

RESEARCH ARTICLE

Cosmologies of conquest: The Renaissance foundations of modern international thought

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Abstract

This paper seeks to reconstruct the worldview informing Iberian overseas expansion during the long sixteenth century, arguing that this worldview was more indebted to Renaissance cosmology than to a recognisably modern scientific worldview. The paper describes how this cosmology provided the intellectual resources necessary to justify overseas expansion to those who doubted its viability and legitimacy, and how the same cosmological beliefs were invoked to make sense of the New World and the people found there, if only to facilitate and justify the subjection of the latter to European rule. This story constitutes an important yet often neglected part of the prehistory of modern international thought insofar as it exposes its Iberian origins and Renaissance foundations and the role played by pre-modern ideas in the making of a modern international system.

Keywords: empire; European expansion; international thought; Renaissance; sovereignty

Introduction

Before a recognisably modern international system emerged, overseas expansion and conquest of foreign lands were widely perceived as integral to state-making and were often justified with reference to Roman and medieval notions of boundless sovereignty. In this context of global competition, two relatively weak polities – Portugal and Spain – pioneered transatlantic expansion and went on to establish vast colonial empires in the New World. As Gabriel Paquette has argued, their eventual success resulted from the use of systematic violence which subsequently was ‘embedded in the institutions they established overseas’; from the ‘efficacious forms of governance and finance’ which enabled them to ‘project and retain power across vast distances’; and finally, from the willing collaboration of Creole elites in maintaining and extending control of conquered territories. Thus, assisted by a mighty army of microbes, the creation of the first European overseas empires was propelled by geopolitical competition between nascent states, yet also constantly compromised by rivalries among their economic and political elites.¹

But first you had to get there. The creation of overseas empires presupposed that there was something out there to conquer in the first place, since expanding into what one believed to be

¹Gabriel Paquette, *The European Seaborne Empires. From the Thirty Year's War to the Age of Revolutions* (New Haven, CT: Yale University Press, 2019), p. 4. For full accounts of these processes, see Anthony R. Disney, *A History of Portugal and the Portuguese Empire*, vol. 1 (New York: Cambridge University Press, 2009); Francisco Bethencourt and Diogo Ramada Curto (eds), *Portuguese Oceanic Expansion, 1400–1800* (Cambridge: Cambridge University Press, 2007); J. H. Elliott, *Spain, Europe, and the Wider World, 1500–1800* (New Haven, CT: Yale University Press, 2009); Hugh Thomas, *Rivers of Gold: The Rise of the Spanish Empire, from Columbus to Magellan* (New York: Weidenfeld & Nicolson, 2003).

an empty space would have made little or no sense. It further presupposed that there was a way of getting there, getting *over* the seas so that this ‘out there’ quite literally becomes an *overseas*. For this feat to be possible, the sea must not be seen as an unsurmountable abyss but had to be perceived as a navigable waterway, possible to master and traverse. Finally, the creation of overseas *empires* presupposed that there were ways of making sense of the peoples and things found on foreign shores, if only to obtain the control necessary for their subsequent subjugation and exploitation.

Thus, overseas expansion and the making of transatlantic empires presupposed the possession of a range of conceptual resources that had been unavailable during antiquity and the Middle Ages. Medieval notions of empire had been fashioned out of the Roman concept of *imperium*, which connoted *territorial* rule, however discontinuous those territories and heterogeneous their populations, and made no reference to the possibility of extending such *imperium* to other continents beyond the Eurasian landmass and the known parts of Africa for the simple reason that their existence remained unknown or at least highly uncertain at that point in time.² As Isidore of Seville had established long ago, ‘the ocean is impassable to men, and those worlds which are beyond it are also unreachable.’³ But in 1600, when Tommaso Campanella published his *Della monarchia di Spagna*, the aspiration to universal sovereignty had taken on a distinctively planetary scope, stretching far beyond the imagined geographical limits of the Roman and Christian worlds.⁴ At this point in time, Iberian transatlantic empires had become premised on the mastery of the transcontinental waterways connecting the different parts of world in ways that transcended the territorial boundaries and geographical limits of the ancient and medieval worlds.⁵ As the Spanish humanist Juan Vives noted already in 1531, ‘the whole globe is opened up to the human race, so that no one is so ignorant of events as to think that the wanderings of the ancients ... are to be compared with the journeys of these travellers.’⁶ Hence, the Roman notion of an *orbis terrarum* had been abandoned in practice well before it was refuted by Copernicus in 1534, the impetus coming from the cartographical and geographical advances following the rediscovery of Ptolemy’s *Geography* in the late fifteenth century.⁷ Thus, what we in retrospect have termed ‘the Renaissance’ above all implied a renaissance of imperial ambition, fuelled by the conviction that such ambitions were unconstrained by the geographical limits of antiquity.⁸

In this paper, I will analyse the impact of cosmological beliefs on the ways overseas expansion and conquest of the New World were understood by contemporaries during the long sixteenth century (c. 1480–c. 1620), arguing that the beliefs informing the discovery and conquest of the New World were more indebted to Renaissance cosmology than to the modern worldview associated with the scientific revolution.⁹ Whereas scientific advances and technological innovations certainly

²See Anthony Pagden, *The Burdens of Empire: 1539 to the Present* (Cambridge: Cambridge University Press, 2015), pp. 2–6; John Richardson, ‘The meaning of imperium in the last century BC and the first AD’, in Benedict Kingsbury and Benjamin Straumann (eds), *The Roman Foundations of the Law of Nations: Alberico Gentili and the Justice of Empire* (Oxford: Oxford University Press, 2010), pp. 21–9.

³Isidore of Seville, *De Natura Rerum* [612–615], trans. Calvin B. Kendall and Faith Wallis (Liverpool: Liverpool University Press, 2016), 40.III,168.

⁴Tommaso Campanella, *A Discourse Touching the Spanish Monarchy* (London: Philemon Stephens, 1654). For analyses, see John M. Headley, *Tommaso Campanella and the Transformation of the World* (Princeton, NJ: Princeton University Press, 1997); Anthony Pagden, ‘Instruments of empire: Tommaso Campanella and the universal monarchy of Spain’, in Anthony Pagden (ed.), *Spanish Imperialism and the Political Imagination* (New Haven, CT: Yale University Press, 1990), pp. 37–64.

⁵For this contrast, see David Armitage, ‘The elephant and the whale: Empires of land and sea’, *Journal for Maritime Research*, 9:1 (2007), pp. 23–36; Charles S. Maier, *Once within Borders: Territories of Power, Wealth and Belonging since 1500* (Cambridge, MA: Harvard University Press, 2016).

⁶Juan Vives, *On Education* [1531], trans. Foster Watson (Cambridge: Cambridge University Press, 1913), p. 3.

⁷See Christian Jacob, *The Sovereign Map: Theoretical Approaches in Cartography throughout History* (Chicago: University of Chicago Press, 2006), pp. 61–4.

⁸Thomas James Dandele, *The Renaissance of Empire in Early Modern Europe* (Cambridge: Cambridge University Press, 2014).

⁹For some accounts, see Steven Shapin, *The Scientific Revolution* (Chicago: University of Chicago Press, 1996); David Wootton, *The Invention of Science: A New History of the Scientific Revolution* (Harmondsworth: Penguin, 2015).

facilitated overseas expansion and conquest by bringing improved methods of navigation and warfare, they do not explain how the practices of expansion and conquest were rendered intelligible and made to appear legitimate to the relevant audiences at the time.¹⁰ Since overseas expansion was by no means an uncontroversial undertaking, it remains to explain how it was justified to those courtiers, noblemen, clergymen, and scholars who were either willingly or inadvertently becoming its stakeholders and beneficiaries in this long and protracted process of imperial expansion. Although overseas expansion seems to presuppose that the planetary surface constituted one single space open to human mastery, such global imaginaries were not readily accessible to the erudite parts of Iberian elites, since that knowledge had not been widely disseminated at the onset of expansion but became accessible only as it proceeded.¹¹ Therefore, in the following section, I will try to reconstruct the worldview that made overseas expansion appear possible and legitimate to contemporary audiences. Crafted out of myriad sources – Greek, Roman, Jewish, Christian, Muslim – this worldview straddled medieval and modern cosmologies and provided many of the intellectual resources necessary to make sense of and justify overseas expansion to those who doubted its viability and legitimacy on a curious combination of cosmological and political grounds in an age when geocentrism and patriotism were sometimes mutually reinforcing. In the second section, I will describe how the same set of cosmological beliefs was invoked to make sense of the New World and the people and things found there, and how the resulting forms of knowledge were used to facilitate and legitimise the subjection of the latter to European rule. Hence, the story I will tell is about the *ideational preconditions* of Iberian overseas expansion and conquest, and not one about its causes and consequences *outside* the realm of civilisational discourse and legitimising rhetoric as they evolved in the Iberian context.

This story, I argue, constitutes an important yet often neglected part of the prehistory of modern international thought insofar as it exposes its Renaissance foundations and the role played by distinctively *unmodern* beliefs in the making of a *modern* international system. As such, this story should be of interest to scholars doing historical International Relations broadly conceived, and especially to those interested in the history of international thought. Telling this story could hopefully help shift some attention away from the modernist and anglophone focus in the study of international thought in favour of a focus on its more neglected Renaissance foundations and Iberian origins.¹² Furthermore, by attending to the cosmological beliefs informing the processes of *overseas* expansion and conquest, the paper tries to add to the growing body of scholarship that emphasises the importance of oceans and seas in the making of modern International Relations by describing how oceans and seas were reconceptualised during the early phases of European expansion, and how the resulting imaginaries of seaborne empire defined the terms of exchange between the European and the non-European parts of the world during the early modern period.¹³

Before proceeding, some notes on terminology and method are in order. In this paper, I will use the term ‘cosmology’ in its lexical sense to denote beliefs about the physical universe and its

¹⁰See, for example, John Law, ‘On the social explanation of technical change: The case of the Portuguese maritime expansion’, *Technology and Culture*, 28:2 (1987), pp. 227–52; Tessaleno Devezas and George Modelski, ‘The Portuguese as system-builders in the fifteenth and sixteenth centuries: A case study on the role of technology in the evolution of the world system’, *Globalizations*, 3:4 (2006), pp. 507–23.

¹¹See, for example, María M. Portuondo, *Secret Science: Spanish Cosmography and the New World* (Baltimore, MD: Johns Hopkins University Press, 2009); Jens Bartelson, ‘The social construction of globality’, *International Political Sociology*, 4:3 (2010), pp. 219–35; David Inglis, ‘Mapping global consciousness: Portuguese imperialism and the forging of modern global sensibilities’, *Globalizations*, 8:5 (2012), pp. 687–702.

¹²See, for example, David Armitage, *Foundations of Modern International Thought* (Cambridge: Cambridge University Press, 2013); Lucian A. Ashworth, *History of International Thought: From the Origins of the Modern State to Academic International Relations* (London: Routledge, 2014).

¹³See, for example, Benjamin de Carvalho and Halvard Leira (eds), *The Sea and International Relations* (Manchester: Manchester University Press, 2022); Liam Campling and Alejandro Colás, *Capitalism and the Sea: The Maritime Factor in the Making of the Modern World* (London: Verso Books, 2021).

ontological make-up, but I will occasionally substitute the term ‘worldview’ to avoid repetition.¹⁴ As I will maintain, cosmological beliefs fulfilled two main functions in the process of expansion and conquest, both of which are constructivist commonplaces. First, beliefs about the make-up of the physical universe tell you what is possible within that universe and what is not, thereby enabling some courses of action while making others look impossible. In the present context, overseas expansion and conquest would hardly have been possible without the corresponding belief that the planetary surface contained inhabitable continents beyond the Eurasian landmass and that these continents were interconnected by navigable waterways. Second, and as Bentley Allan has emphasised, cosmological beliefs fulfil a legitimising function, in the present context that of legitimising those practices of expansion deemed possible given the make-up of the planet.¹⁵ This view of the legitimising functions of cosmological beliefs finds some support in constructivist classics. As Thomas Berger and Peter Luckmann suggested some time ago, legitimacy derives from symbolic universes constructed on the basis of a ‘general theory of the cosmos and a general theory of man.’¹⁶ And as Mary Douglas pointed out in a landmark book, cosmological beliefs are at stake when ‘in reply to the question, “Why do you do like this?” ... the final answer refers to the way the planets are fixed in the sky or the way that planets or humans or animals naturally behave.’¹⁷ Hence, I will maintain that a given set of cosmological beliefs made overseas expansion and conquest appear possible and legitimate to the relevant audiences in ways that competing beliefs did not or could not.

When I speak of legitimisations of expansion and conquest, I refer primarily to the justifications of the implicit claims to sovereignty and the ways these claims were translated into practice in encounters with the peoples and things of the New World. Furthermore, by emphasising the importance of beliefs that seem difficult to reconcile with a modern scientific worldview, my argument is made in contrast to a body of historical scholarship which has associated overseas expansion with claims to novelty and construed it as a harbinger of a modernity to come. To some commentators, the discovery and conquest of the New World signified a *de facto* refutation of ancient wisdoms and thus called for a wholesale revision of received views of both man and nature.¹⁸ But although it is true that the discovery and conquest of the New World were greatly facilitated by the geographical and cartographical advances of the fifteenth and sixteenth centuries, I will emphasise the extent to which the legitimisation of those enterprises depended on beliefs which are bound to look incompatible with a modern scientific worldview. As María Portuondo has shown in detail, the encounter with the New World gave rise to the new science of *cosmography*, the task of which was to make sense of the natural world of nascent empires by mobilising theories from ancient and medieval sources and combining these with findings by contemporary cartographers, geographers, and natural historians.¹⁹ Hence, it seems more reasonable to assume that many of the categories and concepts associated with the scientific revolution owe more to overseas imperial expansion than the other way around.²⁰

¹⁴For a similar usage, see Bentley B. Allan, *Scientific Cosmology and International Orders* (Cambridge: Cambridge University Press, 2018).

¹⁵Allan, *Scientific Cosmology*, pp. 36–9.

¹⁶Peter Berger and Thomas Luckmann, *The Social Construction of Reality* (Harmondsworth: Penguin, 1991), p. 114.

¹⁷Mary Douglas, *How Institutions Think* (New York: Syracuse University Press, 1986), pp. 46–7.

¹⁸See, for example, Juan Pimentel, ‘The Iberian vision: Science and empire in the framework of a universal monarchy, 1500–1800’, *Osiris*, 15 (2000), pp. 17–30; Jorge Cañizares-Esguerra, ‘Iberian science in the Renaissance: Ignored how much longer?’, *Perspectives on Science*, 12:1 (2004), pp. 86–124; Luis Lobo-Guerrero, ‘Novelty and the creation of the new world in XVI C Spain’, in Luis Lobo-Guerrero, Suvi Alt, and Maarten Meijer (eds), *Imaginaries of Connectivity: The Creation of Novel Spaces of Governance* (London: Rowman & Littlefield, 2020), pp. 13–38.

¹⁹Portuondo, *Secret Science*, pp. 19–59.

²⁰See, for example, Jorge Cañizares-Esguerra, *Nature, Empire, and Nation: Explorations of the History of Science in the Iberian World* (Stanford, CA: Stanford University Press, 2006); Antonio Barrera-Osorio, *Experiencing Nature: The Spanish American Empire and the Early Scientific Revolution* (Austin: University of Texas Press, 2006).

But if the cosmological framework informing expansion and conquest was arguably more pre-modern than modern in character, what does such implicit periodisation entail for its study? Recent scholarship informs us that such periodisation cannot but reinforce the most persistent myths of sovereignty and modernity.²¹ In the study of International Relations, the Middle Ages are constantly imagined in contrast to and as a precursor of a recognisably modern international system.²² Consequently, as Julia Costa López has recently cautioned us, ‘approaching the pre-modern with periodization-derived preconceptions about its significance prevents us from doing anything but confirming our own prejudices – whatever those may be.’²³ Yet as Xavier Guillaume also reminds us, periodisation remains a necessary evil in order for historical inquiry to be possible in the first place.²⁴ In order to handle this dilemma, I will use the term ‘Renaissance’ cautiously, not in the narrow sense denoting a mere revival of classical antiquity, but rather to describe a period characterised by the *prima facie* inconsistent blend of ideas which only *later* would become possible to sort and periodise as either ‘pre-modern’ or ‘modern’ in character. I will thus follow the usage of the term ‘Renaissance’ by historians such as Surekha Davies, who has emphasised the extent to which Renaissance knowledge encompassed a much broader range of concepts and theories than can be neatly classified as either medieval or modern in character.²⁵ From this some other methodological commitments follow. To the same extent that it would be misleading to superimpose a distinction between pre-modern and modern beliefs upon Renaissance cosmology, it would be equally misleading and anachronistic to confine the inquiry to distinct national contexts or within narrow temporal frames. Hence, this paper seeks to escape such limitations by opting for a *serial* contextualisation of the discourses of expansion and conquest in some of the writings that tried to make sense of and justify these endeavours to contemporaries across the Iberian and transatlantic world during the long sixteenth century.²⁶

Taming space

But questions of periodisation also cut right into our topic. As Mauro Caraccioli has remarked, in early modern empires ‘the ideological ethos remains curiously consistent: the modern is used to revive the past, but the past buttresses the modern in unexpected ways.’²⁷ Thus, one reason why the discovery and conquest of the New World have come to be considered starting points of modernity is that such claims to novelty were common already in the immediate aftermath of the discoveries and were closely connected to the revival of Roman dreams of empire. As Bodin argued in his *Methodus* (1566), whereas the ancients had lived within the confines of the Mediterranean basin, his contemporaries ‘traverse the whole earth every year in frequent voyages and lead colonies into another world ... not only has this discovery developed an abundant and

²¹See, for example, Constantin Fasolt, *The Limits of History* (Chicago: University of Chicago Press, 2004); Kathleen Davis, *Periodization and Sovereignty: How Ideas of Feudalism and Secularization Govern the Politics of Time* (Philadelphia: University of Pennsylvania Press, 2008).

²²Julia Costa Lopez, ‘International Relations in/and the Middle Ages’, in Benjamin de Carvalho, Julia Costa Lopez, and Halvard Leira (eds), *Routledge Handbook of Historical International Relations* (Abingdon: Routledge, 2021), pp. 408–18.

²³Julia Costa López, ‘The “premodern” world’, in Mlada Bukovansky, Edward Keene, Christian Reus-Smit, and Maja Spanu (eds), *The Oxford Handbook of History and International Relations* (Oxford: Oxford University Press, 2023), pp. 395–409 (p. 405).

²⁴Xavier Guillaume, ‘Historical periods and acts of periodization’, in Benjamin de Carvalho, Julia Costa Lopez, and Halvard Leira (eds), *Routledge Handbook of Historical International Relations* (Abingdon: Routledge, 2021), pp. 562–70.

²⁵See Surekha Davies, *Renaissance Ethnography and the Invention of the Human* (Cambridge: Cambridge University Press, 2016).

²⁶For suggestions along similar lines, see David Armitage, ‘What’s the big idea? Intellectual history and the *longue durée*’, *History of European Ideas*, 38:4 (2012), pp. 493–507; David Armitage, ‘Modern international thought: Problems and prospects’, *History of European Ideas*, 41:1 (2015), pp. 116–30.

²⁷Mauro J. Caraccioli, ‘Early (modern) empires: The political ideology of conceptual domination’, in Benjamin de Carvalho, Julia Costa Lopez, and Halvard Leira (eds), *Routledge Handbook of Historical International Relations* (Abingdon: Routledge, 2021), pp. 419–31.

profitable commerce ... but also all men surprisingly work together in a world state, as if in one of the same city-state.²⁸ Some two centuries later, both Abbé de Raynal and Adam Smith took the discovery of the New World to mark the birth of the modern world by having made possible new modes of exchange. To Raynal, discovery and circumnavigation 'gave rise to a revolution in the commerce, and in the power of nations, as well as in the manners, industry, and government of the whole world'.²⁹ Similarly, to Smith, the 'discovery of America, and that of a passage to the East Indies by the Cape of Good Hope, are the two greatest and most important events recorded in the history of mankind' insofar as they inaugurated a new age of profitable trade and colonial exchange.³⁰ Although such contentions have been much contested since decolonisation, recent scholarship has claimed that the rise of modern conceptions of space was a precursor to European overseas expansion and conquest of the New World.³¹ Within academic International Relations, similar claims to novelty and modernity underwrite the idea that the beginning of the sixteenth century represents a benchmark date. For example, as Barry Buzan and George Lawson have argued, 'within a few years of this date, European navigators crossed the Atlantic and sailed around Africa in ways that could be replicated. In doing so, they opened the way for a global-scale international system.'³²

But what were the ideational preconditions of trans-oceanic expansion? In retrospect, some of the above claims to novelty and modernity appear overstated if not outright anachronistic. As Ricardo Padrón has argued, the cartographical and geographical advances brought about by the revival of Ptolemy's *Geographica* were not widely disseminated at the onset of overseas expansion, which seems to have taken place with the help of nautical charts that still owed much to ancient and medieval representations of space.³³ And given that the maps in the 1477 edition of his *Cosmographia* had been redrawn to align them with the current astrological consensus, the dissemination of Ptolemy's work is hardly indicative of a coming modernity.³⁴ Furthermore, the heliocentric theory presented by Copernicus in *De revolutionibus* (1543) did not find immediate resonance with Iberian scholars, since its unconditional acceptance would have entailed a rejection of the geocentric worldview and thereby put them at odds with ecclesiastical authorities.³⁵ Ptolemaic geography still appeared insufficient for the actual task of navigation, since it had nothing to say about stars visible in the southern hemisphere. As the Portuguese approached the equator on their explorations of the West African coast, the Pole Star could no longer serve as a reliable guide as it sank to the horizon only to eventually disappear from sight altogether.³⁶ This required new astronomical knowledge and the invention of instruments such as the astrolabe for measuring

²⁸Jean Bodin, *Method for the Easy Comprehension of History*, trans. Beatrice Reynolds (New York: Columbia University Press, 1945), p. 301.

²⁹Abbé Guillaume-Thomas-François Raynal, *A Philosophical and Political History of the Settlements and Trade of the Europeans in the East and West Indies*, trans. J. O. Justamond (London: W. Strahan and T. Cadell, 1783), I.I, p. 1.

³⁰Adam Smith, *The Wealth of Nations*, vol. II [1776–8] (London: J. M. Dent & Sons, 1910), IV.VII, p. 121.

³¹See, for example, Walter Mignolo, *The Darker Side of the Renaissance: Literacy, Territoriality, and Colonization* (Ann Arbor: University of Michigan Press, 1995); John B. Harley, *The New Nature of Maps: Essays in the History of Cartography*, ed. Paul Laxton (Baltimore, MD: Johns Hopkins University Press, 2002); Samuel Y. Edgerton, 'From mental matrix to *mappamundi* to Christian empire: The heritage of Ptolemaic cartography in the Renaissance', in David Woodward (ed.), *Art and Cartography: Six Historical Essays* (Chicago: University of Chicago Press, 1987), pp. 10–50.

³²Barry Buzan and George Lawson, 'Rethinking benchmark dates in International Relations', *European Journal of International Relations*, 20:2 (2014), pp. 437–62 (p. 442); also Timothy Dunne and Christian Reus-Smit (eds), *The Globalization of International Society* (Oxford: Oxford University Press, 2017).

³³Ricardo Padrón, 'Mapping *plus ultra*: Cartography, space, and Hispanic modernity', *Representations*, 79:1 (2002), pp. 28–60.

³⁴See George Talias, 'The world under the stars: Astrological geography and the Bologna 1477 edition of Ptolemy's *Cosmographia*', *Imago Mundi*, 71:2 (2019), pp. 125–50.

³⁵See Victor Navarro Brotóns, 'The reception of Copernicus in sixteenth-century Spain: The case of Diego de Zúñiga', *Isis*, 86:1 (1995), pp. 52–78; Victor Navarro Brotóns, 'Continuity and change in cosmological ideas in Spain between the sixteenth and seventeenth centuries: The impact of celestial novelties', in Patrick J. Boner (ed.), *Change and Continuity in Early Modern Cosmology* (Dordrecht: Springer, 2011), pp. 33–50; Portuondo, *Secret Science*, pp. 44–8.

³⁶William Graham Lister Randles, 'The emergence of nautical astronomy in Portugal in the XVth century', *The Journal of Navigation*, 51:1 (1998), pp. 46–57.

the altitude of the sun in order to find the latitude of any given location at sea. And finally, as soon as mariners ventured outside the Mediterranean basin, medieval portolan charts became useless for navigation, prompting the royal cosmographer Pedro Nuñez to publish an elaborate defence of the plane chart (*carta de marear*) with its equidistant and parallel meridians as the only useful instrument of navigation for long-distance trans-oceanic voyages.³⁷ Thus, expansion required the fulfilment of additional preconditions to become viable.

First, it is important to note that the Iberian cartographical and navigational advances were to a large extent motivated by the search for safer and cheaper trade routes to the East Indies.³⁸ Thus, at the same moment as the Lopo Gonçalves first crossed the equator in 1473, Paolo dal Pozzo Toscanelli had written a letter to Fernão Martins, canon of Lisbon Cathedral, on the subject of possible circumnavigation: 'You must not be surprised ... if I call the parts where the spices are west, when they usually call them east, because to those sailing west, those parts are found by navigation on the underside of the earth. But if by land on the upper side, they will always be found to the east.'³⁹ Written to be comprehensible to a lay audience, the simplicity of these instructions contrasts with the complexity of the task at hand. This task consisted of convincing the Portuguese elite of the validity of a new worldview which was at odds with the educated lore of the day and of prompting members of this elite to act urgently upon this new knowledge. But when both Martins and King Alfonso V failed to respond, a copy of the same letter was sent to a more daring spirit in Genoa who soon tried to obtain funding from the Castilian crown.⁴⁰ In contrast to his detractors in the royal council, Christopher Columbus was convinced that the inhabitable parts of the world extended far beyond the limits posited by ancient geographers and that the terraqueous globe was much more fertile and hospitable than previously suspected.⁴¹

Second, these new cosmological beliefs needed to be translated into practical knowledge to make overseas expansion look viable. Thus, measuring latitude by means of an astrolabe required the use of solar tables such as those found in the *Hajibur Hagadol* by the Jewish astrologer Abraham Zacuto. These tables were translated into Portuguese by José Vizinho and published under the title *Almanach Perpetuum* (1496) and were used by Vasco da Gama on his first voyage to India in 1497 and by Pedro Álvares Cabral on the expedition that unintentionally landed him on the coast of Brazil in April 1500. Roughly contemporary – but not necessarily reliable – sources suggest that Zacuto was present to bid the former farewell on the beach of Restelo.⁴² Coupled with practical advice on how to determine the height of the sun, his solar tables were then used to compile influential manuals of navigation such as the *Regimento de Munique* (1509), the *Regimento do Astrolábio e do Quadrante* (1509), and the *Regimento de Évora* (1516), thereby effecting a transfer of useful

³⁷Pedro Nuñez, *Obras*, vol. 1 (Lisbon: Academia das Ciências e Fundação Calouste Gulbenkian, 2002), pp. 120–174. For analyses, see William Graham Lister Randles, 'From the Mediterranean portulan chart to the marine world chart of the great discoveries: The crisis in cartography in the sixteenth century', *Imago Mundi*, 40 (1988), pp. 115–18; Joaquim Alves Gaspar, 'From the portolan chart to the latitude chart', *Cartes et Géomatique, Comité Français de Cartographie*, 216 (2013), pp. 67–77.

³⁸See Denis Cosgrove, 'Mapping new worlds: Culture and cartography in sixteenth-century Venice', *Imago Mundi*, 44 (1992), pp. 65–89; Samuel Y. Edgerton, *The Renaissance Discovery of Linear Perspective* (New York: Basic Books, 1975); Thomas Goldstein, 'The role of the Italian merchant class in Renaissance and discoveries', *Terrae Incognitae*, 8 (1976), pp. 19–27; Portuondo, *Secret Science*, pp. 15–59.

³⁹Letter, 24 June 1474. Thomas Goldstein, 'Geography in fifteenth-century Florence', in John Parker (ed.), *Merchants and Scholars: Essays in the History of Exploration and Trade* (Minneapolis: University of Minnesota Press, 1965), pp. 11–32 (pp. 13–14).

⁴⁰See Norbert Sumien, *La correspondance du savant Florentin Paolo del Pozzo Toscanelli avec Christophe Colomb* (Paris: Société d'éditions géographiques, maritimes et coloniales, 1927), pp. 9–16.

⁴¹Nicolás Wey Gómez, *The Tropics of Empire: Why Columbus Sailed South to the Indies* (Cambridge, MA: MIT Press, 2008).

⁴²Gaspar Correa, *Lendas da Índia*, vol. 1 [c. 1550] (Lisbon: Academia Real das Ciências de Lisboa, 1858), p. 23. The extent of Zacuto's influence has been disputed: see Sanjay Subrahmanyam, *The Career and Legend of Vasco da Gama* (Cambridge: Cambridge University Press, 1998), p. 62; Siebren van der Werf, 'Nautical tables for Vasco da Gama, 1497–1500?', *Journal for the History of Astronomy*, 50:3 (2019), pp. 326–38; Bernard Goldstein, 'Astronomy as a "neutral zone": Interreligious cooperation in medieval Spain', *Medieval Encounters*, 15:2–4 (2009), pp. 159–74.

knowledge from astronomers to mariners.⁴³ But the astrolabe, the lodestar, the quadrant, and the compass were not merely tools of navigation, they were also widely understood as instruments and symbols of imperial expansion in their own right. As Pedro Nuñez maintained in 1537, the expansion of the Portuguese was made possible by the fact that ‘our seamen are well trained and equipped with instruments and rules of astronomy and geometry’.⁴⁴ And as Luis Vaz de Camões had Vasco de Gama saying in *Os Lusíadas*, the discoveries of new lands were made possible by that ‘new and ingenious instrument the astrolabe’.⁴⁵ This momentary confluence of scientific and political concerns generated new ways of producing and organising knowledge, centred on the heroic figure of the knight-turned-cosmographer and his gathering of useful knowledge as a new way of extolling chivalric virtues.⁴⁶

Third, and regardless of these advances in navigational techniques, trans-oceanic voyages had to be justified against the backdrop of the still widely shared belief that the world beyond the *orbis terrarum* was uninhabitable and difficult if not impossible to reach. Moreover, overseas expansion had also to be justified, considering the tide of patriotic sentiments according to which the ancient lands of Lusitania and the bonds of kinship gluing its inhabitants together ought to constitute the prime objects of political allegiance rather than uncertain and expensive adventures on the seas. Hence, even in what was to become a famous instance of celebration, an enigmatic and sceptical voice was inserted if only for purposes of edification. At the very moment when Vasco da Gama was about to depart for India, Camões had an old man complain: ‘Oh, the folly of it, this craving for power, this thirsting after the vanity we call fame, this fraudulent pleasure known as honour that thrives on popular esteem ... You allow the enemy to flourish at your gates while you go seek another at the other side of the world, at the price of depopulating and weakening this ancient kingdom and squandering its resources.’⁴⁷ Camões could provisionally resolve this tension between nascent nationalism and proto-globalism by drawing on and reviving an epic tradition which since Virgil had connected patriotic virtue with the imperatives of imperial expansion, yet the cameo appearance of the Old Man of Restelo in *Os Lusíadas* indicates the extent to which overseas expansion was still believed to be controversial at the point in time when Vasco da Gama set sail from Belém.⁴⁸

Thus, legitimising overseas expansion required careful blending of new and old cosmological beliefs. Knowledge of celestial bodies was not only necessary to determine location at sea, but the same bodies were also invested with profound symbolical significance in an age when astrology and astronomy were still inseparable enterprises. As Jorge Cañizares-Esguerra has argued, ‘astrolgy was part of the obvious mental landscape of every learned individual in the early modern world, regardless of religion and country of origin. Although prognostication was a contentious issue that raised all sorts of theological and political questions, the understanding that the stars

⁴³ See Walmir Thomazi Cardoso and Roberto de Andrade Martins, ‘Iberian approaches to astronomy in the sixteenth century’, *Mediterranean Archaeology and Archaeometry*, 18:4 (2018), pp. 265–71; Avelino Teixeira da Mota, ‘The nautical aspects of astronomical theories and observations in Europe down to 1675’, *Vistas in Astronomy*, 20 (1976), pp. 29–37; Randles, ‘Emergence of nautical astronomy’, *passim*.

⁴⁴ Pedro Nuñez, *Obras*, vol. 1 (Lisbon: Academia das Ciências e Fundação Calouste Gulbenkian, 2002), p. 121. Quoted in Henrique Leitão, ‘Instruments and artisanal practices in long distance oceanic voyages’, *Centaurus*, 60 (2018), pp. 189–202 (p. 197).

⁴⁵ Luis Vaz de Camões, *The Lusíads* [1572], trans. William C. Atkinson (Harmondsworth: Penguin, 1952), Canto V, 126. For an interpretation, see Bernhard Klein, ‘Mapping the waters: Sea charts, navigation, and Camões’s *Os Lusíadas*’, *Renaissance Studies*, 25:2 (2011), pp. 228–47.

⁴⁶ Cañizares-Esguerra, *Nature, Empire, and Nation*, pp. 7–14; Portuondo, *Secret Science*, *passim*.

⁴⁷ Camões, *The Lusíads*, Canto IV, 119–121. For an analysis of the imperial rhetoric of *Os Lusíadas*, see David Quint, *Epic and Empire: Politics and Generic Form from Virgil to Milton* (Princeton, NJ: Princeton University Press, 1993). For the different interpretations of Canto IV, see Gerald M. Moser, ‘What did the Old Man of the Restelo mean?’, *Luso-Brazilian Review*, 17:2 (1980), pp. 139–51.

⁴⁸ See Matthew M. Gorey, ‘Pietas and the “other Camões”’: Subversive translation and allusion in *The Lusíads*, *Classical Receptions Journal*, 11:2 (2019), pp. 211–29.

affected behavior in the sublunary world was something everybody took for granted.⁴⁹ Beyond the confines of the Mediterranean world, astrology had long occupied a prominent place in the official worldviews of the Safavid, Mughal, and Ottoman empires, which had ‘witnessed an occultist arms race ... for messianic and sacral forms of political legitimacy’ which spilled over into justifications for conquest.⁵⁰ Thus ‘the quest to control the world imperially as well as scientifically was in no way exclusive to Latin Christendom, but common to the early modern Western world as a whole.’⁵¹ According to the received Greek and Christian traditions, the stars affected the objects in the sublunary sphere through the four elements of earth, fire, air, and water, and human temperament through the balance of the bodily fluids of blood, yellow bile, black bile, and phlegm. Coupled with Ptolemy’s division of the known world into three distinct geographical regions, the stars were also believed to determine the climate and characteristics of each such region. Celestial influences thereby covered the course of natural and human history, so that ‘all occurrences from the flora of a district to the history of its inhabitants must be determined by the virtue of the presiding stars, and explained with reference to their influence.’⁵² This seamless connection between the realms of natural and human history made it possible for Bodin to take a long shot at the now-fashionable Copernican theory, ‘since neither the motion of eccentric circles nor of the sun is in any way significant in the changes of empire ... we shall have to judge that it pertains to those well-known conjunctions of the stars.’⁵³

The ideational preconditions of expansion did not need to be coherent in order to be persuasive. Making the expected benefits of overseas expansion intelligible and alluring to lay audiences had to proceed from well-established beliefs, giving rise to a literary genre that connected the concerns of cosmography and navigation with more mundane pursuits. Books in this genre all bear similar titles, being variations of *Reportorio de los tiempos* and *Reportorio dos tempos* in Spanish and Portuguese respectively.⁵⁴ Intended for a broad yet literate audience, these books tried hard to mediate between popular beliefs in astrology, the geocentrism still sanctioned by ecclesiastical authorities, and recent advances in geographical and cartographical knowledge. An interesting example in this regard is *Reportorio dos tempos, o mais copioso que até agora sahio a luz* (1585) by André do Avelar, a professor of mathematics at the University of Coimbra. To some extent based on the earlier *Chronographia o reportorio de los tiempos* (1550) by his more famous Spanish colleague Jeronimó de Chaves, Avelar’s work reflects some of the fascinating commonalities of this popular genre.⁵⁵ Among these was the consistent effort to turn temporal differences into spatial ones. Starting out from Augustine’s tripartite classification of time into *aeternitas*, *aveum*, and *tempus*, Avelar begins his account by telling us that eternity is ‘a space that lacks principle, is without end,

⁴⁹Jorge Cañizares Esguerra, ‘New world, new stars: Patriotic astrology and the invention of Indian and Creole bodies in colonial Spanish America, 1600–1650’, *The American Historical Review*, 104:1 (1999), pp. 33–68 (p. 37). For a background, see William R. Newman and Anthony Grafton, ‘Introduction: The problematic status of astrology and alchemy in premodern Europe’, in Anthony Grafton and William R. Newman (eds), *Secrets of Nature: Astrology and Alchemy in Early Modern Europe* (Cambridge, MA: MIT Press, 2001), pp. 1–38.

⁵⁰Matthew Melvin-Koushki, ‘Astrology, lettrism, geomancy: The occult-scientific methods of post-Mongol Islamicate imperialism’, *The Medieval History Journal*, 19:1 (2016), pp. 142–50 (p. 142). I am grateful to Ayşe Zarakol for drawing my attention to this scholarship. See also Ahmet Tunç Şen, ‘Reading the stars at the Ottoman court: Bâyezid II (r. 886/1481–918/1512) and his celestial interests’, *Arabica*, 64:3–4 (2017), pp. 557–608.

⁵¹Matthew Melvin-Koushki, ‘How to rule the world: Occult-scientific manuals of the early modern Persian cosmopolis’, *Journal of Persianate Studies*, 11:2 (2018), pp. 140–54 (p. 150).

⁵²Marian J. Tooley, ‘Bodin and the mediaeval theory of climate’, *Speculum*, 28:1 (1953), pp. 64–83 (p. 67).

⁵³Bodin, *Method for the Easy Comprehension of History*, p. 234.

⁵⁴Cardoso and Martins, ‘Iberian approaches to astronomy’, p. 269.

⁵⁵For the relationship between these works, see Adalgisa Botelho da Costa, ‘O *Reportorio dos tempos* de André do Avelar e a astrologia em Portugal no século XVI’, in Roberto de Andrade Martins, Liliana Al-Chueyr Pereira Martins, Cibelle Celestino Silva, and Juliana Mesquita Hidalgo Ferreira (eds), *Filosofia e historia da ciência no Cone Sul: 3 encontro* (Campinas: Associação de Filosofia e Historia da Ciência no Cone Sul, 2008), pp. 1–7.

without cause and succession which is always present and enjoys permanence.⁵⁶ Having established that the lesser substrata of time are defined by their duration, Avelar goes on to compartmentalise *tempus* into days and nights and fractions thereof. While doing so, however, he makes a significant departure from Augustine insofar as he does not conceptualise *tempus* in terms of the experiences and expectations of the human mind, but by an unmistakable Aristotelian reference to the movement of heavenly bodies and their influence on what happens on earth. From this perspective, planetary movements do not only determine the duration of days and nights but also the proportion of bodily fluids and the corresponding human tempers, so that while certain hours are likely to provoke melancholia, others may incite choleric or phlegmatic tempers, still others sanguine, all depending on location.⁵⁷

Having established an intricate series of correspondences between different temporal categories through observations of the movements of heavenly bodies, the change of seasons, the cycle of weeks and months, the chronologies of human age, the phases of world history, and the succession of kings and monarchies, Avelar proceeds to describe the geographical features of the known world. Since the discovery of the New World had prompted a wholesale revision of the worldview of the ancients, Avelar is led to posit that land and water together now together form one single globe situated in the centre of the universe, subdivided into regions with distinct climates affecting all forms of life there: the terraqueous globe of Copernicus is thereby inserted right into the centre of what remained an essentially Ptolemaic universe.⁵⁸ Consequently, the ocean is no longer an impassable chasm, but instead a medium of connectivity, the usefulness of which to human beings depends on their skill in harnessing the right winds and knowledge of planetary influences for their own purposes.⁵⁹ Since navigating the oceans makes it necessary to know the precise position of the stars, Avelar offered advice on how to locate the Pole Star and the Southern Cross with reference to the signs of the zodiac. Not unlike his contemporary Giordano Bruno or his counterparts in the gunpowder empires of the Near East, Avelar grafted commonplaces of early modern astronomy onto the hermetic and occult traditions wherein they were vested with more profound esoteric meanings.⁶⁰ For this and other reasons, he was imprisoned in 1620 on suspicion of crypto-Judaism, and his *Reportorio* was placed on the index of forbidden books on account of heresy three years later.⁶¹

The chain of resemblances stretching from the planets down to earth allowed Avelar to predict the occurrences of different phenomena with reference to the signs of nature. The strange and irregular behaviour of cows, goats, chickens, and bees foretells imminent changes in the weather, and the more dramatic these irregularities are, the more the dramatic the ensuing changes. Outright weirdness is to be expected from all farm animals ahead of tempests and earthquakes, and a sudden abundance of reptiles is a sure sign of a coming plague.⁶² Comets are harbingers of bad news in general, since they will corrupt the fruits of the earth and bring sterility to beasts and fire and violent outbursts to humankind.⁶³ But knowledge of the motion of the heavenly bodies also made it possible to predict with some precision when it is best to plant wheat and grapes for wine, how best

⁵⁶ André do Avelar, *Reportorio dos tempos, o mais copioso que até agora sahio a luz* (Lisbon: Simão & Lopez, 1594), p. 1. Compare Augustine, *Confessions*, Book XI, Chapters 13–16.

⁵⁷ Avelar, *Reportorio dos tempos*, pp. 5–6.

⁵⁸ Avelar, *Reportorio dos tempos*, pp. 50–2.

⁵⁹ Avelar, *Reportorio dos tempos*, pp. 58–70.

⁶⁰ See Frances A. Yates, *Giordano Bruno and the Hermetic Tradition* (London: Routledge & Kegan Paul, 1964); Matthew Melvin-Koushki, 'Early modern Islamic empire: New forms of religiopolitical legitimacy', in Armando Salvatore, Roberto Tottoli, and Babak Rahimi (eds), *The Wiley Blackwell History of Islam* (Oxford: John Wiley & Sons, 2018), pp. 351–75.

⁶¹ See Roberto de Andrade Martins, 'André do Avelar and the teaching of Sacrobosco's *Sphaera* at the University of Coimbra', in Matteo Valleriani (ed.), *De sphaera of Johannes de Sacrobosco in the Early Modern Period* (Cham: Springer, 2020), pp. 313–58.

⁶² Avelar, *Reportorio dos tempos*, pp. 110–35.

⁶³ Avelar, *Reportorio dos tempos*, pp. 139–40.

to cope with the unpleasant ambience of canicular days, and when to phlebotomise or otherwise purge the human body of undesirable fluids, all depending on its precise location in space.⁶⁴

This permitted Avelar to make sense of a wide range of phenomena with reference to the same body of astrological knowledge. If you suffer bouts of melancholia in the dry winter mornings of Coimbra, if you are overwhelmed with idleness during the stewing summer days of Seville, if your sheep are displaying signs of apprehension on a windy day in spring, or if your orange tree yields less fruit than the autumn before, all those phenomena can be properly understood only if we take the heavenly bodies and their positions into consideration. Avelar renders these phenomena intelligible and subject to the illusion of control by making the likelihood of their occurrence relative to the position in time and place. But by doing this, he assumes that temporal differences can be seamlessly translated into spatial differences across the entire terraqueous globe, so that the knowledge needed in order to harvest olives at the right moment is of the same kind as the knowledge needed to set sail for Salvador with a well-founded hope for a safe return to Lagos with a bountiful cargo next year. Through an admittedly shaky employment of *modus ponens*, overseas travel and expansion become offers hard to refuse for anyone excited by the promises of natural abundance, or, more modestly, simply invested in the smooth running of a country estate. These were the ideational preconditions of overseas expansion that made it look both viable and indeed tempting to contemporary audiences. But what happened when the same cosmological beliefs were used to make sense of the New World and the beasts and people found there?

Taming Indians

On 29 February 1504, Christopher Columbus had been stranded in Jamaica for six months. Although the natives had been initially forthcoming and provided Columbus and his crew with food and fresh water, as the months passed, they grew increasingly impatient with the newcomers to the point of halting the supplies. Columbus then summoned the local *caciques* and let his interpreter tell them in no uncertain terms that the Christian God was very displeased with their conduct and that as a punishment the moon would rise that night ‘inflamed with wrath’. And as the moon rose the following evening, ‘with great howling and lamentation they came running from every direction to the ships, laden with provisions, praying the Admiral to intercede by all means with God on their behalf; that he might not visit his wrath upon them.’⁶⁵ In order to be able to perform this vintage act of dissimulation, Columbus had again consulted the solar tables by Zacuto to find a lunar eclipse to be imminent, which luckily could be weaponised in order to scare the natives into submission. Although the veracity of this account is dubious – an aging Fernando Colón had an obvious interest in rehabilitating the by now slightly tarnished reputation of his father – it nevertheless indicates the extent to which contemporaries believed that knowledge of what transpired in the heavens could be turned into power over human beings on earth.

As some authors have shown, the projection of power onto new trans-oceanic spaces effectively turned these into distinct places while constituting the different peoples found there into Others, supposedly very different from the Europeans. Yet for their obvious merits, these accounts have not had much to say about how cosmological beliefs influenced efforts to make sense of the often-strange customs and habits of the American Indians.⁶⁶ This omission has been corrected in more

⁶⁴ Avelar, *Reportorio dos tempos*, pp. 144–55, 168–81.

⁶⁵ Fernando Colón, *Historie del S.D. Fernando Colombo: nelle quali s'ha particolare, & vera relatione della vita, & de' fatti dell'Amiraglio D. Christoforo Colombo, suo padre: et dello scoprimento, ch'egli fece dell'Indie Occidentali, dette Mondo Nuovo, hora possedute dal Sereniss* (Venice: Appresso Francesco de' Franceschi Sanese, 1571), pp. 237–8. Translation of this passage from *The Life of the Admiral Christopher Columbus by his Son Ferdinand*, trans. Benjamin Keen (New Brunswick, NJ: Rutgers University Press, 1959), p. 272.

⁶⁶ See, for example, Anthony Pagden, *The Fall of Natural Man: The American Indian and the Origins of Comparative Ethnology* (Cambridge: Cambridge University Press, 1982). Although Pagden recognizes that the methods of classifying Indians referred to ‘geographical location and astrological disposition’, he does not pursue this line of inquiry further (p. 13). See also Anthony Pagden, *European Encounters with the New World: From Renaissance to Romanticism* (New Haven, CT: Yale University Press, 1993), pp. 10–11.

recent scholarship. For example, as Nicolás Wey Gómez has argued, ‘geography and politics were closely allied disciplines in a cosmological tradition that imagined the orderly workings of the geocentric universe as the *machina mundi*, or “machine of the world” ... it was widely believed that nations ... owed their unique physiologies, characters and *mores* (customs) to their natural locations in the world machine.’⁶⁷ And as Surekha Davies has shown, the colonisation of the New World was conditioned by beliefs about geography and climate and how these affected indigenous bodies and temperaments.⁶⁸ Pursuing this line of inquiry further, I shall describe how the astrological reasoning popularised by books in the *Reportorio* genre provided the ideational preconditions for understanding the American Indians and their environment, and how the resulting accounts were used to justify the strategies of governance characteristic of early Iberian empires.

Here, Portuguese sources remain silent for the simple reason that the Portuguese did not extend their control much beyond their trading posts during the early phases of imperial expansion. As the first historian of Brazil described the scope of their activities, they were ‘content to go grazing along the sea like crabs.’⁶⁹ But Spanish and other contemporary sources offer rich testimonies of the epistemic challenges encountered when trying to make sense of the customs and habits of the Indians. Explorers and chroniclers came there equipped with an understanding of how celestial bodies affected the climate of different places, why human beings and their societies displayed distinctive features in different climate zones, and how these societies should ideally be governed given their natural circumstances and the customs of their populations.⁷⁰ For example, as Amerigo Vespucci described his voyage to Brazil in 1501, having lost sight of Ursa Minor and Ursa Major, ‘we guided ourselves by the stars of the South Pole, which are numerous and much larger and brighter than those of our Pole.’⁷¹ These new astrological circumstances accounted for many of the strange things found in this environment, as well as for the most horrid practices of its inhabitants. As he informed Lorenzo de Medici in a letter, ‘I have known the nature of those people, their customs, the resources and fertility of the land, the salubrity of the air, the positions of the celestial bodies in the heavens, and, above all, the fixed stars, over an eighth of the sphere, never seen by our ancestors.’⁷² As he continues, ‘the air in this country is temperate and good, as we were able to learn from their accounts that there are never any pestilences or epidemics caused by bad air.’⁷³ And although the Indians lived in what appeared to be a state of natural innocence devoid of private property, rulership, and commerce, they were of a quintessentially wild disposition, inclined to outbursts of disorderly warfare in ‘which they mutually kill with great cruelty. They slaughter those who are captured, and the victors eat the vanquished; for human flesh is an ordinary article of food among them.’⁷⁴

That the many marvels of the New World were conditioned by the position of celestial bodies was equally obvious to the alchemist Richard Eden, who had translated Peter Martyr’s *De orbe novo decades* (1511) into English. A cannibal kitchen on Guadeloupe was a veritable shop of horrors, since, as Martyr reported back to Cardinal Sforza, ‘they founde likewise the heade of a yonge man fastened to a poste yet bledinge.’⁷⁵ After a short but intense battle, and when some of the cannibals

Press, 1993); Tzvetan Todorov, *The Conquest of America: The Question of the Other* (New York: Harper & Row, 1984); Anthony Grafton, Nancy G. Siraisi, and April Shelford, *New Worlds, Ancient Texts: The Power of Tradition and the Shock of Discovery* (Cambridge, MA: Harvard University Press, 1992); Philip E. Steinberg, *The Social Construction of the Ocean* (Cambridge: Cambridge University Press, 2001).

⁶⁷Wey Gómez, *Tropics of Empire*, p. 61.

⁶⁸Davies, *Renaissance Ethnography*.

⁶⁹Frei Vicente do Salvador, *História do Brasil* [1627] (Rio de Janeiro: Leuzinger & Filhos, 1889), p. 8 (my translation).

⁷⁰Wey Gómez, *Tropics of Empire*, pp. 69–106.

⁷¹Clements A. Markham (ed.), *The Letters of Amerigo Vespucci and Other Documents Illustrative of his Career* (London: The Hakluyt Society, 1894), p. 39.

⁷²Markham, *Letters*, p. 45.

⁷³Markham, *Letters*, p. 47.

⁷⁴Markham, *Letters*, p. 47. On the invention of the Brazilian cannibal, see Davies, *Renaissance Ethnography*, pp. 65–108.

⁷⁵Peter Martyr, *Second Booke of the Fyrste Decade*, in Richard Eden, *The First Three English Books on America* [1555] (Birmingham: Montague Road, 1885), p. 69.

had been brought into 'the Admirals shippe, they dyd no more put of their fiernes and cruell countenances, then do the Lyons of *Libia* ... There is no man able to behowdle them, but he shall feele his bowelles grate with a certain horroure, nature hath endowed them with so terrible menacynge, and cruell aspect.'⁷⁶ The appearance of naked innocence among the inhabitants of Hispaniola notwithstanding, 'these naked people also are tormented with ambition for the desyre they haue to enlarge their dominions; by reason whereof they kepe warre and destroy one an other.'⁷⁷ Many of the first chronicles emphasised the wild and beastly character of the Indians but suggested few remedies beyond the use of brute force to subdue them in what would look to a post-colonial posterity like barely concealed acts of projective identification.

Later chroniclers such as Gonzalo Fernández de Oviedo and José de Acosta were puzzled by the fact that Latin America, despite being located in the Torrid Zone, displayed a temperate climate and was more humid than could be expected.⁷⁸ Since an excess of water was associated with phlegmatic tempers and an effeminate character, it was a short step to argue that the humidity of Spanish America made both animals and people generally weak and morally defective. As Oviedo maintained, not only were the 'tigers' of the New World unusually timid and cowardly, but the Indians were also by nature 'idle and vicious, poor laborers, melancholic, cowardly, vile, ill-inclined liars with faint memory and no constancy.'⁷⁹ This harsh diagnosis had in a sense been written into the stars. Already the Laws of Burgos of 1512, composed when knowledge of the Indians still was very scant, made ample references to their idleness and other vices. As the preamble reads, 'it has become evident through long experience that nothing has sufficed to bring the said chiefs and Indians to a knowledge of our Faith ... since by nature they are inclined to idleness and vice.'⁸⁰ The solution was to establish the *encomienda* system, which granted each *conquistador* the right to extract labour and tribute from the natives of a given community, provided that they were given due instruction in the Christian faith as well as protection from their enemies, a system the cruelty of which prompted Bartolomé de las Casas to devote a diatribe to its condemnation, which led Charles V to assemble a *Junta* to assess the validity of his claims.⁸¹

These beliefs had a long pedigree in the Western tradition. Aristotle had provided the seed of this kind of analysis when he argued in *Politics* that 'those who live in a cold climate ... are full of spirit but wanting in intelligence and skill; and therefore keep their freedom, but have no political organization, and are incapable of ruling over others. But whereas the natives of Asia are intelligent and inventive, but they are wanting in spirit, and therefore they are always in a state of subjection and slavery.'⁸² During the early stages of overseas expansion, observations such as these had long been an integral part of a tradition that connected the concerns of cosmology and politics, a tradition which perhaps found its ultimate expression in Bodin's *Methodus ad facilem historiarum cognitionem* (1566) and *Les Six livres de la République* (1576).⁸³ As Bodin put it in the *Six livres*,

⁷⁶ Martyr, *Second Booke*, p. 70.

⁷⁷ Martyr, *Second Booke*, p. 71.

⁷⁸ On the role of natural history in the early Spanish empire, see Mauro José Caraccioli, *Writing the New World: The Politics of Natural History in the Early Spanish Empire* (Gainesville: University of Florida Press, 2021).

⁷⁹ Gonzalo Fernández de Oviedo y Valdés, *Sumario de la natural historia de las Indias* [1526] (Mexico City and Buenos Aires: Fondo de Cultura Económico, 1950), p. 144; Gonzalo Fernández de Oviedo y Valdés, *Historia general y natural de las Indias* [1535] (Madrid: Imprenta de la Real Academia de la Historia, 1851), vol. 1, II.VI, p. 74.

⁸⁰ *The Laws of Burgos of 1512–1513: Royal Ordinances for the Good Government and Treatment of the Indians*, trans. Lesley Byrd Simpson (San Francisco: J. Howell Books, 1960), p. 11.

⁸¹ See Lesley Byrd Simpson, *The Encomienda in New Spain: The Beginning of Spanish Mexico* (Berkeley: University of California Press, 1982); Bartolomé de las Casas, *Brevísima relación de la destrucción de las Indias* [1542] (Medellin: Imprenta Universidad de Antioquia, 2011). This issued in the Valladolid Debate (1550–1): see Pagden, *Fall of Natural Man*, pp. 109–45; David M. Lantigua, *Infidels and Empires in a New World Order: Early Modern Spanish Contributions to International Legal Thought* (Cambridge: Cambridge University Press, 2020), p. 5.

⁸² Aristotle, *Politics*, trans. Benjamin Jowett (Oxford: Clarendon Press, 1885), VII.

⁸³ For an analysis, see Clarence J. Glacken, *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (Berkeley: University of California Press, 1967), pp. 434–47; Tooley, 'Bodin and the mediaeval theory of climate', *passim*.

'for even as we see a great variety in all sorts of beasts, and in every kind some notable alterations for the diversity of regions; in like sort we may say, there is in a manner as great difference in the nature and disposition of men, as there is of countries.'⁸⁴ Of the peoples of the South we learn that they are 'cruell and reuengefull, by reason of melancholie, which doth inflame the passions of the soule with an exceeding violence, the which is not easily suppressed.'⁸⁵ This is the case since 'the Southerners abound in bile, which subsides like lees to the bottom when the humours have been drawn out by the heat of the sun.'⁸⁶ A striking example is provided by the Brazilian Indians, who 'are not contented to eat the flesh of their enemies, but will bathe the children in their blood.'⁸⁷ Hence, it would be a grave mistake to apply the laws and forms of government suitable to the Northern or the Middle regions to the peoples of the South, because 'it is no meruaile then if the people of the South be better governed by religion, than by force or reason, the which is a point verie considerable to draw the people, when as neither force nor reason can preuaile.'⁸⁸ While there was ample room for academic disagreement as to whether the climate of the New World was predominantly moist or torrid, and consequently whether its inhabitants were of a predominantly idle or wild disposition, there was a broad agreement to the effect that instruction in the Christian faith would serve the mutually reinforcing purposes of conversion and control.

The corrupting influences of the southern stars continued to generate commentaries for the rest of the sixteenth century and well into the next. For example, in his *Historia natural y moral de las Indias* (1589), José de Acosta complained that his contemporaries had been wrong about the brightness of the southern stars and the climate of the New World. The stars were dimmer and the climate more temperate, and from this followed a different analysis of its inhabitants and their moral character. Although the Indians were not without religion, they had been tricked by the devil into idolatry and superstition.⁸⁹ But since they did not lack judgement and understanding, they had not established barbarous or tyrannical governments among themselves but been mostly content to live in small communities devoid of sovereign authority to avert those dangers.⁹⁰ Yet being stuck in such a condition of childish ignorance also meant that the Indians were fair game for conversion to the Christian faith, since 'on their part there was much malice against God and our men, which forced them to vse rigor and chastisement ... yet God of his bountie hath drawne good from this evill, and hath made the subiection of the Indians, a perfect remedie for their salvation.'⁹¹

By the end of the sixteenth century, such views of the American Indians had found their way into popular works of comparative ethnology and politics. In the widely read *Relationi Universali* (1596), Giovanni Botero could infer from the position of the stars that 'southerne people having the greatest portion of their other humours drawne out by the heat of the Sun, the melancholike ... remaine, and as dregges settle at the base of all their actions, being the more exasperated by their coward and perverse dispositions.'⁹² Add to this the peculiar climate of the Americas, and it was no surprise that 'the Inhabitants are of a swarty complexion, fairer or fouler, according to their different situations. Not very well favoured, but of savage & brutish behaviours, excellent footmen and swimmers, clearly in their bodies, naked, libidinous, and men eaters.'⁹³ The proper way to manage

⁸⁴ Jean Bodin, *Six Bookes of a Commonweale*, ed. Richard Knolles (London: Imprens G. Bishop, 1606), V.I, p. 545.

⁸⁵ Bodin, *Six Bookes*, VI, p. 555.

⁸⁶ Bodin, *Six Bookes*, p. 102.

⁸⁷ Bodin, *Six Bookes*, VI, p. 555.

⁸⁸ Bodin, *Six Bookes*, VI, p. 560.

⁸⁹ José de Acosta, *The Naturall and Morall Historie of the East and West Indies Intreating of the Remarkable Things of Heaven, of the Elements, Mettalls, Plants and Beasts Which are Proper to that Country: Together with the Manners, Ceremonies, Lawes, Governments, and Warres of the Indians*, trans. Edward Grimeston (London: Edward Blount and William Aspley, 1604), V, pp. 2–6.

⁹⁰ Acosta, *Naturall and Morall Historie*, V, p. 11.

⁹¹ Acosta, *Naturall and Morall Historie*, VII, pp. 27 and 28, 583 and 589.

⁹² Giovanni Botero, *Relations of the Most Famous Kingdomes and Common-Wealths Thorowout the World Discouring of Their Situations, Religions, Languages, Manners, Customs, Strengths, Greatnesse, and Policies* (London: John Hauiland, 1630), p. 14.

⁹³ Botero, *Relations of the Most Famous Kingdomes*, p. 627.

this dangerous combination of bodily strength and moral depravity was through the imposition of strictly organised and controlled labour on the peoples of the south, something which at this point in time was being accomplished with great determination in Spanish America. As the colonial administrator Juan de Solórzano argued in his *Politica Indiana* (1647), the Spanish crown would be better off emulating the tyrannical policies of the Incas and Moctezuma, who had known how to keep the Indians busy at all times: ‘even in the absence of profitable occupations, they worked in others of no use and benefit, even gathering lice in satchels, cutting rocks of immense size, paving valleys and roads, and building in them very sumptuous inns.’⁹⁴ Such were some of the ideational preconditions of the domestication of the American Indians. But as Cañizares-Esguerra has shown in detail, such negative characterisations of the celestial constellations of the New World and their sublunary influences did not go down well with Creole settlers, since it seemed to follow that *they* would sooner or later take on the same negative traits by virtue of inhabiting the same region as the Indians. Thus, according to the missionary Bernabe Cobo, the strongest argument against the determinism of climate is ‘that the Spaniards who live here do not slowly lose their color and take on that of the Indians, which inescapably would have to be the consequence if ... the characteristics of the land determined the color of the natives.’⁹⁵ So in what was to become an elaborate defence of their virtue and valour, Creole elites developed their own home-grown brand of patriotic astrology that made it possible to blame the alleged idleness of the Indians on their bodily characteristics rather than on differences of climate, thereby marking the birth of ‘scientific’ racism.⁹⁶ In a largely parallel development in Europe, by the end of the seventeenth century, differences between humans that earlier had been explained with reference to celestial bodies and variations in climate were now thought to result from differences in skin colour.⁹⁷

Conclusion

As I have tried to show in this paper, the terms in which Iberian overseas expansion was understood and justified by contemporaries owed little to the emergent scientific worldview but more to the Renaissance modes of knowledge in which the inseparable enterprises of astronomy and astrology occupied centre stage. Detailed knowledge of celestial bodies and their positions was necessary to navigate the oceans and arrive safely on foreign shores, while knowledge of their symbolic meaning and esoteric influences was necessary to make coherent sense of the plants, animals, and peoples found there. Although overseas expansion and the creation of transatlantic empires were made possible by the then-emergent conviction that humankind inhabited a terraqueous globe the waterways which were open to navigation and mastery, it was fully possible to reconcile such cosmological beliefs with ancient and medieval beliefs in the magical powers of celestial bodies. Overseas expansion and conquest thus took place in a brief interregnum – the Renaissance – during which the scientific revolution was still unfinished business and educated opinion was still informed by beliefs that with the benefit of hindsight appear distinctively pre-modern in character. Not only difficult to reconcile with an emergent scientific worldview, some of the beliefs invoked to justify expansion and conquest were also considered borderline heretical and would soon be cast aside as superstitious once a modern worldview had triumphed over its rivals. Yet however inconsistent these cosmological beliefs might seem to us, they had the obvious virtue of being sufficiently aligned with more mundane beliefs to persuade those still hesitant about the

⁹⁴Juan de Solórzano Pereira, *Politica indiana* (Madrid: Diego Diaz de la Carrera, 1647), II.VI, p. 92. For a detailed analysis, see James Muldoon, *The Americas in the Spanish World Order: The Justification for Conquest in the Seventeenth Century* (Philadelphia: University of Pennsylvania Press, 1994), pp. 38–65.

⁹⁵Bernabe Cobo, *History of the Inca Empire* [c. 1639], trans. Roland Hamilton (Austin: University of Texas Press, 1979), p. 11.

⁹⁶Cañizares-Esguerra, ‘New world, new stars’, pp. 49–68.

⁹⁷See, for example, Andrew S. Curran, *The Anatomy of Blackness: Science and Slavery in an Age of Enlightenment* (Baltimore, MD: Johns Hopkins University Press, 2011).

viability and legitimacy of overseas expansion to get on board as long as its expected benefits would outweigh the costs of cognitive dissonance generated by the undeniable facts of circumnavigation and discovery. The old man of Restelo could thus be put at ease through a clever recombination of old and new, as indicated by the popularity of books in the *Repertorio* genre.

This Renaissance worldview also goes some way to explain how systematic violence became embedded in colonial institutions such as the *encomienda* in early Spanish America. Celestial constellations and conditions of climate dictated that the Indians were either of a melancholic or phlegmatic disposition and therefore unlikely to respond well to the modes of governance deemed suitable to peoples of the northern or middle regions of the earth. Quite irrespective of whether the Indians were considered wild or idle, a combination of hard regimented labour and religious instruction would not only render them docile labourers in the service of an extractive imperial economy but would also pave the way for their conversion and final redemption in the after-life. But none of this was a matter of othering in the sociological sense of helping to constitute European sameness in the process, but more a matter of *assimilating* the American Indians into a preordained cosmological order into which all things, beasts, and human beings had been fitted since antiquity. Nor had this anything to do with the Portuguese and the Spanish becoming modern in the process, but more with a successful export of what remained an essentially pre-modern mindset to a continent whose subsequent fate it would thereby seal for the foreseeable future.

The above account has a series of implications for the study of historical international relations in general and the history of international thought in particular. First, although it is reasonable to regard European overseas expansion and conquest of the New World as a formative episode in the making of modern international relations, I think it is important to remember that this was more a matter of turning globality into a social fact than that it was a matter of creating something akin to a modern international system. Overseas expansion and conquest were conditioned by beliefs in the habitability of the terraqueous globe and the possibility of traversing the oceans but did not presuppose that this global space necessarily was or should be compartmentalised into distinct political communities. Second, although it is reasonable to construe expansion and conquest as parts of a much wider process of modernisation, I think it is important to note that modernisation was among the *consequences* rather than the causes of European expansion on other continents. Although transatlantic expansion was informed by beliefs that we would hardly regard as modern in character, these processes gave an impetus to scientific endeavours that boosted the development of early modern science in both Europe and Latin America. Third, although the Iberian peninsula constituted the geographical point of origin of European transatlantic expansion, it is important to bear in mind that its ideational preconditions largely derived from sources originating in the wider Mediterranean world, and that similar visions of imperial expansion had been in circulation among the great empires of the East long before European overseas expansion could commence.

Eventually, a modern international system emerged from the attempts to mitigate the quests for universal sovereignty that had been underwriting imperial expansion during the long sixteenth century. Modern international thought was born out of the many attempts to bridle such claims to sovereignty by means of territorial demarcations, public law, and the balance of power. But none of this would have been possible without a prior global context of imperial expansion informed by cosmologies centred on the influences of celestial bodies on human beings and their habitat, cosmologies once tailored to fit a smaller world than the one they were instrumental in bringing about before being decommissioned as superstitions and conveniently forgotten by the modern age.

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