

1492

The Year Our World Began

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Extract

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Chapter 1

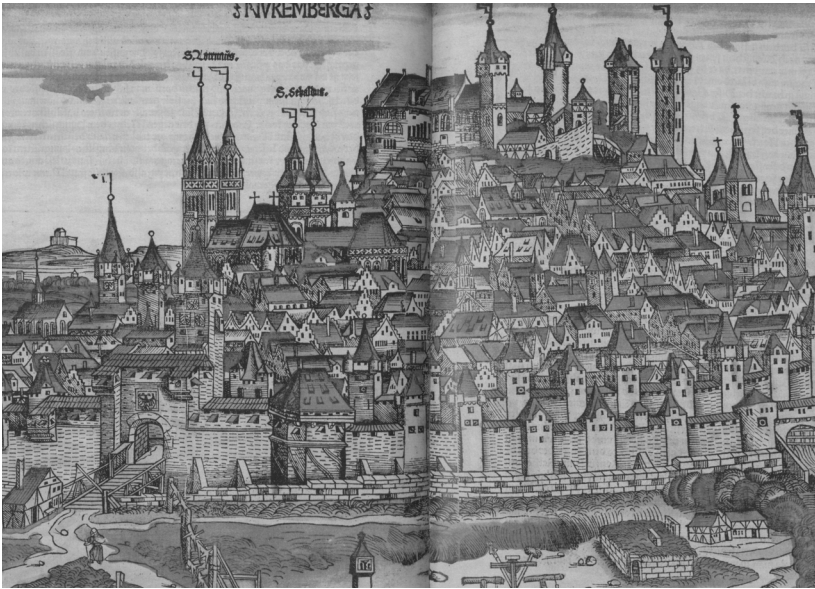
“This World Is Small”

Prophecy and Reality in 1492

17 June: Martin Behaim is at work making a globe of the world in Nuremberg.

In 1491, a prophet appeared in Rome in rags, flourishing, as his greatest possession, a wooden cross. People thronged large squares to hear him announce that tears and tribulations would be their lot throughout the coming year. An “Angelic Pope” would then emerge and save the Church by abandoning worldly power for the power of prayer.¹

The prediction could not have been more wrong. There was a papal election in 1492, but it produced one of the most corrupt popes ever to have disgraced his see. Worldly power continued to mock spiritual priorities – though a ferocious conflict between the two began in the same year. The Church did not enter a new age but continued to invite and disappoint hopes of reform. The events the prophet failed to foresee were, in any case, far more momentous than those he predicted. The year 1492 did not just transform Christendom, but also refashioned the world.



Late-fifteenth-century humanists thought Nuremberg as “significant as Athens or Rome”. Illustrators of the “world-overview”, published there in 1493 “at rich citizens’ expense”, concurred.

Until then, the world was divided among sundered cultures and divergent ecosystems. Divergence began perhaps about 150 million years ago, with the fracture of Pangaea – the planet’s single great landmass that poked above the surface of the oceans. The continents formed, and continental drift began. Continents and islands got ever farther apart. In each place, evolution followed a distinctive course. Every continent had its peculiar repertoire of plants and animals. Life-forms grew apart, even more spectacularly than the differences that grew between peoples, whose cultural variety multiplied, and whose appearance and behaviour diverged so much that when they began to re-establish contact they at first had difficulty recognising each other as belonging to one human family or sharing the same moral community.

With extraordinary suddenness, in 1492 this long-standing pattern went into reverse. The aeons-old history of divergence virtually came to an end, and a new, convergent era of the history of the planet began.

The world stumbled over the brink of an ecological revolution, and ever since, ecological exchanges have wiped out the most marked effects of 150 million years of evolutionary divergence. Today, the same life-forms occur, the same crops grow, the same species thrive, the same creatures collaborate and compete, and the same micro-organisms live off them in similar climatic zones all over the planet.

Meanwhile, between formerly sundered peoples, renewed contacts have threaded the world together to the point where almost everyone on earth fits into a single web of contact, communication, contagion, and cultural exchange. Transoceanic migrations have swapped and swivelled human populations across the globe, while ecological exchange has transplanted other life-forms. Our own mutual divergence lasted for most of the previous one hundred thousand years, when our ancestors began to leave their East African homeland. As they adapted to new environments in newly colonised parts of the planet, they lost touch with each other, and lost even the capacity to recognise each other as fellow members of a single species, linked by common humanity. The cultures they created grew more and more unlike each other. Languages, religions, customs, and lifestyles proliferated, and although a long period of overlapping divergence and contact preceded 1492, only then did a renewal of worldwide links become possible.

For seaborne routes of contact depend on the winds and currents, and until Columbus exposed the wind system of the Atlantic, the winds of the world were like a code that no one could crack. The north-east trades, which Columbus used to cross the Atlantic, lead almost to where the Brazil Current sweeps shipping southward into the path of the westerlies of the South Atlantic and on around the entire globe. Once navigators had detected the pattern, the exploration of the oceans was an irreversible process – though of course slow and long and interrupted by many frustrations. The process is now almost over. “Uncontacted” people – refugees, perhaps, from cultural convergence – still turn up from time to time in the depths of Amazonia, but now the process of reconvergence seems almost complete. We live in “one world”.

We acknowledge all peoples as part of a single, worldwide moral community. The Dominican friar, Bartolomé de Las Casas (1484–1566), who was, in effect, Columbus's literary executor, perceived the unity of humankind as a result of his experiences with indigenous people in a Caribbean island that Columbus colonised. "All the peoples of the world," Las Casas wrote, in what has become one of the world's most celebrated tautologies, "are human", with common rights and freedoms.²

Because so much of the world we inhabit began then, 1492 seems an obvious – and amazingly neglected – choice, for a historian, of a single year of global history. Its commonest associations are with Columbus's discovery of a route to America – a world-changing event if ever there was one. It put the Old World in touch with the New and united formerly sundered civilisations by turning the Atlantic into a highway instead of a barrier. It made genuinely global history – a real "world system" – possible, in which events everywhere resonate together in an interconnected world, and in which the effects of thoughts and transactions cross oceans like the stirrings aroused by the flap of a butterfly's wings. It initiated European long-range imperialism, which went on to recarve the world. It brought the Americas into the world of the West, multiplying the resources of Western civilisation and making possible the eventual eclipse of long-hegemonic empires and economies in Asia.

By opening the Americas to Christian evangelisation and European migration, the events of 1492 radically redrafted the map of world religions and shifted the distribution and balance of world civilisations. Christendom, formerly dwarfed by Islam, began to climb to rough parity, with periods of numerical and territorial superiority. Until 1492, it seemed unthinkable that the West – a few lands at the poor end of Eurasia – could rival China or India. Columbus's anxiety to find ways to reach those places was a tribute to their magnetism and the sense of the inferiority Europeans felt when they imagined them or read about them. But when Westerners got privileged access to an underexploited New World, the prospects altered. Initiative – the power of some groups of people to change others – had formerly been concentrated in Asia. Now

it was accessible to interlopers from elsewhere. In the same year, unrelated events on the eastern edge of Christendom, where prophecy was even more heated about the imminent end of the world, elevated a new power, Russia, to the status of a great empire and a potential hegemon.

Columbus has so dominated books about 1492 – they have either been about him or focused on him – that the world around Columbus, which makes the effects of his voyage intelligible, has remained invisible to readers. The worlds Columbus connected; the civilisations he sought and failed to find; the places he never thought about, in recesses of Africa and Russia; the cultures in the Americas that he was unable even to imagine – all these were areas of dynamic change in 1492. Some of the changes were effective; that is, they launched transformations that have continued ever since, and have helped shape the world we inhabit today. Others were representative of longer-term changes of which our world is the result.

This book is an attempt to bring them all together by surveying them in a single conspectus, rather as a world traveller might have done on a grand tour of the world, if such a thing were possible, in 1492 – zigzagging around the densely populated band of productive civilisations that stretched around the globe, from the eastern edges of Asia across the Indian Ocean to East Africa and what we now think of as the Middle East, and across the Eurasian landmass to Russia and the Mediterranean world. From there, by way of the Atlantic, the civilisations of Meso-America and the Andean region were about to become accessible. Only an imaginary traveller could have girdled the whole world at the time. But real travellers pieced world-encompassing routes together, and as far as possible, readers will accompany them, starting in the next chapter, in Granada in January 1492. We shall cross the Sahara from Granada to Gao in West Africa with a Muslim adventurer, and visit the kingdom of Kongo with Portuguese explorers, before returning to explore the Mediterranean with Jewish refugees from expulsion in Spain, pausing in Rome and Florence to witness the Renaissance with pilgrims, preachers, and itinerant scholars. We shall traverse the Atlantic

with Columbus, and the Indian Ocean with another Italian merchant. Further stops on our selective tour of the world embrace the eastern frontier of Christendom and the worlds Columbus sought in China and almost grasped in America.

The motive I have in mind, as I make the journey in my imagination, is to see the world before it ends. In 1492, and as the year approached, expectations of destruction and renewal gripped prophets and pundits in Europe. The seer of Rome, whose name went unrecorded, was one of many who plied their trade in Europe at the time, ministering to sensation-hungry congregations. The world is always full of pessimists, woe-struck by a sense of decline, and optimists grasping for a golden future. There were plenty of both in the late fifteenth century. But in 1492, at least in western Europe, optimists dominated. Two kinds of optimism were rife: one – broadly speaking – religious in inspiration, the other secular.

In the West, religious optimism had accumulated since the twelfth century in circles influenced by the prophecies of the mystical Sicilian abbot Joachim of Fiore. He had devised a new method of divination based on a fanciful interpretation of the Bible. He pressed passages from all over scripture into service, but two texts were especially powerful and appealing: the prophecy that the writers of the Gospels put into Christ's mouth, among his last messages to his disciples, and the vision of the end of the world with which the Bible closes. There was strong, scary stuff here. Christ foresaw wars and rumours of wars, earthquakes, famines, "the beginning of sorrows. . . . The brother shall betray the brother to death, and the father the son; and children shall rise up against their parents, and shall cause them to be put to death. . . . Ye shall see the abomination of desolation. . . . For in those days shall be affliction, such as was not from the beginning of the creation which God created unto this time, neither shall be." The consolation was that after the sun and moon are quenched, and the stars fall, "then shall they see the Son of man coming in the clouds with great power and glory".³ The visionary of the book of Revelation added more terrors: hail and



Dürer's engravings of the Apocalypse were outstanding examples of a common theme of the art of the 1490s: the end of the world.

fire mingled with blood, the seas turned to blood or wormwood, plagues of giant locusts, scorpions as big as horses, and the earth covered with fire and darkness from "vials full of the wrath of God".⁴ Prophets who contemplated these disasters could do so, however, with a certain grim cheerfulness. Schadenfreude was part of it: the tribulations would be permanent only for evildoers. Part of it was relish for disasters as "signs" and portents of the purging of the world.

Anyone who has ever argued with a fundamentalist in our own times will know that you can read any message you like into scripture, but people are so eager for guidance from holy writ that their critical faculties often seem to go into suspension when they read it or receive other people's readings of it. In the texts he selected, Joachim of Fiore detected a providential scheme for the past and future of the cosmos, in three ages. After the Age of the Father, in which God was only partially



The relish with which illustrators of the Nuremberg Chronicle adapted Dürer's drawings of the Dance of Death evokes apocalyptic expectations.

revealed, the incarnation had launched the Age of the Son. A cosmic battle between Christ and Antichrist, good and evil, would inaugurate the Age of the Spirit, which would precede the end of the world, the fusion of earth and heaven, the reimmersion of time in eternity. Readers of Joachim scrutinised the world for the signs he predicted. The "Angelic Pope" would purify the Church and restore the blessings of the time of the apostles. A "Last Emperor" would conquer Jerusalem, unite the world, and champion Christ against the forces of evil. A burst of evangelisation would spread Christianity to parts of the world previous efforts could not reach.

Joachim's message impassioned readers and hearers in every walk of life, but none more than some members of the new order of friars that Francis of Assisi founded in the thirteenth century. Francis seemed to

embody some of Joachim’s prophecies. He and his followers exemplified the life that Christ and the apostles supposedly led. They owned nothing, shared everything, and lived from alms. They were inspired propagandists, evangelising the poor, confronting pagans, even – in Francis’s own case – preaching to ravens when no one else would listen. The Franciscans radiated a spirit of renewal of the world. When Francis submitted to what he took to be God’s call, he tore off his clothes in the public square of his home town, to signify his renunciation of wealth and his utter dependence on God – but it was also the sign of someone making a new start. His standards of poverty and piety were hard for his followers to sustain after his death, but a tendency among the friars insisted on fidelity to his spirit. These “Spiritual” Franciscans, who grew ever more apart from the rest of the order in the fourteenth and fifteenth centuries, were aware of the parallels between Francis’s life and Joachim’s prophecies, and they became increasingly focused on efforts to ignite the Age of the Spirit.

Meanwhile, Joachimites scoured the world for a potential “Last Emperor”. In the thirteenth century, Joachim’s native Sicily became part of the dominions of the rulers of Catalonia and adjoining regions in eastern Spain, known collectively as the Crown of Aragon. Perhaps for that reason, candidates for the role of the Last Emperor regularly emerged from Aragon. To some of his courtiers, Ferdinand of Aragon, who came to the throne in 1479, seemed a promising choice, especially as he was already, by marriage, king of Castile, the neighbouring kingdom to the west, and bore the traditional title “King of Jerusalem”. His programme of conquests in the 1480s, against infidels in the kingdom of Granada and pagans in the Canary Islands, seemed to invoke implicitly the image of an all-evangelising, all-unifying monarch.

In part, millenarian fervour in Christendom was a reaction to the recent and current expansion of Islam and the successes of the Turks. The horns of the crescent protruded ominously from Constantinople into central Europe and from Granada into Spain. Aragonese counsellors, bred in fear of the Turks, hoped that the junction of the Aragonese and

Castilian crowns would provide the strength they needed for the struggle. Castilians agreed. "With this conjuncture of two royal scepters," declared a Castilian chronicler, "Our Lord Jesus Christ took vengeance on his enemies and destroyed him who slays and curses."⁵ Columbus promised the king that the profits of his proposed transatlantic enterprise would meet the costs of conquering Jerusalem from the Muslim rulers of the Holy Land, fulfilling the prophecies and speeding the end of the world.

Ferdinand was not the only ruler to conjure up messianic language and anticipations of an imminent climax of history. Manuel the Fortunate of Portugal was equally susceptible to flatterers who assured him that he was chosen to reconquer Jerusalem and inaugurate the last phase of the world. Charles VIII of France, as we shall see, had a similar notion about himself, and used it to justify the invasion of Italy he launched in 1494. People nowadays generally think of Henry VII, who captured the throne of England in an uprising at the end of a long series of dynastic squabbles in 1485, as an almost boringly businesslike, hard-headed king. But he, too, was a child of prophecy, vaunting his "British" ancestry as evidence that he was destined to return the kingdom to the line of its ancient founders, fulfilling prophecies ascribed to Merlin, or to an "angelic voice" in the ear of an ancient Welsh prophet. In Russia, 1492 was, according to the consensus of the orthodox, to be the last year of the world.

Even secular thinkers, untouched by religious enthusiasms, were susceptible to prophecy. Admiration for ancient Rome and classical Greece was one of the strongest strands in the common culture of the Western elite, and the ancients were enthralled by oracles and auguries, omens and portents. Just as Joachimites sought prophecies in scripture, humanists scoured classical texts. Virgil's prediction of a golden age supplied a kind of secular alternative to the Age of the Spirit. In Virgil's own mind this was not really a prophecy, but flattery addressed to his own patron, Augustus, the first Roman emperor, and calculated to

sanctify the emperor's reputation by association with the gods. The golden age, Virgil's readers hoped, was imminent. According to Marsiglio Ficino, presiding genius of Florence's Platonists, it would start in 1492. He was thinking – as a good classicist should – of an ancient Roman prophecy: that in the fullness of time the “Age of Gold” would be renewed – the era that preceded Jupiter's supremacy among the gods, when Saturn ruled the heavens in harmony and peace prevailed on earth. Astrology, in which Ficino and many members of his circle were expert, helped. In 1484 a conjunction of the planets named after Saturn and Jupiter excited expectations of some great mutation in the world. Astrologers in Germany predicted twenty years of tumult, followed by a great reform of church and state.

Naturally, competing prophetic techniques spawned competing prophecies. In the 1480s, some expectations focused on the Last World Emperor, others on the dawn of the Age of Gold, others on cataclysm or reform. Almost no one who made a prediction of the future anywhere in Christendom expected the world to continue as it was.

Though they were wrong about most of the details, the prophets who expected change were right. Events in 1492 would make a decisive contribution towards transforming the planet – not just the human sphere but the entire environment in which human life is embedded – more profoundly and more enduringly than those of any previous single year. Because the story of how it happened is a global story, it has many starting points. But if we start in the southern German city of Nuremberg, we can get a privileged vantage point, from which the whole world becomes visible at a glance.

In Nuremberg, in the course of 1492, the most surprising object to survive from that year was taking shape: the oldest surviving globe of the world. The lacquered wooden sphere, mounted on a metal frame so as to be free to spin at a touch, gleams with continents and islands

painted in tawny browns. Seas shimmer in what at the time would have been expensive dark blue pigment – except for the Red Sea, which is a vivid, and also expensive, carmine. Little, scroll-like insets speckle the surface, full of tiny texts in which the cartographer explained his methods and pretended to esoteric knowledge. It was not the first globe ever made. Nor, even for its time, was it a particularly good attempt at realistic mapping: the length of Africa was distorted; the cartographer wildly misplaced capes along the coast, which explorers had measured with some accuracy; he made up names, otherwise unrecorded, for many places; he inserted evidently false claims to have seen much of coastal Africa for himself.

Despite the errors and rank falsehoods, the globe is a precious record of one vision of what the world was like at the time and a key to what made the year special – why 1492 is the best year from which to date the beginnings of the world we are in now and the era we call modernity. The globe made the world seem small: a nephew of St Francis Borgia's, writing a thank-you letter to his uncle for a gift of a globe in 1566, said that he had never realised how small the world was until he held it in his hands. Martin Behaim, like Columbus – who based his theory of a navigably narrow Atlantic on the conviction that, as he said, “[t]his world is small”⁶ – underestimated the size of the planet. But he was a prophet of one of the effects of the processes that started in 1492: the world became smaller in a metaphorical sense, because the whole of it became imaginable and mutually accessible.

Behaim's globe was, at least, an attempt to innovate – an ambition curiously absent in the work of Muslim mapmakers at the time. Perhaps because they were heirs to a rich medieval legacy, scholars in the Islamic world seem to have been satiated with cartography and uninterested in mapping the world afresh until Western advances forced them to try to catch up. One of the classical texts that Europeans hailed as a novelty in the fifteenth century – the *Geography* of the second-century Alexandrian scholar Claudius Ptolemy, had been well known in the Islamic world for many centuries; but until an Italian map based on Ptolemy's informa-

tion arrived in Constantinople in 1469, no Muslim cartographer seems to have thought of making use of it to enlarge the representation of the world. In 1513, an Ottoman cartographer produced a world map in Western style, copied from Western prototypes and using data, apparently captured at sea by Turkish warships, on Columbus's voyages. After a long period of dominance in all the sciences, the Islamic world seems to have fallen suddenly behind in that of mapping.

Muslim cartographers largely contented themselves with recycling Old World images, derived from great pioneers of mapmaking in the tenth and eleventh centuries. The only innovation in the interim was the attempt to superimpose a grid of lines of longitude and latitude – a technique Ptolemy had first proposed – on out-of-date information. Broadly speaking, Muslims in the 1490s had two types of map at their disposal: one formal and rigid, with no attempt at realism; the other, free-flowing and conceived – at least – to be realistic. The first form was familiar to many readers from the work of Ibn al Wardi, who died in 1457, and whose compendium of geographical titbits, *The Unbored Pearl of Wonders and the Precious Gem of Marvels*, was much copied. In his version of the world, Arabia is tiny but perfectly central, gripped between the Indian Ocean and the Red Sea like a nail head in a vice. Africa extends eastward almost to the limits of the Ecumene. Deep in East Africa, the legendary Mountains of the Moon – twin triangles of gold – seem to pour the Nile across the continent. Opposite the great river's mouth, the Bosphorus flows to the northern edge of the world, dividing Europe from Asia. The more informal maps that appeared frequently in fifteenth-century works derived from the work of one of the finest mapmakers of the Middle Ages – the twelfth-century Sicilian master al-Idrisi. Typically, they also placed Arabia in the centre of the composition, but they gave it a reliable shape, and showed the Nile flowing from the Mountains of the Moon, located a little way beyond the equator.

If Muslim cartography made it hard to picture the world of 1492, surviving Chinese sources are even less helpful. Chinese attempts to

map the world existed in the thirteenth and fourteenth centuries. None has survived, however, beyond purely schematic representations of the cosmos – a circle representing heaven, a rectangle representing the earth – designed to evoke the old Chinese saying that the heavens are round but the earth has sharp corners. For an idea of how Chinese cartography made the world look, the best map to turn to is Korean. The *Kangnido* was made in 1402 and much copied, not only in Korea but also in Japan and the Ryukyu Islands. A copy dated 1470 survives. In a passage of promotional writing accompanying the map, the principal patron, the Confucian scholar Kwon Kun, describes “looking on in satisfaction” as the map took shape and describes its purpose – to inform and enhance government – as well as the process by which the cartographer, Yi Hoe, who is also known for maps of Korea and celestial maps, made it. “The world is very wide,” the text observes. “We do not know how many tens of millions of li [a unit of distance equal to less than half a kilometre] there are from China in the centre to the four seas at the outer limits.” The writer condemns most maps as “too diffuse or too abbreviated” but says that Yi Hoe compiled his work from reliable Chinese predecessors of the fourteenth century with corrections and additions, “making it a new map entirely, nicely organized and well worth admiration. One can indeed know the world without going out of his door!”⁷

The map shows Eurasia and Africa in a great sweep from a huge and detailed Korea to a vaguely delineated Europe, sketchy in outline but emblazoned with about one hundred place-names. China is copiously detailed, India less so – though recognisable in shape, with Sri Lanka like a round ball at its toe. Indochina and the Malay Peninsula are a tiny, insignificant stump. Japan is displaced well to the south of its real position, and none of the islands of Indonesia or even of the China Sea, except the Ryukyus, are identifiable. Africa and Arabia are etiolated and squashed towards the western edge of the world. A huge inland sea occupies most of the African interior. The map exudes pride and ambition – an effort at a global vision; a belief, at least, that such a vision was pos-

sible. The excitement the globe of 1492 aroused in Nuremberg seems closely paralleled in Korea.

Martin Behaim made the Nuremberg globe in his native city. A merchant by vocation, he had travelled around western Europe making deals and knew parts of the Low Countries and Portugal well. One of his trips abroad, in 1483, probably had an ulterior motive: to postpone or avoid a sentence of three weeks' imprisonment for dancing during Lent at a Jewish friend's wedding. He was in Lisbon in 1484 and seems to have caught the geography bug in that city of Atlantic explorers, where coastal surveying voyages down the west of Africa were under way, mapping the regions Martin would get so badly wrong on his globe. His claim to have accompanied those expeditions is unsupported by any other evidence, and seems incompatible with his errors. His ambitions exceeded his knowledge.

When he got back to Nuremberg in 1490, his tales excited expectations he could not honestly or perfectly fulfil. Still, although he had little or no practical experience in navigating or surveying, he was a representative armchair geographer of his day, who conscientiously compiled information of varying degrees of reliability from other people's maps and from sailing directions recorded by real explorers. The data he brought to Germany from Portugal was bound to arouse the enthusiasm owing to shards of insight from the cutting edge of the exploration of the earth.

The most conspicuous feature Martin incorporated from the latest Portuguese discoveries was his depiction of the Indian Ocean as accessible from the west, around the southern tip of Africa. He shows the African coast trailing a long way eastward – a relic of an old mapmaking tradition that represented the Indian Ocean as landlocked and effectively barricaded to the south by a great arc of land, stretching all the way from southern Africa to easternmost Asia. Not until the 1490s, or the very end of the 1480s at the earliest, did Portuguese geographers feel certain that the sea lay open beyond what by then they began to call

the Cape of Good Hope. Speculative cartography had broached the possibility for nearly a century and a half, but the first map to reflect explicitly the observations of Portuguese navigators was made in Florence in 1489. Even then, the trend of the African coast beyond the Cape of Good Hope remained in doubt, and before commissioning more voyages, the Portuguese court waited – as we shall see – for reports from agents sent overland into the Indian Ocean to assess the ocean's accessibility from the south.

Behaim's effort was amateurish. On his globe, the old information was familiar and most of what was new was false. But his representation of the world is more important for some of the ways in which it is wrong than for the few things he got right. For many of his errors and assumptions fitted the agenda of an increasingly influential group of geographers in Nuremberg, Florence, Portugal, and Spain, who corresponded with one another and propagated their own, revolutionary way of imagining geography.

In Nuremberg, the person who did most to promote and organise the globe-making project was the merchant and city councillor Georg Holzschuher, who had made a pilgrimage to Jerusalem and became disinterestedly curious about the geography of the world beyond his reach. The Jerusalem pilgrimage had long been a focal theme of mapmakers in southern Germany, and Holzschuher – whom, exceeding the evidence, I imagine as awestruck by the wonders of creation – appreciated the possibilities of integrating all the available data in a single map. Part of a pious beholder's wonder at the diversity of the world was delight in the myths and marvels of traditional travel literature and chivalric romance. Behaim's globe included many of the imaginary isles and prodigies that speckled other medieval maps. He featured the island where, in hagiographical literature, St Brendan the Navigator found paradise, along with Antilia, the mythical Atlantic land where escapees from the Moors supposedly founded seven cities. The island home of the Amazons appears, with another inhabited exclusively by men with whom the Amazons supposedly got together from time to time in order to breed.

Alongside religious inspiration, traditional sensationalism, and scientific curiosity, hard-headed commercial interest motivated Nuremberg's merchant-patricians. Johannes Müller Regiomontanus, the leading cosmographer in the city's lively scholarly community until his death in 1476, was in no doubt that the city's advantages for "very great ease of all sorts of communication with learned men everywhere" derived from the fact that "this place is regarded as the centre of Europe because the routes of the merchants lead through it".⁸ The town council voted to finance Behaim's work, and he loaded his globe with information directed at these patrons. He focused on the sources of spices – the most valuable products of Asia. In practice, pepper dominated the spice trade. Most of it came from south-western India. It accounted for more than 70 per cent of the global market by volume. High-value, low-bulk products, however, were disproportionately important: cinnamon from Sri Lanka, and cloves, mace, and nutmeg from specialised producers in the Banda Islands and the Moluccas. Europeans speculated rhapsodically about the provenance of the spices. St Louis' biographer imagined fishermen of the Nile filling their nets with ginger, rhubarb, and cinnamon dropped from the trees of the earthly paradise and floated downstream from Eden.

The idea that the demand for spices was the result of the need to disguise tainted meat and fish is one of the great myths of the history of food. Fresh foods in medieval Europe were fresher than they are today, because they were produced locally. Preserved foods were just as well preserved by salting, pickling, drying, or conserving in fat and sugar as by canning, refrigeration, freeze-drying, and vacuum-packing today. In any case, as we shall see, taste and culture determined the role of spices in cooking. Spice-rich cuisine was desirable because it was expensive, flavouring the status of the rich and the ambitions of the aspirant. Moreover, the preponderant fashion in cuisine in late-medieval Europe imitated Arab recipes that called for sweet flavours and scented ingredients: milk of almonds, extracts of perfumed flowers, sugar, and all the delicacies of the East.

A menu from Richard II's England featured small birds boiled in almond paste with cinnamon and cloves, served with rose-scented rice boiled soft in almond milk, mixed with chicken's brawn, scented with sandalwood and flavoured with more cinnamon and cloves together with mace. European cookbooks advised adding spices to dishes at the last possible moment so as to lose none of the precious flavour to the heat. A fourteenth-century merchant's guidebook lists 288 distinct spices. In a fifteenth-century cookbook written for the king of Naples, there are about 200 recipes, 154 of which call for sugar; 125 require cinnamon, and 76 need ginger. Spices for the wedding banquet of George "the Rich", Duke of Bavaria, and Jadwiga of Poland in 1475 included 386 pounds of pepper, 286 pounds of ginger, 257 pounds of saffron, 205 pounds of cinnamon, 105 pounds of cloves, and 85 pounds of nutmeg. Medicine, as much as cuisine, demanded spices, almost all of which were part of the Eurasian pharmacopoeia, as needful in the apothecary's shop as in the kitchen. Medieval recipes involve the combination of medical and culinary lore in order to balance the bodily properties – respectively, cold, wet, hot, and dry – that were believed to cause disease when their equilibrium was disturbed. Most spices were hot and dry. In sauces, they could correct the moist and wet properties physicians ascribed to meat and fish. Pharmacists' records feature pepper, cinnamon, and ginger in prescriptions for almost every ailment from pimples to plague.⁹

European markets had always been at a disadvantage in securing spice supplies. China absorbed most of the production. The residue available to Europeans had to travel long distances, through the hands of many middlemen. Europe, which was still a poor and backward corner of Eurasia compared with the rich economies and civilisations of maritime Asia, produced nothing that Asian markets wanted in exchange. Only cash would do. In the first century BC, Rome's greatest natural historian complained that a taste for spice-rich food enriched India and impoverished Europe. Europeans "arrive with gold and depart with spice", as a Tamil poet put it.¹⁰ A fourteenth-century guidebook for Italian merchants in the East explained that there was no point in taking anything

to China except silver, and reassured readers that they would be able to rely on the slips of paper – a kind of money still unfamiliar in Europe – that Chinese customs officers gave them at the border.¹¹

Profit beckoned anyone ingenious or determined enough to buy spices at or near their source. Medieval merchants made heroic efforts to penetrate the Indian Ocean. The routes all involved hazardous encounters with potentially hostile Muslim middlemen. You might try to cross Turkey or Syria to the Persian Gulf or, more usually, attempt to get a passport from authorities in Egypt and ascend the Nile, transferring, via desert caravan, to the Red Sea at a port controlled by Ethiopians. Not surprisingly, many attempts failed. When they succeeded, they remained dependent on native shipping to get the goods across the Indian Ocean and on local middlemen for transport to the shores of the Mediterranean. European merchants who overcame the difficulties became part of the existing trading networks of maritime Asia. Before the 1490s, no one had opened direct routes of access from the European market to the Eastern sources of supply.

Behaim designed his globe to address that problem directly. He was "well fitted to disclose the east to the west".¹² That was the opinion of his friend and a fellow merchant of Nuremberg, Hieronymus Münzer, who also travelled extensively on the Iberian Peninsula and took part in the network of correspondence that united Portuguese and Nuremberg geographers with counterparts in Florence. The letters of recommendation Münzer wrote on Behaim's behalf show the values they all shared. They advocated belief in "experience and trustworthy accounts" over book learning and reliance on ancient geographers.¹³ To that extent, they shared the worldview of modern science, but it would be rash to see them as precursors of the scientific revolution. For wishful thinking, rather than reason or evidence, made them reject classical wisdom.

In particular, they rejected classical traditions about the size of the world. But the ancients had probably got it roughly right. Eratosthenes, the librarian of Alexandria, had calculated the girth of the globe around the turn of the third and second centuries BC. He measured the elevation

of the sun at two points on the same meridian and the distance between the same points on the surface of the earth. The angular difference was a little over seven degrees, or about a fiftieth of a circle. The distance – in miles of value roughly corresponding to those most of Eratosthenes’ interpreters used at the time – was about five hundred miles. So the size of the world would work out, correctly, to about twenty-five thousand miles.

For Behaim and his collaborators, that seemed far too much. They felt either that the calculations were wrong or that miles of smaller value should be used. The evidence they cited was consistent with their prejudice in favour of observation over tradition. Whatever the ancient books said, Münzer insisted, the fact was that there were elephants in Africa and Asia, so those continents must be close to one another. “The habitable east,” he concluded, “is very near the habitable west.” China “can be reached in a few days” westward from the Azores.¹⁴ Other evidence pointed the same way: driftwood washed ashore on Europe’s ocean edge; reports of castaways of allegedly oriental appearance on the same shores. A map described in Florence in 1474 illustrated the theory: it put Japan only about twenty-five hundred miles west of mythical Antilia, which probably appeared in the vicinity of the Azores, and located China a little over five thousand miles west of Lisbon. The details of what might lie in the unexplored ocean between Europe and Asia were in dispute, but one shared conclusion stood out. As Christopher Columbus put it, as he contemplated the theories that came out of Nuremberg, Florence, and Lisbon, “This world is small.” A viewer of Martin Behaim’s globe could sense the smallness, cupping the image of the world between his hands, seeing the whole of it with a single spin. The gaps in Behaim’s mapping symbolise the mutual ignorance of people in non-communicating regions.

Events that began to unfold in 1492 would dispel that ignorance, reunite the world’s sundered civilisations, redistribute power and wealth among

them, reverse formerly divergent evolution, and reforge the world. Of course, a single year can hardly have wrought so much work on its own. Strictly speaking, it was not until 1493 that Columbus was able to explore exploitable two-way routes across the ocean. The route he used to reach the Caribbean in 1492 was, as we shall see, not viable in the long run and had to be abandoned. The linking of the hemispheres was clearly a huge step towards the making of what we think of as "modernity" – the globalising, Western-dominated world we inhabit today – but it was hardly complete even in 1493. All Columbus really did was open possibilities that took his successors centuries to follow up. And even the potential was hardly the product of a couple of years. Only in the following few years could the possibilities of remaking the world, with a new, previously unimaginable balance of wealth and power, really be glimpsed. Other explorers developed more routes back and forth across the North and South Atlantic, to open connections with other parts of the Americas, and created a new seaborne link, or reconnoitred new land routes, from Europe to southern and central Asia.

To most people, anyway, it was not 1492. Even to people in Christendom, it was not yet necessarily 1492 when, by our reckoning, the year began on 1 January. Many communities reckoned the year as beginning on 25 March, the presumed anniversary of Christ's conception. A spring beginning had logic and observation on its side. In Japan, television still broadcasts the opening of the first cherry blossom every year. Each culture has its own way of counting time.

The Muslim world, which dwarfed Christendom at the time, counted – and still counts – the years from Muhammad's exile from Mecca, and divided them into lunar months. In India, outside Muslim areas, the numbering of years was an indifferent matter when viewed against the longevity of the gods, whose world was renewed every 4.32 million years in an eternal cycle. Their current age had begun in what we count as 3012 BC. For everyday purposes, in northern India, people generally counted the years from a date corresponding to 57 BC in our calendar. In the south of the subcontinent, the year AD 78 was the

preferred starting point. For much of their past, the Maya of Meso-America recorded all important dates in three ways: first, in terms of a long count of days, starting from an arbitrary point over five thousand years ago; second, according to the number of years of just over 365 days each of the current monarch's reign; and third, in terms of a divinatory calendar of 260 days, arrayed in twenty units of 13 days each. By the late fifteenth century, only the last system was regularly used. The Incas recorded dates for only 328 days of the solar year. The remaining 37 days were left out of account while farming ceased, after which a new year commenced.

In China and Japan, there was no fixed date on which a new year started; each emperor designated a new date. Meanwhile, people celebrated New Year's Day on different dates, according to local custom or family tradition. Years were named after one of twelve animals, as they still are: rat, ox, tiger, rabbit, dragon, snake, horse, sheep, monkey, bird, dog, and pig. The cycle of twelve interlocked with another cycle of ten, so that no year name was repeated until sixty years had elapsed. In a parallel system, years were also numbered in order from the start of an emperor's reign. The 1st January 1492 was the day named Jia Chen, the second day of the twelfth month of the year Xin Hai, or the fourth year of the Hongxi reign. Xin Hai had begun on 9 February 1491 and would end on 28 January 1492. The year Ren Zi then began and lasted until 17 January 1493. The 31st December 1492 was the thirteenth day, named Ji You, of the twelfth month of Ren Zi, the fifth year of the Hongxi reign.

So a book about a year is fundamentally ahistorical if it treats the events that occurred between 1 January and 31 December, by Western reckoning, of a given year as a coherent entity. Most people would not have thought of those days as constituting a year, any more than any other combination of days amounting to about 365 in all – or 260 days, or 330, or whatever other number happened to be conventional in their culture. In any case, no sequence of days encloses events so discrete that they can be understood except in a longer context. So in this book the

rules shall be flexible about dates, ranging back and forth from what we now think of as 1492 into adjoining years, decades, and ages.

A book like this, moreover, is necessarily about more than the past. Because we are imposing a modern notion of a year on people unaware of it at the time, this book, like other histories of particular years, is self-condemned to be retrospective. It is as much about us – how we see the world and time – as about people in the past. Historians' job is not to explain the present but to understand the past – to recapture a sense of what it felt like to live in it. But, for present purposes, I want to depart from my usual historian's chores. What I expect readers of this book to want to know about 1492 is not only or even primarily what it felt like to experience it, because most people had no sense of experiencing anything of the sort, but what its events contributed to the world we inhabit now.

Still, a year really did mean something, in a way no longer easily accessible to us in urban, industrial or post-industrial environments. The succession of seasons is hardly noticeable, except superficially – as hemlines rise and fall with the mercury in the thermometer, and as the density of clothing matches cloud cover. Heating and insulation indemnify us against summer and winter. US homes are now typically hotter in winter than summer, thanks to the ferocity of the boilers and the frigidity of the air-conditioning. Global trade brings out-of-season food even to relatively poor people in relatively rich countries. Most modern Westerners have lost the lore of knowing when to eat what.

In 1492, almost the entire world lived by farming or herding, and the whole of the rest by hunting. So the cycle of the seasons really did determine almost everything that mattered in life: the rhythms at which crops grew or animals migrated determined what one ate, where one lived, what clothes one wore, how much time one spent at work, and what sort of work one did. Reminders of the passage of time, carved on church doors for worshippers to see as they entered, commonly included scenes, arrayed month by month, of the activities the cycles of weather regulated: typically, tilling in February, pruning in March, hawking in April, mowing in June, grape treading in October, plough-

ing in November. Japanese poems conventionally began with invocations of the season. Chinese writers associated each season with its appropriate food, clothes, and decor. The whole world lived at a pace and rhythm adjusted to the seasons.

Everywhere people watched the stars. In Mediterranean Europe, the motions of Orion and Sirius, as they climbed to mid-sky, signalled the wine harvest. The rising of the Pleiades announced harvest time for grain, their setting the time to plant. The Maya watched the motion of Venus anxiously, because the planet governed days propitious respectively for warmongering and peacemaking. Muhammad had taught Muslims that new moons are “signs to mark fixed periods for men and for the pilgrimage”.¹⁵ In China, astronomers were vital policy consultants, because the prosperity of the empire depended on the accurate timing of imperial rites according to the motions of the stars, and part of the emperor’s duty was to monitor the skies for signs of celestial “disharmony”. For this was a world without escape from the elements, or relief from the demons that filled the darkness, the storms, the heat and cold and hostile wastes and waters. Witchcraft persecution was not a medieval vice but an early modern one, which started as a large-scale enterprise in much of Europe in the late fifteenth century. In Rome in 1484, the pope heard reports of many men and women who “deny with perverse lips, the faith in which they were baptised” in order to “fornicate with demons and harm men and beasts with their spells, curses, and other diabolical arts”. Regulations for persecuting witches followed.¹⁶

Nature seemed capricious, gods inscrutable. Plague in Cairo in 1492 reputedly killed twelve thousand inhabitants in a single day. A flood wiped out most of the army of the ruler of Delhi a year later. Many Jews expelled from Spain in 1492 perished in North African famines. The infections Columbus’s men took to the New World wrought near-destruction on the unaccustomed, unimmunised inhabitants. There were over one hundred thousand people on the island of Hispaniola, by a conservative estimate, in 1492. Only sixteen thousand survived a generation later.

Yet, although they were at the mercy of nature, people could change the world by reimagining it, striving to realise their ideas, and spreading them along the new, world-girdling routes explorers found. The changes wrought in 1492, and their world-shaping consequences, are proof of that. Most of the transforming initiatives that helped to produce modernity came, ultimately, from China. Paper and printing – the key technologies in speeding and spreading communications – were Chinese inventions. So was gunpowder, without which the world could never have experienced the “military revolution” that based modern warfare on the massed firepower of huge armies; nor could the traditional balance of power, which kept sedentary civilisations at the mercy of horse-borne enemies, ever have been reversed. The “gunpowder empires” that outclassed ill-equipped enemies around the early modern world, and the modern nation-state, which arose from the military revolution, would simply never have come about.

Industrialisation would have been impossible without the blast furnace and the exploitation of coal for energy, both of which originated in China. Modern capitalism would have been impossible without paper money – another idea Westerners got from China. The conquest of the world’s oceans depended on Western adaptations of Chinese direction-finding and shipbuilding technologies. Scientific empiricism – the great idea on which Westerners usually congratulate themselves for its impact on the world – had a much longer history in China than in the West. So in science, finance, commerce, communications, and war, the most pervasive of the great revolutions that made the modern world depended on Chinese technologies and ideas. The rise of Western powers to global hegemony was a long-delayed effect of the appropriation of Chinese inventions.

Nevertheless, the effective applications came from Europe, and it was in Europe that the scientific, commercial, military, and industrial revolutions began. To recapitulate: this perplexing shift of initiative – the upset in the normal state of the world – started in 1492, when the resources of the Americas began to be accessible to Westerners while

remaining beyond the reach of other rival or potentially rival civilisations. In the same year, events in Europe and Africa drew new frontiers between Christendom and Islam in ways that favoured the former. These events were surprising, and this book is, in part, an attempt to explain them. For Europe – formerly and still – was a backwater, despised or ignored in India, Islam, China, and the rest of East Asia, and outclassed in wealth, artistry, and inventiveness. The ascent of the West, first to challenge the East and ultimately to dominate the world, began in earnest only in 1492. People in every generation have their own modernity, which grows out of the whole of the past. No single year ever inaugurated anyone's modernity on its own. But for us, 1492 was special. Key features of the world we inhabit – of the way power and wealth, cultures and faiths, life-forms and ecosystems are distributed around the planet – became discernible in the historical record for the first time. We are still adjusting to the consequences.