

Rediscovering the age of discovery

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Among the most complex issues of early modern history is the nature of the European breakout onto the world ocean and the so-called ‘age of discovery’. Assessments of what happened and why, what is meant by words like ‘discovery’, and even what the era’s chronological limits are, change from generation to generation and place to place, and depend in part on who is considering the matter and in what context. A modern dictionary defines ‘discover’ as ‘to notice or learn, especially by making an effort’. Yet the seventeenth-century jurist Hugo Grotius maintained that discovery involved ‘actual seizure [...] Thus the philologists treat the expressions “to discover” and “to take possession of” as synonymous’.¹ A further difficulty arises from the entanglement of the motives behind the voyages of discovery, what was actually discovered, and what resulted from Europeans’ encounters with the rest of the world. This chapter begins with a discussion of some of the issues that affect how people think about the age of discovery, moves on to a narrative overview of the period from 1400 to 1800, and ends with a consideration of the results.

The age of discovery in context

Most assessments of the age of discovery are coloured by the fact that, in superficial terms, Europeans tend to think of themselves as explorers and the people of the places to which they sailed as the discovered, a binary that gives Europeans agency while denying it to others. At the same time, non-Europeans popularly consider Europeans not just as explorers but exploiters, and conflate the global colonialism of the nineteenth century and later with all that took place before. Implicit in these assumptions is the idea that discovery only counts if one is actively looking for something – that is, that Spanish sailors discovered the Marquesas Islands by sailing to them in 1595, but the Marquesans did not discover the Spanish arriving on their shores. (By this logic, Alexander Fleming’s accidental discovery of penicillin was not a discovery.) If we define ‘discover’ more generally as to become aware of something previously unknown to anyone (like penicillin), we find that, apart from uninhabited, and, for

the most part, uninhabitable islands (with a few notable exceptions) and Antarctica, Europeans went to few places that other people had not already put down deep roots. What they did indisputably discover and systematically exploit for the first time was less tangible but every bit as important, namely the winds and currents that make it possible to cross the oceans with confidence and a degree of regularity.

Binary views of the age of discovery result in part from an evidentiary problem that favours European worldviews. European voyagers and their admirers wrote extensively of their activities, often in triumphalist and deeply parochial terms. Some of the people they encountered had no written tradition of their own, and many of those who did were not inspired to write about the newcomers and their ventures. A number of societies of the Monsoon Seas regarded Europeans as pests ('they crawled like lice on the hide of Asia', in one memorable assessment) and viewed their cargoes in the earliest centuries as uninspired at best, and shoddy at worst.² For Asians and East Africans, Europeans were just another in a long string of outsiders who, they likely assumed, would eventually acclimatize to their ways of doing things, just as other interlopers had for hundreds, if not thousands, of years. And while Europeans did effect great change in Africa, the Americas, and Asia, it is clear that, however much they transformed these regions, they were dramatically transformed as well, and the modern world has not been shaped exclusively or even primarily by any one cultural complex like Europe or 'the West'.

Another reason for the many different ways of seeing the age of exploration is that the epochal voyages of the late fifteenth century took people into two distinct worlds. When Christopher Columbus crossed the Atlantic in 1492, in terms of sea trade the Americas were essentially a blank slate. There was no maritime commercial system to speak of, ports did not exist, and the arts of boatbuilding and navigation were nowhere near as sophisticated as those of coastal Eurasia. This gave the Spanish a significant logistical advantage that amplified their undeniable superiority in arms, as did their collective resistance to the Eurasian and African diseases to which previously unexposed Native Americans were catastrophically susceptible. In contrast to this, when Vasco da Gama rounded the Cape of Good Hope in 1497, the Portuguese found themselves in a dynamic, multilateral, and ancient Asian commercial network stretching from southern Africa to the Red Sea and the Persian Gulf in the north, the Spice Islands (Maluku) in the east, and China and Japan in the northeast.

The initial responses to European voyages on the part of the people of coastal Eurasia and Africa seem to have been based on the reasonable assumption that Europeans were motivated chiefly, if not exclusively, by the search for profitable trade. And if we consider why Europeans sailed into the Indian Ocean while Asians did not venture into the Atlantic, it is clear that the bounty of the Monsoon Seas was such that Asians and East Africans had little incentive to sail out of their vast, variegated oecumene into the Atlantic or Pacific Oceans. European merchant-adventurers were eager to promote the potential of newly encountered pockets of wealth and raw materials to satisfy existing demand and develop new markets. At the same time, they were animated by profoundly aggressive ideologies and assumptions, chiefly religious at first, but legal, economic, and political as well. These shaped their expectations of, and responses to, the people they encountered, both east and west.

Despite some ideological continuities (the desire to spread the gospel being one that endured well into the nineteenth century), Europeans' motivations for expansion varied according to when and where they lived. This was the natural result of people becoming acclimatized to the vastly enlarged world that had been revealed to them, and the new experiences and ways of doing things that resulted from this incipient globalization. The Spanish and Portuguese at the end of the sixteenth century, for instance, had a completely different understanding of the world than their forebears had had 100 years before. Within Europe, too, there were marked differences between Iberian Catholics and English and Dutch Protestants, to name only one point of divergence. While Iberian voyagers put to sea animated in large part by a crusader zeal, northern Europeans – chiefly the Dutch, English, and French – were more interested in commercial opportunity and financial returns.

Apart from this consideration of how the passage of time changes people's attitudes is the fact that from the outset there were distinct and competing views about how Europeans should treat the people they encountered. In the most high-profile of the early debates, which took place in 1550–1, Juan Ginés de Sepúlveda argued that because Native Americans were 'deficient in reason, whether because of the region of the heavens, which makes them weak, for the most part; or because of some evil custom, which makes men almost like beasts', they could be warred upon or enslaved.³ Bartolomé de las Casas, 'apostle of the Indians' and biographer of Columbus, argued vigorously to the contrary. In so doing, he upheld the wishes of Columbus' patron, Isabella of Castile, who had urged her husband and heirs 'not to allow the Indians – neighbors and inhabitants of the said Indies and Terra Firma, won and to be won – to suffer any harm whatsoever to their persons or to their possessions'.⁴

These ideas about how to deal with the people encountered had a dual origin. One was explicitly religious. Portugal's Dom Henrique (Henry 'the Navigator') was motivated by an abiding belief in the medieval concept of just war and an obligation to preach the true faith to heathens and crusade against heretics and Muslims.⁵ The crusader ethos had had far greater success in ridding Portugal and Spain of Muslims than in retaking the Holy Land, and Iberians exported an often militant Christianity around the world. In Asia, they fought Muslims and attempted to convert heathens, but apart from the Spanish in the Philippines, they met with little long-term success. Protestants tended to be less zealous about evangelizing non-Europeans. The Dutch famously razed their factory at Hirado when the Japanese took offence to their inscribing *Anno Domini 1639* on the gable stone of one of the buildings, which gave priority to the Christian calendar over the shogunal reign period.⁶

Another aspect of the Columbian voyages that complicates our assessments of the early years of discovery has to do with fifteenth-century Europeans' secular understanding of the *orbis terrarum* ('the whole earth'), which was rooted in a classical 'tripartite geopolitics' that divided the world into cold, temperate, and hot (tropical) zones whose inhabitants had distinct qualities by virtue of where they lived. People of the temperate Mediterranean zone were able to govern; those to their north and south were 'fierce but unwise' and 'wise but tame', respectively, but in either case, fit only to be ruled by temperate people.⁷ Likewise, different regions had distinct physical attributes, and the tropics were regarded as especially rich. As Jaume Ferrer

de Blanes advised Columbus, 'all good things come from very hot regions whose inhabitants are black or dark brown; and therefore [...] until Your Lordship meets such peoples, You shall fail to find an abundance of such things', including precious metals, spices, and fertile lands.⁸ Adherence to this conception of the world, with its roots in Ptolemy and Aristotle, also had implications for the issue of Indian enslavement because, as Sepúlveda argued, people native to the tropics were morally inferior by virtue of where they lived.

In addition to accounting for the endlessly evolving worldviews of those who lived during the age of discovery, as well as those whose claims are excessively grandiose, or who gloss over or ignore faults or failures, or who embellish the truth for propagandistic reasons or out of ignorance, there are more persistent, systemic biases. These result from deep-seated cultural prejudices, some of which can be traced back to claims like Sepúlveda's, others of which stem from long-passed grievances and rivalries. Foremost among the latter is 'the black legend', which holds the Spanish to have been '*uniquely* cruel, bigoted, tyrannical, obscurantist, lazy, fanatical, greedy, and treacherous [and] that Spaniards and Spanish history must be viewed and understood in terms not ordinarily used in describing and interpreting other peoples'.⁹ With roots in the religious conflicts between Dutch and English Protestants and Iberian Catholics of the sixteenth century, this chauvinism got a new lease on life in the nineteenth-century United States, thanks to the latter's paternalistic attitudes toward Latin America and its victory in the Spanish-American War, and due to Americans' and Western Europeans' contempt for decades of fascist rule in Spain and Portugal following the Second World War.¹⁰

Historical change is hardly unique to early modern Europeans, and it takes many forms. For the millennium before their breakout into the Atlantic and beyond, Europeans had been confined to 'a little cape of Asia', while the people of the southern Asian littoral were on the move.¹¹ Europeans' success in Asia cannot be explained without reference to the fact that maritime trading networks there had fully matured by the fifteenth century, at which time there was a sudden wave of self-containment and detachment from maritime enterprise. What some have interpreted as a long-term cultural stasis on the part of China, Japan, and certain Indian kingdoms was actually an inward swing of a pendulum that has now swung the other way. While these states were all Asian, that is about all they had in common. The timing and reasons for their withdrawal around the start of the age of discovery were different, as were the timing and causes of their re-emergence on the world stage in the nineteenth and twentieth centuries.

Many kingdoms and cultures of maritime Asia had already experienced their own 'ages of discovery', starting with Persian Gulf mariners in the ninth and tenth centuries, who began pioneering routes to Southeast and East Asia, Indian sailors who resumed long-distance voyaging across the Arabian Sea and Bay of Bengal no later than this, and the Chinese. The tradition of Chinese writing about the Nanhai, or South Sea, dates to the Han dynasty around 2,000 years ago, but during the 400 years of the Song and Yuan Dynasties – from 960 to 1368 – Chinese knowledge about maritime Asia grew faster than at any time before or since.¹² The growth in sea trade during the Song Dynasty had been a catalyst for the systematic acquisition and

description of geographic and economic knowledge, as exemplified in such works as Zhao Rugua's *Description of Barbarous Peoples* (or *Records of Foreign Nations*, 1225), which includes thumbnail sketches of various parts of Africa, Southwest Asia, and even the Mediterranean.¹³

While China's maritime trade had been growing for hundreds of years, the Southern Song's embrace of overseas commerce in the twelfth and thirteenth centuries was a deliberate effort to compensate for the lack of favourable overland trade. The presence of the Jurchen Jin on their landward flank had forced the Song to relocate their capital to Lin'an (modern Hangzhou), the only time a port city has ever served as the Chinese capital. The Yuan dynasty that followed was able to engage with sea trade because, as Mongols, they had free access to the trade of continental Asia and they were under no threat from their neighbours.¹⁴

The native Chinese Ming dynasty that succeeded the Yuan in the fourteenth century had no such option, and in 1371 imposed a strict ban on overseas trade (*haijin*) so that they could turn their undivided attention to their vulnerable continental borders. This was reversed at the start of the fifteenth century, when seven state-sponsored fleets under Zheng He sailed into the Indian Ocean between 1405 and 1433. Far from discovering new sea routes, however, these voyages simply capitalized on the knowledge gained over the course of several centuries of long-distance maritime exchange.¹⁵ This outward-looking period ended abruptly when the emperor closed Chinese ports to foreign trade, a prohibition that lasted until 1567. If this withdrawal from sea trade isolated the Chinese from overseas influence, the closure of one of the largest markets in the Monsoon Seas must have had a profound if unquantifiable effect on merchants the length of the Asian littoral, and may help account for the success of the Portuguese who, if nothing else, opened a new western market for Asian goods.

A less dramatic withdrawal from the sea took shape on the Indian subcontinent as a conservative strain of Hinduism took hold, particularly among high-caste Indians, who began avoiding overseas travel on religious grounds.¹⁶ Their concern was evidently not over religious proscriptions on seafaring per se, but had to do with the complexity and cost of purification rites one had to undergo after mixing with non-Hindus. But as the presence of Indian communities from Oceania to Africa to the Americas attests, such constraints did not apply to all Hindus or at all times. And an unwillingness to go abroad oneself was no bar to investing in, or profiting from, overseas trade, which many continued to do throughout the period of European discovery.

The last major market to contract in this period was Japan. Although Portuguese and Spanish missionaries made deep inroads in Japan during the sixteenth century, when there were an estimated 300,000 converts to Catholicism, openness to Christianity reversed between the 1580s and 1630s.¹⁷ The shogun Tokugawa Ieyasu instituted a policy of *sakoku* ('closed country', or *kaikin*, 'maritime prohibitions') in 1635, and expelled the last Portuguese in 1639. The *sakoku* edict limited merchants' access to Japan to four ports that catered to traffic with Korea, the Kingdom of Ryukyu, the northern island of Hokkaido, and China, Taiwan, and Dutch Batavia, respectively, and prohibited Japanese from sailing overseas. The punishment for anyone who returned from abroad was death. These laws remained in effect for more than two centuries.¹⁸

Nor were these contractions limited to Asia. The chronology of Oceanian settlement shows that long-distance voyaging and migration ebbed and flowed in centuries-long cycles. When Europeans reached the Pacific in the sixteenth century, the forces of expansion had been spent for some time, though Polynesians had by no means abandoned the sea or lost the ability to navigate long distances. In the eighteenth century, a member of James Cook's first expedition noted that the Tahitian Tupia could locate scores of remote islands and that journeys of 20 days were not uncommon.¹⁹ Cook took this as evidence that it would be possible to trace the origins of the settlement of Oceania all the way from the East Indies. Such a straightforward understanding by one of the great navigators of his day was later dismissed by theorists who decided that non-Europeans were incapable of such feats, and that people reached all the islands of the Pacific only by 'accidental drift' rather than intentional navigation.²⁰ Such notions were consistent with views of unsophisticated heathen islanders promulgated by nineteenth-century Western missionaries lumbering under the weight of the 'white man's burden', but Cook's intuition has since been validated by armies of specialists who have considered the matter in depth.

The age of discovery: an overview

The age of discovery began to take shape at the end of the thirteenth century. Genoese merchants began sending 'great galleys' to the Low Countries in 1277, thus inaugurating direct sea trade from Mediterranean ports to northern Europe. Italian merchants' interest in the west accelerated in 1291 with the Mamluk capture of Tyre, the last of the Crusader-held ports in the Levant. Although the growth of trading opportunities in the Black Sea compensated for some of the losses, Italian merchants sought out new opportunities in the west. Shortly after the fall of Tyre, the Genoese brothers Vadino and Ugolino Vivaldi attempted a circumnavigation of Africa starting from the Strait of Gibraltar and then turning south, but many more Genoese found themselves in Portuguese employ.²¹ Sailing along the Atlantic coast of Africa, Luso-Genoese expeditions landed in the Canary Islands, about 100 miles off the coast, in the 1330s. In 1344, the pope effectively assigned the islands, which were inhabited by the Guaniche people, to the Kingdom of Castile, a decision with far-reaching world-historical implications.²² Iberian navigators followed the northeast trade winds, which prevail between 5°N and 30°N, to work their way down the coast of Africa. The return home involved them in a search for westerlies (30°N–60°N) that took them out to sea in increasingly broad arcs – the *volta da mar*, or (re)turn of the sea – through the uninhabited archipelagos of Madeira and the Azores, by 1370, and the Cape Verde Islands, by 1460.²³

The Portuguese age of discovery received its first major boost from Dom Henrique in the fifteenth century, who promoted the exploration of the coast of West Africa partly for its material rewards – gold, slaves, malaguetta pepper, and a previously untapped coastal fishery – and partly as an expression of his dedication to the ideals of crusading and just war, which encompassed a desire to convert unbelievers and the need to combat Muslims and heathens. These ambitions dovetailed

nicely in the effort to establish direct access to these commodities by sea and to deny Muslim-controlled caravans the profits of transporting them north. By the time of Henrique's death, navigators under his auspices had reached Cape Verde, in Senegal, and he had promoted the settlement of Madeira, to which he introduced sugar and grape cultivation, and the Azores.

It would be another decade before the Portuguese rounded the bulge of West Africa to enter the Gulf of Guinea, at which point the idea of rounding Africa to reach India took hold.²⁴ The Portuguese crossed the equator in 1471, reached the Zaire (Congo) River in 1482, and landed at Cape Cross, just north of Walvis Bay, Namibia, in 1485. This new farthest south prompted King João II to send out four expeditions, two by sea and two overland, to determine if reaching the Indian Ocean by sea was feasible and to assess the opportunities for trade there. The most successful of his emissaries was Bartolomeu Dias, who commanded three vessels on a voyage that brought European ships into the Indian Ocean for the first time. On February 3, 1488, Dias landed at Mossel Bay, South Africa, 130 miles east of Cape Agulhas. On his return, he saw the Cape of Good Hope, which João so named in the expectation that the riches of Asia were now in reach.²⁵

Domestic problems combined with resistance to the idea of breaking into the trade of the Indian Ocean led to a decade-long suspension of exploratory voyages. The opposition was not unreasonable: no one in Portugal knew the first thing about the Indian Ocean world; the outlay in men and materiel might weaken the kingdom at home; and any success they might enjoy could excite jealous rivals.²⁶ Whatever the cause, however, the initiative for Atlantic exploration slipped to Spain, where in 1492 Columbus secured backing for a voyage across the Atlantic from Ferdinand of Aragon and Isabella of Castile, fresh from their conquest of the Emirate of Granada, the last Muslim power on the Iberian Peninsula.

Columbus's conception of a westward voyage to Asia – his intended object – is inextricably bound up with the Portuguese and Spanish exploration of the eastern Atlantic and Africa, of which he had personal experience; he also claimed to have sailed north to the British Isles and Iceland. In this respect, he was a creature of his time. Genoese by birth, he had moved to Lisbon in 1476 and found ready employment in Portuguese ships. He also married the daughter of the late governor of Porto Santo in the Madeiras, whose widow gave her son-in-law a trove of her husband's 'instruments, documents, and navigation charts'.²⁷

Columbus was not alone in his belief that Asia could be reached by sailing west, an idea first proposed in 1470 by the Florentine geographer and cartographer Paolo dal Pozzo Toscanelli. Both men grossly underestimated the distances involved; and while medieval lore posited the existence of islands called Antilia somewhere in the Atlantic, no one had any inkling that a continental landmass lay between the eastern and western extremes of Eurasia. Between the mid-1480s and 1492, Columbus travelled from court to court to solicit support for a westward voyage variously from João II and later from Isabella and Ferdinand. João declined, likely because the southward voyages showed such promise; so did Isabella and Ferdinand, then preoccupied with ridding Spain of Muslim rule. The latter changed their minds after the fall of Granada and having been convinced that though the cost of a failed expedition would be

relatively slight, regaining the initiative would be difficult if someone else found a westward route first.²⁸

In command of three ships, Columbus sailed from southern Spain for the Canary Islands, which were so well-placed for the start of a westward crossing of the Atlantic in the age of sail that a later Spanish king deemed them 'the most important of my possessions, for they are the straight way and approach to the Indies'.²⁹ Sailing again on 6 September, Columbus shaped a course somewhat south of west. After 33 days at sea, during which they averaged about 90 miles per day, with a best day's run of 182 miles, the Spanish landed in the Bahamas, which they explored for two weeks before turning south to Cuba on the recommendation of the Taíno people who lived there.³⁰ Here we see the influence of pre-existing mental frameworks on the course of European exploration, for the Taínos had connections to Cuba and other Caribbean islands, but not with Florida, which is equidistant to the west. As a result, Spanish explorers including Columbus, who made three further voyages, focused on Central and South America, which they penetrated quickly thanks to the networks of communication and trade established by the Aztecs in Mexico, the Maya in Central America, and the Inca in Peru. Vasco Núñez de Balboa crossed the Isthmus of Panama in 1513, becoming the first European to see the Pacific, on whose American shores the Spanish laid out a coastal network of ports from Acapulco, Mexico, to Concepción, Chile.³¹

Spurred in part by Columbus's success, in 1497 João's successor, Manoel I, sent Gama to continue the work of Dias. His four ships stopped in the Cape Verde Islands. From there, they sailed south of the equator where they picked up the southeast trade winds (5°S–30°S) on the first leg of a geographically longer but faster route to the Indian Ocean. Off the bulge of South America (where Pedro Alvares Cabral landed in 1500), they found the Brazil Current which bore them down to the South Atlantic Current and the prevailing westerlies (30°S–60°S). They reached the coast of South Africa north of Cape Town after a passage of 5,200 nautical miles out of sight of land, the longest recorded to that time.³² From there, the Portuguese worked their way along the coast with stops at Mossel Bay, the mouth of the Zambezi River, the island of Mozambique (where they encountered their first Muslim traders), Mombasa, and Malindi, Kenya. There they hired a Muslim pilot who guided them the 2,600 miles across the Indian Ocean to the southern Indian port of Calicut, which they reached after 21 days.³³

The accelerating pace of the Portuguese push toward the Indian Ocean is notable. They rounded Cape Bojador, only 770 nautical miles from Tangier, in 1434, and it took seven more years to reach the Gulf of Arguin, about the same distance again. It would be another 30 years before they sailed into the Gulf of Guinea – an average gain of about 53 miles per year over 30 years, but along a more populous and indented coast. Thereafter, however, the pace quickened appreciably. Between 1471 and Dias's arrival in Mossel Bay, they covered another 3,000 miles – about 180 miles per year. When voyaging resumed in 1497, Gama shattered the previous gains completely, adding at least 3,300 miles between Mossel Bay, Malindi, and Calicut in one voyage.

What made this possible is that upon reaching Mozambique, the Portuguese were in the trading world of the Indian Ocean, which merchant sailors had been traversing

for millennia, and it was only a question of learning routes from those already familiar with them. Had the monsoon systems of the Indian Ocean been unknown, the Portuguese would have had to hug the coast of the Arabian Sea until they reached India. The importance of local knowledge is clear enough from what happened on their return. Gama so antagonized and disdained his Indian hosts that he sailed without a pilot and without waiting for a favourable monsoon. As a result, the return passage to Malindi took not three weeks but three months, during which 30 men died.³⁴

The Portuguese quickly learned to rely on the monsoons (from the Arabic, *mausim*, meaning 'season'), which dictated sailing schedules across the Indian Ocean and the waters of eastern Asia: the summer southwest monsoon, which blows toward India, the Bay of Bengal, and Japan, and the winter northeast monsoon, which blows from China and Japan toward the Strait of Malacca, and from South Asia toward Africa. The seasonal variation in wind direction and intensity was more significant than the distances involved, and with favourable winds, sailors readily sailed the 2,000 miles from Aden and southern India or Sri Lanka.³⁵ The Dutch found an alternative to the monsoons at the start of the seventeenth century, when Hendrik Brouwer discovered the westerlies, or the Roaring Forties. By sailing east from Cape Town for about 2,800 nautical miles before turning northeast for the Sunda Strait, Dutch East India Company ships saved up to six months of sailing time over the monsoon route.³⁶ The major problem was that because navigators had no practical means of determining longitude at sea until the 1760s, many failed to change course before running into the west coast of Australia, which became the site of several infamous shipwrecks.

In 1511, the Portuguese had reached the Spice Islands of eastern Indonesia and the coast of China, an achievement that prompted the first circumnavigation of the globe. This was initiated by Ferdinand Magellan, who sought and found a sea route to Asia around the tip of South America and crossed the Pacific from east to west in 1521. Once past Cape Horn, Magellan sailed in search of winds that would take him across the Pacific. Notwithstanding sailors' appreciation for the trade wind routes of the North and South Atlantic, they did not yet realize the global pattern of the world's wind systems, which on a worldwide level are fairly predictable. This explains why Magellan seems to have sailed north of the equator rather than searching for the southeast trade winds. His precise route is unknown, but it is believed that he picked up the northeast trades at around 10°N latitude. Antonio Pigafetta's account relates that they saw no land for 14 weeks, during which the crew suffered from near starvation and scurvy.³⁷ This was a disease that had thus far spared most sailors because it only afflicts people after a month without fresh food, which was longer than people were accustomed to sail before the European age of discovery. The search for a cure would last until the nineteenth century.³⁸

Following Magellan's death in the Philippines, command of the expedition's two remaining ships fell to Juan Sebastian de Elcano and Gonzalo Gómez de Espinosa. Elcano returned to Spain via Timor and a westerly crossing of the Indian Ocean to the Cape of Good Hope using the southeast trade winds rather than the northeastern monsoon. Meanwhile, Gómez de Espinosa had attempted to return across the Pacific, but when unable to find favourable winds he was forced back to the Spice Islands, where the Portuguese arrested him and his crew. A rescue mission reached the Spice

Islands in 1525, but its surviving crew were imprisoned until 1536. It would take until 1565 before Andrés de Urdaneta, a survivor of the 1525 effort, discovered the westerlies (which blow at the same latitude in the Pacific as they do in the Atlantic) by sailing north of the Philippines to about 39°N before turning east.³⁹

Dividing the sea

The avowed reason for Urdaneta's expedition to the Philippines was so that the Spanish could convert the inhabitants to Catholicism, an effort sanctioned by a series of papal bulls that assigned control of all lands inhabited by 'infidels or pagans' and unknown to Europeans to either Portugal or Castile as early as 1344.⁴⁰ The division of the Atlantic was confirmed by the bilateral Treaty of Alcáçovas of 1479.⁴¹ Two years after Christopher Columbus first crossed the Atlantic, the Treaty of Tordesillas drew a line 370 leagues west of the Cape Verde Islands and stated that 'all lands [...] found and discovered already, or to be found and discovered hereafter [...] shall belong to, and remain in the possession of, and pertain forever to' the kings of Portugal (east of the line) and of 'Castile, Aragon, etc.' (west of the line).⁴² The 1529 Treaty of Zaragoza attempted to clarify 'the demarcation of the ocean sea' in the western Pacific and assigned the Spice Islands and the Philippines to Portugal. Urdaneta's expedition in 1565 was clearly in violation of this, but Portugal was unable to prevent the Spanish incursion.⁴³

Challenges to the church-sanctioned partition of the world into Portuguese and Spanish spheres of influence began in the fifteenth century. In 1497, England's Henry VII issued John Cabot and his son letters patent to sail west and guaranteeing that they 'may conquer, occupy and possess' any territories they found 'which before this time were unknown to all Christians'.⁴⁴ As Jacques Cartier prepared for his third voyage to Canada in the 1540s, Francis I rebutted Spanish claims that he was infringing on their territory by arguing that the pope lacked standing to divide the world among secular powers.⁴⁵ The argument for such a view was fleshed out more fully by the Dutch jurist Grotius, who in *Mare Liberum* ('The Free Seas'; 1609) maintained that the pope's 'donation' to Portugal had no legal basis, that the sea was a commons open to all people and subject to dominion by none, and that 'it is lawful for any nation to go to any other and to trade with it'.⁴⁶ Although he appealed to classical jurists to support his arguments, Grotius can be said to have discovered (or perhaps rediscovered) a legal theory that helped facilitate long-distance international trade and, incidental to that, further geographic discoveries. Indeed, *Mare Liberum* is regarded as a cornerstone of modern international law.

The North Atlantic and the search for the Northwest Passage

While Iberian and Italian sailors were busy breaking the code of the mid-Atlantic and South Atlantic wind systems, merchants and fishermen from Denmark, England, and elsewhere in northern Europe were operating at least as far west as Iceland. Norse Vikings settled there in the ninth century and, in 1000, Norsemen and Icelanders established small enclaves in Greenland, which were abandoned around 1410.⁴⁷ There

are suggestions that fishermen might have operated on the eastern fringe of North America in the late fifteenth century, but the first hard evidence for transatlantic voyages in the early modern period dates to Henry VII's commission to John Cabot. That year, Cabot sailed in the late spring, a period of variable winds that makes it possible to sail west at that latitude. Though he might have reached Labrador, his route is unknown and he apparently accomplished little. The next year, one ship turned back and four disappeared, along with Cabot and his crews.⁴⁸

According to Milan's ambassador to England, however, Cabot had reported 'that the sea is covered with fish which are caught not merely with nets but with baskets, a stone being attached to make the basket sink in the water'.⁴⁹ Thereafter, fish led the way, and English and Spanish accounts of the 1520s tell of seeing as many as 50 fishing vessels on the Newfoundland coast.⁵⁰ Such crowding led to a steady search for new fishing grounds that drew European fishermen ever westward from the Grand Banks south of Newfoundland to Nova Scotia and the Gulf of Maine, which the English began to exploit in the early 1600s.

Apart from fish, the only incentive for sailing that far north was to seek a shortcut to Asia via a Northwest Passage. The French sponsored two expeditions to North America to find a western route to the Pacific. Giovanni Verrazzano sailed along the coast from North Carolina to Newfoundland in 1524, and in the course of three voyages in the following decade, Cartier probed the St Lawrence River as far as Montreal.⁵¹ In the 1570s, the English Martin Frobisher searched for a Northwest Passage with similarly lacklustre results, while one goal of Francis Drake's circumnavigation of 1577–80 was to reconnoitre the Pacific coast of North America for the western outlet of a transcontinental strait. The closest anyone would come to finding a northerly shortcut to the Orient was on the voyage of Robert Bylot and William Baffin, who in 1616 reached the mouth of Lancaster Sound, which ultimately proved to be the eastern entrance to the Northwest Passage. But theirs was the last such voyage for two centuries, although whalers hailing from the Basque country to Denmark and Norway began unlocking the secrets of Arctic navigation around Spitsbergen and Greenland in the seventeenth and eighteenth centuries.⁵² Farther south, however, the French, English, Dutch, and others turned their eyes to the exploration and settlement of what would become the United States and Canada.

Discovery in the age of enlightenment

The seventeenth century was a period of consolidation and the incremental extension of European commercial, military, religious, and political hegemony in various far-flung regions. The shape of the world, its continents, islands, and seas, was coming into sharper focus thanks to advances in cartography, astronomy, geography (especially refined methods for determining longitude), and the beginnings of oceanography. At the turn of the eighteenth century, Edmund Halley (of comet fame) commanded three scientific expeditions. The first two, which ranged as far south as 52°S, were intended to determine 'the Nature of the Variation of the Compass over the whole Earth', and the best method of 'discovering the Longitude at Sea', while in 1701 he spent four months crisscrossing the English Channel to observe

tidal currents and produced the first chart of the channel showing the 'flowing of the Tydes, and setting of the Current'.⁵³

Interest in expanding Europeans' geographical knowledge of the world continued through the eighteenth century, with increased attention being paid to the polar regions and the search for a long hypothesized southern continent, *Terra Australis*. Russia had pushed its eastern border to the Pacific in the early seventeenth century and, in 1648, Semyon Dezhnev led an expedition down the Kolyma River to the Arctic Ocean, around the Chukchi Peninsula and south through the Bering Strait to the mouth of the Anadyr River.⁵⁴ The expedition was forgotten, and in the early eighteenth century Peter the Great appointed Vitus Bering to lead an expedition to determine whether northeastern Russia and northwestern America were contiguous or separated by water. Bering transited his eponymous strait in 1728 and visited several of the Aleutian Islands, but died without reaching North America. On the Second Kamchatka Expedition (1741), his second in command, Aleksei Chirikov, reached Cape Prince of Wales (the east side of the strait), Baranof Island in southeast Alaska, and Adak Island in the Aleutians. Promising though these findings were, the Russians lost interest in further exploration of the region for the next 70 years.⁵⁵

In the 1760s, the British began sending out expeditions to search for new lands that would give them a commercial or strategic advantage over their rivals. John Byron made two voyages to the Pacific, on the first of which he ignored his brief to look for a western outlet for the Northwest Passage to sail through the South Pacific, including the Juan Fernández Islands, the Tuamotus, the Tokelaus, and the Marianas. He did not find the Solomon Islands, which had become his primary objective, but if nothing else, Byron's voyage did force the Admiralty to direct its attention to the South Pacific.⁵⁶ A subsequent expedition under Samuel Wallis was tasked with finding 'Land or Islands of Great extent [...] in the Southern Hemisphere between Cape Horn and New Zealand [...] in Latitudes convenient for Navigation and in Climates adapted to the produce of Commodities useful in Commerce'.⁵⁷ Such places did not exist, but Wallis and his men were the first Europeans to visit Tahiti, their idealized descriptions of which had a profound effect not only on the subsequent exploration of the Pacific but on the European imagination as well. Tahiti's location at the heart of Polynesia was important, yet its psychological impact was greater still, 'For Wallis had not merely found a convenient port of call. He had stumbled on a foundation stone of the Romantic movement'.⁵⁸

The English were not alone in their rhapsodic depictions of a Tahitian paradise, which were amplified by the members of an expedition under Louis Antoine de Bougainville, who called there only 10 months after Wallis. Latecomers to Pacific exploration, the French were interested in increasing geographic knowledge, which served their commercial and diplomatic interests, but Bougainville also sailed with a naturalist and an astronomer. In a voyage lasting more than two years, the French added to or corrected countless charts of the Pacific from South America to the Spice Islands, and returned home with more than 3,000 plant and animal specimens.⁵⁹ Bougainville's expedition added a completely new dimension to the enterprise of discovery, but his accomplishments – and those of all but a very few others – are overshadowed by those of the Royal Navy's incomparable James Cook.

In the course of three voyages, Cook sailed from the ice fields of Antarctica to the Arctic Ocean. His first expedition (1768–71) included eight naturalists, one of whom wrote:

No people ever went to sea better fitted out for the purpose of Natural History, nor more elegantly. They have got a fine library of Natural History; they have all sorts of machines for catching and preserving insects; all kinds of nets, trawls, drags and hooks for coral fishing.⁶⁰

The avowed object of this first voyage was to visit Tahiti to observe the transit of Venus, which Halley had recommended at the start of the century as a means of measuring the distance to the Sun. The weather was uncooperative, but after this stop, he opened secret orders to look for Terra Australis. In so doing he circumnavigated New Zealand, which he confirmed was not part of a larger continent, and after being blown off course sailed along the coast of Australia, putting into Botany Bay, which takes its name from the abundance of new plant species gathered there. On his second voyage (1772–5), Cook sailed twice below the Antarctic Circle – his two ships are the first known to have done so – ultimately reaching 71°10'S, 106°30'W (east of the Palmer Peninsula). While he believed strongly that a continent lay to his south, he did not see Antarctica itself because 'the sea is so pestered with ice that the land is thereby inaccessible'.⁶¹ In the course of his first two voyages, Cook also came across a number of archipelagos previously unknown to Europeans, including the Friendly Islands (Tonga), and the uninhabited South Georgia and South Shetland Islands in the South Atlantic.

The primary object of Cook's third voyage (1776–80) was to take up the quest for the western outlet of the Northwest Passage, which took him to the Pacific Northwest and from there along the coast to the Alaska Peninsula, across the Bering Sea, and through the Bering Strait as far as Icy Cape, Alaska, and west to the Chukchi Peninsula. Sailing south, the British spent six peaceful months in Hawaii before sailing for the Arctic again. Forced to put back after only a few days, Cook was killed in a skirmish that erupted between a shore party and a group of Hawaiians.⁶² His successor in command returned to north of Ice Cape, reaching a new farthest north of 71°56'N before abandoning the search for a Northwest Passage, which would go undiscovered until the 1850s and remained untraversed until 1903–6.

The upshot

The European age of discovery left a complex legacy. In some respects, the world was not ready to be integrated. As a result, Native Americans' lack of immunity to diseases introduced from Eurasia and Africa led to a ruinous loss of human life and culture.⁶³ Clashes between combative ideologies yielded otherwise gratuitous warfare and bloodshed, and, when joined with material greed, to regressive notions of racial supremacy and cultural subordination. Yet the global distribution of lethal pathogens and dogmas was offset by the more salubrious circulation of flora and fauna – the 'Columbian exchange' of plants and animals that brought horses to the Americas, tomatoes to Italy, and sheep to New Zealand.⁶⁴ These material goods were

accompanied by the dissemination of language and literature, science and technology, art and music, legal and business practice, and a host of other cultural trappings. If the age of discovery did not give people a common perspective on the globe, it did show that we have a globe in common.

Notes

- 1 *American Heritage Dictionary*, 5th edn, s.v. 'discovery', and H. Grotius, *Commentary on the Law of Prize and Booty*, ed. M. J. Van Ittersum, Indianapolis: Liberty Fund, p. 306. See also W. E. Washburn, 'The Meaning of "Discovery" in the Fifteenth and Sixteenth Centuries', *American Historical Review* 68/1, 1962, pp. 12–15.
- 2 L. Blussé and F. Fernández-Armesto, eds, *Shifting Communities and Identity Formation in Early Modern Asia*, Leiden: CNWS, 2003, p. 3.
- 3 N. Wey Gómez, *The Tropics of Empire: Why Columbus Sailed South to the Indies*, Cambridge: MIT Press, 2008, p. 105.
- 4 Wey Gómez, *The Tropics of Empire*, p. 101.
- 5 P. E. Russell, *Prince Henry 'the Navigator': A Life*, New Haven: Yale University Press, 2000, pp. 144, 158, 250.
- 6 L. Blussé, *Visible Cities: Canton, Nagasaki, and Batavia and the Coming of the Americans*, Cambridge, MA: Harvard University Press, 2008, p. 22.
- 7 Wey Gómez, *The Tropics of Empire*, p. 70.
- 8 Wey Gómez, *The Tropics of Empire*, p. 42.
- 9 P. W. Powell, *Tree of Hate: Propaganda and Prejudices Affecting United States Relations with the Hispanic World*, New York: Basic Books, 1971, p. 11.
- 10 Powell, *Tree of Hate*, pp. 134, 153–6.
- 11 'L'Europe deviendra-t-elle ce qu'elle est en réalité, c'est-à-dire: un petit cap du continent asiatique?', in P. Valéry, 'La crise de l'esprit (1919), Deuxième lettre', Chicoutimi, Quebec: Pierre Palpant, 2005, p. 9.
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- 13 See F. Hirth and W. W. Rockhill, 'Introduction', in F. Hirth and W. W. Rockhill (eds), *Chau Ju-kua: His Work on the Chinese and Arab Trade in the Twelfth and Thirteenth Centuries Entitled Chu-fan-chi*, reprinted Amsterdam: Oriental Press, 1911, 1966, pp. 36–8.
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- 19 Paine, *The Sea and Civilization*, p. 21.
- 20 G. Irwin, *The Prehistoric Exploration and Colonisation of the Pacific*, Cambridge: Cambridge University Press, 1992, pp. 16–17.
- 21 F. Fernández-Armesto, *Before Columbus: Exploration and Colonisation from the Mediterranean to the Atlantic, 1229–1492*, Basingstoke: Macmillan, 1987, pp. 157–8.
- 22 D. Abulafia, *The Discovery of Mankind: Atlantic Encounters in the Age of Columbus*, New Haven: Yale University Press, 2008, pp. 72–3, and Fernández-Armesto, *Pathfinders*, p. 126.
- 23 Trade winds are so called from an archaic use of 'trade' meaning steadily and regularly.
- 24 Russell, *Prince Henry 'the Navigator'*, pp. 121–7.

- 25 Cape Agulhas (34°49'S, 20°00'E) is the southernmost point of Africa, about 95 kilometres southeast of the Cape of Good Hope (34°21'S, 18°28'E).
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- 27 B. de las Casas, *Las Casas on Columbus: Background and the Second and Fourth Voyages*, trans. N. Griffin, *Repertorium Columbianum* 7, Turnhout: Brepols, 1999, p. 31.
- 28 W. D. Phillips, Jr. and C. R. Phillips, *The Worlds of Christopher Columbus*, Cambridge: Cambridge University Press, 1992, pp. 110–11, 119–32.
- 29 Fernández-Armesto, *Pathfinders*, p. 165.
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- 31 Morison, *The European Discovery of America: The Southern Voyages*, pp. 200–5.
- 32 Fernández-Armesto, *Pathfinders*, pp. 177–8.
- 33 Subrahmanyam, *The Career and Legend of Vasco da Gama*, pp. 121–8.
- 34 Subrahmanyam, *The Career and Legend of Vasco da Gama*, pp. 145–8.
- 35 Paine, *The Sea and Civilization*, pp. 146–7, 168–9.
- 36 R. Parthesius, *Dutch Ships in Tropical Waters: The Development of the Dutch East India Company (VOC) Shipping Network in Asia 1595–1660*, Amsterdam: Amsterdam University Press, 2008, p. 114.
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- 38 Paine, *The Sea and Civilization*, p. 476.
- 39 O. H. K. Spate, *The Spanish Lake*, Minneapolis: University of Minnesota Press, 1979, pp. 100–5.
- 40 See note 23 above.
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- 43 Treaty of Zaragoza, art. 13, in Davenport and Paullin, *European Treaties*, 1: p. 193.
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- 45 Paine, *The Sea and Civilization*, p. 446.
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