maintain food output per head. Some of the pressure was relieved by the steadily improving climate after 1850 and, in the case of England, through movement into the new industrial towns, whereas in other countries, such as Ireland and Norway, emigration to the United States or elsewhere was the only solution.

The real revolution in the European food situation came after about 1850 with large-scale importation of food from the rest of the world and the use of imported resources such as guano from South America and other fertilizers from colonial territories to improve domestic productivity. This solution was not possible for other societies such as China that lacked colonial territories to exploit and they, therefore, continued to suffer the traditional problems of malnutrition and starvation stemming from population pressure. One of the main reasons for Europe’s success in breaking free from the long struggle to survive that had dominated the experience of nearly every society since the development of agriculture lay in its changing relationship with the rest of the world and, in particular, its ability to control an increasing share of the world’s resources.

7

THE SPREAD OF EUROPEAN SETTLEMENT

The history of the spread of European settlement falls into two phases—internal expansion followed by external colonisation—which can be seen as part of a single process driven by the same sort of pressures. The combined impact of these two movements has in effect formed the modern world. They transformed Europe from being one of the more backward societies in the world, which was the case until at least the fifteenth century, into the most advanced, able and willing not merely to influence the pace and nature of development elsewhere, but also, though a variety of means, to impose radical changes on the rest of the world. These changes involved the way people thought about the world around them, the use of natural resources and the exploitation of much of the rest of the world for the benefit of Europeans. The effects are still being experienced worldwide. But the most striking and immediate effect of the spread of European settlement beyond the boundaries of Europe itself was its lethal impact on indigenous peoples and societies.

The sequence of events set in train by the arrival of the Europeans, despite differences in the native cultures and the country of origin of the settlers, reveals a consistent pattern. If events are interpreted in terms of the spreading of European culture, the opening up of new territories and the building of global empires, then it may be seen as a story of success. If the focus is on what happened to the people, the land and the environment generally, then it is an altogether different story.

For most of history, Europe, apart from the Mediterranean area, was a backwater. The earliest gathering and hunting groups only settled the area intermittently and at the height of the last ice age, when the people living in south-west France were producing their great cave paintings, the local population was probably no more than 10,000, with perhaps 100,000 in the whole of Europe, about five per cent of the world’s population. The development of agriculture took place outside Europe and only spread there thousands of years later. The first settled societies
emerged in Mesopotamia and Egypt and it was only at a much later stage that complex, hierarchical societies emerged in Europe. Even then they remained concentrated around the Mediterranean - Minoan Crete, Mycenae, the city states of Greece and their colonies, the empires of Alexander and his successors, the Etruscans and the Carthaginians. Only with the rise of Rome did these more advanced societies begin to control northern and western Europe, away from the Mediterranean. Even with the development of agriculture the population of this peripheral area remained small - perhaps three million people in France, about half that number in Germany and only a few hundred thousand in Britain. At the height of the Roman empire, around 200 AD, the total population of Europe was about 28 million (compared with almost twice that figure in both China and India) but a quarter of that total lived in Italy, which was then still the centre of the empire.

The collapse of the Roman empire in the west and the loss of control over north and west Europe to Germanic invaders meant a continuation of the Mediterranean area (especially the eastern part) as the core of the late empire and the successor Byzantine state. The rise of Islam and the establishment of the Omeyyad empire (stretching from western India to southern Spain) as the most sophisticated and advanced society in the western world reinforced this trend. Northern and western Europe remained a backward region of thinly spread peasant farmers living in tribal groups and forming part of small, primitive kingdoms. The empire of Charlemagne (at its height around 800) was short-lived and western Europe was again overrun by new waves of settlers and raiders - the Vikings and Hungarians. Only in a few places - the Ile-de-France, England, Flanders and the western parts of Germany - did more effective political entities slowly begin to emerge in the tenth and eleventh centuries.

Early medieval Europe was still a vast wilderness with a scattering of small, largely self-sufficient villages which had only very limited outside contacts. At most there were about 36 million people in the year 1000, perhaps 5 million of them in France and 4 million in Germany. England had about 1½ million people (equivalent to one large city today); its most densely inhabited county (Norfolk) had a population of about 100,000 while others such as Kent, Hampshire, Sussex and Wiltshire had 40,000 (the equivalent of a modern country town) and the western and northern parts of the country were even more thinly populated. It was in the three centuries after 1000 that a huge extension of the settled area and a transformation of the European landscape took place. The driving force behind this expansion was a very rapid rise in population from the 36 million of 1000 to over 45 million in 1100, over 60 million in 1200, and about 80 million in 1300.

This doubling in the population meant that a huge amount of new agricultural land was required in order to produce enough food. The problem of growing more food and bringing new areas into cultivation was eased in this period by the relatively warm climate that occurred between the ninth century and about 1200.

The natural ecosystem of most of northern and western Europe is temperate forest, with oak predominant and elm, beech and lime the other main trees. The spread of agriculture in the three millennia after 5000 BC saw the first clearing of the natural forests. In its early stages agriculture in Europe was based on a swidden system: people would make clearings and cultivate the ground for a few years and then allow it to revert to secondary growth and forest once the initial fertility had declined. Only as population slowly increased were permanent fields established. The swidden system survived in the less densely settled parts of Europe until comparatively recent times. As late as the eighteenth century many parts of Sweden and Finland were still farming by cutting down trees (although the stumps were left in the fields to save labour), growing crops for four to six years and then allowing the land to revert to scrub and eventually woodland. In this way the same ground only came into use about four times every century. But even in areas where permanent fields were established the overall population was still low and therefore the amount of forest clearance was limited and remained so until about the end of the tenth century. The process took place through clearing waste and woodland around existing villages to create new fields and through the establishment of new settlements, often no more than individual cottages or hamlets at first, within wooded areas. It was an insidious process, happening over many centuries, but its ultimate impact on the environment was considerable. Forests originally covered about 95 per cent of western and central Europe. By the end of the great period of medieval colonisation this had been reduced to about 20 per cent.

The timing of the clearance varied from area to area. Some of the earliest instances were in places such as Burgundy that were relatively remote from the ninth and tenth century invasions and began the process of population growth earlier than elsewhere. In Brabant the forest areas were settled by the Franks in the sixth and seventh centuries and later became centres of charcoal production - here as early as about 800 large parts of the great climax forests were being destroyed. Other
regions, especially the core areas of the newly developing kingdoms, were also cleared at an early stage. The forest clearance of the Ile-de-France was largely completed by about 1080 and much of south-east England had been cleared by 1086 when the Domesday Book was compiled for the new Norman rulers. Other areas, too, such as Cambridgeshire had also been largely deforested. But the extent of this early clearance was far from total. The Weald and the Chilterns in the south east were still almost entirely woodland and some of the villages recorded in Domesday Book had enough woods around them to support the foraging of as many as 2,000 pigs. In the eleventh and twelfth centuries the main movement of settlement in Europe was into the lowland forests, aided by the ability of the new heavy plough to cultivate the heavier soils. In areas remote from the main centres of population newly founded monasteries, particularly Cistercian, carried out extensive clearance but in most places it was the slow creation of new fields around old villages and the making of new settlements in the woodland that created the new landscape. By about 1200 most of the best soils of western Europe had been cleared of forest and new settlements were increasingly forced into the more marginal areas of heavy clays or thin sandy soils on the higher ground and the heathlands.

In France this movement involved the Argonne region, the higher lands of Lorraine (especially around the Moselle), the Vosges, central Beauce and the poor soils of upland Brittany. In England the chalk down, which had been sparsely populated in 1086, were well settled by the middle of the thirteenth century.

In Eastern Europe the major colonisation movement was that of the Germanic peoples eastwards into the lands occupied by the Slavs. It lasted from the tenth century until about 1300 and changed the ethnic map of Europe by producing not a clear frontier line but a complex mixture of peoples that bedevilled the history of the area ever since. In the main, it was a movement of farmers clearing woodland and using the heavy plough into an area where the Slavs still practised swidden agriculture, with the emphasis on stock-rearing in conjunction with hunting and fishing. The first stages of the movement began between 919-932 when the Germans settled the area between the Elbe and the Saale rivers. It was then held up by the Hungarian invasions, although Vienna was founded in 1018. The major thrust eastwards did not start in earnest until the mid-twelfth century when Holstein, Mecklenburg and Brandenburg were settled. Once political control had been achieved through war the settlers moved in. They were organised by agents acting for the various princes or bishops who controlled the area.

The Spread of European Settlement

The agents would divide up the land, provide the equipment for the settlers and develop villages and towns, often to standardised designs. The agents were paid by grants of land from the bishops and princes. Only in the south with the movement along the Danube were some of the settlements developed around mines rather than for agriculture. The movement eastwards continued into Livonia and Courland (1219), Riga (1201), East Prussia (1231) and by 1240 had advanced as far as the Oder river and Silesia and further south into the Erzgebirge and Sudeten mountains. Only in the late thirteenth century, by which time many of the best lands were occupied, did the thrust of the movement weaken. Throughout the area forests had been cleared and turned into fields as part of a sustained and deliberate policy of development. The attitude of the new arrivals was expressed by the abbot of Fellarich, one of the new German settlements, when he said: 'I believe that the forest which adjoins Fellarich covers the land to no purpose, and hold this to be an unbearable harm.' The newly settled area, particularly those parts with easy access along the rivers to the Baltic ports, were soon turned into a major grain producing region exporting to western Europe.

The great medieval internal colonisation of Europe came to a halt nearly everywhere around 1300. Population was at a peak and probably too high for the agricultural system to sustain in the long term. The climate was also deteriorating. Settlement in the thirteenth century had been increasingly pushed into marginal areas where the yields were lower, which worsened the imbalance between population and food supply. The decline in European population that began, at the latest, in the first years of the fourteenth century halted further colonisation. Indeed the catastrophic loss of population in the Black Death (in places as high as a third) and the periodic recurrences of the plague that continued for the rest of the fourteenth century produced a marked reduction in the settled area: many villages were abandoned and never subsequently reoccupied. In Spain the reconquista, which had been at its height in the twelfth century, as new villages of Christian peasants were established behind the military frontier as the Kingdoms of Castile, Aragon and Portugal moved south into the old Arab territories, came to a halt. It was not completed until the end of the fifteenth century.

A similar, but later, advance of settlement can be traced in Russia after the recovery of the Russian state from the Mongol invasions and its steady expansion from the fifteenth century onwards. As in Western Europe there was a process of forest clearance as population rose and
more land was needed for cultivation. There were periods of stagnation or even retreat as numbers stopped rising, or even fell, but, in general, the process was inexorable. At times it could have a dramatic and highly visible impact on the immediate environment of a district within the space of a few years. For example in one district along the Volga the area of cleared ploughland rose five-fold in the ten years between 1613 and 1622. By the late eighteenth century about three-quarters of the great forest steppe in the north had been cleared of trees and ploughed. In the south, which was settled later, the clearance also came slightly later — it was about one third complete by 1800 but over 80 per cent of the land had lost its forest cover a hundred years later.

Apart from the loss of its natural forests the European landscape has also been transformed by the draining of marshes and fens and the reclaiming of land from the sea. Some of the first drainage projects were undertaken by the Romans, both in Italy and in the provinces. For example in Britain they drained part of the Fens along with Otmoor near Oxford but many of the settlements in both areas were abandoned following the end of Roman rule. Resettlement of the Fen area began in the Anglo-Saxon period and the Domesday Book shows that by the end of the eleventh century there were about fifty villages on the higher land away from the coast, protected by a specially constructed seabank and an inland bank, both about fifty miles long. New Romney, the first settlement in the Romney Marshes on the south-east coast, is dated to 1000 but here the process of drainage seems to have gone ahead in slow stages. The same is true of later developments in the Fens. Here as the population continued to grow the number of settlements and the extent of the reclaimed area also expanded, particularly in the period from 1150 to 1300. The so-called 'Roman Bank', running for about sixty miles around the Wash, was constructed in this period but nearly all the reclaimed land and new settlements came not from some overall scheme but from the gradual and piecemeal work of the village communities, secular landowners and great abbeys of the area. By the fourteenth century this was one of the most prosperous areas of England: the reclaimed land provided high quality pasture for animals, peat for fuel (digging for peat formed the network of waterways known as the Norfolk Broads), and reeds for thatching houses. Other areas in Europe saw similar large-scale reclamation projects. In France the Poitevin marshes were drained after 1100 and those around Arles about fifty years later. In the Po valley work went on from the early twelfth century, when the monks of Chiaverelle abbey began a series of water control projects, to the fifteenth century. The outcome was a huge area of new land, 97 per cent of which was owned by large landlords (who financed much of the work) and where the labourers, employed part-time in the new rice fields, lived in conditions of extreme poverty even by the standards of the time.

A more extensive, difficult and long-lasting struggle to create new land took place in the Netherlands. Until the sixteenth century nearly all the effort went into reclaiming land from the sea, especially around the great river estuaries. Once the sea had been excluded from the area the land provided excellent, fertile, flat and stone-free soil. The process, which was started in Flanders and Zeeland around 900 and in Holland about three hundred years later, was a response to the steadily rising population and the requirement for more agricultural land. Hundreds of small islands in the river estuaries and just offshore were slowly made into larger units, not by working steadily outwards from the shoreline, but by extending existing islands and forming new ones in an unplanned process that created a new landscape. As new land was being formed, existing areas were being lost as the sea encroached. Indeed some of the reclamation began as a secondary consequence of building sea defence walls to protect existing low-lying land at a time when sea levels in the area were rising. Between 1250 and 1480 the modern Zuider Zee was created by flooding but the most catastrophic loss of land occurred in 1421. The 'Elizabethvoed' on 19 November, which killed ten of thousands of people, led to the permanent loss of over 40,000 acres of land and created the Biebosch marsh out of previously fertile polderland. In 1507 a large amount of fertile land at the mouth of the Ems also had to be abandoned.

During the sixteenth century the Dutch shifted attention from the coastline to inland and began the long process of internal drainage in the Netherlands which has continued to the present day. This was a technically more complex process than reclaiming land from the sea. It required large amounts of capital (provided by private consortia who owned the new land) to build windmills to carry out the considerable amount of pumping needed to lower the water table — the draining of Lake Beemster in 1612 used forty-three windmills to drain the thirteen feet deep, twenty-five square mile expanse of water and it produced 17,000 acres of fertile land. The peak of activity in the Netherlands was between 1615 and 1640 and overall a total of nearly 400,000 acres was reclaimed in the hundred years after 1550. Some of the major schemes took centuries to complete — for instance the draining of the Haarlemmermeer, begun in the seventeenth century, was not finished until 1852. In the twentieth century even larger projects have been
undertaken by the state, including extensive works in the Wadden Sea and turning the Zuider Zee into an inland lake (the Ijsselmeer) in 1932 followed by steady reclamation of large sections. As a result of this sustained effort of modifying and controlling the environment about two million acres of land has been created in the Netherlands since the thirteenth century with the result that forty per cent of the country is now below sea level.

The sophisticated techniques developed by the Dutch in the sixteenth century were also applied in other countries, in particular England. In the Fens, in the early seventeenth century, large landowners were given extensive powers to reclaim land, override the rights of other, smaller landowners and suppress common rights. The inhabitants were made responsible for the upkeep of the new works whilst the speculators took the profits. The result was large-scale development, mainly supervised by a Dutch engineer, Vermuyden. New canals were dug and the Great Ouse diverted for twenty-one miles (the longest artificial watercourse built since Roman times). The outcome of much of this effort was an ecological disaster. No allowance was made for the shrinkage of the peat once the water was removed. The consequence was that the ground level fell and the rivers were left above ground level. Around the Wash the coastline was also extended by about three miles, between 1620 and 1770, and major areas such as Canvey Island reclaimed. Other large scale schemes undertaken by Vermuyden, such as those along the Yorkshire and Lincolnshire border, failed and had to be abandoned. Elsewhere in Europe other schemes reclaimed the area around Narbonne and the Rhone estuary in southern France in the mid-sixteenth century. But many were unsuccessful – the Duke of Tuscany failed to drain the Maremma and in a large area of the Adige valley the amount of marsh actually extended after a botched attempt at drainage. Other large-scale drainage schemes had to wait until the twentieth century to be carried out successfully. They included the marshes in the plain of Salonica, the Ebro delta and Pontine marshes, all of which were drained in the 1920s.

Despite the rise in population and the large extension of the settled area, Europe in the thirteenth and fourteenth centuries remained a backward region, on the margins of the main developments of world history. China was the most populous and advanced country in the world and the Islamic states of the Mediterranean and Near East, about to be revived under the Ottoman empire, were culturally far in advance of a relatively impoverished Europe. The crusades were a short-lived enterprise and Christian control of parts of the Levant, in most places maintained for no more than a few decades, passed almost without disturbing the Islamic world. In 1241 the Mongols reached the river Oder and western Europe only avoided invasion after the Mongol victory at the battle of Wahlstatt because of the death of the Mongol leader Ogodi and the resulting internal confusion within the empire. Nevertheless a few decades later the Mongols ruled the most extensive empire the world had ever seen stretching from the Volga in the west to China in the east and taking in large parts of south-west Asia. The rise of the Ottoman Turks in the fourteenth century destroyed most of the last remnants of the Byzantine empire (which had already been undermined by the conquest of Constantinople by the western Christians during the Fourth Crusade in 1204), although Constantinople itself survived until 1453. But the Turks pushed further westwards and defeated the Christians at the battle of Nicopolis in 1396 to extend their control over most of the Balkans and later conquer Cyprus and other islands in the eastern Mediterranean. At the same time the Chinese were also exploring further westwards – the eunuch admiral Cheng Ho led seven armadas of sixty-two vessels and 37,000 soldiers, between 1405 and 1430, to twenty countries as far apart as Kamchatka in the north and Zanzibar off the east coast of Africa. If it had not been for the death of the Emperor and the subsequent faction fighting at court that brought about a new policy of shunning external contacts, the Chinese might well have gone on to discover much of the world before Europe did so.

The remarkable transformation in the fortunes of Europe that was to lead not just to a reshaping of the political map of the world but to extensive control over the world’s resources began in the fifteenth century. The great advantage for the countries of western Europe was that exploration westwards encountered no strongly organised states like those in the Mediterranean and further east which were able to challenge European power. Spain and Portugal, the first nations to explore the eastern Atlantic and launch the long period of European expansion overseas, established control over the Atlantic islands (the Canaries and the Azores) in the fifteenth century and the Portuguese continued their voyages down the west coast of Africa. Once they had rounded the Cape in 1488 they were able to make use of the already well-established trade routes of the Indian ocean to obtain goods for sale in Europe. The Portuguese, with a population of only about one-and-a-half million, had little military power and were not able to challenge seriously the existing states of India and south-east Asia. They were,
however, able to capture a few key trading sites – Goa (1510), Malacca (1511) and Hormuz (1515) – their main aim being not conquest of territory but trade and exploitation of the wealth of the area. The Spanish, moving westwards into the Caribbean after Columbus’s voyage in 1492, encountered only relatively primitive tribes on the various islands. When they reached the mainland they found more advanced states in the Aztec and Inca empires but, because of the slow development of complex societies in the Americas, technologically these indigenous empires were still at least three thousand years behind the Europeans. Conquest, also taking advantage of internal dissenion within the empires, was therefore a relatively easy task even for the small number of Spaniards involved. The Portuguese found people at a level equivalent to those of the Caribbean islanders in Brazil after 1500 and soon established settlements along the coast.

The first phase of European expansion, from 1500 to about 1700, was largely confined to the Spanish and Portuguese conquests of central and south America, the settlement of north America, principally by the British and French, and the extension of trade along the African coast and into the Indian ocean and south-east Asia. The second phase, lasting from about 1750 to 1850, saw the British defeat the French for control over the Indian sub-continent, growing trade between Europe and China and the settlement of Australia and New Zealand. In the last phase after 1850 attention was concentrated on carving up Africa and in 1919, after the defeat of the Ottoman empire in the First World War, France and Britain established control over most of the Near East. The last European war of conquest came in 1935 when Italy defeated the long-lived empire of Ethiopia. Throughout this period there was a wave of European settlement spreading across the globe. The settlers of North America pushed westwards to the Pacific, the new colonies of Australia and New Zealand were founded and the colonial settlements along the coasts of South America pushed further inland. In parallel with these developments came the great expansion of Russia moving out from its narrow enclave in the north centered around Moscow. In 1552 and 1554 the Khanates of Kazan and Astrakhan on the Volga were conquered, opening up the regions to the south and east of Moscow to settlement. For the next three centuries Russians from the north and Ukrainians from the west moved into this wooded steppe area and by the early eighteenth century a quarter of the Russian population was living in the region. At the end of the eighteenth century the defeat of the Turks opened up the grass steppes around the Black Sea to settlement. In the first half of the nineteenth century about fifty million acres of new land were brought into cultivation by farmers in the Ukraine and Volga areas. But the Russians were also moving eastwards. In 1851 they crossed the Urals and parties of traders and developers rapidly moved across Siberia, covering over 3,000 miles in sixty years, founding Tomsk in 1604 and reaching the Pacific coast at Okhotsk in 1649. By 1707 Kamchatka was conquered and thirty years later settlements in Alaska were established. This process was nominally under state control but in practice, especially outside the towns, Russia was as much a frontier society as the United States.

Although the Spanish easily conquered the societies of the Caribbean together with the Aztec and Inca empires, the extension of European settlement was a slow process. In Africa new settlements were largely confined to coastal trading posts until well into the nineteenth century. In China influence was restricted to a few trading stations until the middle of the nineteenth century. Even in North America, European settlement was almost entirely in an area to the east of the Appalachians until about 1800. By that date only a small number of Europeans had settled abroad. The white population of North America was about 5 million, that of South America some 500,000 and Australia 10,000 (New Zealand had still not been settled). Few of these were free settlers. About two-thirds of the whites who went to America before the Revolution were indentured servants forced to work for their masters for a period of years before being granted their freedom – if they lived long enough, and most did not. Until the 183os the majority of emigrants to Australia were convicts and only New Zealand was entirely settled by free people. The great wave of European emigration did not begin until the 1820s when the combined pressures of rapidly rising population in Europe, poor food supplies and a low standard of living (plus better transport) all encouraged emigration. Between 1820 and 1930 about fifty million people emigrated from Europe. Apart from the White Highlands of Kenya, and Costa Rica, few settled in the tropics; most went to the United States and the white colonies of Canada, Australia and New Zealand together with South America. The same upsurge can be seen in the movement of people from Russia to the sparsely populated and difficult lands of Siberia. In the early eighteenth century the total population of Siberia was about 250,000 (although European settlers already outnumbered the natives). A hundred years later there were 1½ million people living there, and the figure was 9 million by 1914. It is now over 30 million.
The expansion of Europe resulted in a complex clash of cultures. The long-established, advanced and culturally secure societies such as India and China survived best, although they eventually succumbed in differing degrees to European political, military and economic power. (Only Japan was able to maintain its independence politically and economically.) The people who suffered the most were the less developed societies, in particular the population of the Aztec and Inca empires, and the native peoples around the globe who were still gatherers and hunters or primitive agriculturalists. Many indigenous societies disintegrated under European pressure when they were not deliberately destroyed. The stark truth is that the native peoples lost their land, livelihood, independence, culture, health, and in most cases their lives. Despite differences in approach the common themes running strongly through European attitudes to the process were a disregard for the native way of life and an overwhelming urge to exploit both the land and the people. In every continent people such as the native Indians of North and South America, the Aborigines of Australia and the islanders of the Pacific found that their societies collapsed under European influence. The story of the natives under the impact of Europe is one of soaring death rates brought about by disease, alcohol, and exploitation together with social disruption and the decline of native cultures, especially under the influence of the missionaries. The Europeans showed little or no interest in native beliefs or customs until anthropologists in the last hundred years tried to investigate the remains of the shattered societies.

Just how rapidly the vulnerable native societies in the Americas could collapse is demonstrated by events on Santo Domingo, one of the first islands to be discovered by Columbus. At the time of the Spanish conquest the population was about one million yet within forty years, after intense exploitation, slavery and many deaths through European diseases, there were only a few hundred natives left. The same happened on an even larger scale in Mexico after the Spanish conquest of the Aztecs in 1519. There the population fell from about 25 million in the early sixteenth century to some 6 million by 1550 and to 1 million about 1600. The complex culture which had evolved over thousands of years could not withstand such catastrophic losses. The people were unable to come to terms with this disaster and their way of life and beliefs disintegrated. Many of the surviving natives were enslaved even though native slavery was technically illegal in the Spanish empire after 1542. In the first half of the sixteenth century over 200,000 Indians were taken from Nicaragua alone as slaves. Slavery continued on the borders of the Spanish empire for centuries – the Araucanians in southern Chile were used as slaves until the 1680s and the Apache, Navaho and Shoshoni in the north until the nineteenth century. After the conquest of the Incas in Peru in the 1530s the native population fell to about a quarter of its pre-conquest level under the pressure of the forced extraction of food, slaughter of the flocks of llamas, new European diseases and labour exploitation by both the Spanish civil and religious powers. The natives were forced into two highly dangerous occupations. The first – cultivation of the coca plant took place in the lowlands where the natives from the Andes found it very difficult to live. About half of the workers died during their spell at the plantations, most from 'mal de los Andes', a wart-like disease spread by an insect, that destroyed the nose, lips and throat. The second area where the Spaniards exploited native labour was in the silver mine at Potosí, 12,000 feet up in the Andes. It was discovered in 1545 and forced labour was introduced in 1550, after the Spanish found that African slaves could not live at this height. By the early seventeenth century about 60,000 Indian labourers were employed at any one time in wretched conditions. They were forced to stay underground for a week at a stretch without coming up to the surface. Not surprisingly such treatment, together with the miserly rations they received and the use of highly toxic mercury in processing the metals, produced a very high death rate. In both Mexico and Peru the indigenous culture was destroyed, much of it simply to secure loot. Nearly all the great treasures of the Aztec and Inca states were melted down and shipped to Europe. Altogether between 1500 and 1650 Spain imported about 450,000 pounds weight of gold and thirty-five million pounds weight of silver from the Americas.

Like the Spaniards, most of the Portuguese regarded the Indians as inferior beasts to be exploited as much as possible. The missionaries wanted their souls (but also their bodies for work) and others just wanted their land and labour. Even when the number of European settlers had increased significantly and the number of Indians was reduced, the disregard of the natives' rights and welfare continued. The first settlers did not plan to work themselves and expected the Indians to do it for them. The Indian attitude, like so many gathering and hunting groups, was that they had no need to work because they already had the goods that they needed. The Portuguese rapidly captured and enslaved as many Indians as they could and when the supply proved to be inadequate moved in people from Africa as slaves. As one early commentator on the Portuguese immigrants in the mid-sixteenth century wrote:
'The first thing they try to obtain is slaves to work the farms. Anyone
who succeeds in obtaining two pairs or half a dozen of them has the
means to sustain his family in a respectable way, even though he may
have no other earthly possessions. For one fishes for him, another
hunts and the rest cultivate and till his fields.'

By 1610 in the province of Bahia there were 2,000 white settlers, 4,000
black slaves and 7,000 Indian slaves on the large-scale sugar plantations
that were already well established. In 1600 when almost all the eastern
seaboard of Brazil was under Portuguese control there were about
50,000 white immigrants but 100,000 slaves. Many of the coastal
Indians died of disease or migrated to the interior so that by the 1630s
when the Dutch captured north-east Brazil they found a largely de-
serted land — along 800 miles of coast where a century earlier there had
been hundreds of thousands of Indians there were a mere 9,000 left.

As the Indians moved inland to avoid the white settlement, large
slaving expeditions were set up to find the slaves the whites still wanted.
There was a long tussle between the Jesuits, who set up 'missions' that
were effectively sugar and cattle plantations where the Indians were
forcibly converted, and the settlers over who should have control of
the remaining Indians. The Jesuits organised some of these slaving expe-
ditions (the rebuilding of the cathedral of Sao Luis in 1718 was financed
by one of them), branded the natives on capture and forced them to
work on their missions. In the seventeenth century white settlement
was moving away from the coast into the dry sertao inhabited by the
Tapuia Indians who were forcibly removed as large cattle ranches were
set up. In the 1690s the discovery of gold in north-east Brazil brought
on a gold rush in which the local Indians were enslaved and exploited by
the prospectors. Even though slavery was abolished at the end of the
nineteenth century in Brazil, the exploitation and destruction of the
natives continued. Numbers fell rapidly — about half the tribes still in
existence in 1900 are now extinct and the Indian population, which
probably numbered about two-and-a-half million in 1500 before the
arrival of the Portuguese, is now less than 200,000 and still declining.
Since independence the Brazilian government has made only token
gestures towards protecting the Indians. In 1967 the official govern-
ment agency for protecting the Indians (SPI) had to be disbanded after
an investigation showed that it had carried out deliberate genocide by
introducing disease amongst the Indians and joined with speculators in
large-scale robbery and murder. It was described by the Brazilian
Attorney-General as 'a den of corruption and indiscriminate killings'.

Its successor FUNAI has done little to protect the Indians. The
attitude of the Brazilian government is best summed up by an official
spokesman who said:

'When we are certain that every corner of the Amazon is inhabited by
genuine Brazilians and not by the Indians, only then will we be able
to say that the Amazon is ours.'

The Indians of North America suffered as much as those further
south. In 1500 the native population of the current area of the United
States was about one million, with a wide variety of cultures and ways of
life. Within four hundred years these had virtually been wiped out. The
Indians were able to adapt to some of the things that the Europeans
brought with them such as horses and metal tools. The plains Indians
abandoned agriculture, domesticated the horse and used it to hunt
buffalo. Others such as the Iroquois used European weapons to estab-
lish a large empire, covering present day New York, Pennsylvania and
the upper Ohio valley. Many of the first European settlements such as
Jamestown actually depended on the Indians for their very survival in
their early stages but once they were firmly established the latent
hostility of the settlers soon surfaced. Within a few years of the first
settlements in New England, the Puritans, who believed God was on
their side in killing the heathen Indians, were at war with the local
tribes. Already in the seventeenth century the first 'reservations' were
established to remove the Indians from land the Europeans wanted and
all along the eastern seaboard Indian numbers were in decline. Of the
early settlers only the Quakers in Pennsylvania treated the Indians with
any degree of decency and humanity.

From very early in the European settlement of North America a
pattern in the treatment of the Indians emerged. The first contacts were
usually with European fur traders, who encouraged the Indians to trap
animals and trade them for a variety of European goods. This phase of
relative prosperity rarely lasted long and the Indians soon came under
pressure from the advancing frontier of European settlement. In many
cases the Europeans at first bought land from the Indians but, sooner
rather than later, war broke out, which, even if they had a few initial
successes, the Indians eventually lost and they were then forced to cede
large amounts of land. Once they were in decline the Indians would be
forced to give up more and more land until they were no longer able to
support themselves on what remained of their ancestral territory. Then
they migrated westwards (putting more pressure on other tribes) or
were forced onto reservations where the poor land, combined with disease, alcohol and massive cultural disruption, led to very high death rates and often extinction of the tribe. For the first two hundred years of European settlement this encroachment was largely confined to the area east of the Appalachians. From the early nineteenth century the Indians had to face the full weight of American expansion. Although land sales were enforced (at nominal prices) this method proved inadequate in clearing the amount of land the whites wanted. In the southern United States, as the pressure to extend cotton cultivation increased, the Cherokees, who had adopted a settled and reasonably prosperous way of life with schools and even their own newspaper, remained a major obstacle to white exploitation of their land. A forced removal bill was passed through Congress; the Cherokees were paid half a million dollars in compensation and a total of 90,000 Indians were forced westwards by the army. About 30,000 died as a result of conditions on the march. The process continued with other tribes and in other parts of the country. For example, between 1829 and 1866, the Winnebagos were forcibly moved westwards six times and the population fell by a half. By 1844 there were less than 30,000 Indians in the whole of the eastern United States, most of them living in a remote area around Lake Superior.

In a series of brutal wars in the 1860s and 1870s the Indians on the Great Plains were brought under control and removed from all the best land. About twenty-five tribes were relocated to 'Indian Territory' (now Oklahoma), where rudimentary attempts were made to make them break with the past and lead settled lives but most of the government assistance was squandered by corrupt contractors. When Oklahoma was opened for white settlement in the early twentieth century the Indians were removed to even worse land. Between 1887 and 1934, the Indians lost two-thirds of their remaining land (86 million acres) and were left with the worst desert or semi-desert parts that the whites did not want. Conditions on the reservations were terrible and most Indians had to exist on meagre government grants at the bottom of the social and economic ladder and with their institutions and way of life rapidly disintegrating. Despite some improvements in the 1930s and after, the Indians remained the most depressed minority in the United States, suffering from discrimination, a very low standard of living and high infant mortality, and left largely dependent on federal government welfare.

The impact of the Europeans on the peoples of the Pacific was equally dramatic. Before the arrival of the Europeans the area was not quite the Arcadia that some accounts, and European wishful thinking (particularly prevalent in the eighteenth century) about an idealised primitive existence, suggested. Warfare and cannibalism were, in fact, widespread but the area was relatively free of disease — it had no smallpox, measles, typhus, typhoid, leprosy, syphilis or tuberculosis — subsistence was obtained with little effort and the way of life was easy going. The European impact from the late eighteenth century meant the arrival of alcohol and a host of fatal diseases and the onset of massive cultural disruption. By 1900 the native population had collapsed to about a fifth of its level before the arrival of the Europeans. The population of Hawaii fell from about 300,000 at the end of the eighteenth century to 55,000 in 1875 and that of Rarotonga in the Cook Islands went from 7,000 in 1827 to 1,850 in 1867. In places the native society was effectively wiped out altogether. For instance, when the Russians arrived in the Aleutian Islands in the 1790s they forced the natives to work, hunting sea otters, so that the furs could be sent back to Europe and China. As a result, the animals were virtually extinct within thirty years and when the native population had collapsed to about five per cent of its original level, the survivors were resettled on the Pribilof Islands to continue working for the Russians.

The story of Tahiti is an illustration of what happened across the whole of the Pacific in the late eighteenth and nineteenth centuries. On his second visit to the island in 1773, Captain James Cook was already worried by the impact the Europeans were having on native peoples, as he wrote in his journal:

'We debauch their morals already prone to vice and we introduce among them wants and perhaps diseases which they never before knew... If any one denies the truth of this assertion let him tell what the natives of the whole extent of America have gained by the commerce they have had with Europeans.'

The violent crews of the whalers which called at the island (about 150 a year by the 1830s) introduced prostitution, venereal diseases and alcohol but the changes deliberately imposed by the first missionaries after 1797 had the effect of permanently undermining the islanders' way of life. The native religion was abolished and Tahitian music, tattooing and the wearing of floral garlands were banned. The natives were forced to wear European clothes and to work gathering coconut oil for export. Within a relatively short period the population was drastically reduced and the local culture was destroyed. In the 1770s, when the first
Europeans arrived, the population was about 40,000; it had dropped to 9,000 when the islands were annexed by France in the 1840s and eventually fell to less than 6,000. When the author of *Moby Dick*, Herman Melville, visited the islands in the 1840s whilst working on a whaler, he was shocked at the condition of the islanders, as was the painter Paul Gauguin when he arrived in the 1880s:

'The natives, having nothing, nothing at all to do, think of one thing only, drinking . . . Many things that are strange and picturesque existed here once, but there are no traces of them left today; everything has vanished. Day by day the race vanishes, decimated by the European diseases . . . there is so much prostitution.'

On one of his voyages to the Pacific Captain Cook also visited Australia where he came across the Aborigines still living in much the same way as when they first arrived on the continent 40,000 years earlier. He was impressed by the friendliness of the natives and their way of life, writing that, 'they may appear to some to be the most wretched people on earth but in reality they are far happier than we Europeans.' The botanist on the expedition, Joseph Banks, reached the same conclusion: 'Thus live these I had almost said, happy people, content with little, nay, almost nothing.' The British government, though, decided to turn the country into a penal colony and the first fleet of prisoners arrived in what is now Sydney Harbour in 1788. The Aborigines tried to live their lives in the face of a wild frontier society run by slave labour and violence and up against a continually expanding area of European settlement, but coexistence proved impossible. All land was declared a possession of the Crown but the natives could not understand the idea of land ownership, which was utterly alien to their traditions, and could not adjust to that or the equally strange new legal system introduced in the colony. The indigenous population were denied any claim to the land or to the same rights as Europeans. For example, in 1805, the colonial authorities decided that since the Aborigines could not understand European law there was no need to put them on trial and they could therefore be dealt with by immediate settler 'justice'. As the Europeans took more and more of the land, the Aborigines resisted but the conflict was hopelessly one-sided — some 2,000 Europeans were killed along the frontier but about 20,000 Aborigines died. Those who were not killed on the frontier or forced to retreat into the more inhospitable parts of the country were left as beggars and prostitutes, ruined by alcohol, on the edges of the towns.

By the 1840s in the Sydney area there were just a handful of survivors. When a Pole, Count Strzelecki, visited the country in the 1830s, he left an account which contrasts vividly with Captain Cook's experience only sixty years before. This time the Aborigines were described as:

'Degraded, subdued, confused, awkward and distrustful, ill concealing emotions of anger, scorn or revenge, emaciated and covered with filthy rags; these native lords of the soil, more like spectres of the past than living men, are dragging on a melancholy existence to a yet more melancholy doom.'

That doom came first on Tasmania. Sporadic warfare between the Europeans and the natives, who numbered about 5,000 at the end of the eighteenth century, began in 1804 and continued with a long series of atrocities committed by the whites. By 1830 only about 2,000 Aborigines were left alive but the Governor of the island decided to remove them altogether from the settled central part of the island. A seven week drive across the island by a line of troops and settlers captured only a small number of Aborigines but by 1834 all of them had been expelled from Tasmania to Flinders Island in the Bass Strait. There, thoroughly disoriented, particularly by the attempts of evangelical Christians to make them wear European clothes and give up their native habits and traditions, they declined rapidly. By 1835 there were only 150 of them left alive and by 1843 just forty-three remained. The last lonely and neglected survivor of the Tasmanian Aborigines died in 1876. The Aborigines on the mainland declined too as their ancestral lands were expropriated by the white settlers and they were forced into ever less hospitable country, attacked by the whites or left on the fringes of white society. A few managed to preserve their way of life in the more remote areas but all of them suffered from extensive discrimination.

The last major area of the world to fall under European domination was Africa. Although the sheer scale of the continent and the problems of access made it difficult to wipe out whole peoples and cultures, the results of European intervention and eventual control were still drastic. The slave trade was the main form of contact between Europe and Africa for the first three hundred years after the Portuguese made their voyages along the coast, and economic exploitation was to remain at the core of the relationship. Unlike the native Americans and the inhabitants of the Pacific, the Africans were part of an area subject to many of the same diseases as Europeans and so did not suffer the rapid decline in numbers experienced by the other groups — indeed the Europeans
suffered more, especially from tropical diseases. In the areas where the Europeans did choose to settle, a common feature was expropriation of native land. In Algeria, 20,000 French settlers took 6 million acres of the best land and left 630,000 natives with 12 million acres of poor land. In Southern Rhodesia, 50,000 whites owned 48 million acres and 1½ million blacks had 28 million acres. In South Africa the blacks (over three-quarters of the population) were left with just 12 per cent of the land and nearly half of that in semi-arid areas. When South Africa took over the former German colony of Southwest Africa in 1919 under a League of Nations mandate, 16 per cent of the population was white but they owned 60 per cent of the land including all the best farm land, the mineral deposits and the ports. As Leutwein, the first German Governor, wrote in July 1896, in a moment of candour: ‘Colonization is always inhumane. It must ultimately amount to an encroachment on the rights of the original inhabitants in favour of the intruders.’

The Europeans also brought with them an innate sense of superiority, tinged with a strong degree of racism. Although some Europeans tried hard to improve life for the natives through medical and educational programmes, many undermined the local culture by forcing them to adopt European ways. Few seemed to be worried by the decline of native culture. The British Commissioner of Kenya wrote in 1904: ‘There can be no doubt that the Masai and many other tribes must go under. It is a prospect which I view with equanimity and a clear conscience.’ Beneath the surface, and often not even well disguised, was a contempt for the Africans, well expressed in a petition from the German settlers in Southwest Africa to the Colonial Office in July 1900:

‘From time immemorial our natives have grown used to laziness, brutality and stupidity. The dirtier they are, the more they feel at ease. Any white man who has lived among natives finds it almost impossible to regard them as human beings at all in any European sense.’

The history of German Southwest Africa (now Namibia) gives a striking picture of the realities of European colonialism. It is an important example because it took place not in the sixteenth or seventeenth centuries but at a time when Europe prided itself on being the most advanced society in the world. Southwest Africa was inhabited by three main tribal groups – the Ovambo in the north, the Herero (nomadic cattle raisers) and the Nama, who had been forced into the

region by the expansion of white settlement in South Africa – and there was continual conflict between the different tribes. The area was allocated to Germany at the 1884–1885 Berlin Conference, which divided most of the remaining independent parts of Africa between the European powers. Within twenty years the Africans were dispossessed of all their land and turned into an underclass of labourers living in appalling conditions. German settlement remained small – 2,000 in 1896, 4,700 in 1903 and 14,000 in 1913 – compared with a native population estimated at 500,000 in the 1890s. German control was exercised through a steadily expanding area of direct military administration and indirect rule through the tribal chiefs. The German plan for the colony was to set up large-scale cattle ranches owned by the settlers and employing cheap African labour. This inevitably involved taking over tribal land, dispossessing the natives and disrupting African life. The outbreak of a rinderpest epidemic in 1897, which killed ninety per cent of the Herero’s cattle, followed by a malaria epidemic brought about the disintegration of Herero society. During the next seven years the Germans showed no concern with preserving the native way of life even in the areas allowed to them and were in the first stages of establishing an apartheid society with the Africans confined to native reserves.

In 1904 the Herero and Nama, faced with a bleak future as labourers on land they once owned, rose in revolt. In response the German authorities embarked on a policy of suppressing and destroying the African inhabitants. At the end of a brutal military campaign the Herero were reduced from a population of about 80,000 to 16,000 after many were imprisoned in camps that were little better than death camps. The Nama revolt lasted till 1907 and by the end half the tribe were killed. A large part of the remaining Herero and Nama tribesmen were pursued into the desert where, as the official German report commented: ‘The arid Omahcke [a desert in north-east Namibia] was to complete what the German army had begun: the extermination of the Herero nation.’ All land still occupied by Africans was expropriated, they were banned from raising cattle and all tribal organisations were dissolved. The Africans were turned into a class of landless labourers needing an identity card and travel permit to move around the country and ninety per cent of males were forced to work for Europeans. In 1915 a survey showed that three-quarters of the Africans were either paid wages insufficient to buy a subsistence diet or instead given food that was similarly inadequate for their needs. The Africans were, therefore, reduced to scavenging to try and survive. With their culture
and native way of life destroyed and continuing to suffer a low level of violence and killings from the white settlers, the Africans had been reduced to an underclass. There was no change for the better when the territory was administered by South Africa after 1919.

The expansion of Europe was a disaster for the native peoples of those areas of the world which could not survive as independent, or quasi-independent entities or restrict the amount of European contact. Some, such as the Tasmanian Aborigines, were exterminated, others suffered a huge fall in numbers through various different combinations of disease, warfare, alcohol and economic and social disruption. All saw their native culture and way of life undermined and often destroyed by Europeans determined to impose their own values. This saga of displacement and destruction was not confined to the early stages of European expansion and colonialism but continued throughout the nineteenth century and into the twentieth. In many areas of the world it is still continuing as newly independent states continue the assault on the few remaining native tribes in the world who still try to maintain their old way of life. The expansion of Brazilian settlement and economic exploitation into the Amazon has resulted in the extermination of some tribes and the few now remaining are on the verge of destruction. Indonesia’s vast transmigration programme—the move of settlers from the densely populated central islands such as Java to the outlying islands—has meant tribespeople have been attacked and killed.

The spread of European settlement overseas opened up huge new areas of the world for exploitation, with a devastating impact on the flora and particularly the fauna of the world. It also meant a recasting of economic relations and increasing European domination and manipulation of other economies so that they grew the food and produced the goods that Europe required. As part of the same process European ideas have also come to dominate the world. What ideas about the relationship between humans and the rest of life on earth had Europe inherited and how did it develop, transform and add to them?

8

WAYS OF THOUGHT

Human actions have shaped the environment in which successive generations and different societies have lived. The driving force behind many of these actions has been simple—the need, as human numbers have steadily increased, to feed, clothe and house them. But the way in which human beings have thought about the world around them has been important in legitimising their treatment of it and in providing an explanation for their role within the overall structure. The way of thinking about the world that has become dominant in the last few centuries originated in Europe. Other traditions, particularly those of the eastern religions, have provided radically different interpretations, but they have been less influential.

One of the fundamental issues addressed by all traditions is the relationship between humans and the rest of nature. Are humans an integral part of nature or are they separate from it and in some way superior to it? The answer to this question is crucial in determining how different thinkers and religions decide which human actions can be regarded as legitimate or morally justified. From this flow other related questions about whether all the plants and animals in the world are there solely for the benefit of humans; about whether humans have a responsibility to guard and take care of the rest of nature (or God’s creation). In the last two hundred years or so these religious and philosophical questions have been very largely overtaken by questions of economics—how should life be organised and scarce resources used and distributed. Although these may not seem at first glance to be philosophical questions, they have exercised an influence way beyond the sphere of economists and academics. They, too, have had a fundamental impact on the way humans view the world and justify their actions.

The origins of European thought about the relationship between humans and nature can be traced back, as in so many other areas, to the