



# The Penguin Atlas of Modern History

(to 1815)

Colin McEvedy

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Maps devised by the authors  
and lettered by Ivan Atanasoff

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## Introduction

The opening of the modern era is marked by the voyages of discovery. Consequently this atlas, unlike its ancient and medieval companion volumes, cannot make do with a single base map: it requires the use of a world map as well. But it is still Eurocentric – in fact, more so than its predecessors, because the focus is now on Europe not the Europe–Near East area. The rest of the world is considered purely as a stage on which the European struts.

The emphasis on Europe needs no justification. The period was one in which Europeans came to dominate first the high seas, then much of the land area of the globe. They all but eliminated two primitive peoples – the Siberians and Amerindians – and seized their lands. They conquered India and Indonesia. Only the Africans, protected by their poverty and diseases, and the East Asians, still at this stage strong enough to exclude all foreigners, maintained their political integrity. Even so, the Europeans' enormous expansion of the slave trade altered the organization of Africa, and imports of silver and muskets were revolutionary factors in Chinese and Japanese society. The growth of European power is obviously the most significant event of the period.

It is easy to tell the story of Europe's history and its overseas expansion: the main aim of this atlas is to provide a digest of this narrative. But it is also necessary to consider the underlying reasons for the supremacy of the European. I would suggest that this supremacy was based on three interrelated advantages: Europeans were richer than their contemporaries, they were more knowledgeable and they were more flexible. (From where we stand they may seem unbelievably poor, ignorant and rigid, but nevertheless *vis-à-vis* the contemporary extra-European societies, I believe these statements are true.)

The fact that they were richer is probably the

primary phenomenon. And as at this time farming was the major human activity and agriculture the main source of wealth, the reason for Europe's prosperity must be sought down on the farm. It is now generally agreed that the 'secret weapon' of the European farmer was the heavy plough. This instrument had been gradually developed during the late Roman and early medieval periods until it was capable of efficiently turning and draining the soils of the high-rainfall zone of North Europe. A series of small improvements in detail and in ancillary equipment, together with an increasing use of other machines – particularly watermills and windmills – kept productivity rising. It was a slow rise, but with the timely help of the Black Death it was enough to keep ahead of population growth. Each medieval century saw Europe a bit wealthier and a bit more efficient at using its wealth.

Economic efficiency correlates with literacy. By the early fifteenth century Europeans were certainly as literate as anyone else, if not more so: in the mid-fifteenth century the invention of movable type printing by Gutenberg of Mainz put Europeans way out in front. Moreover, book production on the new scale made possible by the printing press boosted the demand for information to a level which further improved the supply. From then until the twentieth century the knowledge gap between the West and the rest of the world was to grow at an ever-accelerating rate.

Greater flexibility stems from the first two factors. Basically it is a product of the knowledge that different answers exist, that some are better than others and that better yet remain to be discovered. This attitude is not acquired by illiterate societies, who see what techniques they have as a gift from the gods at the beginning of time.

By the fifteenth century the Europeans had put their wealth, their knowledge and their intellectual flexibility together and created a technology that was more advanced and was developing more rapidly than any other. European successes in the age of discovery and later are often put down

purely to these technical advances: if Cortes and Pizarro conquered empires with a handful of men, well, they had guns, hadn't they? In fact the guns were of dubious value. They took so long to reload that most engagements must have become hand-to-hand fights before an arquebusier could fire a second shot. As neither Cortes nor Pizarro had more than a dozen arquebusiers, a dozen will have been about the maximum number of shots fired per battle – hardly a critical contribution in struggles involving thousands. A better case can be made for horses, which were equally unfamiliar and frightening and of far more use; and the best case of all for the steel of the Spanish swords, so much more deadly than the Indians' stone maces and wooden clubs. But one advantage Cortes had, which was of great importance, tends to get neglected in this sort of comparison. The Amerindian fought largely to get captives for sacrifice: personal kudos was won by dashing up to the enemy's line and pulling out a prisoner. The Spaniards fought to destroy the opposing army as a cohesive force. This was a superior concept. So there wasn't just a technological gap between Amerindian and Spaniard – there was also a management gap. Their superior weaponry made the exploits of the *conquistadors* possible: the skill with which this advantage was exploited was the factor that actually created Spain's New World Empire.

The importance of management as well as technical skills in the European success story comes out more clearly in the British conquest of India. At the critical engagement, the battle of Plassey, the disparity in numbers was so great that one immediately assumes that the British victory must have been due to superior equipment. How else could 800 British and 2,200 Indian auxiliaries defeat the army of Bengal, more than 50,000 strong? In fact, as far as fire power is concerned, the advantage lay with the Bengalis: they had fifty-three field-pieces against the British twelve: they also had enough French advisers to get reasonable if less than perfect use out of these guns. Nor was

Plassey a fifth-column victory. Clive improved the battlefield odds by his skilful conduct of the war of intrigue that went on in parallel with the military campaign. The Nabob had come to mistrust his generals and they him. But there was no overt defection until Clive had shown that he could crunch up his enemies on the field of battle. Clive won Plassey and Bengal by the skilful use of extremely meagre resources. He agonized over every decision not only because he had no margin for error in terms of resources but because in the eighteenth century it was in the decision-making process that the ultimate European superiority lay.

Our grasp of a subject becomes secure only when the data can be quantified. Of the three factors we have considered the one which in theory should be easiest to express numerically is wealth. Figures for the gross national product are available for most nations these days and though such figures have their limitations – particularly in the case of isolated economies like Russia's – they give a fair guide to standards of living and national resources. We would be very pleased indeed to have such a series for the early modern period. Unfortunately no reliable figures exist, and attempts to create them are only quantified guesses. We have, however, got revenue figures, and these are of some value. They provide an index of national power which is valid (with reservations) for one particular time and to a lesser extent for comparisons across the whole period. From them we can get a view of the ranking of European nations and of changes in this ranking. I have included these figures in the short essays attached to the economic maps and mentioned some of the reservations to be attached to them. These reservations are sufficiently important to require rehearsing here as well.

1. In the earlier part of our period most European states were still in the process of tran-

sition from a feudal order to a money economy. That part of the state's power which could be exerted by custom is not reflected in the revenue figures. It is fair to say that the feudal order was steadily decaying in its usefulness and that states which failed to make the transition – such as Poland – declined into impotence. But in the early part of the period such states could field effective armies and show vigour in their foreign policy.

2. The income figures available are rarely satisfactory to a modern accountant. For some countries they are totally lacking and we have to rely on contemporary estimates of dubious validity. When they exist it is often unclear whether they are in real units or the imaginary units of contemporary accounting practice, whether they represent revenue hoped for or achieved and whether they include the often astronomical costs of collection. Sometimes the coinage was being debased so fast or the government's revenues fluctuating so wildly that a representative figure is a matter of choice rather than calculation.

3. Though occasional debasements are relatively easy to allow for – it is simply a matter of taking an undebased coinage as one's unit – some inflations are not. The inflation that is of major importance is the sixteenth-century price rise caused by the import of silver from the Americas. This not only raised prices in a way that makes comparisons between the beginning and end of the century more than usually treacherous, it raised them at varying rates. Spain inflated fast, England more slowly, so until the silver was evenly distributed a Spanish unit of currency – even when in bullion terms equivalent to an English unit – bought less. Late sixteenth-century figures overrate Spanish resources.

4. In conglomerate states such as the Spanish and Austrian Empires, one has, in theory, to choose between aggregating the total revenues of the constituent states and aggregating the sums remitted by them to the central treasury. If one talks of the revenue of the United States one means

the revenue of the federal government, not the revenue of the federal government plus the revenue of the governments of the states. Federal would appear to be the proper meaning for 'Spanish government' revenue. But the Spanish government could use the troops and warships maintained by the Viceroy of Sicily, so it benefited from the local revenues of Sicily. Conversely, much of the central (Castilian) treasury was disbursed in the local government of Castile. The accounts were simply not prepared in a way which yields a 'federal' figure.

I have expressed government revenue during the period 1483–1648 in Venetian gold ducats. The ducat was the standard unit for foreign exchange transactions at the time. It contained 3.5 grammes of pure gold and was never debased. The florin of Florence, the *écu* (crown) of France and the *crúzado* of Portugal were of equivalent value: the Burgundian and German florins were of the same weight but only 80 per cent fine and proportionately discounted.<sup>1</sup>

For the period 1648–1815 I have used the £ sterling as my standard unit. By this time the gold/silver ratio had stabilized: the £ was not devalued in terms of either and though sterling refers to silver, Britain was effectively on the gold standard. The switch to the £ is made simply because the £ became the dominant currency of the era and it would be mere pedantry to express the economic transactions of the world in the currency of a petty state. The rate of exchange was 2.1 ducats to the £.

1. All these coins could be used as units of account, i.e. to represent a fixed number of silver coins. Sometimes theoretically equivalent silver coins were minted with the same names. As silver currency was periodically debased and the gold/silver ratio was altering in favour of gold, one has to be careful that when values are expressed in ducats real gold coins are meant. For example, towards the end of the period the Venetian silver ducat had only half the value of the gold ducat.



Before leaving this topic it is necessary to stress that revenue figures give an idea of the power of the state but do not give any indication of *per capita* wealth. The countries of North Europe certainly had relatively high *per capita* incomes at the start of our period, though their *per capita* revenue figures were much lower than Mediterranean countries with more evolved or more ruthless tax-collection systems.

For literacy the obvious quantification is the percentage of the population that can read and write. If we had figures for the period 1500–1815 they would probably show a rise from around 5 per cent to around 50 per cent of adult males in North Europe. An alternative and more reliable quantification is provided by the rise of the book trade. The number of titles published per year, which was around 1,000 at the end of the fifteenth century, had passed the 2,000 mark by the end of the sixteenth. By 1815 it was ten times greater than this: the production rate being around 20,000 titles a year. This series in fact shows up the difference between modern and medieval societies better than the figures for literacy. Take, for example, the comparative figures for a non-progressive state like Turkey. Constantinople got its first printing press in 1726; up to 1815 the total number of titles produced in this, Islam's premier city, was sixty-three. This is equivalent to an annual rate of less than one. The literacy gap between Europe and Turkey (50 per cent and 5 per cent) involves a factor of ten, the publication rate a factor of 10,000. A gap of this size is really an absolute difference, and an absolute difference in terms of social growth is what existed.<sup>1</sup>

When we consider the last of our three factors, intellectual flexibility, we run into a new difficulty. Up to now we have suffered from a lack of data. Now we are in an area where we lack a notation. In the current state of the art there is no scale against

which we can measure and grade the intellectual activities of the past. No one can doubt that if the award of Nobel prizes for scientific discovery had begun in the year 1500, from then until the early twentieth century more than 90 per cent of the prizes would have been won by Europeans or individuals from European-derived cultures. But Nobel prizes were not awarded in 1500 and as of now there is really nothing to be said on this topic except that when it does prove possible to assess intellectual activity retrospectively it would be surprising if the figures did not show a gap between Europe and Asia during this period that is so great as to amount to another absolute difference.<sup>2</sup>

The unstated premise in the preceding account of Europe's development in the early modern period is that the development was continuous. Certainly each century had its recessions and slumps and sometimes a particular area – Italy and Spain are examples – could slip backwards over a longer period. But there can be no doubt that taking either Europe as a whole or Northern Europe in particular, prosperity, literacy and knowledge increased every century throughout our period.

This progress seems to me to be the most important single thing about European history, indeed about world history, in the period. So it is curious that whereas some aspects of the process – notably the British 'industrial revolution' of 1780–1815 – have been clearly labelled by historians, the process itself remains nameless. Moreover, it is likely that because of the career structure within which the historians of today operate it will remain nameless for a long time to come, for historians normally restrict themselves to a single century and often to a single generation. On this time scale long-term evolutionary trends are effectively invisible. The swings from boom to slump and back again – on the long view ephemeral and nugatory – appear to historians of the short run with the full

magnitude they had for contemporaries. A change in the base line of a few percentage points passes unremarked.

The refusal to look outside the particular society he is studying is one of the historian's great strengths. Nothing is easier or more dangerous than a hindsight emphasis on those elements in a society which only acquire importance later. But an avoidance of teleological thinking and a refusal to consider long-term trends at all are two different things. Inside the short period of time that the historian studies there may be little place for the long perspective: but the long perspective is itself a valid object of study.

Let us take a metaphor from biology. The entomologist studies his insects as animals in their own right, not as halfway houses between viruses and man. But it would be a rare entomologist who did not volunteer that his view of his insects had been greatly enriched by the theory of evolution. He holds in his mind both the special case and the general theory. By contrast the historian is Linnaean: each species of society is to him a special creation, a unique fossil cased in the amber of time.

The attitude is understandable in that no general historical theory of any sophistication exists. Indeed the attempts historians have made to erect comprehensive views of civilization always seem to be anti-evolutionary: societies are seen as individuals that are born, flourish for a day and die, to be replaced by other, near-identical individuals. This

1. The fact that Constantinople's only printing press was closed down from 1730 to 1780 and again in 1800 shows that the difference is not to do with the technology of printing but with society's need for the product. The invention was not only made in Europe (which could possibly be an accident): it succeeded there.

2. The Nobel prizes were first awarded in 1901: the first science prize to go to a non-European was the 1930 physics prize, which was won by the Indian mathematician C. V. Raman. Since then two Chinese and two Japanese have also won physics prizes.

simple anthropomorphism is a very different matter from what has obviously occurred, the continual replacement of one species of society by another which is stronger in some numerical, military or economic sense than its predecessor.

Perhaps the cyclical view reflects the exclusively arts education of historians. Chinese historians, whose education was entirely based on a restricted repertoire of 'classics', created a history of their country which is so dominated by a theory of cycles that it has eliminated almost all trace of the huge differences that existed between successive Chinese empires. A classical education could well predispose to this sort of thinking: everything is measured by a single set of standards: societies rise towards these standards, fall back and then struggle upward again in Sisyphean monotony.

It is probably too early on in the game for anything useful to be done in the way of a general theory. We cannot as yet classify societies properly, let alone do so with the confidence that is essential if the discussion of evolutionary hypotheses is to be meaningful. But the absence of a system for assessing long-term trends is an important fact of present-day historical writing which introduces an element of distortion. For when the trend becomes discernible inside the sort of time interval historians deal with, the significance of this is emphasized out of all proportion. So we get a seventeenth-century 'scientific revolution', and an eighteenth-century 'industrial revolution'. These are real phenomena: but the use of the phrase 'revolution' implies quite incorrect hypotheses about the growth of science and industry. A revolution has a beginning and end: a scientific or industrial revolution must be completed at a certain point in time. Yet no one can believe that the pace of either the scientific or industrial revolutions has slackened since the seventeenth and eighteenth centuries. By every available index the rate of change is still increasing. All that happened in the seventeenth and eighteenth centuries was that the rate of change reached a level at which it

became apparent within a single lifetime, or can be perceived by the historian of a single generation.

A recent newcomer to the series of 'revolutions' which historians perceive within our period is the 'military revolution' of the period 1550–1650. This embraces several phenomena which proceeded hand in hand: a revolution in equipment (the introduction of the arquebus); a revolution in tactics (as an efficient co-operative drill was worked out for arquebusiers and pikemen); a revolution in recruitment (because the new tactics required training to a professional level of skill); and a revolution in scale. Now the revolution in weapons is a revolution of the 'industrial' type – a process that goes back as far as mankind and is still very much with us today. The revolutions in tactics and recruitment are temporary, second-order phenomena. But the change in scale is a different matter. Let us look at it in detail.

In the early sixteenth century the realms of Christendom relied for their defence on the obligation of every fit, adult male to take arms to repel an invader. The number of professional soldiers retained in time of peace was of the order of a few hundred. These few hundred guarded the King's person and garrisoned two or three of the most important royal fortresses. With the appearance of weapons and tactics that demanded a professional level of skill the feudal levy ceased to be an effective part of the state's machinery. However, as the state had not really got the wherewithal to pay for a whole-time standing army the result was that it became near defenceless in peacetime, and fielded only small numbers of men – around 15–30,000 – in wartime. This was so obviously below the potential war-making capacity that every state set out to rectify the situation. Rectified it was in the course of the seventeenth century. The state found new ways to its citizens' pockets and the standing army began to grow at a phenomenal rate. In France, for example, the increase was from the few hundred of the sixteenth century to the 150,000 of the seventeenth. This is a true revolution: within a definite

period of time society shifted gear and having shifted gear the change was complete. Allowing for population growth, France's standing army is roughly the same size today.

It is also a change of no deep significance. As an administrative feat it was within the capacity of such an unprogressive state as the Ottoman. And for that matter it represented only a recovery to the level of administrative competence possessed by the Roman Empire. Whatever factors made European society progressive, the ability to maintain a large standing army was not one of them.<sup>1</sup>

The revolution in land warfare has its parallel at sea. In the course of the seventeenth century the British and other navies grew from a few ships which served as a nucleus around which the merchant galleons gathered in time of war, into permanent fleets which numbered their specialized craft by the dozen. In this instance the long-term trend behind the revolution is clearly visible. Europe's shipping tonnage was steadily mounting, and every century the range, scale and economic importance of the merchant marine increased. The creation of the professional navy was an event: the growth of seaborne trade a continuing process. Can there be any doubt as to which was more important?

All this may seem to be labouring a point too long. My reason is that the phrase 'industrial revolution' has attained such a powerful position in our thinking about the process of industrialization that it merits a full-scale attack. It has, in fact

1. The figures are as follows:

	population (in millions)	standing army (in thousands)	soldiers per 1,000 population
Roman Empire (early 4th century)	c.50	350	7
Ottoman Empire (late 17th century)	c.25	180	7
France (late 17th century)	19	150	8
(1832)	32.5	350	10
(1962)	46.5	415	9

– no mean achievement for a historical theory – done a lot of practical harm. For it is the parent of the economic theory of the ‘take-off’ – the idea that a stagnant society can be transformed into a progressive one by a short period of intensive capital investment. Following the completion of this forced ‘industrial revolution’ the economy is supposed to take off into self-sustained growth.

This idea was based on the hypothesis that the era of the ‘industrial revolution’ was the critical phase in Britain’s transformation into a progressive society, and on the observation that during this period Britain was investing a high proportion of its gross national product. The observation is quite true: indeed the generalization that rapid industrialization and a high level of investment go hand in hand is a truism. But Britain’s evolution into a progressive society began long before the ‘industrial revolution’, which merely represented a stage in the maturity of this society. Equating industrialization with progress is as naïve as equating life with breathing: it ignores the period of foetal development in which the mechanism of respiration is created. By the time the baby breathes or the society industrializes the real work of development is done.

The evolution of the progressive society in Europe – for Britain was only the first in a flotilla of countries sailing this course – is the very stuff of history. But it is surely not the right process for today’s underdeveloped countries to study. Its details are arguable where they are not totally obscure, and the whole development took centuries. The underdeveloped country needs a clearer model and a quicker result. This exists in Japan, which in a very short period – roughly the years between 1868 and 1889 – transformed itself from a stagnant to a progressive society. No one can deny the revolutionary status of these two decades, for Japan has been a successful industrial society ever since. And anyone can see that the revolution was *social*, involving the exchange of old ideas and aims for new ones of European inspira-

tion. Only after this did the country begin to industrialize.

The take-off hypothesis dominated development theory in the years after the Second World War. It encouraged poor nations to beg, borrow or steal as much money as they could. Its results have been lamentable. Many underdeveloped nations are now weighted down with such a heavy external debt that their chances of getting airborne have diminished, not increased. The experiment has merely made it clear that it is new attitudes that the underdeveloped nations must import. Abandoning cherished beliefs is a more painful process than borrowing money. However, the underdeveloped can at least be thankful that, unlike a failing animal species, they can give themselves a second chance by adopting the features of their more successful rivals.

In the preparation of the first two volumes in this series I had the advantage of frequent discussions with Peter Fison. Shortly after I began work on the present volume he contracted leukemia and in 1969, at the age of forty, he died. Many people have helped me since then, but no one could take his place: this book is dedicated to the memory of this shrewd, noisy, vital man.

# The Atlas



## The World in 1483

### 1. Population

No species is uniformly distributed across its habitat, but mankind is unique in having a 10,000-year history of increasingly uneven distribution. In the last century and a half the driving force behind this process has clearly been industrialization, and the expression has taken the form of urban concentration. In the centuries prior to the nineteenth, however, industry and towns had only marginal demographic significance. Variations in population density were a function of agricultural productivity.

Climate and know-how are the factors that govern agricultural productivity: irrigating techniques in a hot country provide the maximum return. So in the fifteenth century the range of population densities had at its top end countries like Egypt, where densities per square mile had long been in the hundreds. Temperate agriculture supported densities in the tens,<sup>1</sup> and herding – the pastoral way of life characteristic of the Asian steppe – densities in single figures. Pure food-gatherers probably averaged only 1 to every 10 square miles of their range.

In the Old World there were three main agricultural areas: Europe, with about 70–75 million people, India with 100–120 million (very high density in the Ganges valley) and China with 110–130 million (very high densities in the Hwang Ho and Yangtze Kiang valleys). Between Europe and India lay the Near Eastern countries with high-density islands of peasants set in an arid landscape occupied by nomadic herdsmen. This zone contained about 20–30 million people of whom 2–3 million were nomads. The major agricultural areas can thus be visualized as (1) a band covering continental Europe (and the southern shore of the Mediterranean), the Near East (weaker in numbers and lacking continuity) and India: (2) a separate East Asian area centred on China but including Japan (with about 15 million inhabitants), Korea

(3 million) and Vietnam (3 million). There were farmers in the rest of South-East Asia and in the Philippines and Indonesia, but even given the technology of the era this zone was markedly underpopulated. The only other agricultural area of significance was Africa south of the Sahara. Population figures here are exceedingly speculative, but something of the order of 25–35 million is a reasonable guess, the Western Sudan having a density twice that of the remainder.

The nomad in pure culture dominated the Asian pasture lands. These stretched from the South Russian steppe via Turkestan to Mongolia and Manchuria. Counting in Tibet to the south, something like 5 million nomads were able to support themselves on this extensive range and keep farmers off the parts of it that were suitable for agriculture.

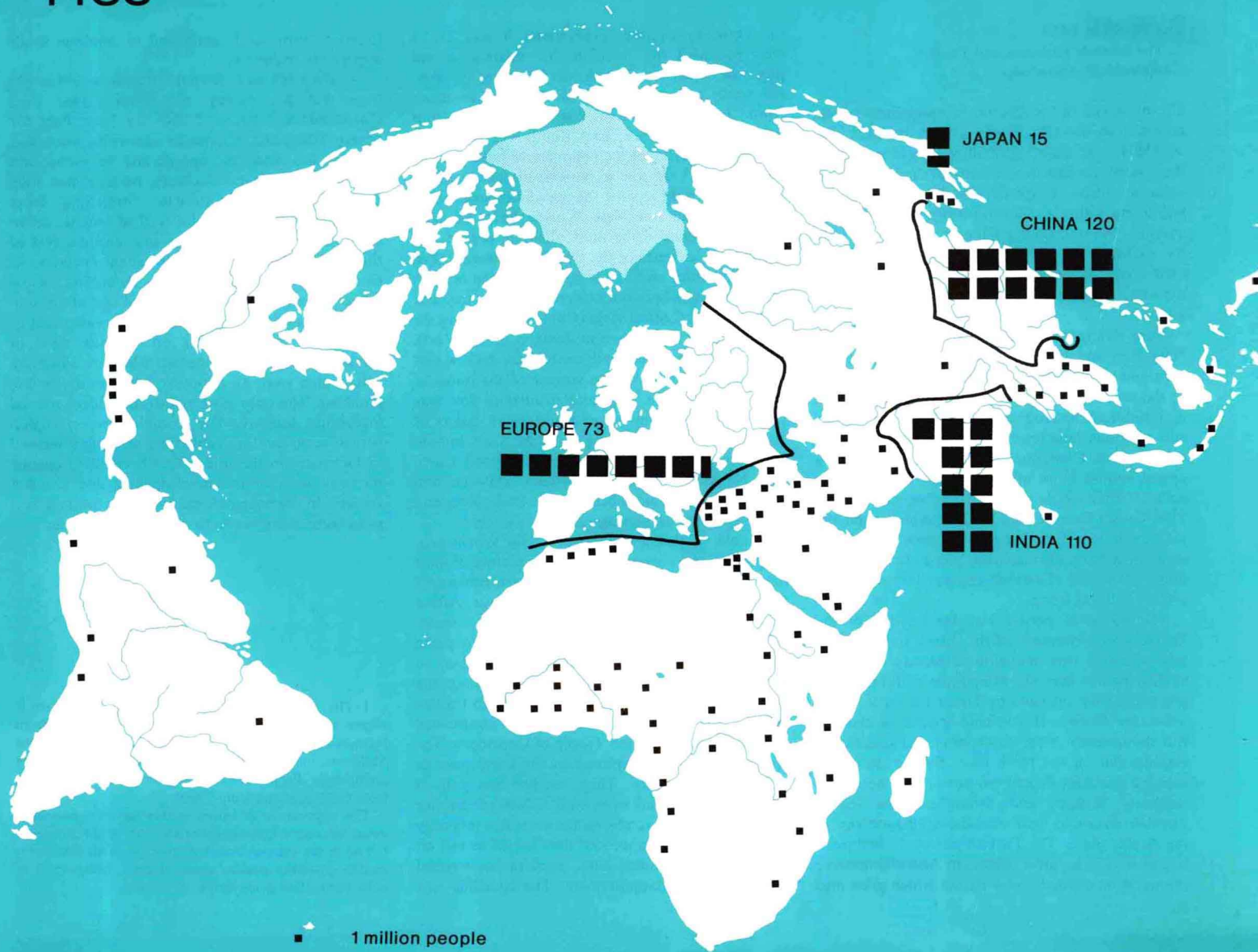
The pre-Columbian inhabitants of the New World had not domesticated any animals of significance,<sup>1</sup> so the pastoral style was lacking in the Americas. In Mexico a sophisticated irrigating agriculture supported a sizable population: the rest of Central America was also fairly well populated, as was the Andean spine of South America. Elsewhere there were scattered tribes of primitive agriculturalists or semi-agriculturalists, shading off into food-gatherers in the west of America and in Canada to the north, and in Chile and the Argentine to the south. Central America contained perhaps 5 million people, the continent as a whole perhaps 11 million.<sup>2</sup>

As for the food-gatherers, one million each for the New World, Asia and Indonesia–Australia would be generous. This is less than 1 per cent of the world total suggested by all these figures, which add up to something over 400 million.

1. The Peruvians had tamed the llama: they used it as a (most inefficient) pack animal and sheared the fleece of the related alpaca.

2. Much higher figures have been bandied about recently and though I do not think Mexico's population can ever have reached the 15–20 millions proposed by some, there is a strong suggestion that population in Central America was subject to big swings. One such boom-and-bust cycle had left the southern (Mayan) zone permanently bust by the tenth century: another bust may have been pending in the Central Mexican area when the Spaniards arrived. On this view the Aztecs' bloody religious rites (which consumed up to 20,000 people a year) could represent an adaptive response to an over-population problem.

1483



■ 1 million people

■ 10 million people

**2. The Literate Cultures and Their Geographical Knowledge**

Up to the end of the fifteenth century literacy was confined to the Old World and, within the Old World, to the major agricultural societies. China dominated the East Asian area, all the East Asians using a syllabic script derived from the Chinese and living within a cultural framework of Chinese making. Indeed, among China's neighbours only the Japanese felt they had a national identity of their own – the rest accepted China as the centre of the world and the sole legitimate source of political authority.

Very different was the situation in Europe, the Near East and India. The elongated shape of this zone and the fact that the weight of population was at the ends, not in the middle, made for cultural and political heterogeneity. Alphabetical scripts and religious fanaticism are about its only common factors. Consequently, whereas China was a united empire more often than not, no state ever embraced the whole stretch from Europe to India. The Roman Empire, the Arab Caliphate and the various Indian Empires are the political expressions of a basically tripartite structure. Christendom, Islam and Hinduism express the same division in cultural terms.

The medieval period was the heyday of the Turco-Mongol nomads of the Asian steppe. Huge though China was, she suffered bloody conquests at their hands: even the Himalayas could not protect India from invasion by Timur the Turk. Westward, the Golden Horde held Russia in slavery. But the nomads' most devastating and continuous assaults fell on the Near East. By the thirteenth century the Arabs' political power had been permanently broken, and throughout the region Turkish dynasties had established themselves in the Arabs' place. The Turkish onslaught had positive as well as negative effects: in Anatolia massive immigration created a new nation which grew into

the Ottoman Empire: everywhere it was Turks who provided the dynamic for Islam's second phase of expansion. The Arabs had already taken the south and east shores of the Mediterranean from Christendom and the lower Indus valley from the Hindus. The Turks took South Russia and the Balkans and brought the conquest of India near to completion. This was a remarkable achievement which went right against the population gradients.

Neither Old nor New Worlds knew of each other's existence in the pre-Columbian period, but the literate societies of the Old World were linked by trade routes and had a fair knowledge of each other. One path between east and west was the 'silk route' across Central Asia (Chinese silk, being the world's finest, was much in demand in the West). Its vitality – in the fifteenth century on the low side – varied according to the temper of the nomads. More important in scale and steadier in flow was the sea traffic along the east and south coasts of Asia, where an overlapping series of Arab, Indian, Chinese and Japanese shippers connected Cairo and Nagasaki via Aden, Calicut, Malacca and Canton. Branch routes brought the Philippines and the Indonesian archipelago into the system.<sup>1</sup>

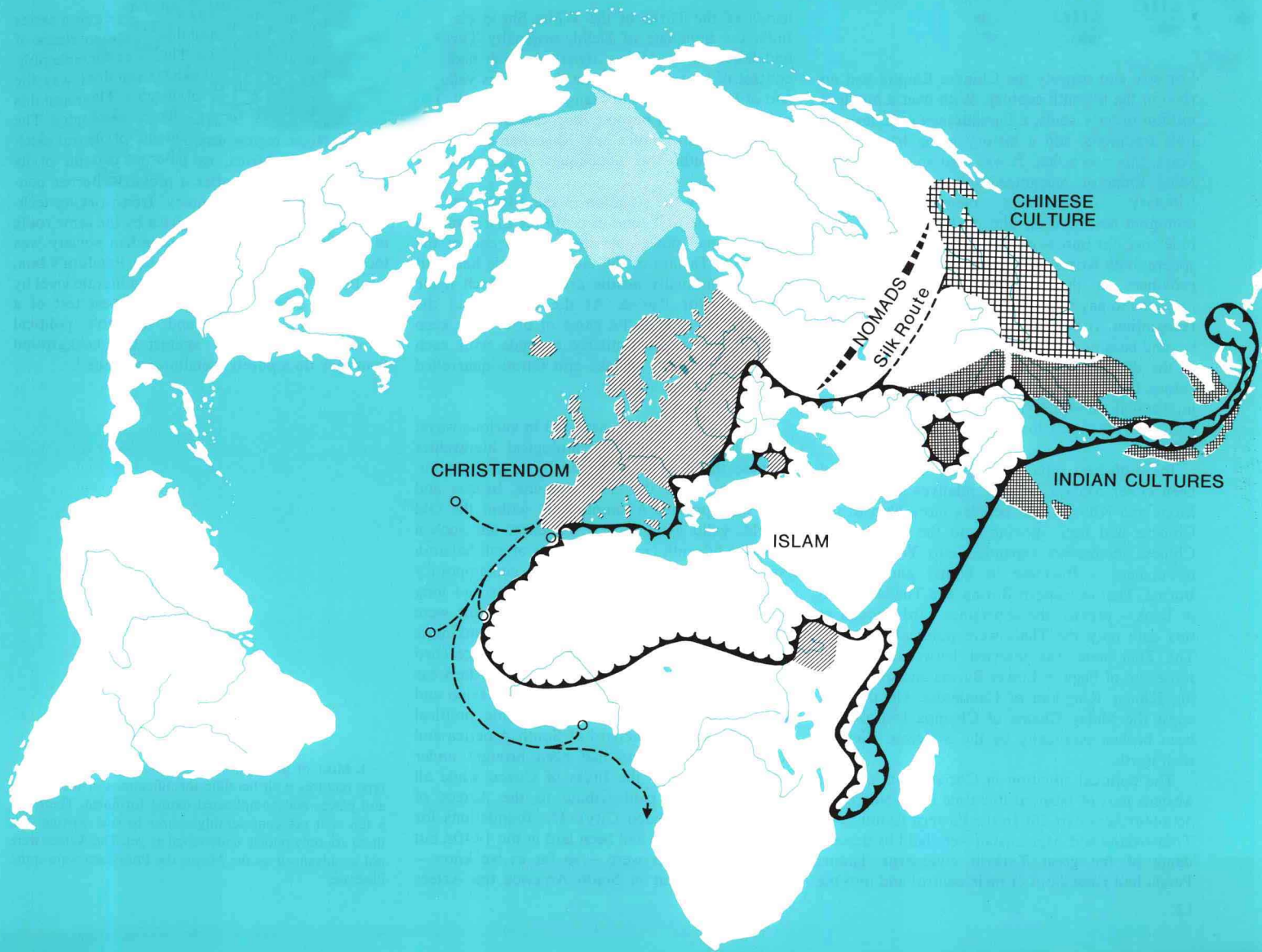
Thanks to this trade network, Old World geographers had a reasonably accurate picture of their hemisphere. The missing pieces were north-east Siberia, and Central and Southern Africa. Africa was the more intriguing. For centuries trans-Saharan caravans had brought gold dust, ivory and slaves from the Sudan to the Mediterranean, so there was some information available about the Niger basin. And on the east coast Arab traders seeking the same commodities had established posts as far south as the Tropic of Capricorn. The west coast was first explored by the Portuguese in the fifteenth century. They reached the gulf of Guinea in 1471 and soon built up a trade similar to that run by the Arabs on the east. But this only satisfied half their ambition: they hoped to sail on past Africa to India. Alas, exploration beyond Guinea was a disappointment. The coastline was

found to turn south again and to continue south apparently endlessly.

At this stage an impartial observer would surely have put his money on Islam rather than Christendom. Islam had held the Near East for nearly 800 years, Christian minorities there had become too weak to support any *revanche*, and anyhow, for military efficiency, no Christian state could match the Ottoman. Stretching from Morocco to Kazan, a solid wall of Islamic countries stood between Christendom and the rest of the known world. Such Christian enclaves as Georgia and Abyssinia were dwindling, while Islam's steady expansion continued east and south. The Negroes of the Niger and of the east coast of Africa, the oasis-dwellers on the silk road in Turkestan and the Indonesian islanders along the spice route were all adopting Islam in increasing numbers. The only card in Europe's hand was its increasing literacy. The combination of alphabetical script and movable-type printing (invented in Germany in the mid fifteenth century) opened the way to a more knowledgeable and efficient society. In the course of the fifteenth century European technology began to pull ahead of Asian.

1. The sea lane from the East to the Near East is known as the spice route. Many of the spices came from Indonesia – cloves and nutmeg specifically from the Moluccas, mace and camphor from other islands in the archipelago. Pepper came mostly from India, cinnamon from Ceylon, ginger from China.

The importance of spices in this period seems ludicrous till one remembers that the diet of the time was boring in the extreme and that spices were an ideal commodity from the traders' point of view, being small in bulk, but high in price and profit margin.





## The World in 1483

### 3. Political Units

For size and majesty the Chinese Empire had no rival in the fifteenth century. With over a hundred million orderly souls, a bureaucracy of indestructible traditions, and a history going back 3,000 years, this was a fact. It was also an attitude: the Ming Emperor recognized other states only as tributary – or rebellious – members of a world dominion bestowed on him by Heaven. This attitude was not unreasonable within the East Asian sphere: both Korea and Vietnam had been Chinese provinces in the past and their rulers were prepared to pay token tribute in return for Chinese recognition. It became untenable when the world beyond became visible and was then to cause a loss of the dignity it was supposed to enhance. Even before that happened it had done damage as an intellectual soporific, making the Chinese smug and incurious, and lowering the vitality of their culture.

In South-East Asia the original inhabitants had been either Malays or near relatives such as the Mons and Khmers, but peoples more akin to the Chinese had been moving into the area as the Chinese themselves expanded into Yunnan. The newcomers – Burmese in Upper and Central Burma, Thai in Eastern Burma and Thailand, Lao in Laos – pressed the aborigines hard, though at this date only the Thais were politically unified. The Thai state was inserted between the Mon Kingdom of Pegu in Lower Burma and the declining Khmer Kingdom of Cambodia. On the east coast the Malay Chams of Champa had already been broken politically by the Sinicized Viets to their north.

The political situation in Christendom and the western part of Islam at this time is considered in detail further on (p. 26). In the Eastern Islamic area Transoxiana and Afghanistan were held by descendants of the great Turkish conqueror Timur; Persia had passed out of their control and into the

hands of the Turks of the White Sheep clan. In India the Sultanate of Delhi, originally Turkish, had fallen to an Afghan dynasty which had lost control of everything outside the Ganges valley – and of Bengal (the lower Ganges area) as well. The old provinces had become independent kingdoms, while resurgent Hindus held Rajasthan and, in the extreme south, the unconquered Kingdom of Vijayanagar.

In one way the situation in the 1480s was unusual: for the first time in centuries there was no major nomad power. At the western end of the steppe the Tartars of the Golden Horde had split into four mutually hostile groups – which made life easier for Russia. At the eastern end the Chinese played a skilful game of bribery to keep the Mongol tribes similarly at odds with each other. In between, Kazaks and Oirats quarrelled without benefit of subsidy.

Cultural level can be assessed in various ways: the archaeologist likes technological hierarchies because the material obtained by excavation immediately places the culture: stone, bronze and iron ages provide a simple and, within the Old World, valid evolutionary sequence. On such a view the fifteenth-century Negroes of sub-Saharan Africa comfortably outrank the contemporary Amerindians, for whereas the Negroes had long been an Iron Age people, the Amerindians were without useful metals of any kind. The ranking is misleading: socially the Amerindians had reached a level at least equivalent to the Negro. In the areas where there were enough of them – Mexico and Peru – they had erected considerable political units: the Pacific seaboard of South America and its Andean hinterland had been brought under unified control by the Incas of Cuzco while all Central Mexico paid tribute to the Aztecs of Tenochtitlan (Mexico City). The foundations for both these empires had been laid in the 1440s, but whereas the Incas were – so far as we know – without precedent in South America the Aztecs

were only the latest and least attractive in a series of tribes that had ruled Mexico. Negro states of comparable scale are lacking: the only sizable political unit in Africa south of the Sahara was the Empire of Timbuctoo on the Middle Niger and this was the creation of a Berber clan, the Songhai. The Middle Niger region was, in fact, a cultural satellite of North Africa, its literacy a result of its conversion to Islam after a previous Berber conquest in the eleventh century. Iron-working techniques had reached Black Africa by the same route in the first century B.C. Amerindian society was too far away to receive any such Pandora's box, but the Mexicans did get to a proto-literate level by their own efforts. Literacy is the best test of a society's sophistication and Mexico's political achievements fit better against this background than they do a purely metallurgical scale.<sup>1</sup>

1. Most of the Mayan 'inscriptions' are comic-strip-type pictures with heraldic identifications of individuals and places and complicated dating formulae. There are a few that get considerably nearer to true writing, but these are only poorly understood as yet. The Aztecs were not as advanced as the Maya; the Peruvians were quite illiterate.



1483



○ Portuguese overseas

## The Voyages of Discovery 1487–1500

With a hostile Islam astride the known routes to the East, and the Portuguese attempt to circumnavigate Africa frustrated by the length of the continent's west coast, there seemed little chance of Europeans gaining direct access to oriental markets. However, if you believed the world was round – as an increasing number of people did – it might be possible to reach the East by sailing west. Most calculations suggested the distances would be formidable, but by taking the largest current estimate of the size of the Eurasian land mass and the smallest current estimate of the size of the globe the Genovese, Christopher Columbus, managed to convince himself that Japan lay only 3,000 miles across the Atlantic. He obtained the backing of Ferdinand and Isabella of Spain and in 1492 put his arithmetic to the test. If he was a second-rate geographer he was a first-rate sailor. Setting out from the Canaries with three ships he arrived at the islet of San Salvador in the Bahamas after thirty-three days on the open sea. He threaded his way through the Bahamas to Cuba, and then sailed east along its northern coast to Hispaniola. After establishing friendly relations with the natives, who were very willing to trade their gold ornaments for glass beads, Columbus founded a token settlement and then set off for home.<sup>1</sup>

Back in Spain he announced that he had discovered some hitherto unknown islands in the Japanese archipelago: Japan itself could not be much further on. In the interim the new discoveries needed colonizing. The next year Columbus led a fleet of seventeen ships filled with enthusiastic volunteers to Hispaniola. He picked the perfect course, reaching the Lesser Antilles in twenty-one days, only to find his original colony had been wiped out by exterminated natives. A second did little better and further exploration revealed only Jamaica, the inhospitable southern coast of Cuba and more aborigines, so poor they were scarcely worth robbing. The dream was fading. On his third voyage (1498) Columbus took more colonists, but this time they were the scrapings

of the Spanish prisons. He steered a yet more southerly course via the Cape Verde Islands and made his landfall at the southernmost of the Lesser Antilles, Trinidad. After a brief exploration of the adjacent mainland – which he recognized as continental by the size of the rivers – he made for the colony on Hispaniola, now moved by his brother Bartholomew to a better site on the south coast (present San Domingo). None of the three Columbus brothers were successful administrators; there was constant trouble in the colony and a royal official sent out in 1500 to investigate complaints was so shocked that he sent all three back to Spain in irons. The Spanish monarchs pardoned Columbus and employed him again, but only as an explorer. His fourth and last voyage (1502–4) along the Central American coastline showed that the Caribbean Sea was closed on the west. His report 'proved' that this stretch of land was the Malay Peninsula. He died in 1506, full of grievances and cranky ideas, a relict of the pre-Columbian age.

The Portuguese exploration of the West African coastline finally paid off in 1487 when Bartholomew Diaz rounded the Cape of Good Hope. Though his men refused to go further Diaz sailed back with the conviction that the route to India lay open. The full-scale expedition of Vasco da Gama came ten years later. To take advantage of the anti-clockwise wind system of the South Atlantic, da Gama stood well out from Africa, turning east only when he reckoned he had reached the latitude of the Cape. He slightly miscalculated, making an accidental landfall a hundred miles north of the Cape, but thereafter had plain sailing and arrived in Southern India ten months after leaving Lisbon. Despite the hostility of the local Moslem traders he was able to carry home a cargo of pepper and cinnamon. Only six months after da Gama's return another fleet under Cabral set out to repeat his voyage. This second expedition sailed a wider arc through the South Atlantic, sighting Brazil (which was promptly claimed for Portugal) and comfortably clearing the Cape.

A third theoretical route to the East was parallel to

Columbus's but to the north – an extension of the ancient and still-travelled Norse route to Iceland and Greenland. Briefly, around the year 1000 the Norse had sailed beyond Greenland to the North American continent. They had failed, however, to establish a permanent settlement and the saga of their exploration became only one of the many tales of fabulous islands in the far Atlantic. Tales spurious or genuine probably played less part than geographical reasoning in the thinking of the Venetian John Cabot, who persuaded the English King Henry VII to finance an exploration of the seas beyond Greenland. His voyages are poorly documented, but it seems that in 1497 he reached Newfoundland and in 1498 New England. He dutifully reported that he had reached the territory of the Great Khan,<sup>2</sup> but it soon became apparent that this barren land was no China. Except for seasonal exploitation of the Newfoundland fishery the voyages were not followed up.

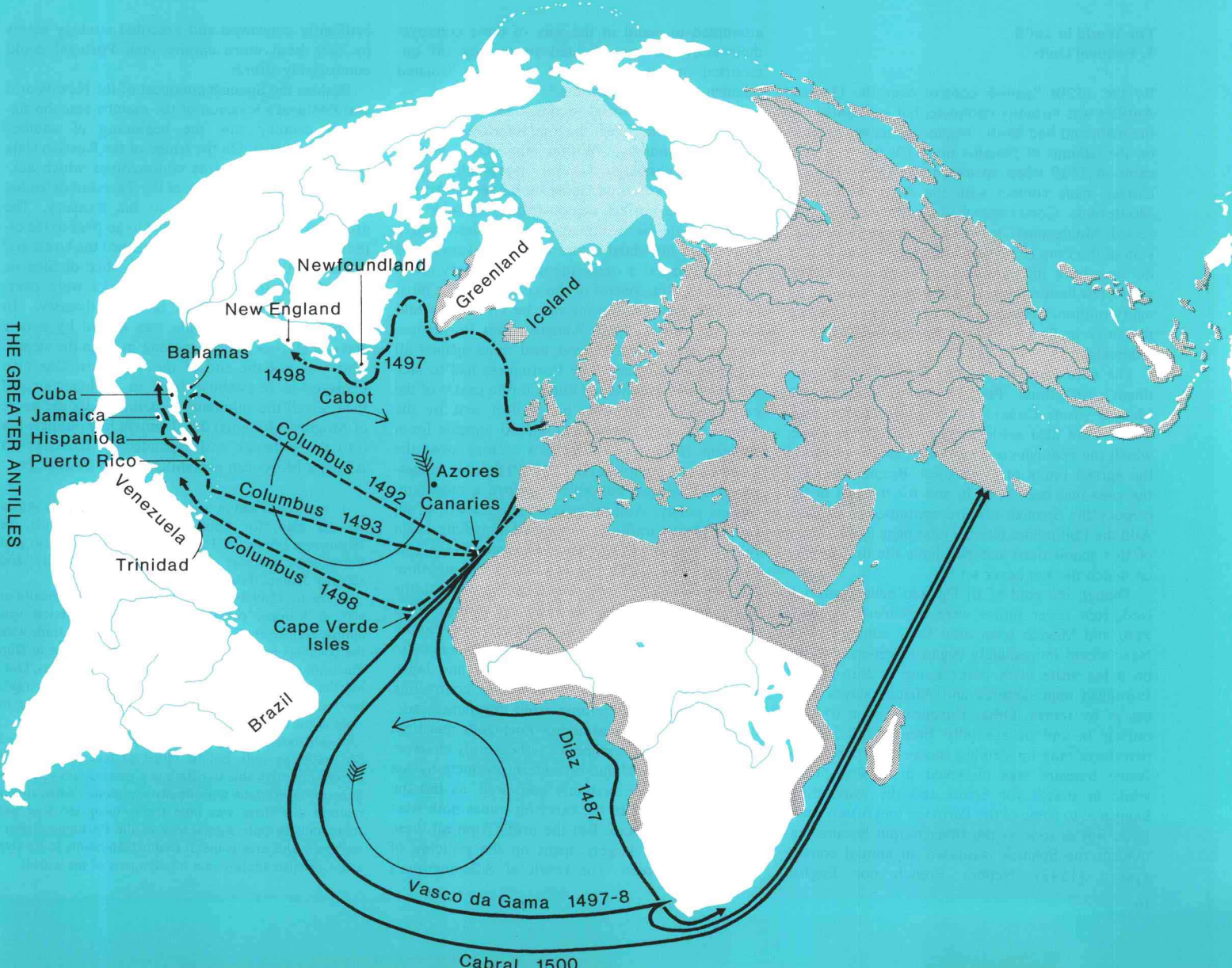
The potential profit in the Portuguese discoveries was obvious. By the same criterion the Spanish exploration had clearly failed. Far from opening a fast route to China, Columbus had merely discovered some islands of dubious worth and some natives whose accumulated stock of gold was to be exhausted within a few years. But these islands were only a minor aspect of what everyone but Columbus soon recognized as a New World: any day might bring news of a country where there really was gold in abundance. The gullible, the greedy and the brave began the search for El Dorado.

1. He returned on a more northerly route via the Azores. On both outward and return voyages he made near perfect use of the clockwise winds of the North Atlantic, which suggest that either he knew what he was doing or else was extraordinarily lucky. Though his choice of the Canaries rather than the Azores as a starting point may have been determined by the fact that they were Spanish (the Azores and all the other Atlantic islands were Portuguese) it seems easier as well as kinder to believe he had correctly worked out the wind system.

2. In Europe it was thought that the Mongol Khans still ruled China.



# THE VOYAGES OF DISCOVERY 1487-1500



## The World in 1600

### 1. Political Units

By the 1520s Spanish control over the Greater Antilles was virtually complete, but exploration of the mainland had hardly begun. Settlement started on the isthmus of Panama in 1510: the real push came in 1519 when an expedition under Hernan Cortez made contact with the Aztec Empire of Montezuma. Cortez marched on Mexico City and seized Montezuma, temporarily winning possession of the Empire by this coup. Ejected, he fought his way back into the capital the next year and, with a few hundred men, made himself master of as many million. Sixteen years later Pizarro repeated the story in Peru by capturing the Inca emperor Atahualpa.

The pattern of entry into the American continent was thus: Panama (from Hispaniola), Mexico (from Cuba) and Peru (from Panama). There were also settlements on the River Plate, which the Spanish correctly calculated lay beyond the agreed limits of Portuguese Brazil. By 1550 the gaps had been filled in and for the rest of the century the Spanish Empire continued to expand. Add the Philippines (see the next page for the story of this acquisition) and you have the first empire on which the sun never set.<sup>1</sup>

Though the gold of El Dorado never materialized, rich silver mines were discovered in both Peru and Mexico soon after their conquest. The New World immediately began to generate traffic on a big scale, with silver going to Europe and European manufactures and African slaves coming in by return. Other Europeans soon tried to muscle in and occasionally French and English privateers rang up striking successes – part of the Aztec treasure was hi-jacked by a Frenchman while in transit for Spain and the same thing happened to some of the Peruvian loot fifteen years later. But as soon as the silver output became significant the Spanish instituted an annual convoy system (1543). Neither French nor English

attempted to stand in the way of these convoys: their activities were limited to picking off unescorted merchantmen and attacking isolated Spanish colonial settlements.<sup>2</sup>

The vast territorial acquisitions of Spain's *conquistador* era reflect the total inferiority of New World technology. Within the Old World, European technology was only marginally superior to Asian. Vasco da Gama on his second trip to India gave a perfect demonstration of how this margin could be exploited when he destroyed a native fleet off Malabar: he kept his distance and used his guns at a range the native artillery could not match. But control of the coasts was the most he hoped for – in the interior he knew he would soon be overwhelmed. Almeida, first Portuguese viceroy in the East, agreed, and ruled against all commitments ashore. The Portuguese had to face not only the seapower of Gujerat (the centre of the native trading network) but a fleet sent by the Mamlukes in response to Gujerati appeals for a Moslem Holy War. Almeida's victory over the allies was so complete (Diu, 1509) that his successor Albuquerque was able to afford a more ambitious policy. Aiming at complete control of all Indian Ocean traffic he organized a girdling chain of forts of which the lynch pins were Goa (the viceregal capital), Ormuz (to control the mouth of the Persian Gulf) and Malacca (to control the Malayan Straits). Between these points ships sailed with Portuguese permission or at their peril.<sup>3</sup> Simultaneously the exploration was pushed further east to the Spice Islands (1512), China (1513) and Japan (1543). Here there was no chance of controlling the routes but considerable profit in general trade.

Of the elements sustaining Portugal's maritime empire two were monopolies – the supply of slaves to the New World and of eastern products by sea to Europe. These certainly paid well, as did the Portuguese share in the carrying trades both west and east of Malacca. But the profit from all these operations was largely spent on the policing of the Indian Ocean. The result of Albuquerque's

brilliantly conceived and executed strategy seems to have been more empire than Portugal could comfortably afford.

Besides the Spanish conquest of the New World and Portugal's invasion of the eastern seas the sixteenth century saw the beginning of another European thrust. On the fringe of the Russian state were the Cossacks, free communities which acknowledged the suzerainty of the Tsar and defended his frontier without cost to his treasury. The arquebus enabled the Cossacks to go over to the offensive and in the 1590s they crossed the Urals and presented the Tsar with his first slice of Siberia.

In Persia the White Sheep Turks were overthrown by the native Safavid dynasty. In Transoxiana Timurid rule was erased by a new wave of (Uzbek) Turks moving in from the steppe. This was not the end of the Timurids. One clan managed to re-establish itself in Afghanistan and then seized the sultanate of Delhi: under the name of Moguls (Mongols) this Timurid line put new life into the sultanate and expanded its frontiers. In Africa a Moroccan expedition seized Timbuctoo.

1. You could add in a great deal more than is shown on the map, for Philip II of Spain obtained the Portuguese crown in 1580. However the Spanish and Portuguese overseas Empires remained legally and actually distinct throughout the period of union.

2. Up to 1559 France and Spain were continually at war in Europe: privateering during this period was almost exclusively French. English attempts to trade with the colonists followed and Spain's determination to stop this traffic quickly transformed traders into pirates. During the last quarter of the century the important raids were all mounted for England, with the Dutch joining in right at the end.

3. Albuquerque originally intended to control the Red Sea outlet as well, but he failed to take Aden and it proved impracticable to maintain a garrison on waterless Socotra. Operations were finally abandoned when it was realized that there was little traffic using the Red Sea route and the only significance of the Portuguese intervention in this area is that it enabled Abyssinia to survive as a Christian enclave in a Muslim part of the world.