hierarchies and divisions of labor. By drawing on the history of racial formations in Silicon Valley, I argue that the racial inequalities of advanced capitalism are not, as theorists of "post-industrial society" contended, a question of integration. In fact, as I demonstrate below, workers of color have been increasingly assimilated into Silicon Valley's high-tech economy since the 1990s. Yet, as I further claim, this has been an impetus for rather than—as Bell imagined—a solution to systemic forms of racial discrimination within the knowledge-based service sector. The racial politics of advanced capitalism, as Silicon Valley aptly illustrates, is less a matter of whether workers of color were, as Lasch put it, "absorbed" by the economy, than a question of the conditions under which they were engulfed by it. I show that within Silicon Valley's high-tech companies, the division between menial and skilled labor remains largely organized and sustained by the region's historical cycles of racialized labor that prevailed in agriculture, manufacturing, maintenance services, and the informal sector throughout the twentieth century. While a vast number of Latino and Mexican immigrant workers are employed by high-tech corporations, they are by and large kept at a distance from the activities and spaces that characterize the allegedly "post-industrial" economy of the region.¹³⁸ These enduring systems of racial exploitation in Silicon Valley

¹³⁷ Pitti, *The Devil in Silicon Valley*, 6, 1.

¹³⁸ Throughout this section I draw on Stephen J. Pitti's use of the terms "ethnic Mexican," "Mexicano/a," "Latino/a," "Mexican immigrant," and "Chicano/a" to refer to San Jose's residents of Mexican descent.

reveal that the “integration” of racialized immigrant workers into the local high-tech economy has been distinguished by precarity. That is, poor workers of color—predominantly undocumented immigrants—are incorporated into the high-tech sector on the condition that they are paid little, work long hours, perform repetitive tasks, abide by an authoritarian management regime, receive minimal or no benefits, and are, at the end of the day, denied the opportunity of partaking in the knowledge purveyed by their work. Meanwhile, these caveats to inclusion remain the exception rather than the norm for the majority of skilled, predominantly white “innovators” and creative workers within the spaces of production and recreation that are off limits to janitors and “data janitors” alike—the campus, the corporate headquarters, the laboratory, the studio, the startup incubator, and so forth. By building on recent ethnographic studies of Latino workers and Mexican migrants employed as janitors by Apple Computers, I argue that the latest instantiation of the region’s historical pattern of racialized exploitation has been directed towards “data janitors.” I contend that the positions advanced by proponents of automation and Marxist critics of cognitive capitalism, namely, that technology and knowledge are transformative social processes—conducive to higher standards of living, leisure, work, and radical political action—cannot account for the racial politics that channels workers of color and immigrants to the lower strata of Silicon Valley’s occupational structure.

Among these, “Latino/a” and, after the late-1960s, “Chicano/a” are terms of self-description by local residents of Mexican-origin. The difference between them is that “Latino/a,” as it is generally used in the United States, refers to a broader community of ethnic Latin and South Americans, while “Chicano/a” refers specifically to those of Mexican descent. Since this section is concerned mostly with Latino/a people of Mexican descent, I use “Latino/a” and “Chicano/a” interchangeably to refer to ethnic Mexicans after the late 1960s for the purposes of variation. Following Pitti, I use the term “ethnic Mexican” to refer “broadly to all residents of Mexican background,” such that, the terms “ethnic Mexican community,” “ethnic Mexican people,” and “ethnic Mexicans in San Jose” are “the umbrella terms intended to represent a wide cross-section of local residents.” The terms “Latino/a,” “Chicano/a,” and “ethnic Mexican” also highlight the *racialization* of ethnicity and nationality since they refer to people of Mexican descent born in the United States—whether or not they are U.S. citizens—and Mexican nationals, both documented and undocumented. Within these categories, the term “Mexican American” refers specifically to people of Mexican background who were either born in the United States or became naturalized citizens. By contrast, the terms “Mexicano/a” and “Mexican immigrant” refer to immigrant men and women from Mexico. To avoid repetition, I sometimes use the term “migrant” as a synonym for “immigrant worker.” See *Ibid.*, 6–7.

Finally, my point throughout this section is not only to refute particular positions within the postindustrial paradigm, but rather to show the inadequacy of the theoretical lens through which its advocates tend to interpret capitalism as a whole. My argument in this section has two related goals that conclude my reinterpretation of advanced capitalism in this chapter and thus set the stage for my subsequent historical investigations. First, my claim concerning Silicon Valley's racial politics conveys that the postindustrial paradigm, insofar as it interprets advanced capitalist society as a radical break with the past, obscures and evades the significant ways in which the society it seeks to explain is racially organized. Second, this section is also meant to demonstrate how my formulation of the factory and its enduring organizing power within the most technologically advanced sector of the world economy makes visible the salient yet underexplored racial structure of advanced capitalism.

Racial Ideologies and Racial Formations in Capitalist Society

The contrast in the two epigraphs to this section, by John Diebold and W. E. B. Du Bois, register the dialectical relationship between technological progress and racial domination at the heart of advanced capitalism. In relating how his family was shut out of the factories from which Irish workers could come and go, Du Bois offers a powerful corrective to Diebold's gloss on American capitalist development. Diebold's story of consequent transformations in the American economy, from the farm to the factory to the office, not only marks but depends on the sublimation of black workers from all three spaces. This historical sketch of progress, which runs through all currents of the postindustrial paradigm, actively subsumes the experiences of racialized workers within a racially-organized labor market under those of a universal white worker in an economy unencumbered by racial hierarchies and inequalities. The movement of this universal white worker from one workplace to the next announces, at each turn, an allegedly ubiquitous shift in the history of the American economy, from agrarian to industrial to postindustrial capitalism. In order to account for workers

whose movements and experiences fall outside the bounds of this narrative, Du Bois presses us to look not only inside dominant spaces of production, but also around them. At the fringes of the farm, the factory, and the office lie those informal spaces of production Lauren Benton called “invisible factories.”¹³⁹ These unregulated and decentralized workplaces enfold a plurality of dynamic economic activities that neither broad generalizations about capitalist development nor official employment statistics can accommodate. Off the books and out of view, these spaces and their workers are often hidden in plain sight. And although this shadow economy is located at the margins of wherever the farm, the factory, and the office stand, it continues and complements the labor processes within all three. As I argue throughout this section, Silicon Valley’s informal economy is a vital extension of the data center discussed in Part 1. It is the “invisible factory” to which many Latino workers and Mexican migrants turn as a means of supplementing their incomes after their poorly-paid hours at high-tech companies.

Following Barbara Fields, Howard Winant, and Michael Oni, I use the terms “racial ideology” and “racial formation” to capture the racialized socioeconomic apparatus that organizes Silicon Valley’s occupational structure, distribution of wealth, and spatial segregation. For Fields, modern ideologies of race perform a negotiation between society’s idealistic commitments and material exigencies that directly threaten these same ideals. For instance, a racial ideology that constructs black populations as subhuman allows a slave society, such as the ante-bellum United States, to uphold its republican doctrines of liberty, natural rights, and equality while also fulfilling its economic demand for slave labor. In this particular case, as Fields writes, “race explained why some people could rightly be denied what others took for granted: namely, liberty, supposedly a self-

¹³⁹ Lauren Benton, *Invisible Factories: The Informal Economy and Industrial Development in Spain* (Albany: State University of New York Press, 1990). I am grateful for Jennifer Pitts who brought this book to my attention.

evident gift of nature's God."¹⁴⁰ According to Omi and Winant, racial formations are historically specific and constantly changing articulations of race that have served, and continue to serve, as fundamental organizing principles of social and economic stratification in the United States.¹⁴¹ Concepts of race, they argue, have significantly shaped "the definition of rights and privileges, the distribution of resources, and the ideologies and practices of subordination and oppression."¹⁴² In both senses, race is a social construct produced by racist ideologies and adapted to the socioeconomic needs of society. And yet, race is also irreducibly ocular; it hinges on specific visual readings of human bodies, the corporeal features of which are reduced, interpreted, systematized, and narrated through the lens of racist ideologies.¹⁴³ As Michael Dawson recently put it, the binary and relational categories of capitalist expropriation, such as "human/subhuman," "full citizen/second-class citizen," or "civilized/uncivilized," divide the world "into distinguished racialized superior and inferior humans," marking in turn "a racialized group whose labor, property, and bodies could be subject to expropriation, exploitation, and violation without recourse to (particularly civic/political) resources available to those classified as fully human."¹⁴⁴ Historically, Dawson discerns, understanding the foundation of capitalism requires "a consideration of 'the hidden abode of race,'" by which he means "the ontological distinction between superior and inferior humans—codified as race—that was necessary for slavery, colonialism, the theft of lands in the Americas, and genocide."¹⁴⁵ Insofar as race is deployed as a mechanism to differentiate populations and position them within a socially and economically stratified system, it is at once an

¹⁴⁰ Barbara J. Fields, "Slavery, Race and Ideology in the United States of America," *New Left Review* 181 (June 1990): 114.

¹⁴¹ Michael Omi and Howard Winant, *Racial Formation in the United States*, 3rd ed. (1986; repr., New York and London: Routledge, 2015), 2–3, 76, 107.

¹⁴² *Ibid.*, 263.

¹⁴³ *Ibid.*, 12–13.

¹⁴⁴ Michael C. Dawson, "Hidden in Plain Sight: A Note on Legitimation Crises and the Racial Order," *Critical Historical Studies*, no. Spring (2016): 149.

¹⁴⁵ *Ibid.*, 146.

organizing principle of the particular society in which it operates and a method of distributing people unevenly across the networks of exploitation and control that make up such a society. Beyond a system of ideas, then, race is, in the words of Chris Chen, “an array of ascriptive racialising procedures which structure multiple levels of social life.”¹⁴⁶ Racial domination is in sum not incidental to the divisions and inequalities of capitalist society; rather, capitalism has from its origins continuously and systematically produced and reproduced race and racialized populations into a “global surplus humanity.”¹⁴⁷

In the case of Santa Clara Valley’s Latino and Mexican population, U.S. citizenship is an important medium through which ideologies of race are produced and vented, be it as a result of official U.S. immigration policy or the broader, racialized categories of “legality” and “illegality.” Donald Trump’s “build the wall” slogan, for instance, has recently made plain the extent to which the immigration status of Mexicans on “American soil” remains integral to the articulation of racist discourse in the United States. Trump’s catchphrase betrays an anti-Mexican sentiment that cannot be reduced to national pride, patriotism, or “America-first” mercantilism; it expresses a racist sentiment internal to American white supremacy in which citizenship, nationality, and ethnicity are inextricable from and subsumed under the racialized category of “Mexican.” According to Nicholas De Genova and Ana Y. Ramos-Zayas, the institution of U.S. citizenship is itself “a mode for producing social inequality and racialized subordination, within the larger framework of U.S. nationalism as a racial formation.”¹⁴⁸ The figure of the “illegal alien,” they continue, “has emerged as

¹⁴⁶ Chris Chen, “The Limit Point of Capitalist Equality: Notes toward an Abolitionist Antiracism,” *Endnotes* 3 (2013), <https://endnotes.org.uk/issues/3/en/chris-chen-the-limit-point-of-capitalist-equality>.

¹⁴⁷ Ibid.

¹⁴⁸ Nicholas De Genova and Ana Y. Ramos-Zayas, *Latino Crossings: Mexicans, Puerto Ricans, and the Politics of Race and Citizenship* (New York and London: Routledge, 2003), 3.

a mass-mediated sociopolitical category that is saturated with racialized difference, and moreover, serves as a constitutive feature of the specific racialized inscription of ‘Mexicans’ in general.”¹⁴⁹

As I argue below, racial formations and the labor market cannot, on their own, account for how and why high-tech companies in Silicon Valley were able to source such an abundant and replenishable class of flexible and low-wage workers in unskilled positions. This is particularly evident at moments of economic downturn, such as in the 1990s, when job opportunities in Silicon Valley’s microelectronics assembly plants stagnated while employment at contract manufacturers, employing predominantly undocumented Latino migrants, “grew significantly.”¹⁵⁰ What explains this apparent paradox is the racial fragmentation of the society in which the high-tech labor market operates. That is, Silicon Valley corporations were only able to supply their demand for cheap and flexible work through a combination of the region’s racial inequalities and the legal constraints imposed on migrants by U.S. immigration policy. Since the early twentieth century, deportation and the tenuous categories of “legal” and “illegal” migration have operated as guiding instruments for the organization of Mexican workers in the American economy. Mexican migration to the U.S., Genova and Ramos-Zayas contend, has provided American capitalism “with the only ‘foreign’ migrant labor reserve so sufficiently flexible and tractable that it can neither be fully replaced nor completely excluded under any circumstances.”¹⁵¹ The legacy of California’s historical race-based hierarchies, as Daniel Martinez HoSang notes, has become evident in recent years “across the political landscape of contemporary California, expressed in the racial disparities within areas such as criminal justice, housing, education, health care, employment, and reproductive rights, and the undeniable correlation between race and life opportunities they produce.”¹⁵²

¹⁴⁹ Ibid.

¹⁵⁰ Zolniski, *Janitors, Street Vendors, and Activists*, 29.

¹⁵¹ De Genova and Ramos-Zayas, *Latino Crossings*, 5.

¹⁵² Daniel Martinez HoSang, *Racial Propositions: Ballot Initiatives and the Making of Postwar California* (Berkeley, Los Angeles, and London: University of California Press, 2010), 8.

While Du Bois recognized that the factory was closed to his family, he never lost sight of its “dirt and noise and low wage.” He knew that, for black workers at the time, the factory was no more a means to, as Bell put it, “enter modern society” than the farm. James Boggs, a black Marxist thinker who worked on Chrysler’s assembly lines for twenty-eight years, made this point explicitly. He remarked that, in 1963, around four million black workers were employed in the bottom production jobs of American industry, forming “a large proportion of [the] working-class force” while “the native-born whites who have been able to move up with every change in production are less and less inside the working-class force.”¹⁵³ But Boggs never believed that entering the factory was a path to the “American way of life” for black workers. Although “every other section of the working class has been to one extent or another assimilated into this ‘American way of life,’” Boggs continued, “the Negroes have been excluded from it and continue to be excluded from it.”¹⁵⁴ Today, the invisible factories—data centers and informal workplaces—in which Latino and Mexican immigrants spend their days, make plain that the backdoors of Silicon Valley are no more an entrance to “post-industrial society” for workers of color than farms and factories were a way into “modern society.” In the Reconstruction era, Du Bois’s family “sat poised on that thin edge between the farmer and the menial.” Although Latino janitors and data workers in Silicon Valley also sit on a “thin edge,” the factory is one of the few open doors to them. The thin edge upon which Silicon Valley’s racial minorities pivot today sways not between the farmer and the menial, as in Du Bois’s context, but between the menial and the creative. At the data center, the “dirt and noise” described by Du Bois are now digital. The low wages, however, remain real.

¹⁵³ James Boggs, “The American Revolution: Pages from a Negro Worker’s Notebook (1963),” in *Pages from a Black Radical’s Notebook: A James Boggs Reader*, by James Boggs, ed. Stephen M. Ward (Detroit: Wayne State University Press, 2011), 87.

¹⁵⁴ *Ibid.*, 137–38.

The Racial Politics of Historical Capitalism in Santa Clara Valley

The contemporary patterns of racialized labor in Silicon Valley are entangled in two historical developments that predate both the computer and the internet: the rise and fall of the region's agrarian economy, on the one hand, and the fate of Mexican immigrants and Latino workers employed by this industry on the other. Today, Santa Clara Valley is, as Curtis Marez suggests, a "key experimental laboratory for the development of forms of neoliberalism in which individual white market freedoms are engendered in opposition to Mexican farm workers."¹⁵⁵ In uncovering the region's history of organized farm labor from the cultural narratives that actively work to erase it, Marez lays bare the ways in which high-tech companies in Silicon Valley depend on and reproduce the historical patterns and ideologies of race practiced and sustained by agribusiness.¹⁵⁶ From the early 1900s to the middle of the century, Mexican immigrants and Latinos have served Santa Clara Valley's agrarian sector as low-wage canners and fruit pickers; in the twenty-first century, corporations such as Google, Facebook, and Intel employ large numbers of unskilled and poorly paid workers, prominently sourced from the barrios of East San Jose, in custodial services, hardware manufacturing, data work, and other maintenance jobs.¹⁵⁷ The growth of high-tech capitalism in the region has been, since the founding of Shockley Semiconductors Laboratory in 1956, highly reliant on the labor of working-class Latinos.

Yet, the emergence of a discernible and systemic racial hierarchy in Santa Clara Valley dates back to the Spanish conquest of local native peoples in 1776.¹⁵⁸ In this period, as Stephen Pitti notes, "a new understanding of racial difference infiltrated the Valley, bringing with it patterns of conquest

¹⁵⁵ Curtis Marez, *Farm Worker Futurism: Speculative Technologies of Resistance* (Minneapolis: University of Minnesota Press, 2016), 119.

¹⁵⁶ Marez, "Cesar Chavez, the United Farm Workers, and the History of Star Wars."

¹⁵⁷ *Ibid.*, 104–5.

¹⁵⁸ Pellow and Park, *Silicon Valley of Dreams*, 23–45; David Naguib Pellow, "High-Tech Environmental Racism: Silicon Valley's Toxi Workplaces," in *Racial Liberalism and the Politics of Urban America*, ed. Curtis Stokes and Theresa Meléndez (East Lansing: Michigan University Press, 2003), 251.

and violence, which in turn begged patterns of accommodation and resistance.”¹⁵⁹ Pitti portrays the various guises under which racial ideologies were practiced in Santa Clara Valley’s historical workplaces through detailed descriptions of the violent cycles of expropriation and extraction directed at Mexican migrants and Latino workers across mercury mines, orchards, and canneries. By following this process of racialization into the twenty-first century, along with the shifting meanings of race and the role ethnic Mexican workers played in the region’s economic development, Pitti offers a long-range account of the hierarchical structuring of racial inequalities that belies Northern California’s astounding record of capital accumulation, from the Gold Rush to Google. Additionally, Santa Clara Valley’s historical patterns of migration, vital to its economic growth, were also a dynamic force of resistance, shaping not only colonial institutions and extractive industries, but also galvanizing “native resistance, working-class political activism, and new forms of cultural politics over generations.”¹⁶⁰ Beginning in the nineteenth century, capital-intensive industries, especially mining, triggered a substantial upsurge in the local economy.¹⁶¹ By the mid-1800s, as Pitti writes, “white residents took over the Valley’s best lands and dominated the political system, and many displaced local residents [...] joined new immigrants from Latin America seeking work at the New Almadén mercury mine located some fifteen miles south of San José.”¹⁶² This supports Tomás Almaguer’s contention that the conquest of Western America through the U.S.-Mexico War of 1846-48 forged “a new pattern of racialized relationships between conquerors, conquered, and the numerous immigrants that settled in the newly acquired territory.”¹⁶³ “The ultimate triumph of modern capitalism,” Almaguer continues, “was accompanied by a fierce struggle among various racial and ethnic groups for position within the emerging new class structure,” laying the basis for “a

¹⁵⁹ Pitti, *The Devil in Silicon Valley*, 1.

¹⁶⁰ *Ibid.*, 3.

¹⁶¹ *Ibid.*, 51.

¹⁶² *Ibid.*

¹⁶³ Tomás Almaguer, *Racial Fault Lines: The Historical Origins of White Supremacy in California* (Berkeley, Los Angeles, and London: University of California Press, 1994), 1.

new pattern of group relationships in the California territory during the next fifty years.”¹⁶⁴

Almaguer’s history of the distinct ways in which different racial groups—the Chinese, Native Americans, Mexicans, the Japanese, and white Europeans—experienced California’s rapidly-changing economy sheds light on how the state’s “emergent hierarchies of racial and class inequality were mutually constitutive.”¹⁶⁵ Both Pitti and Almaguer demonstrate the extent to which historical hierarchies of racial inequality in Northern California were constructed through the simultaneous interaction of material and discursive factors, of economic relations and racial ideologies.¹⁶⁶

In the twentieth century, Santa Clara Valley’s economic development was punctuated by two major transformations: a shift from agriculture to electronics manufacturing in the 1960s and a transition from electronics to software development and online services in the 1990s. At each juncture, the region’s economy was supported by a growing Latino and Mexican working class. Through the early 1900s, Santa Clara Valley became the leading producer of fresh, dried, and canned fruit in the United States, earning the moniker “fruit bowl of America.”¹⁶⁷ Before the industry’s decline in the 1960s, the Valley was, according to some observers, “the largest producer of canned produce in the world.”¹⁶⁸ For over half a century, most agrarian workers employed in its farms and canneries were workers of color, predominantly of Mexican origin, but also, and increasingly between the 1870s and 1930s, Chinese, Japanese, and Filipino.¹⁶⁹ As Santa Clara Valley consolidated its position as a global hub of fresh and processed fruit production, Mexican immigrants and Latinos “soon became the backbone of the labor force employed in agriculture-related jobs, which led to the formation of a large Mexican working class.”¹⁷⁰ Beginning in the 1960s, however, the agrarian base

¹⁶⁴ Ibid., 1–2.

¹⁶⁵ Ibid., 4.

¹⁶⁶ Ibid., 3.

¹⁶⁷ Zlolniski, *Janitors, Street Vendors, and Activists*, 22; Pellow and Park, *Silicon Valley of Dreams*, 46.

¹⁶⁸ Pellow and Park, *Silicon Valley of Dreams*, 46.

¹⁶⁹ Ibid., 46–50.

¹⁷⁰ Zlolniski, *Janitors, Street Vendors, and Activists*, 24.

of Santa Clara Valley's economy began giving way to the industrial production of microelectronics.¹⁷¹ Through the 1970s agricultural de-industrialization left thousands unemployed.¹⁷² By the 1980s, most farms and nearly all canneries had been uprooted by electronics assembly plants, and multinational corporations like Hewlett-Packard and Intel led Silicon Valley down a path of high-tech growth that spiraled into the present.¹⁷³ As had been the case with the region's earlier transitions, Mexican migrants and Latino workers played a central role in the electronics boom of the 1970s and 80s.

Santa Clara Valley's transition from agriculture to manufacturing from the 1960s to the 80s marked an increased economic marginalization of poor Latinos in the area as well as trends in "explosive demographic and urban growth," spawning numerous low-income and densely-populated immigrant communities on the outskirts of San Jose.¹⁷⁴ The displacement of agriculture by microelectronics also had a dramatic effect on the demand for skilled and unskilled labor. The new high-tech economy attracted "thousands of college-educated professionals, such as engineers, technicians, and managers," which in turn generated thousands of new jobs in "unskilled, low-wage occupations in electronics assembly and the service sector that became a magnet for Mexican immigrants."¹⁷⁵ The upsurge in the high-tech sector thus fueled two distinct waves of Mexican migration into Santa Clara Valley. The first, between the early 1960s and the late 70s, was impelled by the rise of electronics manufacturing and a demand for low-wage labor in semiconductor assembly plants. In the 1980s and 90s, a second stream of Mexican workers, many of them undocumented, were pulled into the region by the growing demand for unskilled labor in the service

¹⁷¹ Zlolniski, *Janitors, Street Vendors, and Activists*, 22. See also O'Mara, *Cities of Knowledge*, 97–141.

¹⁷² Pitti, *The Devil in Silicon Valley*, 177.

¹⁷³ Zlolniski, *Janitors, Street Vendors, and Activists*, 24.

¹⁷⁴ From 1950 to 1980, the population of Santa Clara County increase by almost a million residents and San José was ranked the fastest growing city in the country for several years in the 1970s. *Ibid.*

¹⁷⁵ *Ibid.*, 26.

industry.¹⁷⁶ By the mid-1990s, Zlotniski writes, “there were as many janitorial workers—most of them Mexican immigrants—as computer engineers employed in Santa Clara County, revealing the bifurcated labor demand fueled by the high-technology industries in the region.”¹⁷⁷ Today, many of the region’s Latino residents, especially in San Jose’s East Side barrios, are “confined to menial occupations in ways long dictated by ideologies of race,” including the discriminatory housing and labor policies that limit Latino “economic opportunities and settlement patterns in the area,” making early death “an all too common consequence for many workers.”¹⁷⁸ Silicon Valley’s dot-com boom of the 1990s, which Manel Castells called “the longest uninterrupted growth period of the past half-century,” depended on, as Curtis Marez reminds us, “an expansion of low-wage jobs that were mostly filled by immigrant women in Silicon Valley and the U.S. Sunbelt, as well as by female workers in the U.S.-Mexico border region and other parts of the global south.”¹⁷⁹ Modern Silicon Valley, Pitti concludes from this scenario, was shaped by the “patterns of racial segmentation in the workforce established in previous decades.”¹⁸⁰

Invisible Workers in Invisible Factories

The geographical span of Silicon Valley covers most of Santa Clara County, including its seat, San Jose, the third most populous city in California. The population of Santa Clara County is approximately 1.9 million, 53 percent of whom are white, 38 percent are Asian, 25 percent are Latino, and 3 percent are black.¹⁸¹ Most Latinos in Santa Clara County are of Mexican origin, about 23 percent of the whole population, which according to the 2010 census data was roughly 410,000

¹⁷⁶ Ibid.

¹⁷⁷ Ibid.

¹⁷⁸ Pitti, *The Devil in Silicon Valley*, 4.

¹⁷⁹ Curtis Marez, “The Homies in Silicon Valley: Figuring Styles of Life and Work in the Information Age,” *Aztlán: A Journal of Chicano Studies* 31, no. 2 (Fall 2006): 139.

¹⁸⁰ Pitti, *The Devil in Silicon Valley*, 177.

¹⁸¹ “Population Estimates for Santa Clara County, California,” *United States Census Bureau*, July 1, 2018, <https://www.census.gov/quickfacts/santaclaracountycalifornia>.

people, an increase from 325,000 in the year 2000.¹⁸² Comparatively, Google’s Employer Information Report (EEO-1), first made public in 2014, revealed the highly homogenous racial and ethnic makeup of Google’s workforce, 61 percent of whom were white, 30 percent were Asian, 3 percent were Latino, 2 percent were black, and 4 percent were of two or more racial backgrounds.¹⁸³ In light of the repercussions generated by this data, Google has since released an annual, internally-audited “Diversity Report” that includes official statements on the measures and initiatives the company has implemented to improve the diversity of its workforce.¹⁸⁴ Earlier in 2019, for instance, the company reported that its workforce was 54 percent white, 40 percent Asian, 3 percent black, and 6 percent Latino.¹⁸⁵ What is most revealing about these reports, however, is not what they disclose but what they elide. By limiting its “workforce” to managers, technicians, sales personnel, and professional employees, Google’s data suggests the company has no unskilled employees at all—no service and maintenance workers in its facilities, no scanning operatives in its data centers.¹⁸⁶ As I argued in Part 1, however, the company has subcontracted low-wage data workers since 2007, who, hidden from the press, policy makers, internet users, and Googlers, are also absent from the company’s statistics.¹⁸⁷

¹⁸² The United States Census Bureau, “2010 Census of Population and Housing,” Census Data (Suitland, MD: U. S. Census Bureau, January 2011), https://www2.census.gov/census_2010/03-Demographic_Profile/California/. The figure for the year 2000 is quoted in Zolniski, *Janitors, Street Vendors, and Activists*, 22.

¹⁸³ Claire Cain Miller, “Google Releases Employee Data, Illustrating Tech’s Diversity Challenge,” *New York Times Bits: Business, Innovation, Technology, and Society*, accessed August 19, 2019, http://bits.blogs.nytimes.com/2014/05/28/google-releases-employee-data-illustrating-techs-diversity-challenge/?_php=true&_type=blogs&_r=0%20.

¹⁸⁴ Google, “Google Annual Diversity Report 2019” (Mountain View, California: Google LLC, 2019), https://static.googleusercontent.com/media/diversity.google/en//static/pdf/Google_diversity_annual_report_2019.pdf.

¹⁸⁵ *Ibid.*, 13.

¹⁸⁶ Irani, “Justice for ‘Data Janitors.’” The company divides its overall workforce into three categories: “leadership” (managers), “tech” (engineers, programmers, etc.), and “non-tech” (sales and professional employees).

¹⁸⁷ There is evidence that the company continued to contract low-wage data workers at least until 2015, when Lilly Irani published her piece “Justice for ‘Data Janitors.’” See *Ibid.*

Google is not alone. Throughout Silicon Valley, tech companies actively contribute to the invisibility of unskilled workers not only by concealing them in data centers, but also by subcontracting through third-party agencies. Since subcontracted workers are not technically part of the company's official workforce, they are not on the payroll and thus effectively kept off the books. Additionally, the overwhelming focus on skilled, immaterial, knowledge-based, and creative labor within discourses about automation, postindustrial society, and cognitive capitalism helps to eclipse the presence and significance of unskilled work in the computational fold, shrouding in turn the insidious yet subdued consortium between regimes of racialization and capital accumulation in the high-tech economy. Moreover, much of the recent scholarship on the flexibility and diversity of Silicon Valley's labor market has centered on its programmers, coders, and innovators.¹⁸⁸ In Alan Hyde's in-depth and instructive discussion of the region's global and multiethnic workforce, for instance, the systemic subcontracting of unskilled immigrants of color receives relatively little attention compared to the juridical and economic issues affecting the tech industry's foreign-born scientists and engineers, two-thirds of whom were, in 1990, Asian immigrants—mostly Chinese and Indian—with advanced degrees.¹⁸⁹

Anchored in Silicon Valley's historical regimes of racialized labor, the work of “data janitors” in Google's invisible factory is a reminder that the hierarchies and inequalities of the information-driven economy are easily missed by theories and critiques of capitalism that either disregard racial formations or see race as epiphenomenal to capitalism. To be sure, it is not a straightforward task to

¹⁸⁸ On flexibility, see Benner, *Work in the New Economy*; Carnoy, Castells, and Benner, “Labour Markets and Employment Practices in the Age of Flexibility”; Lonnie Golden, “The Economics of Worktime Length, Adjustment, and Flexibility,” *Review of Social Economy* 54, no. 1 (1996): 1–45. On race, ethnicity, and gender, see Radhika Gajjala, “Digital Media, Race, Gender, Affect, and Labor: Introduction to Special Section,” *Television & New Media* 15, no. 3 (2014): 215–22; Bernard P. Wong, *The Chinese in Silicon Valley: Globalization, Social Networks, and Ethnic Identity* (New York: Rowman & Littlefield, 2006); Sangeeta Kamat, Ali Mir, and Matthew Biju, “Producing Hi-Tech: Globalization, the State and Migrant Subjects,” *Globalisation, Societies and Education* 2, no. 1 (2004): 5–23.

¹⁸⁹ Alan Hyde, *Working in Silicon Valley: Economic and Legal Analysis of a High-Velocity Labor Market* (2003; repr., Milton Park and New York: Routledge, 2015), 112–24.

account for workers who escape statistical records and who spend most of the working day (or night) in opaque, hidden, or informal workplaces. At the same time, this is not simply an issue of oversight. The experiences of unskilled workers of color in Silicon Valley are written out of popular and academic narratives about high-tech capitalism in large part because the region is said to represent a “phase” of advanced capitalist societies that is often interpreted as a historical rupture with agrarian and industrial modes of production. This invisibility of Latino workers and Mexican migrants in Silicon Valley points to two connected aspects of its high-tech labor market: subcontracting and informality. The first concerns the sanitary janitors and “data janitors” who work onsite at tech companies; the second speaks to the various supplemental jobs to which many of them resort because their formal employment tends to be temporary, irregular, part-time, and, above all, because their wages are often not enough to make ends meet in the San Francisco Bay. In other words, there is a double process of invisibility affecting low-wage and unskilled workers of color in Silicon Valley, which renders their work particularly difficult to account for through official employment statistics and critical theories of capitalism that gloss over history with broad strokes.

The concealment of unregulated, decentralized, and subcontracted labor is in fact endemic to advanced capitalist economies. Indeed, the concept of “informal” employment was developed by the British anthropologist Keith Hart in 1973 to deal precisely with the discrepancy between the high unemployment figures in Ghana and the largely undetectable economic activities he observed outside formal work settings throughout Accra.¹⁹⁰ Building on this ethnographic tradition, Lauren Benton also turned to Spain’s shadow economy in the 1980s to reevaluate the country’s industrial restructuring in the postwar period. Contrary to dominant accounts of capitalist development, Benton argued that decentralized, informal, subcontracted, and unregulated forms of production,

¹⁹⁰ Keith Hart, “Informal Income Opportunities and Urban Employment in Ghana,” *Journal of Modern African Studies* 11, no. 1 (1973): 61–89; Christian Zolniski, “Economists’ Blind Spots: Field Stories of the Informal Economy among Mexican Immigrants in Silicon Valley,” in *Paradigms for Anthropology: An Ethnographic Reader*, ed. E. Paul Durrenberger and Suzan Erem (Boulder and London: Paradigm Publishers, 2010), 233.

such as those sustained in what she calls “invisible factories”—cottage industries, sweatshops, and households—are constitutive elements of contemporary capitalism rather than “pre-modern” aberrations of an industrial economy gone awry.¹⁹¹ Ethnographies of the informal sectors, such as Hart’s and Benton’s, are thus essential to our understanding of the complexity and dynamism of contemporary capitalist societies. They also help us to form a more holistic image of the social, cultural, and political processes that undergird capitalist economies, from the ways in which attitudes toward gender and race shape the production process to the role immigration policies play in structuring the labor market. Most of all, the value of this type of fieldwork inheres in its potential to unveil workplaces, workers, and forms of work that quantitative, theoretical, or historical approaches to political economy cannot always discern or explain on their own.

For these reasons, Christian Zolniski’s ethnography of poor, working-class Latinos and Mexican immigrants in Silicon Valley is an indispensable contribution to knowledge about the racial politics of high-tech capitalism.¹⁹² In laying bare the ways in which flexibility and subcontracting in the region’s formal labor market have led to and sustained a vast informal sector in the low-income neighborhoods of East San Jose, Zolniski’s work reveals the connections between, and the paradoxes of, integration and exclusion in Silicon Valley’s postindustrial economy.¹⁹³ His accounts

¹⁹¹ Benton, *Invisible Factories*. I thank Jennifer Pitts for helping me to see this connection.

¹⁹² Christian Zolniski, “The Informal Economy in an Advanced Industrialized Society: Mexican Immigrant Labor in Silicon Valley,” *Yale Law Journal* 103, no. 8 (1994): 2305–36; Christian Zolniski, “Etnografía de Trabajadores Informales En Un Barrio de Inmigrantes Mexicanos En El Silicon Valley,” *Revista Mexicana de Sociología* 62, no. 2 (2000): 59–87; Christian Zolniski, “Cleaning the Buildings of High Tech Companies in Silicon Valley: The Case of Mexican Janitors in Sonix” (University of California, San Diego Working Papers, La Jolla: The Center for Comparative Immigration Studies, 2000); Christian Zolniski and Juan-Vicente Palerm, “Working but Poor: Mexican Immigrant Workers in a Low-Income Enclave in San Jose,” vol. 4, 2 (University of California, Berkeley Working Papers, Berkeley: The Chicano/Latino Policy Project, 1996); Zolniski, *Janitors, Street Vendors, and Activists*; Christian Zolniski, “Labor Control and Resistance of Mexican Immigrant Janitors in Silicon Valley,” *Human Organization* 62, no. 1 (2003): 39–49; Christian Zolniski, “Making a Living and a Life: Stories of Undocumented Immigrants,” *Insights on Law & Society* 9, no. 3 (Spring 2009); Zolniski, “Economists’ Blind Spots.”

¹⁹³ Christian Zolniski, “The Informal Economy in an Advanced Industrialized Society: Mexican Immigrant Labor in Silicon Valley,” in *The Yale Law Journal*, 103:8 (1994), pp. 2305-2335; Zolniski, “Labor Control and Resistance of Mexican Immigrant Janitors in Silicon Valley,” in *Human Organization*, 62:1 (2003), pp. 39-49

also evince the hierarchical management framework, authoritarian regimes of control, and disciplinarian mechanisms of exploitation that Latino and Mexican workers endure in their formal jobs at one of Silicon Valley's most prominent high-tech corporations: Apple Computers. More than falsifying Silicon Valley's self-purported "horizontal" and "consent-based" corporate culture, Zlolniski makes plain the extent to which inequalities in working conditions and compensation within the high-tech economy overlap with broader racial patterns of income inequality and spatial segregation. By shedding light on neglected accounts of high-tech work, Zlolniski offers compelling qualitative and empirical evidence in support of my claim that the hierarchies in the high-tech workplace are integral to the region's historical racial formations. Drawing on Zlolniski's ethnographic research, I illustrate that the demand for a cheap and flexible stream of unskilled workers by Silicon Valley corporations not only relied on the already existing racialized inequalities in Santa Clara Valley, but also transformed them in two ways: first, by adopting subcontracting as the official employment scheme through which Latino and Mexican workers were channeled *en masse* into unskilled positions within the high-tech sector; and second, by propelling the dramatic increase of an informal economy in San Jose, where these workers would compensate for their below-subsistence wages.

The Structure of Silicon Valley's Labor Market

By the 1980s, Silicon Valley had established itself as the world's foremost high-technology industrial district, home to the largest microelectronics manufacturers of the period. Throughout the decade, however, most companies in the region began outsourcing their assembly operations to Asia and Mexico, and from the mid-1990s onwards, software and internet companies became the leading growth sectors in the region.¹⁹⁴ During this transitional juncture, profound transformations in the industrial district's labor market got underway. The most significant of these was the rise of

¹⁹⁴ Zlolniski, *Janitors, Street Vendors, and Activists*, 28.

subcontracting, which resulted from a growing demand for decentralized and flexible labor among high-tech employers.¹⁹⁵ The highly competitive business environment and ramped demand for innovation in Silicon Valley gave rise to a class of software engineers and programmers known as “high-tech nomads.”¹⁹⁶ These “nomads,” the *Wall Street Journal* noted in 1996, “move from project to project, prospering but financially insecure—always outsiders on the job.” But the trend toward subcontracting was even more pervasive among unskilled workers. From the 1980s to the 1990s, the majority of lower-level positions in service, administration, and manufacturing, which had previously been held by in-house employees, became subcontracted.¹⁹⁷ In this arrangement, manufacturing and service workers hired through third-party agencies are “legally separated from the client firms that either design the products they make or own the buildings where they work, which prevents them from receiving the same wages and benefits as the employees in those high-tech firms.”¹⁹⁸ In light of the disproportional representation of Mexican immigrants in unskilled positions, subcontracting is, according to Zolniski, “at the heart of the problems Mexican immigrant janitors in Silicon Valley face and has shaped their political responses.”¹⁹⁹ The trend in subcontracting was facilitated by another central feature of Silicon Valley’s economy, namely, its strong antiunion environment.²⁰⁰ Unions and labor organizing pose a direct threat to the flexible model on which the region’s high-tech economy runs.

But the structure of Silicon Valley’s labor market is not only determined by the internal demands of high-tech companies. In contrast with the “nomadic” character of flexible labor, both skilled and unskilled, the geographies of Silicon Valley have cemented through a historical pattern of

¹⁹⁵ Zolniski, “The Informal Economy in an Advanced Industrialized Society,” 2305.

¹⁹⁶ Bernard Wysocki Jr., “Flying Solo: High-Tech Nomads Write New Program For Future of Work,” *The Wall Street Journal*, August 19, 1996, <https://www.craigbrownphd.com/wp-content/uploads/2012/09/Flying-Solo-High-Tech-Nomads-Write-New-Program-For-Future-of-Work.pdf>.

¹⁹⁷ Zolniski, *Janitors, Street Vendors, and Activists*, 29.

¹⁹⁸ *Ibid.*

¹⁹⁹ *Ibid.*, 29–30.

²⁰⁰ *Ibid.*, 30–31.

residential segregation that “mirrors the economic and social inequality of the region.”²⁰¹ As a result, large segments of the Mexican immigrant and Latino population of Santa Clara County reside in the “flatlands” of East Palo Alto and, predominantly, across East San Jose.²⁰² In the East San Jose barrio on which Zolniski based his ethnographic research, for instance, 30 percent of the population lived below the poverty line and 75 percent of all residents were Mexican immigrants, most of whom had arrived in the 1990s, during the upswing of the dot-com sector.²⁰³ This barrio was also an “unincorporated” urban tract, meaning it lacked a variety of community services afforded to “incorporated” neighborhoods, such as child care facilities, health clinics, playgrounds, parks and, until the early 1990s, street cleaning and public street lights.²⁰⁴ The increase in income inequality and the amplification of spatial segregation since the 1990s conformed to and deepened the region’s historical divide between affluence and poverty along racial lines. The fact that the racial and ethnic makeup of Santa Clara Valley’s poor working class grew more homogenous at each of many transitions in its economy points to a powerful racialized structure that undergirds the region’s labor market.

Apple’s Janitors: Between Subcontracting and Informality

At 6:30 PM, after a thirty-minute drive from East San Jose, three Mexican workers arrive at Apple’s corporate headquarters in Cupertino.²⁰⁵ They are only three of 325 janitors subcontracted by

²⁰¹ Ibid., 31.

²⁰² Pellow and Park, *Silicon Valley of Dreams*, 68; AnnaLee Saxenian, “Silicon Chips and Spatial Structure: The Industrial Basis of Urbanization in Santa Clara County, California,” Working Paper 345 (University of California Institute of Urban and Regional Development, Berkeley, 1980).

²⁰³ Zolniski, *Janitors, Street Vendors, and Activists*, 37, 35.

²⁰⁴ Ibid., 35.

²⁰⁵ Throughout his work Zolniski calls Apple by the codename “Sonix.” He offers an abundance of evidence that “Sonix” is indeed Apple, the most conclusive of which is his account of a rally organized by Local 1877 and supported by the Cleaning Up Silicon Valley Coalition at “Sonix” in 1992, which in fact took place at Apple. See David Bacon, “Land of the Open Shop: The Long Struggle to Organize Silicon Valley,” *New Labor Forum* 20, no. 1 (Winter 2011): 76; Manuel Pastor, Chris Brenner, and Martha Matsuoka, *This Could Be the Start of Something Big: How Social Movements for Regional Equity Are Reshaping Metropolitan America* (Ithaca and New York: Cornell University Press, 2009), 65.

Apple from thirteen different Silicon Valley janitorial companies.²⁰⁶ Unlike its former in-house custodian workforce, who earned an average of US\$10.00 per hour with a generous benefits package that included health insurance, Apple's new janitors receive no benefits and are paid an hourly wage of US\$5.50 by Shine Maintenance Company, the private contractor who is their official employer.²⁰⁷ Like most contractors in Silicon Valley, Shine relies "almost exclusively on undocumented Mexican workers."²⁰⁸ Moreover, the mutually-beneficial consortium between Shine and Apple reflects a "general trend in Silicon Valley" where the "restructuring of janitorial work led to a sharp decline of wages and labor benefits for workers employed in the private sector and to demographic changes in the whole industry."²⁰⁹ Between 1965 and 1990, the number of janitors in Santa Clara Valley increased fivefold.²¹⁰ At the onset of the dot-com boom, over 70 percent of subcontracted janitors in Silicon Valley were Latino, nearly half of whom were Mexican immigrants.²¹¹ And throughout the 1990s, approximately 80 percent of subcontracted janitors at Apple, one of the largest users of third-party management, were undocumented immigrants.²¹² The two most substantial benefits Silicon Valley's high-tech corporations reap from subcontracting janitors are, first, access to a "reliable source of abundant, cheap Mexican immigrant labor without the financial costs and legal risks of directly employing them" and, second, the ability to "retain a great deal of control over the subcontracted janitors and their activities in the workplace."²¹³ Additionally, subcontracting allows high-tech employers to delegate the legal responsibility of determining the immigration status of

²⁰⁶ Zlolniski, *Janitors, Street Vendors, and Activists*, 47.

²⁰⁷ *Ibid.*, 51.

²⁰⁸ Zlolniski, "Making a Living and a Life."

²⁰⁹ *Ibid.*

²¹⁰ Zlolniski, *Janitors, Street Vendors, and Activists*, 48.

²¹¹ Christian Zlolniski, "Unskilled Immigrants in High-Tech Companies: The Case of Mexican Janitors in Silicon Valley," in *The International Migration of the Highly Skilled: Demand, Supply, and Development Consequences in Sending and Receiving Countries*, ed. Wayne Cornelius, Thomas J. Espenshade, and Idean Salehyan (San Diego: Center for Comparative Immigration Studies, University of California, 2001), 271–72; Zlolniski, *Janitors, Street Vendors, and Activists*, 50.

²¹² Zlolniski, *Janitors, Street Vendors, and Activists*, 42, 53.

²¹³ *Ibid.*, 54.

janitors to independent contractors, rendering corporations such as Apple immune to the Immigration Reform and Control Act of 1998, which imposes sanctions against employers of undocumented workers.²¹⁴ Apple's managers have a strong preference for nonunionized, small contractors like Shine because of their flexibility. As Apple's head of building maintenance put it, when the company requests a nonscheduled service from Shine, "janitors respond promptly."²¹⁵

In stark contrast to dominant accounts of Silicon Valley's horizontal and consent-based management philosophy, then, Apple's janitors endure "authoritarian forms of managerial control" that include explicitly discriminatory hiring and promotion practices.²¹⁶ They stand at the liminal space between the political regimes of production Michael Burawoy defined as "despotic" and "hegemonic."²¹⁷ Whereas a despotic approach controls labor through coercion, Carolina Bank Muñoz discerns, hegemonic management relies on consent and therefore obscures "the relations of exploitation and the extraction of surplus value by making workers complicit in their own exploitation."²¹⁸ Janitorial companies such as Shine tend to target immigrant and undocumented workers whose unstable economic and legal conditions in the United States enable employers to sustain a regime of labor control and flexibility. Apple's managers, for their part, prefer custodial workers from Mexico, which, according to Zolniski, is a product of the ease with which subcontractors like Shine are able to mobilize the social and cultural resources of Mexican immigrants to "recruit, organize, and control them."²¹⁹ Most of all, Apple's proclivity for Mexican janitors inheres in the vulnerability of undocumented migrants to coercive management practices, which in turn renders them more susceptible to meet the onerous demands of their employer. Apple

²¹⁴ Ibid., 53.

²¹⁵ Zolniski, "Labor Control and Resistance," 42.

²¹⁶ Ibid., 43.

²¹⁷ Michael Burawoy, *The Politics of Production: Factory Regimes Under Capitalism and Socialism* (London: Verso Books, 1985).

²¹⁸ Carolina Bank Muñoz, *Transnational Tortillas: Race, Gender, and Shop-Floor Politics in Mexico and the United States* (Ithaca: Cornell University Press, 2008).

²¹⁹ Zolniski, "Labor Control and Resistance," 42.

translates this asymmetrical power relation between Shine and its workers into a “willingness” on the part of Mexican janitors to “change their work routines without resistance and to work overtime with short notices” as well as their “inclination” to “send relatives or friends to substitute for them at work whenever they were sick or after they quit their jobs.”²²⁰ According to Mexican janitors, however, Shine is only able to offer Apple a cheap, flexible, and abundant stream of custodians through “blatant racial discrimination.”²²¹ Shine’s Mexican workers protested, for instance, that while Korean janitors are often promoted to supervisors after a few months of employment, Latino and Mexicans are never given the same opportunity.²²² Beyond their low wages and flexible hours, many of Shine’s Mexican janitors expressed serious grievances over their precarious working conditions at Apple, which they claimed to be characterized by a “shortage of supplies, old and deteriorated cleaning equipment, [...] the absence of a clear and fair policy regarding distribution of work loads, raises, and promotions, [...] lack of respect, [...] insults, threats, and verbal mistreatment by some supervisors, [...] unfair treatment, arbitrary decisions, and the general contempt with which supervisors treated them.”²²³ Mexican janitors viewed these conditions as “an issue of racial discrimination.”²²⁴ One of Shine’s Mexican custodians, for instance, remarked that “supervisors don’t know about human relations and treat us like animals; they threaten and try to intimidate us all the time!”²²⁵ Commenting on the racially discriminatory policies implemented by managers, he added, “We want Latinos in supervisory positions. Why aren’t there any? You don’t need to speak English to be a supervisor in this job.”²²⁶

²²⁰ Ibid.; Zlolniski, *Janitors, Street Vendors, and Activists*, 52–53.

²²¹ Zlolniski, “Cleaning the Buildings of High Tech Companies in Silicon Valley,” 7; Zlolniski, “Labor Control and Resistance,” 43–44, 47; Zlolniski and Palerm, “Cleaning the Buildings of High Tech Companies in Silicon Valley,” 48; Zlolniski, *Janitors, Street Vendors, and Activists*, 55.

²²² Zlolniski, *Janitors, Street Vendors, and Activists*, 55.

²²³ Zlolniski, “Labor Control and Resistance,” 43.

²²⁴ Zlolniski, *Janitors, Street Vendors, and Activists*, 55.

²²⁵ Ibid., 59–60.

²²⁶ Ibid., 60.

According to Zolniski's ethnographic work, racial discrimination alongside poor working conditions and the many abuses of Shine's supervisors galvanized Latino and Mexican janitors to organize against their employer through the Local 1877 union.²²⁷ Expressing their discontent with the racial forms of exploitation they endured in Apple's offices, Mexican janitors demanded the removal of Shine's "abusive supervisors," an end to the "the racially discriminatory policies implemented at work," the "establishment of a transparent policy regarding the distribution of the workload," and the promotion of qualified Mexican janitors to supervisory positions.²²⁸ Shine retaliated to the unionization effort through a series of repressive intimidation tactics, such as assigning the most grueling cleaning duties to union sympathizers, prohibiting janitors from leaving Apple's buildings during their midnight "lunch" break, and threatening to report undocumented workers to *la migra* (Immigration and Naturalization Service authorities).²²⁹ Ultimately Shine required all janitors to provide evidence of their legal residence status and fired those who were unable to comply with the ultimatum—nearly all of its workers were dismissed.²³⁰ With the support of Santa Clara Valley's broader Latino community and the Cleaning Up Silicon Valley Coalition, the janitors and Local 1877 launched a highly publicized, year-long campaign that included boycotts, hunger strikes, and a rally at Apple's Cupertino headquarters in 1992.²³¹

²²⁷ Ibid., 59.

²²⁸ Ibid., 58–59.

²²⁹ Zolniski, "Labor Control and Resistance," 43–44.

²³⁰ Pastor, Brenner, and Matsuoka, *This Could Be the Start of Something Big*, 65; David Bacon, "Organizing Silicon Valley's High Tech Workers," 1999, Part 5, <http://dbacon.igc.org/Unions/04hitec1.htm>.

²³¹ Bacon, "Land of the Open Shop," 76–78. The campaign was also supported by the international movement "Justice for Janitors," the United Farm Workers, and Cesar Chavez who called for a country-wide boycott of Apple. See Preston Rudy, "'Justice for Janitors,' Not 'Compensation for Custodians': The Political Context and Organizing in San Jose and Sacramento," in *Rebuilding Labor: Organizing and Organizers in the New Union Movement*, ed. Ruth Milkman and Kim Voss (Ithaca and London: Cornell University Press, 2004), 133–49. The janitors' campaign also inspired Latino and Mexican electronics assembly workers at Versatronex to organize against the sweatshop conditions in Silicon Valley's contract factories. See Elizabeth Kadetsky, "High-Tech's Dirty Little Secret: Silicon Valley Sweatshops," *The Nation*, April 19, 1993, <https://www.questia.com/magazine/1G1-13679080/high-tech-s-dirty-little-secret-silicon-valley-sweatshops>.

The political strategy was a success. Apple terminated its contract with Shine and outsourced its janitorial services to a unionized, multinational cleaning company headquartered in Europe.²³² But while workers were paid a better salary and entitled to fringe benefits, Apple's managers complained that the switch had a negative impact on the quality of the cleaning services and the flexibility of its janitors.²³³ In order to recover the flexibility and quality they enjoyed with Shine, Apple decided to intervene in the superintendence of its custodians by implementing the modern managerial system known as Total Quality Management.²³⁴ In order to increase productivity, Apple assigned workers new duties that promoted teamwork and competition, and required them to perform a variety of tasks by following a detailed script that outlined how to undertake each job.²³⁵ To this end, Apple's managers compiled a guide book titled *Cost Effective Housekeeping* that applied the principles of Total Quality Management to the company's janitorial services, providing specific instructions on "how to implement this approach and how to measure workers' performance."²³⁶ The manual also articulated the economic rationale behind subcontracting: "[Apple] has been a leader in the use of quality improvement programs in the product assembly production areas for years. We have demonstrated that the same concepts may be applied to a service organization as well. [...] Faced with continued budget pressure to reduce staff levels and expenses for housekeeping supplies while improving the level of services, we decided to try a Total Quality Control (TQC) approach. [...]"²³⁷ Apple's new approach was a veneer for a politics of production just as repressive and demanding as that deployed by Shine. Under the guise of teamwork, Total Quality Control allowed Apple to repress dissent, curb collective resistance, and, above all, extract "more from fewer workers with the aid of monitoring

²³² Pastor, Brenner, and Matsuoka, *This Could Be the Start of Something Big*, 65; Zolniski, *Janitors, Street Vendors, and Activists*, 61.

²³³ Zolniski, *Janitors, Street Vendors, and Activists*, 62.

²³⁴ *Ibid.*, 63.

²³⁵ Zolniski, "Labor Control and Resistance," 44.

²³⁶ Zolniski, *Janitors, Street Vendors, and Activists*, 63.

²³⁷ *Ibid.*

technologies.”²³⁸ For Apple, the system “delegated more responsibility and authority” to workers; according to the janitors, it significantly increased their workload without additional remuneration and deteriorated their working conditions.²³⁹ Beyond reducing its labor costs and increasing its flexibility, subcontracting also allowed Apple to retain its authority not only over the “organization of production and methods of labor control in the workplace”, but also over the subcontracted janitors themselves, from their work routines to the management techniques they were required to obey.²⁴⁰

Meanwhile, the United States government favored Apple’s politics of production juridically. In the summer of 1995, the Immigration and Naturalization Service (INS) audited Apple’s new independent contractor, which led four hundred undocumented janitors to lose their jobs.²⁴¹ While new janitors quickly replaced those who had been fired, the mass layoff disenfranchised undocumented Mexican workers as much politically as economically. The INS intervention was an hard-hitting lesson to immigrant workers of color across Silicon Valley, one that undermined their trust in the union and deterred many from engaging in collective action in the future.²⁴² The role played by the INS in this episode also illustrates the extent to which changes in the occupational structure of Silicon Valley’s immigrant workforce have been facilitated by U.S. immigration policy since the 1960s.²⁴³ By prioritizing the legal immigration of skilled tech workers, especially through strategic treaties with the Indian and Chinese governments, U.S. immigration policy has actively produced a regime of immigration that, in the words of Sangeeta Kamat, Ali Mir, and Matthew Biju, “clearly privileges a global techno-managerial workforce.”²⁴⁴ On their account, shifts in immigration

²³⁸ Zlolniski, “Labor Control and Resistance,” 44–45.

²³⁹ Ibid., 45; Zlolniski, *Janitors, Street Vendors, and Activists*, 64.

²⁴⁰ Zlolniski, *Janitors, Street Vendors, and Activists*, 70.

²⁴¹ Zlolniski, “Labor Control and Resistance,” 45; Zlolniski, *Janitors, Street Vendors, and Activists*, 64–67.

²⁴² Zlolniski, *Janitors, Street Vendors, and Activists*, 68.

²⁴³ Kamat, Mir, and Biju, “Producing Hi-Tech,” 5.

²⁴⁴ Ibid., 7.

policy not only reflect how states “alter their national policies to meet the demands of the global economy,” but are also indicative of the “unique political context and culture of each country,” such that immigration policy in the United States, they conclude, “shares the legacy of U.S. race politics.”²⁴⁵ Contrary to its effect on technically-trained immigrant workers, U.S. immigration policy has deteriorated the working and living conditions of low-wage Mexican migrants in the United States as a whole. According to Nicholas De Genova and Ana Y. Ramos-Zayas, the history of U.S. immigration law since 1965 “has been central in structuring the inequalities that have shaped Mexican/migrant experiences.”²⁴⁶ They contend that the historical specificity of the “migrant” status as applied to Mexican citizens working in the United States is “inextricable from the fact that all of the prominent changes in U.S. immigration law since 1965 have been restrictive in unprecedented ways, weighing disproportionately upon migrants from Mexico, in particular, through a legal production of Mexican/migrant ‘illegality.’”²⁴⁷ By May 2002, for instance, there were approximately 4.7 million undocumented Mexicans in the United States, of whom as many as 85 percent had arrived in the 1990s.²⁴⁸ While more Mexicans have continued to migrate to the United States, “an increasingly restrictive immigration regime has ensured that ever greater numbers have been relegated to an indefinite condition of ‘illegality.’”²⁴⁹ Together, Apple’s displacement of in-house janitors with subcontracted workers in the 1990s, Silicon Valley’s historically racialized structures of inequality, and U.S. immigration policy generated structural conditions that led newly proletarianized Latino and Mexican residents of San Jose to take on jobs in the informal economy.²⁵⁰

²⁴⁵ Ibid., 5.

²⁴⁶ De Genova and Ramos-Zayas, *Latino Crossings*, 5.

²⁴⁷ Ibid., 5–6.

²⁴⁸ Ibid., 6.

²⁴⁹ Ibid.

²⁵⁰ Zolniski, *Janitors, Street Vendors, and Activists*, 70.

The rise of subcontracting among Silicon Valley high-tech employers had a direct effect on the growth of an informal sector in immigrant barrios, especially in East San Jose.²⁵¹ Due to the precarity that characterizes their formal jobs, many Latino and Mexican janitors in Silicon Valley supplement their incomes with small-scale informal activities in their neighborhoods, including “street vending, house cleaning, baby-sitting, day labor, and recycling.”²⁵² Rather than being disconnected from the high-tech economy, the dynamic shadow economy of San Jose’s ethnic communities is a product of Silicon Valley’s low-skilled maintenance sector.²⁵³ The cyclical relationship between Silicon Valley’s informal and formal economies illustrates high-tech capital’s mechanisms to regenerate a flexible and underpaid workforce in unskilled maintenance occupations. First, in employing a disproportionate number of undocumented immigrants in unskilled positions, companies such as Apple are able to drive down their operating costs by discounting the wages of this workforce below the necessary rate for the social reproduction of their labor power. The financial burden of regenerating labor power—of subsistence itself—is thus delegated to the workers, who turn to the informal sector, after their shifts, as a means to supplement their low wages. Second, the informal income of Latino and Mexican immigrants sustains the high flexibility and low price of their labor in the formal sector; that is, immigrant workers can endure the flexible conditions and poor wages offered by Silicon Valley tech companies only because the informal sector purveys additional income opportunities that, when combined with their formal salaries, allow them to just barely subsist in the new economy.²⁵⁴ The combination of flexible and low-wage formal jobs with a precarious informal sector amounts to a double victory for high-tech companies; by outsourcing the financial charge of subsistence to the informal economy, they are able to keep wages down without affecting the abundant supply of flexible and cheap labor they demand. Silicon Valley,

²⁵¹ Zlolniski, “The Informal Economy in an Advanced Industrialized Society.”

²⁵² *Ibid.*, 2308.

²⁵³ Zlolniski, *Janitors, Street Vendors, and Activists*, 39.

²⁵⁴ Zlolniski, “The Informal Economy in an Advanced Industrialized Society,” 2306–7, 2314.

then, has given rise to a two-tiered economy that channels immigrant labor into both low-wage subcontracting jobs, such as janitorial services, and casual self-employment, such as street vending.²⁵⁵ And the missing link between these tiers is evident in Silicon Valley's longer historical patterns of racial politics, income inequalities and spatial segregations, which only intensified after the dot-com boom.

From Apple's Janitors to Google's Data Janitors

The discrepancy in the wages of skilled and unskilled workers in Silicon Valley's high-tech companies reflects both the internal hierarchies in these companies and the racialized inequalities of the region as a whole. As David Pellow and Lisa Park note, "race, class, and gender operate in ways that generally disadvantage people of color and women in Silicon Valley."²⁵⁶ This unequal scenario in Silicon Valley is not limited to janitors. Rather, the case of Apple's Latino and Mexican custodians indexes a pattern in the region's high-tech economy that is equally apparent in hardware manufacturing and, as I have shown in Part 1, low-wage data work. The few remaining electronics assembly plants in Silicon Valley, for instance, are no less dependent on the hyperexploitation of undocumented immigrants than Foxconn's giant factories in Shenzhen, China.²⁵⁷ Indeed, as Pellow and Park remark, the most toxic, precarious, demanding, and poorly-paid jobs in Silicon Valley are on the shop floors of hardware contract factories, which employ a temporary workforce composed

²⁵⁵ Ibid., 2308.

²⁵⁶ Pellow and Park, *Silicon Valley of Dreams*, 68.

²⁵⁷ On immigrants workers of color in Silicon Valley's hardware manufacturing industry, see Ibid., 6, 9, 77, 170; Fuchs, *Digital Labour and Karl Marx*, 220; Pellow, "High-Tech Environmental Racism." On rural migrants at Foxconn's electronics factories in China, see Boy Lüthje et al., *From Silicon Valley to Shenzhen: Global Production and Work in the IT Industry* (Lanham and Plymouth: Rowman & Littlefield, 2013), 192–96, 210, 237; Jenny Chan, Pun Ngai, and Mark Selden, "The Politics of Global Production: Apple, Foxconn and China's New Working Class," *New Technology, Work and Employment* 28, no. 2 (2013): 100–115; Freeman, *Behemoth*, 284–85; Pun Ngai, *Migrant Labor in China: Post-Socialist Transformations* (Cambridge: Polity Press, 2016), Chapter 6, especially the section "Migrant Workers in the Foxconn 'Empire.'"

of mostly immigrants, people of color, and women.²⁵⁸ These aspects of digital production produce serious material injuries to the working and living conditions of racialized workers. Particularly illustrative of this is digital labor's impact on the reproductive systems of female workers of color who, among other bodily harms, face "miscarriages, birth defects, sterility, distorted menstrual cycles, toxic breast milk, and breast cancer."²⁵⁹ The case of Apple's janitors foregrounds the structural patterns, economic principles, and management practices that hold up such patterns. A variety of social, economic, and political factors contribute to the success with which high-tech corporations have been able to fulfill their demand for a precarious workforce, from U.S. immigration policy and Silicon Valley's history of racial inequality to the availability of an informal sector in low-income neighborhoods and abusive, deregulated, and nonunionized contracting companies. The combination of these factors means that high-tech companies preside over and exploit immigrant workers of color in direct and indirect ways, as much within the formal workplace as beyond it.

Bringing these conclusions to bear on the work of Google's "data janitors," we may come to see that racialized exploitation in Silicon Valley's high-tech economy is not the exclusive predicament of workers employed in hardware production or maintenance services.²⁶⁰ Indeed, "data janitors" are, for all intents and purposes, "informational workers" whose jobs are as dependent on computers, technology, information, and the internet as those of software engineers and

²⁵⁸ Pellow, "High-Tech Environmental Racism," 253; Pellow and Park, *Silicon Valley of Dreams*, 150. Some of the toxic substances released into the workplace and breathed in by assembly-line workers in Silicon Valley's electronics factories include "arsenic, asbestos, chlorine gas, cyanide, Freon, glycol ether, hydrochloric acid, isopropyl alcohol, lead, nitric acid, silica, solder, sulphate, sulphur, toluene, trichloroethylene (TCE), ultraviolet ink and xylene." Fuchs, *Digital Labour and Karl Marx*, 220.

²⁵⁹ Pellow and Park, *Silicon Valley of Dreams*, 12.

²⁶⁰ For an illustration of this view, see Fuchs, *Digital Labour and Karl Marx*, 222, 227–28, 231–32. Fuchs's only distinction in Silicon Valley's workforce is between hardware manufacturers and software engineers. According to Fuchs, on one end of the Silicon Valley labor spectrum are the "low-paid manufacturing proletariat" employed in hardware assemblage and electronics manufacturing. On the opposite end, Fuchs identifies a "labour aristocracy" composed of "Google workers." In contrast to hardware manufacturers, Google's "labor aristocracy" enjoys "relatively high wages" only "at the expense of transforming [their] life time into work time for Google." *Ibid.*, 231–32.

programmers. Yet, when critics of advanced capitalism turn to the question of exploitation in the so-called “immaterial” high-tech economy, they tend to agree that companies such as Google deploy “soft and social” forms of coercion, such as recreational incentives, to manage and control skilled workers.²⁶¹ Although this is certainly plausible, it is only a partial representation of domination in the technological workplace, one that is entirely limited to the class of “innovators” that Marxist critics call the “socialized intellectual proletariat,” the “cognitive proletariat,” or the “labor aristocracy.”²⁶² The experiences of Silicon Valley’s “data janitors” are not accounted for by most theories of exploitation in the high-tech workplace, be it in electronics manufacturing or software engineering.

Racial Politics and the Postindustrial Paradigm: Hierarchies of Knowledge

According to the postindustrial stream of Marxist theory, “cognitive capitalism” effectively replaced industrial society’s “hierarchy of knowledge corresponding to that of the existing social classes.”²⁶³ The logic of this argument suggests that the creation of a general online intellect marks a rupture with previous hierarchies of knowledge, thus socializing education, skill, and training. This is a necessary condition for the emergence of what thinkers associated with this tradition have called mass intellectuality, the general intellect, and the online creative commons. Yet, as the example of operational, unskilled data work reveals, advanced capitalism and the high-tech economy depend on and sustain hierarchies of knowledge and skill that proceed from and are enmeshed in racially-marked patterns of economic inequality and spatial segregation. As Tara McPherson remarks, “our

²⁶¹ *Ibid.*, 228

²⁶² On the “socialized intellectual proletariat,” see Antonio Negri, “Constituent Republic,” in *Radical Thought in Italy: A Potential Politics*, ed. Michael Hardt and Paolo Virno, trans. Ed Emery (Minneapolis and London: University of Minnesota Press, 1996), 213–22. On the “cognitive proletariat,” see Antonio Negri, *From the Factory to the Metropolis*, trans. Ed Emery (Cambridge: Polity Press, 2018), viii, 131. On the “labor aristocracy,” see Fuchs, *Digital Labour and Karl Marx*, 231–32.

²⁶³ Vercellone, “From Formal Subsumption to General Intellect,” 25.

technological formations are deeply bound up with our racial formations.”²⁶⁴ In his classic study on the intersection of race and class in America’s inner-city neighborhoods, William Julius Wilson noted that “urban minorities have been particularly vulnerable to structural economic changes, such as the shift from goods-producing to service producing industries, the increasing polarization of the labor market into low-wage and high-wage sectors, [and] technological innovations.”²⁶⁵ According to Wilson, the postwar transformation in the occupational structure of American capitalism, from industrial manufacturing to information processing, was accompanied by “a major shift in the educational requirements for employment.”²⁶⁶ Whereas, in the latter half of the twentieth century, formal sectors with lower education requirements have experienced a heightened decline in employment, “job growth has been concentrated in industries that require higher levels of education.”²⁶⁷ As John Kasarda argued, unequal access to education has disproportionately affected racial minorities who have been historically concentrated in educational categories “where employment opportunities declined the fastest.”²⁶⁸ This condition has given rise to what Kasarda calls “a serious mismatch” between the education distribution of racial minorities and the changing education requirements for rapidly transforming industries.²⁶⁹

The forms of economic inequality stemming from the racial divide in education identified by Wilson and Kasarda in the late 1980s have been amplified with respect to digital technologies in recent years. Indeed, racialized hierarchies of knowledge in advanced capitalism have bred significant

²⁶⁴ Tara McPherson, “Why Are the Digital Humanities So White?,” in *Debates in the Digital Humanities*, ed. Matthew K. Gold (Minneapolis and London: University of Minnesota Press, 2012), 151, 149.

²⁶⁵ William Julius Wilson, *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*, 2nd ed. (1987; repr., Chicago and London: University of Chicago Press, 2012), 39.

²⁶⁶ *Ibid.*

²⁶⁷ *Ibid.*

²⁶⁸ John D. Kasarda, “The Regional and Urban Redistribution of People and Jobs in the U.S.” (Committee on National Urban Policy, Washington, DC: National Research Council, 1986). Quoted in Wilson, *The Truly Disadvantaged*, 41.

²⁶⁹ Kasarda, “The Regional and Urban Redistribution of People and Jobs in the U.S.” Quoted in Wilson, *The Truly Disadvantaged*, 41.

structural inequalities in technological literacy.²⁷⁰ Unequal access to and training in emerging technologies have, in turn, occasioned disparities in computing skills and scientific knowledge along racial lines. As Paulette Robinson notes, “the gap in access to technology for minorities and the poor [...] continues to widen overall.”²⁷¹ In light of salient racial discrepancies in access to technology, Robinson concluded that “computers, instead of democratizing information, may serve to shut out whole segments of our society.”²⁷² But contemporary hierarchies and inequalities in high-tech capitalism go well beyond physical access to computers. “Data Janitors,” content moderators, and microworkers, for instance, all depend on sophisticated new media technologies and high-speed internet connection to work. Rather, the racial inequalities sustained by the high-tech economy and internet corporations are foremost a matter of unequal access to the requisite information and knowledge for the development of certain linguistic, technical, and intellectual skills that characterize the “meaningful” and “creative” work foreclosed to yellow-badge operatives and MTurk workers. In the United States, racial and ethnic minorities are more likely to lack access to “computers that work, computer staff to provide support, or teachers trained to integrate high-order thinking skills into lesson plans.”²⁷³ Such conditions of systemic racial inequality conspire against racialized populations many of whose members are, as a result, deprived from learning the cognitive and linguistic skills associated with advanced computing. These conditions are thus part and parcel of the context in which Latino and Mexican immigrants in East San Jose are integrated into the Silicon Valley economy.

²⁷⁰ Bosah Louis Ebo, “Internet or Outernet?,” in *Cyberghetto or Cybertopia? Race, Class, and Gender on the Internet*, ed. Bosah Louis Ebo (Westport and London: Praeger, 1998), 1–12.

²⁷¹ Paulette Robinson, “Equity and Access to Computer Technology for Grades K-12,” in *Cyberghetto or Cybertopia? Race, Class, and Gender on the Internet*, ed. Bosah Louis Ebo (Westport and London: Praeger, 1998), 137.

²⁷² Ibid., 149. According to Christian Sandvig, access to broadband wireless connection in indigenous reserves, for instance, is “well below 10 percent.” Christian Sandvig, “Connection at Ewiiapaayp Mountain: Indigenous Internet Infrastructure,” in *Race After the Internet*, ed. Lisa Nakamura and Peter A. Chow-White (New York and London: Routledge, 2012), 169.

²⁷³ Robinson, “Equity and Access to Computer Technology for Grades K-12,” 150.

The argument advanced by Marxist critics that, under postindustrial capitalism, knowledge has been socialized by the internet amounts to a denial of the socioeconomic barriers that prevent ethnic and immigrant communities from attaining the technical skills and scientific education required by jobs in the higher echelons of Silicon Valley's occupational structure.²⁷⁴ Indeed, as I have argued above, this obstacle to equality in technological literacy is indispensable to the creation of a flexible, low-wage, unskilled, and subcontracted class of data workers on which high-tech companies in Silicon Valley depend. In essence, critical theories of cognitive capitalism do not so much deny as they actively excise the racialized reality of the internet economy. In so doing, these authors displace the racial politics of high-tech capitalism with an allegedly critical account of postindustrial society, in which a universal skilled, educated, and white worker is rewritten as the base ontological condition of digital labor. Whiteness, as Barbara Fields put it, "replaces racism with race" and thus elides the relations of political, social, and economic power that have determined the place of racialized populations in capitalist society.²⁷⁵ In evading the realities of our racialized economy, the dominant accounts of advanced capitalism associated with the postindustrial paradigm are firmly moored in the profoundly material yet "unbearable whiteness of cyberspace."²⁷⁶

²⁷⁴ For an alternative Marxist reading of advanced capitalism that does take race into account, see Sandro Mezzadra and Brett Neilson, *Border as Method: Or, the Multiplication of Labor* (Durham and London: Duke University Press, 2013), 131–66. Despite treating questions related to race and racism, Mezzadra and Neilson do not address the political effects of racialization in high-tech capitalism and the knowledge economy as such, but in various other particular aspects of capitalist societies, including industrial manufacturing, public policy, universities, debt peonage, and racialized juridical mechanisms deployed by states, such as the deportation of undocumented immigrants and the patrolling of national borders.

²⁷⁵ Barbara J. Fields, "Whiteness, Racism, and Identity," *International Labor and Working-Class History*, no. 60 (2001): 48.

²⁷⁶ Gajjala, "Digital Media, Race, Gender, Affect, and Labor," 219. For Gajjala's reference, see Kali Tal, "The Unbearable Whiteness of Being: African American Critical Theory and Cyberculture," *Wired*, October 1996, <https://kalital.com/the-unbearable-whiteness-of-being-african-american-critical-theory-and-cyberculture/>. Jonathan Sterne explains how the internet became "predominantly and presumptively white" through a careful study of the history of computing in public American schools in the 1980s, where he links the "whiteness of cyberspace" to the fact that "white people in the United States had a distinct advantage over people of color in learning computing and gaining access to computers." Jonathan Sterne, "The Computer Race Goes to Class: How Computers in Schools Helped Shape the Racial Topography of the Internet," in

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Now that I have shown how and why the postindustrial paradigm gets neither the factory nor capitalism right, I will develop an account of both that does. And doing so requires a new take on their histories. We have seen how social scientists and political thinkers thought of the factory in the twentieth century, but the clue to rethinking the importance of the factory to capitalist society is to reconstruct the rich contexts in which political thinkers and actors encountered the factory before this period. As I move on to redefine the trajectories of the factory in its various shapes and forms, I will foreground the ways in which it became a defining stage for the development of modern political thought and capitalism in three further sites that prefigure and correspond with my focalizing themes of labor, aesthetics, and race: the seventeenth-century workhouse, the eighteenth-century manufactory, and the colony at the turn of the nineteenth century. We will now turn back to our point of departure: the “rise of capitalism” in early modern political thought.

Race in Cyberspace, ed. Beth B. Kolko, Lisa Nakamura, and Gilbert B. Rodman (New York and London: Routledge, 2000), 191.

CHAPTER 3 WORKHOUSE

“Agriculture is a divine factory where the manufacturer associates himself with the author of nature, producer of all goods and riches.”

—Mirabeau, *Philosophie Rurale* (1764).¹

“The farmer is just as much an industrial capitalist as the manufacturer.”

—Karl Marx, *Capital, Vol. 1* (1867).²

A FACTORY AFIELD

Of the first four citations in *Capital*, three are references to Stuart economic thought, including Marx’s earliest formulation of use-value, which he borrows from John Locke: “the natural worth of anything consist in its fitness to supply the necessities, or to serve the conveniences of human life.”³ While Locke’s contribution to the development of capitalist thinking was evident to political economists in the nineteenth century, it would only make a meaningful impression on political theorists a century later.⁴ More recently, Locke’s economic and political thought has become the subject of incisive investigations into the relationship between liberalism, empire, and colonialism.⁵ Meanwhile, a host of critics have returned to Locke’s economic ideas to reassess the

¹ Victor de Riqueti Mirabeau, *Philosophie Rurale: Ou, Économie Générale et Politique de l’agriculture*, vol. 3 (Amsterdam: Les Librairies Associés, 1763), 98.

² Marx, *Capital*, 1:914n.

³ *Ibid.*, 1:125–26. The other two citations invoke Locke through his contemporary critic Nicholas Barbon.

⁴ C. B. Macpherson, “Locke on Capitalist Appropriation,” *The Western Political Quarterly* 4, no. 4 (1951): 550–66; C. B. Macpherson, *The Political Theory of Possessive Individualism: Hobbes to Locke* (Oxford: Clarendon Press, 1962); Peter Laslett, “John Locke, the Great Recoinage, and the Origins of the Board of Trade: 1695–1698,” *The William and Mary Quarterly* 14, no. 3 (1957): 370–402; E. J. Hundert, “The Making of Homo Faber: John Locke between Ideology and History,” *Journal of the History of Ideas* 33, no. 1 (1972): 3–22; Joyce Oldham Appleby, “Locke, Liberalism and the Natural Law of Money,” *Past & Present*, no. 71 (1976): 43–69; Neal Wood, *John Locke and Agrarian Capitalism* (Berkeley: University of California Press, 1984).

⁵ See Barbara Arneil, *John Locke and America: The Defence of English Colonialism* (Oxford: Oxford University Press, 1996); Jack Turner, “John Locke, Christian Mission, and Colonial America,” *Modern Intellectual History* 8,

conceptual and historical meanings of his writings on money, drafted at the onset of England's currency crisis from 1691 to 1696.⁶ But unlike the surging popularity of his monetary theory, the import of Locke's economic ideas to the history of capitalism writ large has traditionally—and especially lately—received far less attention.⁷ Importantly, two classic treatments of Locke's contribution to capitalism withstand this charge: C. B. Macpherson's *The Political Theory of Possessive Individualism* (1962) and Neal Wood's *John Locke and Agrarian Capitalism* (1984). In his polemic reading of seventeenth-century political thought, Macpherson famously dubbed Locke a bourgeois theorist whose *Second Treatise* laid a moral foundation for capitalist appropriation.⁸ Some two decades later Neal Wood confirmed Locke's embroilment in the development of capitalism, adding that he was neither a “mercantile” nor “bourgeois” but an “early agrarian” capitalist thinker.⁹ Against Macpherson, Wood argued that Locke's economic thought was energized less by the upturn of modern commercial society than by the reorganization of England's agrarian economy over the previous two centuries. By foregrounding Locke's repudiation of feudal attitudes toward farming and landed property, Wood reframes key ideas in the *Second Treatise* as central elements in a robust theory of agrarian capitalism predicated on the tenets of profit, frugality, and capitalist property relations.¹⁰

no. 2 (August 2011): 267–97; David Armitage, “John Locke: Theorist of Empire?,” in *Empire and Modern Political Thought*, ed. Sankar Muthu (Cambridge: Cambridge University Press, 2012), 84–111.

⁶ For recent studies of Locke's monetary theory, see John O'Brien, “John Locke, Desire, and the Epistemology of Money,” *British Journal for the History of Philosophy* 15, no. 4 (November 1, 2007): 685–708; Onur Ulas Ince, “Enclosing in God's Name, Accumulating for Mankind: Money, Morality, and Accumulation in John Locke's Theory of Property,” *The Review of Politics* 73, no. 1 (2011): 29–54; Daniel Carey, “Locke's Philosophy of Money,” in *Money and Political Economy in the Enlightenment*, ed. Daniel Carey (Oxford: Voltaire Foundation, 2014), 57–81; Douglas Casson, “John Locke, Clipped Coins, and the Unstable Currency of Public Reason,” *Etica & Politica / Ethics & Politics* 18, no. 2 (2016): 153–80.

⁷ For an important recent exception, see Ince, *Colonial Capitalism*. As Richard Teichgraeber notes, since the 1970s, a conventional starting point for intellectual histories of capitalism has been eighteenth-century works on moral, social, political, and economic thought, see Teichgraeber III, “Capitalism and Intellectual History.”

⁸ Macpherson, *Possessive Individualism*, 220–21.

⁹ Wood, *John Locke and Agrarian Capitalism*, 13.

¹⁰ *Ibid.*, 13, 48.

In contrast to Macpherson, Wood, and the numerous interpretations their works impelled, this chapter reconstructs the relationship between Locke's ideas and the burgeoning capitalist economy of his day. Although I accept that Locke's thought was in many ways embedded in the historical development of capitalism at the time, my reading challenges the prevailing terms through which political theorists and historians of political thought have traditionally interpreted Locke's place in the intellectual development of modern capitalism. On my reading, Locke's contribution to capitalism was neither a vested defense of bourgeois interests nor a vindication of commercial agriculture, but an early articulation of the political regimes of labor discipline, capital accumulation, and imperial commerce that incited and eventually came to sustain the modern factory system, including the conscription of landless farmers into the ranks of industrial wage-labor in workhouses. I argue that Locke's economic doctrine throughout the 1690s inheres in what social and economic historians have called "proto-industrialization"—a phase in the historical development of modern capitalism characterized by the expansion of manufacturing in the countryside beginning in the seventeenth century.¹¹ Moreover, I contend that, because proto-industrialization was deeply enmeshed in the historical development of Britain's colonial economy, Locke's proto-industrial ideas offer new insights into his vision of empire. Contrary to recent commentators who reject that Locke was a theorist of empire, I interpret Locke's writings on Britain's Atlantic colonies as an expression of his imperial commerce. Like later ideologues of empire, Locke's understanding of the global economy aligned with what I consider the central and interlinked commitments of imperial commerce: a hierarchical, stadial theory of economic progress and a commercial policy aimed at

¹¹ The term "proto-industrialization" was first coined by Franklin Mendels in his 1969 doctoral dissertation and further publicized in a 1972 article. See Franklin F. Mendels, "Industrialization and Population Pressure in Eighteenth-Century Flanders" (PhD Dissertation, University of Wisconsin, 1969); Franklin F. Mendels, "Proto-Industrialization: The First Phase of the Industrialization Process," *The Journal of Economic History* 32, no. 1 (1972): 241–61. For a critical overview of the reception of Mendels's theory in economic history throughout the 1970s and 80s, see D. C. Coleman, "Proto-Industrialization: A Concept Too Many," *The Economic History Review* 36, no. 3 (1983): 435–48.

“improving” the colonies while favoring metropolitan trade through an unequal relation of production and exchange.¹²

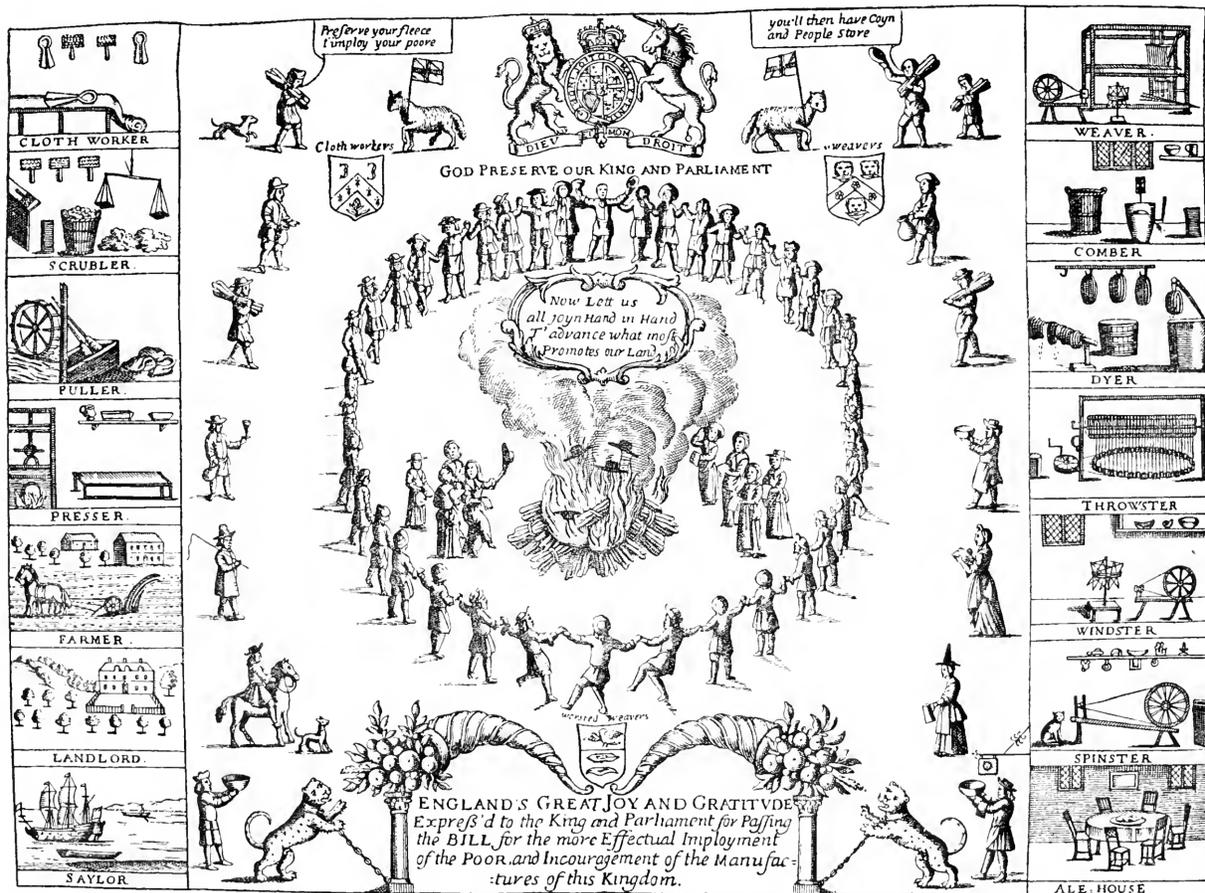
While I accept that Locke’s society was fundamentally shaped by mercantile and agricultural developments, I claim that to designate him as either a *bourgeois* or *agrarian* capitalist is to seriously mischaracterize the political direction in which he sought to veer England’s imperial economy—with increasing force, persistence, and purposefulness—from the early 1690s to the end of his tenure at the Board of Trade in 1700. Rather than simply mercantile or agrarian, this particular period in the history of English capitalism marked the rise of rural manufacturing—or “proto-industry”—occasioned by a series of social, demographic, and economic shocks that reverberated across England and its colonies, including a surge of surplus agrarian labor, the integration of agriculture to industry, the conquest of Atlantic markets, and a considerable spurt in consumer demand for delectable goods. And although the transition from agrarian to industrial capitalism in Western Europe was an intermittent and polyvalent process spanning over two centuries, the growth of proto-industrial manufacturing in early modern England is all but unmistakable. Going against the reigning tendency to read Locke as either a bourgeois-mercantilist or an agrarian capitalist, I develop an alternative framework for interpreting the relationship between his thought and the history of global capitalism. To this end, I situate Locke’s economic ideas in the intercontinental and imperial setting of proto-industrialization, which I hold to be a more accurate context for illuminating the social conditions and economic pressures that set his economic ideas in motion at a turning point in the history of modern capitalism.

¹² What I call Locke’s stadal theory of economic progress bears likeness to certain aspects of Smith’s “natural economic order” and Marx’s theory of primitive accumulation insofar as all three thinkers endorsed the view that economic growth, progress, or industrial development either should (Locke and Smith) or effectively did (Marx) ensue from improvements in agricultural productivity, which in turn led to the integration of farming and manufacturing, the expansion of rural industries, and the creation of a home market for industrial capital. See Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, ed. R. H. Campbell, A. S. Skinner, and W. B. Todd, vol. 1 (1776; repr., Indianapolis: Liberty Fund, 1981), 411–27; Marx, *Capital*, 1:Chapter 30.

My argument is organized in five parts, beginning with an account of the conditions that precipitated proto-industrialization in late seventeenth-century England. In subsequent sections, I reconsider both the meaning and importance of Locke's economic ideas to capitalist development by reading his work against the backdrop of events and discourses that galvanized the rise of proto-industrial capitalism across the English countryside in the final decades of the seventeenth century. Moving between Locke's well-worn and less familiar texts, as well as the historical drifts underlying them, I recover the socioeconomic circumstances to which his late writings responded and attempted to address. As such, I reinterpret Locke's theoretical positions on industry, labor, production, and economic growth as a system of economic and political ideas that betray an early modern argument for proto-industrial capitalism and the brewing reorganization of the labor process that eventually culminated in the factory system. I argue that Locke's thought played a role in the intellectual development of capitalism by making visible and intelligible the ways in which the primordial objective of his political economy—economic growth—was articulated through concrete laws of capital accumulation anchored in the extraction of surplus value from a disciplined, waged, and precarious rural workforce. Additionally, I claim that his theory of capitalism was *proto-industrial* by showing that his prescribed regime of workhouse production was developed as a viable solution to the historical problems animating the rise of proto-industrialization. In the final section, I turn to Locke's writings on colonial trade in Ireland and the Atlantic seaboard to argue that, rather than being confined to the English economy, his proto-industrial prescriptions for growth were of a piece with his stadial vision of global economic development which, together, make up what I call his theory of *imperial commerce*. By reinterpreting what Locke defined as the "great art of government" in the *Second Treatise*, I conclude with a meditation on how my reading of Locke's proto-industrial and imperial political economy casts the significance of his thought to the history of capitalism and the factory in a new light.

To be sure, the spaces of commodity production in the early modern period—cottages, manufactures, workhouses, and workshops—looked decidedly different from what we might understand as a factory today. In reading these texts and ideas as conceptual contributions to the factory’s historical development, my purpose is to enliven and center—rather than brush aside or minimize—the many salient differences between early modern and industrial spaces of production. By contrast to the giant and imposing sites of heavy machinery and assembly lines that would come to dominate British towns in the nineteenth century, this chapter conjures up an image of the factory system in its rustic beginnings—one that, at once nascent and rural, was in many ways still a *factory afield* (Figure 9).

Figure 9. A seventeenth-century broadside illustrating the manufacturing process of the woolen and worsted industries. Source: E. Lipson, *The History of the Woollen and Worsted Industries* (London: A. & C. Black, 1921).



A SEVENTEENTH-CENTURY BROADSIDE ILLUSTRATING THE PROCESSES OF THE WOOLLEN AND WORSTED INDUSTRIES. F.H. von. Hove. sculp.
 Accompanying "A History of the English Woollen and Worsted Industries" by E. Lipson, published by A. and C. Black, Ltd., London.

PART 1: PROTO-INDUSTRIAL CAPITALISM IN EARLY MODERN ENGLAND

Traditionally, interpreters of early modern political thought have largely overlooked the sizeable role proto-industrialization played in English economic discourse and development.¹³ Most narratives of Stuart England as a “traditional,” “mercantile,” or “agrarian” society understate both the significance and magnitude of manufacturing during Locke’s lifetime.¹⁴ As early as 1696, Gregory King estimated the combined output of half of England’s population, which included merchants, workmen, artisans, and shopkeepers, to account for over two-thirds of national income.¹⁵ Impressionistic though it certainly was, King’s study pointed to an upward trend in early modern manufacturing which has been upheld by recent studies of the period. Indeed, contemporary historians generally accept that at the turn of the eighteenth century output growth in industry had at least equaled that of agriculture in England, even according to moderate estimates.¹⁶ As the work of Peter Lindert and Jeffrey Williamson suggests, late seventeenth-century Britain had “much higher percentages of its populations in commerce and industry than previously thought.”¹⁷ Economic

¹³ The economic context of modern European political and social thought, as well as of classical political economy, is often understood to have been shaped by either commercial or agrarian developments. See McNally, *Political Economy and the Rise of Capitalism*, 22. For a notable exception in which proto-industrialization is taken into account, see Peter Laslett, *The World We Have Lost: Further Explored*, 3rd ed. (1965; repr., London: Routledge, 1983), 187–93.

¹⁴ Wood contends that on Locke’s account, agriculture “should be given the highest priority in all economic considerations and political deliberations.” See Wood, *John Locke*, 20. On agrarian capitalism, see: McNally, *Political Economy and the Rise of Capitalism*; Meiksins Wood, *The Pristine Culture of Capitalism: A Historical Essay on Old Regimes and Modern States*; Meiksins Wood, “Locke Against Democracy”; Meiksins Wood, “Radicalism, Capitalism, and Historical Contexts”; Neal Wood, *Foundations of Political Economy: Some Early Tudor Views on State and Society* (Berkeley: University of California, 1994). On “mercantile society” and “mercantilism,” see Tully, *An Approach to Political Philosophy*; Ashcraft, “Radical Dimensions of Locke.” As I argue below, Steve Pincus’s work is an important exception to this charge.

¹⁵ Paul A. Fideler, *Social Welfare in Pre-Industrial England: The Old Poor Law Tradition* (London: Palgrave Macmillan, 2006), 152. In the 1720s Daniel Defoe wrote the following about Norwich: “The Inhabitants being all busy at their Manufactures, dwell in their Garrets at their Looms, and in their Combing-shops, as they call them, Twisting-mills, and other Work-houses; almost all the Works they are employ’d in, being done within Doors.” See Daniel Defoe, *A Tour Thro’ the Whole Island of Great Britain: Divided into Circuits or Journeys* (1724–1727; repr., London: S. Birt, D. Browne, J. Hodges, A. Millar, J. Whiston, and J. Robinson, 1742), 53.

¹⁶ Berg, *The Age of Manufactures*, 14.

¹⁷ Peter H Lindert and Jeffrey G Williamson, “Revising England’s Social Tables 1688–1812,” *Explorations in Economic History* 19, no. 4 (1982): 385–408. Quoted in Berg, *The Age of Manufactures*, 16, 24–25.

historians such as Nicholas Crafts and Maxine Berg, whose contributions have recast European industrialization from the backdrop of the early modern economy, agree that industrial expansion in England should be traced as far back as the sixteenth century.¹⁸

While seventeenth-century England was a society steeped in commercial agriculture, standard accounts of the Stuart economy as “agrarian” or “traditional” substantially overstate the role played by arable farming in the early modern development of English capitalism.¹⁹ In focusing almost exclusively on the developed state of English arable cultivation, defined as the farming of foodstuffs, commentators have missed a distinct, and in many ways far more significant, side of England’s agrarian economy, namely, the rearing of livestock, or what is known as pastoral agriculture. This is a particularly important distinction in the history of English economic development in the seventeenth century because it was precisely the growth of pastoral husbandry that fueled the rise of the England’s woolen industry.

So, even if we bracket the emergence of manufacturing in the English countryside for now and consider the development of agriculture alone, *pastoral husbandry* had begun to overtake *arable farming* in terms of output and employment from the 1650s onwards.²⁰ One reason for this was that the demand for livestock such as sheep had markedly increased in order to sustain the ongoing growth in England’s woolen textile industry.²¹ The development of pastoral agriculture and the decay of arable farming are therefore two sides of the same indispensable historical context of

¹⁸ Berg, *The Age of Manufactures*, 23; N. F. R. Crafts, *British Economic Growth During the Industrial Revolution* (Oxford: Clarendon Press, 1985).

¹⁹ Wood, *John Locke and Agrarian Capitalism*, 13. While Wood only mentions livestock in the context of mixed farming, I stress that a mass of producers switched from arable to pastoral farming, forecasting a shift in the agrarian economy as a whole. For accounts of Stuart England as a “traditional society,” see Jonathan Scott, *Algernon Sidney and the Restoration Crisis, 1677-1683* (Cambridge: Cambridge University Press, 1991); J. C. D. Clark, *English Society, 1660-1832: Religion, Ideology and Politics during the Ancien Regime* (Cambridge: Cambridge University Press, 2000). For a critique of this category, see Steven Pincus, *1688: The First Modern Revolution* (New Haven: Yale University Press, 2009).

²⁰ Peter J. Bowden, “Agricultural Prices, Wages, Farm Profits, and Rent,” in *The Agrarian History of England and Wales*, ed. Joan Thirsk, vol. 5: 1640-1750; Part 2: Agrarian Change (Cambridge: Cambridge University Press, 1985), 95.

²¹ Thirsk, *Economic Policy and Projects*, 158.

England's growing industrial countryside.²² The tandem growth of England's pastoral and manufacturing sectors was rooted in the expansion of the domestic market and the capitalist transformation of agricultural production, the output of which provided a valued source of raw materials for an expanding textile industry.²³ As the petty farmer and small husbandmen in arable regions struggled to make ends meet, consumption, production, and wealth multiplied in the pastoral-industrial country.²⁴ Gradually, workers in pastoral regions became the basis for a new mass of industrial waged labor at once inexpensive, abundant, expandable, and exploitable.²⁵ By the English Civil War, the country's large population of animals "provided high-value outputs, extra supplies of energy, and flows of organic fertilizer that [lent] support to accelerated population growth, proto-industrialization, and extensive urbanization."²⁶ As I argue below, the fact that Locke came down on the side of welding agriculture to manufacturing throughout the 1690s corroborates his other pushes for industrial growth that decade, such as his endorsement of workhouses for the idle poor, mass employment, commodity export, the general naturalization of foreign labor, and the expansion of manufacturing in the countryside, all of which were political measures meant to expand commodity production in rural industries.

Near the end of Locke's life, these successive economic developments marked the earliest phase in the social formation known as "proto-industrialization," or, the rapid regional growth of rural industries alongside agricultural expansion and the spatial reorganization of manufacturing in

²² Berg, *The Age of Manufactures*, 77–80.

²³ Robert Brenner, "The Agrarian Roots of European Capitalism," in *The Brenner Debate: Agrarian Class Structure and Economic Development in Pre-Industrial Europe*, ed. T. H. Aston and C. H. E. Philpin (Cambridge: Cambridge University Press, 1990), 325.

²⁴ Thirsk, *Economic Policy and Projects*, 174–75.

²⁵ Berg, *The Age of Manufactures*, 66.

²⁶ Patrick K. O'Brien, "Deconstructing the British Industrial Revolution as a Conjuncture and Paradigm for Global Economic History," in *Reconceptualizing the Industrial Revolution*, ed. Jeff Horn, Leonard N. Rosenband, and Meritt Roe Smith (Cambridge and London: MIT Press, 2010), 25–26.

the countryside.²⁷ Proto-industrialization denotes the rise of a particular type of rural manufacturing overwhelmingly composed of landless, rural laborers.²⁸ While proto-industrial capitalism peaked in the eighteenth century, its characteristic features were already observable in the 1600s, including the expansion of manufacturing across rural regions, the orientation of production towards foreign markets, and the symbiotic development of industry and commercial agriculture.²⁹ Importantly, proto-industries were neither completely agrarian nor entirely industrial. As the labor force in the countryside shifted to commodity production, rural manufactures became ever more dependent on adjacent farms for basic foodstuffs and raw materials.³⁰ This interdependence afforded a mutually beneficial relationship between farming and manufacturing characteristic of proto-industrialization: while agriculture contributed with surplus labor, entrepreneurial skill, capital stock, and commercial markets, the rise of industry in the countryside propelled agricultural growth by increasing the input of labor and capital in farming.³¹

²⁷ Mendels, "Proto-Industrialization," 1972, 241; Franklin F. Mendels, "Proto-Industrialization," *The New York Review of Books* 31, no. 6 (October 25, 1984). For critical perspectives on and reevaluations of proto-industrialization, see Sheilagh C. Ogilvie and Markus Cerman, eds., *European Proto-Industrialization* (Cambridge: Cambridge University Press, 1996); René Leboutte, ed., *Proto-Industrialisation: Recherches Récentes et Nouvelles Perspectives* (Geneva: Librairie Droz, 1996). For an excellent summary of the key criticisms of proto-industrialization and an overview of the relevant literature, see Sheilagh C. Ogilvie, "Protoindustrialization," in *The New Palgrave Dictionary of Economics*, ed. Steven Durlauf and Lawrence Blume, 2nd Edition (New York: Palgrave Macmillan, 2008), 5223–26.

²⁸ Franklin F. Mendels, "Protoindustrialization: Theory and Reality," in *General Report*, ed. Franklin F. Mendels and Pierre Deyon (Eighth International Economic History Congress: "A" Themes, Budapest, Hungary: Akadémiai Kiadó, 1982), 75.

²⁹ Berg, *The Age of Manufactures*, 67; Mendels, "Protoindustrialization: Theory and Reality," 77–79; Franklin F. Mendels, "Seasons and Regions in Agriculture and Industry during the Process of Industrialization," in *Region and Industrialisation: Studies on the Role of the Region in the Economic History of the Last Two Centuries*, ed. Lucian Hölscher and Sidney Pollard (Göttingen, Germany: Vandenhoeck & Ruprecht, 1980), 177–89; Franklin F. Mendels, "Agriculture and Peasant Industry in Eighteenth-Century Flanders," in *Industrialization Before Industrialization: Rural Industry in the Genesis of Capitalism*, by Peter Kriedte, Hans Medick, and Jürgen Schlumbohm, trans. Beate Schempp (Cambridge: Cambridge University Press, 1981), 161–77.

³⁰ Peter Kriedte, "The Origins, the Agrarian Context, and the Conditions in the World Market," in *Industrialization Before Industrialization: Rural Industry in the Genesis of Capitalism*, by Peter Kriedte, Hans Medick, and Jürgen Schlumbohm (Cambridge: Cambridge University Press, 1981), 24.

³¹ *Ibid.*, 28, 31–32.

For Locke, the integration of farming and manufacturing was the best-suited means to productively employ surplus labor in the countryside. His 1697 plan for poverty relief was itself a cost-saving, growth-oriented solution to rural unemployment, a vision of the English economy that would only come to pass in the eighteenth century when the landless worker formed a “considerable proportion of the workforce in consumer industries.”³² That Locke articulates a strategy for proto-industrial growth is significant not only in terms of the progression of his political thinking, but also in what concerns the historical emergence of capitalism. Proto-industrialization was an instrumental phase of economic growth, industrial expansion, and capital accumulation in England that fundamentally affected the course of modern capitalism; it endowed England’s domestic and colonial economies not only with renewed sources of labour and capital, but also with the entrepreneurial, technological, and organizational developments that galvanized the nineteenth-century factory system.³³

This rural immersion of manufacturing in the early modern period was nowhere more evident than in the English woolen industry—a paragon of European proto-industrialization and Locke’s preferred solution for employing the idle poor.³⁴ Indeed, the woolen manufactures of East Anglia, Yorkshire, Lancashire, and the West Country were a “test case” for the proto-industrial hypothesis.³⁵ The workhouses and working schools of Locke’s 1697 “Essay on the Poor Law” are one of many seventeenth-century pushes for centralized production, divisions of labor, and mass employment in rural manufacturing—a trend already underway in Locke’s time, as he noted in 1691

³² Thirsk, *Economic Policy and Projects*, 167.

³³ Berg, *The Age of Manufactures*, 67–68.

³⁴ Kriedte, “The Origins,” 95; Wolfgang Mager, “Proto-Industrialization and Proto-Industry: The Uses and Drawbacks of Two Concepts,” *Continuity and Change* 8, no. 2 (1993): 194–97.

³⁵ Pat Hudson, “Proto-Industrialization in England,” in *European Proto-Industrialization*, ed. Sheilagh C. Ogilvie and Markus Cerman (Cambridge: Cambridge University Press, 1996), 49; Peter Kriedte, Hans Medick, and Jürgen Schlumbohm, *Industrialization Before Industrialization: Rural Industry in the Genesis of Capitalism*, trans. Beate Schempp (Cambridge: Cambridge University Press, 1981), 8.

by highlighting the “numerous Body of Workmen” clothiers employed “out of their Warehouses.”³⁶ The centralizing tendency in rural manufacturing was also a decisive attack on the freedom of autonomous producers, whose productive sphere became progressively contrived under an enclosed space and whose labor was increasingly disciplined by the direct supervision and control of entrepreneurs, overseers, and merchants.³⁷ The word “progressively” is an important distinction here since wool production was not enclosed at once; rather the transition toward a centralized labor process was gradual and the dispersed production of woolen goods across cottages, households, and workhouses was still considerable at the time.³⁸ Slowly and starting in the countryside, capital encroached traditional spaces of production, transforming independent producers into propertyless waged workers.³⁹ The proto-factories of England’s early modern woolen industry—as much historically as in Locke’s theory—were organized along the lines of “workshop-manufactures,” based on “elementary labor-intensive techniques” and the “disciplining of the labour force.”⁴⁰ In light of its unrivaled place as England’s dominant industry at the time, woolen manufacturing significantly shaped the ways in which modern political thinkers thought about the economy.

In the early eighteenth century, Daniel Defoe painted the woolen industry as England’s “greatest single Manufacture” and “the greatest Trade both Abroad and at Home, of any

³⁶ John Locke, “Some Considerations of the Consequences of the Lowering of Interest, and Raising the Value of Money (1692),” in *John Locke on Money*, ed. Patrick Kelly, vol. 1 (Oxford: Clarendon, 1991), 237. Although Locke was critical of “Ingrossers,” this does not mean he is against the expansion of manufacturing altogether; rather, his critique of large merchants is an indictment of the way in which wool production was organized in the context of a shortage of specie. The term “Ingrosser” comes from the medieval Latin “in grosso,” meaning “wholesale.” Locke’s attack of these traders, then, is directed at a class of large-scale merchants who sell in bulk and who, at time of monetary crisis, hoard money and further prevent its circulation. Locke critiqued “Ingrossers” because his proposal for manufacturing would address this particular aspect of the woolen trade. I thank Steven Kelts for helping me to clarify this point.

³⁷ Kriedte, “The Origins,” 107–11.

³⁸ See Jan De Vries, *The Industrious Revolution: Consumer Behavior and the Household Economy, 1650 to the Present* (Cambridge and New York: Cambridge University Press, 2008).

³⁹ Kriedte, “The Origins,” 110.

⁴⁰ Berg, *The Age of Manufactures*, 74–75.

Manufacture that is to be found in any particular Nation in the World.”⁴¹ On Locke’s account, wool was “the matter of [England’s] greatest manufacture;”⁴² for Charles Davenant it was “the Principal Nourishment of Our Body Politick.”⁴³ Given its privileged position as “the Foundation of the *English Riches*,” Sir Josiah Child wrote in 1690 that, “all profitable means ought to be used to keep [wool] within our own *Kingdom*.”⁴⁴ These positions disclose the widespread fascination for the English woolen trade at the time, which was often figured as an economic marvel and an object of national pride. More than that, these pronouncements convey the industry’s close association with national economic development. One recurrent argument among political economists of the period was that, by exporting woolen garments instead of raw wool, England would substantially increase its wealth and employ the mass of “idle” and “vagrant” peasants roaming its countryside.⁴⁵ Moreover, this rampant tendency among late seventeenth-century thinkers to directly treat woolen manufacturing as England’s key source of wealth and employment—a solution to the country’s agrarian crisis—confirms that leading traits associated with proto-industrialization were already in the horizon.

More recently, Jan de Vries has proposed a corrective to the historiography on early modern proto-industrialization. In particular, he has stressed that the changing structure and behavior of households, which, by the seventeenth century, had begun to reallocate their productive resources in ways that “increased both the supply of market-oriented, money-earning activities and the demand

⁴¹ Daniel Defoe, *A Plan of the English Commerce: Being a Compleat Prospect of the Trade of This Nation, as Well the Home Trade as the Foreign*, 2nd ed. (1728; repr., New York: A. M. Kelley Publishers, 1967), 179.

⁴² John Locke, “For a General Naturalisation (1693),” in *Locke: Political Essays*, ed. Mark Goldie (Cambridge: Cambridge University, 1997), 323.

⁴³ Charles Davenant, *The Political and Commercial Works of That Celebrated Writer Charles D’Avenant, LL.D.*, ed. Sir Charles Whitworth, 5 vols. (London: R. Horsefield and others, 1771).

⁴⁴ Sir Josiah Child, *A New Discourse on Trade* (1690; repr., London: Richardson and Urquhart, 1775). For analogous arguments published in trade pamphlets through the 1600s, see John Haynes et al., *English Wool Trade: Selected Tracts, 1613-1715* (London: Gregg Press, 1968).

⁴⁵ On Davenant’s position regarding the woolen trade, including its effects on wealth and poverty, see Hont, *Jealousy of Trade*, 219–22.

for goods offered in the marketplace.”⁴⁶ According to de Vries, this reorientation of household labor toward the market was propelled by new consumer aspirations, such that demand “developed through an interaction of market and household productive systems.”⁴⁷ On this account, as the market entered the household and the household, in turn, responded to its conditions and constraints, the market became an increasingly significant organizing force in the economic lives of individual residents, coordinating their consumption and production patterns.⁴⁸ Proto-industrialization was, for de Vries, one of four central paths open to industrious households seeking to participate in the market, alongside agricultural specialization, wage-labor, and the provision of commercial services.⁴⁹ Through the course of his argument, de Vries upholds the general thrust of previous claims concerning the importance of proto-industrialization in stimulating the simultaneous growth in the supply of industrial labor, as endemic poverty pushed unemployed rural populations into manufacturing and the demand for petty consumer goods produced in cottages dispersed across the countryside. “Purchasing power and productive capacity,” he concludes, echoing Joan Thirsk, “were thus mutually sustaining.”⁵⁰

While de Vries makes a powerful point about proto-industry having directed underemployed labor—especially that of women and children—toward the market, his insistence that households and consumer aspirations account for the induction of this rural surplus labor into the market is questionable.⁵¹ De Vries does not consider, for instance, why so many Stuart political economists, entrepreneurs, and reformers deemed workhouses, discipline, and control, rather than households and consumer aspirations alone, as the most appropriate means to redirect surplus labor toward the market. As Pat Hudson notes, one of the key difficulties which textile entrepreneurs faced in this

⁴⁶ De Vries, *The Industrious Revolution*, 10.

⁴⁷ *Ibid.*, 122.

⁴⁸ *Ibid.*, 211.

⁴⁹ *Ibid.*, 71.

⁵⁰ *Ibid.*, 97.

⁵¹ On de Vries’s point about women and children, see *Ibid.*, 97–103.

period was controlling the proto-industrial labor process and, in particular, the work-time of their workers.⁵² This posed serious challenges to ensuring output was regularly produced, timely delivered, and of uniform quality. Seen under this light, two essential problems concerning proto-industrialization emerged in the late seventeenth century: underemployment and control. As I contend in Part 4, Locke's plan to establish working schools across country parishes responded to both of these issues at once. That is, Locke's Poor Law amendment was not only meant as a strategy for employing surplus workers, but also for controlling, training, specializing, and dividing proto-industrial labor, in particular that of children. In short, Locke's proposal, alongside the windfall of analogous pamphlets at the time, was less to reorganize the "industrious countryside," as de Vries claims, than to usher in an *industrial* countryside.

Moreover, despite his insistence that proto-industry was foremost a labor-intensification strategy of the industrious household, de Vries nevertheless concedes that, before the eighteenth-century, proto-industrial workers were typically shut out of the market, engaging with it only indirectly, through the mediation of merchants charged with organizing production and sourcing consumers for their output.⁵³ Knowing that independent workers could supplement their income to subsistence levels on their own due to their access to land and agrarian by-employment, merchants in the putting-out system paid producers a wage well below subsistence levels.⁵⁴ Locke's workhouse plan differs from this putting-out arrangement in one central way: it paid workers a subsistence wage directly and in so doing made workers strictly dependent on their employers, their jobs, and the workhouse.

⁵² Pat Hudson, "Industrial Organisation and Structure," in *The Cambridge Economic History of Modern Britain: Industrialisation, 1700–1860*, ed. Roderick Floud and Paul Johnson, vol. 1 (Cambridge: Cambridge University Press, 2004), 40.

⁵³ De Vries, *The Industrious Revolution*, 104.

⁵⁴ Pat Hudson, "Proto-Industrialization," in *New Directions in Economic and Social History*, ed. Anne Digby and Charles Feinstein, vol. 2 (Houndmills, UK: Palgrave Macmillan, 1992), 12.

Although de Vries critiques previous theories of proto-industrialization, as is well known, he never jettisons the term altogether; rather he revises it by focusing on the economic activities of the household, so that we may, in his words, see the rising supply of market-oriented labor “in a light more favorable to the industrious revolution.”⁵⁵ But for all the light it sheds on the pre-industrial household, the “industrious revolution” also enshrouds the importance of coercive labor regimes. Pointing to this shortcoming as a severe limitation of the rational-choice paradigm, Paul Cheney highlights two important factors missing from de Vries’s story: plantations and workhouses. Not only was slave labor in Atlantic plantations vital to the early modern consumer aspirations that fueled the “industrious revolution,” so too were proposals by industrialists, politicians, and moral reformers to apply, in Cheney’s words, “the stick of workhouses, fines, and imprisonment where the carrot of new consumption possibilities proved insufficient encouragement for keeping up ceaseless, well-disciplined effort.”⁵⁶ Indeed, it is striking that, in a study devoted to reinterpreting economic development in early modern Europe, as de Vries’s *Industrious Revolution* aspires to do, the well-documented annals of slavery, imperial commerce, poverty, vagrancy, crisis, and workhouse reform that characterized English society and economic discourse for the better part of the seventeenth century, should receive so little attention.⁵⁷

Moreover, as a host of historians have suggested, in absence of decisive transformations in the world economy and colonial trade, proto-industrialization cannot explain the uniquely rapid and prodigious growth experienced by a handful of European economies at the turn of the nineteenth century.⁵⁸ The early modern eruption of Atlantic commerce, the development of overseas colonies,

⁵⁵ De Vries, *The Industrious Revolution*, 107.

⁵⁶ Paul Cheney, review of *Review of The Industrious Revolution: Consumer Behavior and the Household Economy, 1650 to the Present*, by Jan de Vries, *The Business History Review* 83, no. 3 (2009): 657.

⁵⁷ De Vries’s treatment of poverty is mostly limited to the eighteenth and nineteenth centuries. See De Vries, *The Industrious Revolution*, 64–72, 177–78.

⁵⁸ Robert S. Duplessis, *Transitions to Capitalism in Early Modern Europe* (Cambridge and New York: Cambridge University, 1997), 244, 249; T. H. Breen, “An Empire of Goods: The Anglicization of Colonial America,

and the expansion of foreign trade were, as Steve Pincus succinctly put it, “the jolt that allowed the English economy to grow during a European economic crisis.”⁵⁹ In his influential work on the divergence of global economic development, Kenneth Pomeranz paved the way for this reconceptualization of the Industrial Revolution by, among other things, offering a pointed assessment of how we should think of proto-industrialization in relation to the ascent of industrial capitalism in northwestern Europe.⁶⁰ While he concedes that proto-industrialization made important contributions to the rise of the factory system, Pomeranz maintains that it could not and did not, on its own, usher Europe into an industrial era.⁶¹

Indeed, from a global comparative perspective, proto-industrialization fails to explain why thriving and developed rural industries across much of South and East Asia did not yield similar levels of economic growth as their Western European counterparts. This divergence, Pomeranz explains, was largely the outcome of two factors: the ecological limits to proto-industrial expansion, or the scarcity of land and energy, and the availability of an astronomical stock of natural resources, such as fuel, fiber, and food, necessary to overcome this impasse.⁶² Imperial economies such as Britain were able to wheel their way out of this proto-industrial cul de sac by importing raw materials from their Atlantic colonies, which in turn allowed them to employ vast swaths of the population in industrial production rather than having to divert them to agriculture.⁶³ New World resources and the imperial institutions that sustained Britain’s Atlantic hegemony, including the slave trade, mercantilist policies, naval power, joint-stock trading companies, and plantation slavery, were

1690-1776,” *Journal of British Studies* 25, no. 4 (1986): 467–99; O’Brien, “Deconstructing the British Industrial Revolution.”

⁵⁹ Pincus, *1688*, 87, 81–87.

⁶⁰ Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy* (Princeton: Princeton University Press, 2000).

⁶¹ Also on this point, see Robin Blackburn, *The Making of New World Slavery: From the Baroque to the Modern, 1492-1800* (London and New York: Verso, 1997).

⁶² *Ibid.*, 241, 286–87.

⁶³ *Ibid.*, 287, 289.

therefore indispensable to Western Europe in circumventing its land and energy constraints and thus securing a prodigious and unprecedented level of industrial growth.⁶⁴

At the same time he questions the explanatory claims of proto-industrialization, Pomeranz also concedes that the early modern rise of rural industries provided a crucial contribution to the development of the modern factory system in the form of a massive and exploitable pool of surplus wage labor.⁶⁵ To the extent that proto-industrial workers impelled the emergence and development of the factory system through the skills and knowledge necessary for further innovations, Pomeranz agrees with the key point made by earlier historians of proto-industrialization, namely, that fully-fledged industry was the “growing up” of proto-industry, to which he adds a second and related factor: resources from across the Atlantic economy were the bridge through which Europe’s transition from proto-industrialization to industrialization as such was made possible.⁶⁶ So, even within the recent economic literature that stresses colonial and overseas trade, proto-industrialization remains an important factor in European economic growth. As I propose in Part 5, proto-industrialization was in fact an integral part of Britain’s imperial economy. But before that, in the following section, I argue that Locke’s political and economic ideas of the 1690s were a theoretical articulation of proto-industrial capitalism and a robust vindication of rural manufacturing.

PART 2: LAND, LABOR, AND CAPITAL

In his influential text on money and interest from 1691 titled *Some Considerations*, Locke stressed one of the fundamental tenets of his economic theory: the assumption that, as an economy develops, its wealth becomes less and less dependent on land. At the same time, he notes that labor adds increasingly more value to whatever it produces in incremental parcels—from the commodity’s unformed state as raw material to its transformation into a consumer good. Taking the woolen

⁶⁴ Ibid., 285, 296.

⁶⁵ Ibid., 21–22, 93–94, 255–56, 285–86.

⁶⁶ Ibid., 286, 296.

industry to illustrate his argument, Locke argued that, if a shortage of money were to decrease demand for textiles, a general decline in price would ensue, not only in woolen garments but also in unwrought wool, wages, and food.⁶⁷ As prices continue to slump across the commodity chain, Locke reasons, so too does revenue decrease from the merchant to the producer, until at last it reaches the landholder, whose “Land bears the greatest part of the loss.”⁶⁸ That Locke used the woolen industry as concrete evidence of his theory signals his awareness of the growing tie between commercial agriculture and rural manufacturing that defined proto-industrial cycles of wool production at the time, which in turn implies that, the more connected farming and industry become, a loss in manufacturing revenue will invariably occasion an even greater loss to the landowner, in whose property “*Corn, Butter, Cheese, and Flesh*” are produced.⁶⁹

Locke’s solution to reversing the landowner’s deficit and the laborer’s underemployment was to wheel capital investment away from agriculture since the central problem at hand derived precisely from a deflation in the value of arable holdings and an upsurge in the supply of arable labor. Instead, Locke proposes to expand rural manufacturing so that, as employment and output are scaled, labor bestows more value on a greater quantity of commodities. To this effect, Locke considered it “past question” that “all Encouragement should be given to Artificers” whose business he deems a promising hope against “Brokers” and “Unworking Shopkeepers” who, in “keep[ing] so much of the Money of a Country constantly in their Hands” while “Eat[ing] up too great a share of the Gains of Trade,” are actively “Starving the Labourer and impoverishing the Landholder.”⁷⁰ By “Artificers” Locke refers to the petty manufacturers “who make, [...] Vend, and Retail out their own Commodities.” His definition of “Artificer” here delineates a class of workers that, based on my

⁶⁷ Locke, “Some Considerations,” 293–95.

⁶⁸ *Ibid.*, 294.

⁶⁹ *Ibid.*, 293.

⁷⁰ *Ibid.*, 241. “Unworking Shopkeepers” is likely a reference to private merchants who, during the “putting out system,” collected and sold goods wrought by independent laborers in their own households.

foregoing sketch of proto-industrialization, became—along with unemployed peasants—the bulk of proto-industrial wage-labor: small, middling producers in the countryside.

Given Locke's significant distress over the ongoing agrarian downturn, his proposed redress to the economic depression unchained by the demise of arable farming was to invest in manufacturing rather than agriculture. Indeed, Locke painted a dire picture of the rural crisis, describing insolvent farmers paying laborers with deeply depreciated corn, which the latter could not sell at a high enough price, or at all, to afford rent and food. "And 'tis no wonder to hear every day of Farmers breaking, and running away," he remarked, "[like the] many Farmers in the *West* [who] are broke and [have] gone since *Michaelmass* last."⁷¹ This westbound pilgrimage registers the exodus of underemployed arable labor towards the pastoral country at the time.⁷² In Locke's view, investment in the labor-intensive production of commodities, rather than raw materials, was the surest path to riches. "How much Manufacture deserves to be encourag'd," he writes,

[S]ince that Part of Trade, though the most considerable, is driven with the least Money, especially if the Workmanship be more worth than the Materials. For to the Trade that is driven by Labour, and Handicrafts Men, One two and fiftieth part of the yearly Money paid them will be sufficient: But to a Trade of Commodities of our *bare* Native growth, much greater proportion of Money is requir'd.⁷³

Importantly, Locke qualifies domestic commodities with the word "bare," suggesting that his objection is not to the trade of national goods *tout court*, but only to those that are exchanged as raw material. Because they forego the extra value added from labor in the manufacturing process, bare or raw native commodities are worth less than finished consumer goods—a point Locke returns to in 1693 and 1697. It was thus in the productive arrangement sustained by woolen manufacturing in the

⁷¹ *Ibid.*, 237.

⁷² Joan Thirsk, ed., *The Agrarian History of England and Wales*, vol. 5: 1640-1750; Part 2: Agrarian Change (Cambridge: Cambridge University Press, 1985), 386–87.

⁷³ Locke, "Some Considerations," 242; emphasis mine.

countryside, the archetypical proto-industry of early modern England, that Locke anchored the central precepts of his late economic thinking.

Admittedly, it may seem anachronistic to speak of Locke’s “theory of capital accumulation” when no such idea of “capital,” as Ricardo or Marx would have understood it, existed in the seventeenth century. At the same time, however, early modern political economists anticipated an equivalent of capital with concepts like “Fund” and “Stock.”⁷⁴ Moreover, the widespread use of capital in the early modern period suggests that neither the concept of capital nor capital itself emerged in the late eighteenth century.⁷⁵ Indeed, various historians have studied the etymological transformations and uses of the term “capital” in the history of economic thought since the Middle Ages, including, notably, Fernand Braudel and Jonathan Hicks and, more recently, Geoffrey Hodgson and Jonathan Levy, all of whom agree that the term “capitale” first surfaced in Italian around the thirteenth century, which had been adapted to “fund” in English by the seventeenth century.⁷⁶ “Fund” in this sense means the stock of a nation—here land and labor—that could be invested to generate returns; that is, to yield a profit or “overplus” as Locke called it. My argument is that Locke employed the term “fund” in this way to show his readers which resources would yield the highest return from investment, not to any one person in particular but to England as a whole. In order to overcome the limits of growing rich from a finite and increasingly scarce land mass, Locke suggested that England should, like Holland, veer capital investment toward labor-intensive trades, such as navigation and manufacturing. This reading, as I demonstrate in the following

⁷⁴ Wood, *John Locke and Agrarian Capitalism*, 40.

⁷⁵ On capital and early modern French political economy, see Jean-Yves Grenier, *L’Économie d’Ancien Régime: Un Monde de l’échange et de l’incertitude* (Paris: Éditions Albin Michel, 1996), 84.

⁷⁶ Braudel, *Civilization and Capitalism*, 2:232; John Hicks, “Capital Controversies: Ancient and Modern,” *The American Economic Review* 64, no. 2 (1974): 307–16; Geogfrey M. Hodgson, *Conceptualizing Capitalism: Institutions, Evolution, Future* (Chicago and London: University of Chicago Press, 2015), 174–203; Jonathan Levy, “Capital as Process and the History of Capitalism,” *Business History Review* 93, no. 3 (2017): 483–510. I thank Jennifer Pitts and Jon Levy for their greatly helpful feedback on this question.

sections, is corroborated by his espousal of the general naturalization of skilled Protestant workers from France as well as his support of the workhouse system to employ the idle poor.

In Locke's case, the term "Fund" is most often used as an approximation of capital rather than a synonym of wealth. In *Some Considerations*, for instance, he refers to "Fund" in this sense by comparing England, "whose great Fund is Land," with the Dutch Republic, whose "great Fund [...] is Trade."⁷⁷ Here, "Fund" operates less as an alternative to wealth than as the sum total of national assets that can be exchanged, stored as value, and employed as factors of production.⁷⁸ Across his writings on the economy, Locke distinguishes static sources of wealth—such as unproductive natural endowments—from those productive assets that can be employed, accumulated, and sold, including farmland, manufactures, and carriage. So, whereas America's mountains, fountains, and uncultivated landmass are sources of natural wealth, England's tilled fields are sources of national capital, which is to say, they are England's "Fund."⁷⁹ Much like modern and contemporary definitions of capital, Locke's "Fund" is a mutable concept reflecting "the state of development and prevailing social relations of society."⁸⁰

Moreover, Locke's admiration for the Dutch—whom he deemed "Skilful in all Arts of promoting Trade"—along with his knowledge of their economy suggest that his comparison between England and Holland, far from inadvertent, was rather a reflection of his predilection for the accumulation of capital ("Fund") from trade (in character with the Dutch) as opposed to land (in

⁷⁷ Locke, "Some Considerations," 278, 287; Wood, *John Locke and Agrarian Capitalism*, 40.

⁷⁸ See Thomas Piketty, *Capital in the Twenty-First Century*, trans. Arthur Goldhammer (Cambridge and London: Belknap Press, 2014), 45–50. As I note below, Locke defines trade as manufacture and navigation, both of which can be expressed as capital insofar as they are stocks of value, factors of production, and exchangeable assets that can be owned, accumulated, stored, employed, bought, and sold.

⁷⁹ In chapter five of the *Second Treatise*, Locke argues that though the water one draws from a fountain into his pitcher is rightfully his property, the "Water running in the Fountain be every ones." See John Locke, *Two Treatises of Government*, ed. Peter Laslett, 3rd ed. (1689; repr., Cambridge: Cambridge University Press, 1988), 288–89.

⁸⁰ Piketty, *Capital in the Twenty-First Century*, 47.

the manner of England).⁸¹ By the late seventeenth century playing the English and Dutch against one another had become a recurrent leitmotif of economic discourse. In his 1668 *Brief Observations Concerning Trade and Interest of Money*, for instance, Josiah Child promoted the expansion of England's woolen industry, the export of finished cloth, and the employment of the poor in manufacturing by figuring Holland as a model commercial society whose industry was "the envy of the present, and may be the wonder of all future Generations."⁸² Throughout the 1690s, Locke echoed many of Child's arguments in support of Dutch economic policies, especially its "great encouragement and immunities to the Inventors of New Manufactures" and its "careful [provisions] for, and employment of [the] Poor."⁸³ Added to that, Locke counseled England to follow Holland's commercial scheme in his 1693 essay "For a General Naturalisation." Thus, the contrast Locke drew between English and Dutch "Fund" in 1691 should be read as an invidious comparison meant to register the superiority of capital accumulation from trade—predicated on commodity manufacturing—over the cultivation of land for the production of raw materials. On Locke's account, the Dutch framework of economic growth, undergirded by industrial expansion, was one England should emulate to its advantage.

From 1691 onwards, matters of trade, commerce, and manufacturing appear more frequently and in greater detail throughout Locke's economic writings. At a time when chronic unemployment swept the agrarian sector, Locke cast his lot with industry, attesting to his understanding that the outcome of a rural recession would further depreciate the value of land since, in a plummeting economy, "Land bears the Burthen a heavier way."⁸⁴ Locke was also convinced that, "If we consume our own Product and Manufacture [...] our Stock [will] be so much

⁸¹ Locke, "Some Considerations," 285. From 1683 to 1688, Locke was exiled in the Dutch Republic.

⁸² Sir Josiah Child, *Brief Observations Concerning Trade and Interest of Money* (London: Elizabeth Calvert and Henry Mortlock, 1668), 3.

⁸³ *Ibid.*, 4–5.

⁸⁴ Locke, "Some Considerations," 275.

encreast.”⁸⁵ Thus, he concluded that economic growth and capital accumulation are a source of trade, whose parts are found not in England’s farm fields but in its “Domestick manufactures” and “Cariage, i.e. Navigation and Merchandise.”⁸⁶ For Locke, economic development—or the “producing of Riches”—depended decidedly on trade, which is enhanced to the extent that manufacturing is assisted by the “Improvement of Navigation” and carried out by a population “bold and skillful at sea.”⁸⁷

That England’s “Fund” is increased with the “Improvement of Navigation and Trade” is a cornerstone of Locke’s late economic theory. For him, improvements in trade and navigation are attained by, first, transforming domestic raw materials into finished commodities through a labor-intensive manufacturing process and, second, by investing in naval carriage in order to export those goods to foreign markets—not only in Europe but also, and at this time most importantly, to Britain’s Atlantic colonies.⁸⁸ The twin principles of trade and navigation make up the dominant means to the end of Locke’s theory of capitalism, namely, economic development and progress. In 1677 he provided an early glimpse of the logic driving this theory when he noted that, despite their country being “large and fertile,” West Indians lived a “poor, uncomfortable [and] laborious life” due to a lack of skill and a general inability to improve the state of their industry and arts.⁸⁹ In contrast to the “primitive” state of industry in the West Indies, Locke sanctioned a “developed” economy that applied its knowledge, labor power, and skill towards the “use and advantage of men in this world;” that is, “to find out new inventions of dispatch to shorten or ease our labours” and to “procure new and beneficial productions whereby our *stock of riches* (i.e. *things useful for the conveniences of*

⁸⁵ Ibid., 225.

⁸⁶ John Locke, *Locke on Money*, ed. Patrick Kelly, vol. 2 (Oxford: Clarendon Press, 1991), 485, 488.

⁸⁷ Locke, “Some Considerations,” 223–24.

⁸⁸ Ibid., 232.

⁸⁹ John Locke, “Understanding (1677),” in *Locke: Political Essays*, by John Locke, ed. Mark Goldie (Cambridge: Cambridge University Press, 1997), 261.

our life) may be increased.”⁹⁰ Put differently, capital accumulation and the economic growth it generates ensue from a proto-industrial organization of production whose fruits are not merely the bare necessities of life, but also—and more importantly—its comforts and conveniences. This particular arrangement of the labor process, as Locke insists, is conducive to increasing a country’s “stock of riches” to the extent that it creates new, beneficial, and useful things that render life less toilsome and more pleasant—an unattainable prospect for any agrarian economy whose greatest fund remains land. As I argue next, the application of labor and organization of production promoted in Locke’s theory are redolent of a proto-industrial schema centered on the expansion of rural manufacturing.

PART 3: INDUSTRY, IMMIGRANTS, AND COMMODITIES

In reading Locke as an agrarian capitalist, Wood offers an insightful comparison of Locke’s 1691 *Some Considerations* and his 1668 memorandum *Some of the Consequences*, in which much of the groundwork for the later text had been laid out. While the core of Locke’s economic views remain virtually unchanged across both works, Wood notes that, unlike in the 1668 memorandum, the 1691 treatise contains an incisive and sustained condemnation of luxury and vanity as a detractor of “well-ordered trade,” “good husbandry,” “industry,” and “frugality.”⁹¹ Wood interprets this as a charge against the extravagance of landholders and country gentlemen whose debauchery and fashionable tastes were partly to blame for the agrarian crisis of the late seventeenth century. He construes Locke’s disdain of luxury as a plea for landholders to “mend their ways” by cutting spending, improving farming techniques, and increasing production so to revitalize commercial agriculture.⁹² Although it is certainly true that Locke condemned conspicuous spending, he never held that frugality and industry were inherently antithetical to consumerism, much less was his attack on luxury meant as a universal denunciation of splendor. Rather than a wholesale indictment, Locke’s

⁹⁰ Ibid., 261; emphasis mine.

⁹¹ Wood, *John Locke and Agrarian Capitalism*, 46.

⁹² Ibid., 46–48, 111.

criticism of luxury was reserved to two instances: first, whenever it led to idleness, ostentation, fancy, and vanity—the products of which are moral ruin and financial insolvency.⁹³ Second, luxury was particularly reproachable when it instilled in the public a penchant for foreign over domestic goods.⁹⁴ As it happens, so emphatic was Locke’s support for spending in English consumer articles that he identified “suitable manufactures to the markets whose commodities we want” and “fashions suited to [our] owne manufacture” as “promoters of trade.”⁹⁵ Moreover, Locke demonstrated no personal misgivings about luxury as evinced by his £500 venture in the silk trade with the Earl of Shaftesbury in 1674.⁹⁶

Far from being a universal plea for austerity, then, Locke’s critique of luxury was meant to dissuade non-essential spending in foreign commodities and, as a result, promote English manufacturing. Known as a “mixed-industry,” English wool production attended to consumer demand for coarse and fine commodities alike.⁹⁷ In fact, much of England’s commercial policy at the time was devoted to actively developing consumer industries in order to cope with the upswing in foreign and domestic demand for woolen goods.⁹⁸ Locke’s attack on fashionable spending was therefore a call for the English public to divert its purchasing power and fashion taste away from

⁹³ John Locke, *Locke on Money*, ed. Patrick Kelly, vol. 1 (Oxford: Clarendon Press, 1991), 231; Locke, *Locke on Money*, 1991, 2:493–495.

⁹⁴ Locke, *Locke on Money*, 1991, 1:276–77; Locke, *Locke on Money*, 1991, 2:436.

⁹⁵ Locke, *Locke on Money*, 1991, 2:486.

⁹⁶ Kenneth Harold Dobson Haley, *The First Earl of Shaftesbury* (Oxford: Clarendon Press, 1968), 228; Linda Levy Peck, *Consuming Splendor: Society and Culture in Seventeenth-Century England* (Cambridge: Cambridge University Press, 2005), 109. Locke’s condemnation of luxury with respect to consumption is always reserved to imported articles such as those from Japan and China, see, for instance, Locke’s 1691 “Some Considerations” in John Locke, *The Works of John Locke*, 12th ed., vol. 4 (London: C. and J. Rivington, 1824), 54–59, 72–73, 163–64. See also Karen I. Vaughn, “John Locke, Economist and Social Scientist” (Chicago: University of Chicago Press, 1980), 24.

⁹⁷ According to Pat Hudson some of the most important English proto-industries specialized in not only in coarse textiles, such as the woolen industry of Yorkshire, but also in fine consumer goods for the domestic and foreign markets like the high-quality woolen cloth industry of the West Country. See Hudson, “Proto-Industrialization in England,” 53–57. According to Werner Sombart, the West Country was notorious for producing luxury garments since the sixteenth century, see Werner Sombart, *Luxury and Capitalism*, trans. W. R. Dittmar (1913; repr., Ann Arbor: University of Michigan Press, 1967), 155–59.

⁹⁸ Peck, *Consuming Splendor*, 19.

imports and towards national commodities.⁹⁹ From this angle, it is unlikely that Locke's aversion to luxury in 1691 was either a testament to his agrarian theory of capitalism, as per Wood, or an indication of what Ian Harris has called Locke's "blindness to consumer goods."¹⁰⁰ Indeed, the growth and increasing sophistication of consumer desire were important primers in the early ignition of England's proto-industry.¹⁰¹ Locke attested to this in 1691 when he took notice of the proliferation of "Magazines of all sorts of Wares" as a new development in the English economy.¹⁰² A similar conclusion can be drawn from his well-known view that, while "rich in Land," America was "poor in all the Comforts of Life," including—as he singles out—"rayment and delight," which is to say, clothing and leisure.¹⁰³ In other words, Locke held the conveniences and comforts of life to the same esteem he reserved for its necessities. "To provide these *things*," he argued, "nature furnish[es] us only with the materials for the most part rough and unfitted to our uses," such that the production of those "things useful for the conveniences of life" demand "yet a great deal more [of] labour, art, and thought" than those "things" necessary for our material subsistence.¹⁰⁴ In 1693, Locke publicized his views on the production of consumer goods, alongside his related positions concerning employment and export, in a tract endorsing the naturalization of skilled foreign workers in England.

Following the Revocation of the Edict of Nantes in 1685, French Huguenots expatriated to England by the thousands, sparking a nation-wide debate on immigration. Bills in support of the

⁹⁹ According to Pat Hudson some of the most important English proto-industries specialized in coarse and fine textiles for domestic and foreign markets. See Hudson, "Proto-Industrialization in England," 53–57.

¹⁰⁰ Ian Harris, *The Mind of John Locke: A Study of Political Theory in Its Intellectual Setting* (Cambridge: Cambridge University Press, 1994), 357n17.

¹⁰¹ Hudson, "Proto-Industrialization in England," 54, 53.

¹⁰² Locke, "Some Considerations," 237. In 1697, the English traveller, Celia Fiennes, described a Saturday market in Chesterfield as having "a great deale of corne and all sorts of ware and fowles." See Joan Thirsk, ed., *The Agrarian History of England and Wales*, vol. 5: 1640-1750; Part 1: Regional Farming Systems (Cambridge: Cambridge University Press, 1985), 132.

¹⁰³ Locke, *Two Treatises*, 296–97.

¹⁰⁴ Locke, "Understanding (1677)," 261.

general naturalization of foreigners, which would confer English citizenship upon a whole group of immigrants rather than single individuals, were rejected by Parliament in 1689 and 1690.¹⁰⁵ When another Bill was under consideration in 1693, Locke came down on its side in an essay titled “For a General Naturalisation.” In virtue of its overwhelming appeal to pecuniary interest, Locke’s defense of naturalization is a revealing, albeit overlooked, fragment of his economic theory.¹⁰⁶ In particular, three of his arguments reaffirm the proto-industrial outlook to which he had previously assented in *Some Considerations*. First, he reiterates that national wealth is a driving factor of productivity from labor rather than land; second, he makes the case for the amplification of production and export of consumer goods; and lastly, he proposes integrating the agricultural production of raw material to the manufacturing of commodities by consolidating farming with industry in the countryside. In light of its eminent economic logic, this text is as much a defense of proto-industrial capitalism as it is a moral vindication of naturalization and religious freedom.

If naturalization is the “shortest and easiest way of increasing your people,” Locke reasoned, it should be actively promoted on the grounds that “people are the strength of any [...] government” and “the riches of any country.” Whereas the most valuable factor of production in an agrarian economy is land, a developed economy rooted in manufacturing and foreign trade derives its wealth from an abundant laboring population. “The riches of the world,” he remarked, “do not lie now as formerly in having large tracts of good land [but] in trade, which brings money and with that all *things*.”¹⁰⁷ This predicament resonates with Locke’s treatment of economic development in the *Second Treatise*, in which he noted that “different degrees of Industry” furnish “Possessions in different Proportions.”¹⁰⁸ Whereas a *primitive* mode of production characterized by barter and

¹⁰⁵ See Mark Goldie’s introductory note to Locke, “For a General Naturalisation (1693),” 261.

¹⁰⁶ David Armitage, who noted this connection in 1998, is an important exception here, see Armitage, *Ideological Origins*, 165–66.

¹⁰⁷ Locke, “For a General Naturalisation (1693),” 323; emphasis mine.

¹⁰⁸ Locke, *Two Treatises*, 301.

farming may sufficiently attend to the material necessities of bare life, only a *developed*, commercial society can impart citizens with the “conveniences of Life,” which are sustained and improved by consumer goods, “new and beneficial productions,” all “things useful,” as well as “Invention and Arts.”¹⁰⁹

For all his well-worn ideas on the triumph of civil society over the state of nature in the *Second Treatise*, Locke was also keenly alive to the insoluble, historical reality of economic progress. On David Armitage’s interpretation, people from any and all cultures can go up or down on Locke’s scale of civility “according to the materials nature had given to them,” so that “the presence or lack of adequate tools or commodities could account entirely for the differential productivity of particular peoples.”¹¹⁰ Yet, Locke nevertheless presents the coexistence of modern and primitive economies in the present—the Dutch Republic and America, England and the West Indies—as a testament to their respective positions in a scale of progress whose upward trajectory is acquired through industrial development. If, as per the *Second Treatise*, “in the beginning all the World was *America*,” then America’s agrarian economy demarcates the “primitive,” original, and base mode of production whence “civilized” economies, the likes of England and Holland, sprung.¹¹¹ From this vantage, modern economic development is necessarily at odds with a purely agrarian mode of production whose primary source of wealth is abundance in land. According to Locke’s reasoning, the next frontier of progress for England should be not only the capitalization of agriculture, as Wood insists, but its integration to manufacturing in the hopes of accelerating industrial expansion.

For Locke, trade denotes both the means to produce commodities *and* that of transporting them to foreign markets. “Plenty of hands,” he discerned in 1693, “is what contributes most to both;” that is, they are both labor-intensive processes that generate more value to the extent they

¹⁰⁹ Ibid., 299; Locke, “Understanding (1677),” 261.

¹¹⁰ Armitage, “John Locke: Theorist of Empire?,” 97.

¹¹¹ Locke, *Two Treatises*, 301.

employ labor more efficiently and less costly.¹¹² The goal of manufacturing, he adds, is “to make as much as you can,” and, through trade, to “vent as much abroad as you can.” Building on his view that “the greatest part of the value [in all manufactures] lies in labour,” Locke justifies increasing the workforce in light of the corresponding decrease in wages it would offset, making the final price of English commodities more competitive in the world market. In order to realize his vision of productivity and growth, Locke suggests a reconfiguration of England’s agrarian mode of production. In lieu of farming and exporting raw wool to France, he proposes expanding England’s woolen industry by supplementing its workforce through the general naturalization of French artisans. Since England already boasted an abundant supply of raw wool, all it required to produce cloth as a finished commodity—and at a lower price than France—was a greater and cheaper labor pool. From this, England would raise its “Fund” by exporting a consumable commodity rather than a raw good.¹¹³ According to Locke’s economic theory, more value would be created from manufacturing and selling finished goods as a result of the additional labor incurred in transforming unwrought wool into cloth, a process that in Locke’s time involved several labor-intensive stages such as weaving, spinning, fulling, bleaching, dyeing, and cutting—all of which would be more efficiently and profitably performed by bringing large quantities of workers together in a workhouse.¹¹⁴ At a glance, Locke’s strategy for growth was to increase the national workforce, lower labor costs, expand manufacturing, and export consumer goods.

Additionally, Locke sought to enlarge England’s skilled workforce by naturalizing experienced craftsmen and sailors.¹¹⁵ To prevent the influx of idle foreigners, he suggested limiting naturalization to workers who would “depend only on what they [brought] with them, either their

¹¹² Locke, “For a General Naturalisation (1693),” 323.

¹¹³ Ibid., 323–24. For a historical overview of the problem Locke seeks to address, see G. D. Ramsay, *The Wiltshire Woollen Industry in the Sixteenth and Seventeenth Centuries* (London: Oxford University Press, 1943), 104.

¹¹⁴ Safley and Rosenband, *Production, Transaction, and Proletarianization*, 130; Berg, *The Age of Manufactures*, 42.

¹¹⁵ Locke, “For a General Naturalisation (1693),” 324–25.

estates or industry.”¹¹⁶ Given England’s soaring levels of rural unemployment, Locke was decisively against naturalizing unskilled agrarian labor. In fact, his plan demanded a large workforce skilled in industry and navigation, which explains why his ideal immigrants were Huguenot artisans or foreigners who, like the Dutch, had a proven ability to make “great advantage to themselves by employing so many hands in navigation and transporting the several commodities of the world.”¹¹⁷ Locke moreover objected to the popular outcry against naturalization on the basis that immigrants would overburden and unfavorably affect the national economy by sharing in on the finite resources, employment opportunities, and welfare allowances of English citizens. In response, he argued that skilled immigrant workers would favor the national economy by lowering the price and raising the quality of the labor. Here, the transformative economic promise of naturalization was to “bring down the unreasonable rates of [our] own people or force them to work better,” addressing in turn the problem of England’s “Want of people,” which only “raises their price and makes them both dear and careless.”¹¹⁸ After all, Locke reasons, once naturalized, foreigners are “in interest as much our own people as any. [...] For ’tis hardly to be doubted but that most of even our ancestors were foreigners.”

Fundamentally, in the course of defending the naturalization of foreigners, Locke outlined an economic program whose theoretical allegiance to proto-industrialization comes forth in his plea for expanding manufacturing, intensifying exports, and integrating agriculture to industry. In his call for a more centralized and cohesive production cycle, from raw material to commodity, Locke upholds one of the fundamental laws of capitalist accumulation: the idea that whenever a vertical integration in any two links along a commodity chain occur, total surplus value increases with the

¹¹⁶ Ibid., 324.

¹¹⁷ Ibid., 325. Most Huguenots seeking asylum in England after 1685 were skilled textile artisans, John M. Hintermaier, “The First Modern Refugees? Charity, Entitlement, and Persuasion in the Huguenot Immigration of the 1680s,” *Albion: A Quarterly Journal Concerned with British Studies* 32, no. 3 (2000): 434. On the benefits of foreign skilled labor to England’s textile industry, see Peck, *Consuming Splendor*, 20, 108, 110.

¹¹⁸ Locke, “For a General Naturalisation (1693),” 325.

rate of accumulation and the total stock of capital.¹¹⁹ It is therefore not incidental that Locke's vindication of manufacturing came at a moment when English garments had become a highly coveted commodity in continental Europe, so much so in fact that from the 1690s onwards the characteristic feature of English export had become "a finished product and no longer a raw material."¹²⁰ On this last point, Locke's tract on naturalization is legible as an expression of the historical transformations that invigorated England's nascent proto-industry in the final moments of the seventeenth century.

In closing the text, Locke briefly entertains the question of poverty as it applies to the influx of foreign workers. His rejoinder to the common objection that naturalization would increase poverty was to cast doubt on what the general public understood by "the poor." "If by poor," he wrote, "are meant such as have nothing to maintain them but their hands, those [who] live by their labour are so far from being a burden that 'tis to them chiefly we owe our riches."¹²¹ However, he continued, "If by poor are meant [those] who are able to work and do not, 'tis a shame and a fault in our constitution." Locke's retort moved in two steps. First, it absolves working people from the category of "the poor;" second, it defines poverty as a self-incurred idleness, which is less a product of immigration than an internal social problem that "ought to be remedied" nationally through state legislation. Idleness for Locke was a social death sentence for England, with or without immigrants: "whilst it is permitted we must ruin, whether we have many or few people." On the other hand, if idleness can be resolved, then "the more [people] we have the better it is for us." It is to Locke's attempt at solving this problem that I turn next.

¹¹⁹ According to Terence Hopkins and Immanuel Wallerstein, a commodity chain denotes "a network of labor and production processes whose end result is a finished commodity." See Terence K. Hopkins and Immanuel Wallerstein, "Commodity Chains in the World-Economy Prior to 1800," *Review (Fernand Braudel Center)* 10, no. 1 (1986): 159; Immanuel Wallerstein, *Historical Capitalism with Capitalist Civilization* (London: Verso, 2011), 32.

¹²⁰ From 1699 to 1701 the export of English consumer goods comprised 81.2% of the country's total exports. See Kriedte, "The Origins," 34, 36.

¹²¹ Locke, "For a General Naturalisation (1693)," 326.

PART 4: UNEMPLOYMENT AND PROLETARIANIZATION

If in 1693 Locke sought to increase England's laboring population with religious refugees, four years later sustained unemployment had become a more viable means to that same end. And so, in his capacity as Commissioner to the Board of Trade, Locke compiled a series of amendments to the Elizabethan Poor Laws, England's poor relief legislation, in a text titled "Essay on the Poor Law," drafted in the autumn of 1697.¹²² In the "Essay," Locke re-envisioned national welfare as a state-sanctioned, mass-employment program at the service of economic growth. Judging the number of beggars roving the streets as "manifestly great," Locke opens with potential solutions to the problem of idleness, including coercive regimes of punishment, forced labor, and discipline directed at those who were able though unwilling to work.¹²³ Anyone found guilty of forging an alms license, for instance, "shall lose his year," felons "shall be transported to the plantations," and children caught begging outside their own parish shall be "sent to the next working school, there to be soundly whipped, and kept at work till evening."¹²⁴ Additionally, all able-bodied adults who choose to live idly from the charity of others should be "kept at hard labour" in houses of correction or aboard one of "his majesty's ships [to] serve three years under strict discipline, at soldier's pay."¹²⁵ For the remainder of the text, however, Locke turns his attention to a section of the unemployed who, while capable and willing to work, are unable to find employment.

¹²² In 1696, poor law reform became the focus of the newly founded Board of Trade whose Commissioners "heard testimony on ways to employ the poor, conducted a survey of poor rates around the kingdom, and drafted proposals for legislation." Locke's "Essay" was drafted between September and October of 1697 and in October it was rejected by the Board, which opted to submit another memorandum to the lords justices in December. See Stephen M. Macfarlane, "Social Policy and the Poor in the Later Seventeenth Century," in *London, 1500-1700: The Making of the Metropolis*, ed. A. L. Beier and Roger Finlay (London and New York: Longman, 1986), 261.

¹²³ John Locke, "An Essay on the Poor Law (1697)," in *Locke: Political Essays*, ed. Mark Goldie (Cambridge: Cambridge University, 1997), 190.

¹²⁴ *Ibid.*, 185–86.

¹²⁵ *Ibid.*, 186.

The “true and proper relief of the poor,” Locke argues, is not to maintain them in idleness through allowances but to employ them according to their abilities and industry.¹²⁶ As such, the surest path to “true and proper relief” rests on a locus of profit-generating productive activities related to the “woollen or other manufacture.”¹²⁷ Locke notes that if, hypothetically speaking, England’s poor numbered 100,000 and every one of them worked in a wool factory at 1d per day, in eight years this “would make England above a million of pounds richer.”¹²⁸ The aim of Locke’s plan was thus neither to improve the poor’s living standards nor to promote their upward social mobility. Rather, if enforced, his proposal would keep peasants at the margins of misery through subsistence wages, inducting them into a political regime of proletarianization.¹²⁹ In this sense, Locke’s policy proposal was something of an economic stimulus package the foremost objective of which was to increase England’s capital by making trade, manufacturing, and labor its greatest “Fund.” As is well known, Locke’s poor relief scheme was hardly original. It followed on the footsteps of analogous petitions for Corporations of the Poor that, according to Paul Slack, occasioned an “unprecedented explosion” in workhouse projects across England at the turn of the eighteenth century.¹³⁰ Founded

¹²⁶ Ibid., 189–90.

¹²⁷ Ibid., 189. While most corporations for the poor based on workhouse labor at the turn of the eighteenth century generated substantial losses, their promoters justified them with the promise that these projects would reduce the costs of poor relief and generate a surplus. See Paul Slack, *Poverty and Policy in Tudor and Stuart England* (London and New York: Longman, 1986), 199–200.

¹²⁸ Thirsk, *Economic Policy and Projects*, 169. As Thirsk notes, “to satisfy the home and foreign demand for stocking in the 1690s, 15.3 per cent of labouring and pauper families could have supplemented their living by knitting as a by-employment.”

¹²⁹ According to Fernand Braudel the Elizabethan Poor Laws were “laws *against* the poor.” See Fernand Braudel, *Capitalism and Material Life 1400-1800*, trans. Miriam Kochan (London: Weidenfeld and Nicolson, 1973), 40. To maintain the worker in a state of poverty is the premise of proletarianization: “It is true indeed, that the first introducing [of] a manufacture employs many poor, but they cease not to be so, and the continuance of it makes many.” Excerpt from an anonymous 1677 tract titled *Reasons for a limited Exportation of Wool*, quoted in Marx, *Capital*, 1:716n7.

¹³⁰ Slack, *Poverty and Policy*, 195. As Mark Goldie notes, “fifteen cities secured Acts of Parliament to establish corporations of the poor between 1696 and 1715.” See Locke, “An Essay on the Poor Law (1697),” 183. Prior to Locke, workhouse schemes for employing the poor had been proposed by Thomas Firmin in 1678, Matthew Hale in 1683, Josiah Child in 1693, John Bellers in 1695, and John Cary also in 1695. On the relationship between economic theory and poor relief policy, see A. W. Coats, “Economic Thought and Poor Law Policy in the Eighteenth Century,” *The Economic History Review* 13, no. 1 (1960): 39–51.

in 1696, the Bristol Corporation—a model for its progenitors—was conceived and managed after the ideas espoused in John Cary’s 1695 *Essay on the State of England in Relation to its Trade*, which advocated for the establishment of a “new corporate body providing compulsory employment, a vast new workhouse, and central control of parish relief.”¹³¹

Given his familiarity with English commercial policy and labor relations, Locke was cognizant of the regulations in production, apprenticeship, and employment enforced by guilds and corporations in towns, in particular their restrictions on child and female employment that threatened his plan.¹³² These urban regulations help to explain Locke’s greater thoroughness and attention to detail when addressing the implementation of his policy in rural parishes, where restrictions were fewer and surplus labor greater than in towns. In fact, when Locke briefly turns to the enforcement of his proposal in urban areas, nearing the end of his text, he is decidedly less concerned with the creation of jobs than he is with assuring that the poor will be effectively absorbed by the commercial infrastructure already in place.¹³³ This suggests, furthermore, that the historical conditions that frame the “Essay” were in character with those that energized the development of proto-industrialization in the English countryside at the time.¹³⁴

¹³¹ Slack, *Poverty and Policy*, 196. Cary was a personal acquaintance to Locke and, along with Thomas Firmin (also known to Locke), an advisor to the Board of Trade in its 1695-96 inquiry into the Poor Laws that underpinned Locke’s “Essay.”

¹³² According to Christopher Dyer, the urban landscape of English towns was indeed a “hostile environment for early capitalism.” See Christopher Dyer, “Were There Any Capitalists in Fifteenth-Century England?,” in *Enterprise and Individuals in Fifteenth-Century England*, ed. Jennifer Kermode (Wolfeboro Falls: Alan Sutton, 1991), 11. See also John Merrington, “Town and Country in the Transition to Capitalism,” *New Left Review* 93 (October 1975): 71–92.

¹³³ Locke, “An Essay on the Poor Law (1697),” 195–98. While Locke gives urban corporations more autonomy in executing his policy (195-96), he is far more severe with the trades, skills, and manufactures that should be promoted in the countryside, including roughing, spinning, and weaving wool (192-93). At the same time, however, most Corporations of the Poor founded between 1696 and 1712 were established in towns the likes of Bristol, Exeter, Hull, Norwich, and London. See Slack, *Poverty and Policy*, 195–99; Timothy V. Hitchcock, “The English Workhouse: A Study in Institutional Poor Relief in Selected Counties, 1696-1750” (Doctoral Dissertation, University of Oxford, 1985), Chapter 2; Macfarlane, “Social Policy and the Poor.”

¹³⁴ As Stephen Macfarlane notes, the Board’s final report to the lords justices “made no mention of the City or the suburbs.” See Macfarlane, “Social Policy and the Poor,” 261.

Moreover, the text reveals Locke's support for integrating agriculture and industry, a measure that embodied one of the more salient transformations in the early modern expansion of proto-industry. Locke stresses, for instance, the need for parishes to farm their own stock of raw materials in order to supply manufacturing in neighboring workhouses and peasant cottages (i.e. domestic industries). He proposes that a segment of the working poor should be employed in husbandry, as apprentices to yeomen or farmers and that, whatever they produce "in wool or other materials," must be sold to a "storekeeper [...] skilled in the particular manufacture," and an overseer should be charged with distributing these "materials for the employment of the poor in each parish."¹³⁵ The wool, which must be wrought at home by poor workers and finished in workhouses under the surveillance of artisans, is finally sold in the market by the storekeeper for a profit.¹³⁶ In this way, Locke's plan assures the employment of the poor at each and every stage of the production process, from farming to manufacturing. Importantly, the "Essay" also carefully bars workers from taking any part in the sale of either the raw materials or the commodities they produce. In turn, the exclusion of workers from commercial activity enables merchants, clothiers, masters, artisans, yeomen, and landowning farmers to capture the surplus value from labor by selling finished goods for a profit in the market. The logic of Locke's plan is therefore the creation of surplus-value from a model that approximates the real subsumption of labor-power in production and—to borrow from Marx—the exchange of valorized commodities for "money which is worth more money, value which is greater than itself."¹³⁷ As Locke notes, while the initial capital

¹³⁵ Locke, "An Essay on the Poor Law (1697)," 93.

¹³⁶ *Ibid.*, 194, 192.

¹³⁷ Marx, *Capital*, 1:257.

investment for setting up his scheme may seem considerable, he reassures his readers that “it will quickly pay its own charges, with an overplus.”¹³⁸

From a theoretical standpoint, then, Locke’s plan sustains the logic of proto-industrial capitalism in the following way: to the extent that wages are lowered to subsistence levels and workers are excluded from the market, all surplus value from labor is “saved to the public”—the original investor in the workhouse scheme—rather than shared with the workers, so that, as the public—or state—grows richer, the rural poor become increasingly proletarianized.¹³⁹ In its capacity as a historical document, the “Essay” favors the early proletarianization of landless workers occasioned by the advent of rural manufacturing and poorhouses at the turn of the eighteenth century. Having absorbed much of rural surplus labor, England’s textile industry around the 1690s was best characterized as “an unorganized mass of sweated labour” kept “just alive” by “meagre wages” that in turn “nourished theft, sedition, and rebellion.”¹⁴⁰ In light of a workforce overwhelmingly composed of poor laborers in a largely open and unregulated labor market, textile manufacturing was a particularly apt industry for the emergence of proletarianization before the rise of factory labor in the nineteenth century.¹⁴¹

In addition to the “Essay,” Locke outlined his positions on proto-industrial labor in a report titled “Encouragement of Irish Linen Manufacture” submitted to the lords justices by the Board of

¹³⁸ Locke, “An Essay on the Poor Law (1697),” 192. Many fixed costs incurred through the implementation of Locke’s plan would be deducted from funds raised by the poor relief tax, including the salaries of teachers, guardians, and overseers charged with training, monitoring, and disciplining workers.

¹³⁹ Ibid., 189. Whereas in capitalism a firm accumulates capital from labor, in Locke’s plan the “public” “saves” it. On Locke’s distrust of private entrepreneurs whose “knavery” he deemed a threat to “all publick good works,” see Locke’s letter to William Molyneux on 22 February, 1697 in E. S. De Beer, ed., *The Correspondence of John Locke*, vol. 6 (Oxford: Clarendon Press, 1981), 7.

¹⁴⁰ Alfred P. Wadsworth and Julia De Lacy Mann, *The Cotton Trade and Industrial Lancashire, 1600-1780* (Manchester: Manchester University Press, 1931), 90; Ramsay, *The Wiltshire Woollen Industry*, 128–29.

¹⁴¹ As James Tully aptly notes, “Locke did not expect [workhouses] to be entirely self-supporting. His aim was rather to habituate the young to a life of industry and discipline.” See Tully, *An Approach to Political Philosophy*, 65. This suggests that Locke was far more interested in the long-run rather than the immediate effects of reforming the Poor Laws through a workhouse system; that is, his interest lay on the effects this scheme would have on future generations of workers rather than the ways in which this would benefit large textile merchants, such as “Ingrossers.”

Trade on September 2, 1697.¹⁴² The overall goal of this document was to discourage Ireland from undercutting the English woolen industry in foreign markets. To this end it proposed, quite simply, that all Irish producers of wool switch to linen.¹⁴³ In fewer than ten pages, Locke put forth a bold program for rationalizing and standardizing the labor process in the Irish linen industry so to make it “the general trade of that country.”¹⁴⁴ Noting that spinners were the poorest workers in the linen manufacture, Locke called for the establishment of “spinning schools” to which families earning less than forty shillings a year would be forced to send their children.¹⁴⁵ In order to maximize efficiency, he insisted that only the double wheel should be employed in spinning.¹⁴⁶ The double-headed wheel was a labor-saving technology that allowed multiple yarns to be spun at once and, in being operated by foot pedals, left the worker’s hands free to perform other tasks simultaneously.¹⁴⁷ It was invented in 1681 by Thomas Firmin, a friend of Locke’s, an advisor to the Board during its efforts to reform poor relief, and the author of workhouse proposals—which he pursued in practice—very similar to the schemes championed by Bellers, Cary, and Locke during the period.¹⁴⁸

Moreover, the report confirms Locke’s effort to integrate industry and agriculture. As per his proposal, large part of the raw materials used in the production of linen would be cultivated, transported, and given up for free by workers themselves: each woman would contribute an annual total of 2,400 yards of unwrought linen while every man would bring in one pound of raw flax and

¹⁴² Although the text was co-signed by his colleagues, the final report was, as notes H. R. Bourne, “substantially altogether Locke’s work,” See John Locke, “Encouragement of Irish Linen Manufacture (1697),” in *The Life of John Locke*, ed. H. R. Fox Bourne, vol. 2 (London: Henry S. King, 1876), 363.

¹⁴³ Locke learned much about Ireland’s linen trade by corresponding with his Irish friend William Molyneux, see E. S. De Beer, ed., *The Correspondence of John Locke*, vol. 5 (Oxford: Clarendon Press, 1979), 701–5; De Beer, *The Correspondence of John Locke*, 1981, 6:219–22, 229–31.

¹⁴⁴ Locke, “Encouragement of Irish Linen Manufacture (1697),” 365.

¹⁴⁵ *Ibid.*, 366.

¹⁴⁶ *Ibid.*, 366–67.

¹⁴⁷ Walter Endrei and Rachel P. Maines, “On Two-Handed Spinning,” in *European Women and Preindustrial Craft*, ed. Daryl M. Hafter (Bloomington and Indianapolis: Indiana University Press, 1995), 37.

¹⁴⁸ M. G. Mason, “John Locke’s Proposals on Workhouse Schools,” *The Durham Research Review* 3, no. 11 (1960): 8–16; Joan Thirsk and J. P. Cooper, eds., *Seventeenth-Century Economic Documents* (Oxford: Clarendon Press, 1972), 302.

another of hemp.¹⁴⁹ This stipulation would ensure that peasants reaped and sowed these byproducts in their own time and for free, enforcing the divide between free labor in the household and wage labor in the workhouse. Much like in the “Essay,” the report is undergirded by the twin principles of employment and growth. But while the state is certainly slated to play an active role as investor and stakeholder, the management of the industry is placed entirely in the hands of “directors”—private citizens appointed by Parliament and given “full power and authority in all things whatsoever relating to the conduct and management of this whole affair.”¹⁵⁰ In order to run their business operation, directors would be allowed “to erect magazines, workhouses, and other public buildings” as well as “to order the buying and selling of anything in such manner as they judge expedient,” including levying taxes, imposing regulations, and—in collaboration with “justices of the peace and other officers”—enforcing these regulations as law, punishing those who transgress them, and policing the market.¹⁵¹

But domination in the capital-labor relation is as much a question of managing time as of controlling space. Before the widespread use of clocks, the prevalent measure of labor time in early modern Europe was the length of the task. In such “task-oriented” regimes of time notation, as E. P. Thompson has made plain, the categories of “work” and “life”—“social intercourse” and “labor”—were unbound.¹⁵² Starting in the late seventeenth century, workers began to lose the freedom to preside over their schedules as “task-orientation” was gradually replaced by “timed labor.” Here, the dominant measure of time was no longer the task itself but the *value* of time—expressed in money—taken to complete it.¹⁵³ As much in the “Essay” as in the “Encouragement,” Locke prescribed a production cycle for textile workers that explicitly demarcated the bounds of the

¹⁴⁹ Locke, “Encouragement of Irish Linen Manufacture (1697),” 369.

¹⁵⁰ *Ibid.*, 370.

¹⁵¹ *Ibid.*, 370–71.

¹⁵² E. P. Thompson, “Time, Work-Discipline, and Industrial Capitalism,” *Past & Present* 38 (1967): 60.

¹⁵³ *Ibid.*, 61.

working day through conventions of timed labor. Children in spinning schools, for instance, would be forced to work from “sun rising to sunset only allowing them an hour for dinner.”¹⁵⁴ Or, more precisely, they would be employed in spinning “ten hours in the day when the days are so long, or as long as it is light when they are shorter.”¹⁵⁵ Further, Locke continues, “all children who are thus obliged to come to these schools shall be paid for what they earn *there in spinning*, according to the ordinary rate paid to others, first deducting from each of them what they have spoilt in tow or flax in their beginning to learn.”¹⁵⁶ As the production process is taken out of the domestic sphere and gradually brought to the workshop, the wage rate becomes a factor of the time spent at work, in the confines of the workplace. Importantly, the labor time workers would spend in training was not so much unremunerated as it was paid for by the workers themselves, whose wages would be reduced according to the value of the materials they “spoil” in learning the trade. Time is here effectively turned into a currency: “it is not passed but spent.”¹⁵⁷ So, when he famously wrote in the *Second Treatise*, “the Turfs my Servant has cut [...] become my *Property*,” Locke did not mean that he owned his servant, of course, but only his servant’s labor-time.¹⁵⁸

By the late seventeenth century, apprenticeship in English textile had not been enforced for many years and, contrary to the restrictions imposed by urban guilds, the rural industry remained open to all workers, including women and children.¹⁵⁹ The creation of a proto-industrial infrastructure for the employment of female and underage peasants in the countryside was a

¹⁵⁴ Locke, “An Essay on the Poor Law (1697),” 192, 192n8.

¹⁵⁵ Locke, “Encouragement of Irish Linen Manufacture (1697),” 366.

¹⁵⁶ *Ibid.*, 366; emphasis mine.

¹⁵⁷ Thompson, “Time, Work-Discipline, and Industrial Capitalism,” 61.

¹⁵⁸ Locke, *Two Treatises*, 289. The “turfs passage” has been a subject of contested debate among Locke interpreters. According to Ellen Meiksins Wood, the master’s payment to his servant is akin to “buying working time and whatever the master can get the labourer to do within the time of his employment.” See Meiksins Wood, “Radicalism, Capitalism, and Historical Contexts,” 365. For skeptical accounts see Ashcraft, “Radical Dimensions of Locke”; Hughes, “Locke, Taxation and Reform.”

¹⁵⁹ Julia De Lacy Mann, *The Cloth Industry in the West of England from 1640 to 1880* (Oxford: Clarendon Press, 1971), 98. By the late 1600s, the increase in supply of finished and colored fabric in England demanded greater quantities of skilled labor. See: Ramsay, *The Wiltshire Woollen Industry*, 130; Kriedte, Medick, and Schlumbohm, *Industrialization Before Industrialization*, 95; Hudson, “Proto-Industrialization in England,” 54.

hallmark of Locke's plan. In order to make the employment of the poor "to the advantage of this kingdom," he proposed setting "all children at 5 years old or sooner" to labor in working schools specialized in "spinning or knitting, or some other part of the woolen manufacture."¹⁶⁰ This measure served the dual purpose of putting both children and women to labor in manufacturing by freeing "wives of day labourers" from childcare.¹⁶¹ In pressing this point, Locke prefigured a widely held belief among eighteenth-century social reformers that only enclosed manufacturing compounds held the promise to effectively assimilate vagrant peasants into the productive segments of the population. "Manufacturers had one advantage over day-labourers," Hugh Cunningham noted, "in manufacture [unlike in farming] there was often employment for women and children."¹⁶² And while Locke's proposal never became a Bill, it was, as James Tully noted, "utilized in Bristol and it served as a highly praised model for discipline of the labouring classes, organization of child labour, factory discipline, and reform schools right up to the [early twentieth century]."¹⁶³ This much Marx had learned from Robert Owen, who had shown in detail that "the germ of the education of the future is present in the factory system."¹⁶⁴ As a silk manufacturer stated to the Children's Employment Commissioners in 1866: "I am quite sure that the true secret of producing efficient work-people is to be found in uniting education and labour from a period of childhood."¹⁶⁵

Historically, the cheap and continual labor supplied by women and children was "integral to the spread of manufacture from the early modern period."¹⁶⁶ Labor-intensive consumer goods industries increased productivity by exploiting the advantages of the division of labor in the

¹⁶⁰ Locke, "An Essay on the Poor Law (1697)," 192.

¹⁶¹ *Ibid.*, 189–90.

¹⁶² Hugh Cunningham, "The Employment and Unemployment of Children in England c.1680-1851," *Past & Present*, 126 (1990), 128–29.

¹⁶³ Tully, *An Approach to Political Philosophy*, 65.

¹⁶⁴ Marx, *Capital*, 1:614.

¹⁶⁵ *Children's Employment Commission, Fifth Report*, London, 1866, p. 82, n. 36. Quoted in *Ibid.*, 1:613n22.

¹⁶⁶ Berg, *The Age of Manufactures*, 31.

workshop while cutting costs by extensively employing underage and female workers.¹⁶⁷ Given this trend, what rendered the rural poor so useful to proto-industrial capital, besides their low wage rate and abundance, was their social condition. More than anything, the destitution, flexibility, and docility of unemployed peasants made them particularly vulnerable to proletarianization through regimes of forced work, confinement, surveillance, discipline, and timed labor that characterized labor politics in early modern manufacturing, as Locke's writings of 1697 vividly illustrate.¹⁶⁸

PART 5: IMPERIAL COMMERCE AND ECONOMIC DEVELOPMENT

As a critical mass of historical scholarship over the last few decades has made plain, the outgrowth of English capitalism since the seventeenth century was an undeniable corollary of Britain's ascendancy over the Atlantic economy. The early modern increase of colonial trade in the Americas and West Indies furnished England with new sources of raw materials for its manufactures, including silk and cotton, along with new markets for their consumption as well as a prodigious supply of enslaved and indentured labor for the production of coveted imports and re-exports, such as tobacco and sugar.¹⁶⁹ Since a sizable portion of the commodities produced by

¹⁶⁷ Marjatta Rahikainen, *Centuries of Child Labour: European Experiences from the Seventeenth to the Twentieth Century* (Aldershot: Ashgate, 2004), 32.

¹⁶⁸ Most children subject to forced labor in early modern Europe were employed in "textile and clothing production, particularly spinning." See *Ibid.*, 31–7. Seventeenth-century projects to expand textile manufacturing "called for women children because they were docile and cheap labor." See Peck, *Consuming Splendor*, 108.

¹⁶⁹ Nuala Zahedieh, *The Capital and the Colonies: London and the Atlantic Economy, 1660-1700* (Cambridge and New York: Cambridge University Press, 2010), 17–54, 238–79; Nuala Zahedieh, "Overseas Expansion and Trade in the Seventeenth Century," in *The Origins of Empire: British Overseas Enterprise to the Close of the Seventeenth Century*, ed. Nicholas P. Canny and William Roger Louis, vol. 1, *The Oxford History of the British Empire* (Oxford: Oxford University Press, 1998), 398–422. On cotton, see Beckert, *Empire of Cotton: A Global History*. On sugar, see Sidney Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Penguin Books, 1985). On tobacco, see Jeff Horn, "Tobacco Colonies: The Shaping of English Society in the Seventeenth-Century Chesapeake," in *The Origins of Empire: British Overseas Enterprise to the Close of the Seventeenth Century*, ed. Nicholas P. Canny and William Roger Louis, vol. 1, *The Oxford History of the British Empire* (Oxford: Oxford University Press, 1998), 170–92. On colonial markets, see T. H. Breen, *The Marketplace of Revolution: How Consumer Politics Shaped American Independence* (New York: Oxford University Press, 2004), Chapters 2–4. On European and Asian markets for New World luxury goods, see Pomeranz, *The Great Divergence*, 114–65,

proto-industries in the English countryside at this time were destined to overseas markets, the historical rise of rural industries in England was of a piece with a much broader, international network of colonial trade in the orbit of Britain's sprawling commercial empire.¹⁷⁰ Although most English woolen cloths were exported to Europe at the turn of the eighteenth century, the industry reaped considerable gains from the imperial policies, logistical infrastructure, and capital investment that sustained the development of Britain's Atlantic trade.¹⁷¹ As Robert Allen remarked, the early modern upturn in wool exports, which "propelled the English economy forward," was meaningfully spurred by the "expansion of intercontinental trade" and an "imperial foreign policy that secured a rising volume of trade."¹⁷² Additionally, the exceptional surplus and mobility of rural labor that galvanized rural industrialization in seventeenth-century England was itself instrumental to the early modern growth of British settlements and commerce in America, furnishing the colonies with multitudes of new working immigrants.¹⁷³ More generally, as Pomeranz has argued, the flow of New World resources into Western Europe, including slave-grown cash-crops and mineral-derived

189–94. For an overview of the recent scholarship on the early modern Atlantic economy, see Ince, *Colonial Capitalism*, 40–47.

¹⁷⁰ On the importance of overseas trade to England's early modern economic growth, see Pincus, *1688*, 81–87; Daron Acemoglu, Simon Johnson, and James Robinson, "The Rise of Europe: Atlantic Trade, Institutional Change, and Economic Growth," *The American Economic Review* 95, no. 3 (2005): 546–79. For a succinct overview of how colonial trade and new Atlantic markets advanced British economic development since the seventeenth century, see: Robin Blackburn, *The Making of New World Slavery: From the Baroque to the Modern, 1492-1800* (London and New York: Verso, 1997), 518–27. On how the triangular Atlantic trade was fundamental to England's place as the warehouse and workshop of world commerce, see Arrighi, *The Long Twentieth Century*, 179–218. On English foreign trade in this period, see Ralph Davis, "English Foreign Trade, 1660-1700," in *The Growth of English Overseas Trade in the Seventeenth and Eighteenth Centuries*, ed. Walter Minchinton (London: Methuen & Co, 1969), 78–98.

¹⁷¹ On the importance of English wool exports to the development of Britain's early modern economy, see Robert C. Allen, *The British Industrial Revolution in Global Perspective* (Cambridge: Cambridge University Press, 2009), 109, 117, 130. On the reliance of proto-industrialization on long-distance networks of transportation and communication linking the countryside to towns and thus to overseas markets, see Jan De Vries, *European Urbanization, 1500-1800* (Cambridge: Harvard University Press, 1984), 238–40. On England's world market for textiles in the late seventeenth century, see Eric Kerridge, *Textile Manufactures in Early Modern England* (Manchester: Manchester University Press, 1985), 218–19. On the export of cloth manufactures from the West of England to America, see Mann, *The Cloth Industry*, 45, 152, 166, 173, 216–18.

¹⁷² Allen, *The British Industrial Revolution in Global Perspective*, 130.

¹⁷³ Blackburn, *The Making of New World Slavery*, 228–29; Alison Games, "Migration," in *The British Atlantic World, 1500-1800*, ed. David Armitage and Michael J. Braddick, 2nd ed. (Basingstoke and New York: Palgrave Macmillan, 2009), 38–45.

energy, allowed Britain to circumvent the “proto-industrial cul de sac” in which the production of fiber, fuel, food, and finished consumer goods competed for labor and scarce quantities of land.¹⁷⁴ These Atlantic resources, which were at the time unavailable to advanced economies in Eastern Europe and Asia, advanced English industrialization by, among other things, facilitating the transfer of agrarian and handicraft workers into the factory system. The imperative significance of the Atlantic economy to the domestic development of English proto-industry was evident in the terms of imperial trade established by the 1696 Navigation Act, which remained the official policy of Britain’s commercial empire throughout the eighteenth century.¹⁷⁵

If the British Atlantic was, as one commentator remarked, the “hub of empire,” then Locke’s enduring service in colonial administration from 1669 to 1700 gave him a privileged vantage—a rare “practical cosmopolitanism”—from which to visualize the intimate connections between England’s domestic economy and the expansion of its intercontinental commercial empire.¹⁷⁶ As David Armitage put it, “Locke’s arguments in the 1690s showed his awareness of the larger archipelagic and Atlantic context within which political-economic argument was now necessarily being played out.”¹⁷⁷ In light of England’s early modern immersion in world trade, my preceding reading of Locke’s economic ideas in the 1690s raises two implications for our understanding of his place in modern European theories of empire. First, Locke’s adamant push to improve English wool production in rural workhouses was part and parcel of his stadial theory of economic progress whereby agrarian societies, such as America and the West Indies, were construed

¹⁷⁴ Pomeranz, *The Great Divergence*, 206–7, 264.

¹⁷⁵ Herman Wellenreuther, “Britain’s Political and Economic Response to Emerging Colonial Economic Independence,” in *The Empire of Credit: The Financial Revolution in the British World, 1688-1815*, ed. Daniel Carey and Christopher J. Finlay (Dublin and Portland: Irish Academic, 2011), 121–40. Wellenreuther notes that, while British imperial trade policy did not change throughout the 1700s, the macro-economic structure of Britain’s trade relations with its North American colonies underwent significant transformations, especially since, from an economic point of view, “the colonists achieved independence well before 1775” (pp. 122-3).

¹⁷⁶ David Armitage, *Foundations of Modern International Thought* (Cambridge: Cambridge University Press, 2013), 76, 88.

¹⁷⁷ Armitage, *Ideological Origins*, 166.

as primitive forerunners of the developed, commercial economies England and the Dutch Republic had become. Second, Locke's scale of economic development betrays his imperial vision of how and to what ends Britain's colonial economies should be developed—managed, pruned, and propped up—in the interest of metropolitan economic growth. For Locke, the best-suited approach to governing a colony for the benefit of England's wealth and power depended on that particular colony's state of economic development. The role of his imperial commercial policy, then, was to improve the economies of British colonies according to their place within his scale of progress so they could, as a result, favor England's volume and balance of trade. While the encouragement of commercial agriculture in America and the West Indies would fulfill this goal by perfecting their plantation complex, the proper management of a more developed colony, such as Ireland, was to stimulate its production and trade of manufactured commodities.

In *Some Considerations*, Locke argued that for England, a country “not furnished with Mines,” “there are but two ways of growing Rich, either Conquest, or Commerce.”¹⁷⁸ To this he added that trade, “where it is managed with Skill and Industry” rather than force, is “a surer and shorter way to Riches.” And if “no Body is vain enough to entertain a Thought of our reaping the Profits of the World with our Swords,” then “Commerce therefore is the only way left to us.”¹⁷⁹ Given the diverse comparative advantages of Britain's Atlantic settlements, colonies played varying roles in favoring British trade. Since gains from colonial expansion were, for Locke, rooted in commerce rather than conquest, it follows that the most pressing question for an effective imperial policy was discerning what particular type of economic activity was optimal to the economic development, or improvement, of a particular colony. As I contend, Locke proposed that in order to reap the greatest advantages from its colonies, Britain should govern the economy of its settlements in accordance

¹⁷⁸ Locke, “Some Considerations,” 222.

¹⁷⁹ *Ibid.*, 223. This is consistent with Locke's understanding of conquest in the *Second Treatise*, which would grant the conqueror a right over the life of an aggressor but not the estate, goods, money, and property of the vanquished. See Locke, *Two Treatises*, II, §182, 390.

with their degree of economic progress and comparative advantage. To illustrate this claim, I will outline the contours of Locke's theory of imperial commerce in two sequential steps. First, I argue that, while Locke never subscribed to a hierarchical order of populations characteristic of modern imperialism, he did adhere to a stadial theory of economic progress upon which he advanced the twin principles of imperial commerce: an empire's *right* to favorably trade with its colonies and its *duty* to improve them. Second, by looking to his writings on Ireland, I foreground how Locke's scale of progress informed his prescription to encourage the Irish linen industry through a plan that, much like his proto-industrial prescriptions for England's economic development that decade, combined the cultivation of raw materials with the manufacturing of finished commodities.

In an incisive corrective to recent interpretations of Locke's imperial thought, Armitage argues that although Locke was beyond doubt a colonial thinker, he fell short of being a theorist of empire. On this account Locke, unlike modern imperialists, never espoused a Eurocentric hierarchical ordering of civilizations because "he saw rationality itself as evenly distributed among human populations."¹⁸⁰ Indeed, for Locke, native peoples of the Americas or West Indies were neither naturally inferior nor irrational, but corrupted by social vices, such as impiety, mercilessness, infidelity, promiscuousness, and idleness, all of which could be redressed through instruction, education, and institutional reform.¹⁸¹ While I agree with Armitage's point that Locke did not necessarily embrace a hierarchy of civilizations governed by invidious natural differences among populations, I maintain that he did submit to a hierarchical theory of progress that, to borrow Armitage's own formulation elsewhere, was "developmental, if not necessarily progressivist."¹⁸² Importantly, the subjects of Locke's theory of progress were *economies* as opposed to populations,

¹⁸⁰ Armitage, "John Locke: Theorist of Empire?," 86.

¹⁸¹ *Ibid.*, 95–96.

¹⁸² Armitage, *Foundations of Modern International Thought*, 79.

and its markings of development were *economic* attributes such as private property, trade, and industry, rather than innate or natural capacities such as reason.

In the *Second Treatise*, for instance, Locke articulates the stark contrast between England and America by plotting each within a matrix of progress in which particular regions, as opposed to their populations, are ordered according to their economic development, beginning with a state of nature composed of hunters and gatherers, then moving to an agrarian civilization of farmers and graziers, and ending with a commercial society steeped in and propelled by markets, money, manufacturing, foreign trade, the mechanical arts, and private property rights.¹⁸³ It is certainly possible that, for Locke, commercial economies the likes of England or Holland developed faster and with greater intensity than agrarian societies, such as America or the West Indies, due to unforeseeable contingencies. But even then, the place these economies took up in his global scale of progress was determined by concrete and tangible economic indicators, which in turn played a pivotal role in his hierarchical vision of imperial commerce. In other words, the key levers in Locke's global scale of progress—the markings of development—are economic attributions such as industry, labor, money, and trade.¹⁸⁴ Rather than being bequeathed to a group by nature, these economic determinants of progress are acquired, learned, and honed in civil society through the various industrial, financial, and market-based institutions of a commercial economy set in motion by the imperatives of capitalist production, exchange, and accumulation—all of which could be, at least in theory, instituted anywhere and pursued by anyone.¹⁸⁵

Above all else, the quality, productivity, and application of labor, along with improvements in manufacturing, exchange, finance, and shipping are factors that, on Locke's telling, render one

¹⁸³ On the resonances of Locke's arguments about property within Enlightenment models of moral progress, see James Tully, "Aboriginal Property and Western Theory: Recovering a Middle Ground," in *Theories of Empire, 1450-1800*, ed. David Armitage (Aldershot: Ashgate, 1998), 357–61.

¹⁸⁴ On the function of money in Locke's theory of property as a means of propelling moral and material progress, productive development, and the accumulation of value, see Ince, *Colonial Capitalism*, 47–69.

¹⁸⁵ On property in Locke's theory of development, see Tully, *An Approach to Political Philosophy*, 155–66.

society superior to another in economic terms. This much is clear in Locke's understanding of idleness as a universal ill present in societies across his spectrum of development.¹⁸⁶ As his "Essay" makes plain, Locke was as critical of idleness in America as in England. His invidious classification of Native Americans in the *Second Treatise*, for instance, is predicated on their undeveloped economy rather than their innately inferior nature. So too was Locke's condemnation of uncultivated land universal, as evinced by his call to confiscate parcels of unproductive land belonging to Virginia's idle elites so their uncultivated property could be redistributed among poor English colonists.¹⁸⁷ Indeed, the problem with America's backward state of affairs, as Locke saw it, was its abundant yet unimproved land—its "*great Tracts of Ground [that] lie waste*"—occasioned by the unproductive ends to which native populations applied their labor.¹⁸⁸ In short, then, what causes Native Americans to be less productive and more wasteful than the English and the Dutch is also what demarcates America as an economy in arrested development: the rudeness of their industry, labor, and trade. These societies are thus "rude" and "primitive" because their economies are unable to supply consumers with the comforts of life—those "new and beneficial productions whereby our stock of riches (i.e. things useful for the convenience of our life) may be increased or better preserved."¹⁸⁹ As I noted above, it is precisely this developmental logic, which is a central feature Locke's economic thought, that leads him to view Holland as a superior and more developed economy than England.

As such, the markings of an advanced economy upon which Locke rests his theory of progress are—rather than "contingent" and "fragile" as Armitage claims—discernible and tangible imprints of commercial, financial, and industrial development. What renders an economy more

¹⁸⁶ According to James Tully, however, Locke took Native American peoples to be incapable of consenting to the private ownership of property. See Tully, *An Approach to Political Philosophy*.

¹⁸⁷ Holly Brewer, "Slavery, Sovereignty, and 'Inheritable Blood': Reconsidering John Locke and the Origins of American Slavery," *The American Historical Review* 122, no. 4 (October 1, 2017): 1065–66; Michael G. Kammen, "Virginia at the Close of the Seventeenth Century: An Appraisal by James Blair and John Locke," *The Virginia Magazine of History and Biography* 74, no. 2 (1966): 141–69.

¹⁸⁸ Locke, *Two Treatises*, II, §45, 299; II, §42, 297.

¹⁸⁹ Locke, "Understanding (1677)," p. 216.

developed than another, then, is the extent to which its application of productive labor propels commercial agriculture, manufacturing, and trade such that, as a result, the economic lives of its subjects are improved and the state is made richer and more powerful. To illustrate that the value of finished commodities derives almost entirely from “*Humane Industry*,” Locke traces the production of consumer goods in the *Second Treatise* “through their several progresses, before they come to our use.”¹⁹⁰ These micro “progresses” of a commodity’s stages of production—from raising and breeding sheep in pastures to spinning animal fibers in cottages to weaving yarn in workhouses—are analogous to the macro progress of an economy across its various stages of development, from agriculture and husbandry to manufacturing and global trade. In the context of an imperial economy such as Britain’s, the level of economic development of a particular colony is crucial to determining what type of economic activity—arable, pastoral, industrial, and so forth—should be encouraged within it to the advantage of metropolitan trade. Under these conditions, the metropole and the colony enter not simply a commercial relationship, but an *imperial* one defined by a correspondence of inequality between the dominant and subservient party.¹⁹¹ My interest in making this distinction hinges less on whether Locke’s theory of progress warrants him the label of “a theorist of empire” than it does on understanding how his idea of progress relates to what I have called his proto-industrial political economy.

As Locke outlines in the *Second Treatise*, economic progress in America—the improvement of its land through husbandry and productive labor—was not a matter of industrial development in manufacturing, as was then the case in England, but in arable farming. By refining its plantation complex, America would raise its economy from a state of uncultivated waste to one of productive agrarian commerce. This would in turn benefit the English economy by opening up new foreign markets for its domestic commodities and, as a result, encourage its manufacturing and shipping

¹⁹⁰ Locke, *Two Treatises*, II, §42, 297.

¹⁹¹ Bell, *Reordering the World*, 91; Tully, “Lineages of Contemporary Imperialism,” 5–6, 14, 28.

industries; planters would thus require “a catalogue of things” made in England to cultivate and transport their cash-crops, including, as Locke wrote in 1696, “all the Materials made use of in the Ship, that brought any of the Commodities made use of by any of the Workmen, to any part of the Work.”¹⁹² For Locke, the value of Atlantic colonies derived less from their abundance in land than from their potential to drive the growth and development of British industry, trade, and navigation. Given this, it is striking that the debate around Locke’s embroilment in empire and colonialism has focused mostly on his theory of property and defense of colonial dispossession in the *Second Treatise*.¹⁹³ As a result, the ongoing controversy regarding the imperial and colonial overtones in Locke’s thought has generally overlooked the specific role trade and industry play in his broader vision of empire, an aspect of his thinking that was as crucial to his professional, personal, and intellectual investments in the colonies as to his treatment of land and property.¹⁹⁴

The view that Atlantic colonies were most valuable to England as emerging markets for national manufactures was a cornerstone of Whig imperial policy following the deposition of James II. Not only did Whigs encourage new taxation schemes that, as Pincus points out, “would favor the manufacturing as opposed to the agrarian sector,” they also pushed for the creation of the Bank of England, which would “simultaneously support manufacturers and provide liquidity to the

¹⁹² Locke, “Notes on Trade in Sweden, Denmark and New England” (1696; Bodleian Library, MS Locke c. 30, folio 38). Quoted in Barbara Arneil, “Trade, Plantations, and Property: John Locke and the Economic Defense of Colonialism,” *Journal of the History of Ideas* 55, no. 4 (1994): 603.

¹⁹³ On the relationship between Locke’s colonialism and his theory of property, see Tully, *An Approach to Political Philosophy*, 137–76; Bhikhu Parekh, “Liberalism and Colonialism: A Critique of Locke and Mill,” in *The Decolonization of Imagination: Culture, Knowledge, and Power*, ed. Jan N. Pieterse and Bhikhu Parekh (London: Zed Books, 1995), 81–98; Arneil, *John Locke and America: The Defence of English Colonialism*; Uday Singh Mehta, *Liberalism and Empire: A Study in Nineteenth-Century British Liberal Thought* (Chicago and London: University of Chicago Press, 1999), 46–64; Ince, *Colonial Capitalism*, Chapter 2.

¹⁹⁴ For critics of the position that Locke’s thought was embroiled in colonialism, imperialism, and slavery, respectively, see Vicki Hsueh, “Unsettling Colonies: Locke, ‘Atlantis’ and New World Knowledges,” *History of Political Thought* 29, no. 2 (2008): 295–319; Armitage, “John Locke: Theorist of Empire?”; Brewer, “Slavery, Sovereignty, and ‘Inheritable Blood.’”

government.”¹⁹⁵ According to Whig imperial policy, the central economic advantage of overseas settlements derived less from their promise to enlarge Britain’s landmass than from their potential to pry open new markets for Britain’s consumer industries.¹⁹⁶ Indeed, the “maelstrom of change” that followed England’s political transformations in the 1690s included above all important shifts in colonial governance and commerce crystalized by the newly minted Board of Trade.¹⁹⁷ Composed predominantly of reforming Whigs, the Board was a driving engine in the overhaul of Britain’s incumbent imperial economy in the wake of the Glorious Revolution. And although Locke’s leadership within the Board is well known, less attention has been paid to how his proto-industrial prescriptions for domestic growth related to adjacent transformations in British imperial policy. To answer this question we must veer the focus of ongoing debates around Locke and empire away from the reigning interest in his theory of property, important though it certainly is, and towards his treatment of colonial trade. Locke’s writings and correspondences on the Irish economy during this period offer an illuminating perspective on his understanding of imperial commerce not in the least because Ireland was, in sharp contrast to British America, one of the colonies for which the question of trade became a more pressing political and economic concern than that of settlement and land at the turn of the eighteenth century.¹⁹⁸

¹⁹⁵ Steve Pincus, “Rethinking Mercantilism: Political Economy, the British Empire, and the Atlantic World in the Seventeenth and Eighteenth Centuries,” *The William and Mary Quarterly* 69, no. 1 (2012): 22–23, 27. Trevor Burnard notes that the rapid economic expansion of the British West Indies following the Glorious Revolution attested to the Whig position that wealth derived from labor rather than land, see Trevor Burnard, “Making a Whig Empire Work: Transatlantic Politics and the Imperial Economy in Britain and British America,” *The William and Mary Quarterly* 69, no. 1 (2012): 51–56.

¹⁹⁶ As Pincus writes, “This was why in the proposed Whig peace treaty of 1709, the British had demanded not territorial acquisition but rather a Habsburg on the Spanish throne and free trade in Spanish America.” Pincus, “Rethinking Mercantilism,” 27.

¹⁹⁷ Brewer, “Slavery, Sovereignty, and ‘Inheritable Blood,’” 1059–60.

¹⁹⁸ This is not to imply, of course, that British settlement in Ireland was unimportant at this point but rather to point out that it was not as central an issue for economic thinkers and policymakers of the period as trade. For an excellent treatment of British settlement in Ireland in this period, see T. C. Barnard, “New Opportunities for British Settlement: Ireland, 1650–1700,” in *The Origins of Empire: British Overseas Enterprise to the Close of the Seventeenth Century*, ed. Nicholas P. Canny and William Roger Louis, vol. 1, *The Oxford History of the British Empire* (Oxford: Oxford University Press, 1998), 309–27.

In the context of Locke's perspective on economic development, Ireland occupied a liminal position; neither were its consumer industries as advanced as those of England and Holland, nor was its agrarian sector as undeveloped as those of America and the West Indies. While Ireland did not benefit as Scotland had from the trade regulations of the Navigation Acts, it sustained a considerable clandestine trade with the American colonies in provisions and textiles despite England's prohibitions.¹⁹⁹ Moreover, unlike Britain's New World colonies, the contours of Irish self-government were far less definitive. But this in turn meant that Ireland's anomalous status as both kingdom and colony "generated the most pointed discussions of nation, state and empire in British political thought of the late seventeenth century."²⁰⁰ Because Locke contributed to the debate on England's economic relationship with Ireland in the late 1690s, taking stock of his position on this aspect of British imperial policy opens at least two avenues for reinterpreting his ideal vision for a thriving commercial empire. First, as an overlooked dimension of Locke's international thought, Ireland unveils salient aspects of his theory of empire that most accounts focusing exclusively on America cannot fully capture. Second, discerning what was distinctive about Locke's stance on Ireland sheds new light on how his proto-industrial views about economic development in England related to his outlook on overseas trade with the colonies.²⁰¹

The central problem animating political discourse around Ireland in the 1690s was the threat it posed to England's woolen industry. "Of all the Plantations settled by the *English*," John Cary

¹⁹⁹ Daniel Carey, "An Empire of Credit: English, Scottish, Irish, and American Contexts," in *The Empire of Credit: The Financial Revolution in the British World, 1688-1815*, ed. Daniel Carey and Christopher J. Finlay (Dublin and Portland: Irish Academic, 2011), 9; R. C. Nash, "Irish Atlantic Trade in the Seventeenth and Eighteenth Centuries," *The William and Mary Quarterly* 42, no. 3 (1985): 329–56, doi:10.2307/1918931.

²⁰⁰ David Armitage, "The Political Economy of Britain and Ireland after the Glorious Revolution," in *Political Thought in Seventeenth-Century Ireland: Kingdom or Colony*, ed. Jane H. Ohlmeyer (Cambridge and New York: Cambridge University Press, 2000), 225.

²⁰¹ For an insightful discussion of improvement, civil society, and empire in debates over Irish economic development and England's stake in it, from the late seventeenth through the eighteenth century, see James Livesey, *Civil Society and Empire: Ireland and Scotland in the Eighteenth-Century Atlantic World* (New Haven and London: Yale University Press, 2009), 77–84.

wrote in 1695, Ireland “hath proved most injurious to the Trade of this Kingdom, and so far from answering the ends of a Colony, that it doth wholly violate them.”²⁰² Cary’s preferred measure against the development of Ireland’s burgeoning textile industry was thus to “limit their Trade [...] by reducing that Kingdom to the State of our other Plantations, confining the Exportation of their Product only hither, and that also *unmanufactured*, and preventing their being supplied with Necessaries from other Nations.”²⁰³ And although Cary entertained the possibility—albeit only briefly and in passing—of encouraging Ireland’s linen industry as an alternative to checking their industrial growth entirely, his optimal resolution for the threat of Irish competition in the world market for textiles was to encourage its pastoral agriculture, especially as a source of cheap cattle to sustain England’s demographic and economic expansion.²⁰⁴

Writing in 1699, Charles Davenant echoed Cary’s alarm, arguing that if Ireland were allowed to trade freely with the rest of Europe, the low price of its finished commodities occasioned by the availability of cheaper production costs would in time dry up England’s share of foreign consumer markets or, in his words, “cut the Turf from under our Feet.”²⁰⁵ Much like Cary’s, Davenant’s ultimate solution was to enforce Ireland’s status as a colonial plantation by suppressing its textile trade wholesale and, “in keeping with their backwardness,” limit Irish foreign commerce to furnishing England with livestock.²⁰⁶ In the context of his theory of world trade, Davenant’s plan for Ireland aligned with what he viewed as the best policy for Britain’s northern American colonies,

²⁰² John Cary, *An Essay on the State of England in Relation to Its Trade* (Bristol: W. Bonny, 1695), 89.

²⁰³ *Ibid.*, 98, emphasis mine.

²⁰⁴ *Ibid.*, 101–10. Cary called for revocation of the Cattle Acts banning the export of Irish cattle to England.

²⁰⁵ Davenant, *An Essay Upon the Probable Methods of Making a People Gainers in the Ballance of Trade* (London: James Knapton, 1699), 118.

²⁰⁶ Istvan Hont, “Free Trade and the Economic Limits to National Politics: Neo-Machiavellian Political Economy Reconsidered,” in *The Economic Limits to Modern Politics*, ed. John Dunn (Cambridge: University of Cambridge Press, 1990), 85, 88–89. On top of pushing for the restriction of wool production and export in Ireland, Davenant also explicitly rejects the position that linen should be encouraged there and, in turn, suggests that the prohibition on Irish cattle should be lifted. See Davenant, *Ballance of Trade*, 129–31.

namely, to supply southern planters with the “nourishment of Life” or “Product of the Earth.”²⁰⁷ As he put it, if the northern colonies in America were to “set up Manufactures, and to Cloath, as well as feed their Neighbours, their nearness, and low Price, would give ’em such Advantages over this Nation as might prove of pernicious Consequence.” Yet, he assured the reader, the possibility of industrial development in America was, unlike in Ireland, “very remote, because new Inhabitants, especially in a large Extent of Country, find their Accompt better, in Rearing Cattle, Tilling the Earth, clearing it of Woods, making Fences, and by erecting Necessary Buildings, than in setting up of Manufactures, which is the last work of a People settled three or four hundred Years; growing numerous, and wanting Territory.”²⁰⁸ By contrast, Davenant’s fear of Irish competition in manufacturing was very real and therefore demanded a direct intervention from England to disinvest and underdevelop Ireland’s textile trade. In sum, for Cary and Davenant alike, Ireland must be dealt with not only as an agrarian colony in the service of metropolitan proto-industrialization; it must also abandon its plans for commercial development and its hopes of improving its textile industry altogether.

Locke’s plan for Ireland was decidedly different. The Board of Trade had been debating the Irish question since 1696 and, following a series of consultations on the state of Ireland’s linen trade with William Molyneux, Locke drafted his solution in 1697, which was endorsed by his colleagues at the Board.²⁰⁹ Unlike Cary’s and Davenant’s proposals to retrench Irish manufacturing and limit the colony’s economic function to a pastoral plantation, Locke argued strongly in favor of prodding Ireland’s linen industry through an ambitious scheme that, characteristic of what I have called his

²⁰⁷ Davenant, *Discourses on the Publick Revenues, and on the Trade of England* (London: J. Knapton, 1698), 225–27.

²⁰⁸ *Ibid.*, 227.

²⁰⁹ Locke, “Encouragement.” For Locke’s correspondence with Molyneux on the Irish linen trade, from September 1696 to January 1698, see: E. S. De Beer, ed., *The Correspondence of John Locke*, vol. 5 (Oxford: Clarendon, 1979), 701–5; De Beer, *The Correspondence of John Locke*, 1981, 6:4–9, 189–93, 219–22, 229–32, 292–97. See also: Patrick Kelly, “The Irish Woollen Export Prohibition Act of 1699: Kearney Re-Visited,” *Irish Economic and Social History* 7 (1980): 22–44; Hont, “Free Trade,” 80, n83; Armitage, “The Political Economy of Britain and Ireland,” 239–41.

“proto-industrial” outlook in the 1690s, would unite the cultivation of flax and hemp with the production of finished linen textiles in a network of public workhouses across the country.²¹⁰ As I note in the previous section, Locke’s plan would employ the latest manufacturing technologies alongside innovative measures to enhance productivity, increase output, and standardize quality through an intricate system of rewards and punishments, from apprenticeships for unskilled workers and performance-based bonuses for managers to the enforcement of disciplinary action and punitive sanctions leveled against detractors.²¹¹ Locke’s plan therefore ensured that Ireland would remain one of the peripheral economies managed by and subservient to British imperial rule and pecuniary interests.²¹² Yet, although he certainly thought of Ireland as a colony in the metropole’s service, he did not see it—in the vein of Cary and Davenant—as just another one of Britain’s plantations.²¹³

As Armitage observed, Locke did not advance as thoroughgoing a vision of the global economy as William Petty, Charles Davenant, Henry Martyn, or Pierre Nicole. Rather, his treatment of foreign trade was almost entirely confined to the Atlantic seaboard.²¹⁴ At the same time, however, the imperial thrust of Locke’s perspective on world commerce ensues from his understanding of British economic development as a project to be pursued as much nationally as globally. That is, England’s economic growth was tied to and dependent on its management of the colonies with a

²¹⁰ Locke, “Encouragement,” 365–69.

²¹¹ *Ibid.*, 367–72. For an analysis of Locke’s philosophy of rewards and punishments as it applies to his thinking about labor discipline see Tully, *An Approach to Political Philosophy*, 64–68.

²¹² My reading of Locke’s view on Ireland is consistent with the unfavorable position he and the Board of Trade took regarding Scotland’s attempt to found a joint-stock trading company in Panama in 1697, known as the “Darien Venture.” While the Board’s justification for suppressing the Darien Venture was that it violated the 1670 Treaty with Spain and conflicted with England’s interests in the West Indies, in doing so, the Board also stifled Scotland’s own imperial aspirations to attain economic independence and modernization without metropolitan tutelage. See David Armitage, “The Scottish Vision of Empire: Intellectual Origins of the Darien Venture,” in *A Union for Empire: Political Thought and the British Union of 1707*, ed. John Robertson (Cambridge: Cambridge University Press, 1995), 109–11.

²¹³ Locke did not, for instance, voice support for Henry Maxwell’s view that a union should be formed with Ireland, despite their shared interest in Irish economic development. Nor did Locke agree with his friend William Molyneux that Ireland should be considered a kingdom, on equal footing with Scotland. See Armitage, “The Political Economy of Britain and Ireland,” 240–43; Armitage, *Ideological Origins*, 156–57.

²¹⁴ Armitage, “John Locke: Theorist of Empire?,” 90–93.

view to their improvement. So, rather than promoting England's woolen trade by constraining Ireland's textile industry, as per competing doctrines, Locke found a way to square the demands of English imperial authority and economic growth with those of Irish industrial expansion. It is certainly true that Locke's international thought was neither as geographically wide-ranging nor as anthropologically hierarchical as the theories of later imperial ideologues. Still, his view of world commerce was nevertheless *imperial* insofar as it did, like such ideologies, subscribe to both a hierarchical, stadial scale of economic improvement and a managed system of commercial governance aimed at moving the colonies along the various stages of economic development outlined in his theory of progress. As such, Locke's economic thought was intimately bound by what Maurice Cranston dubbed a "zeal for commercial imperialism" and "the possibilities it offered for personal and national enrichment."²¹⁵

Although I accept Armitage's claim that a hierarchical ordering of populations based on theories of racially-marked rational capacity was central to modern theories of empire, I am less convinced that it was a necessary condition of imperial ideology. According to Duncan Bell, for instance, imperialism, in its broadest definition, may refer to an attitude or disposition invested in creating, maintaining, or intensifying "relations of inequality between political communities."²¹⁶ Indeed, modern ideologies of empire included—and still include—a remarkable plurality of historical strategies of exclusion, exploitation, and governance, such as practices and discourses that replaced direct forms of settler colonialism and formal practices of ethno-racial domination in favor of indirect and informal means of economic, political, cultural, and non-territorial rule.²¹⁷ As

²¹⁵ Maurice Cranston, *John Locke: A Biography* (Oxford and New York: Oxford University Press, 1985), 119.

²¹⁶ Bell, *Reordering the World*, 91.

²¹⁷ On indirect, informal, and free trade imperialism, see James Tully, *Public Philosophy in a New Key: Imperialism and Civic Freedom*, vol. II (Cambridge: Cambridge University Press, 2008), 195–221; Tully, "Lineages of Contemporary Imperialism." On indirect imperial rule, see Karuna Mantena, *Alibis of Empire: Henry Maine and the Ends of Liberal Imperialism* (Princeton: Princeton University Press, 2010). On the diverse forms of British imperial governance since the nineteenth century, see Bell, *Reordering the World*, 107–10.

Prasannan Parthasarathi discerns, Britain's imperial trade policies in the Indian subcontinent were "not only destructive, in that they checked and constrained industrial activity, but also creative, as they channeled manufacturing work along certain lines."²¹⁸

In his genealogy of modern imperialism, James Tully noted that, in addition to claiming a commercial or cosmopolitan *right (ius imperium)* to access the resources, labor, and markets of their colonies, imperial powers have historically imputed to their governments a particular *duty* to "improve the conditions of the imperialised country."²¹⁹ By contrast to Cary and Davenant, whose commercial policies were unconstrained by a developmental duty to improve Ireland's textile trade, Locke's call to expand Irish linen production conveys Britain's imperial *right* to trade with and *duty* to improve Ireland in its capacity as a British colony. To be sure, Davenant's plan to ward off Irish manufacturing and restrict its textile trade was also couched in a language of improvement insofar as it would, by his estimates, lay a "Necessity on [...] Landed Men, of doing their utmost to promote other Improvements, of which [Ireland's] soil is capable."²²⁰ Yet, the goal here was to underdevelop Irish manufacturing rather than to develop its economy as a whole; encouraging Ireland's pastoral sector was not a means to the end of economic progress. Instead, his objective was to improve Irish agriculture so that it would *remain* an agrarian society—a colonial plantation—and, by virtue of its specialization in raising cattle, lower the price and increase the output of its livestock to fuel England's industrial and demographic growth with a cheap and abundant supply of food. By contrast, Locke set out to improve the Irish economy as a whole, rather than its agrarian sector alone. In accordance with his stadial idea of economic progress, Locke's scheme was to propel Ireland's linen trade by accelerating the colony's ongoing development in manufacturing and lifting

²¹⁸ Prasannan Parthasarathi, "Trade and Industry in the Indian Subcontinent, 1750-1913," in *Reconceptualizing the Industrial Revolution*, ed. Jeff Horn, Leonard N. Rosenband, and Meritt Roe Smith (Cambridge and London: MIT Press, 2010), 272.

²¹⁹ Tully, "Lineages of Contemporary Imperialism," 10–11.

²²⁰ Davenant, *Ballance of Trade*, 126.

it from an agrarian to a proto-industrial economy as a supplement rather than a threat to England's woolen trade.

CODA: THE GREAT ART OF GOVERNMENT

Reading Locke's economic thought as an articulation of proto-industrial capitalism and imperial commerce implies casting the meaning of his political economy in a new light. First, the political import of the "proto-industrial" designation ensues from the historical significance of proto-industrialization as both a progenitor of the industrial factory system and a key impetus for the proletarianization of the rural poor in England and parts of Western Europe. Historically, the mass migration of surplus agrarian labor to rural manufacturing was the "early modern economic and social change which paved the way for the factory system and wage labour."²²¹ The English textile industry in the long eighteenth century provided the "missing link" between the proto-industrial and modern industrial cycles of production.²²² Conceptually, the term "factory" surfaced in the nineteenth century when thinkers such as Charles Babbage and Andrew Ure defined the factory system as a concealed workplace whose production cycle—called to motion by central legislating mechanisms like the steam engine and the clock—melded the human movement of labor with the mechanical rhythm of machines.²²³ Yet, depictions of the factory as a paragon of machine technology and a synecdoche for urban industrialization are limiting models for understanding its place within the broader development of capitalism before the nineteenth century. As the historical context of Locke's late thinking reveals, the economic reasoning and social conditions that

²²¹ Berg, *The Age of Manufactures*, 66.

²²² In particular the calico-printing proto-factories, *Ibid.*, 74; Kriedte, Medick, and Schlumbohm, *Industrialization Before Industrialization*, 17.

²²³ In the English language, the dominant usage of "factory" in the eighteenth century derived from its association with agency and defined work establishments set up by traders abroad. In the early 1700s, the word "manufacture" alluded to "anything 'made by art,' the productions of a place or country, or a site of production." In contrast to manufactures, "factories" were usually referred to as "mills" where machines (supervised by workers) were the main source of labor-power in production. See Tribe, *Genealogies of Capitalism*, 107–9.

spearheaded the factory in the 1800s had already been fomenting in the English countryside since the seventeenth century.²²⁴ And although his vision of an embryonic factory system portended the *fait accompli* of capitalist modernity, Locke could not have anticipated the extent to which his ideas attended to economic transformations already afoot. By contrast, later thinkers such as Karl Marx and Michel Foucault, being distant enough from the heyday of agrarian capitalism, were well placed to earmark with hindsight the constituent events, practices, discourses, and institutions that culminated in the nineteenth-century triumph of industrial capitalism in England. As much for Marx as for Foucault, capitalist industry was born in the English countryside and animated by the same political problems and postulates that underpinned the bulk of Locke's late economic theory. Both thinkers agreed that England's historical solution to turn the tide of its agrarian crisis was to forcefully employ legions of errant peasants in a proto-industrial cycle of production that conformed to Locke's prescriptions to refit the national economy in the 1690s.²²⁵

Second, in seeing the economic development of Ireland as a complement, rather than a threat, to the growth of England's rural industries and foreign trade, Locke's theory of imperial commerce combined the seemingly irreconcilable goals of favoring the metropole's pecuniary interests, national manufactures, and balance of trade, on the one hand, and promoting the overall economic progress of British colonies on the other. As I explain above, this constitutes an imperial concept of commercial exchange insofar as it ensures that the colony remains subordinate, unequal, and subservient to as well as dependent on the metropole in at least two respects. First, the fate of Irish economic progress would be unilaterally decided by the English Parliament; second, the

²²⁴ Offering an alternative view to Babbage and Ure, William Cooke Taylor argued in 1844 that the essence of a factory consisted less in the employment of machinery than in the concentration, division, and supervision of labor, see Marx, *Capital*, 1:439–43, 490, 637, 914n, 915. Mantoux, *The Industrial Revolution*; H. D. Fong, *Triumph of Factory System in England* (Tientsin, China: Chihli Press, 1930), 16–17.

²²⁵ For Marx, see Marx, *Capital*, 1:439–43, 490, 637, 914n, 915. For Foucault, see Michel Foucault, *The Punitive Society: Lectures at the Collège de France, 1972-1973*, ed. Bernard E. Harcourt, trans. Graham Burchell (New York: Palgrave Macmillan, 2015), 287, 206, 210–16, 232–33; Michel Foucault, *Discipline and Punish: The Birth of the Prison*, trans. Alan Sheridan (New York: Vintage Books, 1995), 220–21.

colony's prospects of reaping the material rewards of economic development—employment, growth, and wealth—would be strictly dependent on its ability to promote metropolitan interests. In making economic development in Ireland a means to the ends of enriching and strengthening England, Locke was able to harmonize the otherwise antagonistic interests of two supposedly competing economies through an imperial understanding of world commerce in which the metropole and the colony were unequal yet mutually beneficial and essential parts of a unified, global economic system.²²⁶ Moreover, Locke's vision of a proto-industrial commercial empire was the linchpin of his political theory insofar as it attended to what he called the “great art of government.”

In Locke's theory of government, the state figures not merely as a formal guarantor of monetary institutions or a facilitator of commercial transactions. More than that, the state is an active agent of production, a “captain of industry” charged with managing, increasing, and employing its subjects, as much in the metropole as in the colonies, by directly intervening in systems of production and networks of exchange—not only by setting people to work in manufacturing, but also by finding new world markets in which raw materials could be bought and finished commodities could be sold. This is clear in the following passage from the *Second Treatise*, in which he defines the “great art of government,”

So little, that even amongst us, Land that is left wholly to Nature, that hath no improvement of Pasture, Tillage, or Planting, is called, as indeed it is, wast; and we shall find the benefit of it amount to little more than nothing. This shews, how much

²²⁶ Although Locke never went so far as to support Ireland's full economic independence like Daniel Defoe, Thomas Prior, and Arthur Dobbs, they all shared a commercial vision of empire that, to varying degrees, construed the development of Irish consumer industries as a benefit rather than a threat to England's national interests. On Defoe, Prior, and Dobbs, see Livesey, *Civil Society and Empire*, 68–69. For Prior's proposal to encourage Ireland's textile industry through a plan that, much like Locke's, propelled output by a system of pecuniary rewards, such as “praemiums,” and combined the cultivation of flax and hemp with the production of linen cloths in workhouses, charity schools, and manufactories, see Thomas Prior, *An Essay to Encourage and Extend the Linen-Manufacture in Ireland, by Praemiums and Other Means* (Dublin: G. Faulkner, 1749).

numbers of men are to be preferred to largeness of dominions, and that the increase of lands and the right employing of them is the great art of government. And that Prince who shall be so wise and godlike as by established laws of liberty to secure protection and encouragement to the honest industry of Mankind against the oppression of power and narrowness of Party will quickly be too hard for his neighbours.²²⁷

Here, “the great art of government” inheres in what I have argued to be the central tenets of Locke’s late economic thought: employment and industry.²²⁸ Starting from the assumption that a large population is more beneficial and useful to economic development than abundance in land, Locke ends by equating the “great art of government” to a state’s competence in increasing and rightly employing its population. A government that secures, protects, and encourages production and the right employment of its citizens is, by this logic, at once great and artful in politics insofar as it reaps a comparative advantage from trade and consequently increases its fund. What defines a government as great, then, is its success at improving trade by setting its subjects to produce and export finished commodities in and to all corners of its empire and the world. Wealth and power ensue not only from land but also from a prodigious and skilled population of artisans and sailors able to carry out the twin components of trade: manufacturing commodities and transporting them to foreign markets.²²⁹

This suggests that Locke’s theory of government is inextricable from the proto-industrial and imperial elements of his economic thought, a connection that in turn explains his plea to expand the scope of Britain’s control over its domestic and colonial economies and to reorganize the

²²⁷ Locke, *Two Treatises*, II, §42, 297–98.

²²⁸ For a convincing reading of this passage as an indication of Locke’s espousal for an increase in “hands” (labor) rather than “lands” (territory), see Brian Smith, “Hands, Not Lands: John Locke, Immigration, and ‘the Great Art of Government,’” *History of Political Thought* 39, no. 3 (2018): 465–90.

²²⁹ The view that wealth depended on population rather than territory was shared by most influential political economists of the late seventeenth century, including Sir William Petty, Child, Carry, and Davenant. See Armitage, *Ideological Origins*, 165–66.

ongoing arrangements of production and exchange across its global empire. It is not incidental that Locke's prescriptions for growth and employment—both central to his view of economic development—only concern commercial agriculture as a byproduct of proto-industrial manufacturing and global commerce, that is, as a means or factor of production rather than its end. In fact, as I argue above, when agrarian societies make their way into Locke's economic thought it is often as placeholders for a primitive stage in his scale of progress—a model to avoid rather than to emulate. Admittedly, his examples of purely agricultural societies, such as America and the West Indies, are meant to illustrate subsistence farming rather than what various commentators have called “agrarian capitalism.” However, that is precisely the point: the most developed economic system will be, in the proper course of Locke's theory of progress, as far removed as possible from the productive organizations these economies are invoked to convey. As such, a forward move in the direction of economic development lies in the productive employment of labor as opposed to land, the invention and production of useful and beneficial consumer goods, the provision of life's comforts and conveniences, and the export of finished commodities to world markets. As Locke insistently argued, manufacturing and navigation are the surest means to the ends of economic growth and progress. More than that, rural workhouses and transatlantic ships were, alongside slave plantations and mines, the engines that spurred early modern capitalism and empire into motion.

§

As I have stressed throughout, Locke's late work comprises a measured attempt to intervene in the coming trajectory of the English economy. Treading the bounds of policy and theory with indifference, these texts disclose a coherent plan to organize production and employ labor in a distinct arrangement. From 1691 to 1697 Locke detailed a vision of capitalist production built on, among other things, commodity manufacturing in the countryside, mass-employment, the exchange

of consumer goods in foreign markets, and a model of surplus-value extraction that approximated the real subsumption of the labor process. And if the chief aim of Locke's theory was economic growth, its governing directive was capital accumulation. In a sense, Locke's political economy encapsulates what Immanuel Wallerstein called an "integrated locus of productive activities within which the endless accumulation of capital has been the economic objective or 'law' that has governed or prevailed in fundamental economic activity."²³⁰ In other words, Locke's theory defines a social system whose rules, structure, and conditions workers must conform or "suffer the consequences."²³¹ Wallerstein's gloss on historical capitalism here does well to convey the logic of Locke's economic doctrine. First, his call for conjoining farming and manufacturing in 1693 and his employment scheme of 1697 formed an integrated locus of productive activities; second, his insistence on amplifying England's "Fund" through commodity production and foreign trade in consumer goods reveal an inchoate logic of capital accumulation spurring his model to action; and finally, his proposal to coerce idle peasants into a regime of wage-labor, confinement, and discipline in workhouses registers the historical process of proletarianization, whose rules the rural poor were quite literally forced to conform or "suffer the consequences."

In the last analysis, my designation of Locke's capitalism as proto-industrial is grounded as much on his conceptual apprehensions and insights as on the historical subtext underlying them. If Locke's political economy enunciates the core premises of proto-industrialization, as I have suggested, this is by and large a factor of the dominant theoretical assumptions supporting his design for economic development, especially his espousal of labor over land as the primordial engine of wealth. In this regard, Locke is a theorist of proto-industrial capitalism not only because he acknowledged the limits to capital accumulation imposed by land, but also because he sought to overcome them by employing labor in rural manufacturing through a more intensive, efficient,

²³⁰ Wallerstein, *Historical Capitalism*, 18.

²³¹ *Ibid.*, 19.

productive, and less costly arrangement of commodity production. Given England's significant strides in commercial agriculture by the late seventeenth century, it is significant that Locke's solution to the limits of accumulation in land was—*pace* the “agrarian capitalism” thesis—to engage the unemployed in what was still a rudimentary manufacturing system rather than to create more agricultural jobs by investing in an already capitalized agrarian system. In other words, the gravity of the labor crisis in the 1690s pressed Locke to fine-tune his economic ideas; it sent him—and many of his compeers—on a quest for a model of growth unbound by the constraints of a saturated agrarian economy. He knew, for example, that it would be nearly impossible to profitably employ surplus labor while, at the same time, increasing both the rate of accumulation and the total stock of capital without integrating farming to manufacturing. Locke was moreover convinced that investing in the production of consumer goods was tantamount to employing England's underused agricultural resources—surplus labor and commercial farming among them—in a rural cycle of industrial production.

In the end, Locke's capitalism—much like proto-industrialization itself—was both mercantile and agrarian. Set in the interstices of farm fields, rural cottages, and workhouses, its subjects were both farmers and weavers. And yet, the consolidation of industry and agriculture at the heart of Locke's political economy is uncompromising in its rupture with earlier, Edenic images of pastoral labor as the delightful though dignified work of tilling an open field, such as the one John Milton, writing in 1667, idealized as “a happy rural seat of various view.”²³² Casting his gaze on the future, Locke foreshadows instead the “Other” to Milton's courtly paradise: the tormenting

²³² John Milton, *Paradise Lost* (1667; repr., Oxford: Oxford University Press, 2005), 112. On the transformation of early modern pastoral literature and the transition from feudalism to capitalism in England, see Raymond Williams, *The Country and the City* (New York: Oxford University Press, 1973), 13–34.

heterotopia of an impending factory system comprised of what William Blake, bearing witness to the realities of industrial labor over a century later, defined as “dark Satanic Mills.”²³³

²³³ Blake, *Milton: A Poem in 2 Books*, xix. On the opposition between utopian and heterotopian spaces, see Michel Foucault, “Of Other Spaces,” trans. Jay Miskowiec, *Diacritics* 16, no. 1 (1986): 22–27.

CHAPTER FOUR
MANUFACTORY

“On a spruce pedestal of *Wedgwood ware*,
Where motley forms, and tawdry emblems glare,
Behold she consecrates to cold applause,
A Petrefaction, work’d into a *Vase*:
The Vase of Sentiment! — to this impart
Thy kindred coldness, and congenial art.”

— Richard Tickell, 1778.¹

“I do not know that any more wide or effective influence in public taste was ever exercised than that of the Staffordshire manufacture of pottery under [Josiah] Wedgwood.”

— John Ruskin, 1859.²

“Josiah Wedgwood converted a rude manufactory into an elegant Art and an important part of national commerce.”

— William Gladstone (Prime Minister of the United Kingdom, 1868-1894), 1863.³

“We may try to dig up whatever of responsibility & independence lies half smothered under the compact clay of the factory system, to find out if there are not some persons in the employ of the commercial organisers who are artists, to give them opportunities if possible of working more directly for the public, and to win for them that applause & sympathy of their brother artists which every good workman naturally desires.”

— William Morris, 1888.⁴

¹ Richard Tickell, *The Wreath of Fashion, or; The Art of Sentimental Poetry*, 4th ed. (London: T. Becket, 1778), 5.

² John Ruskin, “Modern Manufacture and Design (1859),” in *The Theory of Decorative Arts: An Anthology of European and American Writings, 1750-1940*, ed. Isabelle Frank (New Haven and London: Yale University Press, 2000), 58.

³ Quoted in Arthur Bryan, “Josiah Wedgwood,” *RSA Journal* 143, no. 5460 (1995): 25. Finer, Savage, and Savage, *Letters of Wedgwood*, 343.

⁴ William Morris, *Art and Its Producers, and the Arts & Crafts of Today: Two Addresses Delivered Before the National Association for the Advancement of Art* (London: Longmans & Co, 1901), 19.

A SENSATIONAL ECONOMY

Figure 10. *The Portland Vase* (1-25 AD).
Source: The British Museum.



Figure 11. Josiah Wedgwood, *The Portland Vase* (1785-1795). Source: The British Museum.



Two distinct objects by the same name are now on display at the British Museum. The Portland Vase in room 70 (Figure 10) is a first-century antique and among the Museum's most prized *objets d'art*. A paragon of ancient Greek cameo glass, it has been called "the best known vase in the world."⁵ The Portland Vase in room 47 (Figure 11), no less celebrated for its artistry and beauty, is a replica of the original in room 70. The copy was first exhibited in 1790 to a select audience of critics, connoisseurs, and nobles, including Queen Charlotte and the founding director of the Royal Academy, Sir Joshua Reynolds, who publicly endorsed the vase with his benediction at

⁵ Wolf Mankowitz, *The Portland Vase and the Wedgwood Copies* (London: Andre Deutsch, 1952), 9.

its inaugural exhibition.⁶ While it has been encased at the Museum for over two centuries, the replica in room 47 originated from a 350-acre “factory town” in Staffordshire, England owned by the acclaimed ceramics manufacturer Josiah Wedgwood.⁷ By the time of his death in 1795, Wedgwood had left behind one of the largest industrial factories of its kind, employing close to 400 workers.⁸ Named after the eponymous ancient pottery region in central Italy, Etruria was among the first and best-known industrial communities in Britain.⁹ The factory was built to order from the ground up: workshops tailored to each stage of production, a village of cottages to house their workers, and a new waterway connecting the factory to the Trent and Mersey Canal, and from there to foreign markets across the Atlantic and beyond. On the shop floor, a forty-horsepower steam engine set men, women, and children to work twelve-hour shifts along assembly lines, mass-producing some of the finest ornaments in eighteenth-century Europe.¹⁰ If the ease with which Wedgwood’s vases moved from the assembly line to the museum gallery might strike us as odd today, this is in large part because the divide that separates pottery from sculpture, artisan from artist, and the factory from the studio, is as recent as the eighteenth-century invention of modern aesthetics and the fine arts.¹¹

⁶ Ibid., 35. See also Finer, Savage, and Savage, *Letters of Wedgwood*, 327.

⁷ The British Museum has two Wedgwood copies of the Portland Vase: the one I reference above was donated by his son, John Wedgwood, in 1802; the other one was acquired by the Museum in 1909.

⁸ Bryan, “Josiah Wedgwood,” 25. According to Eric Hopkins, Wedgwood’s competitors, John Taylor and Matthew Boulton, employed somewhere between 500 and 1,000 workers each as early as the 1760s. See Eric Hopkins, *Birmingham: The First Manufacturing Town in the World, 1760-1840* (London: Weidenfeld and Nicolson, 1989), 10–11, 84.

⁹ Nancy F. Koehn, “Josiah Wedgwood and the First Industrial Revolution,” in *Creating Modern Capitalism: How Entrepreneurs, Companies, and Countries Triumphed in Three Industrial Revolutions*, ed. Thomas K. McCraw (Cambridge and London: Harvard University Press, 1997), 17–48.

¹⁰ Alison Kelly, *The Story of Wedgwood* (London: Faber and Faber, 1962); J. G. Growther, *Josiah Wedgwood* (London: Methuen Educational, 1972); Robin Reilly, “Josiah Wedgwood: A Lifetime of Achievement,” in *The Genius of Wedgwood*, ed. Hilary Young (London: Victorian & Albert Museum, 1995), 44–57.

¹¹ Larry Shiner, *The Invention of Art: A Cultural History* (Chicago and London: University of Chicago Press, 2001); M. H. Abrams, “Art-as-Such: The Sociology of Modern Aesthetics,” in *Doing Things with Texts: Essays in Criticism and Critical Theory*, by M. H. Abrams, ed. Michael Fischer (New York and London: W. W. Norton & Company, 1989), 135–58.

Treading the boundaries of artwork and commodity with indifference, Wedgwood's vases throw into relief the complex social context of eighteenth-century luxury; they emerge as material remnants of the historical thread tying factories to ateliers, storefronts to exhibition halls, use-value to disinterested contemplation, consumerism to the art market, and—ultimately, I argue—capitalism to modern aesthetics and the fine arts. And if, as Arjun Appadurai put it, “commodities, like persons, have social lives,” perhaps none are so intractable as those of luxury objects.¹² Indeed, luxury dwells in uncertainty. But it is also in this indeterminacy that it attends to the central event animating this chapter: the historical and conceptual entanglement of two facets of modernity that are often seen as irreconcilable, namely, the *economic* domain of factories and industrial production, on the one hand, and the *aesthetic* realm of politeness, refinement, genius, beauty, sentimentality, and art on the other. Moving across commerce and art, luxury indexes not only its own liminality but also those of the categories through which it circulates. Here, the indefinite status of luxury, oscillating in and out of beauty and utility, aura and objecthood, foregrounds the overlap of the modern fields of political economy and aesthetics.¹³ In short, if the luxury commodity is unstable so too are the economic and artistic spheres about which it roams and within which it resides. Theoretically, luxury calls forth equivalencies between modes of production, theories of judgment, and systems of art; historically, it has lent indispensable impetus to a culture of consumerism, industrial manufacturing, and capital's direct organization, control, and exploitation of labor. On this

¹² Arjun Appadurai, “Introduction: Commodities and the Politics of Value,” in *The Social Life of Things: Commodities in Cultural Perspective*, ed. Arjun Appadurai (Cambridge: Cambridge University Press, 1989), 3.

¹³ Drawing on Sianne Ngai's work on late capitalism and aesthetics, I employ the term “category” here as a shorthand for the discourses, practices, dispositions, sentiments, and theories that define economic and aesthetic experiences. Sianne Ngai, *Our Aesthetic Categories: Zany, Cute, Interesting* (Cambridge and London: Harvard University Press, 2012). My use of “objecthood” builds on Michael Fried's definition of the term, a possible iteration of what Clement Greenberg called “the condition of non-art.” Michael Fried, “Art and Objecthood (1967),” in *Art and Objecthood: Essays and Reviews* (Chicago and London: University of Chicago Press, 1998), 148–72.

view, what Werner Sombart famously called “the child of luxury” is perhaps not, as he imagined, modern capitalism *tout court*, but rather one vital part of it: the factory system.¹⁴

In working through the complex relationships between the ideas, objects, and spaces that marked the modern convergence of capitalism and aesthetics, this chapter charts an alternative historical narrative of the drawn-out contention among eighteenth-century thinkers known as “the luxury debate.”¹⁵ From the 1750s onwards, the consumer boom responsible for much of England’s economic growth reached revolutionary proportions.¹⁶ The onset of this “consumer revolution,” as many political theorists and intellectual historians have observed, sparked a wave of conflicting ideas on the virtues and vices cultivated by luxury—its economic benefits and social detriments to the individual, society, culture, and the state. Yet, as I argue below, this eighteenth-century frenzy over luxury also animated discourses and practices that transcended political economy, or rather connected it to the simultaneous emergence of modern aesthetics, the fine arts, and the factory system. The conceptual and historical intimacy between aesthetics and economics dates to the very coinage of the term “political economy” in 1615 by Antoine Montchrestien, who was neither a political thinker nor an economist but a French dramatist and leading tragedian during Louis XIII’s

¹⁴ Sombart, *Luxury and Capitalism*, 171.

¹⁵ While this literature is too vast for a proper gloss, key contributions by political theorists and historians include: John Sekora, *Luxury: The Concept in Western Thought, Eden to Smolett* (Baltimore and London: Johns Hopkins University Press, 1977); Christopher J. Berry, *The Idea of Luxury: A Conceptual and Historical Investigation* (Cambridge: Cambridge University Press, 1994); Michael Kwass, “Ordering the World of Goods: Consumer Revolution and the Classification of Objects in Eighteenth-Century France,” *Representations* 82, no. 1 (2003): 87–116; Maxine Berg, “In Pursuit of Luxury: Global History and British Consumer Goods in the Eighteenth Century,” *Past & Present*, no. 182 (2004): 85–142. Istvan Hont, “The Early Enlightenment Debate on Commerce and Luxury,” in *The Cambridge History of Eighteenth-Century Political Thought*, ed. Mark Goldie and Robert Wokler (Cambridge: Cambridge University Press, 2006), 377–418; Dean Mathiowetz, “Feeling Luxury: Invidious Political Pleasures and the Sense of Touch,” *Theory & Event* 13, no. 4 (2010); Maxine Berg and Elizabeth Eger, eds., *Luxury in the Eighteenth Century: Debates, Desires and Delectable Goods* (New York, NY: Palgrave Macmillan, 2003). Marie-Odile Bernez, “Comfort, the Acceptable Face of Luxury: An Eighteenth-Century Cultural Etymology,” *Journal for Early Modern Cultural Studies* 14, no. 2 (2014): 3–21. Jeremy Jennings, “The Debate About Luxury in Eighteenth- and Nineteenth-Century French Political Thought,” *Journal of the History of Ideas* 68, no. 1 (2007): 79–105.

¹⁶ Neil McKendrick, “The Consumer Revolution of Eighteenth-Century England,” in *The Birth of a Consumer Society: The Commercialization of Eighteenth-Century England*, by Neil McKendrick, John Brewer, and J. H. Plumb (London: Europa Publications, 1982), 9–33.

reign.¹⁷ A century later, the connection between luxury, political economy, and the arts was revived by Bernard Mandeville, whose incendiary writings on the subject were read and received alongside philosophical and literary exchanges by the likes of Richard Steele and Joseph Addison, whose journals *The Tatler* and *The Spectator* became widely-circulated platforms for discussions on how to adequately define, classify, perceive, and critique works of literary and visual art. By midcentury, ideas on the commercialization and sociability of luxury had become part and parcel of broader debates on taste, judgment, and receptivity.¹⁸ At the same time, calls for a new model of aesthetic perception—motivated by ideas of “art-as-such” at the heart of what M. H. Abrams termed “the contemplation model” of aesthetic judgment—culminated in what art historians and critics have dubbed a “modern system” for the classification of art.¹⁹ As the eighteenth century ran its course, critics, connoisseurs, artists, and institutions embracing this emergent concept of aesthetics helped to introduce a new category of artistic production and perception to British society known as the “fine arts,” which lifted painting, architecture, sculpture, music, and poetry above the servile, commercial, and utilitarian spheres of the mechanical arts and artisanal crafts.²⁰ In drawing invidious distinctions between art forms that had been affiliated since classical antiquity, the fine arts defined

¹⁷ Antoine de Montchrestien, *Traicté de l'oeconomie Politique (1615)*, ed. François Billacois (Geneva: Libraire Droz, 1999); Richard F. Teichgraber III, “Preface,” in *The Economic Limits to Modern Politics*, ed. John Dunn (Cambridge: University of Cambridge, 1990), vii.

¹⁸ As Berg and Eger note, “One significant development of eighteenth-century culture was the extent to which aesthetic appreciation became a shared, public activity.” See: Maxine Berg and Elizabeth Eger, “The Rise and Fall of the Luxury Debates,” in *Luxury in the Eighteenth Century: Debates, Desires and Delectable Goods*, ed. Maxine Berg and Elizabeth Eger (New York: Palgrave Macmillan, 2003), 19.

¹⁹ According to Abrams, the “contemplation model” was a new theory of art originally formulated by the third Earl of Shaftesbury and Joseph Addison in the early eighteenth century. Rather than presupposing the artist’s production process as a means of classifying an art form, the “contemplation model” considered only the spectator’s stance toward a finished artwork. It prioritized contemplation over and above artistic construction. In this model, the paradigmatic situation in which a critic may classify and judge art is that of a lone perceiver who, once in the presence of an isolated work, attends exclusively to the particular features the artwork manifests to her undivided attention, arresting her senses for the duration of the encounter. See: Abrams, “Art-as-Such: The Sociology of Modern Aesthetics,” 138; John Brewer, *The Pleasures of the Imagination: English Culture in the Eighteenth Century* (New York: Ferrar, Straus, and Giroux, 1997).

²⁰ Paul Guyer, *A History of Modern Aesthetics*, vol. 1 (Cambridge: Cambridge University Press, 2014), 9.

the pinnacle of a pure aesthetic experience, of beauty and genius, of freedom and disinterested contemplation.²¹

Lastly, the advent of modern aesthetics and the fine arts that accompanied the eighteenth-century fixation on luxury also corresponded with a critical juncture in the history of capitalism. From the 1750s onward, the emergence of large industrial “manufactories” across England—including John Taylor’s Dale End Works in the 1750s, Matthew Boulton’s Soho Manufactory in the 1760s, Richard Arkwright’s Cromford Mill in the 1770s, and David Dale’s New Lanark in the 1780s—were early exemplars of Britain’s looming factory system. As Adam Ferguson wrote in 1767, the eighteenth century was “the age of separations,” by which he meant not simply the division of labor in manufacturing, but also the partitioning of art and craft in Academies, museums, Societies, periodicals, and salons.²² Taken together, the division of labor and art impelled a concomitant economic separation in modern society that redefined artisans, artists, craftsmen, and workers as distinct, antagonistic social classes.²³ On the whole, the parallel rise of aesthetics, the fine arts, and the factory system epitomizes the spirit of modernity and the Enlightenment to divide and reorder

²¹ The aristocratic language of civility and politeness at the center of Shaftesbury’s “contemplation model” was revitalized later in the eighteenth century by a group of fine artists, critics, and connoisseurs who championed modernity’s “new art system,” to paraphrase Larry Shiner. Prominent among these figures was Joshua Reynolds whose understanding of art was largely an application of Shaftesbury’s principles of judgment and taste to painting—its norms of production, exhibition, critique, and appreciation. See: Abrams, “Art-as-Such: The Sociology of Modern Aesthetics.” Shiner, *The Invention of Art: A Cultural History*. Recently, James Porter has objected to the view that the “fine arts” and “aesthetics” were a modern inventions. For my purposes, I do not claim that these were *exclusively* modern but rather that their meanings and ascriptions underwent considerable transformations in the mid-to-late eighteenth century. For Porter’s exchange on this question with Larry Shiner, see James I. Porter, “Is Art Modern? Kristeller’s ‘Modern System of the Arts’ Reconsidered,” *The British Journal of Aesthetics* 49, no. 1 (2009): 1–24; Larry Shiner, “Continuity and Discontinuity in the Concept of Art,” *The British Journal of Aesthetics* 49, no. 2 (2009): 159–69; James I. Porter, “Reply to Shiner,” *The British Journal of Aesthetics* 49, no. 2 (2009): 171–78.

²² Adam Ferguson, *An Essay on the History of Civil Society*, ed. Fania Oz-Salzberger (1767; repr., Cambridge: Cambridge University Press, 1995), 175.

²³ The Irish painter and critic James Barry, for instance, situated his understanding of the ideal form in the late eighteenth-century discourse of the division of labor. See John Barrell, *The Political Theory of Painting from Reynolds to Hazlitt: “The Body of the Republic”* (New Haven and London: Yale University Press, 1986), 173.

society in terms of what Michel Foucault discerned as a “certain mode of being for language, natural individuals, and the objects of need and desire.”²⁴

While political theorists and intellectual historians have touched on virtually every aspect of luxury as an idea in eighteenth-century political and economic discourse, they have, for the most part, missed its relation to the congeries of interwoven, simultaneous transformations in aesthetic theory, modern art, and the capitalist labor process. This oversight is quite striking once we consider how often eighteenth-century thinkers articulated their positions on luxury by explicitly drawing on emerging models of judgment, new taxonomies of art, and innovative techniques of industrial production. Without discounting forgoing interpretations of luxury as a motif in Enlightenment thought, this chapter tracks an alternative path through luxury’s career in European modernity, one that, reaching beyond the ambit of political discourse, locates the social, economic, and cultural lives of luxury—defined as an inventory of concepts and objects—within a network of modern developments that cut across theories and histories of capitalism, aesthetics, and art.

I pursue this by, first, reading David Hume’s defense of luxury, published intermittently from 1752 to 1777, in the context of his writings on political economy, taste, and aesthetics. From this textual interpretation, I argue that Hume understood luxury as an instrument meant to catalyze economic developments in industrial production while also diffusing and refining a specific variety of middle-class taste by purveying a culture of consumerism among the masses.²⁵ In doing so, I

²⁴ Michel Foucault, *The Order of Things: An Archeology of the Human Sciences* (1966; repr., New York: Vintage Books, 1994), 208.

²⁵ The commodities at the heart of Hume’s definition of luxury fit the description of what Thomas Hine called “populuxe.” A portmanteau combining “popular” and “deluxe,” populuxe registers the modern democratization of luxury through the corresponding phenomena of mass consumption (by the middle classes) and the standardized production (by manufacturers) of luxury consumer goods. While Hine dates this process to the mid-twentieth century, Paul Yachnin adds that populuxe had already become a “standard feature of consumer capitalism in the eighteenth century,” reaching its “premodern apogee in the brilliant marketing of ‘china’ to middle-class households by the ‘Queen’s Potter,’ Josiah Wedgwood.” See Paul Yachnin, “‘The Perfection of Ten’: Populuxe Art and Artisanal Value in ‘Troilus and Cressida,’” *Shakespeare Quarterly* 56, no. 3 (2005): 307. For a study of populuxe in eighteenth-century Paris, see Cissie Fairchild, “The Production and Marketing of Populuxe Goods in Eighteenth-Century Paris,” in *Consumption and the World of*

foreground a recurring yet understated aspect of Hume's treatment of luxury, namely, that its promises of pleasure, happiness, and sensuous gratification were strictly contingent on a specific organization of production characteristic of a commercial and industrializing society devoted to the production of fine yet mass-produced consumer goods in across the burgeoning manufactories of Europe. In short, Hume's vision of a developed commercial society lured by commodity fetishism and material desire was the *fait accompli* of capitalist modernity. Throughout these texts, he consistently figures luxury as the key meant to unchain a succession of cultural, aesthetic, social, and economic developments that were either imminent or already afoot.

Further, I contend that this entanglement of economic and aesthetic categories in Enlightenment thought was not a mere theoretical abstraction but a reflection of key social, economic, and cultural transformations in Britain's sprawling commercial empire. To illustrate this claim, I turn to the ways in which Josiah Wedgwood, one of the period's most celebrated industrialists, brought art and labor together in his luxury ceramics factory from 1767 to 1795. I argue that Wedgwood's innovations in industrial production were, as Hume had previously claimed they ought to be, largely animated by the manufacturer's aesthetic judgment and taste. That is, Wedgwood's success as a factory master was the outcome of his artistic ambition to produce vases whose elegance, beauty, and public reception elevated them to the status of art, consequently cleansing his reputation of the degrading class stigma associated with ceramic craft. In attending to his artistic goals and insatiable quest for profit, Wedgwood eventually transformed an artisanal apparatus of production into a prototype of the industrial factory system. Wedding entrepreneurial acuity to aesthetic perception, he redefined England's eighteenth-century pottery industry by imposing stricter divisions on labor, scaling output, streamlining manufacturing, and ultimately

Goods, ed. John Brewer and Roy Porter (London and New York: Routledge, 1993), 228–48. For Hine's coinage, see Thomas Hine, *Populuxe* (New York: Knopf, 1986). I thank Paul Cheney for bringing this to my attention.

ushering legions of petty artisans toward his factory town, Etruria.²⁶ Wedgwood's cunning move to hire renowned sculptors from the Royal Academy as designers, for instance, allowed him to standardize the labor of his workforce and reduce their formerly artistic activity to the mechanical task of reproducing—rather than creating—vases from prototypes molded by established Academicians. Moreover, in assailing the potter's independence and ultimately recasting the status of artisans as wage laborers, Etruria inadvertently advanced the goals of a new art system championed by institutions such as the Royal Academy itself and flag-bearers of modern aesthetics, including Jonathan Richardson and Joshua Reynolds whose projects to ennoble the fine arts as a privileged aesthetic field and secure their place within a venerable cultural plane rested in part on exalting the practice of painters, sculptors, architects, composers, and poets above the ignoble domain of working artisans and craftsmen.²⁷ As Etruria engulfed the traditional pottery industry around Staffordshire, it gradually converted scores of artisan potters—many of whom had been designers and creative craftsmen up to then—into menial industrial workers, accordingly advancing the agenda of a modern ideal of art by reconfiguring artisanal labor as the waged, mechanical 'Other' against which artistic labor could be defined as liberal, creative, and genius.

It would be difficult to overstate Wedgwood's role in transforming the Staffordshire Potteries from a "provincial backwater" into one of Britain's largest industries at the onset of the

²⁶ The social status of workers in modern luxury industries seldom matched the economic and cultural esteem associated with the commodities they produced. This lack of equivalency between the social value of luxury goods and that of the workers who manufactured them illustrates the *tromp l'oeil* effect which Jacques Rancière has aptly discerned as a mistaken tendency among labor historians to "project onto artisanal practice the image of bourgeois luxury, which is its end product." See: Jacques Rancière, "The Myth of the Artisan: Critical Reflections on a Category of Social History," *International Labor and Working-Class History*, no. 24 (1983): 2; William H. Sewell, "Response to J. Rancière 'The Myth of the Artisan,'" *International Labor and Working-Class History*, no. 24 (1983): 17–20.

²⁷ As Holger Hoock notes, in the interest of broadening its appeal, the Royal Academy submitted a report in 1800 acknowledging "the beneficial effects which the improvement in the higher branches of the arts had on Josiah Wedgwood's pottery design and his business prospects, as well as on his workmen's living conditions." Yet, the Academy never recognized how much Wedgwood's factory advanced both the institution's own goals and the progress in the "higher branches of the arts." Holger Hoock, *The King's Artists: The Royal Academy of Arts and the Politics of British Culture, 1760-1840* (Oxford: Clarendon Press, 2003), 280.

industrial revolution.²⁸ Wedgwood himself envisaged the future impact of his factory when, faced with an industry “in a rude, uncultivated state,” he announced in 1767: “A revolution, I believe, is at hand.”²⁹ Even if Wedgwood only accelerated a process already in motion, he remains responsible for ushering in “the factory system and the age of industrialization to the Potteries.”³⁰ Rather than rehearsing previous arguments concerning Etruria’s contributions to the factory system, my aim in Parts 2 and 3 is to reconsider the particular ways in which Wedgwood’s industrial configuration of artisanal production was always bound up with his aesthetic sensibility and artistic goals.³¹ In a word, Wedgwood’s innovations mark a pivotal, if understated, episode in the history of modern capitalism in which British aesthetic theory and London’s high-end art scene emerged as decisive forces in the development of the industrial factory system.

Finally, while the turn of phrase “sensational economy,” which I deploy to conceptualize the historical entanglement of capitalism and aesthetics, evokes the sensuous drift of political economy captured by luxury, I also mean it as a punning analogy to the conventional definition of “sensational” as seductive, stirring, and alluring—something that rouses public interest as it gratifies the senses. On this view, the term “sensational economy” encapsulates the frenzied fascination over luxury that seemed to betide eighteenth-century publics. It speaks to a zestful “play culture” that developed adjacent to consumerism and impressed on the middle and upper classes a new

²⁸ Sidney Pollard, *The Genesis of Modern Management: A Study of the Industrial Revolution in Great Britain* (Cambridge: Harvard University Press, 1965), 98. John Thomas, *The Rise of the Staffordshire Potteries* (Bath: Adams & Dart, 1971), 10, 11–13. While the potteries were only declared “factories” by statute in 1867, they had been categorized as such unofficially since 1833.

²⁹ Letter to Bentley, August 5, 1767, Finer, Savage, and Savage, *Letters of Wedgwood*, 58.

³⁰ Neil McKendrick, “Josiah Wedgwood and Factory Discipline,” *The Historical Journal* 4, no. 1 (1961): 31.

³¹ According to V. W. Bladen Wedgwood’s key contributions to industrialization consisted in “the discovery by constant experiment of new bodies, new glazes, new methods of decoration; a greater division of labour, a growth of the factory and the development of methods of control, *i.e.* the beginnings of scientific management and cost accounting; the improvement of transportation and the opening of new markets at home and abroad.” See: Bladen, “The Potteries in the Industrial Revolution,” 117.

disposition toward material objects centered on a visceral yet refined form of pleasure.³² In an unwitting reference to this sensational aspect of modern capitalism, Wedgwood once described the surge in demand for his wares as a “violent *Vase madness*.”³³ In calling forth the almost loutish underside of sumptuous spending, Wedgwood likens luxury to a mania that overwhelms economic reason and welds the predictability, frugality, and discipline of *Logos* with the so-called volatility, splendor, and hysteria of *Eros*.³⁴ In the end, the same force that animated the indulgent consumption Thorstein Veblen called “conspicuous” also propelled the decadence Wedgwood deemed violent and mad.³⁵ That is to say, both forms of consumerism were prompted by a shared insatiable appetite for excitement, an ungovernable desire for the sensational—a mystic, “will-o’-the-wisp that beckoned.”³⁶

PART 1: A POLITICAL ECONOMY OF SENSATION

David Hume was far from the first modern thinker to highlight the social and economic advantages laid open by commodity manufacturing and foreign trade. As I have argued in the foregoing chapter, seventeenth-century political economists—not only Locke, but also John Cary, John Bellers, Charles Davenant, Nicholas Barbon, and William Petty—advanced optimistic visions of proto-industrial society based on the expansion of rural manufacturing as a means to absorb surplus agrarian labor and increase imports of national consumer goods.³⁷ In contrast to early

³² Roy Porter and Marie Mulvey Roberts, eds., *Pleasure in the Eighteenth Century* (New York: New York University Press, 1996).

³³ Letter to Bentley, August 2, 1770, Katherine Eufemia Farrer, ed., *Letters of Josiah Wedgwood, 1762-1770*, vol. 1 (Manchester: E. J. Morten & The Wedgwood Museum, 1973), 356.

³⁴ Herbert Marcuse, *Eros and Civilization: A Philosophical Inquiry into Freud* (Boston: Beacon Press, 1974).

³⁵ Thorstein Veblen, *The Theory of the Leisure Class: An Economic Study in the Evolution of Institutions (1899)* (Oxford: Oxford University Press, 2009), 50–51, 59.

³⁶ Werner Sombart, *The Quintessence of Capitalism: A Study of the History and Psychology of the Modern Business Man (1915)*, trans. M. Epstein (New York: Howard Fertig, 1967), 38.

³⁷ This is also true of Hume’s contemporaries. As E. J. Hundert notes, arguments in favor of commercial expansion through the division of labor, for instance, became increasingly popular among British thinkers from the 1750s onwards, see: E. J. Hundert, *The Enlightenment’s Fable: Bernard Mandeville and the Discovery of Society* (Cambridge: Cambridge University Press, 1994), 184–218.

modern thinkers, Hume's defense of commercial society furnished economic discourse with a particular language of cultural progress, artistic refinement, and sensuous gratification afforded by the production and consumption of luxury goods. Rather than embracing the familiar lexicon of Stuart "political arithmetick," Hume articulated his economic perspective by mobilizing key terms from the conceptual repertoire of modern aesthetics, including established ideas concerning judgment, taste, art, and sense perception developed by such philosophers and critics as the third Earl of Shaftesbury, Jonathan Richardson, Joseph Addison, and Joshua Reynolds.³⁸ In parsing out the aesthetic facet of Hume's economic thought, I begin this section with a close reading of his classic works on commerce and luxury by foregrounding the particular ways in which his vindication of manufacturing and foreign trade were bound up with his reflections on taste, refinement, and sensuous gratification. I then turn to Hume's writings on culture and aesthetics in order to discern what kind of sensibilities he associated with the widespread production and consumption of luxury goods. I conclude this section by noting that Hume's defense of luxury was predicated on the cultivation of a delicacy of passion within the middle class by impressing on the public a culture of mass consumption based on a set of desires and dispositions that only a developed manufacturing system and a robust luxury market could satiate.

Luxury, Manufacturing, and Foreign Trade

In his 1752 essay entitled "Of Commerce," Hume described the transition from subsistence farming in a closed market to a system of commodity manufacturing and foreign trade as the proper course of economic development tending to the level of cultural refinement and scientific progress

³⁸ The aesthetic elements of Hume's economic thinking resonate with Mandeville's writings on luxury, from which Hume dissented. On Hume's critique of Mandeville, see Berry, *The Idea of Luxury*, 142–52. On Hume's place in eighteenth-century British aesthetic theory, see Terry Eagleton, *The Ideology of the Aesthetic* (Cambridge: Basil Blackwell, 1990), 31–69.

consonant with a civilized society.³⁹ In Hume's schema, once hunter-gatherers have left the state of nature to form a civil society, they take up the role of either husbandmen or manufacturers to supply the material needs of the population. In time, their industry and experience lead to improvements in production and higher yields of necessary staple goods. As a result, the state eventually sustains a population far greater than its limited, subsistence economy can employ. For Hume, the solution to the problem of surplus labor lies in the development of a commercial society where "superfluous hands apply themselves the finer arts, which are commonly denominated the arts of *luxury*."⁴⁰ Refinement in these arts, he continues, contributes to the happiness of individuals by affording to many "the opportunity of receiving enjoyments with which they would otherwise have been unacquainted." Because the "greatness of a state, and the happiness of its subjects" are "inseparable with regard to commerce," a "want of trade and manufactures" will only weaken the state, impoverish the public, and sadden the individual.⁴¹ And, if the best policy is always to "comply with the common bent of mankind, and give it all the improvements of which it is susceptible," then the state should invest in industry and the arts of luxury as a means to "increase the power of the sovereign as well as the happiness of [its] subjects."⁴² Without a developed manufacturing sector, a modern state is destined for ruin. "Where manufactures and mechanic arts are not cultivated," Hume notes, a "habit of indolence naturally prevails" among workers whose labor produces commodities that gratify neither their pleasure nor their vanity.⁴³

³⁹ David Hume, "Of Commerce (1752)," in *Essays: Moral, Political, and Literary*, ed. Eugene F. Miller, Revised Edition (Indianapolis: Liberty Fund, 1987), 256.

⁴⁰ *Ibid.*

⁴¹ *Ibid.*, 255, 260.

⁴² *Ibid.*, 260.

⁴³ *Ibid.*, 260–61. Similarly, in "Of Refinement in the Arts," Hume reasons that, "In a nation, where there is no demand for such [luxury] superfluities, men sink into indolence, lose all enjoyment of life, and are useless to the public, which cannot maintain or support its fleets and armies, from the industry of such slothful members." See David Hume, "Of Refinement in the Arts (1760)," in *Essays: Moral, Political, and Literary*, ed. Eugene F. Miller, Revised Edition (Indianapolis: Liberty Fund, 1987), 272.

On Hume's telling, the remedy to the decay and atrophy of a subsistence economy rests in the expansion of those luxury industries that best satisfy our passions, which he deems "the only causes of labour."⁴⁴ In order to fulfill the desires animating the demands of modern consumers, an economy must be capable of manufacturing luxury objects on the same scale in which the public demands them. And to the extent that it devotes more resources to commodity production and foreign commerce, this economy consequently provides a substantial impetus for the rationalization of capitalist husbandry and the eventual refinement of the liberal arts. As Hume writes, "When a nation abounds in manufactures and mechanic arts," agricultural surplus, rather than being lost, is "exchanged with manufactures for those commodities, which men's luxury now makes them covet."⁴⁵ In this model, the delicate taste of modern individuals, animated by the "spirit of avarice and industry, art and luxury,"⁴⁶ impels industrial expansion, yielding benefits to workers of all stripes: "peasants," "tradesmen," and "the middling rank of men."⁴⁷ Although Hume's idea of a manufacturing system is first galvanized "by the knowledge inseparable from ages of art and refinement," its fruits are not limited to wealth and happiness. Additionally, the factory ushers the state into a period of peace sustained by "laws, order, police, [and] discipline."⁴⁸ By calling his reader's attention to specific technologies of production and the division of labor already extant in English manufactories, including the spinning wheel and the loom, Hume hints at the labor process he deems best suited to gratify the passions of a modern public and consequently steer society into an age of affluence, order, liberty and happiness.⁴⁹ "The greatness of the sovereign and the

⁴⁴ Hume, "Of Commerce (1752)," 261.

⁴⁵ Ibid.

⁴⁶ Ibid., 263.

⁴⁷ Hume, "Of Refinement in the Arts (1760)," 277.

⁴⁸ Ibid., 273.

⁴⁹ "Can we expect, that a government will be well modelled by a people, who know not how to make a spinning-wheel, or to employ a loom?" Ibid.

happiness of the state are, in a great measure,” he concludes, “united with regard to trade and manufactures.”⁵⁰

In addition to having manufactories necessary for the production of luxury commodities, a commercial society must, according to Hume, trade these consumer goods in the global market. Imports furnish a trading economy with “materials for new manufactures” while exports produce “labour in particular commodities, which could not be consumed at home.”⁵¹ As a result, a nation open to foreign trade “must abound more with industry,” especially “delicacies and luxuries,” than a “kingdom which rests contented with its native commodities.”⁵² Besides bringing power and wealth to the state, Hume views the global trade in luxury goods—foreign imports and domestic exports—as a source of happiness for consumers who “reap the benefit of these commodities, so far as they gratify the senses and appetites.”⁵³ Like his defense of manufacturing, the development of which is spurred by the desires and tastes of consumers, Hume’s vindication of foreign trade rests as much on the pleasure, happiness, and sensuous gratification which luxury excites in consumers as on the pecuniary gains it affords producers. Thus, he continues,

[M]en become acquainted with the *pleasures* of luxury and the *profits* of commerce; and their *delicacy* and *industry*, being once awakened, carry them on to farther improvements, in every branch of domestic as well as foreign trade. And this perhaps is the chief advantage which arises from a commerce with strangers. It rouses men from their indolence; and presenting the gayer and more opulent part of the nation with objects of luxury, which they never before dreamed of, raises in them a desire of a more splendid way of life than what their ancestors enjoyed. [...] Imitation soon diffuses all those arts; while domestic manufactures emulate the

⁵⁰ Hume, “Of Commerce (1752),” 262.

⁵¹ *Ibid.*, 263.

⁵² *Ibid.*

⁵³ *Ibid.* David Hume, “The Stoic (1742),” in *Essays: Moral, Political, and Literary*, ed. Eugene F. Miller, Revised Edition (Indianapolis: Liberty Fund, 1987), 148. “The great end of all human industry is the attainment of happiness.”

foreign in their improvements, and work up every home commodity to the utmost perfection of which it is susceptible. Their own steel and iron, in such laborious hands, become equal to the gold and rubies of the INDIES.⁵⁴

Hume's point that, through improvements in industrial production, English steel and iron would be in time as valuable as the gold and rubies of the Indies alludes to the systems and technologies of production employed in steel and iron manufactories all across mid-eighteenth-century England. At this time, Britain's then-emerging crucible-cast steel industry, notes Maxine Berg, was "based on processes of heating with coked coal and fireclay crucibles [that] relied on the lateral transfer of long-standing tacit knowledge in the working of fireclay for bricks, glass furnaces and earthenware kilns."⁵⁵ And while iron and steel were certainly used in the production of heavy machinery, weapons, and industrial tools, they were equally "the material of the finest metal ornaments and jewellery, of watch and clock springs and precision instruments." Insofar as it awakens industry by rousing a taste for splendor that seeps through the class strata, Hume's definition of luxury appeals as much to sense, judgment, and sensibility as to economic interest. And it is precisely from this economic-aesthetic composite formed by melding "the *profits* of commerce" with "the *pleasures* of luxury" that foreign trade, commercial society, and manufacturing—on Hume's account—render otherwise mundane materials, such as steel and iron, into coveted objects of desire as valuable and alluring as the gold and rubies of the Indies.

Indeed, Hume's position on luxury, originally developed in a 1752 essay entitled "Of Luxury" and subsequently published under the title "Of Refinement in the Arts" starting in 1760, is an incisive affirmation of the relationship between political economy and aesthetics, or his political

⁵⁴ Hume, "Of Commerce (1752)," 264.

⁵⁵ Berg, "In Pursuit of Luxury," 131.

economy of sensation.⁵⁶ Far from incidental, Hume's integration of economic and aesthetic language here communicates a measured discursive and theoretical design; it registers the reconciliation of political economy and modern aesthetic theory by foregrounding the sensuous and artistic features of luxury, which he defines both as a "great refinement in the gratification of the senses"⁵⁷ and a "refinement in the arts and conveniencies of life."⁵⁸ It is in calling forth the seductive qualities of luxury—its primary appeal to our senses—that Hume delineates the contours of his sensational economy.

Attending to happiness by recasting indolence as pleasure and action, Hume's idea of luxury evinces the unmistakably aesthetic fabric of economic life.⁵⁹ By appealing to the senses of consumers, luxury paves the way for a commercial economy underpinned by domestic manufactures and integrated into global markets. To the extent the working and middle classes develop a penchant for luxury, Hume notes, workers and artisans who produced these commodities are kept "in perpetual occupation" while being rewarded with the enjoyment of "the occupation itself" and "those pleasures which are the fruit of their labour."⁶⁰ Tying the appeal of luxury objects to a human impulse for wealth and pleasure, Hume discerns two ways luxury might benefit the middle and working classes. First, by transforming mechanical labor into a form of action, luxury recasts work as impish glee, elevating it from earlier associations with straining pain and sacrifice.⁶¹ Second, in raising the value of labor, it affords workers the means to revel in its consumption. Thus, to deprive

⁵⁶ The essay accounts for Hume's reputation as one of the "most resolute promoters of luxury" in modern political theory. See: Ryu Susato, *Hume's Sceptical Enlightenment* (Edinburgh: Edinburgh University Press, 2015), 92. See also: Berry, *The Idea of Luxury*. Sekora, *Luxury: The Concept in Western Thought, Eden to Smolett*.

⁵⁷ Hume, "Of Refinement in the Arts (1760)," 268.

⁵⁸ *Ibid.*, 278.

⁵⁹ *Ibid.*, 269.

⁶⁰ *Ibid.*, 270.

⁶¹ Hume's praise for the mechanical arts can be read as part of a broader Enlightenment project to liberate productive labor from what William Sewell aptly defined as "the archaic restrictions of a barbarous past." Thinkers like Hume and Diderot upheld the idea that "labor should be exalted as an essential foundation of human happiness rather than despised as a stigma of baseness and sin." See William Hamilton Sewell, *Work and Revolution in France: The Language of Labor from the Old Regime to 1848* (Cambridge: Cambridge University Press, 1980), 64.

a population of its luxury, Hume avers, is to “deprive men both of action and of pleasure; leaving nothing but indolence in their place.”⁶² If Hume’s case for luxury charts a familiar, modern path to economic development through labor, as we saw with Locke and his contemporaries in Chapter 3, his emphasis on refinement equips political economy with a renewed vocabulary for voicing its wonted capitalist credo of progress and growth.⁶³ In expounding upon the effects of luxury on labor, for instance, Hume defends higher wages and industrial employment only insofar as they occasion pleasure, action, and happiness to the material lives of workers.⁶⁴ In fact, Hume only limits his reading of luxury to purely economic criteria once in his essay: in the course of denouncing a vicious kind of conspicuous spending that, rather than eliciting pleasure, merely “engrosses all a man’s expence.”⁶⁵ Moreover, the same refinement accorded by luxury renders the excess characteristic of “vicious luxury” repulsive.⁶⁶ “The more men refine upon pleasure,” he proclaims, “the less will they indulge in excesses of any kind; because nothing is more destructive to true pleasure than such excesses.”⁶⁷

But luxury is not merely a medium for self-gratification according to Hume; it is just as much a promoter of the fine arts. Viewing industrial development and artistic progress as interdependent, cyclical phenomena, he suggests that particular “refinements in the mechanical arts,” galvanized by the production and consumption of luxury, “commonly produce some refinements in the liberal [arts].” In turn, progress in the liberal arts typically provokes a corresponding effect on industrial

⁶² Hume, “Of Refinement in the Arts (1760),” 270.

⁶³ In contrast to Bernard Mandeville’s defense of conspicuous spending, Hume rejected the notion that luxury was vicious. Rather than a “private vice,” conspicuous consumption, on Hume’s account, cultivated moral and civic virtues in the citizen.

⁶⁴ Hume also ties the industrial manufacturing of “alluring objects” to happiness in his 1742 essay “The Stoic,” in which he writes: “Know, that this labour itself is the chief ingredient of the felicity to which thou aspiest, and that every enjoyment soon becomes insipid and distasteful, when not acquired by fatigue and industry.” See: Hume, “The Stoic (1742),” in *Essays: Moral, Political, and Literary*, ed. Eugene F. Miller, Revised Edition (Indianapolis: Liberty Fund, 1987), 149.

⁶⁵ Hume, “Of Refinement in the Arts (1760),” 279.

⁶⁶ Throughout the essay, Hume draws a distinction between “neutral luxury,” which he endorses, and “vicious luxury,” which he denounces.

⁶⁷ Hume, “Of Refinement in the Arts (1760),” 271.

growth. For this reason, Hume continues, “the same age, which produces great philosophers and politicians, renowned generals and poets, usually abounds with skilful weavers, and ship-carpenters.” And if “the more these refined arts advance, the more sociable men become,” it follows that, beyond the knowledge and happiness the public derives from industrial prosperity and artistic refinement, individuals “feel an encrease of humanity, from the very habit of conversing together, and contributing to each other’s pleasure and entertainment.”⁶⁸ To the extent that commercial society instills in consumers a penchant for sociability and entertainment, the capitalist market encapsulates the art world in an early expression of a “culture industry” that, according to Theodor Adorno, reworks aesthetic semblance as the commercial sheen of the commodity form, melding culture into practical life.⁶⁹ The result is a commercialized public sphere whose production apparatus caters to the urbane appetites of mass consumers who “flock into cities” and love to,

[R]eceive and communicate knowledge; to show their wit or their breeding; their taste in conversation or living, in clothes or furniture. Curiosity allures the wise; vanity the foolish; and pleasure both. Particular clubs and societies are every where formed: Both sexes meet in an easy and sociable manner; and the tempers of men, as well as their behaviour, refine apace. [...] Thus *industry*, *knowledge*, and *humanity*, are linked together by an indissoluble chain, and are found, from experience as well as reason, to be peculiar to the more polished, and, what are commonly denominated, the more luxurious ages.⁷⁰

Hume’s “indissociable chain” linking industry, knowledge, and humanity outlines a particular vision of modern society in which *industry* evokes the productive labor, or action, performed by industrial

⁶⁸ Ibid.

⁶⁹ Adorno traced the development of mass culture not only to industrial capitalism but also to a categorically modern ideal of art: “Since the beginning of the industrial era an art has been in vogue which is adept at promoting the right attitudes and which has entered into alliance with reification insofar as it proffers precisely for a disenchanted world, for the realm of the prosaic and even the banal, a poetry of its own nourished upon the work ethic.” See: Theodor W. Adorno, “The Schema of Mass Culture,” in *The Culture Industry: Selected Essays on Mass Culture*, ed. Jay M. Bernstein (London and New York: Routledge, 1991), 61.

⁷⁰ Hume, “Of Refinement in the Arts (1760),” 271.

workers of all stripes—craftsmen, artisans, mechanical artists, menial handymen—assembled yet divided within the many workshops and manufactures of British cities; *knowledge* registers the modern triumph of scientific progress and artistic refinement in Academies and salons; and *humanity* alludes to an emerging strain of middle class leisure sustained by a horde of consumers desperately yearning for the latest “play thing” to hit the market.

To be sure, I do not mean to conflate Hume’s vision of industrial production with the large-scale, capital-intensive factory system of the nineteenth century. Rather, my goal here is to reconstruct, from his textual argumentation, the systems, technologies, and techniques of production and the organization of labor Hume deems most suitable for supplying society with the luxury goods demanded by a mass of increasingly refined and polite consumers. The apparatus of production that emerges from my reading of Hume is best characterized as a network of workshops and manufactories that together employ a vast industrial workforce composed of skilled artisans, mechanical workers, and low-wage laborers who, despite being divided according to their specialized tasks, work in unison under the same roof to produce the same thing. Such arrangement does well to describe the organization of production already in place across a variety of European manufactories during Hume’s lifetime.⁷¹ Michael Sonenscher, for instance, has notably referred to Britain’s eighteenth-century luxury industry as a system of “mass production” in which “broader and deeper markets for mass-produced goods could, gradually, make what the eighteenth century had called luxury more widely available.”⁷² Indeed, through the course of the eighteenth century, English cities such as Birmingham and London became major industrial centers in which the concentrated manufacturing of high-end and popular luxury goods employed hundreds of thousand of specialized and menial workers across the class strata, from middle-class craftsmen to pauperized children, from

⁷¹ Berg, *The Age of Manufactures*, 50–56, 66–73.

⁷² Michael Sonenscher, *Before the Deluge: Public Debt, Inequality, and the Intellectual Origins of the French Revolution* (Princeton and Oxford: Princeton University, 2007), 262.

tailors, pewterers, goldsmiths, and milliners to seamstresses, throwers, joiners, and weavers.⁷³ In a short essay from 1742 entitled “The Stoic,” Hume had already portrayed the artisan as an industrial alchemist, a man of action and virtue who, in employing his industry and art, “converts a rude and shapeless stone into a noble metal” and through “his cunning hands, creates, as it were by magic, every weapon for his defense, and every utensil for his convenience.”⁷⁴ Through his “ever active and intelligent” industry, this artisan refines both labor and its fruits “from their brute state, and fits them for human use and convenience.” While Hume’s artisan is not yet a factory worker, his industry, art, skill, and labor, his action and virtue, are indispensable factors of production for the luxury manufactories at the heart of his ideal commercial society.

A Taste for the Masses

In his writings on aesthetics, Hume defines taste as a “productive faculty” that gives expression to our sentiment and as such “constitutes happiness or misery, becomes a motive to action, and is the first spring or impulse to desire and volition.”⁷⁵ Yet, because it emanates from both our internal frame and external constitution, taste varies with nature, class, education, sentiment, and rank.⁷⁶ Rather than a material feature of objects, beauty exists solely “in the mind which contemplates them; and each mind perceives a different beauty.”⁷⁷ Just as “the skin, pores, muscles, and nerves of a day-labourer are different from those of a man of quality,” Hume remarks, so too are his “sentiments, actions and manners,” for the “different stations of life influence the whole

⁷³ Peter Earle, *The Making of the English Middle Class: Business, Society and Family Life in London, 1660-1730* (Berkeley and Los Angeles: University of California, 1989), 18–34; Hopkins, *Birmingham*, 135–72.

⁷⁴ David Hume, “The Stoic (1742),” in *Essays*, 147.

⁷⁵ David Hume, “An Enquiry Concerning the Principles of Morals (1751),” in *Enquiries Concerning Understanding and Concerning the Principles of Morals (1777)*, ed. P. H. Nidditch, Third Edition (Oxford: Clarendon Press, 1975), 294.

⁷⁶ *Ibid.*

⁷⁷ David Hume, “Of the Standard of Taste (1757),” in *Essays: Moral, Political, and Literary*, ed. Eugene F. Miller, Revised Edition (Indianapolis: Liberty Fund, 1987), 230.

fabric, external and internal.”⁷⁸ In fact, Hume views class barriers in taste as unassailable. Since artworks cannot produce their “due effect on the mind” unless they are “surveyed in a certain point of view,” they cannot be “relished by persons, whose situation, real or imaginary, is not conformable to that which is required by the performance.”⁷⁹ He estimates that very few people are “qualified to give judgment on any work of art, or establish their own sentiment as the standard of beauty.”⁸⁰ This rare refinement of judgment is rather the exclusive prerogative of a constricted, cultivated class composed by experts, *cognoscenti*, and connoisseurs of delicate taste, distinguished by “the soundness of their understanding and the superiority of their faculties above the rest of mankind.”⁸¹ In light of this, Hume considers it natural that we establish a “standard of taste”—or a rule of judgment—able to reconcile “the various sentiments of men.”⁸² The question is, then, where in this spectrum does Hume locate the tastes and sensibilities of mass consumers whose happiness, pleasures, and desires he claims are fulfilled by luxury?

To answer this question, we must first unpack Hume’s aesthetic theory. Broadly speaking, two orders of judgment inform his treatment of taste: one apt for mass culture, the other for the fine arts. The first kind is expressed by the overlap between what Hume discerns as a “delicacy of taste” and a “delicacy of passion.” While different in many regards, these delicacies share the same disposition toward judgments of beauty and deformity.⁸³ They describe commensurate feelings that allow one to be “sensibly touched” by every aspect of an object. Here, the fine strokes of a painting are perceived with as much “exquisite relish and satisfaction” as the “negligences or absurdities” of a

⁷⁸ David Hume, *A Treatise of Human Nature (1739-1740)*, ed. P. H. Nidditch and L. A. Selby-Bigge, Second Edition (Oxford: Clarendon Press, 1978), 402.

⁷⁹ Hume, “Of the Standard of Taste (1757),” 239.

⁸⁰ *Ibid.*, 241.

⁸¹ *Ibid.*, 243.

⁸² *Ibid.*, 229.

⁸³ David Hume, “Of the Delicacy of Taste and Passion (1741),” in *Essays: Moral, Political, and Literary*, ed. Eugene F. Miller, Revised Edition (Indianapolis: Liberty Fund, 1987), 4.

poem are met with “disgust and uneasiness.”⁸⁴ In sum, both expressions of delicacy—in taste as in passion—enlarge our spheres of happiness and misery to the extent that they make us sensible of what gratifies and offends our senses.⁸⁵ Yet, unlike a delicacy of passion, a delicacy of taste must be cultivated in a refined society. Taste for Hume is a sentiment or feeling rather than a product of the understanding.⁸⁶ It is the outcome of an observer’s contemplation of an object, deed, or character and as such the basis for judgments of beauty and deformity as well as of vice and virtue.⁸⁷ A man of delicate taste derives more happiness “by what pleases his taste, than by what gratifies his appetites, and receives more enjoyment from a poem or a piece of reasoning than the most expensive luxury can afford.”⁸⁸ And it is here that we come to the central subject of Hume’s political economy of the senses, namely, the middle class. If large part of his justification for industrial development hinges on pleasure, happiness, and sensuous gratification, it stands to reason that this is not a project for expert critics of delicate taste, but for the middling men of delicate passions: workers, shopkeepers, and consumers who compose the greater mass of English society. As such, Hume’s formulation of delicacy in passion delineates a middle-class aesthetic sensibility, which, in a modern society, is best cultivated, refined, and diffused through the mass consumption and production of luxury goods.

This form of aesthetic disposition—based on the delicacy of passion—contrasts with the “higher and more refined taste” Hume deploys to designate a sound and proper judgment in the fine

⁸⁴ Ibid. See also: Hume, *A Treatise of Human Nature (1739-1740)*, 299, 576. Hume, “Of the Standard of Taste (1757),” 230. Hume, “An Enquiry Concerning the Principles of Morals (1751),” 291. David Hume, “An Enquiry Concerning Human Understanding (1748),” in *Enquiries Concerning Understanding and Concerning the Principles of Morals (1777)*, ed. P. H. Nidditch, Third Edition (Oxford: Clarendon Press, 1975), 165. “Beauty, whether moral or natural, is felt, more properly than perceived.”

⁸⁵ Hume, “Of the Delicacy of Taste and Passion (1741),” 5.

⁸⁶ While taste and understanding are distinct faculties, they are nevertheless complementary, such that a sound understanding becomes essential to true taste: “The same excellence of faculties which contributes to the improvement of reason, the same clearness of conception, the same exactness of distinction, the same vivacity of apprehension, are essential to the operations of true taste, and are its infallible concomitants.” See: Hume, “Of the Standard of Taste (1757),” 240–41.

⁸⁷ Ibid., 5n2.

⁸⁸ Ibid., 5.

arts.⁸⁹ Much like in the aesthetic theories advanced by Shaftesbury, Addison, and later on by Reynolds, Hume argues that perfecting the organ of taste requires “*practice* in a particular art, and the frequent survey or contemplation of a particular species of beauty.”⁹⁰ The skill and address that “practice gives to the execution of any work” is for Hume “acquired by the same means in the judging of it.”⁹¹ By drawing a parallel between practice and contemplation, Hume anticipates the founding motto of the Royal Academy, which, according to Reynolds, was meant to promote the production, critique, and appreciation of the fine arts among those who had the most experience in practicing them, which is to say, the artists themselves.⁹² Much like the Academy’s urgency to refine the taste, judgment, and sensibilities of its artists through classical training and the Grand Tour, Hume saw experiential knowledge as a vital conduit for cultivating delicate taste: “One accustomed to see, and examine, and weigh the several performances, admired in different ages and nations, can alone rate the merits of a work exhibited to his view, and assign its proper rank among the productions of genius.”⁹³

Although economic development, according to Hume, depends on and affects the entire population, genius evolves only at the individual level.⁹⁴ Because those who cultivate and advance the arts and sciences tend to be a minority, their passions limited, their taste delicate, and their application inconsistent, chance is often said to “have a great influence on the rise and progress of all the refined arts.”⁹⁵ In contrast to this opinion, Hume maintains that scientific progress and artistic

⁸⁹ *Ibid.*, 6.

⁹⁰ Hume, “Of the Standard of Taste (1757),” 237.

⁹¹ *Ibid.*

⁹² Brewer, *The Pleasures of the Imagination: English Culture in the Eighteenth Century*, Ch. 5-7.

⁹³ Hume, “Of the Standard of Taste (1757),” 238. To feel the “proper sentiment” of beauty in a work of art requires “much reasoning” and “a false relish may frequently be corrected by argument and reflection.” This is also the case with moral beauty, whose judgment demands “the assistance of our intellectual faculties.” See: Hume, “An Enquiry Concerning the Principles of Morals (1751),” 173.

⁹⁴ David Hume, “Of the Rise and Progress of the Arts and Sciences (1742),” in *Essays: Moral, Political, and Literary*, ed. Eugene F. Miller, Revised Edition (Indianapolis: Liberty Fund, 1987), 111–37.

⁹⁵ *Ibid.*, 113–14.

refinement should not be reduced to unknown causes and the idiosyncrasies of a talented few.

Rather, the genius of those who cultivate the refined arts “must be antecedently diffused throughout the people among whom they arise, in order to produce, form, and cultivate, from their earliest infancy, the taste and judgment of those eminent writers.”⁹⁶ As Hume sees it, then, the rise and progress of the arts and sciences concerns the taste, genius, and spirit of “a whole people.”⁹⁷

If the progress of industry develops within the broader public while genius only manifests in the individual, then commerce and trade emerge as the best-suited vessels for diffusing the type of taste necessary to advance the arts and sciences. In circumstances of a flourishing economy, Hume maintains, “the emulation, which naturally arises among those neighbouring states, is an obvious source of improvement.”⁹⁸ Additionally, commercial economies engaged in foreign trade tend to have “great intercourse of arts and commerce,” which prevents them from “receiving too lightly the law from each other, in matters of taste and of reasoning, and makes them examine every work of art with the greatest care and accuracy.”⁹⁹ By contrast, in a monarchy “the arts of luxury, and much more the liberal arts, which depend on a refined taste or sentiment, are easily lost because they are always relished by a few only, whose leisure, fortune, and genius fit them for such amusements.”¹⁰⁰ Under these conditions, he continues, “no improvement can ever be expected in the sciences, in the liberal arts, in laws, and scarcely in the manual arts and manufactures.”¹⁰¹ In a state where most citizens are “entirely destitute of all relish for those noble entertainments,” the greatest aspiration of the middle class is the ignorance of “illiberal genius.”¹⁰²

⁹⁶ *Ibid.*, 114.

⁹⁷ *Ibid.*

⁹⁸ *Ibid.*, 119.

⁹⁹ *Ibid.*, 120.

¹⁰⁰ *Ibid.*, 124.

¹⁰¹ *Ibid.*

¹⁰² Hume, “An Enquiry Concerning Human Understanding (1748),” 8.

Rather than the politeness of patricians and the rudeness of plebeians, the requisite aesthetic disposition for purveying cultural and economic progress lies “between those extremes,” in a population able to retain an “equal ability and taste for books, company, and business.”¹⁰³ As such, the middle class preserves “in conversation that discernment and delicacy which arise from polite letters” while conserving “probity and accuracy” in industry.¹⁰⁴ Hume’s aesthetic theory, then, serves his economic plan for a commercial society neither by appealing to an existing ideal of middle-class taste nor by projecting a more refined and noble sensibility onto the masses, but rather by articulating a new standard of judgment peculiarly fit for the middling sort; that is, by instilling in the middle class a predilection for luxury, pleasure, sociability, and the arts *through* the establishment of an industrial economy capable to mass-produce the splendor and comfort—the commodities and distractions—which the masses will at once desire, appreciate, and produce. So, as the mechanical arts expand and become advantageous to the greater public, it is of utmost importance that they in turn benefit “the great number of persons to whose share the productions of these arts fall.”¹⁰⁵ For Hume, this project hinges on realizing and capitalizing on the fact that the producer of luxury is also its main consumer. Nurturing a more intimate and reciprocal association between these two roles of the middle-class subject, as producers and consumers of luxury, is not only a matter of corralling consumers into the manufactory, but also of ushering workers into the market, the shop, the coffeehouse, and the salon. Equipped with disposable income and a sensibility suited for reveling in all delightful things his money might procure, the worker will, as Hume put it, “enjoy the fruits of his labour, in a full possession of all the necessaries, and many of the conveniencies of life.”

¹⁰³ Ibid.

¹⁰⁴ Ibid.

¹⁰⁵ Hume, “Of Commerce (1752),” 265.

PART 2: A MODERN ART FACTORY

In tracing the origins of Western modernity to the intersection of scientific discourse and industrial technology, Anson Rabinbach remarked on how often the strict regulation of work in nineteenth-century Europe coexisted with idyllic images of the factory.¹⁰⁶ And the paradigmatic evocation of this “thoroughly limited” fantasy of factory labor was, according to Walter Benjamin, Édouard Foucaud’s 1844 *Physiologie de l’industrie*. “Quiet enjoyment is almost exhausting for a workingman,” Foucaud lamented, “however, if a loud noise or a whistle from a distant factory happens to hit his ear, [...] his face immediately brightens.”¹⁰⁷ After all, to the industrial worker, notes E. P. Thompson, “sound served better than sight.”¹⁰⁸ Perhaps no modern capitalist understood this better than that “supposedly-formidable disciplinarian,” Josiah Wedgwood—the first captain of industry to replace the “ear-cracking barbarism of horn-blowing” with the supposedly “pleasant ringing” of a bell.¹⁰⁹ Chiming initially at 5:45 in the morning, Wedgwood’s bell summoned workers from their cottages into the factory; it set them to work at 6:00, sent them to breakfast at 8:30, returned them to their stations at 9:00, herded them to lunch at noon, and brought them back at half-past where they worked without rest until a final toll crowded them at the gates so late “they [could] no longer see.”¹¹⁰ In addition to the bell, Wedgwood hired a “Clerk of the Manufactory” to enforce discipline and govern workflow. The Clerk, whose tasks were carefully and thoroughly outlined by Wedgwood himself, was expected to,

¹⁰⁶ Anson Rabinbach, *The Human Motor: Energy, Fatigue, and the Origins of Modernity* (Berkeley and Los Angeles: University of California Press, 1992), 32.

¹⁰⁷ Quoted in: Walter Benjamin, “The Paris of the Second Empire in Baudelaire (1938),” in *Charles Baudelaire: A Lyric Poet in the Era of High Capitalism* (London and New York: Verso Books, 1997), 38.

¹⁰⁸ Thompson, “Time, Work-Discipline, and Industrial Capitalism,” 64.

¹⁰⁹ *Ibid.*, 64, 82; Eliza Meteyard, *The Life of Josiah Wedgwood: From His Private Correspondence and Family Papers*, vol. 1 (London: Hurst and Blackett, 1865), 330.

¹¹⁰ Koehn, “Josiah Wedgwood and the First Industrial Revolution,” 43. According to M. A. Bienefeld, until the nineteenth century a typical workday in the Potteries usually ended at 10:00 PM, see: M. A. Bienefeld, *Working Hours in British Industry: An Economic History* (London: London School of Economics and Political Science; Weidfeld and Nicolson, 1972), 26.

[B]e at the works the first in the morning, & settle the people to their business as they come in—to encourage those who come regularly to their time, letting them know that their regularity is properly noticed, & distinguishing them by repeated marks of approbation, from the less orderly part of the workpeople, by presents or other marks suitable to their ages, &c. / Those who come later than the hour appointed should be noticed, and if after repeated marks of disapprobation they do not come in due time, an account of the time they are deficient in should be taken, & so much of their wages stopt as the time comes to.¹¹¹

In order to aid the Clerk in identifying and reprimanding tardy or absent workers, Wedgwood introduced a recorded clocking-in system, an embryonic “punch clock”—also the first in the history of the factory system.¹¹² Alongside the bell, the punch-clock, and the Clerk, Wedgwood also counted on the labor of a “Clerk of Weights & Measures,” a “Porter,” overseers at each stage of production, and five to ten general managers to discipline his workforce. Together, these foremen kept a tight rein on labor. They presided over the factory’s code of ‘Rules and Regulations’ while ingraining in workers the industrial virtues of diligence, thrift, cleanliness, sobriety, and regularity.¹¹³ Operating under the tenets of skill, order, and industry, Etruria was a paragon of capitalist rationality—wares on conveyor belts moved efficiently, men at assembly lines worked productively, and superintendents guided by scripts helmed the factory methodically. And although production was eventually powered by a steam engine in the 1780s, Wedgwood’s greatest contributions to the factory system were decidedly low-tech; they were foremost a result of his scientific approach to business management centered on disciplining workers, systematizing production, and bringing the

¹¹¹ MS. Instructions, c. 1780, in Wedgwood MSS. (Barlaston), 26.19114, quoted in: Thompson, “Time, Work-Discipline, and Industrial Capitalism,” 82.

¹¹² Ibid., 83; Koehn, “Josiah Wedgwood and the First Industrial Revolution,” 43. McKendrick, “Josiah Wedgwood and Factory Discipline,” 41; Letter to Bentley, September 4, 1773, Katherine Eufemia Farrer, ed., *Letters of Josiah Wedgwood, 1771-1780*, vol. 2 (Manchester: E. J. Morten & The Wedgwood Museum, 1973), 162.

¹¹³ McKendrick, “Josiah Wedgwood and Factory Discipline”; Koehn, “Josiah Wedgwood and the First Industrial Revolution.”

division of labor “to an extreme nicety.”¹¹⁴ While Andrew Ure and Charles Babbage famously defined the factory system in the nineteenth century as a machine industry, William Cooke Taylor argued, by contrast, that the essence of a factory consisted less in the employment of machinery than in the concentration, division, and supervision of labor.¹¹⁵ As Paul Mantoux wrote in his classic study of English industrialization, “It was only by imperceptible changes that the system of ‘manufacture’ developed into the factory system, as for instance in the Potteries in the time of Josiah Wedgwood.”¹¹⁶

But a disciplined workforce and a rationalized labor process, as I contend below, are only half of the story. To hone the acclaim of his ornamental wares and preserve their stature among Europe’s finest luxuries, Wedgwood had to combine the precepts of factory production with those of craftsmanship, artistry, and elegance. The challenge of modernizing and scaling the production of a traditional and artisanal trade such as pottery while sustaining the elegance and finesse of his vases meant that Wedgwood’s entrepreneurial vision had to be placed at the service of his taste and artistic judgment at all times. As his associate Thomas Bentley put it in 1769, “We are every day finding out some ingenious man, or curious piece of workmanship; all which we endeavour to make subservient to the improvement of our taste, or the perfection of our manufacture.”¹¹⁷ In order to illustrate how this aesthetic dimension of Wedgwood’s insatiable quest for efficiency, output, and profit was central to his contribution to the factory system, I focus on how his organization of painting, sculpture, and design allowed him to set the rhythm of artisanal labor to the beat of industrial production while, at the same time, elevating his wares to the apex of beauty, refinement, prestige,

¹¹⁴ Fong, *Triumph of Factory System in England*, 126.

¹¹⁵ For economic historians who emphasize the concentration, supervision, and division of labor over the employment of machinery, see: Cooke Taylor, *The Factory System*. Mantoux, *The Industrial Revolution*.

¹¹⁶ Mantoux, *The Industrial Revolution*, 40.

¹¹⁷ Letter From Thomas Bentley to Samuel Boardman, November 4, 1769, James Boardman, *Bentleyana; or, A Memoir of Thomas Bentley, Sometimes of Liverpool, with Extracts from His Correspondence* (Liverpool: Wareing Webb, 1851), 15.

and luxury. Sensibility and taste were the sinews of Wedgwood's success as a factory master and entrepreneur.

Production at Wedgwood's manufactory, Etruria Works, began on June 13, 1769 in the town of Burslem. Its first vases were hand-painted with red encaustic enamel and modeled after the Ionic Etruscan wares in Sir William Hamilton's *Etruscan Antiquities*, a valuable collection of ancient Egyptian, Roman, and Greek rarities. On the shop floor, the twin principles of separation and division organized the workday. The labor process was broken up by skill level; each class of workers—confined to isolated workshops—bore “no connection with any other.”¹¹⁸ Stages of production were enclosed within distinct departments accessible only by exclusive doorways and external stairwells. While workers remained still and confined, the objects they touched moved swiftly through their hands. The vases were classed according to their price and refinement, just as the workers who produced were ranked and filed according to their skill level and wage rate. Since “the same hands cannot make *fine*, & coarse—*expensive* & *cheap*—articles,” unskilled workers made utilitarian tableware, skilled artisans focused on the ornamental line.¹¹⁹ Besides being divided, the workforce was also highly specialized. Out of the approximately 300 men, women, and children employed at Etruria in 1790, only five were labeled as “Odd men” with no specific title, task, or skillset.¹²⁰

Thomas Bentley handled the company's commercial affairs from London, where most of his time was spent pursuing the favor of noble patrons, procuring new customers, and prying open foreign markets for ornamental wares. As the demand for his ornamental vases began to surge in the late 1760s, Wedgwood leased a spacious warehouse on Great Newport Street to serve as a storefront

¹¹⁸ Letter to Bentley, June 25, 1769, Finer, Savage, and Savage, *Letters of Wedgwood*, 76. According to V. W. Bladen, in 1790 Etruria employed more than eighteen distinct classes of workers, see: Bladen, “The Potteries in the Industrial Revolution,” 129. Fong, *Triumph of Factory System in England*, 126.

¹¹⁹ Letter to Bentley, May 12, 1770, McKendrick, “Josiah Wedgwood and Factory Discipline,” 32.

¹²⁰ *Ibid.*, 33.

for his useful wares, a showroom for his ornamental line, and—one day, he hoped—“a Colony of Artists,” for which he had already begun to source eligible tenants, including David Rhodes, a “Master Enameler & China Piecer,” and William Hopkins Craft, who “paint[ed] flowers & Landskips very prettily,” along with their apprentices and assistants.¹²¹ The advantages laid open by training and housing his artists in the same place where his wares were stored, displayed, sold, and finished were immediately evident to Wedgwood. On acquiring the lease in March 1768, he wrote to Bentley: “The having such a man as [Rhodes] under the same roof with the Warehouse, to do Crests, or any other patterns by ordinance—to take sketches &c.—is the most convenient thing imaginable, & nobody but ourselves will know what he is doing.”¹²² Building on Wedgwood’s vision for a “Colony of Artists,” Bentley scaled their enameling operation by moving it to a new site in London’s Chelsea district, which became the company’s dedicated atelier.¹²³ In contrast to their warehouse on Greater Newport Street, this workshop—“Chelsea Decorating Studio”—could accommodate a greater number and diversity of artists as well as heavier equipment, such as a muffle kiln used for firing wares of delicate colors. In the studio, painters of varying skill levels were efficiently organized into specialized tasks, from decorating Queen’s ware teapots with floral patterns to painting intricate classical scenes on Etruscan vases, all under the instruction and supervision of a master, a manager, and a head clerk.¹²⁴ Looking to maximize the economies availed by this scheme, Wedgwood introduced two additional measures to standardize painting at Chelsea. First, he consolidated the enameling operations of useful and ornamental wares into a single assembly stream so that both lines could be assisted by the “same Press, Printer, Clerk (Mr Rhodes)

¹²¹ Letter to Bentley, March 24, 1768, Josiah Wedgwood, *Letters of Josiah Wedgwood, 1762-1770*, ed. Katherine Eufemia Farrer, vol. 1 (London: Women’s Printing Society, 1903), 210. According to Eliza Meteyard, Wedgwood opened the Newport Street warehouse in the summer of 1768, Eliza Meteyard, *The Life of Josiah Wedgwood: From His Private Correspondence and Family Papers*, vol. 2 (London: Hurst and Blackett, 1866), 130. Robin Reilly, *Josiah Wedgwood, 1730-1795* (London: Macmillan, 1992), 96.

¹²² Letter to Bentley, March 24, 1768, Wedgwood, *Wedgwood, 1762-1770*, 1:211.

¹²³ Reilly, *Wedgwood, 1730-1795*, 99.

¹²⁴ *Ibid.*, 96–100.

and Master” at once, cutting in half fixed costs that were previously duplicated.¹²⁵ Second, Wedgwood required painters to work exclusively with penciled or printed outlines instead of freehandedly, ensuring expediency, uniformity, and consistency.¹²⁶ And in case painters protested the new rule, Wedgwood would retort with an alibi: the new measure was based “rather upon the idea of *dispatch* so necessary in a manufacture, than to *supply any deficiency* in the Artist.”¹²⁷ More importantly, given the difficulty in training painters to follow directions, the new system was particularly useful as a disciplinary mechanism.¹²⁸ According to Wedgwood, painters were an unruly and debauched class of workers ridden with “coxcombical manners.”¹²⁹ So, more than simply expediting and standardizing production, tracing also curbed the creative liberties painters had previously enjoyed in freehanded painting, making their practice more mechanical and menial. This particular form of deskilling, supplemented by the spatial reorganization of labor as a continuous assembly in a single workshop, made painters more docile and vulnerable to the discipline, control, and surveillance of their superiors.

In addition to streamlining production, Wedgwood began paying painters by the piece rather than an hourly wage. He was reticent about implementing this policy to flower painters, Chelsea’s least skilled class of artisans, as it would encourage them to produce “*too much in a little time*,” possibly jeopardizing the quality and consistency of their enamels. By contrast, he was confident the same

¹²⁵ Letter to Bentley, April 29, 1770, Finer, Savage, and Savage, *Letters of Wedgwood*, 91. Wedgwood’s consolidation of useful and ornamental lines also extended to sales. Just as the London warehouse doubled as a shop for useful wares and a showroom for ornamental vases, Bentley was charged with the commercial operations of both lines rather than only the ornamental one, as his original partnership with Wedgwood had stipulated. See Reilly, *Wedgwood, 1730-1795*, 97–98.

¹²⁶ Finer, Savage, and Savage, *Letters of Wedgwood*, 90–94.

¹²⁷ Letter to Bentley, April 29, 1770, *Ibid.*, 91.

¹²⁸ Finer and Savage’s editorial note: *Ibid.*, 90.

¹²⁹ Letter to Bentley, September 13, 1769, *Ibid.*, 120. Wedgwood once stated that he “would rather Man for Man have to do with a shop of Potters than Painters.” After meeting a middling painter—which he would eventually hire—Wedgwood was shocked by the man’s “sober” and “solid” appearance: “[he] has nothing flighty or Coxcombical in his dress or behavior, of which most of this Class are apt to contract a small tincture.” See: Letter to Bentley, June 25, 1769, *Ibid.*, 75. Even John Flaxman, who he esteemed “a great Artist,” was considered a “Coxcomb.” See: Letter to Bentley, September 7, 1771, *Ibid.*, 114.

measure would have no adverse effects on figure painters, who were altogether “another order of beings.”¹³⁰ Wedgwood’s contempt of flower painters resonates with the established prejudice against menial and commercial craftsmen held by critics and connoisseurs at the time. Indeed, Wedgwood would eventually only employ the most reputable figure painters to work on his prized ornamental vases. The workmanship of these particular *fine* artists, most of whom were affiliated to the Royal Academy and the Society of Artists, had been sanctioned by the gatekeepers of London’s high art world—established connoisseurs, critics, and noble patrons—whose judgments were widely recognized as paragons of good taste. In contrast to his apprehensions about flower painters, Wedgwood trusted that portraitists were inherently disinclined to risk their reputation by sacrificing the elegance and beauty of their artwork in exchange for money. Flower painters, on the other hand, had to be either paid a fixed wage or forced “to offtrace and cobby any prints [...] without attempting to *mend* or alter them.”¹³¹

As with painting, Wedgwood reorganized modeling by separating the labor of designers from that of molders and, as a result, streamlining the reproduction of clay molds performed by unskilled workers. When Wedgwood became an independent potter in 1759, the industry had already attained a certain degree of specialization, such that no single artisan was responsible for producing an entire pot. Yet, this did not prevent workers at each stage of production from exercising some control over the end product, resulting in “many accidents, & alterations, from the Workmens *unbandiness and want of Ideas*.”¹³² Traditionally, modeling had been entirely performed by a skilled class of artisans known as “throwers.” Their handicraft, insofar as it lent form to a yielding

¹³⁰ Finer, Savage, and Savage, *Letters of Wedgwood*, 91–92.

¹³¹ Letter to Bentley, May 12, 1770, *Ibid.*, 91.

¹³² Letter to Bentley, quoted in Adrian Forty, *Objects of Desire: Design and Society from Wedgwood to IBM* (New York: Pantheon Books, 1986), 33.

mass of clay, was the closest approximation to artistic creation in the Potteries.¹³³ By the mid eighteenth century, however, throwers had almost entirely lost their freedom to model according to their tastes and desires, with “no other aid than a revolving disc, [their] hands, eyes, and brains.”¹³⁴ An additional design stage was added to the modeling process, which took the creative license from throwers and placed it in the hands of “modelers.” In Etruria, for example, the sole task of modelers from the 1770s onward was to make prototypes, or molds, that throwers and other workmen could copy.¹³⁵ As he had done with painting, Wedgwood streamlined modeling by hiring reputable sculptors from the Royal Academy—including John Flaxman, Henry Webber, and William Hackwood—to design the molds which factory workers then reproduced en masse. Wedgwood’s success in this regard reorganized the working conditions of artisan modelers, many of whom were left no choice but to abandon design and enter the factory as throwers. When weighing the decision of commissioning a design from either an artisan modeler or a Royal Academy sculptor, Wedgwood wrote, “I suppose that those at the Academy are less hackney’d & better in General than the Plaisters shop can furnish us with; besides it will sound better to say—This is from the Academy, taken from an Original in the Gallery of &c &c.”¹³⁶ Wedgwood’s statement here points in two directions. First, it evinces his responsiveness to the prevalent taste among his clientele, most of whom were likely to favor a vase modeled by an Academician over one made by an ordinary artisan. Second, it registers the sophistication of Wedgwood’s wares, which demanded artistic designs molded from original antiques as opposed to the classical replicas of classical objects made by

¹³³ Harry Barnard and James Hodgkiss, *Artes Etruriae Renascuntur: A Record of the Historical Old Works at Etruria as They Exist Today, Forming an Unique Example of an Eighteenth Century English Factory* (London: Bemrose, 1920), 18.

¹³⁴ Ibid.

¹³⁵ Forty, *Objects of Desire*, 34–41.

¹³⁶ Letter to Bentley, February 16, 1771, Farrer, *Wedgwood, 1771-1780*, 2:11.

middling plaster-cast makers.¹³⁷ Ultimately, Wedgwood's reorganization of modeling advanced his aesthetic and commercial goals at once. By hiring celebrated sculptors as designers, he brought his wares closer to the status of art. By relegating previous modelers to the sole task of duplicating molds, he was able to reduce costs and scale production. In other words, Wedgwood elevated the artistry of his vases through a technique of mass production while, at the same time, making factory workers out of artisans.

And if Wedgwood's rationalization of production assailed artisanal labor by gnawing away at the particular qualities that distinguished one craft from another, this was in part because he found all workers in the Potteries to be equally incompetent. Whether they were flower painters, plaster-cast makers, or throwers, Wedgwood was convinced that few if any artisans in Staffordshire were cut out for Etruria. For this reason he told Bentley that, instead of hiring workers suited to their standards, they "*must make them.*"¹³⁸ He continues,

We have stepped forward beyond the other manufactures and we must be content to train up hands to suit our purpose. Where amongst our Potters could I get a complete Vase maker? Nay, I could not get a hand through the whole Pottery to make a Table plate without training them up for that purpose and you must be content to train up such Painters as offer to you and not turn them adrift because they cannot immediately form their hands to our new stile, which if we consider what they have been doing all their life we ought not to expect from them.¹³⁹

No worker is "*ready made*" and, as long as he arrives at the factory sober, it was the company's responsibility to "*make him everything else.*"¹⁴⁰ Following his belief that, "nothing must be left to the

¹³⁷ Adrian Forty, *Objects of Desire: Design and Society from Wedgwood to IBM* (New York: Pantheon Books, 1986), 36; Bruce Tattersall, "Flaxman and Wedgwood," in *John Flaxman, R. A.*, ed. David Bindman (London: Royal Academy of Arts, 1979), 47.

¹³⁸ Letter to Bentley, May 19, 1770, Finer, Savage, and Savage, *Letters of Wedgwood*, 92.

¹³⁹ Ibid.

¹⁴⁰ Letter to Bentley, May 23, 1770, Ibid.

random hand of the workman,”¹⁴¹ Wedgwood had to create his ideal workforce from scratch, a project he expressed in two maxims: “to make *Artists* [of] mere men”¹⁴² and “to make such *Machines* of the *Men* as cannot err.”¹⁴³ To this end, Wedgwood set up an apprenticeship in drawing and modeling where established artists trained unskilled workers to model and decorate vases to the standards demanded by Wedgwood and Bentley.¹⁴⁴ Concurrently, these same workers—not only men but also women and children—were made into unerring machines in the factory floor, as subjects of Wedgwood’s industrial technique to divide, confine, specialize, discipline, and standardize the labor process. According to Neil McKendrick, however, only the second motto—“to make such *Machines* of the *Men* as cannot err”—conveys Wedgwood’s aspiration to mold workers “to the needs of his factory system.” For McKendrick, the first statement—“to make *Artists* [of] mere men”—alludes instead to Etruria’s laudable transformation of semi-skilled potters into “specialist craftsmen.”¹⁴⁵ By contrast, I take the first maxim concerning artists to be as vivid an expression of Wedgwood’s industrial vision as his second assertion concerning machines. More than simply “a contribution to the tradition of the skilled artisan,” as McKendrick suggests, Wedgwood’s plan to train workers through an art apprenticeship forged a stronger bond between handicraft and industrial labor.¹⁴⁶ This was in fact how he justified the venture to Bentley: “when you wanted any hands we could draft them out of this school.”¹⁴⁷ At Etruria, “*Artists*,” “*Men*,” and “*Machines*” shared

¹⁴¹ Letter to Bentley, June 25, 1779, Farrer, *Wedgwood, 1771-1780*, 2:496.

¹⁴² Letter to Bentley, October 9, 1769, McKendrick, “Josiah Wedgwood and Factory Discipline,” 34.

¹⁴³ Letter to Bentley, October 7, 1769, Finer, Savage, and Savage, *Letters of Wedgwood*, 82–83.

¹⁴⁴ McKendrick, “Josiah Wedgwood and Factory Discipline,” 35–36. By 1790 25% of his workmen were apprentices (37).

¹⁴⁵ *Ibid.*, 38.

¹⁴⁶ This accounts for one of the more serious challenges faced by early factory innovators, who, according to Sidney Pollard, “needed large concentrations of craftsmen of a type which had hitherto worked scattered in small workshops; [...] wanted new skills, often created or developed in the works of the innovators themselves; or [...] required workpeople willing to suffer the new factory routine.” See: Pollard, *The Genesis of Modern Management*, 167.

¹⁴⁷ Letter to Bentley, May 23, 1773, Wedgwood, *Wedgwood, 1762-1770*, 1:348–49. Wedgwood’s plan was to set up “a regular drawing & modeling school to train up artists for ourselves. I would pick up some likely Boys of about 12 years old & take them apprentice ‘till they are twenty or twenty one & set them to drawing & when

the same fate; the factory created the workforce it demanded—“part humans: soulless, depersonalised, disembodied.”¹⁴⁸ On this reading, Wedgwood’s portrayal of the ideal industrial worker in the image of a “machine-artist” prefigures the imminent demise of craft at the onset of capitalist modernity. Wedgwood’s imagery of the artisan’s allegorical metamorphosis from man into android indexes the impending displacement of the workshop by the mechanized factory.¹⁴⁹

Moreover, all workers that passed through Etruria since the early 1770s—whether they were artisans, Academicians, or “Odd men”—were employed in manufacturing complex geared to mass-production. Although Wedgwood had already made considerable progress in standardizing production, it was the crisis in consumer demand of the early 1770s that pushed him to expand his ornamental line.¹⁵⁰ While the decision to scale output during an economic crisis was likely seen as counterintuitive by his contemporaries, it stemmed from his groundbreaking discovery that consequently established “total cost accounting” as a standard practice in business management.¹⁵¹ After studying his accounts in 1772, Wedgwood noticed that producing at or above a certain level decreased his *average total cost* (or total unit cost) since it allowed his fixed costs to be divided across a greater number of units.¹⁵² Fixed manufacturing expenses “move on like clockwork,” he wrote, “and are much the same whether the quantity of goods made be large or small.” The numbers revealed that overheads associated with production, such as modeling, turning, and throwing, decreased by a third when output rose by a dozen units.¹⁵³ From this point on, the official production norm at

they had made some tolerable proficiency they should practice with outlines of figures upon Vases which I would send you to be fill’d up. [...] “The Paintings upon these Vases from W & B school—so it may be said 1,000 years hence.”

¹⁴⁸ Werner Sombart, *Der Moderne Kapitalismus*, quoted in Pollard, *The Genesis of Modern Management*, 161.

¹⁴⁹ Adelheid Voskuhl, *Androids in the Enlightenment: Mechanics, Artisans, and Cultures of the Self* (Chicago and London: University of Chicago Press, 2013).

¹⁵⁰ Finer, Savage, and Savage, *Letters of Wedgwood*, 106. “General trade seems to be going to ruin on the Gallop—large stocks on hand both in London and the Country, and little demand.”

¹⁵¹ Neil McKendrick, “Josiah Wedgwood and Cost Accounting in the Industrial Revolution,” *The Economic History Review* 23, no. 1 (1970): 45–67.

¹⁵² Letter to Bentley, August 23, 1772, Finer, Savage, and Savage, *Letters of Wedgwood*, 130.

¹⁵³ *Ibid.*, 131.

Etruria became: “*making the greatest quantity possible in a given time.*”¹⁵⁴ And yet, despite all these measures to streamline and scale production, to discipline and squeeze his workers, to produce ornamental wares “as currently as usefull ware,” and so forth, Wedgwood’s products continued to evolve in terms of quality, prestige, beauty, and artistry. As I argue next, Wedgwood reorganized the artisanal labor process and introduced a new culture of work to a traditional craft in large part by, as Sidney Pollard put it, introducing “art into a major mass-production industry.”¹⁵⁵

PART 3: THE MODERN AESTHETICS OF A FACTORY MASTER

In a study dedicated to the role of taste in modern architecture and design, Jules Lubbock notes that Wedgwood’s primary concern in ornamental wares was with a limited, upper class luxury market. According to Lubbock, Wedgwood set the process of social emulation to work “not between social classes but within a single social class—the gentry and aristocracy.”¹⁵⁶ His intent, Lubbock concludes, was to preserve the exclusivity of his wares by preventing them from trickling down to the lower echelons of English society.¹⁵⁷ Indeed, indulging the nobility was the hallmark of Wedgwood’s marketing strategy.¹⁵⁸ His Etruscan vase, for instance, did more than simply cater to aristocratic taste: it was modeled after the collection of classical antiques amassed by a distinguished member of the Georgian gentry, Sir William Hamilton, British ambassador to the Court of Naples and founding member of the Society of Dilettanti.¹⁵⁹ Writing to Wedgwood in 1786, Hamilton claimed to have been “instrumental in introducing a purer taste of forms & Ornaments by having

¹⁵⁴ Ibid.

¹⁵⁵ Pollard, *The Genesis of Modern Management*, 99.

¹⁵⁶ Jules Lubbock, *The Tyranny of Taste: The Politics of Architecture and Design in Britain, 1550-1960* (New Haven and London: Yale University Press, 1995), 225.

¹⁵⁷ Ibid.

¹⁵⁸ Neil McKendrick, “Josiah Wedgwood and Thomas Bentley: An Inventor-Entrepreneur Partnership in the Industrial Revolution,” *Transactions of the Royal Historical Society* 14 (1964): 1–33; Neil McKendrick, “Josiah Wedgwood and the Commercialization of the Potteries,” in *The Birth of a Consumer Society: The Commercialization of Eighteenth-Century England*, by Neil McKendrick, John Brewer, and J. H. Plumb (London: Europa Publications, 1982), 100–145.

¹⁵⁹ Koehn, “Josiah Wedgwood and the First Industrial Revolution,” 44–45.

placed [his] collection of Antiquities in the British Museum.”¹⁶⁰ Yet, he continues, the merit of impressing this taste on the British public was not his own: “a Wedgwood and a Bentley were necessary to diffuse that taste so universally, and it is to their liberal way of thinking & . . . acting that so good a taste prevails at present in Great Britain.” Hamilton’s statement is a reflection of Hume’s thesis on luxury and taste. Although luxury promotes the mechanical and fine arts in equal measure, the refined taste it instills in the public is only dispersed across society once luxuries become available to the masses. This is a program Wedgwood professed overt sympathy for, going so far as adapting his wares so they might better “serve the arts, & diffuse the seeds of good taste.”¹⁶¹ In order to, as Hamilton put it, “diffuse that taste so universally” Wedgwood had to: first, incite a popular desire for his objects among the middling ranks; second, make his goods affordable to ordinary consumers; and finally, scale his production to meet mass demand. So, while he is correct to underscore the predominantly noble makeup of Wedgwood’s patronage, Lubbock neglects the vital role mass consumption played in shaping the production, marketing, and sales strategies at Etruria.

And while it is certainly true that Wedgwood went through “endless trouble and expense to win the royal favour,”¹⁶² he never lost sight of that “numerous Class of People [willing] to purchase *shenny* and *cheap* things”¹⁶³ Much like Hume, Wedgwood understood the benefits of extending the spheres of luxury and refinement to middle class consumers by appealing to their tastes and budgets. In 1772, he sought to capture a larger share of this mass market with lower prices. “The Great People,” he reasoned, “have had these Vases in their Palaces long enough for them to be seen and admired by the *Middling Class of People*, which Class we know are vastly, I had almost said, infinitely superior, in number to the Great, and though a *great price* was, I believe, at first necessary to make the

¹⁶⁰ Ibid., 575–76n157. See: Reilly, “Wedgwood.”

¹⁶¹ Letter to Sir William Hamilton, June 24, 1786, quoted in Mankowitz, *The Portland Vase*, 26.

¹⁶² McKendrick, “Josiah Wedgwood and the Commercialization of the Potteries,” 109.

¹⁶³ Letter to Bentley, March 5, 1774, Finer, Savage, and Savage, *Letters of Wedgwood*, 159.

Vases esteemed *Ornament for Palaces*, that reason no longer exists.”¹⁶⁴ After years of catering his designs to the tastes of Georgian aristocrats, Wedgwood was convinced that the high-luxury gleam of his wares had become so familiar that “middling People would probably buy quantities of them at a reduced price.”¹⁶⁵ Even when his ambitions were set on a new, middle class market, Wedgwood continued to tie in his aesthetic sensibility, his predilection for refinement and beauty, with the commercial interests of his business:

[T]hose customers who were more fond of shew & glitter, than fine forms, & the appearance of antiquity would buy Soho Vases [made by Boulton], & that all who could feel the effects of a fine outline & had any veneration for Antiquity would be with us.—But these we were afraid would be a minority; a third class were therefore call’d in to our aid, compos’d of such as would of *themselves* choose shewy, rich & gaudy things, but who would be *overruled by their betters* in the choice of their ornaments as well as other matters; who would do as their *Architects*, or whoever they depended upon in matters of taste directed them; & with this reinforcement we thought Etruria stood a pretty good chance with any competitor; but when it was recollected that to all this we could add *richness & splendour* equal perhaps, if not superior to water gilding, the odds were clearly in our favour, & we decided accordingly.¹⁶⁶

Importantly, as I argue next, middling fine artists—painters, architects, decorative designers, and sculptors—became Wedgwood’s most sought-after customers for ornamental articles from the mid 1770s until his death in 1795. In marketing his wares to a fine arts public and trusting his own aesthetic judgment rather than catering to the tastes of his noble patrons, Wedgwood was able to advance his commercial enterprise and artistic ambitions at once. The importance of taste and the fine arts to industrial production was made explicit by Wedgwood’s business associate, Thomas

¹⁶⁴ Letter to Bentley, August 23, 1772, *Ibid.*, 131.

¹⁶⁵ *Ibid.*

¹⁶⁶ Letter to Bentley, December 24, 1770, Wedgwood, *Wedgwood, 1762-1770*, 1:386–87.

Bentley, in 1772. Amidst rampant fears by economists and industrialists that English luxury goods were losing their share of foreign markets to European rivals, Bentley raised the possibility that the problem was not a matter of price alone. “There is another *deficiency* in many of our manufactures,” he wrote, “that depend[s] upon *taste*, which purchasers seem to be more sensible of than manufacturers; and which is of so much consequence, that neither *good workmanship*, nor even *cheapness*, can counterbalance; and that is a want of *design* in *patterns* and *forms*.”¹⁶⁷ This deficiency, he continued, could not be addressed in economic terms, rather, it required manufacturers themselves to “study the *principles of taste*, and spare no expence in procuring the *best designs*, on which the character and sale of their goods will depend more than upon any other circumstance attending the manufactory.” Indeed, the only improvements English luxury producers lacked concerned design and taste. For Bentley, the key impetus to the creation of the Royal Academy was to rectify this aesthetic deficiency among England’s capitalist class: “It was *chiefly* with a view of raising up the numbers of artists for the benefit of our manufactures, and procuring the manufacturers the only assistance they seemed to want, that [His Majesty] established the *Royal Academy*.”¹⁶⁸ My aim in this section, then, is to shed light not only on the contours of Wedgwood’s contact with modern aesthetics and the fine arts, but additionally to lay bare the ways in which the prodigious growth of his factory ensued from his obsession with taste and artistry, or what Bentley elatedly proclaimed, in regards to the official merger of fine art and luxury in the Royal Academy, as “a noble design!”

Use Versus Ornament, Utility Versus Beauty

In September 1767, Wedgwood remarked on the impressive spurt in demand for creamware. “It is really amazing,” he wrote, “how rapidly the use of [his wares] has spread allmost over the

¹⁶⁷ Thomas Bentley, “Review of ‘Political Essays Concerning the Present State of the British Empire’ [Part 3],” *The Monthly Review* 47 (September 1772): 200.

¹⁶⁸ *Ibid.*

whole Globe, and how universally it is liked.”¹⁶⁹ Dwelling on the possible causes for the popularity of his vases, he wondered “how much of this general use and estimation [was] owing to the mode of [their] introduction—and how much to [their] real utility and beauty.”¹⁷⁰ Rather than probing the sources of consumer desire, Wedgwood addressed the question as a business problem.¹⁷¹ “If a Royal or Noble introduction,” he continued, “be as necessary to the sale of an Article *of luxury*, as real Elegance and beauty, then the Manufacturer, if he consults his own interest will bestow as much pains, and expense too if necessary, in gaining the former of these advantages [endorsement by arbiters of taste], as he would in bestowing the latter [real beauty].”¹⁷² Three years later, when Bentley considered exporting to Ireland, Wedgwood confirmed his position: “I need not tell you how much [our success] will depend upon a *proper* and *noble* introduction.”¹⁷³ Wedgwood’s active search for noble sponsorship is a classic case study of eighteenth-century marketing innovation.¹⁷⁴ Yet, less attention has been paid to what his predicament between a noble introduction and real beauty may say about his views on aesthetics, especially in what concerns the distinction between art and craft. In 1767, Wedgwood hinted at an economy of sensation in his attempt to convince Bentley to become his partner at Etruria, which he did by appealing to Bentley’s sensibilities and equating a factory owner to a creator of beauty. He wrote,

I should have little or no doubt of our success, for if we consider the *great variety of colours* in our raw Materials—the *infinite ductility of Clay*, and that we have *universal beauty* to copy after, we have certainly the fairest prospect of *enlarging this branch of Manufacture* to our wishes, and as *Genius* will not be wanting I am firmly persuaded that our proffits will be in proportion to our application, and *I am confident that it would*

¹⁶⁹ Letter to Bentley, September 8, 1767, Finer, Savage, and Savage, *Letters of Wedgwood*, 58. Creamware was also known as “Queens Ware” and “Ivory.”

¹⁷⁰ Ibid.

¹⁷¹ Ibid.

¹⁷² Ibid., 58–59.

¹⁷³ Letter to Bentley, August 2, 1770, Ibid., 93.

¹⁷⁴ McKendrick, “Josiah Wedgwood and the Commercialization of the Potteries.”

*be beyond comparison more congenial, and delightful, to every particle of matter, sense, and spirit in your composition, to be the Creator as it were of beauty, rather than merely the vehicle or medium to convey it from one hand to another.*¹⁷⁵

From the outset, Wedgwood was prone to communicate his pursuit of profit and industrial expansion—the prospect of enlarging and improving a nascent and rude industry—by detailing the aesthetic dimension of his capitalist project, one that was on his view enmeshed in a modern idea of art predicated by the imperatives of genius, beauty, and creation. While the merchant is a mere vehicle for exchange, the manufacturer of luxury—in particular the manufacturer of ornamental vases at Etruria—is a “Creator” of beauty.

Ultimately, Wedgwood did not see much difference between his ornamental wares and works of art insofar as the success and valuation of both were contingent upon similar factors. He was aware that, in order to be accepted as art or luxury, an object required more than the benediction of connoisseurs. A claim to artistry and grandeur would be futile in the absence of real, material qualities that conformed to reigning conventions of refinement and quality. Being a devout patron of the arts as well as a manufacturer of luxury earthenware, Wedgwood knew firsthand that the prestige and value of a painting depended as much on the sanction of experts as the prestige and value of his vases depended on aristocratic sponsorship. Both objects had to favor a public whose judgment and taste were emulated. Yet, as Wedgwood alludes to above, in order for any object to be recognized as either art or luxury while being valued *qua* a work of art or a luxury, its appearance, form, color, and feel must display real—nearly “objective”—elements of beauty and elegance. To him, the distinction between useful and ornamental wares, for instance, could not be made on the basis of an article’s “*fitness, or richness, or price, or colour, or enameling, or bronzing or gilding.*”¹⁷⁶ Instead

¹⁷⁵ Letter to Bentley, November 8, 1767, Finer, Savage, and Savage, *Letters of Wedgwood*, 46.

¹⁷⁶ *Ibid.*, 95–96.

of relying on form, he proposed to ascribe the difference to the *purpose* of each object.¹⁷⁷ Under this criterion, he defined as useful any ware that was “*made use of at meals.*”¹⁷⁸ In doing so, Wedgwood only defined his ornamental line negatively, as those works whose end was not use but display. This move to class objects by attending to their purpose rather than form echoes a similar tendency among critics to define the fine arts in opposition to the utilitarian telos of the mechanical arts. As Karl Philipp Moritz wrote in his 1785 *Theory of Ornament*, “The purely useful object is [...] not whole or perfect in itself but becomes so only on accomplishing its purpose.”¹⁷⁹ By contrast, when contemplating the beautiful, he continued, “the purpose lies not in me but in the object itself, which I regard as [...] *something that constitutes a whole in itself*, and gives me pleasure *for its own sake.*” In tune with contemporary apologias for “*l’art pour l’art,*” Wedgwood classified his vases as “ornamental” by recourse to the same tautology through which Moritz and others defined the art object: something is a work of art because it is whole in itself and it is whole in itself because it is an artwork, as opposed to an ordinary commodity made for a particular use.

Wedgwood understood that, whatever the similarities his earthenware shared with works of art, they would never carry the esteem of art unless they ceased to be useful, especially since his best-selling creamware had become, to his likings, “vulgar and common every where.”¹⁸⁰ As early as 1772, Wedgwood had already vocalized his intent to focus on improving the quality of ornamental pieces. “I wish to have the stock of usefull ware kept down,” he instructed Bentley, “for—*A* *REVOLUTION IS CERTAINLY AT HAND.*”¹⁸¹ In the next four years, Wedgwood would devote

¹⁷⁷ Wedgwood anticipated Simmel’s rejection of form as a conduit of value: “Value is never a ‘quality’ of the objects, but a judgment upon them which remains inherent in the subject.” See: Georg Simmel, *The Philosophy of Money*, trans. Tom Bottomore and David Frisby (London and New York: Routledge, 2011), 65.

¹⁷⁸ Finer, Savage, and Savage, *Letters of Wedgwood*, 95–96.

¹⁷⁹ Karl Philipp Moritz, “Preliminary Ideas on the Theory of Ornament (1785),” in *The Theory of Decorative Arts: An Anthology of European and American Writings, 1750-1940*, ed. Isabelle Frank, trans. David Britt (New Haven and London: Yale University Press, 2000), 31.

¹⁸⁰ Letter to Bentley, December 12, 1774, Finer, Savage, and Savage, *Letters of Wedgwood*, 169.

¹⁸¹ Letter to Bentley, April 18, 1772, *Ibid.*, 120.

most days to perfecting a new “White ware” the “*WORLD* [had] so long and so *IMPATIENTLY* expected.” He was determined to make it “as much whiter, and as much better in every respect than my Neighbours as I am able, and by that means to keep up the distinction as much in white ware as I have hitherto done in the Cream-colour.” As his remarks suggest, Wedgwood’s plan for the new ware was not only to make it as beautiful as a work of art, but also to lift it from the servile and utilitarian sphere of hollowware commodities. To this end, Wedgwood set out to brand his new article as a byproduct of sculptural ornaments, cabinet pictures, and enamel plates made by visual and decorative artists.¹⁸² In September of 1774, while tirelessly at work on a new white tablet, Wedgwood received a visit from Samuel More, Secretary of the Society of Arts, who commissioned a collection of Wedgwood & Bentley wares to be preserved at the Society for posterity.¹⁸³ The recognition likely validated Wedgwood’s decision to focus on the artistic rather than noble appeal of his articles.¹⁸⁴

Wedgwood and the London Art Scene

In 1777, after six years and over 5,000 experiments, Wedgwood introduced his “fine white composition” to the market under the name “jasper.”¹⁸⁵ A “biscuit porcelain” made from “decomposed talc,” jasper was a hybrid tablet: hard as stoneware yet fine as porcelain. Much like porcelain, it could withstand great heat in firing and turned translucent if fired at sufficiently high temperatures.¹⁸⁶ From the earliest phase in its development, Wedgwood planned to apply jasper only

¹⁸² During this period Wedgwood confided in Bentley his misgivings about the commodification of his ornaments by their noble patrons: “I despair making flowerpots, or any other pots to please those good ladies who do not know what they would have.” See: Letter to Bentley, July 21, 1774, *Ibid.*, 163.

¹⁸³ Today, this collection forms the basis of the Wedgwood Museum, see: Lubbock, *The Tyranny of Taste: The Politics of Architecture and Design in Britain, 1550-1960*, 225.

¹⁸⁴ Letter to Bentley, September 3, 1774, Finer, Savage, and Savage, *Letters of Wedgwood*, 164.

¹⁸⁵ Jenny Uglow, “Vase Mania,” in *Luxury in the Eighteenth Century: Debates, Desires and Delectable Goods*, ed. Maxine Berg and Elizabeth Eger (New York: Palgrave Macmillan, 2003), 160. Alfred J. Caddie, “Recent Discoveries at the Wedgwood Factory,” *The Burlington Magazine for Connoisseurs* 8, no. 34 (1906): 257.

¹⁸⁶ Finer and Savage’s editorial notes, Finer, Savage, and Savage, *Letters of Wedgwood*, 170–71.

to his finest vases, locket, cabinet pictures, and snuffboxes adorned with onyx and lapis lazuli.¹⁸⁷ To make any useful articles with jasper would, by his judgment, only “vulgarise the material.”¹⁸⁸ In bringing jasper to his standards, Wedgwood counted on the excellent craftsmanship in portrait-modeling of two established sculptors: William Hackwood and John Flaxman. In perfecting jasper bas-reliefs from molds, Hackwood was able to give each piece “the appearance, and nearly the reality, of models,” according “these fine things [with] every perfection in [his] power.”¹⁸⁹ Recognized with awards from the Society of Arts and the Royal Academy, Flaxman had an impressive reputation in the London art circuit.¹⁹⁰ Well aware of Flaxman’s favorable standing among critics, connoisseurs, and artists, Wedgwood gloried in having “so valuable an artist” as his worker.¹⁹¹ In the coming years, Hackwood and Flaxman would model the finest jasper bas-reliefs ever produced by Wedgwood & Bentley, including the most celebrated article in the company’s history, the *Portland Vase*. That Wedgwood chose these particular sculptors to assist him in perfecting and promoting jasper attests to his determination in marketing the tablet as a fine arts object for a fine arts public.

By November 1777 Wedgwood was satisfied with the form and appearance of his new tablet. “I am now ABSOLUTE in this precious article,” he wrote Bentley, “& can make it with as much facility, & certainty as black [basalt] ware.”¹⁹² Having achieved his desired degree of beauty, quality, and consistency, the next step was “to push [jasper] forward into the world.”¹⁹³ But unlike creamware and black basalt, Wedgwood directed jasper at England’s burgeoning class of middling artists. He did this not simply because he deemed the tastes of artists more discerning than those of

¹⁸⁷ Letter to Bentley, December 18, 1774, *Ibid.*, 170.

¹⁸⁸ Letter to Bentley, November 4, 1778, *Ibid.*, 228.

¹⁸⁹ Letter to Bentley, November 4, 1778, *Ibid.*

¹⁹⁰ *Finer and Savage’s* editorial notes, *Ibid.*, 114n3.

¹⁹¹ Letter to Bentley, January 14, 1775, *Ibid.*, 172.

¹⁹² Letter to Bentley, November 3, 1777, Farrer, *Wedgwood, 1771-1780*, 2:391.

¹⁹³ Letter to Bentley, November 3, 1777, *Ibid.*, 2:391–92.

his noble patrons, but also because he believed the favor of artists could be a vehicle to establish his craft as an art form.¹⁹⁴ To this end, Wedgwood explicitly outlined the artistry and refinement of jasper in one of his catalogues, describing the material as a “white porcelain biscuit of exquisite beauty and delicacy” capable of retaining color “in a manner which no other body, ancient or modern, has been known to do.”¹⁹⁵ Rather than selling retail to noble patrons as usual, Wedgwood set out to gain the notice of architects and decorators in the hopes they would contract for his work wholesale.¹⁹⁶ To his dismay, however, the plan foundered.

Of the numerous artists approached by Wedgwood, James and Robert Adams among them, only two incorporated jasper during this period.¹⁹⁷ Despite the late eighteenth-century surge in neoclassical construction and decoration, architects and interior designers were reluctant to adorn neoclassical buildings with sculptural decoration that carried traces of modern manufacturing and invariably opted for the seemingly ancient appearance of natural stone.¹⁹⁸ For most architects and designers of his day, Wedgwood’s jasper remained an ersatz of neoclassical decoration. And, although a group of architects had gone as far as to convince Queen Charlotte that jasper was “not fit for chimney pieces,” Wedgwood remained “persuaded that the jasper tablets, and pictures must

¹⁹⁴ Letter to Bentley, July 21, 1774, Finer, Savage, and Savage, *Letters of Wedgwood*, 163.

¹⁹⁵ Bermingham, “The Origin of Painting and the Ends of Art: Wright of Derby’s Corinthian Maid,” 142; See: *Josiah Wedgwood: The Arts and Sciences United*, Science Museum Catalogue (London, 1978), 14; E. 22495-30, Wedgwood MSS. In the 1774 French catalogue of gems, Wedgwood had already described the immediate forerunner of jasper as a “terra cotta of a wonderful whiteness, and of a delicacy without equal, *proper for Cameos, Portraits and Bas-reliefs*.” See: Finer, Savage, and Savage, *Letters of Wedgwood*, 164.

¹⁹⁶ Bermingham, “The Origin of Painting and the Ends of Art: Wright of Derby’s Corinthian Maid,” 144.

¹⁹⁷ *Ibid.*, 142–44. The architect James Stuart used jasper for decorating Elizabeth Montagu’s house in Portman Square. Additionally, Sir William Bagot had his chimneypiece decorated with the material in 1779. See: Letter to Bentley, July 30, 1779, Finer, Savage, and Savage, *Letters of Wedgwood*, 236. In 1776, Wedgwood reported that Henry Clay, a renowned Birmingham artisan, had also used jasper tablets as insets for his escritaires and snuffboxes. See: Letter to Bentley, July 14, 1776, *Ibid.*, 194–95.

¹⁹⁸ Mr. Brown, architect to Wedgwood’s patron Lord Gower, expressed interest in working with jasper, Wedgwood claims that he even “preferred them greatly to sculpture in marble, [and] would make use of them himself” on the condition they were “a copy of some natural and valuable stone.” See: Letter to Bentley from October 6, 1778, Finer, Savage, and Savage, *Letters of Wedgwood*, 225–26. The “great Mr Brown” had also visited the factory four years earlier and “admir’d greatly” Wedgwood’s ornaments. See: Letter to Bentley, September 11, 1774, *Ibid.*, 164.

sell.”¹⁹⁹ Since “*Fashion* is infinitely superior to *merit*,” he reasoned that, “if you have a favorite child you wish the public to fondle and take notice of, you have only to make choice of proper sponcers.”²⁰⁰ Instead of being jasper’s “godfathers,” architects “have cursed the poor infant by bell, book, and candle, and it must have a hard struggle to support it self, and rise from under their malediction.”²⁰¹ But rather than insisting on favoring architects, Wedgwood channeled his marketing efforts to another class of fine artists: painters.²⁰²

Wedgwood’s plan to make jasper fashionable among painters marks the beginning of his collaboration with George Stubbs, the first artist to adopt the material. By the time he met Wedgwood in 1777, Stubbs was an established and well-regarded painter, best known for painting horses.²⁰³ His series of anatomical studies, *Anatomy of the Horse*, engraved and published in 1766, was an immediate sensation across Europe.²⁰⁴ From 1761 to 1776, Stubbs had recurring exhibitions at the Society of Artists of Great Britain and was inducted to the Royal Academy in 1775.²⁰⁵ As a personal acquaintance to several artists, critics, and connoisseurs associated with both institutions, Wedgwood was certainly alive to Stubbs’s acclaim, especially since his practice was, much like Wedgwood’s own, founded on scientific research.²⁰⁶ In fact, it was during this period that Stubbs established his reputation as an innovator in the field when he became the first English painter to

¹⁹⁹ Letter to Bentley, June 19, 1779, Finer, Savage, and Savage, *Letters of Wedgwood*, 235. Bentley had previously written Wedgwood to inform him of a Royal visit to their London showroom (on Greek Street) in June 1779.

²⁰⁰ Letter to Bentley, June 19, 1779, *Ibid.*

²⁰¹ Letter to Bentley, June 19, 1779, *Ibid.*, 236.

²⁰² Much like his previous inventions, jasper would eventually become popular, in the 1780s, as a byproduct of luxury hollowware commodities and fashionable household items prized by upper-class consumers. See: Bermingham, “The Origin of Painting and the Ends of Art: Wright of Derby’s Corinthian Maid,” 145.

²⁰³ Constance-Anne Parker, *Mr. Stubbs the Horse Painter* (London: J. A. Allen, 1971).

²⁰⁴ Frank Cossa, “Josiah Wedgwood: His Role as a Patron of Flaxman, Stubbs, and Wright of Derby” (Doctoral Dissertation, Rutgers University, 1982), 158.

²⁰⁵ His break with the academy in the 1780s was partially motivated by the critical and commercial failure of his enamels on jasper. See: *Ibid.*, 163; Basil Taylor, *Stubbs*, Icon Editions (New York: Harper & Row, 1971).

²⁰⁶ Stubbs’ scientific research is evinced as much by his anatomical studies as by his experimentations with enamel painting, which led to his discovery of nineteen new fireproof tints; this breakthrough was an important factor in sealing his collaboration with Wedgwood from 177 to 1780. See: Neil McKendrick, “Josiah Wedgwood and George Stubbs,” *History Today* 7, no. 8 (1957): 507.

work with vitreous enamel on large plates.²⁰⁷ Although he initially developed the practice with copper, the material prevented him from scaling the dimension of his works. In light of their weight, the largest copper plates Stubbs could practically apply measured 15 by 18 inches, which he found both too small and too heavy.²⁰⁸ No longer able to proceed with copper, Stubbs decided to paint his enamels on ceramic plates, a more workable material for large-scale surfaces. The choice eventually led him to Wedgwood who rejoiced at the opportunity to furnish Stubbs with “the means of adding immortality to his very excellent pencil.”²⁰⁹ From 1777 to 1779, Wedgwood conducted countless failed experiments in jasper before successfully firing a plate up to par with the painter’s needs—the jasper tablet on which Stubbs painted the *Reapers*, for example, measured 30¼ by 40½ inches.²¹⁰

While Wedgwood’s admiration for Stubbs was certainly great, it is unlikely that the “honor of being his *canvas maker*” sufficed to compensate the potter for nearly two years of free labor.²¹¹ Contrary to Frank Cossa’s suggestion that the work was “a favor” for Stubbs, Wedgwood’s care to perfect the tablet should be seen as an investment in two fronts, one commercial the other artistic.²¹² First, the commission was a valued business opportunity to thrust jasper into an environment teeming with artists, connoisseurs, and critics; it was his chance to render the ware fashionable among painters in the orbit of the Royal Academy. Cognizant that if “Stubbs succeeds he will be followed by others,” Wedgwood counseled Bentley to join him in giving Stubbs “every encouragement to proceed and establish the fashion,” adding that, “if the oil painters too should use

²⁰⁷ Finer and Savage’s editorial notes, Finer, Savage, and Savage, *Letters of Wedgwood*, 234.

²⁰⁸ Cossa, “Josiah Wedgwood: His Role as a Patron of Flaxman, Stubbs, and Wright of Derby,” 159.

²⁰⁹ Letter to Bentley, October 17, 1778, Farrer, *Wedgwood, 1771-1780*, 2:460.

²¹⁰ Letter to Bentley, May 30, 1779, Finer, Savage, and Savage, *Letters of Wedgwood*, 234. The first time Wedgwood mentions working on Stubbs’s commission occurs in a letter to Bentley from October 18, 1777; Neil McKendrick, “Josiah Wedgwood and George Stubbs,” *History Today* 7, no. 8 (1957): 507.

²¹¹ Until May 30, 1779, Stubbs had not yet paid Wedgwood. Letter to Bentley, May 30, 1779, Finer, Savage, and Savage, *Letters of Wedgwood*, 234–35.

²¹² Cossa, “Josiah Wedgwood: His Role as a Patron of Flaxman, Stubbs, and Wright of Derby,” 161.

[jasper tablets] they may become a considerable subject.”²¹³ Second, the partnership was more than a commercial undertaking alone. Rather than working *for* Stubbs, Wedgwood interpreted the commission as an occasion to work *with* the painter and, through their collaboration, impress the artistry of his practice on the minds of a fine arts public. In the end, Wedgwood had as much luck with painters as he had with architects. Stubbs’s ceramic enamels pleased neither his audience nor his colleagues and as a result dealt another blow to Wedgwood’s hopes for jasper. Since the subjects of Stubbs’s enamels were the same as those of his widely popular oil paintings, the poor reception of the former was a direct indictment of Wedgwood’s tablet.²¹⁴ Indeed, painters objected to jasper in light of the risk associated with applying the material to painting: its surface often came out uneven, it was expensive relative to canvas, the technique required to paint on it was laborious, and tablets routinely broke on the last firing.²¹⁵ Not even those painters personally known to Wedgwood—including Joseph Wright, George Romney, and Joshua Reynolds—were persuaded to adopt the ware. Once again, Wedgwood’s project to rouse a taste for jasper among fine artists had been thwarted.²¹⁶ But still, Wedgwood pressed on.

In 1778, at the start of his collaboration with Stubbs, Wedgwood commissioned an original painting by Joseph Wright of Derby.²¹⁷ Like Stubbs, Wright was a noted painter who, according to Wedgwood, “shine[d] so gloriously in his profession.”²¹⁸ Curiously, instead of summoning a portrait, as upper-class patrons were wont to do, Wedgwood engaged Wright to paint “the infancy

²¹³ Letter to Bentley, May 30, 1779, Finer, Savage, and Savage, *Letters of Wedgwood*, 234.

²¹⁴ Cossa, “Josiah Wedgwood: His Role as a Patron of Flaxman, Stubbs, and Wright of Derby,” 164; Taylor, *Stubbs*, 16–17.

²¹⁵ Cossa, “Josiah Wedgwood: His Role as a Patron of Flaxman, Stubbs, and Wright of Derby,” 162–63.

²¹⁶ *Ibid.*, 163; Bruce Tattersall, *Stubbs and Wedgwood: Unique Alliance between Artist and Potters* (London: Tate Gallery, 1974).

²¹⁷ Stubbs and Wright were friends and champions of William Hogarth’s radical critique of the hierarchical order organizing the Royal Academy and the Society of Artists. In the late 1760s both men “formed part of a tiny rump of leading painters who would have nothing to do with the newly founded [Royal] Academy.” See: David H. Solkin, *Painting for Money: The Visual Arts and the Public Sphere in Eighteenth-Century England* (New Haven and London: Yale University Press, 1993), 242.

²¹⁸ Letter to Bentley, May 5, 1778, Farrer, *Wedgwood, 1771-1780*, 2:427.

of the Potters Art,” which suggests that this was an ancillary to his scheme of certifying jasper’s artistry.²¹⁹ Seen under this light, the commission promised not only to frame Wedgwood’s practice as a worthy historical subject of a “grand style” painting, but also to depict pottery as the original art form, the wellspring of art.²²⁰ Wedgwood gestured at this intention in a letter to Bentley, assessing an earlier work of Wright’s as “a piece in which our Vases might be introduced with the greatest propriety.”²²¹ For his part, Wright abided by Wedgwood’s wishes, and in 1784 presented him with *The Corinthian Maid*: a 42-by-51-inch oil painting on the origin of art (Figure 12). The work reconstructs a scene from *Naturalis Historia* by Pliny the Elder in which the Roman author traces the visual arts to an engraved image made from the outline of a man’s shadow.²²² Inspired by William Hayley’s 1778 poem, *An Essay on Painting*, Wright casts Dibutade, the Corinthian maid, as the original artist of Pliny’s fable. In Wright’s adaptation the maid traces her lover’s silhouette by etching the profile of his shadow on a workable wall with a sharp stylus. The scene is set in her father’s workshop, the potter Boutades, whose vases—displayed in full view—evoke a patently classical image of Wedgwood’s wares. Yet, Wright’s allusions to pottery are not there simply to gratify his patron; they are also a reference to Pliny’s original version of the myth, which relates less the origin story of painting or drawing than that of the plastic arts. On this telling, Boutades is said to have invented sculpture by pressing clay into the dented outline his daughter had carved, transforming her engraving into a portrait relief. This version of the legend resonated with Wedgwood, who took *The Corinthian Maid* to depict the origin of pottery in the image of clay modeling, which he viewed as the source of both the plastic and pictorial arts.²²³

²¹⁹ Ibid., 2:428.

²²⁰ Several of Wright’s “firelight scenes” (or “night pieces”) carried an allure of “grand style” historical painting, such as *The Blacksmith’s Shop* (1771-3) and *An Iron Forge* (1772). Wedgwood asked Wright to paint him a “fire piece.” See Letter to Bentley, May 30, 1779, Finer, Savage, and Savage, *Letters of Wedgwood*, 235.

²²¹ Letter to Bentley, May 5, 1778, Farrer, *Wedgwood, 1771-1780*, 2:427.

²²² Bermingham, “The Origin of Painting and the Ends of Art: Wright of Derby’s Corinthian Maid,” 137–38.

²²³ Ibid., 139–40.

Figure 12. Joseph Wright of Derby, *The Corinthian Maid* (1784). Source: National Gallery of Art, The Paul Mellon Collection.



Wedgwood, Fine Arts, and Modern Aesthetics

According to Ann Bermingham, Wright's adaptation of the myth spoke to certain issues raised by the manufacture of earthenware generally and jasper in particular. "The legend," she writes, "locates the production of earthenware bas-relief in antiquity, and centres its production on a moment that was coextensive with the invention of the arts of drawing, painting, and design and

that placed it on an equal footing with them.”²²⁴ “The painting,” she concludes, “gave the craftsman a central role as an inventor and creative designer”²²⁵ In keeping with Bermingham’s reading, Larry Shiner figures the painting as a centerpiece in what he calls Wedgwood’s project to “hold together an older art system.”²²⁶ While the painting certainly situates pottery within the art-craft continuum of classical antiquity, its role as a vindication of Wedgwood’s allegiance to a pre-modern art system, as Bermingham and Shiner imply, is questionable. On my reading, Wedgwood never took *The Corinthian Myth* to represent pottery in general but only *his own* contributions to the trade in particular, innovations that in his mind raised the wares made in Etruria beyond the status of craft. Wedgwood’s aim here, I want to suggest, was to evoke the artistry of his practice by foregrounding its *unique* bond to sculpture, painting, drawing, and design—a bond to which the ordinary Staffordshire potter could not lay claim.²²⁷ Rather than holding together “an older art system,” Wedgwood accepted and upheld the art-craft divide redolent of a modernist aesthetics in order to show that his innovations in pottery, characterized by innate talent and creative genius, exonerated his work from the servility of craft and inducted it to the ranks of the fine arts. In this respect, Wedgwood’s aesthetics and idea of art were categorically modern. Two aspects of his work with jasper corroborate this reading: the first relates to the denouement of his collaboration with George Stubbs and the second to his concept of imitation.

During his residency at Etruria in 1780, Stubbs made two clay models for Wedgwood from a pair of his oil paintings: *Horse Frightened by a Lion* (c. 1760) and *The Fall of Phaëton* (c. 1762). Since both works had been engraved in the 1770s, Stubbs was able to design the models from existing

²²⁴ Ibid., 146–47.

²²⁵ Ibid., 147.

²²⁶ Shiner, *The Invention of Art: A Cultural History*, 120.

²²⁷ On various occasions Wedgwood claimed that prior to his innovations the pottery industry was “in a rude, uncultivated state” run by potters “who had not the least idea of beauty or proportion in what they did.” See: Letter to Bentley, August 5, 1767, Finer, Savage, and Savage, *Letters of Wedgwood*, 58. Letter to Bentley, January 10, 1770, Farrer, *Wedgwood, 1762-1770*, 1:329.

etchings of each painting.²²⁸ Wedgwood then used these models as molds for jasper bas-reliefs.²²⁹ While Stubbs contributed to the work by determining its subject and modeling it in clay, it was Wedgwood who ultimately transformed the molds into jasper plaques. This is a revealing element in the division of labor surrounding the Stubbs-Wedgwood collaboration. Noticeable differences between the final wares and the clay models suggest that Wedgwood altered Stubbs's designs to suit both his own artistic taste and certain stylistic conventions of neoclassical fashion.²³⁰ In particular, the flat, linear reliefs of the jasper plaques—redolent of neoclassical contour—contrast with the textured surface in Stubbs's models.²³¹ Issuing from Wedgwood's own aesthetic sensibilities, judgment, taste, and labor, the changes he made to the Stubbs prototype bear out the potter's authorship in this collaborative artwork.

From the late 1780s to the early 1790s, jasper became the most fashionable and reputable tablet Wedgwood had ever made.²³² This was in large part due to the reception of two vases: *The Apotheosis of Homer* and the *Portland*. The latter—currently on display in room 47 of the British Museum—was modeled after one of Sir William Hamilton's ancient Greek antiques. Flaxman, who designed the copy, wrote Wedgwood to say that the original vase—now in room 70 of the Museum—was “the finest production of Art that has been brought to England and seems to be the very apex of perfection to which you are endeavouring to bring your bisque & jasper.”²³³ Certain decisions Wedgwood made while developing these vases reveal that his understanding of artistic authorship was predicated on the opposition between fine arts and craft prevalent in modern

²²⁸ Cossa, “Josiah Wedgwood: His Role as a Patron of Flaxman, Stubbs, and Wright of Derby,” 179, 180, 185, 186. Stubbs chose to model *The Fall of Phaëton* after a 1775 adaptation of the oil painting, which he painted in enamel on copper.

²²⁹ Wedgwood also made copies in black basalt, see: *Ibid.*, 177.

²³⁰ *Ibid.*, 180–90.

²³¹ *Ibid.*, 180–83, 188.

²³² *Finer and Savage's* editorial notes, *Finer, Savage, and Savage, Letters of Wedgwood*, 304.

²³³ Letter from Flaxman to Wedgwood, February 5, 1784, quoted in Laurence Mchet, “The Portland Vase and the Wedgwood Copies: The Story of a Scientific and Aesthetic Challenge,” *Miranda*, no. 7 (2012): 6, <https://miranda.revues.org/4406>.

aesthetic theory at the time. Among these decisions, two are worth a brief gloss: his choice in color and his approach to imitation.

When Lord Gower, one of Wedgwood's noble patrons, visited the factory in 1778, his architect—Mr. “Capability” Brown—objected to jasper's sky blue background and counseled Wedgwood “to make the whole white, as like to statuary marble as [he] could.”²³⁴ Indeed, when it came to *The Apotheosis* and the *Portland*, most sentinels of taste and experts in neoclassical fashion echoed Brown's judgment, encouraging Wedgwood to preserve the original, classical appearance of the vases, which meant abandoning handles, gilding, and—above all—Wedgwood's signature Jasper blue background. Sir Hamilton was adamant on this point. “If you could instead of sky-blue,” he suggested, “make your ground look like an onyx, as in the vase itself, it would be better, for there is no natural stone of the sky-blue colour.”²³⁵ Ultimately, Wedgwood sided with his own judgment at each turn and, while *all* jasper bas-reliefs had a version in light blue, not a single one was made with an entirely white or onyx backdrop.²³⁶ This casts doubt on the idea that, because Wedgwood's aesthetic decisions were always bound by whimsical trends in aristocratic fashion, his independence, freedom, and agency as an author, along with the originality and authenticity of his works, were necessarily compromised.²³⁷

Finally, Wedgwood's method of copying the *Portland* illustrates the commensurability between his understanding of art and the modern partitioning of the fine arts and craft. Establishing his approach as the “true way of copying the antique,” he writes, “I have endeavoured to preserve the stile and spirit if you please the elegant simplicity of the antique forms, and so doing to introduce all the variety I was able. [...] I only pretend to have attempted to copy the fine antique forms, but

²³⁴ Letter to Bentley, October 6, 1778, Finer, Savage, and Savage, *Letters of Wedgwood*, 225–26.

²³⁵ Letter from Hamilton to Wedgwood, July 1786, Mankowitz, *The Portland Vase*, 30.

²³⁶ The *Portland* was eventually marketed in two colors: light blue and “Barberini black.” Letter to Josiah Wedgwood Junior, May 9, 1790, *Ibid.*, 31. The light blue pallet of Wedgwood's jasper vases became so popular that it was crowned “Wedgwood blue.” See: Uglow, “Vase Mania,” 160.

²³⁷ McKendrick, “Josiah Wedgwood and the Commercialization of the Potteries,” 113.

not with absolute servility.”²³⁸ Wedgwood’s claim to imitate without servility resonates with Joshua Reynolds’s position on the role of imitation in painting. While Reynolds defined art in part by opposing original genius to mimesis, he never disavowed imitation wholesale.²³⁹ According to his credo, only the “mechanical practice” of copying exercised by artisans and craftsmen—which “requires no effort of the mind”—denigrates art.²⁴⁰ For Reynolds, the act of copying is in fact a necessary and useful skill for the painter, so long as it is not servile to the original.²⁴¹ Yet more revealing still than Wedgwood’s approach to copying others are his views on how others copy him. Although Wedgwood never denied that “*money getting*” was the foundation of his business, it was the prospect of fame and greatness that moved him: “my bosom begins, and allways does glow with a generous warmth at the idea,” he confessed.²⁴² If their business operated in the interest of fame rather than profit, he once told Bentley, their fear of being copied by competitors would be replaced by a feeling similar to the honor artists experience at the public approbation of their work. Driven by fame, they would be free to “Make all the good, Fine and New things we can immediately, and so far from being afraid of other People getting our patterns, we should Glory in it, throw out all the hints we can, and if possible have all the Artists in Europe working after our models.”²⁴³ In a rare, unalloyed expression of his emotions, Wedgwood resented subordinating his taste and judgment to the undignified imperatives of economic reason and consumer markets: “There is nothing relating to business I so much wish for as being released from these degrading slavish chains, these mean, selfish fears of other people copying my works.”²⁴⁴ If it were up to him, the sensational would have upstaged the economic. But this was never the case. And that’s precisely the point, for if anything

²³⁸ Letter to Erasmus Darwin, June 28, 1789, Finer, Savage, and Savage, *Letters of Wedgwood*, 317.

²³⁹ Sir Joshua Reynolds, *Discourses on Art*, ed. Robert R. Wark (New Haven and London: Yale University Press, 1997), 50, 57–58.

²⁴⁰ *Ibid.*, 29.

²⁴¹ *Ibid.*, 29–30, 98–100.

²⁴² Letter to Bentley, September 27, 1769, Finer, Savage, and Savage, *Letters of Wedgwood*, 81.

²⁴³ *Ibid.*

²⁴⁴ *Ibid.*

distinguishes Wedgwood from competing capitalists and artists of his day it is his inability to conform to either category exclusively.

Although his attempts at endearing jasper to fine artists were at first unsuccessful, Wedgwood's own use of the tablet marked a palpable transition in his neo-classical aesthetic, from Renaissance to antique. Whereas his black basalt wares resembled Renaissance bronze, jasper tablets—with their flat, silhouetted reliefs—were classical cameos that complemented the light and airy interiors prevalent in neoclassical architecture.²⁴⁵ On account of its appearance, style, and quality, jasper was also decidedly distinct from Wedgwood's previous tablets. In contrast to creamware and black basalt, for instance, jasper was the product of a complex and highly skilled manufacturing process that had more in common with the production standards of sculpture than ceramics.²⁴⁶ His jasper vases of the 1780s were, by his own accord, “objects of very much labor and time, every ornament and leaf being first made in a separate mould, then laid upon the vase with great care and accuracy, and afterwards wrought over again upon the vase itself by an artist equal to the work.”²⁴⁷ In 1786 Wedgwood made “an extraordinary gesture” by presenting *The Apotheosis* to the British Museum “as a work of art.”²⁴⁸ During his lifetime, the *Portland* was acknowledged as Wedgwood's “most technically perfect work”²⁴⁹ and “the finest achievement of his career.”²⁵⁰ In the end, the

²⁴⁵ Bermingham, “The Origin of Painting and the Ends of Art: Wright of Derby's Corinthian Maid,” 147.

²⁴⁶ Besides the inordinate amount of research and experimentation Wedgwood invested to develop jasper from 1771 to 1777 and then to gradually improve it until the early 1780s, two facts concerning its production illustrate its distinction. First, the raw material used for its basis was Cornish clay (known at the time as “Cherokee clay”), which Wedgwood illicitly extracted and imported from America. See: Letter to William Constable Esq. of Burton Constable, October 13, 1783, Finer, Savage, and Savage, *Letters of Wedgwood*, 272. Second, in order to give jasper its vitrified appearance without having to glaze it, Wedgwood was advised by the glass manufacturer and Lunar Society fellow, James Keir, on methods of annealing. See: Robert E. Schofield, “Josiah Wedgwood and the Technology of Glass Manufacturing,” *Technology and Culture* 3, no. 3 (1962): 286.

²⁴⁷ Letter to Sir William Hamilton, June 24, 1786, Finer, Savage, and Savage, *Letters of Wedgwood*, 296. This is a reference to *The Apotheosis*.

²⁴⁸ Uglow, “Vase Mania,” 160. Upon giving his vase to the Museum, Wedgwood declared it “the finest and most perfect [vase] I have ever made.” See: Stuart Fleming, “Science Scope: Josiah Wedgwood: A Potter of Fashion,” *Archaeology* 39, no. 3 (1986): 70. See also: Mankowitz, *The Portland Vase*, 27.

²⁴⁹ Finer and Savage's editorial notes, Finer, Savage, and Savage, *Letters of Wedgwood*, 321.

works Wedgwood made in jasper were recognized for their artistry by “eminent judges of the fine arts,”²⁵¹ including the British Museum, the Royal Academy, and the *Memorie per le belle arti*.²⁵² “From the beginning,” Wedgwood wrote in 1786, “I determined to spare neither time nor expence in modeling and finishing my ornaments, and I have the satisfaction to find that my plan has [been] hitherto met with the approbation of my friends, for the purchasers of every nation declare them to be the *highest finished* and *cheapest* ornaments now made in Europe.”²⁵³

CODA: CAPITALISM, AESTHETICS, AND THE ORIGINS OF CULTURAL CRITICISM

How does the story I have told in this chapter contribute to the changing historical synergies and antagonisms between capitalism, aesthetics, and cultural criticism? In closing with an answer to this question, I will highlight the centrality of two sequential developments: first, the ties forged between art and industry as a result of Hume’s aesthetic and economic understanding of luxury and Wedgwood’s novel approach to producing luxury as both an artform and a commodity; and second, the separation of art and industry that resulted from the institutionalization of the fine arts and aesthetics in the late eighteenth century.

As I have argued throughout this chapter, starting in the middle of the eighteenth century, particular figures and institutions of English high-society—entrepreneurs, critics, artists, thinkers, museums, associations, and academies—shared a commitment to cultivating a more intimate bond between the polite and mechanical arts that could be equally beneficial to the refinement of taste and to economic growth. This commitment represents the crux of Hume’s view regarding what he took to be a clear correlation between the expansion of luxury industries and the refinement of the fine arts, culture, and national taste. A similar view was expressed by the celebrated political economist

²⁵⁰ Finer and Savage’s editorial notes, *Ibid.*, 295.

²⁵¹ Letter to Lord Auckland, July 13, 1790, *Ibid.*, 328.

²⁵² Letter to Sir William Hamilton, June 16, 1787, *Ibid.*, 308.

²⁵³ Letter to Sir William Hamilton, June 24, 1786, *Ibid.*, 296.

Malachy Postlethwayt who, upon a visit to France's Royal Manufactory of the Crown Furniture at Gobelins, noted that in "this fine Manufacture" the work of "the most able Masters and Designers" proved beyond doubt that France's policies toward noble patronage in art and industry were "highly conducive to the Advancement of all the commercial Arts, and to render[ing] the Labor of their Artists in general, not less cheap than exquisite in Point of Workmanship." Postlethwayt also praised France's "Advancement of the polite Arts," which together with its "Point of Workmanship" cultivated an "eternal Variety and Succession of new Modes and Fashions" that, by falling "so much in with the Taste of the whole world," gave France the upper hand in vying for commercial hegemony with "all States and Empires in the Productions of Arts."²⁵⁴ Likewise, the union of art, industry, and commerce was at the heart of Wedgwood's approach to producing ornamental wares and acted as a central impetus for the creation of the Society of Arts in 1753. In a particularly emblematic expression of these views from 1758, *The Universal Magazine of Knowledge and Pleasure* defended the public utility of the mechanic arts on the grounds that it would not only employ but also refine the sensibilities and "civilize" the minds of a great number of artificers.²⁵⁵

In the final three decades of the eighteenth century, however, the once stable and reciprocal, close-knit union between art and commerce began cleaving apart. Two developments were instrumental to the emergence of this trend: the rising political power and cultural sway of self-described "fine arts" societies on the one hand and, on the other, the institutionalization of "philosophical aesthetics," the core subject matter of which was "the study of the nature and value

²⁵⁴ Malachy Postlethwayt, *Great-Britain's True System* (London: A. Miller, B. White, W. Sandby, 1757), 227–28, 288. See also *Ibid.*, 287–91.

²⁵⁵ Quoted in Maxine Berg, *Luxury and Pleasure in Eighteenth-Century Britain* (Oxford: Oxford University Press, 2005), 100. While this became a dominant position in the first half of the century, some already raised doubts, such as R. Campbell, who argued in his 1747 *The London Tradesman* that the division of labor in English manufactories was detrimental to workmanship, the improvement of design, and the refinement of taste. See *Ibid.*, 98–99.

of aspects of the human *experience* of art.”²⁵⁶ As such, philosophical aesthetics disseminated, across the intellectual realms of theory and criticism, an analogous understanding of and disposition toward beauty and taste which organizations such as the Royal Academy propagated in the sphere of artistic production and exhibition. As a subfield of academic philosophy, aesthetics introduced a novel approach to art theory and criticism that circumscribed—more authoritatively than before—the boundaries of judgment, taste, pleasure, and beauty within the provenance of the fine arts. As early as the 1750s, influential critical thinkers in Britain and across Europe began to cast serious doubt on the standard view—championed by Hume and Wedgwood—that the division of labor in manufactories, central to the production and export of luxury wares, was beneficial to the refinement of taste and the improvement of art. Rather than serving as catalysts for progress and development, figures such as Denis Diderot, Jean-Jacques Rousseau, and Adam Ferguson argued strongly that commercial expansion, luxury production, mass consumption, and the division of labor were among the basic causes of modern society’s most distressing vices, from economic inequality and cultural decay to intellectual atrophy and political corruption. In stark contrast to Hume’s views, for instance, Ferguson argued in 1767 that within luxury manufactories not unlike Wedgwood’s Etruria and Boulton’s Soho “the genius of the master, perhaps, is cultivated, while that of the inferior workman lies waste.”²⁵⁷ This is because, he continued, “many mechanical arts, indeed, require no capacity” and “succeed best under a total suppression of sentiment and reason,” for “ignorance is the mother of industry.”²⁵⁸ With the increasing popularity of philosophical aesthetics in the late eighteenth century, the accepted definition of “art” drew closer to Ferguson’s critique of industry as terms such as “taste” and “beauty” became explicitly dissociated from any fathomable tie to commerce, instruction, science, and utility.

²⁵⁶ Guyer, *A History of Modern Aesthetics*, 1:1.

²⁵⁷ Ferguson, *An Essay on the History of Civil Society*, 174.

²⁵⁸ *Ibid.*

The entry on “art” in the second edition of the *Encyclopædia Britannica* (1778) speaks to this shift in the meaning of art championed by philosophical aesthetics. Unlike its first edition, the 1778 version of the *Britannica* included a definition of the “general theory of the polite arts,” or “esthetics,” that figured the fine arts as diametrically opposed to natural and applied science. While the essence of “esthetics” inhered in “*expression*,” the authors contended that the goals of science lay in “*instruction and utility*.”²⁵⁹ Even in cases where the polite arts demand creative thought and even where they are applied to useful objects, such as in eloquence, poetry, and architecture, “expression arises from the inventive faculty,” as in “a picture that is designed by Minerva, to which the muses add the colouring, and the graces the frame.” The polite arts are, in this rendering, composed of nine forms that call to mind the nine muses of Greek mythology: eloquence, poetry, music, painting, sculpture, gravure, architecture, declamation, and dancing. All of them hinge on the artist’s “natural disposition, the fire of genius, which no human art can confer, but which is the pure gift of heaven.” Here, the rules of art, the precepts of the great masters, are only there to instruct, direct, and facilitate the artist’s path to perfection; they “refine, strengthen, and confirm his taste.”²⁶⁰ Founded on just and sagacious rules, art bestows elegance, dignity, and politeness upon wild and savage nature. Moreover, unlike the sciences and mechanical arts, the ends of which are confined to instruction and use, “Beauty is the object of all the polite arts.”²⁶¹ “*Genius*, or invention, is that faculty of the mind by which *beauty* is produced,” and

Taste, disposition, or rather the natural sensation of the mind refined by art, serves to guide the genius in discerning, embracing and producing that which is beautiful of every kind. From whence it follows, that the general theory of the polite arts is

²⁵⁹ *Encyclopædia Britannica; Or, A Dictionary of the Arts, Sciences, &c.*, 2nd ed., vol. 1 (Edinburgh: J. Balfour and Co. W. Gordon, J. Bell, J. Dickson, C. Elliot, W. Creech, J. McCliesh, A. Bell, J. Hutton, and C. Macfarquhar, 1778), 715. Although their preferred modifying adjective for classifying this branch of art is “polite,” the authors also refer to it interchangeably as the fine, noble, and liberal arts.

²⁶⁰ *Ibid.*, 1:715–16.

²⁶¹ *Ibid.*, 1:716.

nothing more than the knowledge of what they contain that is truly beautiful and agreeable; and it is this knowledge, this theory which the modern philosophers call by the Latin name of *aesthetica*.

This theory of the fine arts—variously dubbed “esthetics,” “*aesthetica*,” or “aesthetics”—was composed of six rules meant to guide the artist’s practice while also providing the critic and connoisseur with standard criteria for the appraisal and judgment of beauty. In order to be classed as fine, noble, liberal, or polite, an artist must always and constantly: (1) consult his genius or imagination; (2) refine his taste; (3) imitate nature; (4) demonstrate perspicuity of expression; (5) elevate his sentiments; and (6) strive for the sublime.²⁶² While these six directives, when strictly adhered to, advance the “design of the fine arts,” namely “to excite pleasure by the expression of that which is beautiful,” they also materialize the distinction between the mechanical and polite arts by creating towering barriers of entry into the latter that no artisan, manufacturer, mechanic, or inventor could so much as strive to surmount.²⁶³

While some recent commentators, such as Maxine Berg, are certainly correct in noting that eighteenth-century encyclopaediae and dictionaries evidenced the importance of the mechanical and liberal arts in promoting invention and national taste, this picture was complicated by the leap of “aesthetics” into common parlance after the 1770s.²⁶⁴ From this point onwards, as the second edition of the *Britannica* aptly illustrates, the scientific, polite, and mechanical arts—along with instruction, beauty, and utility—jostled evermore uncomfortably under the same category. Instead of emphasizing the synergies between distinct forms of knowledge and production, the *Encyclopædia*’s authors sought to disaggregate the various branches of art according to a new, deeper, and more detailed aesthetic-philosophical understanding of their respective and distinct means and ends. As

²⁶² *Ibid.*, 1:716–17.

²⁶³ *Ibid.*, 1:717.

²⁶⁴ Berg, *Luxury and Pleasure in Eighteenth-Century Britain*, 101.

the fields of human artifice became divided and specialized—and as aesthetics continued to solidify as a philosophical and romantic category—their contribution to society became dispersed and difficult to trace. Science, commerce, and art were no longer seen as equally suited to developing *every* aspect of national progress, as Hume and Wedgwood held they could with regards to taste, economic growth, and cultural development. The authors of the *Britannica* insisted that the polite arts, governed by genius, pleasure, and beauty, were distinctively conducive to the refinement of taste in a way that the scientific and commercial arts, determined by instruction, utility, and profit, were decidedly not. While improvements in one art could and often did lead to improvements in another, and vice-versa, this did not mean their methods and goals overlapped in any profound or even tractable respect, nor that they should be pursued by the same people and promoted by the same institutions.

And yet, despite defining the beauty of art against the utility of industry, this sophisticated and learned rendering of the fine arts was less a contestation of the view heralded by Hume and applied by Wedgwood than it was the crystallization of the categories they attempted to blur and redefine. That is, *Britannica* only sharpened the broad prejudices both Hume and Wedgwood set out to transform, namely, the conceit that a vase produced in a manufactory could not approach the level of refinement, beauty, and prestige of a sculpture etched at the Royal Academy. For Hume, the inherently unstable status of luxury goods made them a perfect medium for reconceptualizing luxury as an idea; that is, as the luxury commodity traversed the boundaries of art and industry, beauty and utility, emotions and interests, it threw into sharp relief the elemental synergies, borrowings, and mutually-reinforcing relations between the polite and mechanical arts. Luxury thus allowed Hume to confront the belief that these categories were defined in opposition to one another, which led him to the realization that, to the contrary, the fine arts and commerce, culture and the economy, were allies that relied on one another as resources for their mutual refinement and growth. Even Wedgwood,

who epitomized the scientist, inventor, manufacturer, and industrialist all at once, would have recognized his own self-proclaimed image and work as an artist in *Britannica's* rendering of artists and the fine arts. But the fact that Wedgwood could freely choose to which category—artist, artisan, manufacturer—he belonged would be impossible if not for the division of labor and prodigious mass of assembly workers inside his factory. It was only by virtue of having corralled so many creative artists to the realm of menial laborers that Wedgwood could define himself as a fine artist. And once that was said and done, his work in promoting the very ideals of beauty and art championed by philosophical aesthetics was in many ways more substantial and lasting than the definitions in *Britannica* could ever hope to be.

Not all eighteenth-century thinkers, scientists, artists, and manufacturers agreed with the classifications and divisions laid out in the *Britannica*, especially not those whose work was strewn across the very activities the encyclopedia labored to segregate. The painter, activist, and commercial engraver William Hogarth is a case in point, as are a host of working-class poets, such as the cobbler John Lucas, the weaver Ellen Taylor, the domestic servant Janet Little, and the blacksmith Thomas Spence, to name but a few. Indeed, the story I have traced in this chapter about the ways in which luxury, art, and aesthetics were produced and contested in the capitalist workplace, showcase one significant instance in a lasting controversy regarding the relationship between culture and capitalism. The contested status of these two categories continued to animate discussions and spawn discourses, movements, and theoretical traditions for centuries to follow, from the critiques of art and industry by William Morris and John Ruskin, which impelled the Arts and Crafts Movement in the late nineteenth century, to the debates about “high” and “mass” culture animated in the post-

World War Two period and perturbed, for instance, by Andy Warhol's "pop" incursion against New York's high-end art scene, which grew out of his aptly named Midtown studio: "The Factory."²⁶⁵

§

In the end, Wedgwood, the captain of the Potteries, should be remembered as a dutiful servant of a modern art world and a promoter of modern aesthetics, not only by virtue of his stint as a fine artist, but most importantly in his role as a prominent architect of the factory system. But as I have argued throughout, the cohesion of Wedgwood's personae as fine artist and even finer capitalist should not surprise us; after all, had it not been for the alliance forged by art and industry, by modern aesthetics and political economy, then the eighteenth-century separation of art and craft—artist and worker—would not have coincided so conspicuously with the divide between the studios of the Royal Academy and the workshops of Etruria. For as we have learned from E. P. Thompson, "There is no such thing as economic growth which is not, at the same time, growth or change of a culture."²⁶⁶ In this case, however, the term "culture" should be plural. That is, the economic growth and cultural changes ushered in by the rise of the factory system, luxury, modern aesthetics, and the fine arts were not confined to Britain's metropolitan core. Rather, they spilled over into the many cultures and economies of the British empire.

While Wedgwood deemed his vases "the *highest finished* and *cheapest* ornaments now made in Europe," a considerable portion of the raw materials used to produce them as well as the bulk of consumers who purchased them were sourced in the colonies across the Atlantic.²⁶⁷ The "Cherokee clay" with which he made his prized Jasper biscuit, for instance, was extracted from South Carolina and had to be "carried near 300 miles by Land Carriage" and another four thousand by sea before it

²⁶⁵ On one of these twentieth-century altercations as it involves Hannah Arendt, Clement Greenberg, Dwight Macdonald, and others, see Patchen Markell, "Arendt, Aesthetics, and 'The Crisis of Culture,'" in *The Aesthetic Turn in Political Thought*, ed. Nikolas Kompridis (New York: Bloomsbury Academic, 2014), 61–88. I thank Patchen Markell for his insightful comments regarding these connections.

²⁶⁶ Thompson, "Time, Work-Discipline, and Industrial Capitalism," 97.

²⁶⁷ Letter to Sir William Hamilton, June 24, 1786, Finer, Savage, and Savage, *Letters of Wedgwood*, 296.

could navigate the Trent and Mersey Canal, which he helped to build, from a port in Liverpool or Hull directly to his factory.²⁶⁸ In a letter from 1783 Wedgwood relates how he smuggled this raw material from unceded Native American lands deep within the Appalachian mountains,

I was so delighted with the appearance of this beautiful raw material, and with the idea of the improvements it might produce, that notwithstanding the distance, and the risk of not obtaining leave to dig in lands which did not belong to us, I determined upon sending an agent to the spot, to reconnoitre the land, and procure me some of the clay [...]. With much difficulty he procured about six tons, at the expense all together of about £500.²⁶⁹

Likewise, Wedgwood's many consumers were scattered across the many places in which the British Empire had a foothold. In a demonstrative account of the global reach of his goods, Wedgwood related to Bentley, in the same breath, the solid consumer base for their wares in America and India as well as the prospect of employing Chinese artisans in his factory. As Wedgwood wrote in 1766,

May the winds & seas be propitious, & the invaluable Cargo be wafted in safety to their destin'd Market, for the emolument of our American Bretheren & friends, & as this treasure will now no longer be locked up, or lost to the rest of the world, I shall be perfectly easy about the returns, be they much, little, or nothing at all. [...] *It is really amazing how rapidly the use of it has spread almost over the whole Globe, & how universally it is liked.* [...] I had with me yester-day an East Indian Captain & another Gentleman & Lady from those parts who ordered a Good deal of my Ware [...]. They told me it was allready in Use there, & in much higher estimation than the finest Porcellain [...]. Dont you think we shall have some Chinese Missionaries come here soon to learn the art of making Creamcolour?²⁷⁰

²⁶⁸ Letter to Bentley, May 27, 1767 in Farrer, *Wedgwood, 1762-1770*, 1:147.

²⁶⁹ Letter to William Constable Esq. of Burton Constable, October 13, 1783 in Finer, Savage, and Savage, *Letters of Wedgwood*, 272. See also the following letters concerning Cherokee clay: Letter to Bentley, November 17, 1766 in Farrer, *Wedgwood, 1762-1770*, 1:106. Letter to Bentley, February 18, 1767 in Wedgwood, *Wedgwood, 1762-1770*, 1:118. Letter to Bentley, March 2, 1767 in Farrer, *Wedgwood, 1762-1770*, 1:130.

²⁷⁰ Letter to Bentley, March 12, 1766 in Farrer, *Wedgwood, 1762-1770*, 1:127–28, emphasis mine.

As these examples make plain, the rise of European luxury trades in the eighteenth century was both a global phenomenon and inextricable from Britain's imperial projects of territorial and commercial expansion in the colonies.²⁷¹ Early-modern luxury imports from Asia, for instance, stimulated a wave of innovation in European consumer industries, whereby new production techniques, systems, and technologies were developed out of a widespread quest by manufacturers to replicate the design, craftsmanship, and quality of the many Chinese, Japanese, and Indian commodities for which European consumers yearned.²⁷² Britain's imperial policies at the time, alongside its ascendancy over a vast network of colonial settlements and intercontinental trade routes, were therefore indispensable to Wedgwood's success and international renown as both a factory master and fine artist. Here, the evolution of what I referred to as "imperial commerce" in Chapter 3 continued to shore up the historical connections this chapter traced between the ideas, objects, and spaces, tying together luxury and political thought to the modern developments of the factory, aesthetics, art, and industrial capitalism. Indeed, the global networks of the British Empire were an important configuration of Wedgwood's business enterprise, which Thomas Bentley pursued aggressively through the 1760s and 1770s, prying open new and vast markets for raw materials and consumers across the colonies. Bentley is a significant yet under-explored protagonist in this story. Without him, Wedgwood's business venture would never have reached the global proportions it was able to attain. Moreover, Bentley's contribution to the international renown of the Wedgwood brand far exceeded his role as the company's merchant. Bentley was also well connected with artists, politicians, philosophers, and nobles, boasting a list of correspondents and personal acquaintances that included Benjamin Franklin and Jean-Jacques Rousseau.²⁷³ As a thinker

²⁷¹ On the global supply chains of luxury and its colonial markets, see Breen, "An Empire of Goods"; Berg, "In Pursuit of Luxury"; Berg, *Luxury and Pleasure in Eighteenth-Century Britain*.

²⁷² Berg, "In Pursuit of Luxury," 126–30.

²⁷³ On Bentley's personal account of meeting Rousseau at the philosopher's home in Paris during the summer 1776, see Thomas Bentley, *Journal of a Visit to Paris, 1776*, ed. Peter France (Brighton: University of Sussex

in his own right, he contributed various articles to *The Monthly Review* on the most pressing issues of his day, including American independence and the political economy of the British Empire.²⁷⁴

A global thread runs through this chapter. Following it will lead to a new dawn of British imperialism, a period marked by two contiguous projects to bring civilization and commerce to Africa and New South Wales at the turn of the nineteenth century: Sierra Leone, which became a Crown Colony in 1808, and the Pacific penal colonies Botany Bay and Sidney Cove. Unlike the settlements in New South Wales, however, Sierra Leone was not originally an official mission by the British Empire.²⁷⁵ It was instead, as I will argue in the following chapter, spearheaded by industrialists and philanthropists behind the movement to abolish the slave trade. And while virtually every major factory master of the period was involved in the antislavery cause, Wedgwood was peerless at its helm. In 1787 he engaged William Hackwood to model a medallion that became the distinguishing symbol of abolitionism the world over. The cameo, titled “The Slave Medallion” (Figure 13), was modeled after the seal of the Committee for the Abolition of the Slave Trade, which pictured a kneeling slave in chains below the inscription “Am I not a Man and a Brother.” The abolition of the slave trade marked indelibly the period’s emerging “humanitarian” articulations of

Library, 1977). On earlier accounts of Bentley’s life and correspondences, see Boardman, *Bentleyana*; Richard Bentley, *Thomas Bentley, 1730-1780, of Liverpool, Etruria, and London* (1927; repr., New York: The Wedgwood Society of New York, 1975).

²⁷⁴ In a Review of Arthur Young’s 1772 *Political Essays Concerning the British Empire*, for instance, Bentley lauded the author for drawing an important distinction between “the northern and southern continental colonies, shewing that the former are dangerous rivals of the mother country; and the latter the only proper and beneficial colonies to Britain.” See Bentley, “Review of ‘Political Essays Concerning the Present State of the British Empire’ [Part 3],” 201.

²⁷⁵ Wedgwood was also involved in Britain’s penal colonies in New South Wales. In 1789, the acclaimed botanist and mineralogist Sir Joseph Banks sent Wedgwood a sample of clay from the Botany Bay Colony. Finding the material to be of excellent quality, Wedgwood made a medallion out of it and ordered copies to be dispatched to New South Wales as a gift to colonists. He named the cameo “Hope encouraging Art and Labour under the influence of Peace.” Erasmus Darwin referenced the cameo in his 1791 poem *Botanic Garden*: “Or with fair Hope the brightening scenes improve, / And cheer the dreary wastes at Sydney-cove.” See Erasmus Darwin, *The Botanic Garden; A Poem in Two Parts* (London: J. Johnson, 1791), 88. On Wedgwood’s Hope medallion and Botany Bay, see Meteyard, *The Life of Wedgwood*, 1866, 2:567–70; Katherine Eufemia Farrer, ed., *Letters of Josiah Wedgwood, 1781-1794*, vol. 3 (Manchester: E. J. Morten & The Wedgwood Museum, 1973), 85n.

Figure 13. Josiah Wedgwood and William Hackwood, *Slave Medallion* (1790). Source: The British Museum.



capitalism and empire. It announced an enlightened, industrial approach to imperial expansion propelled by new sensibilities, ideas, and attitudes that ran the gamut from progress and racial difference to slavery and foreign trade. Erasmus Darwin, a close friend of Wedgwood's, captured the essence of this emerging alliance between British imperialism and "industrial enlightenment" in his 1791 poem *Botanic Garden*:

To call the pearly drops of pity eye,
Or stay Despair's disanimating sigh,
Whether, O Friend of Art! The gem you mould
Rich with new taste, with antient virtue bold;
Form the poor setter'd SLAVE on bended knee
From Britain's sons imploring to be free.²⁷⁶

Although Bentley did not live to witness Wedgwood's rise in the abolitionist movement, he would have likely reveled in knowing that his business partner had become the largest single stakeholder in the Sierra Leone Company among their industrial rivals. I mention this because in 1772 Bentley made the following comment about Africa: "What misery involves that vast country! Liberty only exists at the point of one cape, an exotic plant of European growth."²⁷⁷ If this "exotic plant" was "liberty," then the seeds of its "European growth" were "civilization" and "commerce." Throughout the late eighteenth century, these very seeds were sown anew in Sierra Leone, but the exotic plant into which they grew, as we will see next, was a far cry from liberty.

²⁷⁶ Darwin, *The Botanic Garden*, 87.

²⁷⁷ Thomas Bentley, "Review of 'Political Essays Concerning the Present State of the British Empire' [Part 1]," *The Monthly Review* 46 (June 1772): 579.

CHAPTER FIVE
COLONY

“Here is the real modern labor problem. Here is the kernel of the problem of Religion and Democracy, of Humanity. Words and futile gestures avail nothing. Out of the exploitation of the dark proletariat comes the Surplus Value filched from human beasts which, in cultured lands, the Machine and harnessed Power veil and conceal. The emancipation of man is the emancipation of labor and the emancipation of labor is the freeing of that basic majority of workers who are yellow, brown and black.”

— W. E. B. Du Bois, 1935.¹

AN ENDLESS FIELD OF COMMERCE

Less than a year before his autobiography was published in London, Olaudah Equiano, a prominent black abolitionist and former slave, addressed the President of Britain’s Board of Trade and Plantations, Baron Hawkesbury, on March 13, 1788.² Equiano’s unique life story, from freedom in Africa to slavery in America to liberty and literary acclaim in Britain, commanded great respect and attention from an elite European public composed of nobles, royals, and industrialists.³ As the antislavery movement set afoot, Equiano conveyed to Hawkesbury the significant profits Britain

¹ W. E. B. Du Bois, *Black Reconstruction in America: An Essay Toward a History of the Part Which Black Folk Played in the Attempt to Reconstruct America, 1860-1880* (1935; repr., New York: The Free Press, 1998), 15–16.

² Olaudah Equiano, *The Interesting Narrative and Other Writings*, ed. Vincent Carretta (New York: Penguin Books, 1995), 304n. Carretta challenges Equiano’s claim that he was born in Africa by noting that his baptismal record of 1759 and naval records from 1773 suggest that he was born in South Carolina. See Vincent Carretta, *Equiano, the African: Biography of a Self-Made Man* (New York: Penguin Books, 2005), xvi, 2, 8.

³ From 1789 to his death in 1797, Equiano’s autobiography, *The Interesting Narrative of the life of Olaudah Equiano, or Gustavo Vassa, the African, Written by Himself*, went through nine editions in Britain, the United States, France, Germany, Russia, and Holland. Among the subscribers to his work were members of the royal family, the aristocracy, prominent figures in the arts, philanthropy, and business, including the painter Richard Cosway, the ceramics magnate Josiah Wedgwood, and Elizabeth Montague. See: Equiano, *The Interesting Narrative*, xvii. On November 1788, Wedgwood received a handwritten note from Equiano, soliciting the potter to purchase his forthcoming book. The solicitation he mailed to potential patrons of his work, including Wedgwood, accounts for the first known time Gustavus Vasa identified himself as Olaudah Equiano. See “Letter from Equiano to Wedgwood” (November 1788), MS L74-12632, Wedgwood Museum, Stoke-on-Trent, United Kingdom.

stood to make by replacing the African slave trade with a legitimate exchange in consumer goods. “If a system of commerce were established in Africa,” he informed the President of the Board, “the demand for manufactures would most rapidly augment, as the native inhabitants would insensibly adopt the British fashions, manners, [and] customs,” thus opening “an inexhaustible source of wealth to the manufacturing interests of Great Britain.”⁴ In addition to gaining from trade, Equiano continued, British commerce would be considerably favored by the cultivation of Africa’s vast yet untapped natural resources, which “abound in valuable and useful returns.” If Britain’s modern approaches to capitalist husbandry and mining were employed in Africa, the continent’s “hidden treasures”—its land, crops, animals, spices, and minerals—would be brought “to light and into circulation.”⁵ Africa, he concluded, would as a result lay open “*an endless field of commerce* to the British manufacturers and merchant adventurers.”⁶

Equiano’s “endless field of commerce” conjures up a familiar eighteenth-century image of free trade as boundless and mutually beneficial.⁷ A snapshot of global capital in motion, it figures commerce as the revolving wheel of capitalist modernity, enriching, developing, and civilizing whatever crosses its path. On another level, however, Equiano’s turn of phrase might also be read as a literal reference to the colonial relationship between African nature and British industry, between African plantations and British factories. Equiano’s was neither the first nor last attempt at articulating a new image of the African continent, from the badlands of modernity to a fertile field for industrial growth. In a 1784 memorial, Edward Morse, Chief Justice of Senegambia, Britain’s first officially-sanctioned colony in the African continent, proposed to transform the uncultivated land around the River Gambia into a colonial plantation to which English convicts would be sent as

⁴ Ibid., 233–34.

⁵ Ibid., 234.

⁶ Ibid., 34, emphasis mine.

⁷ For one of the most characteristic statements to this effect in Enlightenment political thought, see: Hume, “Of Commerce (1752),” 261–64.

settlers and agrarian workers. Here, Morse wrote, “an extensive Field for Commerce would be opened and every day produce new inducements to send vessels [which] would return to England with Rice, Indigo, Tobacco, Ivory, Bees-wax, Mahogany, Cotton, and a variety of other valuable articles.”⁸ Such visions of capitalizing Africa’s bounty through the labor of marginalized populations were part of a broader register through which late eighteenth-century political economists, imperial administrators, industrialists, and abolitionists reimagined African nature as, quite literally, the agrarian *field* of British commerce.⁹

Starting in the 1770s, a vocal cohort of antislavery advocates placed their hopes of ending the slave trade on Africa’s natural wealth as a plentiful source of cash-crops to fuel Britain’s booming luxury industries. Additionally, as a system of free labor and exchange gradually replaced the slave trade, abolitionists believed that a greater number of native Africans and emancipated workers of color could be effectively employed in the cultivation of raw materials which workers in British factories would in turn transform into finished commodities. Conquered by the capitalist imperatives of wage-labor, agricultural science, private property, free trade, and civil society, Africa’s vast and “uncultivated” land, as well as its people, would make the transition from a “hidden treasure” to an important branch of world trade.

This chapter examines how modern theories of race, colonialism, and political economy across Britain and the Atlantic world set in motion a project to end slavery by colonizing Africa. I

⁸ Edward Morse, “A Comparative State of the advantages and disadvantages to be expected from the Territory of the River Gambia in the Hands of the African Company or if erected into a Colony,” June 23, 1784, PRO 30/29/3/8/9, f. 715, African Committee’s Affairs (1783-1784), The National Archives, Kew, United Kingdom.

⁹ Proposals to transform Atlantic Africa into colonial plantations were not initially tied to the abolition of the slave trade, which was the case for Morse as well as the Liverpool slave-trader Henry Trafford. See: Henry Trafford, “Plan of a Revolution of Commerce” (1783), Add MS 38345, f. 42, The British Library, London, United Kingdom; Christopher Leslie Brown, “The Origins of ‘Legitimate Commerce,’” in *Commercial Agriculture, the Slave Trade, and Slavery in Atlantic Africa*, ed. Robin Law, Suzanne Schwarz, and Silke Strickrodt (Woodbridge and Rochester: James Currey, 2013), 138–57; Deirdre Coleman, *Romantic Colonization and British Anti-Slavery* (Cambridge: Cambridge University, 2005), 13–16.

explore how the parallel rise of industrial capitalism and shifting attitudes toward slavery in the British Empire contributed to the establishment of a commercial colony for free black settlers in Sierra Leone.¹⁰ From 1787 to 1807, the Sierra Leone Colony and Company became a laboratory for key ideas in Western political thought, including—most notably—the contractarian conceit of a free civil society put up from bare nature. Here, a cohort of abolitionist activists and wealthy industrialists tried their hand at ending the slave trade by establishing an independent settlement of former slaves brought in from all corners of the Atlantic. As a social experiment intended to reorganize the relationship between the black Atlantic, wage-labor, and global capitalism, Sierra Leone illustrates the conceptual entanglements of race, capitalism, and colonialism that played out at a turning point in the histories of the modern world-economy and racial slavery. From the settlement’s inception in the 1780s, its abolitionist founders—Henry Smeathman and Granville Sharp—challenged the moral economy of slavery by offering a commodity trade between Britain and Africa as a profitable and humane alternative to colonial slavery.

Yet it was only in 1791, four years after its original implementation, that Sierra Leone became financially viable in the form of a joint-stock trading company funded largely by the private capital of industrialists, merchants, financiers, and philanthropists. Until 1807 the colony grew from an imagined paragon of Britain’s enterprising and humanitarian spirit, to an agrarian settlement, to a commercial network composed of plantations, schools, workshops, warehouses, and merchant ships. Thousands of newly conscripted black colonists were brought in from across the Atlantic to work the land as an absentee board of British traders and bankers managed the company from London. Despite its importance to the history of British colonialism in Africa, Sierra Leone’s

¹⁰ Throughout the 1780s and 90s, following Britain’s loss of American colonies in 1776, Burke’s “Sketch of a Negro Code” (1780) became a central text in proposals for reforming the British plantation complex in the West Indies by gradually transforming slaves into a waged workforce. See: Edmund Burke, “Sketch of a Negro Code (1780),” in *Edmund Burke: The Works*, vol. 6, 12 vols. (New York: Georg Olms Verlag, 1975), 255–89.

contribution to recent studies on the relationship between political theory, colonial capitalism, and liberal empire remains unheeded.¹¹ How might the new bond between black identity, free trade, and wage-labor forged at the colony enrich ongoing debates over the winding historical trajectories of political thought, capitalism, empire, and modern racial formations?

In an attempt to answer this question, I argue that, throughout the last two decades of the eighteenth century, the Sierra Leone project introduced a new regime of racialized labor that rested at once on theories of colonization, civilization, and free wage-labor. The thinkers behind the Sierra Leone Colony and Company suggested that black workers were naturally disposed to agrarian labor in tropical environments. According to this logic, an allegedly innate disposition to live in hot climates rendered black populations in the Atlantic the optimum and ideal workforce for cultivating cash-crops in Britain's tropical colonies. And although earlier proponents of British colonialism in the tropics relied on eighteenth-century racist thought to justify the employment of black workers in their projects, Sierra Leone's founders attempted to deliberately downplay the connection between race and labor. In the rare moments when Sierra Leone officials publicly recognized racial difference, it was always in order to refute arguments leveled by their critics—planters and slave merchants—positing the innate intellectual and spiritual inferiority of black Africans in comparison to white Europeans. Rather than focusing on racial difference, exponents of the project made their case through a Christian language of universal human equality. Indeed, much of the abolitionist defense of racial equality at the time was couched in a scriptural grammar of natural rights in which humanity was understood as a natural, God-given, and universal attribute of *all* human beings that

¹¹ For recent studies that take up these issues across a wide range of themes, periods, and geographical locations, see: Barbara Arneil, *Domestic Colonialism: The Turn Inward to Colonies* (Oxford: Oxford University, 2017); Onur Ulas Ince, *Colonial Capitalism and the Dilemmas of Liberalism* (Oxford: Oxford University, 2018); Adom Getachew, *Worldmaking After Empire: The Rise and Fall of Self-Determination* (Princeton: Princeton University, 2018). For classic studies on political thought, colonialism, and empire, see: Arneil, *John Locke and America: The Defence of English Colonialism*; Muthu, *Enlightenment Against Empire*; Armitage, *Ideological Origins*; Pitts, *A Turn to Empire*; Muthu, *Empire and Modern Political Thought*.

no social institution, law, or state could overrule. Despite its administrators' efforts to dismiss racial politics, both the Sierra Leone Colony and Company depended on a complex racialized regime of production that combined elements from colonial slavery, feudal indenture, and capitalist wage-labor.

As I argue throughout this chapter, Sierra Leone contributes to our understanding of political thought, capitalism, empire, and modern racial formations in two central ways. Conceptually, the colony was a laboratory for political theory, from Lockean ideas of civil society and the social contract to new conceptions of freedom and natural rights articulated as a moral critique of slavery. Historically, it laid the groundwork for nineteenth-century ideas, discourses, and institutions that connected liberal thought to colonialism and the expansion of the British Empire after 1807. Moreover, the approach to colonization implemented at Sierra Leone combined, for the first time in British history, leading arguments of abolitionist discourse—which was then just emerging—with established precepts of modern racism, empire, and political economy. In light of the project's overlooked significance to Western political thinking, the central goal of this chapter is to account for its intellectual foundations and historical legacies. Despite its significance to the ideas and events at the heart of modern capitalism, abolitionism, slavery, and colonialism, Sierra Leone has remains absent from key debates in the history of political thought. By reading across traditions, archives, periods, and geographies, this chapter brings together forgotten thinkers and unpublished texts to offer an alternative historical account of how certain modern political ideas were instrumentalized in the development of a strange kind of factory—a hybrid built of a trading outpost, a free civil society, a colonial settlement, and a plantation, all built with the intent of abolishing the slave trade or, to paraphrase Thomas Bentley's allegory from 1772, sowing the seeds

of European civilization and commerce in the hopes that they will grow into that “exotic plant” he called “liberty.”¹²

In order to unravel the theoretical ideas underpinning the Sierra Leone experiment, I turn to earlier proposals for new commercial colonies in the tropics by Malachy Postlethwayt and Maurice Morgann. Both thinkers advanced complementary possibilities for invigorating and expanding British capitalism and imperial rule by colonizing tropical territories across the Atlantic, from West Africa to West Florida and beyond. Together, their ideas amount to an original colonial model organized around four principles at the heart of the Sierra Leone project: civilization, settlement, free trade, and wage-labor. Drawing on classical political economy and modern racist thought, Postlethwayt and Morgann shed important light on how and why ideas concerning abolition, colonialism, and capitalism converged in the eighteenth century and became increasingly interdependent as the nineteenth century ran its course.

Moreover, in accounting for the importance of Sierra Leone in the history of modern political thought, I foreground the experiment’s unique position in the mutually-constitutive expansion of capitalism and empire at the turn of the nineteenth century. While Britain had, since the 1600s, sustained a constant commercial presence in the West African coast devoted largely to trading slaves, gold, and ivory, it had not pursued a colonial project to “develop” the continent’s natural resources and “civilize” its native population in the scale it had done in America and the West Indies. By conscripting black populations into a colonial regime of free labor, the architects of the Sierra Leone experiment set out to accomplish something that, until then, Britain had not attempted in Africa—at least not officially under the rubric of a British colony. In a way, the racialized regime of slave labor in Britain’s American and Caribbean colonies provided Sierra Leone officials with the means to justify their project as a profitable and commercially viable form of liberal

¹² Bentley, “Review of ‘Political Essays Concerning the Present State of the British Empire’ [Part 1],” 579.

humanitarian intervention. In short, abolitionists figured the inhumane and despotic regime of racial slavery as the ‘Other’ against which Sierra Leone’s new system of wage-labor was constructed as both “humane,” “free,” and—in the nineteenth century—“liberal.” And yet, as I argue below, not only was the Sierra Leone experiment organized around earlier colonial theories based on civilization, settlement, free trade, and wage-labor, but additionally, as an application of these concepts, the project furnished a powerful image of Africa as the blank slate of European modernity, onto which the projects and ends of capitalism and empire could be simultaneously projected. Throughout the nineteenth century, territories on the Western coast of Africa became a testing ground for new imperial ideas and practices connected to then-emerging currents of “liberal thought” and the global expansion of industrial capitalism.¹³

Recently, historians have taken up—although at times without acknowledging it—the twentieth-century line of inquiry pioneered by black radical Marxists the likes of Du Bois, Eric Williams, and C. L. R. James on the historical intimacies of slavery and capitalism.¹⁴ Thanks to the work of these thinkers, slavery is one of the dominant subjects within historical investigations of race and capitalism. This is not only understandable, but necessary. It is after all with the historical emergence and development of Atlantic slavery that modern racism and capitalism became most decisively entwined. Moreover, this modern and Atlantic expression of chattel slavery offers historical definitions of racial domination and capitalist expansion that are familiar, or that at least fit in well with classic and critical Marxian accounts of how the consortium between these two

¹³ See Andrew Zimmerman, *Alabama in Africa: Booker T. Washington, the German Empire, and the Globalization of the New South* (Princeton and Oxford: Princeton University, 2010).

¹⁴ See, for instance, Nicholas Draper, *The Price of Emancipation: Slave-Ownership, Compensation and British Society at the End of Slavery* (Cambridge: Cambridge University Press, 2010); Walter Johnson, *River of Dark Dreams: Slavery and Empire in the Cotton Kingdom* (Cambridge and London: Belknap Press, 2013); Beckert, *Empire of Cotton: A Global History*; Edward Baptist, *The Half Has Never Been Told: Slavery and the Making of American Capitalism* (New York: Basic Books, 2014). For a critique of these works in light of the black radical tradition, see Peter James Hudson, “The Racist Dawn of Capitalism: Unearthing the Economy of Bondage,” *Boston Review*, 2016, <http://bostonreview.net/books-ideas/peter-james-hudson-slavery-capitalism>.

institutions inflicted violence, murder, expropriation, and exploitation upon millions of black women, children, and men while delivering prodigious amounts of wealth and power to a few white men. Racial difference was thus a basic condition of Atlantic slavery; it was the product of modern racial discourses and ideologies that naturalized and justified total despotic domination. Insofar as it was claimed to determine one's membership in the human race, it served as the marker of freedom and abjection *par excellence*. Meanwhile, capitalism under slavery was the categorical business model of the capitalist epoch in terms of sustained economic growth, investment, capital, productivity, profit, and foreign trade.¹⁵ It was an embodiment of the entrepreneurial spirit and management philosophy we have come to associate with the long-run history of capitalism, including modern approaches to risk assessment, time-notation, and cost-accounting. Above all else, slavery's capitalism exemplifies the tendencies of capital to override the limits of its own expansion by showing a complete disregard for the ethical, moral, geographical, ecological, and political barriers to growth. For slavery was also part of a large-scale imperial project rooted in military and political systems of violence leveraged by powerful states to consolidate a political and economic hegemony in global affairs through policies deliberately intended to suppress the mechanisms of a so-called "free" market, including: colonial expropriation; the seizure of territories; the manipulation of exchange rates, tariffs, and subsidies; and various other means of intimidating and coercing trading partners into an unequal relation of exchange. Race and capitalism, defined in this way, came to life under the modern system of Atlantic slavery, which includes the slave trade from Africa and slave plantations in the Americas. Slavery is therefore the epitome of racial capitalism; it is the most powerful synthesis of the regimes of racial and economic domination that have come to define the modern world-economy.

¹⁵ Cromwell Cox, *Foundations of Capitalism*; Cromwell Cox, *Capitalism as a System*; Williams, *Capitalism and Slavery*; Williams, "The Golden Age of the Slave System in Britain."

In sum, the tendency among recent historians of slavery and capitalism invested in asserting a fundamental historical relationship between the formation of racial ideologies and capitalist development, mostly in the nineteenth century, has been to take slavery as a starting point.¹⁶ By contrast, this chapter demonstrates that, at a moment when the slave trade soared, a parallel project to create a racialized world-economy—allegedly beyond the racial categories undergirding slavery—was conceived and practiced in Sierra Leone with black workers brought in from Jamaica, Nova Scotia, London, and various parts of the African Atlantic seaboard. Importantly, this emerging form of racial capitalism attempted, quite explicitly, to detach itself from both the African slave trade in neighboring commercial factories and systems of slave labor in American and Caribbean plantations, the very workplaces from which its workforce had managed to flee. The implementation of the Sierra Leone project as well as the ideas, people, and events that marked its rise and fall offer an alternative path for thinking about racial capitalism in relation to the global racial order that developed and grew after the nineteenth century.¹⁷ This international hierarchy—the blueprint of which can be discerned as much in Malachy Postlethwayt’s writings as in the Sierra Leone Colony—divided what Du Bois called the “darker nations of the world” and their “dark and vast sea of

¹⁶ See, for instance, Sven Beckert and Seth Rockman, eds., *Slavery’s Capitalism: A New History of American Economic Development* (Philadelphia: University of Pennsylvania Press, 2016). To be clear, I am not claiming that either studying the nineteenth century or thinking about racial capitalism only through slavery is a weakness or a problem with those contributors to the “slavery and capitalism” debate interested in problems of race and racism. I am suggesting instead that we can derive different, complementary, related, or simply further conclusions about the historical relationship between race and capitalism by looking at abolitionist projects that occurred during slavery and employed free black workers as the bulk of their labor force. Some of the recent studies on slavery, as well as its aftermath, upon which I draw throughout, include, in no particular order, Saidiya Hartman, “The Time of Slavery,” *South Atlantic Quarterly* 101, no. 4 (2002): 757–77; Saidiya Hartman, *Lose Your Mother: A Journey Along the Atlantic Slave Route* (New York: Farrar, Straus and Giroux, 2006); David Kazanjian, *The Brink of Freedom: Improvising Life in the Nineteenth-Century Atlantic World* (Durham and London: Duke University Press, 2016); Paul Cheney, *Cul de Sac: Patrimony, Capitalism, and Slavery in French Saint-Domingue* (Chicago and London: University of Chicago Press, 2017); Padraic X. Scanlan, *Freedom’s Debtors: British Antislavery in Sierra Leone in the Age of Revolution* (New Haven and London: Yale University Press, 2017); Christopher Taylor, *Empire of Neglect: The West Indies in the Wake of British Liberalism* (Durham and London: Duke University Press, 2018).

¹⁷ On the development of this international racial hierarchy after World War II, see Getachew, *Worldmaking After Empire*, 83–87; Jennifer Pitts, “The Society of Nations, Imperialism, and the Color Line: Three Conceptions of the International,” 2019.

human labor,” along with their natural resources and raw materials, from the industrial core of modern capitalism located in Europe and the United States.¹⁸ This chapter thus makes visible the conceptual and historical prelude to the racial politics of Du Bois was speaking of, which was particularly salient from where he stood in the first half of the twentieth century. Additionally, my argument also attends to the new and old synergies which the racial formation at Sierra Leone sustained between race and capitalism, slavery and wage-labor, and between factories, colonies, and plantations.

The upshot of thinking about racial capitalism in the context of Sierra Leone’s antislavery economy is that the ties between race and capitalism it nurtured were at once experimental and familiar, different and yet indissociable from the racial ideologies and institutions held under slavery. On the one hand, the articulations and practices of racial capitalism in this case study do not fit perfectly within conventional narratives, historical and conceptual, of race and capitalism in the eighteenth century. This is because they were deliberately devised as means of transcending the very discourses, conventions, and mechanisms that produced and reproduced race and capitalism during slavery. That is, the theories of race that impelled the Sierra Leone Colony were formulated as systematic critiques of the racial logic on which the economic viability of slavery, along with the profits of slave traders and planters, all depended. In place of this particular expression of racism, abolitionists constructed new systems of and explanations for racial difference that related black populations in Africa and the Americans to modern institutions of liberty, such as natural and inalienable human rights, wage-labor, private property, and participation in the political process. Unlike in a slave society, the entire political and economic fabric of Sierra Leone was premised on the natural, moral, spiritual, and intellectual equality of all humans, thus conceding the liberties and freedoms its founders associated with civil society and the capitalist workplace to the black Atlantic

¹⁸ Du Bois, *Black Reconstruction*, 15, 16, 30.

as a whole. On the other hand, however, these theories also advanced racist idea of racial difference based on the human body's adaptability to different climates and geographical settings. Leveraged by its exponents at Sierra Leone, this doctrine of race became a justification for inducting free people of color into a racialized system of agrarian wage-labor in the service of Britain's economic development and imperial expansion. Finally, the cycles of production and exchange, the social property relations, and the wage system implemented in Sierra Leone set it apart from those that were then held under most capitalist societies and industrial workplaces. The colony's political economy—from its labor process and monetary institutions to its market—was a strange synthesis of capitalism and feudalism. Here, wage-labor and modern systems of management stood cheek by jowl with debt peonage, indentured labor, quit-rents, and the early medieval system of joint suretyship known as "Frankpledge." Moreover, the results of this hybrid "feudal-capitalist" model did not yield anything close to the levels of profit, external investment, revenue, output, and productivity that characterized the period's successful slave plantations across the Atlantic.

I argue that these distinctive qualities of Sierra Leone's economy allow us to reconsider racial capitalism as a conceptual and historical category. Sierra Leone demonstrates that ideologies and practices of race and capitalism were constantly developing in accordance with the political and economic exigencies of the particular society in which they operated. Sierra Leone also reveals the extent to which flexibility, adaptation, and change were basic structural features of modern racism that still inhere in, for instance, the racialized labor markets of Silicon Valley as I contended in Chapter 2. That is, throughout the modern history of capitalism, from slavery to abolition, theories of racial difference were continually placed at the disposal of capital accumulation while, by the same token, the pecuniary interests of capitalists—whether they were abolitionists like Wedgewood or pro-slavery merchants and planters—also influenced how race was defined and understood within particular economic contexts. And yet, as attitudes toward race and practices of capitalist expansion

changed, so too did the connection between them. If race and capitalism are equally indispensable to how we define racial capitalism, then we must be open to the possibility that, as notions of race and capitalism transformed, racial capitalism changed with them. Sierra Leone bears out this logic. It throws into relief the remarkable adaptability of racial capitalism as a malleable and capacious system able to accommodate new attitudes, ideas, and practices of both racialization and capitalism that were conceived and implemented in the late eighteenth century as critiques of slavery and calls for abolition.

PART 1: CAPITAL'S COLONY, EMPIRE'S COMPANY

The first plan to form a colony with free black settlers in Sierra Leone was drafted by Henry Smeathman, an English botanist, inventor, and abolitionist. Smeathman first came up with the idea in 1783, following a decade-long stint in West Africa investigating the region's species of termites and collecting native plants for Sir Joseph Banks—England's foremost authority in the natural sciences. During his time on the African coast, Smeathman gathered a considerable body of knowledge on the prospects of creating a profitable plantation complex powered by emancipated workers of color around Sierra Leone. "I conceive this project in Africa," he declared in his proposal, "where an industrious cultivation of the soil, with various excursions, made me well acquainted with the genius, customs, agriculture, trade and arts of the natives."¹⁹ By his estimations, tropical cash crops—cotton, sugar, tobacco, and coffee among them—cultivated in America and the Caribbean by slaves could be more profitably and efficiently produced in Africa by free black laborers.

By 1786, Britain's defeat in the American Revolutionary War created a set of social circumstances that rendered Smeathman's plan at once practical and desirable to imperial officials.

¹⁹ Henry Smeathman, "Two Letters Addressed to Dr. Knowles, of London, on the Productions and Colonization of Africa (1783)," in *An Essay on Colonization*, by Carl Bernhard Wadström, vol. 2 (London: Darton and Harvey, 1795), 198.

After 1776, thousands of black loyalists—former slaves who had been emancipated by fighting alongside the British in the Revolutionary War—lived precariously as refugees in Nova Scotia and England. In London, the plight of black loyalists had reached a state of national crisis. Since their material needs were not accommodated by the parish-based welfare system of the English Poor Laws, scores of black refugees had no choice but to dwell in the streets at the whims of public charity.²⁰ In January 1786, private philanthropists with ties to the Quaker and abolitionist movements formed the Committee for the Relief of the Black Poor to abate the situation. Among its subscribers were two leading antislavery activists: Granville Sharp and William Wilberforce. Sharp, who was already familiar with Smeathman’s plan, decided to bring the idea of settling the black poor in Sierra Leone before the Committee. The proposal consisted of two founding texts, Smeathman’s “Plan of a Settlement to be Made Near Sierra Leone” and Sharp’s detailed statute for the colony entitled “A Short Sketch of Temporary Regulations.”²¹ By May of 1786, the Sierra Leone project had secured approval from the Committee, state sanction from the Commissioner of the Navy, and public funding from the Treasury.²² In May 1787, 462 colonists arrived in Sierra Leone to found the “Province of Freedom.”

Three years after their arrival on the West African coast, the experiment dealt a catastrophic blow to the hopes and ambitions of its founders. As of 1789, the vast majority of settlers had either died or fled while many of the black colonists were captured and sold into slavery. Most of the forty-six surviving settlers were so sick and malnourished that prospects of continuing the project were dismal. In the end, the imagined prospect of profit and liberty at the Province of Freedom gave way

²⁰ Cassandra Pybus, *Epic Journeys of Freedom: Runaway Slaves of the American Revolution and Their Global Quest for Liberty* (Boston: Beacon, 2006), 75–87.

²¹ Henry Smeathman, “A Plan of a Settlement to Be Made near Sierra Leone (1786),” in *An Essay on Colonization*, by Carl Bernhard Wadström, vol. 2, 2 vols. (London: Darton and Harvey, 1795), 207–9; Granville Sharp, *A Short Sketch of Temporary Regulations (Until Better Shall Be Proposed) for the Intended Settlement on the Grain Coast of Africa, Near Sierra Leona* (London: H. Baldwin, 1786).

²² David Olusoga, *Black and British: A Forgotten History* (London: Macmillan, 2016), 164–69.

to the unforeseeable reality of loss and misery. Meanwhile, a few miles from the colony's barren fields, European merchants made unprecedented profits as the Atlantic slave trade soared. In 1791, a new plan to revive the colony as a joint-stock company breathed new life into the commercial and humanitarian aspirations of the project.²³ Less than a year after Parliament incorporated the Sierra Leone Company with a Royal charter, its Board of Directors managed to raise £200,000 in shares, mostly from the private capital of Britain's leading industrialists, including Matthew Boulton and Josiah Wedgwood, both of whom were original shareholders.²⁴ This time around, the intertwined principles of commerce and civilization were explicitly outlined in the founding charter of the Company, the primary aim of which was "the Introduction of Civilization into Africa" through "the Establishment of a secure Factory at Sierra Leone, with the View to a new Trade in Produce, chiefly with the Interior."²⁵ In order to ward off critics, gain a popular support base, and avoid the mistakes of original settlers, the Company set commercial viability as a central and immediate priority.²⁶ Lured by false promises of free land grants, 1,190 black loyalists were transported from Nova Scotia and New Brunswick to populate the settlement as a free agrarian workforce.²⁷ In 1800, the Company received 550 Maroons who, after resisting slavery in Jamaica, had been recaptured and deported to Nova Scotia. When Parliament adopted the Act for the Abolition of the Slave Trade in March 1807,

²³ Stephen J. Braidwood, *Black Poor and White Philanthropists: London's Blacks and the Foundation of the Sierra Leone Settlement, 1786-1791* (Liverpool: Liverpool University, 1994), 225–49.

²⁴ Among the celebrated industrialists who invested in the venture, the Wedgwood estate purchased twenty-four shares; Matthew Boulton purchased two; Sir Richard Arkwright purchased three; David Gale, founder of the factory-town "New Lanark," purchased five; John Roebuck purchased three; Walter Spencer Stanhope purchased four; and John Taylor, owner of one of the largest "toy" factories in Birmingham, second only to Boulton's, purchased seven shares. For a list of all shareholders and number of shares purchased, see "List of the Original Subscribers to the Capital Joint Stock of the Sierra Leone Company. Instituted for Promoting the Civilization of Africa" (June 1792) in Carl Bernhard Wadström, *An Essay on Colonization, Particularly Applied to the West Coast of Africa*, vol. 2 (London: Darton and Harvey, 1795), 341–53.

²⁵ "Report from the Committee on the Petition of the Court of Directors of the Sierra Leone Company," May 26, 1802, MS WO 1/352, p. 79, Africa and the Atlantic Islands, Sierra Leone, Sierra Leone Company, The National Archives, Kew, United Kingdom.

²⁶ Seymour Drescher, *The Mighty Experiment: Free Labor Versus Slavery in British Emancipation* (Oxford and New York: Oxford University Press, 2002), 93.

²⁷ Christopher Fyfe, *A History of Sierra Leone* (London: Oxford University Press, 1962), 34.

the Sierra Leone Company was completely bankrupt—since 1792 it had cost the state close to £1,000,000 in subsidies. At this point, the British government took control of the Company’s assets and management, turning it into a Crown Colony in 1808.²⁸

The experiment that had begun as a philanthropic colony and evolved into a chartered company funded by private capital ended in the hands of empire, where it would remain until Sierra Leone’s independence in 1962. This trajectory did not go undisputed, however; during a meeting between representatives of the British Government and the Sierra Leone Company in 1807, disagreements among adversarial parties on the future of Sierra Leone were fierce. According to Henry Thornton, the Company’s Chairman, “only the civil and military government of the *Colony* were intended to be transfer’d, not the commercial interest of the *Company*.” As one of the Sierra Leone officials present at the meeting noted, “probably if there had been a proper distinction between the words Colony and Company, this opposition had not existed.” Not only was the distinction between the colony and the company unclear, so too was that between the factory, the colony, and the plantation. Indeed, as I argue below, Sierra Leone encased all of these institutions at once.²⁹

Describing the objects of joint-stock companies in 1698, Charles Davenant aptly captured the adventurer and ambitious commercial spirit that defined the Sierra Leone project. Through strength and wealth, Davenant wrote, chartered companies “might exert themselves boldly in high Attempts, for the Honour and future Advantage of their Country; They may launch into profitable Designs, or the unsuccessful Event of any new Settlement; They will be able to bear that Loss with which, repeated Endeavours of introducing the Wear and Fashion of our Manufactures in those

²⁸ MS CO 267/9, CO 270/1, CO 270/4. The National Archives, Kew, United Kingdom.

²⁹ Thomas Byerley, “Memorandum of the proceedings of a meeting relating to proposals concerning Sierra Leone” (1807). The principal speakers were Thornton, Twining, Stevens, Walker, and Wilberforce. L139-28193, British Library, UK.

Nations, must in the beginning be attended.”³⁰ According to Adam Smith, for instance, the modern European mercantile economy blurred the ancient distinctions between colony, company, and plantation in classical Greece and Rome. Whereas modern European languages and empires defined a colony at once as a settlement, corporation, garrison, trading outpost, and plantation, the Romans and Greeks kept them apart. In Ancient Greece, Smith remarks, “The mother city, though she considered the colony her child, [...] yet considered it an emancipated child, over whom she pretended to claim no direct authority or jurisdiction.”³¹ In Rome, by contrast, colonies emerged as a source of land for the landless and, “being within the dominions of the republick, they could never form any independent state; but were at best but a sort of corporation [...] subject to the correction, jurisdiction, and legislative authority of the mother city,” which in turn “often established a sort of garrison too in a newly conquered province.”³² Not only, then, does the word denote different types of establishments, the terms it brings together also have quite distinct meanings: “The Latin word (*Colonia*) signifies simply a plantation. The Greek word (*ἀποικία*), on the contrary, signifies a separation of dwelling, a departure from home, a going out of the house.”³³ Smith does not mention that besides *apoikía* the Greeks also had another word for colony: *ἐμπόριον* or *emporion*, which was the ancient equivalent of the modern trading outpost or trading factory. Indeed, what the Greeks called an emporium and the Romans designated as a corporation, modern European empires defined as a “factory,” especially those located in Africa and Asia throughout the seventeenth and eighteenth centuries. In his encyclopedic *Origin of Commerce* (1764), Adam Anderson defended joint-stock companies as the optimal institutions of imperial rule and global commerce not only because they are “capable of a far greater extension, as to the number of traders and largeness of stock, than

³⁰ Davenant, *Discourses*, 426.

³¹ Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, ed. R. H. Campbell, A. S. Skinner, and W. B. Todd, vol. 2 (1776; repr., Indianapolis: Liberty Fund, 1981), 557–58.

³² *Ibid.*

³³ *Ibid.*, 2:558.

any regulated company,” but also because, in a joint-stock, “noblemen, gentlemen, shopkeepers, widows, orphans, and all other subjects, may be traders, and employ their stock therein.”³⁴ As we will see, in the Sierra Leone Company, not every settler could be a trader. In fact, black colonists faced significant obstacles to the liberal freedoms they had been promised throughout Sierra Leone’s early history, including their right to trade and own land within the colony.

As I continue to argue throughout this chapter, the ideas and events that impelled the rise and fall of the Sierra Leone Colony and Company lay bare two key ways in which the project nurtured a new relation between race, capitalism, and empire at a turning point in the history of the Atlantic slave trade. First, the vision of Africa propagated by its founders as a source of raw materials for Britain’s consumer industries and the seat of the antislavery movement was strictly contingent on a racialized division of labor informed as much by the Atlantic slave trade and slavery as by abolitionism and colonial capitalism.³⁵ In this global configuration, black labor—whether waged, indentured, or enslaved—was defined as agrarian *par excellence*. In the same way Africa’s contributions to trade were, on the whole, limited to its natural resources, black labor was, for the most part, confined to the cultivation of raw materials that British workers manufactured into finished commodities. This system speaks to a colonial and racialized production cycle that the Sierra Leone project did not so much reaffirm as it reified at a global scale by transforming elements of racialized slave labor and rendering them applicable to a system of wage-labor. Second, from its inception as a colony to its demise as a Company, Sierra Leone sustained a particular political economy of race that, despite being founded on modern theories of racial difference, was justified as an inevitable product of the project’s Christian-humanitarian intent to abolish the slave trade. In other words, while the founders of the colony and the directors of the company deployed their

³⁴ Adam Anderson, *An Historical and Chronological Deduction of the Origin of Commerce*, vol. 2 (London: J. Walter, 1764), 556.

³⁵ For a definition of colonial capitalism as it applies to British political thought, see: Ince, *Colonial Capitalism*.

antislavery mandate to explain the settlement's virtually exclusive reliance on a black workforce, this alibi obscured the extent to which the project's employment of black workers as menial farmers was grounded on earlier theories concerning the natural proclivity of black populations to perform agrarian work in tropical climates. In the next two sections I show how these registers of race, colonialism, and capitalism at Sierra Leone were prefigured by earlier eighteenth-century colonial theories that articulated a new path for black labor within global capitalism after slavery.

PART 2: IMPERIAL CAPITALISM

Commenting on the colonization of West Africa by European abolitionists, Philip Curtin concluded that, "If any field of thought was neglected in planning for human happiness in Africa, it was certainly not political theory."³⁶ Indeed, the social contractarian imaginary—running from Hobbes to Locke and Rousseau—was a salient motif in the modern history of African colonization, which was particularly important for the establishment of the Sierra Leone Colony.³⁷ Yet, the political thinker who I argue is essential to understanding eighteenth-century global commerce and colonial capitalism in Atlantic Africa has been mostly neglected today, despite being perhaps the single-most influential political economist of his time: Malachy Postlethway. When he is remembered, Postlethway is mostly cited with his unrelenting support of the Royal African Company and the slave trade in 1740; in fact, his writings have been proven useful in recent years to historians of capitalism, slavery, and empire looking for the most characteristic economic and imperial defenses of the Atlantic slave trade.³⁸ But, as will become clear, Postlethway's contribution

³⁶ Philip D. Curtin, *The Image of Africa: British Ideas and Action, 1780-1850* (Madison: University of Wisconsin, 1964), 119.

³⁷ The eventual failure of these projects brought in radical revisions to these projects based on utopian ideas of a civil society by the likes of Thomas Spence and, later on, Robert Owen.

³⁸ One important exception and, to my knowledge, the best treatment of Postlethway as a political thinker is Christopher L. Brown's work. See Brown, "The Origins of 'Legitimate Commerce'"; Christopher Leslie Brown, "Empire without America: British Plans for Africa in the Era of the American Revolution," in *Abolitionism and Imperialism in Britain, Africa, and the Atlantic*, ed. Derek R. Peterson (Athens: Ohio University

to these transnational formations transcends his role as a polemicist and pamphleteer. By reading Postlethway as a key modern political thinker and placing his works in the historical context of central intellectual debates about and key transformations in the Atlantic world economy, I argue that Postlethway was as significant to modern political thought's embroilment in global capitalism and empire as canonical thinkers the likes of Hume, Smith, and Burke, as some commentators have recently suggested.³⁹ In the same way Locke relied on images of a wild, unbound America as the natural and primitive grounds for a civilized and industrious political society, abolitionists painted a plenteous portrait of the African hinterland in defense of their own projects for a free society in the continent. From the 1750s to the turn of the nineteenth century, modern ideas about capitalism, civilization, and racial difference became the key ingredients of European inscriptions on Africa's alleged *tabula rasa*.

As I argue in this section, eighteenth-century projects to colonize Africa through civilization, settlement, free trade, and wage-labor—an agenda so pointedly articulated by Equiano, Smeathman, and Sharp in the 1780s—had been formulated by Postlethway nearly thirty years earlier. While most political theorists today would not consider Postlethway a significant modern thinker, his influence on eighteenth-century economic and abolitionist discourse was unparalleled in Britain. His *Universal Dictionary of Trade and Commerce* went through four editions from 1752 to 1774 and was widely read across Europe, including by Adam Smith, whose thinking about foreign trade was considerably influenced by Postlethway.⁴⁰ By the end of the eighteenth century, Postlethway's writings on the

Press, 2010), 84–100; Christopher Leslie Brown, *Moral Capital: Foundations of British Abolitionism* (Chapel Hill: University of North Carolina Press, 2006).

³⁹ See, for instance Ince, *Colonial Capitalism*; Margaret Kohn and Daniel I. O'Neill, "A Tale of Two Indias: Burke and Mill on Empire and Slavery in the West Indies and America," *Political Theory* 34, no. 2 (2006): 192–228; Daniel I. O'Neill, *Edmund Burke and the Conservative Logic of Empire* (Oakland: University of California Press, 2016).

⁴⁰ Robert J. Bennett, "Malachy Postlethway, 1707-67: Genealogy and Influence of an Early Economist and 'Spin-Doctor,'" *Genealogists' Magazine* 18, no. 2 (2011): 1–8; Peter Groenewegen, *Eighteenth-Century Economics: Turgot, Beccaria and Smith and Their Contemporaries* (London and New York: Routledge, 2002), 381.

prodigious profits Britain could reap from a legitimate commerce in staple crops with Africa held significant sway on abolitionist discourse. Indeed, the influence of Postlethwayt's political economy on critiques of the slave trade is made clear, as Christopher Brown notes, in the work of leading abolitionist in the period such as Anthony Benezet, whose 1771 *Some Historical Account of Guinea* included a series of unaltered passages from *Universal Dictionary*, and James Swan, who references Postlethwayt's ideas throughout his 1772 *Dissuasion to Great Britain and the Colonies, from the Slave Trade to Africa*.⁴¹ As I will argue below, the same is true of C. B. Wadström, a Swedenborgian missionary, industrialist, and abolitionist, whose two-tome *Essay on Colonization* (1794-1795) made him one of the leading theorists of colonial antislavery at the turn of the nineteenth century.⁴²

For most of the eighteenth century, British presence in Africa revolved around thirteen trading castles and forts—known as factories—along the continent's Gold Coast.⁴³ And although this meant that Britain's sovereignty over coastal territories was legally untenable, its commercial infrastructure was an influential institution in the transatlantic slave trade, exerting a considerable influence over the lives of native Africans.⁴⁴ In Upper Guinea, for instance, the Royal African Company commanded a massive and socially complex sphere of trade in the orbit of its factories that went as far back as the seventeenth century.⁴⁵ After 1750, however, control over Britain's trading network in the continent fell in the hands of the Company of Merchants Trading to Africa. At this point the Company was charged with administering all British castles, forts, outposts, and warehouses in the region, most of which had to be renovated and many others built from the

⁴¹ Brown, "The Origins of 'Legitimate Commerce,'" 144–46, 156–57.

⁴² Carl Bernhard Wadström, *An Essay on Colonization, Particularly Applied to the West Coast of Africa*, vol. 1, 2 vols. (London: Darton and Harvey, 1794); Wadström, *An Essay on Colonization*, 1795; Jonas Ahlskog, "The Political Economy of Colonisation: Carl Bernhard Wadström's Case for Abolition and Civilisation," *Sjuttonhundratals* 7, no. 0 (October 1, 2010): 146–67; Coleman, *Romantic Colonization*.

⁴³ A. W. Lawrence, *Trade Castles and Forts of West Africa* (London: Jonathan Cape, 1963).

⁴⁴ Curtin, *The Image of Africa: British Ideas and Action, 1780-1850*, 7; see also: Rebecca Shumway, *The Fante and the Transatlantic Slave Trade* (Rochester: University of Rochester, 2011).

⁴⁵ Colleen E. Kriger, *Making Money: Life, Death, and Early Modern Trade on Africa's Guinea Coast* (Athens: Ohio University Press, 2017), 5.

ground up in the service of a booming slave trade.⁴⁶ Despite its significant presence in the continent, Britain was not—by the middle of the century—invested in setting up a lasting colonial settlement in Africa the likes of which it had already established across the Atlantic. Up to this point, Britain’s mission in Africa was primarily to sustain and expand its trade in slaves.

Paradoxically, Postlethwayt, one of the earliest British proponents for the commercial settlement of Africa’s Western coast, was a leading advocate of the slave trade and a civil servant in the Court of Assistants to the Royal African Company for over a decade before its dissolution in 1752.⁴⁷ For most of his career as a Company official, Postlethwayt was a vocal and relentless propagandist for the importance and necessity of maintaining the Royal African Company’s monopoly in the slave trade, a position he outlined in a series of pamphlets, including: *The Importance of Effectually Supporting the Royal African Company of England* (1744); *The African Trade, The Great Pillar and Support of the British Plantation Trade in America* (1745); and *The National and Private Advantages of the African Trade Considered* (1746). But after the Company disbanded to make way for a system of free trade under the newly-established Company of Merchants Trading to Africa, Postlethwayt’s position on the slave trade began to shift. In his 1757 *Britain’s Commercial Interest Explained*, he proposed that, rather than limiting its commercial activity to the coast, Britain should instead extend it “into the bowels of Africa, as might and would have unspeakably advantaged the trade, the wealth, and the power of the whole kingdom.”⁴⁸ To this end, Postlethwayt suggested refitting coastal factories into colonial settlements that would facilitate trade with natives residing deep in the country, in lands that “abound with commodities of inestimable value,” including an “infinite variety of vegetable, mineral,

⁴⁶ Ty M. Reese, “The Drudgery of the Slave Trade: Labor at Cape Coast Castle, 1750-1790,” in *The Atlantic Economy during the Seventeenth and Eighteenth Centuries: Organization, Operation, Practice, and Personnel*, ed. Peter A. Coclanis (Columbia: University of South Carolina, 2005), 277–96.

⁴⁷ Brown, “Empire without America,” 88.

⁴⁸ Malachy Postlethwayt, *Britain’s Commercial Interest Explained and Improved; In a Series of Dissertations on Several Important Branches of Her Trade and Police*, vol. 2 (London: D. Browne, A. Millar, J. Whiston, B. White, and W. Sandby, 1757), 201, 210.

and animal production[s], [...] which might afford an infinite variety of trafficable objects.”⁴⁹

Foreshadowing both Equiano’s “endless field of commerce” and Smeathman’s plan to civilize Africa through commercial trade, Postlethwayt believed that Africa would “admit of a very extensive and lucrative commerce [...] if we can propagate the same into the very heart and center of these extensive territories.”⁵⁰ According to Postlethwayt, the African interior would not only provide Britain with an extended source of raw materials at a much shorter distance from English ports than its American and West Indian colonies; it would also compensate Britain if it were ever dispossessed of its New World territories. In addition to new valuable commodities such as diamonds, ivory, and camwood, the British could easily transplant to Africa the cash crops it cultivated across the Atlantic since, as Postlethwayt claimed, the tropical climate and soil were commensurate in both areas, which lie on the same latitude.⁵¹

Postlethwayt singles out an additional advantage of a commodity trade with the African interior: its potential to civilize the native population. After all, he reasons, “What has so much tended to civilize the human species as commerce?” Postlethwayt’s plan was to purvey a culture of European consumerism to the native populations of the African interior, cultivating among them a set of Western customs, habits, tastes, and sensibilities generative of sumptuous consumer desires that only British commodities could satiate.⁵² “If we could so exert our commercial policy among these people,” he continues, “as to bring a few hundred thousand of them to cloath with our commodities, and to erect buildings to deck with our furniture, and to live something in the European way, would not such traffic prove far more lucrative than the slave-trade only, or the dealing with them only for those small quantities of gold, and other commodities which we do?”⁵³ If

⁴⁹ Ibid., 2:215.

⁵⁰ Ibid.

⁵¹ Ibid., 2:216.

⁵² Ibid., 2:217–19.

⁵³ Ibid., 2:218.

the British succeed at exciting the passions and reforming the manners of natives such that they demand more and more British commodities, native Africans would, in Postlethwayt's words, "lay in time all nature's work at our feet; they would clear their lands; take to the cultivation of those things we have found valuable amongst them, breed those animals we esteemed, and search, at our instigation, to the very center of the earth for all her invaluable treasures."⁵⁴ Some three decades later, this line of thinking would become indispensable to abolitionist programs to colonize Africa by Equiano, Smeathman, Sharp, and many others.

Colonizing the interior parts of Africa was, from such perspectives, the chief method "whereby traffic of this part of the globe may be advanced, for the benefit of the subjects of *Great-Britain* in particular."⁵⁵ By Postlethwayt's estimations, Portugal had implemented the most beneficial commercial model in Africa, which he believed the British should emulate to their advantage. From its "extensive colonies in *Africa*," he writes, the Portuguese enjoy a "very great sway, influence and dominions over many of the countries adjacent to their settlements."⁵⁶ While he claimed that Britain's "African Commerce" was then still "in its state of infancy," the African Company had in fact expanded before being disbanded.⁵⁷ The Company, he notes, "had several other factories for near 800 miles up [the Gambia] river," including a large and commercially significant factory at James Fort which "mounted 90 guns, with small arms and stores; and had several warehouses for merchandize, and a negroe-house for 2—negroes, and apartments for the governor, factors, writers, officers, artificers, soldiers, and castle-slaves."⁵⁸ Unlike most European states, Postlethwayt discerns, the Portuguese are "not on the coast merely as a *factory*, as the other nations are, but they possess the country as a *colony* of their own, and command all the slaves that are to be had, by keeping the

⁵⁴ *Ibid.*, 2:219.

⁵⁵ Malachy Postlethwayt, *The Importance of the African Expedition Considered* (London: C. Say and M. Cooper, 1758), 77.

⁵⁶ *Ibid.*, 86.

⁵⁷ *Ibid.*, 50.

⁵⁸ *Ibid.*, 52n.

negroe kings and chiefs under their dominion.”⁵⁹ The Portuguese had effectively colonized parts of the African hinterland such as São Salvador, which, despite being situated some two hundred miles from the coast, the Portuguese had, on Postlethwayt’s telling, “so christianized in their way, that the barbarous paganism is here pretty much eradicated.”⁶⁰ Writing about the country of Cumbo on the river Gambia, close to the English factory in James Fort, Postlethwayt observed that, “were this country planted by the *Europeans* in colonies and settled habitations, towns and cities built, and people brought over to inhabit as in the *American* plantations [...], the whole commerce of this part of the world might in all probability, be considerably more extended among those people than it has ever yet been [...]; for by this means we may bring the natives to become so civilized as to clothe, and to live more and more according to the *European* mode; and thereby have a proportionate demand for our commodities of every kind; and this increase of the consumption would excite the natives to be more active and industrious in the search of all valuable products to barter with us in return.”⁶¹ By combining the twin institutions of commerce and empire—the factory and the colony—Britain would be able to expand its trade with and dominion over Africa. Postlethwayt also highlighted the great extent to which Britain’s American commerce depended on its incursion into Africa, not only in terms of slaves but most critically in light of the continent’s natural treasures, which he deemed “as considerable as those of any other part of the whole world.”⁶² For Postlethwayt, these benefits could not be reaped unless Britain settled in Africa with the explicit intent of colonizing and civilizing local populations, who, on his account, were amenable to this

⁵⁹ Ibid., 74.

⁶⁰ Ibid., 75–76.

⁶¹ Ibid., 85–86.

⁶² Ibid., 50. Postlethwayt remarked that, given “the greatest part of the commerce of *America* does so essentially depend upon that of *Africa*,” Britain “cannot tender the latter too broad bottomed and extensive for it will repay us in an hundred fold degree” (Ibid., 50). On African minerals, see Ibid., 50–59. On agricultural commerce in the hinterlands, see Ibid., 77, 80.

arrangement, many of whom were already “well informed in the value of *European* goods” and had “grown subtle and knavish, by instructions from the *Europeans* themselves.”⁶³

Postlethway concluded, “Nothing seems wanting to render *Africa* equal by nature, if not in many respects superior, to any of the three other parts of the globe” and, importantly, “*Africa*, in one respect, has greater advantages than the other parts of the world; for it feels no cold.”⁶⁴ As I show below, Africa’s temperate climate would play a central role in later arguments for colonizing the continent’s Atlantic coast with black and native workers. This is another feature of the Sierra Leone Colony which Postlethway had theorized twenty years earlier. Drawing on the knowledge and experience of officials from the African Company, “who have lived on the spot,” Postlethway argued that “many of those importations, which we have been habituated to, the merchants of *Europe* might supply themselves with from other countries in the like latitude, by causing them to be planted and cultivated in such places, where we have great reason to believe they would grow, and that to advantage.”⁶⁵ If “the earth, the air, the sun, [are] all the same,” he reasons, “why not then the productions?”⁶⁶ Likening Sierra Leone’s climate to those of Barbados and Jamaica, Postlethway notes that, if suitable measures were implemented in the region, the land and soil would “come to perfection, and produce as profitably, and as much to the encouragement of the planter in the country upon the *Coast of Guiney*, as in *America*.”⁶⁷ So, if the West coast of Africa is “capable of very extraordinary improvement,” he asks rhetorically, “Why do not the *Europeans* enclose such lands for cultivation, as their nature and situation appear proper for beneficial productions?”⁶⁸ With respect to the tea imported from China and Japan, for instance, he proposes, “With how much greater advantage of climate, may we presume the same plant might be produced at *Sierraleone*, and on the

⁶³ Postlethway, *The Importance of the African Expedition Considered*, 72.

⁶⁴ *Ibid.*, 60.

⁶⁵ *Ibid.*, 87.

⁶⁶ *Ibid.*

⁶⁷ *Ibid.*, 88.

⁶⁸ *Ibid.*, 93.

gold coast?”⁶⁹ The lucrative cash-crops that could be raised in tropical plantations beyond the Americas are thus a “temptation sufficient to rouse our industry.”⁷⁰ Additionally, as Britain transforms its coastal factories into colonial plantations, these establishments “would soon spread the commerce into the inland nations, and employ and enrich the inhabitants, by instructing them in the arts of living, as well as of trade and minerology; which leads to a view of one of the greatest scenes of commercial improvement.”⁷¹ This would instruct “the barbarous nations in all our colonies, factories, &c. in the arts of living handsomely, clothing with decency, not going brutally naked; dwelling in towns and cities, with oeconomy and civil government, and not like savages.”⁷² With the exception of the abolition of the slave trade, all ingredients for a total colonization of the African coast, as the Sierra Leone Colony attempted, are accounted for here.

Postlethway also supports his plan for colonizing Africa with a universal logic of economic development and a conjectural history of human progress. “Before commerce took effect amongst mankind,” he notes, “the human species in general were little better than brutes of the first class: but trade and navigation exciting to the advancement of arts and sciences necessary thereto [...] have naturally civilized men: and as they have increased in civilized polity, commerce in general has in its turn proportionally augmented.”⁷³ On his view, this was precisely the effect which European colonization had in America; it awakened a dormant taste for wealth and consumption among Native Americans who, once fully convinced of the conveniences purveyed by modern capitalism, became strictly dependent on European traders and manufacturers for “an infinite number of things, for the abundant accommodation of life.”⁷⁴ This illustrates the mutually beneficial logic of colonization, civilization, and foreign trade behind Equiano’s “endless field of commerce.” As

⁶⁹ *Ibid.*, 94.

⁷⁰ *Ibid.*, 95.

⁷¹ *Ibid.*

⁷² *Ibid.*, 95–96.

⁷³ *Ibid.*, 96.

⁷⁴ *Ibid.*, 97, 96–97.

Postlethwayt put it, “the more and more civilized [natives] grow, the greater vent [Europeans] shall have for [their] commodities: this has created a commerce reciprocally beneficial.”⁷⁵ In a sense, Britain’s trading factories were seen as a stepping stone to fulfilling the end goal of an imperial commercial policy, to which the establishment of colonies and plantations were a “fundamental principle.”⁷⁶ Indeed, only by expanding its colonies to remote parts of the world could Britain hope “to civilize and instruct the natives of those countries, so as to bring them by the softest and gentlest methods to fall into the *European* customs and usages, and incorporate among our people as one nation.”⁷⁷ Not only does trade have a “natural tendency to polish and humanize mankind in general,” it is in consequence of sustaining trade that “government has been established.”⁷⁸ For Postlethwayt, commerce is so indispensable to the creation and development of civil and political society that, as he writes, “among those nations destitute of trade, we find the whole race of men but a small remove above the brute creation.”⁷⁹ The prospect of integrating African natives to the British Empire was still a radical idea at the time, especially given the extent to which Britain’s American plantations relied on this very population as a source of slave labor rather than as subjects. As much for Equiano as for the architects of the Sierra Leone Colony, incorporating emancipated slaves and African natives into a system of political rights and free wage labor was impossible without abolishing the slave trade.

Contrary to what some commentators in the “abolitionism and capitalism” debate have suggested, the relationship between the abolitionist movement, colonialism, and capitalism goes well beyond the financial interest this triangulation laid open to British industrialists. Rather, the collaboration between capitalists and abolitionists to colonize Africa in the late eighteenth century

⁷⁵ *Ibid.*, 97.

⁷⁶ *Ibid.*, 98.

⁷⁷ *Ibid.*

⁷⁸ *Ibid.*, 99.

⁷⁹ *Ibid.*

was equally sustained by eighteenth-century ideas, discourses, and proposals that foregrounded the importance of African colonization to the longevity and expansion of the British Empire at the onset of the Seven Years War. Not only do these ideas and discourses significantly predate the abolitionist movement, but given that Britain had not pursued a large-scale venture to colonize Africa before the 1760s, plans such as Postlethwayt's became key sources of colonial abolitionism in the 1780s. Additionally, the fact that central figures in the abolitionist movement, such as Benezet, Equiano, and Smeathman, framed their projects in Africa on Postlethwayt's theories does more to help us understand the place of modern political and economic ideas within colonial capitalism than classic texts of canonical figures.

The importance of setting up civil settlements on the African coast became a popular motif in imperial thought following Britain's successful takeover of Gorée and Saint-Louis from the French in 1758. As a result of this incursion, the British established the Province of Senegambia, which assured their monopoly of the gum trade for European textile production.⁸⁰ Writing in 1766, Thomas Whatley contended that the civil establishment formed in Senegambia "*must be an Encouragement to the present Factories; it will be the Means of encreasing them; it may be the Foundation of future Improvements in Power, in Commerce, and in Settlement, to a Degree, perhaps, of Colonization: [it will] give Stability, Order and Credit, to the British Trade upon the Coast, and make our Establishment superior in Strength, Extent, and Influence, to those of any other European Power.*"⁸¹ Whatley thus contended that a civil establishment, or colonial plantation, would strengthen the magnitude and influence of British factories trading on the coast and, in time, lay the foundation for future schemes

⁸⁰ Christopher L. Brown, "1758: War and Trade on the Senegal Coast" (Empires & Atlantic Forum, University of Chicago, 2019), 1–52; Joshua D. Newton, "Slavery, Sea Power and the State: The Royal Navy and the British West African Settlements, 1748-1756," *Journal of Imperial and Commonwealth History*, no. 2 (2013): 171.

⁸¹ Thomas Whatley, *Considerations on the Trade and Finances of This Kingdom, and on the Measures of Administration, with Respect to Those Great National Objects since the Conclusion of the Peace* (London: J. Wilkie, 1766), 68, emphasis mine.

to colonize Africa's Atlantic seaboard, as Postlethwayt had suggested in the late 1750s. In short, Postlethwayt popularized the idea that "no consideration drawn from the barbarous state of the Africans should discourage our efforts to cultivate and extend our commerce amongst them to the utmost."⁸² We thus find in Postlethwayt's theory of colonial capitalism a conceptual grammar for combining civilization with free trade that colored both Equiano's "endless field of commerce" and the central tenets of Smeathman's "Plan." But beyond these textual resonances, Postlethwayt's proposal to unite the factory and the colony in a single African settlement was enshrined, almost verbatim, in the 1791 mandate of the Sierra Leone Company, which called for "the Introduction of *Civilization* into Africa [through] the Establishment of a secure *Factory* at Sierra Leone, with the View to a *new Trade in Produce, chiefly with the Interior*."⁸³

Despite Postlethwayt's support for and service to the Royal African Company, he began to revise his position on the Atlantic slave trade throughout the 1750s. "For my own part," he admitted in 1757, "I cannot help expressing my dislike to the slave-trade, and wish an end could be put to it; and I am inclined to believe that practicable without injury to our plantations."⁸⁴ If the price of labor in Europe became as cheap as it was in the colonies, Postlethwayt was certain that white European workers would in time replace slaves in American plantations; he moreover projected that all European powers would eventually "find their account in laying absolutely aside the slave-trade, and cultivating a fair, friendly, humane, and civilized commerce with Africans."⁸⁵ But since he saw no viable alternative labor supply for Britain's plantations that were at once as abundant and economical as African slaves, he added: "We cannot think of giving up the slave-trade,

⁸² Postlethwayt, *The Importance of the African Expedition Considered*, 99.

⁸³ "Report from the Committee on the Petition of the Court of Directors of the Sierra Leone Company," May 26, 1802, MS WO 1/352, p. 79, emphasis mine.

⁸⁴ Postlethwayt, *Britain's Commercial Interest*, 1757, 2:217.

⁸⁵ *Ibid.*, 2:269.

notwithstanding my good wishes that it could be done.”⁸⁶ Nevertheless, Postlethwayt’s conjecture led him to a prescient conclusion that, in the course of two decades, would become the linchpin of abolitionist projects to colonize and civilize Africa through legitimate commerce. Until the slave trade is abolished, Postlethwayt wrote, “it does not seem possible that the inland trade of this country [Africa] should ever be extended to the degree it is capable of; for, while the spirit of butchery and making slaves of each other is promoted by the Europeans among these people, they will never be able, perhaps, to travel with safety into the heart of Africa, or to cement such commercial friendships and alliances with them as will effectually introduce our arts and manufactures amongst them.”⁸⁷ And although he could not foresee what was to unfold at Sierra Leone, Postlethwayt hoped his hints would “possibly some time or another rouse some noble and benevolent Christian spirit to think of changing the whole system of the African trade, which, as things are now circumstanced, may not be easily brought about.”

For the time being, however, Postlethwayt recognized that, were Britain to abolish the slave trade, its production and export of staple crops from America would be quickly overtaken by rival nations who continued to employ slaves. Another extra-economical reason he cited for why Britain cannot afford to forgo slave labor—although he did not believe it had been sufficiently proven by experience—was that “whites like blacks cannot sustain the heat, and the fatigue necessary [to] perform the laborious business requisite in our sugar-colonies.”⁸⁸ As I argue in the next section, ideas about the climate’s effect on the dispositions and somatic features of different populations was central to eighteenth-century theories of race and human development. For Postlethwayt, a region’s climate and natural environment shape the particular character and disposition of its native population. England, for instance,

⁸⁶ *Ibid.*, 2:221.

⁸⁷ *Ibid.*, 2:269.

⁸⁸ *Ibid.*, 2:221.

[I]s an island placed as a center to the circular globe, towards which, commerce may draw a line from the whole circumference; it is blessed with a moderation of every element; no scorching sun negroes, nor frigid zone benumbs its natives; a medium influence strengthens and beautifies its inhabitants, rendering them, neither of the unwieldy or pigmy race, but fit to endure the toils of labour.⁸⁹

England's temperate climate, that is, accounts as much for its fertile soil as for the industrious tendencies of its people who, having a character that is as mild as the natural environment in which they are nurtured, possess an imagination that is in turn "neither too airy for deep contemplation, nor too dull for invention."

And yet, notwithstanding the natural proclivities instilled in people by the contingencies of their surroundings, Postlethwayt also held that all human beings were by nature distinctively susceptible to change and improvement. This much is clear in his belief that African natives were capable of being civilized under the tutelage of British colonial rule and legitimate commerce. "In tracing mankind as near as we can to their origin," he argued, "we find them in the general to have been no better civilized, than the Africans."⁹⁰ Commerce, "being the parent of treasure, splendor, and magnificence," has been historically "conducive to the propagation of all the commercial arts." And if commerce, wherever it has been duly introduced, has "scarce ever failed to polish and humanize the most brutish savages," then "why not the Africans?" Human nature, he continues, "is one and the same in all parts of the world, suitable to it's [sic] climate and it's [sic] situation; and the colour, and stature in men is as little to be despised as the soil where they inhabit, and the productions of the earth." So, if "soils of all kinds, and in all climes are improvable," he further asks, "why not the human nature? Are not the rational faculties of the negroe people in the general equal

⁸⁹ Malachy Postlethwayt, *Britain's Commercial Interest Explained and Improved; In a Series of Dissertations on Several Important Branches of Her Trade and Police*, vol. 1 (London: D. Browne, A. Millar, J. Whiston, B. White, and W. Sandby, 1757), 182.

⁹⁰ Postlethwayt, *Britain's Commercial Interest*, 1757, 2:216.

to those of any other of the human species?”⁹¹ Racial difference is on this account neither an invidious distinction nor a mark of natural inferiority but a sign of human nature’s adaptability to its environment and climate. Human beings are equally and universally capable of development and improvement, regardless of their race, color, stature, nationality. In particular, Postlethway claims that Africans are not intellectually inferior by nature but culturally undeveloped by their lack of commerce, which is the catalyst of progress and civilization, capable of lifting the whole continent’s population from a condition of backwardness and barbarism. In a similar way that the barren lands of the African interior can be transformed into productive plantations through capitalist husbandry, so too can the uncultivated ways of its people be improved and civilized through a legitimate, free, and peaceful trade in commodities. History and experience, he notes, have shown that Africans are indeed “no less capable of the mechanical and manufactural arts and trades, than the bulk of Europeans.”⁹²

The slave trade was most objectionable to Postlethway because it foiled, on his view, Britain’s prospect of economic and political hegemony across the globe. “Wherever the commercial Europeans have humanely cultivated a trade with the most savage people,” he argued, “they have always reaped advantages sufficient to induce [savages] to pursue the practice [of commerce].”⁹³ Through their East India settlements, the Dutch had, through their trade alone, “civilized innumerable of the natives” and “thereby brought them to the European of cloathing, and imbibed most of their peculiar customs and habits.”⁹⁴ The same policy, Postlethway argued, can and should be applied in Africa and, given that the continent “affords productions valuable enough to pay for our manufactures,” the benefits to Britain will be as great.⁹⁵ “If we could so exert our commercial

⁹¹ *Ibid.*, 2:217.

⁹² *Ibid.*

⁹³ *Ibid.*

⁹⁴ *Ibid.*, 2:217–18.

⁹⁵ *Ibid.*, 2:218.

policy amongst these people,” he continues, “as to bring a few hundred thousands of them to cloath with our commodities, and to erect buildings to deck with our furniture, and to live something in the European way,” such traffic would in time “prove far more lucrative than the slave-trade only.”⁹⁶ “With a commerce that must prove of such a nature and extent; and so beneficial to these kingdoms, what comparison will the mere slave-trade bear?”⁹⁷

Finally, according to Postlethwayt’s theory of colonial trade, Britain had a direct interest in precluding Africa, as with any other one of its plantation colonies, from developing into an industrial economy. Britain’s policy in Africa should be restricted to the introduction of capitalist agriculture and, from then on, to maintaining the continent in an arrested state of development within Postlethwayt’s scale of economic progress, the apogee of which is a manufacturing, commercial society. He laid out his developmental theory of global progress in his 1757 *Great-Britain’s True System*,

As Things are now constituted amongst the trading World, those Countries which subsist on their natural Productions, and by bartering them against those of other Countries, make no Figure as a Trading People. The *Indians* in *North America*, as well as the Negroes in *Africa*, are instances thereof. [...] Were the *Chinese*, and the other *Eastern* Countries, deprived of their mechanical and manufactural Artists, they would, probably, degenerate into the like savage Dispositions with the wild *Africans*, or the *American-Indians*: this we may presume, would also be prove the Case amongst the *Europeans*. For, as the Arts are the Basis of all Commerce, and Commerce has so greatly civilized the human Race, this Class of People [Europeans] may be said to have some Share in the Merit [of civilizing the human race].⁹⁸

⁹⁶ Ibid.

⁹⁷ Ibid., 2:220.

⁹⁸ Postlethwayt, *Great-Britain’s True System*, 274–75.

As I argued in Chapter 3, economic development is the centerpiece in Locke's theory of imperial commerce. Similarly, Postlethwayt espouses a vision of imperial capitalism in which manufacturing and foreign trade are as much levers of economic progress as engines for cultural, social, and moral transformations. Europe's significance in advancing civilization is therefore a product of its developed industrial and commercial institutions rather than the innate superiority of its people. But this rationale highlights the limits of progress when taken at a global scale. For Europe to develop, it had to—as Walter Rodney put it—“underdevelop” Africa; that is, in order to ensure that Africa remained useful to metropolitan interests, Europe had to actively ensure its peripheries remained a source of cheap and abundant labor and raw materials.⁹⁹ Indeed, Postlethwayt's case in support for the Royal African Company in 1745 was to invest and expand Britain's trade in Africa in order to, much like the French had done, “raise a magnificent Superstructure of *American Commerce and Naval Power* on an *African Foundation*.”¹⁰⁰

On the whole, Postlethwayt develops three central elements of the Sierra Leone project that its founders seldom elaborated on: first, the advantages of combining the trading factory and the colony in a plan intended to develop and civilize Africa through free commerce and settler colonialism; second, the justification for the colony's black African agrarian workforce; and third, the importance of maintaining Africa in an agrarian state of economic development. Finally, while Postlethwayt's ideas on race were undeveloped, the same cannot be said of Maurice Morgann, whose plan to establish British colonies with free black workers across the globe's tropical belt is the subject of the following section.

⁹⁹ Walter Rodney, *How Europe Underdeveloped Africa* (London and Dar-es-Salaam: Bogle-L'Ouverture Publications and Tanzania Publishing House, 1972), 85.

¹⁰⁰ Malachy Postlethwayt, *The African Trade: The Great Pillar and Support of the British Plantation Trade in America* (London: J. Robinson, 1745), 4.

PART 3: A LABOR THEORY OF RACE

In addition to its reliance on economic arguments in favor of colonizing and civilizing Africa through a free commodity trade, including Postlethway's suggestion to transform coastal factories into colonial plantations, the Sierra Leone project also benefited from certain ideas concerning the relationship between race and climate that emerged in the latter half of the eighteenth century. The debate on the origins and development of the human species captured the attention of many eminent thinkers at the time, including, most notably, Hume, Rousseau, Kant, and Herder.

Maurice Morgann, an "imperial insider," was a Shakespeare scholar as well as an advisor on colonial affairs to the President of the Board of Trade, Lord Shelburne.¹⁰¹ In 1772, Morgann published a plan for the abolition of the slave trade as a colonial experiment in black wage-labor, which he summarized as "a proposal for the extention of the future power and commerce of Great Britain."¹⁰² His proposal outlined measures for "the introduction of free Negroes into an assigned part of Florida; that lands be granted them, and their propagation encouraged in that country."¹⁰³ While Morgann's plan differed from Postlethway's in its explicit goal to abolish the slave trade by introducing black slaves into a regime of free labor, both projects converged in two significant regards: first, they appealed to the global ambitions and commercial interests of empire, rather than those of private capital; second, they advanced an environmental theory of race in which racial difference and human equality were complementary rather than mutually exclusive.

As much for Morgann as for Postlethway, racial difference indexed a population's "natural" propensity to "develop" in their "native" environment. While both authors conceded that black Africans and white Europeans were racially, ethnically, and culturally distinct, they maintained that

¹⁰¹ Peter S. Onuf and Eliga H. Gould, *Empire and Nation: The American Revolution in the Atlantic World* (Baltimore: Johns Hopkins University, 2005), 304–6; Trevor Burnard, *Planters, Merchants, and Slaves: Plantation Societies in British America, 1650–1820* (Chicago and London: University of Chicago, 2015), 216–17; Brown, *Moral Capital*.

¹⁰² Maurice Morgann, *A Plan for the Abolition of Slavery in the West Indies* (London: William Griffin, 1772), 1.

¹⁰³ *Ibid.*, 2.

these differences were in no way invidious markers of innate superiority. On their accounts, members of one race cannot be inherently superior or inferior to those of another because human beings are naturally equal in what concerns their intellectual abilities and propensity to be “civilized” and “educated.” Instead, racial difference according to Postlethwayt and Morgann was a product of environmental factors such as climate. In other words, the particular physical traits of each race correspond to the natural conditions of the environment in which that racial group originated. This view of race was set decidedly against popular currents of eighteenth-century racist thought in which caricature writers, for instance, commonly figured blackness as a sign of innate indolence, pathological virility, and intellectual deformity.¹⁰⁴ Still, the climatic theories of racial difference advanced by Postlethwayt and Morgann were well known in eighteenth-century Europe. From the 1740s to the 1770s, prominent naturalists such as Comte de Buffon in France and Johan Blumenbach in Germany had popularized the theory of racial monogenism with recourse to conjectural arguments about the climate’s effect on skin pigmentation.¹⁰⁵ The distinctive and original aspect of the abolitionist understanding of racial difference inheres in the subtle ways they connected race to labor. In other words, abolitionists used racial difference as evidence that distinct races were naturally disposed to live and work in specific environments. Moreover, unlike academic naturalists and mainstream caricaturists, abolitionists mobilized these ideas in the service of political, social, and economic ends.

For Morgann, “Nature has fitted all her creatures for the climate they are destined to inhabit,” which is made apparent in what he calls “the wise distribution of the various genius of the vegetative and brute creation, all adapted to climate.”¹⁰⁶ In accordance with the wisdom and prudence of nature, Morgann proposes to “furnish our most southern colony on the Continent of

¹⁰⁴ James Walvin, *Black and White: The Negro and English Society, 1555-1945* (London: Penguin Press, 1973), 160.

¹⁰⁵ Drescher, *The Mighty Experiment*, 73–87.

¹⁰⁶ Morgann, *A Plan for the Abolition of Slavery*, 4–5.

America with a race of people, whose constitutions are best adapted by nature to labour in that country, and to sustain the heats of the climate.”¹⁰⁷ He likens human races to “a breed of cattle” that may only “thrive kindly or increase” in an environment congenial to its nature and claims that members of different races are naturally fit—and therefore destined—to work in climates appropriate to their natural constitutions. With a single stroke, Morgann’s theory naturalizes both race and labor, enmeshing the one in the other. In the same way different species of termites, plants, and animals are naturally engineered to survive and reproduce in different environments, the distinct racial characteristics of humans reveal their “natural” proclivities to labor in their “native” terrains and climates. On Morgann’s telling, black Africans, native to the tropics, were naturally endowed with the “most apt constitution” for performing hard agrarian labor in hot climates. As he notes, “It were well if our statesmen, less engaged in the pursuits of temporary policy, had given some attention to the wisdom of nature.”¹⁰⁸ The racial politics of Morgann’s theory was thus determined by a climatic and geographical understanding of racial difference through which black Africans were constructed as naturally suited to dwell and toil in tropical climates.

The “original and essential difference in the corporal constitution of the whites and blacks,” Morgann discerns, “becomes apparent to us chiefly by colour, and by that woolly hair bestowed on the natives of Africa, as a defence against a sun, whose beams beat directly on their heads.” As Morgann reiterates throughout his text, racial difference is solely physical: “both experience, and the nature of man, considered as a presiding rational animal, forbid us to suppose that there is any original or essential difference in the mental part, however our bodies may be varied by colour, or any other corporeal distinction.”¹⁰⁹ From this, he argues that “The natives of Africa are better able to bear extreme heat, and to labour in the Torrid Zones, than the whites of Europe; and that the

¹⁰⁷ Ibid., 4.

¹⁰⁸ Ibid., 11.

¹⁰⁹ Ibid., 5.

former [natives of Africa] may, under the influence of a right policy, be induced to emulate, in one climate, the industry of the latter, in another.”¹¹⁰ Or, in blunt terms: “blacks are better suited by their constitutions to labour in the hot climates than whites.”¹¹¹

But *physical* difference is a particularly salient aspect in a plan almost entirely devoted to *manual* labor. In this case, what Morgann calls “corporeal distinction” marks what kind of bodies are best suited to perform a given form of labor under certain environmental conditions. Morgann thus racializes labor by arguing that natives of Africa are *naturally* fit to withstand the heat of tropical climates and are, therefore, better suited than whites to the agrarian labor necessary to cultivate staple crops in the tropics. Like Postlethwayt, Morgann also argues that exposing native Africans to commercial society would be conducive to civilizing them. And although Postlethwayt limits this project to free trade, Morgann extends it to free labor: “The love of independence, of gain of fame; the gratifications of pride, vanity, ambition, avarice, and every human passion, would certainly raise among them a Spirit of industry and atchievement [sic], which at present, the lash alone compels them.”¹¹² The freedom of wage-labor is conceived as a more effective impetus for hard work than brute force under slavery. As English industrialists were beginning to realize around this time, workers are most productive when their employer recognizes and rewards them for their effort. Beyond being punished and disciplined, workers must be motivated. It was in large part based on this hypothesis that the pottery manufacturer Josiah Wedgwood trained his workers through free apprenticeships, the capitalist reformer David Dale shortened the workday in his industrial community at New Lanark, and the entrepreneur Matthew Boulton founded sick clubs, schools, and dispensaries for workers at his Soho factory.¹¹³

¹¹⁰ Ibid., 6.

¹¹¹ Ibid., 8.

¹¹² Ibid., 7.

¹¹³ Mantoux, *The Industrial Revolution*, 399–440, 465.

Moreover, Morgann's account of English artisans propelled to work by rewards and benefits rather than tyrannical punishment brings to mind an idyllic image of industrial society as humane, just, and orderly: "Who that has seen the Spirit of industry toiling in the streets of London, who that has heard of our draymen, our watermen, or our miners, can doubt, if freedom does not furnish inducements and supports of labour beyond all the terrors and the inflicted punishments of tyranny?"¹¹⁴ These examples are also telling of the racial division of labor animating Morgann's plan. Blacks, naturally "capable of the most extreme toil in those [hot] climates," will be farm peons, while white workers will transform raw materials into commodities in the temperate, industrializing parts of the empire, such as England and the northeast provinces of America.¹¹⁵ The plan, then, is to "stock, in the farming dialect, the new acquisition of Florida with such a breed of men, from whose industry we may most reasonably expect the largest return of such commodities as are the production of, or may be produced in, that country."¹¹⁶ Because he sees white Europeans as naturally unfit for agrarian labor in tropical climates, Morgann deems "an effectual settlement of Florida by whites altogether hopeless."¹¹⁷ The prospect of success would be even more abysmal if the colony were populated by Native Americans whose "savage liberty" Morgann deems irreconcilable with the principles of law, agriculture, and commerce.¹¹⁸

In the colony, free blacks would cultivate raw materials such as hemp, silk, indigo, and spices, which would be traded and imported to artisans in northern American provinces or Britain charged with finishing, marketing, and selling them as consumer goods. For Morgann, a capitalist economy organized by the racial division of black agrarian and white industrial labor would "furnish

¹¹⁴ Morgann, *A Plan for the Abolition of Slavery*, 7.

¹¹⁵ *Ibid.*, 6.

¹¹⁶ *Ibid.*, 9.

¹¹⁷ *Ibid.*

¹¹⁸ *Ibid.*, 24.

so increasing a people with all the necessaries, conveniencies, and luxuries of life.”¹¹⁹ Not only that, this system would also forge an amicable bond between both races since, by abolishing slavery, it would consequently eradicate its hold on the social meaning of racial difference. In such a racially divided yet harmoniously connected society, Morgan had it, race could not be the grounds for enmity between whites and blacks because “it is not a nominal, but a real and a lasting distinction; a distinction founded in physical, not moral causes; and which Nature, not man, has established.”¹²⁰ Rather than a sign of economic wealth, social esteem, and political power, Morgann writes,

[T]he colours of men are distinctions of another nature; they are the distinctions of *climate* and *constitution*; and whilst; as such, they infer *distance*, they can never imply a real or supposed opposition of interest; but, on the contrary, a common and mutual exchange of benefits, by means of a friendly intercourse and commerce.¹²¹

For Morgann, racism is the product of an “unnatural mixture of climate and complexion on the same spot of existence.” Additionally, the hostility between blacks and whites is, on his telling, an outgrowth of the ways in which colonial slavery disrupted the natural layout of the world’s population across the globe, displacing people to environments and geographical regions uncongenial with their natural dispositions. This unequal state of affairs, he concludes, will continue “till the violated order of Nature is restored, and the climates of that country are divided between their proper and destined inhabitants.”¹²²

Differently put, racial difference is not naturally generative of moral ills; it founds an unequal society that recasts race as a source of invidious distinctions among humans. If slavery were replaced by free trade in commodities and free wage-labor, racial difference would retain its natural meaning

¹¹⁹ Ibid., 26.

¹²⁰ Ibid., 21.

¹²¹ Ibid., 22.

¹²² Ibid., 22–23.

and cease to be socially or economically significant. “Nature herself,” he discerns, “will *necessarily* link [whites and blacks] in intercourse and concord.”¹²³ Morgann thus calls upon what he sees as the liberating and emancipatory institutions of capitalist society to restore nature’s damaged order and set both races on a path of harmony and mutual advantage. By turning to capitalist notions of freedom and labor as a remedy to the injuries caused by slavery, Morgann hoped his plan would further strengthen existing British colonies and set the stage for a second—more liberal and humanitarian—wave of imperial expansion into the “Torrid Zone” of the African continent. As Morgann put it,

Thus wisely availing herself both of moral and physical causes, no longer weakened and disgraced by slavery or refrained by climate, but rising upon the sure foundations of equality and justice, might Great Britain, aggrandized and invigorated at home, stretch forth, with irresistible power, her sable [black] arm through every region of the Torrid Zone.¹²⁴

To populate the world’s “Torrid Zone” with Britain’s “sable arm” is the ultimate goal of Morgann’s plan: to colonize the Atlantic, Pacific, and Indian tropics through free trade, commercial settlements, and the physical labor of black and brown workers as subjects of the British Empire in a formation W. E. B. Du Bois would later call the world’s “dark proletariat.”¹²⁵ “We might next turn our eyes to Africa,” Morgann concludes, echoing Postlethwayt’s melding of factories and colonial settlements, “where, instead of seeing a few whites languishing and piddling for gum in Senegal, we might behold the whole coast colonised, and our commerce pushed through the very heart of that continent.”¹²⁶ Finally, Morgann justifies the gradual liberation of black slaves on the grounds that they are not yet ready to be free, since slavery has precluded them from being civilized by capitalism. “It must be

¹²³ Ibid., 26.

¹²⁴ Ibid., 27.

¹²⁵ Du Bois, *Black Reconstruction*, 16.

¹²⁶ Morgann, *A Plan for the Abolition of Slavery*, 27.

allowed to be wholly impracticable [...] to liberate the present race of slaves; nor indeed, if it were in other respects practicable, are they capable of receiving freedom; their ignorance and their bad habits effectually forbid it.”¹²⁷

PART 4: FACTORY, COLONY, PLANTATION

Few historical studies of industrial capitalism have compared the factory system with European trading factories in Western Africa.¹²⁸ As I have suggested throughout this chapter, one way into this connection is to momentarily bracket the manufacturing plant aside and focus instead on the colony and the plantation. Indeed, the factory towns that had been growing across Britain since the latter half of the eighteenth century were often described as colonies. In 1794, for instance, a traveler described Wedgwood’s Etruria as “a colony newly raised in a desert, where clay-built man subsists on clay.”¹²⁹ By the nineteenth century, the utopian socialist Robert Owen had transformed David Dale’s cotton factory at New Lanark into a model industry society that Friedrich Engels described as “a model colony.”¹³⁰ But was there any substance behind these comparisons?

At the time Postlethwayt and Morgann were writing, the trading factory and the colony were Britain’s key imperial institutions, scattered across the Atlantic, Indian, and Pacific. Unlike colonies, trading factories were “special economic zones” quite different from permanent colonial settlements. As Samuel Johnson defined it in his 1755 *Dictionary of the English Language*, a factory referred to either, “A house or district inhabited by traders in a distant country” or “Traders themselves embodied in one place.”¹³¹ In other words, factories were giant warehouses where consumer goods were bought, stored, and sold, as well as spaces of confinement in which slaves

¹²⁷ Ibid., 13.

¹²⁸ For one excellent exception, see Freudenberger and Redlich, “The Industrial Development of Europe.”

¹²⁹ *Gentleman’s Magazine*, Vol. 64, ii., 1078, (1794), quoted in Meteyard, *The Life of Wedgwood*, 1866, 2:129–30.

¹³⁰ Friedrich Engels, *Socialism: Utopian and Scientific*, trans. Edward B. Aveling (1880; repr., London: S. Sonnenschein & co, 1892), 21.

¹³¹ Johnson, *Dictionary*, “Factory.”

were kept before being transported to plantations across the Atlantic.¹³² Conversely, Johnson defined a colony as both “a body of people drawn from the mother-country to inhabit some distant place” and “a plantation.”¹³³ By the same token, the term “plantation” designated “the act or practice of planting,” “an establishment,” “a place planted,” and “a colony.”¹³⁴ So, while the factory was mostly a place of exchange and storage, the colonial plantation was a site of production quite distinct from the factory. Indeed, European colonies in the West Indies at the time served both as settlements for European colonists and African slaves and as plantation complexes where cash crops like the sugar cane were cultivated. And although commodities were not mass-produced in West African factories, colonial plantations across the West Indies were industrial enterprises where granular sugar was manufactured through a labor-intensive process in which manual and skilled slave labor was divided, disciplined, and mechanized. Plantations were, as Sidney Mintz put it, “a synthesis of field and factory” to which “brute field labor and skilled artisanal knowledge are both necessary.”¹³⁵

Postlethway’s suggestion to join the factory, the colony, and the plantation gained considerable traction among abolitionists seeking to colonize Africa in the late eighteenth century. Among the many abolitionists who engaged with Postlethway was the period’s leading antislavery authority on colonization, C. B. Wadström. In his comprehensive 1794 *Essay on Colonization*,

¹³² Factories took various forms. In 1736, the English merchant Thomas Hall sent a ship to the Gold Coast of Africa where it was permanently stationed off the Annamoboe port near Cape Coast Castle as a “Floating Factory.” It received “European goods from a number of visiting ships, and would transfer to them in exchange slaves and other commodities bought in Africa between the visits.” See Conrad Gill, *Merchants and Mariners of the Eighteenth Century* (London: Edward Arnold, 1961), 91. On a critical assessment of so-called “slave dungeons,” see Ralph A. Austen, “The Slave Trade as History and Memory: Confrontations of Slaving Voyage Documents and Communal Traditions,” *The William and Mary Quarterly* 58, no. 1 (2001): 229–44.

¹³³ Johnson, *Dictionary*, “Colony.”

¹³⁴ *Ibid.*, “Plantation.”

¹³⁵ Mintz, *Sweetness and Power: The Place of Sugar in Modern History*, 47. While Paul Cheney accepts this general characterization, he adds that “investments and technical change inside the plantation were far from automatic responses to opportunities and market pressures coming from the outside. See Cheney, *Cul de Sac*, 60. Cheney also notes that the “quest for productive efficiency that animated the literature on improvement also extended to slave populations, whose characteristics could be studied with an eye toward improving work routines and minimizing suffering.” *Ibid.*, 73.

Wadström defined a colony as “a regular community with a view to cultivate the soil *and* rear posterity.”¹³⁶ He remarks that, throughout the eighteenth century, “the words colony and settlement have sometimes the same meaning; but as the latter is very often used for the word factory, I wish to restrict it to this last signification—Factories (or settlements), having only commercial ends in view, leave wholly out of sight every kind of cultivation and improvement, either of the people or the land.”¹³⁷ But like Postlethwayt, Wadström did not think that the colony and the factory should remain distinct. Rather, as the words “cultivation” and “commerce” in the subtitle of his *Essay* suggest, part of his proposal was that the factory and the colony should be incorporated into a single institution on the Western coast of Africa as a means of amplifying the benefits each form of settlement reaped from civilization and trade. The best way to sustain a thriving capitalist economy without slavery, that is, was to unite the ends of each imperial institution in Atlantic Africa: cultivation in the colony and commerce in the factory. Like the Portuguese in Africa, the Dutch India Company had transformed their factory in Batavia into a colonial settlement where over eighty-thousand people lived and worked in trade, agriculture, and industry. In his 1764 *Origin of Commerce*, Adam Anderson described this Dutch factory as not only a trading outpost but a productive network of “plantations, farms, [...] sugar-houses, powder-mills, paper-mills, and [...] magazines of iron, and naval stores; founderies for cannon, docks for ship-building, &c.”¹³⁸

As I have noted above, Postlethwayt’s push to increase the provenance of the factory into a colonial plantation was enshrined in the official mandate of the Sierra Leone Company’s 1792 charter.¹³⁹ The archival records from the period in which Sierra Leone transitioned into a chartered company illustrate how its directors envisioned the institution as a trading factory, colonial establishment, and plantation. Writing in 1791 to John Clarkson, the first Governor of Freetown,

¹³⁶ Wadström, *An Essay on Colonization*, 1794, 1:59n.

¹³⁷ Ibid.

¹³⁸ Anderson, *The Origin of Commerce*, 2:276.

¹³⁹ “Report from the Committee,” May 26, 1802, MS WO 1/352, p. 79. The National Archives, Kew, UK.

the Company's Chairman, Henry Thornton, remarked that among the venture's top priorities was the appointment of a Commercial Agent whose "commercial habits" were congenial to the demands of a "Leader in a commercial Factory."¹⁴⁰ "It seems reasonable," Thornton speculated, "that we who are at the expence of governing [the settlers], setting up a factory, & giving even a permission of a free Passage, & provision to the first Settlers, should have the profits of trade to ourselves."¹⁴¹ In 1792, the Directors drafted detailed instructions to the Company's Superintendent Council on the venture's commercial affairs, stressing the importance of building a fortified factory, regulating trade, and establishing plantations.¹⁴² Referencing the Sierra Leone's recent Charter, the instructions noted that while "the great object specified of the Sierra Leone Establishment is Trade, and its Consequence is looked upon to be Civilization," the Council should "*not* to wait for Civilization as a Consequence of Commerce, but to look up to it as a Point as much to be attended as the other."¹⁴³ In order "to look upon our Commerce & the Civilization of the Natives in the same light," three specific committees dealing with each of these goals were installed.¹⁴⁴

The Company's commercial success, however, was a matter of survival and thus the first order of business. "With Respect to Commerce," the Directors pressed the Council "to forward it, for unless we produce profit, Humanity will be exhausted in supporting the Establishment."¹⁴⁵ The Directors proposed three central means through which commerce should be pursued by the Company: "1. by means of Agriculture— 2. by means of a Coast & River Trade— 3. by a Trade inland."¹⁴⁶ Each of these objectives were entrusted to distinct "Committees of Commerce," the first

¹⁴⁰ "Letter from Henry Thornton to John Clarkson" (December 30, 1791) in Clarkson Papers, Vol. 1, Add MS 41262 A (17 Jun 1785 – 29 Dec 1792), f. 33. The British Library, United Kingdom.

¹⁴¹ Ibid., f. 39.

¹⁴² "Instructions for the Superintendent Council by the Directors of the Company" (1792) in Clarkson Papers, Vol. 1, Add MS 41262 A (17 Jun 1785 – 29 Dec 1792), ff. 68-70.

¹⁴³ Ibid., f. 72, emphasis mine.

¹⁴⁴ Ibid., f. 70.

¹⁴⁵ Ibid., f. 70.

¹⁴⁶ Ibid., f. 70.

of which was charged with managing the Company's plantations and the latter two with its trading factory. The purpose of the Committee of Agriculture, for instance, was "to ascertain the Production of Sierra Leone" not just by developing cash-crop plantations but also by promoting agrarian development through such measures as offering "Premiums enjoined Us for any Improvement of the Land" and rewarding "useful Discoveries," for which, the document added, "no Country perhaps affords a finer field for profitable Discoveries than Africa."¹⁴⁷ Beyond these responsibilities, this Committee was burdened with organizing the Company's agrarian labor process and thus vested with the mission to "devise ways and Means of bringing the Natives into Habits of Industry & to introduce them as labourers on the Company's Land."¹⁴⁸ Yet, the Directors also made plain that the Committee must be governed and constrained at all times by the imperatives of the price system and the market, keeping costs low and profits high. This meant that, while "Encouragement must be given," the "Rates of Labour must be kept within certain Bounds, otherwise the Commercial profits of the Company will fail."¹⁴⁹ The Directors also had a specific vision for the Company's plantation, namely, that it would grow beyond the bounds of the colony, making incursions inland toward neighboring regions. This would be realized by inducing "the Natives to labour on their own Land, so that many little Patches may not only be put into Culture in the District belonging to the Company, but in various Parts in the Neighbourhood & along the Banks of the Rivers for the use of the Company as far as there may be Water Carriage to bring them down."¹⁵⁰

The goals of Sierra Leone's plantation complex were indeed ambitious. According to Thornton, for instance, the Company was "expected to push the attempt of cultivating W. India produce—many proprietors subscribed on this principle, [...] on the experiment of setting up the

¹⁴⁷ Ibid., f. 71.

¹⁴⁸ Ibid., f. 71.

¹⁴⁹ Ibid., f. 71.

¹⁵⁰ Ibid., f. 71.

*first sugar estate in Africa.*¹⁵¹ So strenuous was the pressure from its shareholders that, as Thornton saw it, the Company seemed to have been primarily instituted “for the purpose of bringing about in African an exportable tropical produce,” the profits of which, he added, “may be distant—five, ten or if you will, twenty years may first elapse.” Even so, setting up plantation experiments was “one of the very earliest things that ought to be attended to,” which included, besides all the basic duties outlined above, “the examination of the nature of the canes, & other articles, the collection of plants, the sowing of seeds, & the tryal of African land.”¹⁵² The productions from the Company’s plantations would be processed, stored, shipped, and sold through a trading factory placed under the care of two additional Committees respectively charged with Sierra Leone’s navigable and inland trades. The Committee for Coast & River Trade was called to, among other things: barter the Company’s produce for those of neighboring natives; explore the rivers and the coast; recommend “the Natives to turn their Attention to certain [English] articles of Commerce in Preference of others;” communicate to the native populations “any Improvements in their Agriculture,” since “the more their Labour is improved the cheaper they can sell to the Company;” and, finally, to “form Charts of Navigation [...] for the different Coasts & Rivers where the Company’s Vessels will be principally sent to trade.”¹⁵³ The duties of the Committee entrusted with promoting inland trade were also various, including: to draw on the knowledge of local native peoples to devise “a Map of interior Africa” and “gain an Introduction from one Village to another;” to “furnish [natives] with Samples of our Goods desiring them to show these to the People of the Villages they pass through and to imagine for the Produce they could raise to give in Return for these;” and to “establish in short the Articles to pass between both as Articles of Trade” within “a circle of fifty miles in

¹⁵¹ “Letter from Henry Thornton to Thomas Clarkson” (September 14, 1792) in Clarkson Papers, Vol. 1, Add MS 41262 A (17 Jun 1785 – 29 Dec 1792), f. 175, emphasis mine.

¹⁵² “Ibid., ff. 175-176.

¹⁵³ “Instructions for the Superintendent Council by the Directors of the Company” (1792) in Clarkson Papers, Vol. 1, Add MS 41262 A (17 Jun 1785 – 29 Dec 1792), f. 71.

Diameter for Trade with the Natives.”¹⁵⁴ In short, the Sierra Leone Company attempted to do what Postlethwayt had proposed thirty years earlier, assaying to spread commerce and civilization across an increasingly large territory of Atlantic Africa by uniting the factory, the colony, and the plantation.

PART 5: SABLE LABOR AND TORRID COLONIES

Civilization and commerce lie at the heart of modern imperialism and capitalism. Both were equally central concepts in abolitionist projects to colonize Africa in the 1780s. In Morgann’s view, the Atlantic slave trade had disrupted the natural correspondence between race and labor by forcibly taking black Africans out of the environments in which they were destined to live and work. Free wage-labor under capitalism therefore became a necessary mechanism for restoring the natural harmony of race and labor in a two-step process: first, by bringing native Africans “back” to their native “Torrid Zones” in the tropics; and second, by governing Africa under the “right policy,” which for Morgann meant wage-labor, global trade, and the adjoining liberties, rights, and duties afforded by a modern commercial empire such as Great Britain. Much like Postlethwayt’s idea to unite the factory, the colony, and the plantation was reified in the Sierra Leone Company’s charter, so too was Morgan’s labor theory of race realized in the Colony’s founding text by Henry Smeathman. As a botanist who had spent ten years studying the plants and termites of West Africa, Smeathman was convinced that the tropical exuberance and climatic endurance he encountered in the African natural world was equally present among African natives.¹⁵⁵ From its inception to its demise, the Sierra Leone project experimented with the idea that both natives of Africa and the whole black Atlantic were racially preordained to work in Britain’s tropical plantations.

Smeathman’s original plan for Sierra Leone was far more than a commercial venture; it was a mission to civilize Africa through free commerce and wage-labor. “My plan,” he wrote in 1783,

¹⁵⁴ Ibid., ff. 71-72.

¹⁵⁵ Henry Smeathman, *Some Accounts of the Termites, Which Are Found in Africa and Other Hot Climates* (London: J. Nichols, 1781).

“would tend to emancipate and to civilize every year, some thousands of slaves, to dry up one great source of that diabolical commerce [the slave trade].”¹⁵⁶ In light of its tropical climate, fertile soil, and abundant supply of native African labor, Smeathman defined Sierra Leone as “the finest *field* for exerting that species of industry, which is the surest foundation of national prosperity,” namely agriculture.¹⁵⁷ Joseph Hardcastle, a merchant and missionary who served as one of the Company’s founding directors offered a succinct account of the goals and means of colonial antislavery in Africa in a 1791 letter to John Clarkson, the Governor of Sierra Leone charged with transporting the second wave of black settlers from Nova Scotia. Speaking on the education afforded to a young African prince in England, Hardcastle wrote, “He promises to be a very valuable Man, [...] now placed for his improvement under the care of a worthy Clergyman, where he will be made very happy, and every attention given to furnish him with such Knowledge as may render him a suitable instrument to Civilize his Countrymen [...]. I hope [...] that the introduction of English Laws & Money will be an important blessing to his Subjects as well as the Colony.”¹⁵⁸

Smeathman envisioned three key sources of agrarian labor for his plan: free natives in the vicinity of Sierra Leone, free blacks from across the Atlantic, and redeemed slaves purchased in the West coast of Africa. While Smeathman defined the first group—native Africans—as indolent and ignorant, he argued this was strictly a consequence of their habits, not their nature. “A very singular jurisprudence and customs [...] enchains the inhabitants of this part of the globe, and, till the charm is broken, must keep them in indigence, indolence and contempt.”¹⁵⁹ In order to refine their ways, he suggested inducting natives into a system of free labor, free trade, and private property organized around British common law and Christianity. The second category of agrarian workers would come

¹⁵⁶ Smeathman, “Two Letters (1783),” 198.

¹⁵⁷ Smeathman, 205; emphasis mine.

¹⁵⁸ “Letter from Joseph Hardcastle to John Clarkson” (November 9, 1791) in Clarkson Papers, Vol. 1, Add MS 41262 A (17 Jun 1785 – 29 Dec 1792), f. 17. The British Library, United Kingdom.

¹⁵⁹ Smeathman, “Two Letters (1783),” 202.

from “the vast numbers of people of colour in the West Indies, who though *called free*, labour under such intolerable oppression, that they would almost to a man unite themselves to such a community.”¹⁶⁰ For the final third of his colony’s workforce, he proposed redeeming captured slaves from neighboring slave factories and ships in order to turn them into indentured laborers. This plan would entail purchasing slaves from outposts in Senegal, Gorée, and Gambia to work in the colony for free until the cost of their redemption was paid in full.¹⁶¹ Unlike free native Africans, Smeathman described redeemed slaves as naturally docile workers who would readily adopt the terms of civil society without resistance. “These people,” he observed, “could not have the same customs and language, which they would give up for liberty, and readily agree to be governed by what they term *White-man’s fashion*.”¹⁶² On the whole, Smeathman’s plan was strictly dependent on the condition that all black workers—natives, immigrants, and slaves—disavow their culture, national identity, customs, and language in exchange for membership in his free community as an agrarian workforce ruled by the government and morally guided by the regulations of a Christian commercial society. Although he considerably revised his views on native Africans for the publication of his “Plan” in 1786, Smeathman’s letters, diaries, and private papers reveal an array of racist sentiments more consistent with the colonial undertones of his scheme.¹⁶³

¹⁶⁰ Ibid., 204.

¹⁶¹ Ibid., 205–6.

¹⁶² Ibid., 205.

¹⁶³ For instance: “Hopes, dependencies & expectations are vain follies & delusions; dragging men to ruin. Like African mountains whose ever verdant tops smile on the simple traveller, but when he arrives at the shore, he finds his wiser friends at home & is welcomed by sharks, alligators &—*Negroes*.” Henry Smeathman, “Bananas, 5 March 1774” in “Extracts from Mr. Smeathman’s Letters to Mr. Drury” (1772-1775), D26/2, f. 9. Uppsala University Library, Special Collection. Uppsala, Sweden. Another example: “These improvident wretches [...] are always poor, miserable & wicked as they will stick at nothing to supply their wants. They are the most impudent & unabashed beggars. The greatest men in the Country are not ashamed to beg, if you will not give, they will take by force & the poorer will steal.” Henry Smeathman, “Sierra Leone, 10 July 1773” in Ibid., ff. 8-9. And finally: “The people though all slaves are so lazy & insolent that scarce any thing is to be effected with them, which is the chief cause of all our distress.” Henry Smeathman, “Island of Bannanoes, 2 August 1772” in Ibid., f. 2.

In addition to black agrarian workers, Smeathman also envisioned accommodating a non-agrarian class of white settlers composed of artisans, mechanics, administrators, teachers, botanists, and clergymen invested in advancing the commercial and civilizing missions of the colony. Reaffirming the racial division of labor in Smeathman's plan, Granville Sharp's regulations for the colony, which were based on a medieval law known as "Frankpledge," made labor time the only accepted medium of exchange in the settlement. Instead of buying commodities from white artisans with money, for instance, black farmers would pay "by giving the *merchant*, or *tradesman*, in return for [articles of trade] an indenture for as many *days labour* as the purchase is worth."¹⁶⁴ Like Smeathman, Sharp saw a valuable source of agrarian labor in an indentured workforce of freed slaves set to work for their freedom—without remuneration—for five to ten years. But Sharp added a further constraint on the future freedom of indentured workers. Beyond paying the colony for the cost of their redemption through unpaid labor, indentured servants were to continue working *pro bono* until their labor yielded a profit to the colony: ten percent of the price originally paid for each worker.¹⁶⁵ As the colony evolved into a chartered company, the unequal labor distributions between white and black settlers became more pronounced. When the Company's first Governor, Henry Thornton, found out that over one thousand black loyalists would immigrate from Nova Scotia in 1792, "he decided to send from England only qualified craftsmen or traders," which in the end was a total of less than fifty white workers, a mere fraction of the black agrarian labor force.¹⁶⁶

When it came to the political ideas about race animating abolitionist projects to colonize Africa, the Sierra Leone project was undergirded by the widely-held scientific belief among eighteenth-century natural historians that black Africans were, unlike white Europeans, naturally

¹⁶⁴ Sharp, *Short Sketch*, 74–75.

¹⁶⁵ *Ibid.*, 27.

¹⁶⁶ Fyfe, *A History of Sierra Leone*, 35.

conditioned to live and work in the tropics.¹⁶⁷ This theory appeared to be supported by the empirical observations of European explorers and adventurers for whom, as Seymour Drescher put it, “Africans seemed, for whatever reason, favored by their rates of survival under the severe disease and labor conditions for competitive production of the principle staples of the American tropics and subtropics.”¹⁶⁸ Smeathman assented to this belief in his 1786 “Plan of a Settlement to be Made Near Sierra Leone,” arguing that his colony would offer people of color an opportunity to “enjoy perfect freedom” by being “settled in a country *congenial to their constitutions*.”¹⁶⁹ In order to expedite the transportation of a third wave of black refugees from Nova Scotia to Sierra Leone in 1800, British authorities blamed the destitution and unhappiness of the Maroons—emancipated people of color who had been deported from Jamaica for resisting plantation slavery—on the harsh North Atlantic climate, rather than on the racially motivated mistreatment of black Loyalists by Commonwealth officials.

As Ellen Gibson Wilson writes, “Whites on both sides of the Atlantic in succeeding generations have liked to think that the loyal blacks [...] were driven out of Nova Scotia and New Brunswick in 1792 by dreams of the steamy sunshine of Africa.”¹⁷⁰ Yet, she continues, “The blacks themselves seldom mentioned the cold. It was well down on their list of grievances, which always led off with the failure to get land as freemen.” Philip Curtin adds that, despite their purportedly egalitarian views on human nature, abolitionists followed earlier patterns of tropical colonization, assuming “a racial division of labor even when it was not explicitly stated: the blacks would do the

¹⁶⁷ The period’s foremost authority on this subject was Johann Blumenbach, who was also a fierce critic of slavery. See Johann Friedrich Blumenbach, “Einige Zerstreute Bemerkungen Über Die Fähigkeiten Und Sitten Der Wilden,” *Göttingisches Magazin Der Wissenschaften Und Litteratur* 2, no. 6 (1782): 409–25; Johann Friedrich Blumenbach, *A Manual of the Elements of Natural History*, ed. Richard Thomas Gore, 10th ed. (1825; repr., London: W. Simpkin & R. Marshall, 1831).

¹⁶⁸ Drescher, *The Mighty Experiment*, 74–75.

¹⁶⁹ Smeathman, “Plan of a Settlement to Be Made near Sierra Leone (1786),” 209; emphasis mine.

¹⁷⁰ Ellen Gibson Wilson, *The Loyal Blacks* (New York: G. P. Putnam’s Sons, 1976), 113–112. As Gibson notes, the central problems that led loyal blacks to Sierra Leone was their inability to acquire land, famine, and poverty, see: Gobson, 91-2.

work and the whites would supervise.”¹⁷¹ When he was sold back into slavery after having spent years in England, Equiano described his arrival in the Caribbean island of Montserrat as an experience less congenial than distressing: “I had been so long used to an European climate that at first I felt the scorching West India sun very painful.”¹⁷² Slave owners, Equiano observed, held that slaves “come from a climate, where nature, though prodigal of her bounties in a degree unknown to yourselves, has left man alone scant and unfinished, and incapable of enjoying the treasures she has poured out for him!—An assertion at once impious and absurd.”¹⁷³

In the end, black workers were taken as an embodiment of what Smeathman called the “tropical exuberance” of African nature—their dark skin was a mark of their origins in the tropics. According to abolitionists, then, the Sierra Leone Colony and Company offered black Africans more than freedom, happiness, and prosperity; the project was articulated as something of a “homecoming” for the global black diaspora created by colonial slavery. Free people of color scattered across the Atlantic world were the optimal supply of labor for what Morgann called the “sable arm” of the British empire not only because they were inexpensive and abundant but also because working in tropical fields was assumed to be, in so many words, the natural calling of their race.¹⁷⁴ In order for Sierra Leone to work, then, as a commercial, colonial, antislavery, and civilizing mission, a series of factors had to be in place. What Kenneth Pomeranz called the global conjunctions of economic development were important to economic growth. But climate was not exclusively a consideration of racist thought. In his *Political Essays Concerning the Present State of the British Empire*, Arthur Young made a systematic argument about the relation between climate and empire as

¹⁷¹ Curtin, *The Image of Africa*, 116.

¹⁷² Olaudah Equiano, “The Interesting Narrative of the Life of Olaudah Equiano, or Gustavus Vassa, the African,” in *I Was Born a Slave: An Anthology of Classic Slave Narratives*, ed. Yuval Taylor, vol. 1 (Chicago: Lawrence Hill, 1999), 85.

¹⁷³ *Ibid.*, 93.

¹⁷⁴ In his scientific work on West African termites, Smeathman made a similar argument about how certain forms of social organization are determined by nature and climate. See: Henry Smeathman, *Some accounts of the termites, which are found in Africa and other hot climates* (London: J. Nichols, 1781).

follows: “When colonies are planted with [...] a view of commerce, and the acquisition of riches [...], the inhabitants of such a climate as the British Isles, if they act prudently, settle countries which produce the commodities most *wanted* at home; and such must necessarily be the product of different climates. [...] To estimate, therefore, the comparative merit of the climate of colonies, it is only necessary to compare it with that of the mother country. If they are the same, or nearly the same, the colony is useless; if entirely different, highly valuable. It is apparent from this remark, that there must be a great difference in value between the English colonies, from variation of climate.”¹⁷⁵ And much later in his *Essays*, he reiterates that “it appears upon the whole, that the staple productions of our colonies decrease in value in proportion to their distance from the sun.”¹⁷⁶ Comparing the returns Britain yields from its hottest and coldest colonies, Young exclaims, “surely suggests a most important lesson—to avoid colonizing in northern latitudes!” [...] Of such vast consequence is it to the country, to plant new colonies or extend our old ones, only in climates which will allow of such capital advantages!”¹⁷⁷

CODA: THE RACIAL POLITICS OF HISTORICAL CAPITALISM

Capitalism is a historical formation of many facets. This chapter has turned to Sierra Leone as a means of conveying the racial politics of historical capitalism beyond though not entirely outside slavery and the slave trade. In doing so, it cuts an alternative path for understanding racial capitalism. Although Du Bois never used the term “racial capitalism,” he offered a robust account of race and capitalism in *Black Reconstruction* that illuminates the contributions social formations and ideas have made to the racial politics of capitalism. In the material realm, Du Bois contends that capitalism has historically “reconstructed” white and black workers as inherently antagonistic and mutually-

¹⁷⁵ Arthur Young, *Political Essays Concerning the Present State of the British Empire* (London: W. Strahan and T. Cadell, 1772), 7–8.

¹⁷⁶ *Ibid.*, 326.

¹⁷⁷ *Ibid.*, 328.

constitutive social classes. That is, capitalism recast these two groups as competitors within a racially-organized labor market where distinctions between slave, landless peasant, and proletariat, or between the *total* political and economic destitution of black workers and the poverty of white workers, have been determined by physical and ocular categories of race. Ideologically, the racist doctrines onto which capitalism has been historically mapped since the dawn of the Atlantic slave trade have not only rendered the “racial lines” of, say, antebellum American society visible to white workers; they have also furnished white workers with a coherent and systematic paradigm for interpreting the racially segregated world in which they lived and for justifying their political and economic privileges over black labor as a matter of fact and right. Du Bois remarks, for instance, that during the Reconstruction era, the movement led by white farmers for free land and the campaign led by abolitionists for free black labor could have easily cooperated with each other yet failed to do so, in large part, because “black and white laborers were competing for the same jobs.”¹⁷⁸ This immediate competition, he adds, “became open and visible because of *racial lines* and *racial philosophy*.”¹⁷⁹ For Du Bois, capitalism created the material and economic conditions for preventing unity and fostering antagonism between white and black workers in their capacities as a stream of underemployed labor-power competing for the same, limited employment opportunities. However, the material realities of this competition were not, in and of themselves, enough to harness the full-blown racist animus that defines the racial politics of capitalist society according to Du Bois. This antagonism had to become intelligible as a system through which white workers could explain and vindicate their rights to these jobs as assets of their natural privilege. The fact that this strife over economic resources was made palpable to white workers in terms of their inherent racial supremacy and, in addition, that they capitalized on the idea of their racial ascendancy as a form of socioeconomic dominance over black labor constituted what Du Bois called “racial philosophy.”

¹⁷⁸ Du Bois, *Black Reconstruction*, 22.

¹⁷⁹ *Ibid.*, 22, emphasis mine.

Turning to the case of white Southern workers who revolted against the planter oligarchy that oppressed them, Du Bois argues that this labor movement “was nullified by deep-rooted antagonism to the Negro, whether slave or free.”¹⁸⁰ Here again, Du Bois discerns a rampant economic fear of competition alongside an adherence by white workers to racist ideologies, recounting that poor white Southerners “had a very vivid fear of the Negro as a competitor in labor, whether slave or free.”¹⁸¹ Moreover, this same attachment to racist doctrines was prevalent among white republican pioneers in the American West who, despite being advocates of “extreme democracy and equalitarianism,” did not leverage their influence “to strengthen the abolition-democracy” but, on the contrary, disavowed the antislavery movement in light of their devotion to the “doctrine of race.”¹⁸² For Du Bois, these examples illustrate and explain a global hierarchy of race that, despite having emerged after black emancipation, was thoroughly embedded in the racial legacies of slavery. “The plight of the white working class throughout the world today,” he writes, “is directly traceable to Negro slavery in America.”¹⁸³ The “color caste” of slavery that capitalism at once “founded and retained” was, as he continues, “adopted, forwarded and approved by white labor, and resulted in subordination of colored labor to white profits the world over.”¹⁸⁴ In other words, while capitalism created the economic conditions for an opposing class consciousness among white and black workers, racist doctrines translated the indignation of whites into a system of ideas, discourses, and practices while imperialism spread the synthesis of these material and ideological forces—in the form of full-blown racial capitalism—across the “the darker nations of the world.”¹⁸⁵ The image of racial capitalism painted by Du Bois is thus grounded as much on historical

¹⁸⁰ *Ibid.*, 27.

¹⁸¹ *Ibid.*, 28.

¹⁸² *Ibid.*

¹⁸³ *Ibid.*, 30.

¹⁸⁴ *Ibid.*

¹⁸⁵ *Ibid.*

transformations in the social relations of production as on the discursive practices and ideas used to dilute, explain, and apprehend these formations in terms of a racial world order.

At Sierra Leone, the violence, dispossession, and extraction of slavery were couched in a “civilizing” and “humane” ideology that tied an international, racialized division of wage-labor to abolitionism and imperial expansion in Africa to the growth of industrial capitalism in Britain. As Marx exclaimed: “That is peaceful commerce!”¹⁸⁶ Commenting on this “peaceful” modern consortium between empire and capitalism, Marx noted that, insofar as it transforms certain populations into global supernumerary labor, into surplus humanity, large-scale industry “spurs on rapid increases in emigration and the colonization of foreign lands, which are thereby converted into settlements for growing the raw material of the mother country.”¹⁸⁷ Taking on the abolitionist logic expressed in Equiano’s “endless field of commerce,” Marx argues that, from the association of liberal imperialism and industrial capital, “a new and international division of labour springs up, one suited to the requirements of the main industrial countries, and it converts one part of the globe into a chiefly *agricultural field* of production for supplying the other part, which remains a pre-eminently *industrial field*.”¹⁸⁸ Congealed within the complementary images of the modern world-economy painted by Marx and Du Bois lay the various facets and qualifiers of historical capitalism: global, colonial, agrarian, commercial, industrial, imperial, and—prominently across all of them—racial.

The unifying idea behind abolitionist projects to colonize Sierra Leone was an implicit and unchallenged understanding of labor as a naturally ordained form of productive activity contingent on the innate disposition of different races to live and work in particular climates. Insofar as it constructed racial difference as the mark of a natural division of labor, such a concept of race was not simply a racial theory of labor, but also a labor theory of race. If the division of labor at Sierra

¹⁸⁶ Marx, *Capital*, 1:916.

¹⁸⁷ *Ibid.*, 1:576.

¹⁸⁸ *Ibid.*, 1:580, emphasis mine.

Leone had really been based, as abolitionists claimed to believe, solely on the inalienable natural equality of all human beings, then the type of labor black workers were destined to perform once freed from slavery would not have been predetermined a priori by their race, much less would it remain the prerogative of white Europeans. By and large, the natural proclivities of black Africans to work in tropical plantations was a deciding factor in abolitionist plans to imagine a future for black labor after slavery. Moreover, the idea that capitalism was capable of civilizing native populations was a peculiar position for abolitionists to hold given their knowledge that free trade and Europe's booming consumer demand for luxury commodities was what set the slave trade afoot in the first place. While abolitionists were careful to emphasize the ways in which the slave trade had precluded Africa from becoming a modern civilization, they downplayed—just as carefully—the active role international commerce played in this process.

Still, Sierra Leone officials understood that the demands of a rapidly industrializing society were largely responsible for ushering in what Eric Williams called the “golden age” of British slavery.¹⁸⁹ Abolitionists were equally cognizant that capitalism created the class of white planters and merchants responsible for preserving the Atlantic slave economy. Additionally, abolitionists agreed that industrial capitalism was to blame for eroding rural traditions and transforming pious and industrious peasants into an “unruly” and “disorderly” working class.¹⁹⁰ In order to prevent black workers at Sierra Leone from adopting the debauched manners of English workers, both the Colony and the Company combined a medieval agrarian regime of order, discipline, indenture, and Christian morality with a modern, industrial system of free labor and time notation that mirrored those implemented in English factories. Much like in the industrial workplaces of Britain's manufacturing core, the life of black workers at the Sierra Leone Colony—their labor and leisure time alike—was

¹⁸⁹ Williams, “The Golden Age of the Slave System in Britain.”

¹⁹⁰ David Brion Davis, *The Problem of Slavery in the Age of Revolution, 1770-1823* (Ithaca: Cornell University Press, 1975).

always meant to be uniform, regimented, and controlled. “The daily commencement of publick labour and of hired labour, and all the necessary cessations from labour for rest and refreshment,” Sharp wrote in 1786, “should be limited to stated periods of time, rendered uniform and general, throughout the settlement, by the periodical summons of a publick bell, as in our *dock yards* and great manufactories, for the more effectual prevention of imposition by the employer or employed.”¹⁹¹ If Wedgwood was indeed one of the first industrialists to corral workers into assembly lines by sounding a bell, then his contributions to Sierra Leone went beyond the Slave Medallion and capital investment.

The ideas of race, colonialism, and capitalism that emerged from the Sierra Leone experiment combined the capitalist rewards—individual liberties and paid work—with its punitive apparatus of impersonal domination and labor discipline. So, while black Africans were introduced to a system of free labor, they were decidedly not free to determine what type of work they could pursue, nor were they free to weigh in on the geographical location of their workplace. Instead, their work and workplace had been naturally delimited a priori by their allegedly innate, racial disposition to withstand working the land under the scorching sun. On top of these direct limitations on their liberties as workers, black colonists at Sierra Leone were subject to a political regime of labor overdetermined by mechanisms of capitalist domination that imposed further social, external, and structural constraints on their freedoms.¹⁹² It was by recourse to the workings of a global capitalist market that Sierra Leone officials justified rationing food, confiscating land, raising taxes, indenturing free workers, and other measures that directly oppressed the settlement’s black working class. Protesting the patterns of capitalist domination at Sierra Leone, three black settlers who had escaped slavery in Britain’s West Indian sugar plantations—Ishmael York, Stephen Peters, and Isaac

¹⁹¹ Sharp, *Short Sketch*, 15.

¹⁹² For a recent treatment of capital’s mechanisms of impersonal domination, see: William Clare Roberts, *Marx’s Inferno: The Political Theory of Capital* (Princeton: Princeton University, 2016).

Anderson—wrote to the colony’s Governor in 1798: “Having [found] ourselves *oppressed*, [we] would wish to [...] lay before your honour all our grievances and our Distresses which we are encountering with here.”¹⁹³ Despite having been promised free plots of land, they protested being “shamefully called upon to pay a quit rent for their land.” As these workers concluded, their place in the political economy of the colony meant in turn that they were never considered free settlers. Racial slavery—a regime which these settlers had experienced firsthand—was central to their views on freedom and domination. These workers, members of the fractal and transnational formation Paul Gilroy called the “black Atlantic,” understood that the abolition of slavery could not be reduced to its replacement by wage-labor.¹⁹⁴ On their view, wage-labor at Sierra Leone represented another form of racialized domination carefully organized to exploit them by dressing racialized violence in the “humanitarian” garbs of “peaceful commerce.” Unlike the European founders of Sierra Leone, these settlers understood capitalism’s racial politics and were committed to resist it.

§

By looking at how theories of racial difference and capitalist expansion converged as the factory, colony, and plantation came together, the Sierra Leone project—along with the ideas that underpinned its development—shed important light on the intertwining histories of capitalism, empire, and modern political thought in two central ways. First, the experiment leaves us with a vivid illustration of how modern political thought shaped the historical development of capitalism as a world system. As I have argued, the political ideas of racial difference, free trade, wage-labor, and colonization advanced by Postlethwayt and Morgann frame a real moment in the history of capitalism in which an economy without the slave trade was conceived and implemented. As a result,

¹⁹³ Sierra Leone Company Council Minutes, 1796-1799, January 15, 1798, MS CO 270/4, p. 186, The National Archives, Kew, United Kingdom.

¹⁹⁴ Paul Gilroy, *The Black Atlantic: Modernity and Double Consciousness* (London and New York: Verso, 1993).

this experiment lays bare how the factory—in its capacity as both a colony and a plantation—introduced and sustained a new synergy between capitalist wage-labor and racial identity as much conceptually as historically. Postlethway and Morgan, for their part, each laid a piece of the theoretical foundations for a new historical relationship between race, capitalism, and empire after slavery. Postlethway formulated a systematic theory of settler colonialism along the Atlantic coast of Africa that, much like the plan outlined in the Sierra Leone Company Charter, centered on civilizing Africa by transforming the factory into a colony or settlement as well as a plantation specializing in the cultivation of cash-crops for Britain’s growing consumer industries. Similarly, Morgann attacked racial slavery through a climatic theory of racialized wage-labor in which native Africans were constructed as naturally ordained to, in the words of a Company official, “settle in a climate congenial to their constitution and adapted to promote their Happiness,” which in this case happened to be—quite conveniently—the tropical factories, colonies, and plantations of Britain’s sprawling commercial empire.¹⁹⁵ In short, modern theories of racial difference and wage-labor became theoretical centerpieces upon which a novel organization of exchange and production was articulated and practiced, thus expanding the global development of British capitalism and empire, bringing into its purview new territories, markets, raw materials, and supplies of labor scattered across the Atlantic world.

Second, this case study also illustrates how historical transformations in the capitalist world economy worked in tandem with changes in modern political thought. On this point, Sierra Leone sets a historical precedent for nineteenth-century projects of capitalist and imperial expansion in Africa. As such, the Sierra Leone experiment occupies a unique position in the history of eighteenth-century colonialism and nineteenth-century visions of empire. By conscripting black populations into a colonial regime of free labor, the architects of the Sierra Leone experiment set out to

¹⁹⁵ “Letter from Joseph Hardcastle to John Clarkson” (November 9, 1791) in Clarkson Papers, Vol. 1, Add MS 41262 A (17 Jun 1785 – 29 Dec 1792), ff. 17-18. The British Library, United Kingdom.

accomplish something that, until then, Britain had not attempted to this degree in Africa. In a way, the racialized regimes of slave labor in Britain's American and Caribbean colonies provided Sierra Leone officials with the means to justify their project as a profitable and commercially viable form of liberal humanitarian intervention. By figuring the inhumane and despotic regime of racial slavery as the 'Other' against which Sierra Leone's new system of wage-labor was constructed as "humane," "modern," and "free," the Colony prefigured liberal theories of empire in the nineteenth century.

At the same time, as I have contended, not only was the Sierra Leone experiment organized around earlier colonial theories of civilization, settlement, global trade, and wage-labor, but additionally, as it applied these concepts in a real and concrete way, the project gave form to an idea of Africa as the "blank slate" of liberal empire. Indeed, as liberalism gained force in Europe during the latter half of the nineteenth century, the African continent became a testing ground for supposedly "humane" models of imperialism, including the liberal practices of imperial rule that framed the so-called "European scramble for Africa" and the rise of "New Imperialism" in the late 1800s, both of which were formalized by such influential transnational institutions and treaties as the "International Association for the Exploration and Civilization of Central Africa" in 1876 and the Berlin Conference of 1885. Overall, the imbrication of political ideas in the exploitation of black workers that materialized at Sierra Leone contributes to how we understand capitalism as a historical world-system, the legacies of which remain with us.

As Oliver Cox, Immanuel Wallerstein, and Giovanni Arrighi have argued that, during the eighteenth century, England was not only the "workshop" of global commerce but also its warehouse, entrepôt, and emporium. This was nothing new to Postlethwayt who defined the London of his day as "the most opulent and splendid commercial emporium in the world."¹⁹⁶ In other words, during this period Britain became the epicenter of *both* the exchange and production of

¹⁹⁶ Malachy Postlethwayt, *The Universal Dictionary of Trade and Commerce*, 3rd ed., vol. 1 (1757; repr., London: H. Woodfall, 1766), ii.

commodities for the world market.¹⁹⁷ Indeed, throughout the seventeenth and eighteenth centuries, the words “commerce,” “trade,” and “manufacture” were not distinct categories, often overlapping significantly in meaning. According to some early modern thinkers, the transportation and storage of commodities were as much a part of trade and manufacturing as the actual production of goods. As I noted in Chapter 3, Locke defined “trade” as at once a category of exchange and production. “Trade consists of two parts,” he wrote in 1693, “(1) In manufacture. (2) Next in carriage and navigation.”¹⁹⁸ This was as much the case in practice as it was in theory. The imperial institutions that specialized in long-distance trade—such as the West African factories of Britain’s joint-stock companies—exercised a double role. In addition to storing, handling, and transporting commodities, trading factories also engaged in the processing of goods they bought and sold, as well as in the construction of the means and facilities required to store, ship, and process these commodities.¹⁹⁹

Yet one important aspect of historical capitalism that Cox, Wallerstein, and Arrighi miss—but that becomes clear in the triangulation of the factory, the colony, and the plantation I have traced in this chapter—is that, at the same time Britain became both the warehouse and the workshop of world commerce, the meaning of the word factory and its function in the economy were beginning to change. It is precisely at this point that the factory transitions from a place in which goods were exchanged to an industrial site in which they were also mass-produced. Once trading factories and companies became obsolete, the word factory was used exclusively to refer to industrial workplaces of mass production. But throughout the eighteenth century, European trading factories in West Africa were not simply warehouses but socially complex enclosures of economic life in which commodities were moved, traded, produced, and exchanged and where services, such as construction, maintenance, and cleaning, were rendered daily by African workers. One of the

¹⁹⁷ Arrighi, *The Long Twentieth Century*, 218.

¹⁹⁸ Locke, “For a General Naturalisation (1693),” 323.

¹⁹⁹ Arrighi, *The Long Twentieth Century*, 182–83.

earliest uses of the term factory as most understand it today dates back to a Parliamentary Committee on England's woolen trade from 1806, in which large-scale factories were distinguished from small manufactories *not* because they were teeming with assembly lines and machines, but because their owners "possessed considerable capital" and the ability to "learn by personal inspection the wants and habits, the arts, manufactures, and improvements of foreign countries."²⁰⁰ In other words, the industrial factory was first conceived as the private equivalent of the overseas trading factories owned by joint-stock companies in Africa and Asia. These institutions are alike insofar as both types of factory relied on benefitting from large economies of scale, vast sums of capital, and the ability to connect distant markets through ships, warehouses, merchants, and so on.

Some of the most emblematic eighteenth-century factories, such as Matthew Bolton's Soho Manufactory, Wedgwood's Etruria, or David Dale's New Lanark, were not simply places of mass production. They were also civil and commercial settlements, or "factory towns," where men, women, and children lived and worked, and where commodities were produced, stored, sold, and transported to foreign markets through canals and turnpikes built with the sole purpose of connecting the factory to consumer markets and raw materials in America, Africa, and Asia. Here, the warehouse and the factory—spaces of production and exchange, of discipline and confinement—become as indistinct as the words trade and production. At both sites, value is added to commodities not only when they are industrially manufactured but also when they are handled, moved, and, in the case of an Amazon warehouse, for instance, when they are picked up from shelves. Once we see that the factory was initially also a colony and a plantation, an emporium and a workhouse, we can in turn acknowledge that postindustrial workplaces, such as Amazon's "fulfillment centers," have more in common with historical factories than we might think. Factories are thus deeply enmeshed not only in the production and exchange of commodities but also in the

²⁰⁰ House of Commons, "Report on the Woollen Manufacture," 12.

reproduction and proliferation of practices, ideologies, and discourses that disguise exploitation as freedom. The factory is a historical, physical, and real space where influential ideas and ordinary experiences of the capitalist economy and modern politics came together and where they continue to live on, entangled and in flux.

EPILOGUE
FACTORIES OF FULFILLMENT

“That dark and vast sea of human labor in China and India, the South Seas and all Africa; in the West Indies and Central America and in the United States—that great majority of mankind, on whose bent and broken backs rest today the founding stones of modern industry—shares a common destiny; it is despised and rejected by race and color; paid a wage below the level of decent living; driven, beaten, prisoned and enslaved in all but name; spawning the world’s raw material and luxury—cotton, wool, coffee, tea, cocoa, palm oil, fibers, spices, rubber, silks, lumber, copper, gold, diamonds, leather—how shall we end the list and where?”

— W. E. B. Du Bois, 1935.¹

Silicon, aluminum, lead, tin, tantalum, tungsten, beryllium, gallium, indium, palladium, platinum, coltan, cobalt, lithium. The list continues into the present, arraying an even more dizzying inventory of things, places, and people. Like most raw materials Du Bois enumerates, the minerals in my list are ground zero in the global supply chain of valuable and coveted luxury goods. In particular, they are key inputs in the production functions of electronic commodities on Amazon’s “best sellers” directory, which is updated hourly and includes, at this hour, portable media players and voice-controlled speakers, wireless cameras and LED monitors, cable modems and internet routers, laptops and smart phones. The metals and metalloids congealed in these commodities are sourced from mines across Africa, South America, and Asia. Every year, close to 72,000 tons of cobalt are hand-dug from the earth’s crust in the Democratic Republic of the Congo while 48,000

¹ Du Bois, *Black Reconstruction*, 15.

tons of lithium are pumped out of saltwater marine brines in Chile.² All of this is done by women, men, and children who, numbering in the many hundreds of thousands, lend form to a new “sea of human labor” no less “dark and vast” than that described by Du Bois. Once extracted, cargo-loads of unprocessed cobalt and lithium are ferried in container ships from Africa and South America through the Pacific and Indian Oceans toward East Asia where they are wrought into a mass of rechargeable lithium-ion batteries. A shorter trip takes them to a factory, such as, say, Foxconn’s giant industrial plant in Shenzhen, China. Here, the batteries are assembled into a continuous stream of iPhones, iPads, and MacBooks. But before their avatars show up on our screens, before they can rise to the ranks of a “best seller,” these commodities must be handled and boxed by yet another sea of human labor—“pickers” and “packers”—in one of Amazon’s expansive warehouses or “fulfillment centers.” From these new entrepôts of global capitalism, from these “factories of fulfillment,” our consumer electronics are finally shipped the world over, straight to our doorsteps. The fate of cobalt and lithium, of silicon and lead, is also that of cotton and silks; it is the fate of wool, leather, rubber, lumber, and all other “stones of modern industry.” The world’s raw materials, Du Bois continues, are “gathered up at prices lowest of the low, manufactured, transformed and transported at fabulous gain; and the resultant wealth is distributed and displayed and made the basis of the world power and universal dominion and armed arrogance in London and Paris, Berlin and Rome, New York and Rio de Janeiro.”³ Du Bois might just as well have been speaking of iPhones, Foxconn, and Silicon Valley. New people, places, and things have entered his picture while others have left, but the arc and moral of the story remain intact.

² Todd C. Frankel, “The Cobalt Pipeline: Tracing the Path from Deadly Hand-Dug Mines in Congo to Consumers’ Phones and Laptops,” *Washington Post*, September 30, 2016, www.washingtonpost.com/graphics/business/batteries/congo-cobalt-mining-for-lithium-ion-battery/; Brian Merchant, *The One Device: The Secret History of the iPhone* (New York: Back Bay Books, 2017), 107–22.

³ Du Bois, *Black Reconstruction*, 15–16.

The foregoing chapters have taken us on a journey no less drawn-out than those of our smart phones. And it is by taking stock of this range, of what it allows us to do and see, that the central conclusions from this study can now come to light. We started at Cambridge in the 1960s where the “rise of capitalism” first became a disputed interpretive subject in political theory. In an attempt to reanimate yet move beyond this debate, we set forth in search of the factory within broader accounts of capitalist society only to find it had been written out of history and theory altogether. In the pages of *Fortune* magazine and classics of midcentury social sciences, in forecasts of automatic factories and critical theories of capitalist society, we traversed the various articulations of the “postindustrial paradigm,” unveiling in turn the contours of a powerful and pervasive account of our present. But as we descended upon Silicon Valley, an alternative reality of contemporary capitalism lay before us across data centers, online platforms, and corporate offices. By showing us that the factory remained a governing institution of advanced capitalism, the data center challenged the cardinal assumptions and commanding narratives about the world we inhabit. As it revealed that the factory is indispensable to our understanding of how labor, aesthetics, and race are constructed today, the data center also raised questions it could not answer, questions about its history and about its lineages. In traveling through the long eighteenth century, we accounted for the ways in which the workhouse, the manufactory, and the colony each played a decisive role in bringing labor, aesthetics, and race into their modern forms, as defining categories of capitalist modernity. All of these factories worked toward economic goals: higher profits, lower costs, and a greater stock of capital. Yet, in each of them, surplus and growth were not only commercial ends but of apiece with such “developmental” modern aspirations and ideals as freedom, progress, and civilization. To those in charge, factories were economic means of fulfilling political and cultural goals: for Google, the data center is a space in which “data janitors” can partake in the alleged liberties and flexibility afforded by the “gig economy;” from where Stuart political economists stood, the workhouse was a

realm of dignity and happiness for the poor; in Wedgewood's hands, the manufactory became a site of beauty and pleasure for artisans; and, according to abolitionists, the Sierra Leone Colony was a place of providence and freedom for emancipated slaves. The crucial matter in all of these factories was not whether these goals were in fact reached but how and by whom they were meant to be fulfilled.

As the latest instantiation of the workplaces I have dubbed "factories of modernity," the fulfillment center is a synthesis of the data center, the workhouse, the manufactory, and the colony. Within its reach are prodigious amounts of capital, sophisticated networked technologies of control, and a vast, cheap, and replenishable pool of labor. Like all factories in this dissertation, fulfillment centers lie at the heart of a web of people and things strewn across the globe in a logistical system of production and exchange that dates back to the seventeenth century. Indeed, modern logistics was founded with the slave trade, with "the great movement of commodities, the ones that could not speak."⁴ In the historical contexts of discipline and control that characterize the factories of modernity, fulfillment is synonymous with compliance; at Amazon warehouses, what actually gets "fulfilled" in the space of the factory, over and above the subsistence of labor, are the desires of consumers, the quotas of managers, and the imperatives of capital, of value in motion throughout the world. As I have shown, rather than thinking about capitalism as "agrarian," "commercial," "mercantilist," "post-industrial," or "cognitive," historians of political thought and critical theorists of capitalist society can productively draw on new, interdisciplinary tools, diachronic approaches, and diverse archives to rethink the place capitalism occupies in political theory. This dissertation has thus offered political theorists a new framework for understanding an array of relations and synergies in the history of capitalism, but the one I would like to close with, echoing Du Bois, is our apprehension of consumer luxuries—smart phones and laptops in our case—as links between global

⁴ Stefano Harney and Fred Moten, *The Undercommons: Fugitive Planning & Black Study* (Wivenhoe: Minor Compositions, 2013), 92.

online consumers, pickers at Amazon, miners in the Congo, and assembly workers in China. These devices reveal that we are caught up in a historical process that is not only impossible but unfathomable in a “post-industrial society” of “social factories” and “immaterial” laborers. Having traversed the nuanced, interconnected and persistent lives of the factories of modernity, our conclusion bears repeating: this process is not an aberration, it is an inheritance.

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