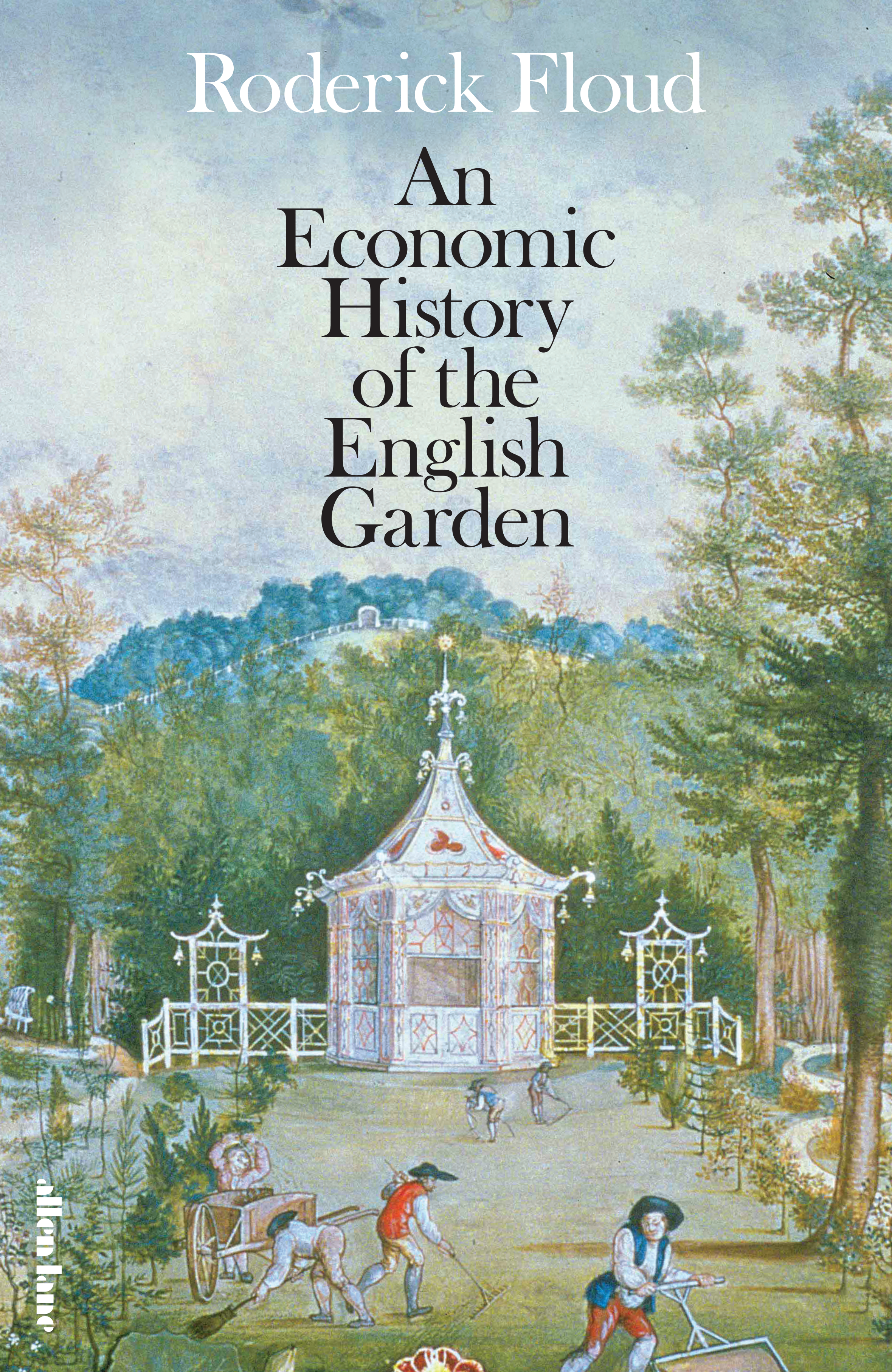

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An Economic History of the English Garden

allen lane

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Introduction

I love visiting other people's gardens. It is a passion that I share with millions of others in this country who spend their weekends at the properties of the National Trust or at the myriad gardens open for charity. All of us admire the beauty of the landscapes, the quality of the planting, the serried ranks of vegetables; all of us secretly delight in discovering the odd weed or criticizing the colour schemes. In the great gardens we marvel at hidden grottoes and eye-catching temples, peaceful lakes and expansive vistas.

But as well as admiring all these things, I have a particular set of questions in mind when I tour a garden. A great deal of work is needed to create and look after a garden; I want to know how much it cost to make and to maintain. I want to know how many gardeners tend it, where the plants come from, what tools and techniques were used to create it and how they were invented. I want to be able to compare one garden with another in terms of the burden that it may have put on the family, who may have owned it for centuries. I want to know where their money came from and why they spent it on a garden. In short, I want to understand the economics of gardening and its history.

This book tries to answer these questions. It is, therefore, a new kind of garden history. Tens of thousands of books and articles have been written and published about the history of British gardens, and many more about those of other countries. But almost all of them focus on the design of gardens, or on their designers, on the trees, shrubs, flowers, fruit and vegetables that they contain, or on the temples, cascades, arbours, pergolas, statues or even the garden gnomes that adorn them. Only very rarely is the cost of making or maintaining a garden ever mentioned. The prices of plants sold by nurseries, or imported from far-flung corners of the world, or the costs of employing a gardener, are sometimes discussed, but they are almost never put into context by comparing them with the price of other items at the time or by discussing the economic conditions of each period.[1]

Garden historians thus almost entirely ignore money.[2] But the subject of money in the garden is – oddly – ignored also by another group, the historians who study the economy in the past. This is despite the fact that, as this book aims to show, spending money on gardens has been one of the greatest, and certainly most conspicuous, forms of expenditure on luxury in England since the seventeenth century or earlier; it has employed hundreds of thousands of people at a time, given rise to a substantial foreign trade and created a whole industry of nurseries, garden centres and landscaping contractors whose current turnover exceeds £11 billion each year. So I hope that this book will help persuade economic historians and economists to recognize that gardening is an important British industry in its own right and has been one for hundreds of years.

In failing to appreciate the role of money in gardening, historians of all kinds have ignored, in addition, the importance of the impact of public spending, financed from taxes and borrowing, on the creation of gardens, both by the royal family and by those who in previous centuries occupied lucrative government posts. They have not appreciated the wealth that gardening brought to designers, seedsmen and nurserymen. Advances in the technology of gardening have led to wider improvements, such as in water and steam engineering, in central heating and in the construction of metal and glass buildings. The gardens both of the great estates and of the suburbs have changed the face of England. Gardens, in short, are far more important to our economy and society than even their greatest devotees have realized.

The book begins with the garden industry as it was in 1660 and what it has become today. The restoration of Charles II to the throne may not seem an obvious starting point for the history of an industry, but Charles spent large amounts of public money on gardens and, by that means and through his own personal interest, gave a crucial boost to gardening by the wealthy and the aristocratic. One of the results was a rapid growth of plant nurseries, particularly around London, which supplied an ever-increasing range of shrubs, trees and flowering plants to garden owners and garden designers throughout England. Their creations, which are documented in a range of books and pictures, show how large were both their ambitions and their purses. Quite how large can only be demonstrated by a full evaluation of how much was spent in the past. A proper translation from old to current values, by the method explained in Chapter 1, shows the huge sums that have been spent over the centuries, while modern evidence – for example, on our use of time – shows how important gardening is to us today.

Chapter 2 starts with the state and the monarchy that is its symbol. It describes the role of central government, which provided the funds with which successive monarchs, from Charles II onwards, created, maintained and enhanced the royal gardens and parks around London, including the world-famous Royal Botanic Gardens at Kew. Later, local government became important, building public parks with their floral displays and boating lakes throughout England. Where the monarchs trod, so the aristocracy followed and Chapter 3 describes the builders of the great gardens of Stuart, Georgian and Victorian England. It explores the sources of their wealth, the vast sums they spent to display their taste and discernment and how their conspicuous consumption,[3] in their gardens as well as their houses, helped to fuel the Industrial Revolution.

Chapter 4 turns from the customers to those who worked for them, did their bidding or influenced their taste. It considers the garden designers not just as artists but as businessmen, and a few businesswomen, who had a living to make and workers to employ and organize within the economic constraints and customs of their time. They worked closely with the nurserymen, discussed in Chapter 5, who provided the millions of plants which were and are required each year to meet the apparently insatiable demands of their customers for novelty as well as familiarity; they in turn worked with the plant collectors who scoured – and sometimes ravaged – other parts of the world in search of plants and varieties new to England. Last, there were the thousands – by the nineteenth century, hundreds of thousands – of working gardeners, who actually did the gardening in the great estates, in the suburban villas and in the public parks; their training, their careers and their rewards are discussed in Chapter 6.

All industries thrive on innovation and Chapter 7 describes several ways in which gardening took the lead in the technological changes that swept over England during the eighteenth century and beyond. It begins with water and steam engineering, where gardens developed techniques in construction and machinery that were later adopted by canal builders and machine makers. Then came the use of glass and iron in construction, pioneered in English greenhouses, together with the central heating systems that kept plants warm even while their owners shivered. Finally there was chemistry, where highly toxic substances were employed in a vain, and often destructive, attempt to wipe out insects and diseases.

Chapter 8 returns to the customers and to the huge expansion in the number and extent of English gardens and gardeners that came with the growth of the suburbs from early in the nineteenth century. Some of those gardens were used to grow fruit and vegetables, so Chapter 9 considers the vegetable garden within the context of the English diet and the state of nutrition of different groups of people within English society. Chapter 10 sums up the importance of gardening and its ramifications within the English economy both today and in the past.

Part of my aim in writing this book is to stimulate others to follow, to consider other aspects of the subject and to explore more historical records. There are over 1,500 gardens in Britain listed as being of historical interest and it is only possible to refer to a fraction of them. The archives in county record offices and stately homes are voluminous and I have therefore been forced to limit myself to England – although the gardens of Wales, Scotland and Ireland are equally beautiful and expensive – and to draw examples only from a small set of English counties.[4] I have had to leave, for future research, the economics of plant collecting and the recent development of the nursery industry. I have not been able to consider the impact of English gardens on the rest of Europe, nor on the rest of the world, much though I would like to be able to answer the question I have often been asked: was England, or Britain, unusual? I don't think that it was, but I look forward to others investigating the topic.

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The English Garden in 1660 and 2020

'The World's a Garden; Pleasures are the Flowers'[1]

In 1664, Captain Leonard Gurle, a nurseryman who was later to become the king's gardener, received an order for sixty-five fruit trees. In pride of place were twenty different varieties of peach and five of nectarines, in which Gurle specialized, but there were also apricots, figs, plums and grape vines.[2] Gurle's nursery, where the young trees were growing, was not, as one might expect, deep in the English countryside, but in Shoreditch, only a few hundred feet outside the old walls of the City of London. It covered 12 acres of what is now the Brick Lane or Banglatown area of east London, with its south Asian restaurants and shops selling brightly coloured saris.

Peaches and nectarines were recent introductions to English orchards and the walls of kitchen gardens. Shakespeare does not mention 'peach' except as a colour, but some of the other plants that Gurle supplied were the luxuries that Queen Titania, in *A Midsummer Night's Dream*, ordered her fairies to give to her enchanted lover, Bottom, with his ass's head:

> Feed him with apricocks and dewberries,
> With purple grapes, green figs and mulberries.[3]

Gurle's trees were to be supplied, however, to a more mundane customer, William Alington, 3rd Baron Alington, for his new house, Horseheath Hall, in Cambridgeshire. Alington, whose family had owned land there since 1397, as well as manors in several other English counties, was rebuilding his mansion. He and his father had kept a low profile during the English Civil War of 1642–51 and the following interregnum and had escaped the fines or confiscation of lands that affected other royalist aristocrats. Now, with the restoration of Charles II in 1660, Alington clearly felt confident enough to embark on a major building project, for which he engaged the aristocratic architect Sir Roger Pratt. It was 'on a grand scale with a 500 foot frontage, the most imposing in the country of that date';[4] in 1670 the diarist and garden writer John Evelyn dined there and remarked waspishly that Alington had 'newly built a house at great cost, little less than twenty thousand pounds . . . standing in a park with a sweet prospect and stately avenue, but water still defective. The house also has its infirmities.'[5] Evelyn says nothing else about the lake or the rest of the garden, of which little remains, but it seems to have been on an equally grand scale; there was a 'great terrace' between the house and a slightly sunken garden, with flanking walled areas for fruit and vegetables.[6] The stately avenue was over a mile long and the garden was divided into elaborate compartments.

The family's fortune rested on land and the rents from it, although Alington also held lucrative government posts and served as Constable of the Tower of London from 1679. Whatever its source, his wealth was enough to afford a very costly new house and garden. Gurle's trees for the orchard or kitchen garden represented a small fraction of that cost, at £8 and 3 shillings. However, each specimen of the most expensive varieties of peach, a Province, a Lion, a Violett Muscatt and a Persian Peach, cost 5 shillings, a large sum at the time. Gurle's customers were of the highest quality and he ended his career as the royal gardener at St James's, so Alington was clearly buying from the best or, at least, the most expensive.

THE GARDEN INDUSTRY

Alington and Gurle were part of the garden industry. We do not normally think of gardening as an industry; it is a hobby, a pastime, a search for beauty, even an obsession. But, as well as these, gardening is something on which we spend money: it employs people; it uses tools and machinery; it occupies land, from the smallest patio to the largest park; it constructs hedges and pergolas, temples, fountains and waterfalls. It is an unusual industry because many of its customers are also its workers, its designers and its entrepreneurs, but it is an industry none the less and one that has consumed great amounts of economic resources of all kinds – land, labour and money – for many centuries.

This book is about the myriad trades, professions, institutions, firms and people that have, over more than three centuries, interacted with their tens of millions of customers to create and maintain England's gardens. They have all acted within the society and economy of their time and their achievements can only be understood in that context. The book covers the gardens, parks and landscapes that were created for pleasure or to provide flowers, fruit and vegetables for personal consumption. It therefore includes the nurseries, such as Gurle's, which produced the plants for domestic gardens and parks, and all those who designed or provided the expertise, tools and machinery, but not – except as an aside when discussing kitchen gardens – what the English call 'market gardens' and the Americans 'truck gardens', growing vegetables, fruit or flowers for sale.

THE CHANGING VALUE OF MONEY – TODAY AND YESTERDAY

Since money underpins much of the discussion about gardens in this book, we have at the outset to confront a problem. Very few of us know how much prices have changed or what sums of money in the past meant to those who paid or received them. Lord Alington's mansion, the 'most imposing in the country' in 1670, seems very cheap at £20,000, but was the 5 shillings (£0.25) that he paid for a peach a little or a lot of money? And two centuries later, in the 1880s, was the £153,000 that Baron Ferdinand de Rothschild of the great European banking family spent on the gardens at Waddesdon, Buckinghamshire, an equally large sum in today's values? Let's take some other examples. The great garden designer Lancelot 'Capability' Brown became head gardener at Stowe, Buckinghamshire, in 1741 at the age of twenty-six; he was paid £25 a year, with £10 for housing. In 1826, Joseph Paxton – later designer of the Crystal Palace – was appointed head gardener at Chatsworth, Derbyshire; aged twenty-three, he was paid 25 shillings a week, or £65 a year, and given free lodging in a cottage that came with the job.

What do these numbers mean? How much would Alington's mansion, or his peach, cost in 2019, and what would the Waddesdon gardens cost if they were built today? Was Joseph Paxton really paid more than Brown? Was Brown well paid by today's standards? Are we spending more or less on our gardens than our ancestors did? Questions like this can only be answered if we translate money from the past into a common standard, such as its value today. But how? How do we take account of changes in the value of money and of all the other changes over three centuries in the things that we buy and the amounts we are paid?

A common method is to look at the prices of consumer goods such as bread and milk, to calculate the average change in those prices, and to apply that change to a salary or the cost of a building in the past; this method uses the retail price index (RPI) or consumer price index (CPI). Since consumer prices have increased by 128 times since 1741, we would multiply Brown's salary of £25 by 128 and conclude that he was paid, in today's values, £3,200. But this figure doesn't make sense. It suggests that the head gardener of the greatest garden in England in the 1740s was paid for a year the equivalent of someone working for twelve weeks at the current national minimum wage of an unskilled labourer.

Comparing consumer prices works well over short periods; that's why we use them to make yearly adjustments to pensions or other benefits. But it is a misleading method for comparing prices over long periods; the things on which we spend money have changed in nature and quality – white-van couriers have replaced the horse-drawn carters of the eighteenth century and we send emails instead of letters. Foreign trade means that bread, for example, is much cheaper, because of grain imports from Canada and the United States. We also spend much less of our income on manufactured goods and food than we did two centuries ago and much more on services such as entertainment or restaurant meals. Finally, we use much more machinery than we used to. We live our lives and spend our money quite differently; few of us spend half our income on food and half of that on bread, as was common until the twentieth century. All these changes make the use of RPI or CPI inappropriate as a means of comparison over long periods.

A better method, particularly for examining salaries or wages or the objects built or made by the people who were paid these wages, is to compare their pay with changes in average earnings over the centuries. In 1700 the average worker earned £12 and 8 shillings a year; in 2015 he or she received £25,609. This large increase in the amount of money at our disposal has occurred mainly because of inflation in the twentieth century – caused by a number of different factors, including wars and the prices of commodities such as gold or petroleum. But, also, each worker – often aided by machinery – now produces much more than he or she used to; the agricultural labourer can plough far more land in a day with a tractor than his ancestor could with a horse, the metal-worker can produce far more screws or tools than could the Georgian village blacksmith. This has meant that wages have risen and our average standard of living has improved; our houses are of much higher quality, we drive cars rather than walking or riding a horse, we have more nutritious and much more varied food.

All this improvement is reflected in average earnings, which take account of changing values of money and the improvement in our welfare over the centuries. So in this book we translate the average annual wage of £12 and 8 shillings in 1700 to £25,609 today. By 1750 the annual average had risen to £14 and 1 shilling, but we still translate that to the average today of £25,609. If someone was paid twice as much as the average wage in 1800, the translation is twice the average today. This also makes sense if we are comparing expenditure on gardens over the centuries, since most of the cost of making and maintaining gardens is used in paying wages for labourers and gardeners. So, if a garden project employed twenty-five men in 1850 and cost roughly twenty-five times average earnings in that year, we would say that the modern equivalent of that project would be one costing twenty-five times average earnings today. To put it another way, if something cost two-thirds of average earnings in 1800, we say that its equivalent is two-thirds of average earnings today.*

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* Equating proportions of average earnings in this way may somewhat overstate the value in today's money of work done in the past. The garden labourer of today can

Economic historians have estimated what average earnings were in each year from 1270 onwards, so we can calculate the modern value of any sum of money in each year since then; all the data are conveniently displayed on the MeasuringWorth website and the conversions are done automatically there. That website shows and explains other ways of making the translations, but in this book I use the index of labour earnings.* The value of £1 at each date since 1660, according to the change in average earnings, is shown in the graph on page xi.

On this basis, Capability Brown was paid – in modern values – £45,580 a year, or £63,810 if one includes the value of the house that came with the job; it isn't a princely sum, but it is reasonable for Lord Cobham's trusted gardener, who was in charge of a number of under-gardeners at Stowe. Using this method, we can also answer the question of whether Paxton was paid more than Brown. It turns out that Paxton was getting, in modern terms, £47,120 together with his cottage, so his basic salary was about £2,000 more than Brown's. Both of them were earning quite a bit more than the UK average. We can use the same method to measure how much the gardens at Waddesdon cost, since so much of it comprised the wages of labourers digging out vast quantities of earth: the £153,000 that Baron Ferdinand spent translates to £68.8 million in today's values. It's a huge sum but he was, after all, one of the richest men in Europe and even this amount did not greatly dent his fortune. Finally, Lord Alington's mansion and garden of £20,000 cost him the equivalent of £33 million, which helps to explain why John Evelyn thought they were so grand, while each of the peach trees that he bought from Gurle cost him £400 in modern values, an indication of their rarity at the time.

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shift far more earth, using a mechanical digger, than his predecessor could with his spade and wheelbarrow. As an economist would put it, capital in the form of machinery has been substituted for labour and the desired result has been to reduce the overall cost. However, much gardening remained labour intensive for almost all the period covered by this book, so the use of average earnings is likely to give the most reliable results.

* In this book, all the translations in values from one period to the present were calculated in June 2019. As more data become available and are added to the index of labour earnings database, some of the translations after that date may differ slightly from those given here. For the sake of consistency, all are related to average British earnings in 2015.[7]

In case this expenditure on historical gardens may seem too large to believe, we can also consider whether these translations – using fractions or multiples of average earnings – give reasonable results, by comparing them with expenditure on gardens today. Capability Brown was paid £21,538 by the 4th Duke of Marlborough for his work at Blenheim Palace in Oxfordshire between 1764 and 1774, which equates via the earnings index to about £34.4 million today. It's a huge sum and it may not seem believable that so much could be spent. Most of the money went on the 150-acre lake; no one has built anything like it recently, but the Marlborough estate is spending £6 million in 2020 simply to clear the silt that has accumulated in only a relatively small part of the lake that Brown created. At Alnwick Castle in Northumberland, at least £42 million was spent between 2000 and 2006 on the restoration of part of the garden, while the Royal Horticultural Society began work in 2018 to create its new garden in Salford at an estimated cost of £35 million. Many gardens in the past contained elaborate buildings, few more dramatic than the pagoda at Kew; its latest restoration in 2018 has cost £5 million.[8] The terrace in front of the great house at Cliveden has just cost £6 million to restore. Expenditure on the Royal Parks in London is currently about £27 million each year, which is somewhat less than the equivalent that a succession of monarchs, from Charles II onwards, through the eighteenth century, were spending every year to create and maintain the same parks. In contrast, a peach tree that cost Alington the equivalent of £400 would today cost about £30, illustrating the fact that buying goods has become much cheaper in relation to average earnings.

In other words, the sums of money spent on gardens, when translated into modern values, seem to be huge because that is exactly what they were and still are. It is why current annual UK expenditure in nurseries and garden centres and on landscape contractors is over £11.4 billion, without including the amount we spend on gardeners, or the value of all our own labour or the cost of all the land that we use. For centuries we have been spending, and now continue to spend, far more on our gardens than almost anyone realizes.

It is both confusing and clumsy to burden the reader with repeated sentences such as: 'Capability Brown was paid £25 a year, which in modern values is £45,580.' So this book adopts a unique approach for a work of history and gives the modern value followed by the original sum in brackets and italics: for example, 'Capability Brown was paid £45,580 *(£25)*.' The original values are quoted in pounds, shillings and pence – each pound consisting of 20 shillings (20s) and each shilling of 12 pence (12d) – which were the British currency until 1971. Finally, since measures of length and area are still mired in confusion between imperial measures and their metric equivalents, the original feet, yards or acres have been used: 1 foot is 0.3 metres, 1 yard is 0.9 metres and 1 acre is 0.4 hectares.

Armed with these tools, what can we say about the garden industry in 1660?

GARDENING IN 1660

An industry supplies what its customers demand and can pay for. By 1660, the English garden industry was already sufficiently large and well developed to grow vast numbers of trees and other plants and to organize their transportation to wherever they were wanted. It could supply the labour and the expertise to dig lakes, construct terraces, plant hedges and avenues; it was soon to construct greenhouses and to use them to nurture an increasing number of exotic plants, initially from North America. It had sent out its gardeners, such as John Tradescant the Younger, in the years before the English Civil War to seek out new plants and seeds in America and to arrange their transportation – with great difficulty – back to England. John Harvey, historian of the nursery trade, places 'the beginnings of the garden trade as we think of it in the middle of the 17th century',[9] but its antecedents go back centuries, even millennia.

We know that there were gardens at the villas of Roman England,[10] for instance, and probably next to houses even during what used to be called the 'Dark Ages'. In medieval England, gardens are documented in the records of monasteries and royal palaces. The accounts of Winchester College in the late fourteenth and early fifteenth centuries record numerous payments for seeds, seedlings and cuttings, together with the wages of gardeners and the purchase of tools and measuring cords and lines.[11] If there were purchases, there must have been sales. In other words, there was a nascent garden industry in the sense, at least, that someone was saving seed and cultivating plants that were then made available for sale. By the sixteenth century, there was clearly a thriving overseas trade in plants. It is documented, for instance, in the accounts of the royal gardens, which show that Henry VIII paid £101,100 *(£20)* in 1547 to Sir Jehan Le Leu to bring 'trees and sets of sundry kinds out of the realm of France'.[12] Sir Jehan, who is credited with introducing the apricot to England in 1542, was known as *confector viridariorum* (literally, 'garden maker'), or royal garden designer, and was granted an annuity for life in 1538 of £78,500 *(£13 6s 8d)*; he worked at Whitehall and Hampton Court, and he was not alone, as there were a number of other royal gardens and gardeners.[13]

It was not only kings who had gardens. C. Paul Christianson has unearthed the records of five other large London gardens, along the River Thames, including those of the grandest of bishops, of Canterbury, Winchester and London, together with the garden at Chelsea of Sir Thomas More. According to More, in his *Utopia*, published in 1516, the Utopians – citizens of his ideal society, which was modelled on London – were

> very fond of these gardens of theirs. They raise vines, fruits, herbs and flowers, so thrifty and flourishing that I have never seen any gardens more productive or elegant than theirs. They keep interested in gardening, partly because they delight in it, and also because of the competition between different streets which challenge one another to produce the best gardens. Certainly you will find nothing else in the whole city more useful or more pleasant to the citizens. And for this reason, the city's founder seems to have made gardens the primary object of his consideration.[14]

The Thames of More's time in early sixteenth-century London was bordered by gardens.

Archives recording royal gardens and other gardens in London document the purchase of seeds, plants and trees, tools and pots. In other words, there is plenty of evidence of a developing garden industry in London and, probably, in other urban centres, small though they then were. The gardeners of the big houses might also have been in business on their own account and we know that many of them were contracted to maintain gardens, employing their own labour force and probably supplying their own plants and seeds.[15] While the range of plants was very limited compared with what is available today or with what became available later, in the eighteenth or nineteenth century, it was still wide enough to provide colour and variety, both in flower gardens, herb and rose gardens and in the kitchen garden. Fruit trees seem to have been particularly valued.

This is part of the background to the mature garden industry that emerged in the second half of the seventeenth century. But there are other underlying factors. One is the state of the English economy, which has affected gardens and garden-making through the centuries.

Gardens are, in the main, a form of luxury. Flower gardens or landscaped parks are not essential to life, even if a part – though usually only a small part – of our diet is supplied by a vegetable garden. Therefore money spent on gardens comes from whatever is left after we have provided for our basic needs for food, clothing and housing, together with the energy required for work. For much of English history there was, for most people, very little or nothing to spare in terms of unused income, but there are signs that, from the seventeenth century onwards, the surplus available after providing for bare necessities was growing. Despite the disruption and heavy loss of life in the English Civil War, the period from 1650 to 1700 saw the productivity of the economy – that is, the total economic output divided by the number of people in the country – growing more rapidly than during any other fifty-year period between 1270 and 1870. It was founded on the expansion of industry, particularly textiles, coal and iron, the concurrent development of internal and foreign trade and commercial activities, and on an increased role for the state in regulating the economy and the financial system.

By 1690, England's productivity surpassed that of its closest rival, Holland. What makes this period particularly unusual is that there was very little increase in the population overall, although the proportion to be found in London and a few other urban centres was growing. This minimal population growth is in marked contrast to the period of the so-called Industrial Revolution, from 1780 to 1840 and beyond, when the increase in goods and services produced was nearly matched by a similar increase in the number of people.[16] All this may be a surprise to people brought up on the traditional account of an agricultural revolution of the eighteenth century and an industrial revolution to follow it, but we now know that the economy had been growing and changing since much earlier on.

In simple terms, people at the end of the seventeenth century had a bit more money to spend. As their probate inventories compiled at their death show, they spent it on clothes, furniture and more comfortable houses. They spent it in an increasing number of shops; some employed more servants and people also paid for better transport, for more services, such as shipping and carriage of goods by land, and a developing legal and banking system. Although study of this aspect of consumption has been neglected, people also spent it on gardens. Some had a great deal more money and were able and willing to spend part of it on very elaborate and costly garden schemes. The royal family – funded by taxes levied on the rest of the population – led the way, but they were soon followed and emulated in both the town and the country by the rest of the aristocracy, such as Lord Alington, and by the growing middle class.

These were the demands that Leonard Gurle and an increasing number of nurserymen were successfully meeting. Gurle had been preceded during the early 1600s by three leading London growers of fruit trees: Banbury of Tothill Street, Westminster; Warner of Southwark; and Pointer of Twickenham. There was also the florist – then the term for a flower grower – Ralph Tuggie of Westminster, whose specialism was carnations. There were the Tradescants, father and son, royal gardeners and botanical collectors, whose cabinet of curiosities was to become the foundation of Oxford's Ashmolean Museum. There was the Millen family of the Old Street nursery, just outside the City of London, who were known for their gooseberries. There were an increasing number of nurseries in Southwark, across London Bridge, as shown in plate 1, as well as in other areas along the Thames and in Shoreditch, to the north-east. Seedsmen could be found all over London. Thus Captain Gurle, who had founded his nursery in 1643, faced increasing competition, particularly – towards the end of his life, in the early 1680s – from the great Brompton Park Nursery.[17]

By then, nurserymen were branching out into the design and construction of gardens and landscapes. By then, too, the nurseries of London were occupying hundreds of acres; as every gardener knows, one can grow a very large number of plants on an acre. Among them, by this time, were thousands of forest trees, a whole range of shrubs and, of course, the prized fruit trees in which Gurle specialized. His peaches and nectarines, his apricots and figs, the eight orange trees 'in boxes of ye biggest sort' and seventeen 'of the next sort' – valued altogether at £97,750 *(£49 10s)* in his probate inventory of 1685 – were luxuries, to be afforded only by the few. They were desired as items that denoted wealth and social status. They were scarce, to be fought over, even to bankrupt some of those who desired so desperately to possess them.[18]

GARDENING TODAY

In many ways, gardening in England today has changed little since 1660. The hand tools that we use are still much the same. We buy plants and seeds from nurseries and seedsmen whose predecessors, like Gurle, were well established by then. Garden designers have existed for all that time. Gardening is still mainly governed by the seasons. We still love admiring or criticizing other people's gardens, as past visitors to the Tradescants' garden and cabinet of curiosities or to numerous stately homes must have done too.

The main differences are ones of scale. There are millions more gardens and in them thousands more different species of plants, originating from all over the world. Nurseries in Stuart England probably contained millions of plants, as did those in France and the Netherlands, but now English gardens have access to hundreds of millions, either propagated locally or imported throughout the year. A few greenhouses have been replaced by millions and are supplemented by polytunnels and conservatories. Garden visitors are now numbered in the tens of millions. How did this increase in scale occur?

England's population is now about ten times larger than it was three and a half centuries ago. Moreover, each person today, on average, consumes at least eighteen times more by way of resources – after taking account of changes in prices – than his or her equivalent in 1660. These are the two most important facts in understanding the growth of English gardens and the garden industry. It is economic growth, partly driven by population growth, that has produced a surplus of income over expenditure on the necessities of life; part of that surplus is spent on luxury consumption such as gardening.

But actually those two facts understate the impact of economic growth in several ways. One example is our use of time. Until very recently – in fact only until the past century or more recently – production in the economy, and the wages that were paid, depended on long hours of work. Most of our ancestors worked for twelve hours a day, six days a week, with only short meal-breaks. They had little spare time and also little energy left to enjoy it. Today, we have far more leisure time and we spend a good deal of it on gardening. On average across the whole population of the UK, we spend ten minutes per day, or over an hour a week, on that pastime, men slightly more than women; this may not seem much, but in 2014 – things may have changed a little since then – it was as much or more than the time we spent on other hobbies and forms of entertainment, other than watching television. It was the same as the number of minutes spent on computer and video games and other computing, for example, and much more than is spent on any form of sport. However, there is great variation across age groups: men aged fifteen to twenty-four spend only one minute on gardening in an average day, while those aged sixty-five and over spend twenty-six minutes. This statistic is important because there are now more older people who live longer in retirement and hence have more time for gardening.

We are not alone in this use of our time. The English, or indeed the British, may believe that they are exceptional in their devotion to gardening, but actually, and despite the fact that our temperate climate is particularly suitable, we spend less time on it than all but two – Finland and Spain – of the fifteen countries who participated in a recent ‘Harmonised European Time Use Survey’. Top comes Bulgaria, with thirty minutes per day, closely followed by Slovenia with twenty-eight minutes.[19] We also spend less money on our gardens than do people in many other European countries, less than in France, Italy or the Netherlands and much less than in Austria, Sweden, Denmark, Norway and Luxembourg.[20] We even seem to do less gardening than men and women in the United States, although the data there are collected in a different way.[21]

As well as time, space is a factor. Part of our country's economic growth has come from making the land more productive; we have also been able to spend some of our income on importing food from abroad. This has made it possible for us to devote more and more of our land to building houses and to creating gardens around them. Particularly since the garden city movement at the end of the nineteenth century and the growth of the suburbs in the twentieth, we've been prepared, collectively and individually, to pay to use land to make gardens. Today, even though land prices have risen so rapidly in recent years, we still devote 15 per cent of the land area of our towns and cities to parks and gardens, most of it taken up by the individual front and back gardens that we tend so lovingly. This is changing, and the average new house has a smaller garden than it would have had a century ago, but there has been some compensation in a rise in the use of pots, patios and window boxes to cram more plants into smaller places.

In many areas of life, increased incomes and overall wealth have meant that we have employed other people to do things that we used to do ourselves. We no longer make our own clothes and we often go to restaurants or buy take-away meals rather than cooking ourselves. Gardening bucks this trend. In past centuries, every upper-class and most middle-class households would have employed a gardener, but today only 5 per cent of us still do so.* Garden machinery has helped, just as the vacuum cleaner, washing machine and electric cooker have made housework easier. So too have the nurseries and garden centres, with their ranks of container-grown plants and seedlings, which make it unnecessary for most of us to raise plants from seed.

For the 95 per cent of us who don't employ a gardener, gardening is something that we do ourselves. Surveys tell us this and what we think about it. First, and perhaps most importantly, we enjoy it. The Horticultural Trades Association published a survey in 2006 that found that 55 per cent of respondents said that they enjoyed gardening a lot or a little. Enjoyment rose to 70 per cent among individuals aged fifty-five to sixty-four, from 25 per cent among those aged fifteen to seventeen. Other surveys have found that the older you are, and the richer you are, the more gardening you are likely to do. Six out of ten of those interviewed thought that spending money on plants was a good investment, and eight out of ten thought the garden was important for relaxing and entertaining; seven out of ten took pride in their gardens, although about the same proportion were always looking for ways to reduce their garden workload.[22]

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* This figure probably does not include the occasional employment of landscape contractors, such as the army of workers paving over so many front gardens today.

Even though we do so much garden work ourselves, we seem rarely if ever to keep a record – as I did while writing this book – of how much time and money we spend on our gardens; probably some of us dread what we would discover. I was amazed to find that my wife and I had spent £7,500 in a year on a half-acre garden in Buckinghamshire. Oxford Economics has recently calculated that in 2017 we spent £5.6 billion in the nurseries and garden centres of the UK, together with £6.8 billion on landscape services – designing, building, planting and maintaining the UK's green spaces. In addition, £1.35 billion worth of ornamental plants were produced and sold in the UK and a further £1.2 billion was spent on imported plants, although about two-thirds of those were cut flowers.[23] These figures do not include the cost of innumerable television programmes, books and magazines on the subject. Together, gardening is a big industry. Creating gardens can be particularly expensive; it is said that the average cost of a show garden at the annual Chelsea Flower Show of the Royal Horticultural Society, which will be on display for only five days, is now over £1 million. But garden maintenance is expensive too, particularly as few gardeners can resist making constant improvements. As the writer John Claudius Loudon put it in 1822:

> A man whose garden is his own for ever, or for a considerable length of time, whether that garden be surrounded by a fence of a few hundred feet, or a park-wall of ten or twelve miles, will always be effecting some change in arrangement, or in culture, favourable to trade and to artists.[24]

Much of this book is about the trade and the artists who have made up the garden industry since 1660. But it is also about their interaction with us, their customers – we who love, create and maintain gardens and who supplement the professional expertise of the gardener, nurseryman or designer with our own skill and artistry, as well as our sometimes fickle likes and dislikes. Demand and supply in gardening produces constant change; we alter our gardens far more frequently than we modify our houses. That is what produced the garden industry in the seventeenth century and still animates it today. This book celebrates an industry that is oddly unrecognized in our history, certainly in comparison to cotton, iron or the railways, but which has nevertheless changed the face of England not once but many times.

2

Gardens and the State

'To see our Prince his matchless force employ'[1]

On 29 May 1660, his thirtieth birthday, Charles II returned to London from his exile abroad to take up the throne, eleven years after his father, Charles I, had been executed outside the Banqueting House in Whitehall. The new king had plenty to do. He had to re-establish the monarchy, appoint his ministers and courtiers, call a new parliament and cement relationships with the Anglican Church, which was still suspicious of his Catholic mother; not least, he had to pursue and put to death the men who had killed his father. Yet despite all these tasks, he still had time before the end of 1660 to begin work on another of his major priorities: renovating the royal gardens. In St James's Park, only a few hundred yards from Whitehall, he made use of unemployed soldiers to dig a huge rectangular lake, 850 yards long by 42 yards wide, which he called a 'canal';* plate 2 shows the results of their work. It linked together a series of ponds that had been neglected under Cromwell's Protectorate. The next step for Charles was to restock the menagerie and aviaries that had been established by his grandfather, James I; soon he was able to enjoy himself feeding the ducks on his new lake. Gardens were important to Charles and indeed to most of his successors down to today.

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* A French word, which has now come – in both languages – to mean a waterway, but in the late seventeenth century also meant a rectangular pond or lake. Charles II's canal was constructed at about the same time as the canal at the Château de Vaux-le-Vicomte, but predated both the great French Canal du Midi and Louis XIV's Grand Canal at Versailles.

Ducks were the least exotic of the attractions. As early as 1663, there were elk, deer, antelope, 'goates from Guinea' and monkeys, together with cranes, storks, peacocks, pelicans – still a favourite with visitors – partridges and even a cassowary.[2] By 1670 there were parrots, a golden eagle, a vulture and two eagle owls, and by 1682 thirty ostriches, the gift of Moulay Ismail ibn Sharif, the Sultan of Morocco. John Evelyn recommended that enclosures and aviaries should be provided in gardens; he had one of his own at Sayes Court in Deptford.[3]

As it was soon opened to the public, Charles was often seen walking there, mingling with passers-by in a way that would be inconceivable in today's security-conscious times. In the winter of 1662, he and Queen Catherine were observed watching the 'strange and wonderful dexterity of the sliders [skaters] on the new canal, after the manner of the Hollanders'.[4] John Evelyn and Samuel Pepys record such royal perambulations, but the park became known for less innocent pleasures, indulged in by both Charles and his subjects, and Evelyn also censoriously describes, on 1 March 1671, how he walked with the king through the park

> to [Nell Gwyn's] garden, where I both saw and heard a very familiar discourse between . . . [Charles] and Mrs Nelly [Nell Gwyn] . . . she looking out of her garden at the top of the wall and . . . [Charles] standing on the green walk under it. I was heartily sorry at this scene. Thence the King walked to the Duchess of Cleveland, another lady of pleasure, and curse of our nation.

Much less elevated ladies of pleasure, and their activities in the park, were described in graphic detail in the 1661 poem 'A Ramble in St James's Park' by the courtier John Wilmot, 2nd Earl of Rochester.

St James's Park saw the first royal 'improvement' after the Restoration. But by the end of the seventeenth century, equally ambitious or even larger works – under Charles I, James II and William and Mary – had been carried out at Hampton Court, Greenwich, Newmarket and, abortively, Winchester, while the next century saw more – at Kensington Palace, Hyde Park, Windsor Castle and Windsor Great Park (including Virginia Water), Frogmore House, Carlton House, Richmond and Kew. In the nineteenth century came Frogmore Kitchen

Garden and works at Osborne House, Balmoral and Sandringham, in the twentieth at Highgrove. Each royal generation tried to outdo the one before.

So kings, queens and princes each did their 'matchless force employ'. But it wasn't with their own money. That came from the government of the day and, ultimately, from all the nation as taxpayers. Nor was building and maintaining royal gardens the only role that the state played in English gardening. During the late nineteenth century, public parks multiplied throughout the country, usually through the initiative of local government. In the twentieth, new towns were surrounded with parks, lakes and woodland; colleges and universities laid out gardens. Public events such as the Great Exhibition of 1851, the Festival of Britain in 1951 and the London Olympics of 2012 called for landscaping and planting.

Together, these projects make up a very large – this and the next chapter aim to show how large – public investment in English gardening, stimulating the creation of a garden industry and underpinning its growth. Royal patronage and enthusiasm led the way, creating and sustaining a fashion that was emulated not only by the aristocracy – who piled into gardening right across the country after the Restoration – but by the growing middle classes, the more prosperous working class and eventually the poor. The government responded and applied its 'matchless force' to the task. But the decision, taken by generation after generation, to spend billions of pounds of public money on gardens and parks, required not only a wide consensus that this was a sensible thing to do but also an economy that could afford to do it. How was that possible?

The answer lies in the increase in our population and the size of the economy. More people has meant more workers and more consumers – along with more taxpayers – but we have also become better at producing and selling; we have invested in machinery, developed new technology, trained and educated individuals and traded throughout the world.

This change, which has transformed the lives of successive generations, has not been a sudden one, however. England has never experienced economic growth as rapid as in today's China or India, but it has been growing for much longer. Very broadly, our economy grew slowly between 1650 and 1750,* a bit more rapidly from 1750 to 1825 and a bit faster again from then until today – for this last long period at roughly 2 per cent each year, although there have been ups and downs, booms, recessions and slumps. At first, we were accompanied or surpassed by Holland and France, which then faltered; Holland suffered from a lack of coal and France had a revolution. Britain carried on at the front of the pack until we were challenged by the United States and Germany at the end of the nineteenth century.

We have decided, collectively, to allocate part of the proceeds of the past three centuries of economic growth to gardens, both to our own and to those created and maintained by the state. Government expenditure, financed by taxation and by borrowing, has had a bad press recently. People talk of the 'burden of taxation' and of government expenditure 'crowding out' private investment. Spending by the state is seen as inherently less efficient and less desirable than spending by individuals or companies. Some want to reduce the role of government in all areas.

However, successive governments in the late seventeenth century were essential in re-establishing the rule of law and the property rights that underpin contracts and commerce. In 1694 they set up the Bank of England, which gradually established confidence in the currency and provided – after the crisis of the South Sea Bubble – a stable way for the government to borrow from the public. This, at the least, greatly reduced centuries of conflict over money between king and Parliament, one of the main causes of the Civil War that cost King Charles his head. Governments defended the country and attacked its enemies.† Governments made rules, for example about the building and running of canals and railways. They set taxes, which affected individuals and companies in many ways; the excise duties favoured by eighteenth-century governments were levied on a bewildering range of transactions, from employing servants to distilling gin or manufacturing glass, and made a difference to both production and consumption.

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* However, in the first half of this period, output per head – productivity – rose quite rapidly, which would have allowed for a similar improvement in living standards.

† By one count, Britain was involved in as many as twenty-three wars during the eighteenth century and thirty-four in the nineteenth.

Governments also spend money; this pays wages and stimulates the development of new methods and products. Most public expenditure in the eighteenth and nineteenth centuries was on the army and navy, which meant putting public money into the shipbuilding and armaments industries.* That had a knock-on effect on other parts of the economy. It helped to develop coal-mining and iron-making. Naval dockyards and army and militia garrisons also injected cash into Plymouth, Portsmouth and many other towns, which in turn stimulated growth in local amenities, such as food and clothes shops, pubs and plant nurseries.

London, as usual, did best of all. There, governments built and refurbished palaces, parks and gardens to uphold the dignity of the royal family. The money went to builders and contractors, artists, furniture makers, sculptors, plant nurserymen, landscape designers and gardeners. Much more was spent, in London and then throughout the country, both by central and local government, in the nineteenth century. This chapter is about the impact of all this money on the English garden industry.

ROYAL GARDENS – PUBLIC FUNDS

In 1701, the Lords of the Treasury were worried about their king, William III. They were not concerned that he was asserting too much royal power, as his (and his wife's) executed grandfather, Charles I, had done. Nor were they anxious about his religion, the problem that had led to William's uncle, James II, losing his throne. The Act of Settlement of 1688 and the Bill of Rights of 1689 had dealt with both issues, even if the repercussions had to be worked out throughout the next century. No, the problem with William was the amount he was spending on 'works' – palaces and gardens – particularly at Hampton Court and Kensington.

Both his predecessors had been big spenders. Charles II followed up his canal in St James's Park with building and garden work at Whitehall, Newmarket and Windsor Castle; one of his other early efforts was to build a court to play the ball game pell-mell (a precursor to croquet), as Pepys recorded in his diary in April 1661 and on other occasions.[5] The name of the fashionable London street Pall Mall still recalls its location. James II continued the tradition at Whitehall, St James's and Hampton Court. William III and his wife Mary II, who had already constructed two large gardens in Holland before securing the British throne, lost no time; in 1689, the year after they arrived – as Charles II had done before them – they were improving Kensington House and its grounds and building greenhouses at Hampton Court. Much more work followed.

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* As governments borrowed more, partially to finance wars, the payment of interest on the national debt accounted for larger and larger proportions of government expenditure; military always dwarfed civil expenditure.

In response to an inquiry from the Treasury, the Office of Works – which had some responsibility for the palaces, parks and gardens[6] – estimated that Charles II had spent about £39 million *(£20,000)* per annum on them during his twenty-five-year reign (1660–85). James II had spent about £63 million *(£30,000)* in each year of his brief reign (1685–8). But William (with Mary, until her death in 1694) had spent £92 million *(£45,000)* each year and by 1701 his spending seemed to be increasing.[7] So the four monarchs had between them spent nearly £2.4 billion in modern values between 1660 and 1701.*

We don't know exactly how much of this was spent on parks and gardens, but we can make an educated guess. The financial accounts of a number of great country houses suggest that at least one-third of the cost of a new house and garden went on the latter. This seems to be confirmed by expenditure later in the eighteenth century, when the Office of Works produced detailed accounts; between 1761 and 1776, George III spent about £22 million *(£13,500)* each year on his gardens, about one-third of the annual expenditure of the Office of Works on buildings and gardens.[8] So it is not unreasonable to think that total royal spending on parks and gardens may have been between £800 million and £1 billion in the last forty years of the seventeenth century.

Some of the money went, for example, on Kensington Palace and its gardens as a principal royal residence. William III, who suffered from asthma, urgently needed to find an alternative to living with the smoke pollution and damp atmosphere of the Palace of Whitehall. He and Queen Mary took a liking in 1689 to Hampton Court Palace and renovations there began almost immediately, but it was too far from London – either by road or river – for the court and ministers who needed to be near Parliament and the Law Courts. Kensington – less polluted than Whitehall – appealed as the village was on one of the routes to Hampton Court, and William and Mary chose to buy Nottingham House, on the western edge of Hyde Park, for £39 million *(£20,000)*. It needed renovation and extension and Sir Christopher Wren, architect of St Paul's Cathedral and Surveyor-General of the King's Works, was soon at work with Nicholas Hawksmoor, architect of several renowned churches in and around the City of London. Work was sufficiently advanced that the king and queen were able to move in on Christmas Eve 1689.

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* The modern equivalents are computed from the mid-year of each reign.

While Wren and Hawksmoor worked on the house, which became Kensington Palace, the Earl of Portland – Hans Willem Bentinck – newly appointed as Superintendent of the Royal Gardens, set to work with George London on the grounds. Initial landscaping and laying out of gravel paths was followed, between 1690 and 1696, by the planting of huge numbers of trees and other plants, most probably supplied by London's own large nursery close by at Brompton Park. There was a menagerie with 'curious wild fowl', tortoises, 'tygers' and snails.[9] There may have been a pause after the death of Mary in 1694, as there was at Hampton Court, but London was again at work extending the garden in 1701.

Queen Anne succeeded William III in 1702, vowing to restrain expenditure on the royal gardens; her restraint didn't last long and her new gardener, Henry Wise, was soon at work at Hampton Court and Kensington. 'Thousands of bulbs and shaped hollies' were planted at Kensington in 1702–3, no doubt also supplied from Brompton Park Nursery, where Wise was a partner. Hawksmoor and Sir John Vanbrugh, later architect of Blenheim Palace, built the orangery, an essential attribute of the formal gardens of the time since citrus fruit and other tender plants, which played a major part in garden designs, could not survive English winters. A wilderness – a carefully controlled woodland area – and a sunken garden followed, constructed by a labour force of at least a hundred men, together with a 100-acre paddock known as a zoological garden, stocked with antelope. A plan of 1713–14 shows a huge formal garden with box hedges and elaborate, maze-like paths.[10]

Anne's successor, George I (r. 1714–27), spent between £12 million and £16 million in modern values each year between 1715 and 1717 and at least this in succeeding years. Some of it went on a vast eastward extension of the Kensington Palace garden, improving the menagerie to house tigers and other exotic animals, and enclosing yet more acres of Hyde Park; the result was the largest pleasure garden in England, of 170 acres. George I started work on the 'Great Bason' – today called the Round Pond – and the other waterworks that ultimately became the Serpentine, a project of Queen Caroline, the wife of George II (r. 1727–60), although she got rid of the menagerie.[11] In the taste of the time, a huge lawn replaced the formal gardens of earlier years. The public, or at least those considered sufficiently genteel, were admitted, in a gesture to those who were paying for all this magnificence. Expenditure seems to have continued at this rate or more for the rest of the eighteenth century and probably, although the records are less complete, thereafter. This is actually quite modest by the standards of today's Royal Parks – now, despite their name, almost all open to the public – whose annual combined expenditure is £27 million.[12]

Three questions arise here. First, where did the money come from? Second, what did it buy? And third – to be left until we've looked at public parks and new towns in the next section – what did all this state aid do for the English garden industry?

Answering the first question is easy. The money came from the British taxpayer. It was allocated to the royal family and its gardens from the 'civil list', the name given to the funds issued by the Lords of the Treasury to cover the expenses of running the civil government, including the upkeep of the royal household, as well as, for example, tax collection, the legal system and the costs of ambassadors posted abroad. The other, always much larger, part of government expenditure was on the army and navy. Civil and military spending was paid for by taxes and, increasingly, by borrowing from the British public.

The political and financial settlement that made this possible was the outcome of the 'Glorious Revolution' that brought William and Mary to the throne in 1688. Eighteenth-century Britain had some of the trappings of a democracy, with an elected House of Commons, but it was in essence an oligarchy. Parliament and government were controlled by a small number of very wealthy families, working with the monarchy; their money came mainly from their land, but individuals from some of these families also had positions at court and became generals, admirals and bishops, all lucrative appointments. Local government was also in their grip, as was law enforcement, particularly at the local level. Only a small proportion of the population – men only, of course – could vote either in national or local elections. This oligarchy had been profoundly shaken by the events of the Civil War and the establishment by Cromwell of the Protectorate. The conflict between king and Parliament had pitted aristocratic family against aristocratic family, father against son, and had, like most civil wars, led to very heavy loss of life: about 85,000 died in combat and 100,000 more from war-related diseases, from a total population in England at that time of about 5 million.* The Restoration promised stability, but then the succession of a Catholic, James II, to the throne in 1685 threatened to spark further conflict.

The settlement of 1688 – whereby William and Mary came to the throne and James was exiled – stabilized the country. Although there were foreign wars and the Jacobite rebellions of 1715 and 1745, these common dangers cemented the alliance of the monarchy with the aristocratic oligarchy; they had a shared interest in avoiding further internecine conflict. Within the oligarchy, there were two political parties – Whigs and Tories – who vied for favour and a place in government but, as Britain's economy continued to grow, the aristocracy and the king felt increasingly secure. In particular, the country seemed to have solved the problem that had plagued all European countries for centuries: how to raise sufficient funds to finance the monarchy, the government and foreign wars.

The solution was twofold: the government borrowed money, principally from its own citizens, occasionally from those of other countries, and imposed a bewildering range of taxes on consumption and trade to pay its expenses, including interest on the money that had been borrowed. The national debt – the total amount owed by the state – rose at a rate that would today give the Treasury, or the International Monetary Fund, collective heart failure. It was £6.2 billion in modern values in 1691, £139 billion by 1750 and – partly because of the wars with France – £483 billion in 1800. This was only possible because the British public – who had lent most of the money to the Bank of England, which managed the debt – trusted that the government would pay interest on the loans. Interest from government bonds or consols (short for 'consolidated annuities', a means by which the government borrowed), or 'the funds', as the debt was known, soon came to be relied upon by large swathes of upper- and middle-class society – including men such as Capability Brown – to provide a regular and reliable income. They were benefiting from a growing economy and so had money to invest; the funds were safer than any other form of savings and investment in an age when there was no risk-free way of investing in trade or industry and when there were frequent bank failures.

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* War-related mortality in Ireland and Scotland was much higher.

Most of the rise in the national debt came from the need to pay for wars. The cost of the civil list – paying for the royal household, their luxuries, their palaces and gardens – rose only gradually. It was a price that the oligarchy were prepared to pay for the stability that William and Mary, Anne and the Hanoverian monarchy had brought to the country. Indeed, the oligarchs themselves paid very little, since the excise duties and other indirect taxes that paid the interest were largely borne by the rest of the population; the oligarchy saw to it that taxes on the land that they owned fell and there was no income tax until 1799.

So, to answer the second question posed above, the money was spent on larger and larger royal palaces, parks and gardens. Although most of the public who paid for them were never allowed to see them, they excited little concern. It was an age when broadsheets and cartoons viciously attacked the royal family, but nothing very unpleasant seems to have been said about their gardens as they put up and took down buildings, erected pagodas and other forms of chinoiserie and dug lakes. Even the Dowager Princess of Wales, Augusta, who was mercilessly lampooned in the 1750s for her supposed relationship with Lord Bute, wasn't attacked for her gardening, although her daughter-in-law, Queen Charlotte, did not entirely escape ridicule for her works at Kew. To be fair, the British royal gardens were never as lavish or ostentatious as those of their continental cousins and rivals; they were also, with the possible exception in the seventeenth century of Hampton Court Palace, hardly more so than the gardens of the rest of the oligarchy.

What did the state get in return? First, the dignity of the monarchy – an important aspect of the maintenance of an oligarchy – was upheld. None of the British palace gardens was as enormous or elaborate as the original 20,000 acres of Versailles; Hampton Court was only 27 acres in 1689, although William III increased it to 46 acres by 1696.[13] William and Mary thought the palace and park of Honselaarsdijk and Het Loo in Holland at least equal to their English gardens. George I and George II, who were each brought up at Herrenhausen in Hanover, both considered it superior. But the royal gardens as they developed during the eighteenth century were at least respectable in their size and design, even if the Royal Gardens Inquiry of the 1830s concluded that none of them then really matched the dignity desired of the English monarchy. Kew, the Royal Botanic Gardens, acquired special status, but mainly after it ceased to be a private royal garden in 1840 and became the foremost botanical garden in the world.

The state made some beautiful gardens, even if many of them long remained closed to the public. Possibly the greatest formal garden ever created in England was that at Hampton Court, Cardinal Wolsey's palace on the Thames fifteen miles west of London. Seized by Henry VIII from his disgraced Lord Chancellor in 1529, it was a royal residence from then until 1737.[14] While its gardens were always notable, they were developed further, particularly under Charles II, James II, William and Mary, and Anne, though they stood still after that. In the 1660s, Charles II commissioned André and Gabriel Mollet, who had recently completed the canal for him in St James's Park, to design and build one at Hampton Court; the result was the Long Water, 105 feet wide and 3,800 feet long, bordered by 758 Dutch elms, and the semicircular basin that fronted the palace.[15] The water came from a diverted river, although it never properly supplied the fountains that were an essential feature of formal gardens of the period.

More changes followed; Charles laid out an entirely new garden, the Wilderness. William and Mary constructed, on another front of the palace, the largest parterre (a formal garden, usually next to a house, with planted beds separated by paths and sometimes ponds with fountains) built in Britain in the seventeenth century. Long avenues were laid out, thousands of trees planted; three greenhouses, each 55 feet long, were constructed for Queen Mary's collection of rare and exotic plants. After a pause following the death of Mary in 1694, work carried on; the accounts show that Henry Wise, the royal gardener, carried out work costing £18.9 million *(£9,384)* in 1700–1701 and a further £6.8 million *(£3,407)* in 1701–2. By 1703, despite her resolution to economize, Queen Anne was remodelling the Great Parterre, probably because the fountains had again failed to work. Later in her reign, she altered the gardens north and east of the palace, ordered extensive tree-planting in Bushy Park and built the famous maze; since the nineteenth century, the maze has been the palace's greatest tourist attraction.

Hampton Court was just one of a series of royal residences that were renovated and, sometimes, abandoned as fashions changed, the royal family decided that they liked another house or garden better, or the growth of London made it sensible to relinquish land for housing. Successive generations of monarchs, their spouses and children, supervised garden improvements or even worked in them. During the eighteenth century, George I and George II modified the gardens of Kensington Palace, while George III and his wife Charlotte, an accomplished botanist, altered the gardens of his parents at Richmond and Kew at the behest of Capability Brown. During the nineteenth, Victoria and Albert superintended the creation of the largest kitchen garden in Britain, at Frogmore on the Windsor estate, improved the grounds of Windsor and Balmoral and created their own personal paradise at Osborne on the Isle of Wight; their son Edward VII built notable rockworks at Sandringham. Edward VIII, when Prince of Wales, commanded his guests, probably including a succession of mistresses, to plant with him at Fort Belvedere; most recently, Prince Charles has transformed his garden at Highgrove.

A particular royal garden, destroyed in the mid 1820s, was once hailed as the epitome of gardening taste. Frederick, Prince of Wales and son of George II, was estranged from his father for many years and a focus for the parliamentary opposition to the king. He worked in the 1730s with his wife Augusta to build the garden of Carlton House, north of St James's Park in central London. Its designer was the protégé of Lord Burlington, William Kent, who had been responsible for a trendsetting garden – still to be seen – at Rousham in Oxfordshire. Documented in Frederick's household accounts, Carlton House is an eighteenth-century example of today's 'instant' gardening. A year spent preparing the 9 acres of grounds cost over £1.3 million *(£710)*. Frederick couldn't wait for trees and shrubs to grow and they were transplanted wholesale, at a cost of £2.2 million *(£1,239)*; there were over 15,000 trees, including a 25-foot tulip tree and an 18-foot Virginia black walnut, together with thousands of shrubs, bulbs and flowering plants.[16] The ground was levelled and turfed, an aviary (clearly a necessity, as the prince had another at Cliveden, which he rented from 1837 onwards) and bath-house were built, statues installed and, in February 1735, Thomas Fowke delivered two pumping engines, 654 feet of leather forcing pipes, 10 feet of suction pipes and '22 pair' of brass screws, all 'for the use of HRH the Prince of Wales for Watering his Gardens' and costing £203,400 *(£113 10s)*. Altogether, the garden cost at least £10.4 million *(£5,781)*, spent in less than three years.

Lavish spending was a feature of many of the royal gardens. The royal family, like all garden owners, liked to show off. Part of a Roman temple, transported from Leptis Magna (in modern-day Libya), became a picturesque ruin at Fort Belvedere on Virginia Water, newly constructed in the 1750s. The Duke of Cumberland, who had built the fort as a summer house, kept a 50-ton ship on the lake there to entertain his friends with mock naval battles.[17] From the 1740s onwards there were elaborate menageries and aviaries at Kew and Richmond, containing zebra, elephants and a range of birds; they were joined in the 1790s by kangaroos from the new colony of Australia.[18] The basin for the fountain at Frogmore Kitchen Garden was 30 feet in diameter and made of polished Peterhead granite, like those in Trafalgar Square.[19] The hothouses were 840 feet long and there were 1,665 feet of pits devoted to asparagus, cucumbers, melons, pineapples and grapevines. Perhaps the record for extravagance is held by William III. In 1701, he visited Hampton Court Palace and noticed that he could not see the River Thames from his first-floor rooms; he immediately ordered that the level of the Privy Garden should be lowered by 8 feet. This was done in the winter of 1700–1701 and the garden was fully planted, pipework was installed for the fountains and statues placed on their plinths. Then, in June 1701, William visited again and discovered that he could still not see the Thames; he insisted that the whole garden should be lowered again. All the newly installed plants, grass, paths, pipes, fountains and statues had to be removed and 3 feet of soil taken from an area of 5 acres before all the plants and equipment were put back. Henry Wise, the royal gardener, employed hundreds of labourers on the project and, remarkably, it was all done by November. It cost £2.8 million *(£1,426 4s 4d)* on top of the millions spent on the original work. But the king had his view of the river. The garden can still be seen, as in plate 4, restored in the 1990s to its original splendour at a cost of between £4 million and £5 million.

No one can doubt that the royal parks and gardens – most of them now open to the public, who paid for them over the centuries – are a major ornament of London and the envy of many other capital cities. If, at a conservative estimate, their annual cost was about £15 million in modern values, they have cost more than £5 billion over the course of 350 years. Cheap at the price, many will say; less than the cost of two aircraft carriers. But there was much more to come, as the fashion for building public parks spread across England and local took over from central government in the funding of gardening.

PEOPLE'S PARKS: PUBLIC SPACES FOR THE LIVING AND THE DEAD

During the second quarter of the nineteenth century, the average height of Englishmen began to fall.[20] Like the canaries that warned of poisonous gas in coal mines, it was a sign of danger. Height is a very sensitive indicator of the welfare of the population and it has normally risen in line with the growth in people's incomes and the economy in general. But in the 1830s and 1840s in Britain, several other European countries and the USA, that relationship was broken; the economy seemed to be growing, but the average height was faltering. The reason was the poor living conditions in towns and cities.

As the economy grew from early in the eighteenth century and the Industrial Revolution gathered pace, England's population rose and was increasingly concentrated in towns and cities. By 1800, England was the most urbanized country on earth and the process accelerated in the new century. It was entirely unplanned, the result of a myriad individual decisions; millions of people, men and women, needed jobs and places to live, and employers and builders, in their thousands, tried to satisfy their needs. As there was no cheap and efficient public transport, jobs and houses had to be near each other. The result was more and more people crammed together and in close proximity to the amenities that supported their lives but also contaminated them: abattoirs, dairies and their cows, stables generating tons of horse manure, tanneries, soap boilers, dye works – all constantly churning out smoke, noxious smells and other pollutants. There was little local government and what there was could not cope: waste poured into rivers; water sources were polluted and caused cholera to spread; overcrowded houses were fire traps; graveyards were overflowing with putrid corpses, if they had not been purloined by the body-snatchers. Central government either did not care or was helpless, not least because local politicians, such as those in the City of London, resisted any interference with what they called their 'liberties' and their right to pay as little as possible in taxes.

By the 1830s and 1840s, the situation had become intolerable. In 1833, a Factory Commissioner (a government commissioner inquiring into the state of British factories) visited Manchester and was 'struck by the lowness of stature, the leanness and paleness which present themselves so commonly to the eye'. In the 1840s, the great sanitary reformer Edwin Chadwick argued that 'noxious physical agencies' were producing a population 'having a perpetual tendency to moral as well as physical deterioration'.[21] It was not only in the large towns that chaos reigned: in 1842 the authorities administering the system of poor relief that existed in various forms from the reign of Elizabeth I until the establishment of the welfare state after the Second World War were told that the small town of Windsor, nestling below the royal castle, was 'the worst beyond all comparison. From the gas-works at the end of George-street a double line of open, black and stagnant ditches extends to Clewer-lane. From these ditches an intolerable stench is perpetually rising.'[22] Famously, in 1858, Members of Parliament fled from the 'Great Stink' of the River Thames, into which flowed all the human waste and industrial effluent of London. Mourners didn't dare to accompany their loved ones to the graveside, for fear of what they would see and smell in the overflowing churchyards. No wonder that disease was thought to be spread by miasmas.

Nothing could be more different from the towns and cities than the landscape parks of aristocratic England. Yet it was to that model that social reformers turned, in the hope that light, air and space could alleviate the horrors of urban existence. In the process, they changed the meaning of 'park' from the deer parks of medieval England or the rolling landscapes of Capability Brown to the more regimented, flower-bedecked spaces that still adorn our towns and cities and which continue to be loved by their inhabitants. They, together with the splendid town halls, libraries, concert halls and, later, swimming pools are the most visible remnants of the late nineteenth-century activism of local government that has been increasingly stifled by centralized control from Whitehall in the twenty-first century.

As ever, concern for the general health of the population was motivated by various factors: some were philanthropic, others utilitarian attempts to improve the productivity of British workers. Some were self-interested: several early parks, from Regent's Park onwards, were part of schemes for building luxury villas and aimed to make a profit. On 21 February 1833, the House of Commons established a Select Committee to consider 'the best means of securing Open Spaces in the Vicinity of populous towns, as Public Walks and Places of Exercise, calculated to promote the Health and Comfort of the Inhabitants'.[23] Its chairman was Robert Slaney, MP, a wealthy Shropshire landowner whose overriding concern in a long parliamentary career as a Liberal was 'improving conditions for the lower classes, especially in the industrial towns'.[24] The committee found that 'as respects those employed in the three great Manufactures of the Kingdom, Cotton, Woollen and Hardware, creating annually an immense Property, no provision has been made to afford them the means of healthy exercise or cheerful amusement, with their families, on their Holidays or days of rest'.[25] With the usual mix of anxiety and condescension they concluded that open places 'reserved for the amusement (under due regulations to preserve order) of the humbler classes, would assist to wean them from low and debasing pleasures . . . drinking-houses, dog fights and boxing matches'.[26]

Although the committee did not actually recommend that central government funds should be used, a succession of bills in Parliament produced, in 1841, a grant of £7.2 million *(£10,000)*, which was used between 1842 and 1856 to subsidize parks in ten English, Scottish and Irish towns. The largest sums went to Manchester and Bradford, but those for the north of England were dwarfed – a familiar story – by the money that was separately spent on London, a total of £339.2 million in modern values as compared to £7.2 million for the whole of the rest of the United Kingdom.[27]

One of the new London parks, Primrose Hill, still today a much-loved open space, north of Regent's Park and surrounded by expensive houses, had actually been the proposed site of a landscaping solution to another of London's problems, the overflowing graveyards. Although the problem had been identified as early as the 1720s, nothing had been done either by the Anglican Church, which owned the graveyards and received the fees for burials, or by the local authority, the City of London Corporation. But by the 1820s, about 40,000 people needed to be buried in London each year. The solution was left to private initiative in the shape of George Frederick Carden, who combined the roles of lawyer and philanthropist, and was the prime mover in what became the General Cemetery Company. Carden, who was inspired by the Parisian Père Lachaise cemetery, argued that a private burial ground was needed: it would provide vaults and graves secure from body-snatchers,[28] it would remove dangers to public health and it would create a fittingly peaceful and beautiful landscape. Carden was enthusiastically supported, in the *Morning Advertiser*, by the garden writer and designer John Claudius Loudon, who suggested that London should be surrounded by several burial grounds that could be made 'at no expenses [sic] whatever' into botanic gardens.[29] They could also serve as 'breathing places' for