Introduction: Worldmaking and the Project of Modernity

Antwerp, 1579. A new pocket collection of maps is on sale from the printing house of Plantin. The first of its kind in French, it offers a scaled-down version of Abraham Ortelius’s recent folio bestseller Theatrum orbis terrarum [Theater of the World], the first world atlas produced in modern times. This little volume bears a similarly imposing title: Miroir du monde [Mirror of the World].1 A reader who opened the “epitome” expecting to find Ortelius’s famous world map, however, would have been disconcerted. The opening pages feature an allegorical frontispiece (fig. 1) that illustrates the work’s title and scope. A muscular figure, his face obscured by a giant globe topped by a cross—a globus cruciger, the ancient symbol of dominance over the world—looms over all. He is identified as “omnipotentia dei,” the all-powerful God. Flanking him are two naked women, God’s Prudence and God’s Truth, holding mirrors to reflect his glory. Streams of light illuminate their bodies. But the center of the image remains dark and difficult to see. Venite et videte opera Domini, invites the caption, echoing the Psalms, “Come and see the works of the Lord.”

Amsterdam, 1633. Fifty years later, another Dutch printing house brings out the latest collection of maps, the prized Atlas ou representation du monde universel [Atlas or Representation of the Universal World] with its iconic double hemispheric world map (fig. 2).2 Here, the precise contours of continents embedded in geometric matrices of longitude and latitude take familiar, modern forms. Allegorical symbols of dominion are reduced to a cartouche in the center, while the map’s richly decorated frame celebrates the achievements of human cartographers in four medallions. In a proto-scientific gloss
on the nature of the planet, the hemispheres are surrounded by emblems of the four elements. This world emerges into view not through divine revelation but by dint of human effort. It is the outcome of a long quest to make visible the global whole—now understood as the “universal world,” a fusion of the earth and the heavens—that could never be seen at once through the naked eye.

Apollo 8, 1968. Three hundred years later, the dream of encompassing the world in a single glance would be fulfilled when the first manned NASA mission to the moon photographed the earth from lunar orbit. “Earthrise at Christmas” (fig. 3) finally confirmed the picture of the world that the early modern mapmakers could only construe through the imagination. In the multicolor interplay of land and sea across the earth’s surface as the orb rises above the horizon, the photograph provides a god’s-eye view of the world—a view previously reserved for the deity and only partially revealed to a curious human gaze.

The Worldmakers reconstructs this imaginative struggle to capture the
world's entirety through the self-conscious efforts of particular human makers. It tells the story behind these changing images, tracing the transformation of the world from an expression of a creative, omniscient deity to a modern conception of cosmic totality—from a world revealed to a world made up. Looking back at the long history of the desire to see the world whole, a desire that culminates in "Earthrise," The Worldmakers asks how it became possible to capture such a vision of the world in the sixteenth and seventeenth centuries when space travel was a metaphor confined to fantasy. And it investigates why all aspects of early modern culture were fueled by this desire to comprehend the world, to organize and capture its variety in a single, harmonious frame.

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Traces of a resurgent interest in "the world" as a whole appear everywhere in the early modern period. The boundaries of the world slowly expand on planispheres and across the love-lyrics of Petrarch, Scève, Bruno, and Donne. Ptolemy's Geography, the classic work on how to draw a map of the world, becomes a sixteenth-century bestseller. Early advertisements for navigational tracts, scientific instruments, and maps promise untold riches in lands yet-to-be-discovered. Political treatises dream of empires faster than any classical civilization. The new, global scale of such dreams is also indexed by their immense cost: the slaughter of the Amerindians at Cuzco and Tenochtitlán, the flames which burned heretics at the stake for daring to think of plural worlds or different origins for the cosmos.

The verbal omnipresence of "the world," a familiar refrain in various texts of the period, thus signals a brave new intellectual conundrum. The intelligibility and scope of the known world had been called into question over the course of almost two centuries, ever since the early Spanish and Portuguese voyages of exploration. The pursuit of colonial and commercial exploration, the growing intellectual trends of skeptical thought, theological questioning, astronomical speculation, and the emergence of a new "historical consciousness" all raised the urgent question of how the extent of the known world—whose boundaries were not immediately visible or tangible—was to be described.4

When in 1651 Andrew Marvell mused, "Tis not, what once it was, the world," he was speaking for at least two generations of Europeans who had experienced at first hand the effects of an expanding world, transformed by the discovery of a new continent on the other side of the Atlantic and of new planetary bodies circulating in space. No longer the divinely ordered terrain familiar to classical antiquity or the Middle Ages, "the world" now seemed, in Marvell's words, "but a rude heap together hurled." With a mixture of elegiac solemnity and wonder, the poet articulates one of the most profound intellectual shifts of early modern Europe: the definition of "the world" as a new category encompassing a previously unknown intellectual expanse and holding new imaginative power. For the poet and his contemporaries, the crumbling of old systems of explanation had left the concept vague and undefined. No longer did a golden chain connect "this pendant world" to Heaven. The human and natural world seemed decentered and disconnected, leaving the idea of "the world" itself desperately in need of redefinition, re-imagination, and renewal.

Early modern Europe responded to this quest with an explosion of images, descriptions, measurements, hypotheses, and debates about the nature of the world. From the Dutch print of a world map in a jester's cap to the mammoth Coronelli globes, from vast Flemish tapestries showing The Spheres to small octavo epitomes of compendious cosmographies such as
the *Miroir du monde*, from global trade networks that brought pineapples to England and Chinese slaves to Mexico, to furious local debates over cosmic theories, such as Galileo's *Dialogue Concerning the Two Chief World Systems*—the very idea of "the world" becomes a foundational but fluid and fiercely contested category." It would be no exaggeration to identify the central intellectual task of the late Renaissance, which affected all aspects of early modern life and thought, as the problem of "the world" itself.

Writers from More to Leibniz make the collision between worlds—old and new, ancient and modern, imagined and real—central to their depiction of what has since been called the "epistemological crisis" of the period, that increasing emphasis in the late sixteenth and seventeenth centuries on worldly plurality, contingency, and the limitations of human perception and knowledge. The last such comparable effort dated back to Roman Egypt of the second century, where Claudius Ptolemy had established the boundaries of the *oikoumene*. For almost two thousand years then, until the Columbian age of exploration, the world had remained a stable concept. In the age of the Renaissance worldmakers, it had to be rethought and reshaped once more.

**WORLDMAKING**

At first, the intimation of a world beyond could only be sensed in slivers of new knowledge, in local details, anecdotes, "singularities." A feather headdress might stand for America; a piece of coral for the beauty of the Pacific islands; the sketch of an unseen coastline might promise a sea route to China, or prove to be a new continent. But if "the world" stood for some idea of unity—an ordered system—then these fragments had to be synthesized into an intelligible conceptual framework, a coherent world picture. How was such a synthesis achieved? What tools helped navigate the passage from an old order to a new one?

This book follows the hard-won renovation of the world across the sixteenth and seventeenth centuries, tracing the story of its emergence as a foundational category of modernity. "Worldmaking" thus describes the methods by which early modern thinkers sought to imagine, shape, revise, control, and articulate the dimensions of the world. It captures the relentless intellectual and cultural drive to uncover a comprehensive vision of the whole—global and eventually cosmic—by attending not only to large-scale macro-historical processes, but to the conceptual, imaginative, and metaphysical challenges posed by the task of envisioning an abstract totality.

The modern world comes into view as it is measured against its various parts—from the microcosmic self, to national and imperial communities, to the sweep of the cosmos. Worldmaking was a ubiquitous cultural practice in the early modern period. It informed the commerce of sailors and merchants, the battles fought across continents for global imperial dominion, the crafting of precision instruments and the printing of books in the workshops of European capitals. It colored the work of the land surveyor in Peru as it does the rhetorical bombast of Marlowe's *Tamburlaine* who demands, "Give me a map; then let me see how much / Is left to conquer all the world." It fuels voyages of exploration, habits of collection, and the rise of the "New Science." And it demands the interrogation of traditional forms of religious belief and faith in the divine.

Underlying all these activities is a need to synthesize new global experiences into a structure that would bind individual fragments into a collective unity. To comprehend the world thus required a shift in perspective between local details and global frameworks and a reconfiguration of the particular against the universal. It was a task of metaphysical, and not just practical, dimensions. These abstract questions were familiar from a long tradition of medieval mereology and its classical antecedents in Plato, Aristotle, and Cicero. But they took on a new urgency when "world," that all-encompassing but all-too-nebulous category, itself was in the balance. To redefine the whole demanded a new consensus for determining the relative autonomy of the individual vis-à-vis a collective whole. While measurement and observation—soon to become the standards of empirical science—could provide a record of local details, synthesis into a global whole required an act of imagination, a leap of theoretical speculation that left the precision of the example for the abstraction of totality. A concept, a category, and a system of order, the world thus had to be self-consciously refashioned by individual human makers. But this was a gradual and difficult recognition.

For much of European history, worldmaking had remained tied to the idea of creation, an original divine act that had prescribed an absolute order to all things. Even the frontispiece to Pieter Heyns's 1759 *Miroir du monde* reflects this view: the globe is the face of the Deity, simultaneously covering and revealing it; it is both subject to divine dominion and a privileged expression of divine creative power. That identification provided the foundation for a vision of world order whose intellectual contours had crystallized into the Thomist-Aristotelian synthesis of Christian religion and classical science. But by the late sixteenth century, this *summum* lay in shreds. Even though many dreamed of uncovering a perfect, perhaps divine, system of
world order that would heal the damage, the impossibility of that aspiration was soon evident: when Montaigne writes movingly of a world in flux at the end of the “Apologie de Raimond Sebond,” we sense the emergence of a terrible skepticism about our ability to apprehend the order of the universe. Early modern worldmaking, as it is chronicled in these pages, begins in response to this dilemma. It reflects a new recognition of our existence in a radically uncertain world where we must create our own order. And it therefore emphasizes the importance of *poiesis*—artful making—as a means of eliminating contingency and making sense of the pieces.

Despite its recent association with the anti-realist, neo-Kantian philosophy of Nelson Goodman, worldmaking has a complex ideological history that derives from physico-theology and was only later exported into modern philosophical discourse. At its core is the idea of creation—the belief that a world can be made and transformed, rather than being a preestablished entity awaiting discovery. When Nathaniel Fairfax first used the term “worldmaker” in the late seventeenth century, he was asserting the importance of metaphors of construction that were popularly used to describe divine creation. “I can’t find in my heart to deny that skill to a World-maker, that I must needs give to a Watch-maker,” he wrote, alluding to the mechanical philosophy with its vision of a perfectly ordered natural world that functioned according to preestablished laws. His emphasis on materiality signals a literalist vision in which physical matter is carefully crafted and given a specific form. While this metaphor of construction was immensely popular throughout the Renaissance, it was only one of several possible models; others included theories of spontaneous generation, instantaneous creation called forth by the Word, or random evolution through the collision of material particles. To assert that the world was made implied staking a position in a charged debate on the existence of deity and the extent of God’s involvement in human affairs.

Paradoxically, the constructivism implicit in Fairfax’s version of worldmaking becomes staunchly realist because it is grounded in theistic belief. It conceives of the world as a discrete object given form by a single identifiable creator. The existence of a world-picture as a subjective human creation that might itself replace or construct a sense of the objective world is utterly absent; human representations of the world are always secondary, imitative shadows of the divine original. But while this remained the orthodox view, it was already under attack by the late seventeenth century, when Milton would explore the bounds between human and divine making in *Paradise Lost*.

By the early eighteenth century, there are signs that the term “world” had become detached from this literalist, theistic context to encompass more metaphorical meanings. Thus, Matthew Prior’s use of a similar phrase “system-makers and world-wrights” in 1721 suggests that worldmaking could refer to the construction of competing models of world order rather than to the physical world itself. “World-wrights” seems to be derived from such Anglo-Saxon compounds as “shipwright,” “wainwright” or “playwright,” which describe human artificers, specifically handicraftsmen. While it retains a trace of Fairfax’s realism, the synonymous use of “system-makers” suggests that Prior’s “world” is not that of physical matter but rather one of philosophical theory.

It is, however, not until Hume’s *Dialogues concerning Natural Religion* (1779) that “worldmaking” receives its first philosophically deliberate use, though once again in a theological context, as the skeptic Philo questions the logic of the cosmological argument for the existence of God:

> But were this world ever so perfect a production, it must still remain uncertain, whether all the excellences of the work can justly be ascribed to the workman.... Many worlds might have been botched and bungled, throughout an eternity, ere this system was struck out: much labour lost: many fruitless trials made: and a slow, but continued improvement carried on during infinite ages in the art of world-making. In such subjects, who can determine, where the truth? nay, who can conjecture where the probability, lies; amidst a great number of hypotheses which may be proposed, and a still greater number which may be imagined?

Hume explores the materialist-realistic vision of a divine world-maker articulated by Fairfax. The skeptic Philo sees the art of worldmaking as an extension of human artifice rather than an illustration of divinity: it is therefore subject to the vicissitudes of trial and error. Here, Hume gives the notion of worldmaking its current, double-edged meaning—it refers both to the actual origin and order of the physical world as well as to the theories that we invent to comprehend the vastness of that whole. In this, he anticipates both the realist and antirealist positions of recent philosophers while highlighting what was at stake in the struggle over the nature of worldmaking: the basis of religious belief, the possibility of scientific truth, and the nature of all systems of order as imagined representations rather than demonstrable facts.

The *Dialogue* thus illustrates the outcome of a long struggle to reconstruct a new world order, and Hume’s specific use of the term “the art of worldmaking” marks the end of an intense phase of such activity rather than its
beginning. It reflects a radical shift from a primarily realist-theistic view of the world as divinely created to a skeptical-constructivist view of the world as humanly fashioned. But as the controversial reception of the Dialogues suggests, this destabilization of the world was accompanied by a tremendous cultural anxiety that is already palpable in many early modern works.

Hume's skepticism was not itself new. It draws on well-known arguments by writers such as Lucretius, Montaigne, Descartes, and even Millon, and is similar to the position taken by the French encyclopedists. However, the Dialogue contains an important insight that was never explicitly articulated before: the world must be understood as no more (and no less) than a human representation because certain, complete knowledge of the objective world is ultimately impossible to achieve. Hume thus touches on the great secret of the early modern system-makers—worldmaking is possible, even necessary, because of the insurmountable gap between our fragmentary apprehension of the phenomenal world and our desire for complete knowledge of it.

Worldmaking is thus a creative process emerging from a renewed celebration of homo faber.13 I use the term in the wake of Hume and Goodman to accent the processes by which the world is remade in the early modern period through a combination of rhetoric, aesthetics, poiesis, and the speculative imagination. This new belief in the world as an artifact also marks its modernity: the world comes into view as a thing made, shaped by human skill and ingenuity, and subject to historical transformation.

A SHORT HISTORY OF “THE WORLD”

One of the first signs of change is lexical: the words used to designate “world” in both classical and vernacular languages undergo significant reconfiguration over the sixteenth and seventeenth centuries. Derived from two related but distinct classical concepts—the oikoumenē or orbis terrarum (the “circle of lands”) and the kosmos or mundus (“the world” or more amply, universe)—the words for “world” in most European vernaculars (world, welt, monde, mondo, mondo) begin to combine both meanings into a single term in the early modern period. This gradual fusion is evident, for instance, in the difference between the expressions of the idea “world” in Cesare Ripa’s late sixteenth-century Iconologia (1593) and Giambattista Vico’s early eighteenth-century Scientia nuova (1725). Taken together, they measure the intellectual transformation witnessed by the early moderns; at the same time, they suggest models for the study of such cultural change.

Ripa’s influential Iconologia, the Renaissance sourcebook of iconography, contains several emblematic representations of the world—or rather, of various aspects of it. Ripa includes detailed instructions on how to represent Terra (the element of earth), Mundus (the World), the four continents (America, Asia, Europe and Africa), as well as emblems for the disciplines of cosmography, choreography, and geography. Each represents a particular world-picture, and their cataloguing as distinct images and categories marks a process of fragmentation. But Ripa’s divisions also reveal how a multifaceted conception of the world was being developed in symbolic form.

The Iconologia depicts a distinction that underpins words associated with “world” throughout the early modern period (world, world, world in Old English; kosmos and oikoumenē in Greek; terra, orbis terrarum, mundus in Latin). On the one hand was the natural world, the bounty of the earth and the glory of human culture and civilization: terra signifies the fertile land and all that it sustains, organically or architecturally. At the other extreme was the charged moral field of mundus, the world, which retained its medieval associations with vice, corruption, and metaphysical decay (worldliness) even as it came to signify the immensity and beauty of the cosmos.14

The emblems for Terra and Mundus thus present dramatically different, gendered versions of the world. Earth, grouped with the other elements early in the work, is described as “a matron sitting upon a globe, with a cornucopia in one hand, and a sceptre in the other.” She is said to wear a “mural crown” or a garland of flowers and fruits, and her typically green garments are decorated with floral motifs. This iconography links Terra to Natura and Scientia, and Ripa explains that her attributes transform her into a figure of both nature and culture: she is the mother of all animals; the globe denotes the sphere of the earth, while the cornucopia and foliage represent the products of the land; the crown “alludes to the buildings for the accommodation of the inhabitants.” Terra thus signals the conjunction of human and natural worlds, an intersection that produces political and social action as well as scientific inquiry.

Mundus, however, is a pictured as an Atlas-figure, “a strong man, supporting a golden coloured globe on his shoulders with the constellations marked upon it.” He is dressed in a garment of haircloth, covered with long bejeweled purple robes. Ripa’s exposition moves away from the language of fruitfulness and civilization associated with Terra and instead enters the realm of natural and moral philosophy. Strength and support of the globe allude to “endurance of the evils, toils, and labours of this World”; this time, the globe denotes “the splendour, perfection, order, and harmony of the
Universe, and the amazing works of Creation and Providence." The hair-cloth, however, is a reminder of "the miseries, misfortunes and difficulties of this present state," while the pomp of his robes "signify that the pursuit of riches and worldly grandeur is vain and transitory" (2.160). Mundus, the World, figures the lure of knowledge and the transfiguring beauty of universal creation; it also reminds us of the need for metaphysical reflection.

While Ripa's emblems synthesize these differences into intelligible visual wholes, it is only in Vico's mammoth Sciencia nuova that we get an etymological history of the concept "world" that reflects back on the transformations of the two previous centuries:

The theological poets felt the earth to be the guardian of boundaries, which is why it was called terra. The heroic origin of the word is preserved in the Latin noun territorium, territory, meaning a district over which dominion is exercised. . . . The Latin grammarians mistakenly derived territory from terrere, to frighten, because the licitors used the terror of the fasces to disperse crowds and make way for the Roman magistrates . . . [but] the true origin of the verb terrere, to frighten, derives from the bloody rites by which Vesta guarded the boundaries of the cultivated fields, in which civil dominions were to arise. The Latin goddess Vesta is the same as the Greek Cybele or Bercynthia, who is crowned with towers, terrae, or strong situated lands, terrae. From her crown there began to take shape the so-called orbis terrarum, or world of nations, which cosmographers later expanded and called the orbis mundanus, mundane world, or simply mundus, world, which is the world of nature. . . .

In early Latin mundus meant a slight slope. . . . Later, everything that trimns (mondo), cleans, and adorns a woman was called mundus muliebris, feminine ornament. Eventually, the poets understood that heaven and earth are spherical; that each point of their circumference slopes in all directions; and that the ocean washes the earth on all sides. So when they saw that the whole is adorned with countless various and diverse sensible forms, the poets called the universe mundus as a beautiful and sublime metaphor for the ornament with which nature adorns herself.18

Vico's creative reconstruction of the concept's evolution from the specificity of the land (terra), to civil dominion over a wider region, and eventually to a universal ideal of beautiful order (mundus) parallels Ripa's differentiation, and like the iconographer, owes much to a long literary and philosophical tradition. But the categorical differences in Ripa are, in Vico, part of an intellectual-historical continuum.

Isidore of Seville's seventh-century Etymologiae had already divided the study of the world into sections on the cosmos ("De mondo et partibus") and on the earth ("De terra et partibus"), noting that the Latin mundus was an attempt to translate the meanings of the Greek kosmos, a word that presented a distinctly aesthetic understanding of the universe, since it signified order, beauty, form, fashion, and ornament.17 On the political plane, the Roman historians Livy and Herodian had suggested links between Roman territorial concepts and religious ritual—accounts that were then faithfully reproduced by Renaissance cosmographers and lexicographers. Early modern thinkers, however, added a new term—"the universal world"—a hybrid that marked the integration of land and sea into a single terraqueous planet.18 By the early eighteenth century, the geographical contours of the world had been reconceived by cartographers such as Ortelius, Mercator, Hondius, and Blaeu; the "world of nations" had been brought into political existence by conquests in the Americas and the Peace of Westphalia; and the "world of nature" seemed continuously to expand as scientific study probed both infinite space and the infinitesimal microbe. Vico's attempt to integrate classical origins and modern reconfigurations into a single seamless narrative reflects a point of culmination, the description of a newly completed event.

The Italian philosopher's "poetic cosmography" differs sharply from earlier compilations in its focus on the unexpected ways in which cultures synthesize meaning and create new conceptual categories. Vico is less interested in establishing what the concept "world" means than in how it comes to have multiple meanings and why it means in these particular ways. Here, as elsewhere, Vico emphasizes the intersection between poetic mythmaking and historical contingency: the orbis terrarum (circle of the earth), once derived from the crown of towers worn by the earth goddess Cybele, is now simply a collective term for the world of nations; the beauty of feminine ornament has, over time, become a "sublime metaphor" for the ordered universe.

If such etymologies and emblems are the fragments through which Vico traces a culture's transformation, his interest in the assimilation of poetic naming and narrative into cultural memory offers an unusual model for this book as well. The Sciencia nuova's recovery of long-forgotten acts of poiesis invites us to reexamine them too from a postmodern stance. Poiesis, the act of making, is an epistemological practice for Vico, the only mode of knowing with certainty. If, as he had famously argued, "verum et factum convertuntur" (the true and the made are interchangeable), we can only truly understand what we have made.19 Full knowledge of any thing involves discovering how it came to be what it is as a product of human ac-
tion. From this perspective, Vico's discussion of the world suggests that it too is humanly made through constructive acts of naming. The centrality of "theological poets" to Vico's method signifies a crucial link between poesis and epistemology, making and knowing, and thereby lays the philosophic foundation for understanding how a plethora of local details may be transmuted into encyclopedic knowledge of the whole. Vico's vision of a poetic epistemology and his history of the term "world" provide inspiration for this project, which tells a previously unexamined cultural and intellectual history of "the world" by excavating its symbolic, ideological, and metaphysical freight.

**A Project of Modernity**

Few ideas have become so thoroughly associated with the emergence of modernity in Europe as that of a globalized, interconnected, secular world. The phrase "modern world" has in fact become a shorthand for a global environment characterized by scientific rationalism, large-scale economic networks, international realpolitik, and agnostic skepticism. Not surprisingly, then, recent scholarship on globalization and world-systems has emerged primarily from the social sciences, particularly economics, historical sociology, and cultural anthropology, thereby reiterating the basic elements of a familiar historiography despite overt gestures of critique. But to recognize the world as a subject in its own right—rather than as a background for or byproduct of large-scale historical processes—is to rethink traditional narratives about the genesis of the Copernican universe and the making of the modern world.

In its emphasis on human making, *The Worldmakers* tests one of the key shibboleths of modernity: the entwined rise of secularism and scientific empiricism. Contrary to the now-classic Weberian narrative of modernity and disenchantment, I argue that the invention of the modern world owed much to theology and the spiritual practices of imaginative identification; it remained enmeshed in metaphysics and the creative faculties of the "intellectual imagination" even as it drew on the tools of empiricism, mathematics, and the new science. Central to this story is not only a new technological facility and belief in human reason but also an integration of earlier forms of magical thinking—hypothesis, metaphoric association, symbolic correlation, aesthetic formalism—into scientific practice.

*The Worldmakers* thus seeks to move conversations about globalization and modernity beyond the events and material processes that were its catal-

ysts to the imaginative responses that sought to comprehend them. Philosophical critiques of modernity in the twentieth century from Heidegger to Habermas and Foucault have argued that the modern world was founded upon a rationality that stripped away alternate forms of knowing—speculation, meditation, intellectual intuition—in order to establish the hegemonic universalisms of the Enlightenment. But my inquiry into early modern worldmaking raises fundamental questions about such accounts as it reveals the persistence of those earlier modes of thought. I argue instead for an alternate genealogy for modernity, one that emphasizes the collusion of empiricism and the poetic imagination and highlights the continued significance of metaphysics alongside a supposed "epistemological rupture." If the modern age, for Heidegger, begins when we no longer seek a picture of the world but rather when the world comes to be "conceived and grasped as a picture," the early modern project of worldmaking illustrates how this inversion came about. The making of the modern world, in this book, depends finally on the synoptic energies of the imagination even as its individual elements are produced through rational inquiry and action.

Recognizing modernity's debt to self-conscious worldmakers brings a new perspective to two distinct matters: the question of religion in modern life and the much-debated connection between modernity and empire. Attention to the spiritual and theological roots of worldmaking reminds us that the world's creation and its domination were traditionally the provenance of the deity. The transfer of worldly authority from divine to human hands provided the legitimation for early European imperial ambitions (the title *domino totius mundi*, once reserved for God, was later appropriated by individual monarchs). It also underwrites a new conventional narrative about the rise of secularism as a condition of post-Enlightenment modernity. And yet, the persistence of theological rhetoric in worldmaking accounts suggests how the skeptical crisis of modernity could also engender a new, more robust faith—a historical insight that is in keeping with Charles Taylor's recent analysis of the persistent place of religion in the modern world.

Consequently, this book argues for the importance of reevaluating the metaphysical foundations of the modern world. These are discernible in the early modern competition between different philosophical systems, particularly the repeated confrontation between Platonic and Epicurean philosophy which epitomized a wider struggle between two kinds of metaphysics: one founded on the (theistic) principle of divine creation and cosmic order, the other based on an (atheistic) belief in worldly contingency, mutabi-
ity, and evolution. Historians of philosophy have long acknowledged the significance of this opposition: it informs the emblems and images which contrast the eternal and the mutable; it underlies clashes over the closed, Ptolemaic system with its unchanging celestial spheres and the infinite, Copernican universe composed of mutable matter; it infects arguments over the status of scripture as unchanging, literal truth or as allegorical narrative open to changing interpretation. But the difference between the Platonic emphasis on the primacy of form and the Lucretian insistence on the centrality of matter precipitated a cultural debate on the nature of world order and its relation to God that continues even today: was the world pre-established by divine sanction or is it unstable, ever-evolving, and open to human intervention? The Worldmakers charts the oscillations between these positions, connecting such debates to contemporary reflections on secularization and faith.

This book, however, does not neglect urgent political and ethical concerns. Laura Doyle speaks for many scholars when she argues that “modernities are often organized and motivated by the will to empire.” And indeed, worldmaking has frequently been regarded as a euphemism for the empire-building aims pursued by European states across the globe, both in accounts from the sixteenth and seventeenth centuries and in contemporary historical and theoretical analyses. This identification between modernity, empire, and worldmaking seems almost self-evident: Charles V’s emblem and motto, “plus ultra,” alluded to the vast world beyond the Pillars of Hercules, while his successor Philip II’s motto, “non sufficit orbis,” would proclaim that even the world was not enough for his ambitions.

It is, in fact, impossible to speak of an emerging “modern world” in Europe in the sixteenth and seventeenth centuries without grappling with the impact of European colonial and imperial projects across the globe. For the language of worldmaking, universalism, and cosmic comprehensiveness is frequently invoked in the context of political desire; the triumphant narratives of global expansion remain tied to the rapacity and destruction that accompanied cross-cultural encounters and which were their bitter, lingering aftermath. As Walter Mignolo has powerfully argued, imperial annihilation and colonial oppression are the “darker side of the Renaissance,” the corollary to the anthropocentric humanism celebrated by writers such as Alberti, Pico, and Leonardo. Contemporary postcolonial critiques of empire and Enlightenment insist on this conceptual overlap between empire and world, universal humanism and European hegemony. But were the two terms—empire and world—indeed synonymous and indistinguishable in the early modern period? How, in fact, does the totalizing concept of “world” relate to other categories of belonging, such as the nation or the state? The conceptual challenges inherent in these questions motivate this book’s quest to distinguish between the nebulous, always present political dimensions of the world and of world order that lurk beyond early modern empires and nation-states.

Despite the enthusiasm for global approaches in a variety of disciplines, and the apparently relentless push toward the transatlantic, the transnational, the multicultural, and the diverse, there remains a significant lacuna: the emphasis on globalism has actually produced a plethora of local narratives and detailed micro-histories, but the intellectual problem of understanding the “world” and how it is imagined as a totality still demands critical attention. Sanjay Subrahmanyam has observed, “The early modern world was for the most part a patchwork of competing and intertwined empires, punctuated by the odd interloper in the form of a nascent ‘nation-state.’” This picture of inter-imperial rivalry punctuated by gradual consolidation points to a sliding scale of community and political belonging within which “world” represents an intangible, theoretical amalgam of all polities, or of all peoples. At a literal level, such as that evoked by Tamburlaine and Philip II, “world” signifies all the territory available for conquest, the desire for universal dominion. But “world” also opposes “empire.” It points to the territories and peoples not part of a state’s control. It thus offers an alternative order and an alternate means of identification that both resists and transcends the hegemonic energies of empire—even though it threatens to be co-opted into displays of imperial ambition.

In the wake of recent calls to reevaluate cosmopolitan notions of global belonging, as well as their critique, it is particularly urgent to recover the pre-Enlightenment vision of “world” as a politically potent, morally compelling category. It is now a commonplace to argue that the rhetoric of the universal and the global merely masks the imposition of European norms onto “the rest of the world,” often through the violent assimilation of the colonizing process. But the elision of earlier worldmaking conceptions with individual national imperialisms reiterates a post-Enlightenment confusion of scale. For the early modern period sees the emergence of the modern world through the oppositional energies of nation- and empire-building on the one hand and worldmaking internationalism on the other. The word “cosmopolite,” itself a sixteenth-century invention, carried with it from these early modern origins the conflicted freight of imperial ambition and transcendent global aspiration. In these hesitant movements
toward a political world beyond the interests of the individual state and its imperial ambitions, a world existing prior to and greater in scope than the sum of singular nations, we can see the beginnings—and also perhaps the future—of the modern global order in the political sphere. Tracing the seeds of a universal desire that opposes imperial aggrandizement, this book finally suggests how worldmaking in its early modern iteration may offer insights for contemporary theorists in a post-imperial world.

INTRODUCING THE WORLDMAKERS

Emphasizing connections between classical, medieval, and modern desires for comprehensive knowledge of the world, The Worldmakers traces the rough chronological arc of the early modern period, from the late fifteenth-century voyages of exploration to the late seventeenth-century debates over religion and science. It moves across increasingly expanding scales of analysis that connect part and whole: from the microcosmic relation of self and world, the communal affiliations promised by the nation and the lure of imperial dominion, to the vast expanse of cosmic space, where the world itself is subsumed into the universe.

Built around five case studies, the book explores varied terrain: the maps of Gerhard Mercator, the essays of Michel de Montaigne, the imperial epics of Luís Vaz de Camões and Edmund Spenser, the philosophical meditations of René Descartes, and the cosmic poetry of John Milton. These encounters with particular intellectual topographies highlight central historical crucibles and suggest how new genres and styles of representation emerged in response to the problem posed by a world in flux. Thus, my consideration of Mercator’s Atlas interrogates the intellectual strategies implicit in the development of the world atlas as a genre and as a tool for envisioning the world, while the companion chapter on Montaigne’s Essais examines how the rhetorical conjunction between cosmography and autobiography was instrumental to a skeptical reappraisal of the world’s order. Turning to the relations between political and cosmic order, the pairing of Os Lustiadas with The Faerie Queene reveals how the Renaissance epic showcased a contemporary tension between national-imperial desire and cosmic-universal claims, anticipating the dilemmas of imperial expansion even before the era of postcolonial critique. The final set of chapters turn to the question of Genesis and ask how this foundational worldmaking text was reimagined in the wake of the New Science: it follows Descartes and Milton as they rewrite and rehabilitate the subject of creation itself.

I turn to such familiar texts precisely because they are so thoroughly assimilated into a modern intellectual tradition that we have forgotten the radical charge that they carried. These texts established habits of thought that formed the bases of worldmaking across a variety of disciplines—cartography, geography, political theory, literature, natural and moral philosophy—that continue to inform ways of encountering the world today. Each of these writers invents new genres and modes of expression in response to the challenge of a new world; they cross linguistic and national boundaries as well as the battle lines of class and confession. To return to their work with fresh eyes is to look past the disciplinary frontiers erected by the Enlightenment to a time when the philosophers’ most cherished goal was the union of all forms of knowledge.

With its immersion in multiple disciplines and languages, this book—perhaps unsurprisingly for an account of efforts to comprehend the world—speaks to a range of diverse interests, engaging with scholarship in the history of philosophy, early modern literature, studies of comparative empires, the history of cartography, cultural geography, and the scientific revolution. It tells of exploration and mapmaking, of the struggle to shape a nascent selfhood against an engulfing world, of the march to national self-definition, of quests for scientific truth, and of the perennial desire to contemplate the cosmos. But while it seeks to join together philosophical, literary, and historical approaches in rethinking the making of the world, it inevitably leaves out many details—a problem that early modern worldmakers themselves would recognize. The story of worldmaking could take in many other figures, texts, and objects; it could include other genres, disciplines, languages, for the scope of the world is vast and finally cannot be contained within the covers of a book. In writing of the early moderns’ desire to comprehend the world, one must inevitably succumb to their pitfalls as well: like the texts it engages, this book too suffers from a partiality of perspective, a struggle to surmount the intellectual abyss that separates an individual’s limited gaze from a yearning to acquire an all-encompassing view of the whole.

A final word is in order about the book’s scope. This project presents an unmistakably Eurocentric approach to the question of the world—a question that justly demands to be addressed from a variety of cultural and geographic vantage points to be truly global. The critique of Eurocentrism, however, is also bound up with the vision of a modern world whose theoretical coordinates have been fixed by Europeans and exported to the rest of the world. Is a sustained excavation of European forms of worldmaking
merely a reiteration of post-Enlightenment global hegemonies, or can it move beyond them? Paradoxically, perhaps, this book emerged from a post-modern, postcolonial suspicion of ideas of unity and totality—concepts that have often been used to erase local difference and impose imperial structures on subject peoples. But as Martin Lewis and Karen Wigen suggest, "to transcend Eurocentrism initially requires a very close engagement with European thought." This study consequently aims to deconstruct critical orthodoxies and seeks a subtler understanding of the stakes of universalist dreams. The Worldmakers thus joins in a project of provincializing Europe at the very moment it laid claim to the world; in this, it suggests avenues for research in a similar vein in other, non-European, contexts. Through the book’s analyses, worldmaking appears as a courageous, ethically empowering, imaginatively ambitious response to forces of entropy and disorder. It may be this response—and not the Weberian analysis of institutional change—that can define a modernity capable of transcending the particularity of the European model.

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Such an ample vision already surfaces in the sixteenth century. In 1583, Justus Lipsius’s De constantia urged readers to imagine themselves as part of one world:

O fool! Are not they men, sprung first out of the same stock with thee? Living under the same globe of heaven? Upon the same mold of earth? Thinks thou that this little plot of ground... is thy country? Thou art deceived. The whole world is our country, wheresoever is the race of mankind sprung of that celestial seed. Socrates being asked of what country he was, answered: Of the world. For a high and lofty mind will not suffer itself to be penned by opinion within such narrow bounds but conceives and knows the whole world to be his own.

This exhortation to cosmopolitan connection carries with it a new, fragile intuition of global unity, one nevertheless charged with a recognition of human divisions and differences. Its turn back to Socrates, however, may have been inspired by new cartographic vistas: Ortelius’s Theatrum orbis terrarum contains a similar neo-stoic sentiment juxtaposed alongside a world map. And Montaigne, too, would return to Socrates’ assertion in the essay on vanity as he contemplated Rome, caput mundi, the head of the world.

Almost four hundred years later, responding to television broadcasts showing the Earth rise over the lunar horizon on Christmas Day 1968, the poet Archibald MacLeish echoed this rhetoric when he spoke for the first generation to see photographs of the world from space:

To see the Earth as it truly is, small and blue and beautiful in that eternal silence where it floats, is to see ourselves as riders on the Earth together, brothers on the bright loveliness in that eternal cold—brothers who know they are truly brothers.

For MacLeish, as for a range of commentators, the shock of the first literal moon voyage was not the experience of space or the materiality of the lunar surface. It was an unexpected first look at the Earth floating in the dark expanse of the universe. It was a sight that evoked a renewed sense of cosmic loneliness, first experienced in the seventeenth century, as well as a powerful celebration of global human community.

When the astronauts’ photographs were later published, “Earthrise at Christmas” (fig. 3) would be met with awe-struck wonder—a human response to a panorama reserved for God. Robert Poole does not exaggerate when he notes that “the sight of the Earth came with force of a revelation.” It was a revelation. If the early moderns could never achieve such a direct view of the planet from a point outside it, The Worldmakers shows how they anticipated its metaphorical and metaphysical impact—it was a view they had repeatedly tried to imagine and recreate in texts, images, and objects. They had prepared the way for Earthrise. It is no accident that the astronauts themselves, invoking a time when such a vision remained suspended between deistic and artistic creation, prepared to introduce the moment with an ancient text. They read from the opening verses of the Bible, speaking aloud the creation story of Genesis, as they looked at the world coming into view.