Prologue

'Some Great Change Must Take Place' 1

The 'facts' of improvement were so striking that they made men dream dreams: the word 'improvement' itself which now sounds sober, respectable and emotionally threadbare was capable then of stimulating daring flights of imagination. Asa Briggs, *The Age of Improvement*

I should fear to tell the dreams which I have now beside the electric telegraph, and on the railways, and within the regions of the god-like inventors and makers of machinery. There is a time coming when the realities shall go beyond any dreams that have yet been told of these things.

Alexander Somerville, Autobiography of a Working Man

One of the many fascinating aspects of *Kilvert's Diary* is its depiction of a rural society which had hardly changed for hundreds of years beginning to give way to modernity. A Diary entry for 25 January 1871 encapsulates something of the state of that society. Penny Readings were then in vogue as a means by which the well-to-do middle class provided a modicum of learning and entertainment for the rural poor. The Rev. Daniell, Vicar of Kington Langley near Chippenham, had written to Kilvert - in Latin and on one of the new-fangled postcards - asking him to help at his Penny Reading. Daniell's caprice of communicating to another clergyman in Latin demonstrated what real learning was. Kilvert walked over to Kington Langley Vicarage to find only Mrs Daniell there, who told him about 'the 5 Japanese pupils, all noble', who were living with them. He was misinformed about their nobility. Cobbing described them, the first in England to have lived outside the capital, as 'five officers from Tosa [who] lived in Daniell's home and received lessons in English² Kilvert also stated that one was 'of royal blood', part of an official Japanese deputation which was studying the Franco-Prussian War. This prince would have been Higashi Fushimi, who merely visited the Langley Burrell students.³ Various Japanese students visited Britain in the nineteenth century, some in 1830 to see railways, completely unknown in their country. Those who came to Britain in the 1860s marvelled at such wonders as gas lighting, electric telegraphs, and drills (such as seized Kilvert's attention – see chapter five) which could cut holes in steel plate.⁴ The villagers of Kington Langley in 1871 would have regarded their Japanese visitors as even more exotic wonders. Even Kilvert was intrigued by what he heard of their 'perfect manners' and of the way they regarded Saturday nights as 'a solemn time'. The ever-shrinking world of the 1870s had brought in its steam-ships visitors from the farthest limits of the Far East to report, via the electric telegraph, on a European war. Their presence in rural Wiltshire would have been unthinkable thirty years before.

The Victorian country clergyman was almost invariably a teacher. Kilvert's teaching in school, which will be examined later, was a mixture of the traditional (the Catechism, Bible stories, annals of pious lives) and the modern (geographical exploration, missionary travels, scientific and technological discovery). To some extent therefore he was mediating change to his school pupils and to his congregation (he also used sermons to teach what was happening in the world at large). At times he marvelled at country people's ignorance as, for example on 29 February 1872: 'There is a general belief amongst the Clyro and Langley people that I cannot travel from Radnorshire to Wiltshire without going over the sea'. The census returns of Clyro and Langley show that the great majority of their inhabitants were born either in those parishes or in neighbouring villages and towns. Most would not have travelled much beyond them nor have any real grasp of the geography of their region. Perhaps in Kilvert's view the subject that his flocks were in most need of was geography, especially at a time when the world was shrinking due to the invention of steam-ships, newspapers, railways, and the electric telegraph. We shall see later that his imagination was stirred by these developments, and also that as a teacher he had a particular concern for geography.

The story of Kilvert and his family is a story about teachers and teaching, schools and schooling, and a nineteenth-century subculture in which education was an activity of paramount importance. The story is not primarily of formal lessons with textbooks, slates and chalks, and inky copybooks, though they have their place in it. It is rather the story of individuals learning values and attitudes from parents and siblings, places and people, personal and national heroes, Penny Readings, museums and zoos, books and magazines, religion, science, and nature. It is also about one kind of society learning, often painfully because the process of change was at times frighteningly rapid, to become a quite different kind of society. The diary which Kilvert kept from 1870 to 1879 recorded one phase of this monumental change. He was thirty when he began the diary, and enormous changes had already taken place since his birth in 1840. Many entries indicate his awareness that his was a society in ferment and that he saw himself as its historian, documenting the period in which the world became recognisably 'modern'.

When Kilvert was born on 3 December 1840 at Hardenhuish, on the edge of Chippenham (Wilts.), Victoria had been on the throne for three years. His father, Robert Kilvert, youngest son of a coachbuilder in Bath, became a clergyman. Kilvert's mother was Thermuthis Coleman, of a Quaker merchant family, which had lived for generations in the village of Kington St Michael near Chippenham, and which had intermarried with the Ashe family, gentry of neighbouring Langley Burrell. Francis Kilvert, the diarist, was educated first at his father's school at Hardenhuish Vicarage and later at his uncle Francis's Claverton Lodge school in Bath. Kilvert died from peritonitis in 1879, only weeks after his marriage, but it wasn't until 1937 that his nephew, Mr T. Perceval Smith, submitted his diaries (originally 27/8 notebooks but only 22 by this time as 6 had been destroyed) to the publisher Jonathan Cape. After Smith's death, the notebooks passed to his sister, Mrs Essex Hope.

The *Diary*'s first publication in three volumes, coming at a historically momentous time – between 1938 and 1940 – encouraged nostalgia for the peace and safety of the countryside. Its editor, William Plomer, told how their publication caught the mood of the time: 'Already the last decades of silence were passing . . . before the pandemonium set in, of motor traffic, radio, aircraft and bombs. In that doomed hush [Kilvert] lived and wrote'.⁵ Of course, for Victorians the pandemonium had set in a good deal earlier, experienced by workers in factories, foundries, docks and shipyards, and dwellers in large towns and cities. Kingsley's eponymous hero, Alton Locke, spoke of having become inured in London to the 'ceaseless roar of the human sea'. In 1853, Matthew Arnold was complaining in *The Scholar-Gipsy* of 'this strange disease of modern life,/ With its sick hurry . . . '. We get little overt sense of this in Kilvert's diary, although he did express relief at escaping from London into the quiet of the country.

In the main it is country life that is Kilvert's subject. Plomer referred to the *Diary* as an 'intimate record of English country life in the last century'.⁶ Brought up to love the countryside and nature, and with a sharp awareness that rural ways were becoming extinct, Kilvert consciously set out to document them before they were gone forever. V.S. Pritchett was right to see the diarist as a historian: 'He was very much aware of recording history, if only with a small "h". And Pritchett

believed that Kilvert was conscious of 'belonging to a society... and it was this sense that made Kilvert a historian?7 Because so much of the Diary deals with rural life, the idea has grown up that it records little or nothing else; but in the narrative there is an urban, industrial life whose encroachments Kilvert was keen to set down. Plomer may have omitted some urban and industrial references because they had little interest for him and, he assumed, his readers. However, many have survived and this study highlights them and scientific references in order to show that Kilvert's vision extended beyond the country parish. Ronald Blythe wrote of the Diary: 'It is, comparatively speaking, minutiae that fill it, the deepest, remotest, richest provincialism that speaks, yet the voice is neither quaint or old-maidish but young, direct and vital'.8 The emphasis on the vigorous voice is accurate as is the emphasis on the provincialism's depth. However, Kilvert was not merely provincial: there was a metropolitan dimension to his character that has hitherto gone unnoticed.

The following words were written about another nineteenth-century diarist, but they fit Kilvert closely:

[His diary's] varied contents and its vivid and spontaneous style reveal a young man full of energy and with an interest in all that goes on around him.... He is quick to sympathise with human weakness, but equally quick to laugh at cant and humbug when he meets them. He takes a fresh and intelligent look at men and their affairs, but is sensitive to the beauty of the countryside and has a genuine concern for animal life. His pages provide a graphic account, enlivened by youthful good spirits, of what life was like ... he was aware of the larger issues of the day, political, spiritual and intellectual. . . . One could hardly have a more observant, thoughtful and yet entertaining recorder of his times.⁹

The diarist being described here is Robert Barclay Fox of the famous Quaker family of Falmouth in Cornwall, which ran a shipping business. His generation directly preceded Kilvert's. He was born in September 1817 and his *Journal* extends from 1 January 1832 to October 1854.¹⁰ He died prematurely at the age of 38, as Kilvert did. His father, Robert Were Fox (1789-1877), was a distinguished scientist and Fellow of the Royal Society.

One branch of the family produced several doctors, one of whom, Edward Long Fox (1761-1835), was well known by reputation to the Kilverts. Kilvert's aunt Emma, wife of the Rev. Edward Kilvert, younger brother to Kilvert's father, was a patient in Brislington House, a Bristol asylum founded in 1806 by Edward Long Fox. It was a progressive establishment, pioneering a humane treatment of the mentally ill known as 'Moral Therapy'. After Fox's death in 1835, the asylum was continued by his sons. Aunt Emma, who, Kilvert recorded on 5 October 1871, regarded it as 'a hell upon earth', was in the care of Dr Charles Fox.¹¹ The Fox family would also have been known to Kilvert because it was related to the leading families of the Quaker establishment and he, with a Quaker mother and aunt (Sophia), would have been informed about these families' humanitarian and scientific achievements. Furthermore, there was a Kilvert family link to the Fox family. Barclay's mother was Maria Barclay of Bury Hill, Dorking. Her sister, Anna, had married the Quaker businessman, Jacob Reynolds, whose sister Ann was the second wife of Thomas Woodruffe Smith, the guardian of Kilvert's aunt Sophia. A later chapter gives details of this last relationship.

Barclay was only fourteen when he found an exhibition of steamengines 'particularly interesting'. In Dublin in August 1835 at the British Association for the Advancement of Science (BAAS) Meeting with his family, he was greatly impressed by the geology lecture of Professor Adam Sedgwick, about whom we will hear in connection with Kilvert. Fox was with his family viewing what he called 'the wonders of Birmingham' in 1837. He witnessed the launch of the new steamer, British Queen, '1836 tons, larger by 500 tons than any other on the ocean. It was a superb sight'. The next day he was at an anti-slavery meeting at Exeter Hall, the Evangelical centre in London. It was entirely typical of the Fox family that Barclay's eldest sister, Anna-Maria, set up in 1833 (when she was eighteen) the Falmouth Polytechnic, which stimulated and showcased scientific and technological developments in Cornwall. Following those developments nationally was one of Barclay's chief interests. He toured foundries and factories, and made frequent visits to London's Polytechnic Institution whose display of new inventions showed, he said, 'the progressive spirit of the age'. In Bristol in 1843 he visited the Coalbrookdale iron products warehouse and saw the Great Britain, Brunel's wonder ship, referred to by Barclay as 'the greatest experiment since creation'. After attending a lecture in London on phreno-mesmerism, he entertained his friends by recounting its 'wonders'. In 1840, the year Kilvert was born, Barclay marvelled that the rail journey from London to Bristol took only 41/2 hours, adding: 'Certainly steam is the one great Fact of the present age. To be deprived of it would be like going back to barbarism' (his italics). He had expressed anxiety a few days earlier about whether religion ('call it superstition if you please') had been replaced by Utilitarianism; instead of churches, his society built railway stations.

In 1842, he took over the management of the family's Perran Foundry¹² after it suffered decline in the charge of its previous manager and partner, Benjamin Sampson. Kilvert showed marked interest in this establishment when staying in July 1870 with his friends William and Emma Hockin in Tullimaar, a house built by Sampson for himself near Falmouth. William had inherited the house from his mother Ann, Sampson's daughter. We may assume that Kilvert was told of this family connection to the Foxes. He referred three times in his Cornish Diary to the foundry chimneys that could be glimpsed from Tullimaar's windows. Fascination with Cornwall's industrial past and present permeates Kilvert's Cornish Diary; the Perran Foundry interest is not an isolated example. His Cornish tour is full of references to foundries and mines, to industrial processes and products. The reason for this is simple: he belonged to the same social group and was raised with the same outlook as Barclay Fox. He too was excited by new scientific and technological developments and exulted when their application resulted in increase of wealth and comforts. He shared Barclay's faith in 'the progressive spirit of the age' and his passion for philanthropic causes.

The origins of Kilvert's outlook derived partly from the circumstances that brought his paternal grandfather, Francis, along with representatives of other Shropshire families, to Bath in the late eighteenth century. In the annals of one of those families, the Falkners of Claverley, can be found motives for the migration. Originally yeoman farmers, the Falkners had a paper mill from the early eighteenth century, 'always maintaining an excellent position among the yeomen and gentle people of the neighbourhood', in the words of Anne Falkner.¹³ It seems the paper mill could not provide for the younger Falkner sons, Francis and Robert, and the former went to Bath in 1778, becoming a partner in the wine business of Thomas Collett. The Colletts, a Quaker family, had been bakers, brewers, and clothiers in Somerset throughout the eighteenth century.¹⁴ Francis became related to the Kilvert family in July 1780 when he married Catherine Parsons, elder sister to Anna, who married Francis Kilvert, the diarist's grandfather. This latter Francis could also see business opportunities in Bath, where he moved in November 1780 to set up as a coachbuilder. Anne Falkner underlined the slowness and inconvenience of coach travel when these newlyweds were struggling to keep contact with their families in Shropshire: 'coach journeys were a long and weary business', taking a whole day to get from Bath to Birmingham.¹⁵ Robert Falkner migrated to Bath only in 1787, to enter into partnership with a Quaker corn factor and miller. Further insight into the values of both the Falkner and Parsons families can be gained from the comment made in a letter by Catherine Parsons' brother, William: 'I have always heard Mr Robert Falkner spoken of as a sober industrious and good man'. In another letter he approved Robert's Quaker partner: 'I have a great predilection for that sect'.¹⁶ William also recommended 'a Counting House or Warehouse as a proper place' for young men after school. Desire to make something of themselves drove the young Falkner and Kilvert men to Bath to join its trading community. Sympathy for Evangelical religion may also have cemented friendship between the two families because when Francis Falkner died in 1797 he was buried in the crypt of St James's Church, Bath, 'a massive Simeonite trustee church', where he had also been a churchwarden.¹⁷ Evangelicalism had begun to flourish in Bath at this time and Kilvert's grandfather may have embraced it after the city's building boom collapsed in 1793 with the failure of his coach building business and bankruptcy.¹⁸

Honest tradesmen could see the possibility of thriving in a society where wealth, fashion, and ostentation ruled. A regular influx of visitors seeking health cures and excitement came to Bath, whose population was growing rapidly at this time: 26,000 in 1793, 33,000 in 1801, and 38,000 in 1811. The Falkners and Kilverts were part of this influx and their businesses were calculated to serve the needs of the rich and fashionable. Rises in population and in house-building brought with them greater demand for coaches and coach services; those to London increased by 70%. The young Francis Kilvert with his modest workshop in Monmouth Street was thus part of a burgeoning national industry that was contributing to the accelerating pace of change of the Industrial Revolution. The iron he needed for his work was supplied by George Stothert, a Presbyterian from Scotland, whose ironmongery business in Bath was the outlet for products from the Coalbrookdale (Shropshire) works of the Quaker Abraham Darby.¹⁹ Since Stothert had married a Parsons' grand-daughter, he was related to Francis Kilvert and the Falkner brothers. On 24 October 1871, Caroline Stothert introduced herself to the diarist as his cousin. She was the 35-yearold grand-daughter of George Stothert. Francis Falkner's son, Francis Henry, was a contemporary in 1800 at Bath Grammar School with two of Stothert's sons.

The Rev. Christopher Anstey, in *The New Bath Guide* (1776), contrasted Bristol, 'renowned for Commerce and Dirt', with Bath, 'a gay place' of pleasure and frivolity, a city of 'loungers'.²⁰ Other contemporary and later writers pictured Bath this way. When the Evangelical preacher, William Jay, began his pastorate in its Argyle Chapel in 1791, Bath was 'the resort of fashion and folly in the pursuit of pleasure'.²¹ Elliott-Binns

wrote: 'Life at Bath was intensely artificial. . . . Pleasure and diversion were the chief occupations' (he was referring to the late eighteenth century).²² An anonymous writer observed in 1814: 'pleasure seems [Bath's] only business'.²³

The change of address in 1787 of Francis Kilvert, coachbuilder, to Bath's Westgate Street is one indication of his relative prosperity. It took place during a boom period that lasted from 1785 to 1793. However, the crash of 1793 then occurred, partly because war with France depressed the demand for houses, and banks had made rash loans to speculative builders who were then unable to pay them back. Francis's business failed. He had served the rich and fashionable but in the slump they, by and large, 'lounged' on while he and others like him went under: he was declared bankrupt in 1794.²⁷ This disaster was compounded by the failure of the bank in which his and his mother's assets were lodged (it is believed a five-figure sum was involved). Francis's situation could hardly have been worse: in debt, in depressed times, with neither employment nor savings. Furthermore, his wife Anna was pregnant: Kilvert's uncle Francis was born on Good Friday 1793. Around 1799, the family moved to Widcombe, a relatively poor suburb of Bath.

Loss of fortune produced a crisis – economic and social – for the Kilvert family that was felt particularly after Francis died in 1817 and his sons approached adulthood. 'In 1818... it became needful that all of us who were of an age to do so should set to work,' wrote Robert. Perhaps the worst element of Francis's position after the bankruptcy was that he had no place in society. His sons began to seek their place: William was to be a merchant (had he not died in 1818), John to be a doctor, Richard emigrated to Canada, and Francis, the eldest, who had become surrogate father to his siblings, had entered the Church while simultaneously teaching at Bath Grammar School.

For Francis Kilvert and his brother Robert, making their own way in the thrusting, competitive society of the early nineteenth century involved seeking patronage from local landowning families and from the élite of Bath by offering to tutor their sons. They were learning the importance of being gentlemen and of mixing with gentlemen. However, the range of occupations pursued by all the Kilvert sons indicated the ways in which society was changing. The Industrial Revolution brought with it not only wealth but a desire for improvement among a middle class increasingly aware of its worth and unique character. Its members included those dubbed by Briggs 'the new men', who were 'struggling against old oligarchies and enthusiastic in the cause of local "improvement". He noted the passing, between 1785 and 1800, of no less than 211 Local Improvement Acts that focused on street lighting, water-supply, the clearing of 'nuisances', and the providing of watchmen.²⁸ It is of some significance therefore that the disillusion of that failed coachbuilder, Francis Kilvert, did not make him completely idle: between 1805 and 1817 he was Widcombe's 'Collector of Lamp, Scavenger and Watch Rates', a lowly paid but useful Council job.²⁹

Later chapters will show various members of the Kilvert family, including Kilvert himself, embracing municipal, industrial, and cultural movements that were gaining ground in the first quarter of the nineteenth century: local government reform, elementary education, popular literature, improved transport, 'rational' leisure pursuits, museums and, above all, popular science. Traditionalists, particularly those of the landed interest, regarded these developments with alarm. The Tory friend and patron of the Kilverts, Sir Robert Inglis, opposed the 1832 Reform Bill in the House of Commons because it represented 'a revolution that will overturn all the natural influence of rank and property'. With Shropshire forebears who were for generations yeoman and tenant farmers, the Kilvert family inevitably favoured traditional country ways. Kilvert: The Homeless Heart emphasised how much Kilvert was a defender of rank and property but it also pointed out that he naturally sided with the small man trying to raise himself by education and hard work. In addition, the Quaker and Evangelical elements in his background rejected aristocratic notions of rank and family pride. It should be remembered too that Kilvert's maternal forebears, the Quaker Colemans, were originally tradesmen.

Briggs, in his picture of the 'energetic initiative' of the emergent middle class, highlighted the provincial Literary and Philosophical Societies that began to appear in the late eighteenth century; the Manchester society, founded in 1781, was among the first. One of the founders of the Bath Philosophical Society, dating from December 1779, was William Matthews, the Quaker partner of Robert Falkner in their corn and seed business. We also find that Francis Henry Falkner (1782-1866), son of Robert's brother Francis, who came to Bath as a wine merchant, was a member of the Bath Philosophical Society in the 1820s. And finally, as a later chapter shows, the Society became the consuming interest of Kilvert's uncle Francis, eldest son of the coachbuilder. Clearly, the Bath Philosophical Society reflected and furthered the interests and aspirations of the social group to which these men belonged. We will see later how Kilvert's uncle Francis and the Society were pivotal in developing in Kilvert interests in natural history and science and technology.

It is important here to note the significance of 'Lit and Phil' Societies for the generation and the social group that included Kilvert's grandfather, the Falkners, and George Stothert. Their period - 1780s to the late 1820s - was one in which science became extremely popular. Its popularity was reflected in the Lit and Phils, which Briggs saw as a characteristic product of the period's 'new men'. Their motivation for founding these societies was, according to Inkster, a consequence of the social changes of the period, which witnessed 'the making of social class, a process which centred upon the economic and social evolution of the industrial provinces'. During this flux, when 'there was no longer one social world', individuals felt the absence of 'central . . . values, beliefs and norms' on which they could rely.³⁰ There emerged in industrial provincial England 'social groups who were essentially "marginal" to society because neither overtly of the capitalists and often decidedly not of the working masses'. Such men were drawn to Lit and Phils not simply from a desire to move up socially, though that was no doubt a factor, but chiefly because they sought to join others with similar interests in an organised group. It was a question of identity, Inkster believed: 'The institutions and groupings of science culture were utilised by the marginal man in first gaining then propounding his social identity.³¹ Lit and Phils were in effect Mutual Improvement Societies.

Cooter laid emphasis on the kind of knowledge with which this kind of man was identifying. The Lit and Phils pursued practical knowledge, 'independent of the knowledge's technical utility or validity'. Their endorsement of 'natural knowledge' challenged the 'unnatural' basis of traditional agrarian society, and sought to legitimate change from that society, in which position depended on land ownership and 'good' family, to one in which 'urban utilitarian and meritocratic values would predominate'. These new professionals 'by locating themselves in Lit and Phils . . . confirmed through the use of natural knowledge and the rhetoric of utility the legitimacy of bourgeois dominance'.³² The Dillwyn family, with which uncle Francis Kilvert and Robert Kilvert ('the diarist's father) made significant contact in their role as teachers, provides examples of 'new men' for whom these values held overwhelming importance.

One of the elite Bath families whose sons Francis and Robert Kilvert were teaching in the early 1820s was that of Sir William Hotham. The family was Evangelical, and had traditionally supported Quakers.³³ Robert Kilvert recounted that in 1822 he was invited to accompany Sir William as his son's tutor on a tour through France and Switzerland. Illness prevented him from going and his friend Henry Moule replaced him. A short time later, Moule was approached again through the Evangelical network to act as tutor to a gentry family. The family was that of Lewis Weston Dillwyn (1778-1855), landowner and

industrialist, whose home of Penllergare was on the edge of Swansea. His journal³⁴ contains few expressions of piety but his Evangelicalism is evident in strict Sabbath observance, family prayers, membership of a Bible Society, and friendship with the Evangelical Bowdler family of Bath. His 16 January 1823 journal entry reads: 'Received a letter from my Sisters enclosing a strong recommendation from the Revd. Mr Kilvert of Bath in favour of Mr Henry Moule as a Tutor for my Boys'. Dillwyn then offered Moule a temporary engagement and on 1 February 1823 Moule arrived.

It is not clear why uncle Francis Kilvert's recommendation of Moule should have come via Dillwyn's sisters, who are not identified (there were five). Perhaps they knew Sir William Hotham, who in turn knew that uncle Francis maintained a private school at his home. Dillwyn went to Bath on 9 February 1823 with his friend Sir Christopher Cole to obtain a first-hand account of Moule from Hotham, who was an intimate of Cole. Dillwyn did not actually meet Hotham: it was Cole who gave Moule 'an extraordinarily high character' (Dillwyn's words). If Kilvert's father had not begun at Oriel College, Oxford, in October 1822, he might have become tutor to Dillwyn's boys. However, Oriel College provided another contact in the web that brought like-minded families together at this time. Two of Robert's fellow students were from families friendly to Dillwyn's. One was Christopher Rice Mansel Talbot, landowner and industrialist, of Margam Castle and Penrice Castle; the other was Richard Calvert Jones, clergyman and pioneer photographer, of Veranda near Swansea, and friend of the great photographer Henry Fox Talbot. Either Christopher Talbot or Jones could have mentioned that Dillwyn needed a tutor to Robert Kilvert, who then recommended his friend Moule. In addition there was the fact that Christopher Talbot's stepfather was Sir Christopher Cole, who had married Talbot's mother, Lucy Fox-Strangeways.

Moule tutored Dillwyn's sons, John (born 1810) and Lewis (born 1814), from 1 February 1823 to 30 April 1824. Contact between Dillwyn and uncle Francis became even closer when, on 18 August 1824, the former called on the latter in Bath about a replacement for Moule, who had become curate in Melksham. By December 1827 John, having had a number of temporary tutors, had matriculated at Oriel, but Lewis became a boarder at uncle Francis's school at Darlington Street, Bath, on 10 December, where he was to remain for 3½ years – until the summer of 1831. The very large amount of trust signified by this arrangement is further indication that although the Dillwyn and Kilvert families were sharply divided in terms of income and status, they were one in values and outlook.

Dillwyn, before he became an M.P., devoted much of his time to

his Cambrian Pottery business in Swansea, a town whose population and coal, iron, copper, and harbour industries were expanding rapidly in this period. Dillwyn maintained close contact with owners and managers of these enterprises and ensured that his children knew of them and respected them. On 2 August 1824 he took his son John to see a turning lathe in London and over the next few days both John and his sister Fanny had turning lessons. John, Fanny, and their mother were taken by Dillwyn to the first of a series of lectures on the steam-engine in September, followed by lectures on hydrostatics, hydraulics and pneumatics. Dillwyn introduced his children to all the wonders of the industrial age that was dawning. In August 1819 they saw the Favourite, the Margate steam-ship on the Thames. John and Lewis had regular trips on steam vessels plying between Newport and Bristol. Fanny was given a tour of Crawshay's ironworks on 20 September 1838. When in London all the Dillwyn children were taken frequently to Bullock's Museum, the British Museum, and the Polytechnic Institution.

Nothing epitomises more powerfully Dillwyn's admiration for technological energy and enterprise than his stance towards towns which lacked these features. He singled out Bath in particular for criticism. During a visit there on 15 December 1828 he referred to 'lounging about this idly busy place all day'. The town was 'busy' he acknowledged but only with pleasure and frivolity, not with productive work. He was repeating the criticisms made in the 1770s by the Rev. Anstey, who had characterised Bath as a city of 'Loungers'. Dillwyn's irritation surfaced on other Bath visits. Visiting his son Lewis at 'Mr Kilvert's' in early May 1829, he wrote that he did little but 'lounge about' and on 14 May he wrote again 'Did nothing but lounge about in Bath!' He used 'lounge' again in the 11 June entry, while on the 12th he wrote: 'Dawdled and lounged all day'. Spa towns whose ethos was idleness both offended and sapped his spirit. Cheltenham provoked a similar, even more revealing reaction: 'Dawdled away my time Cheltenham fashion' (12 September 1843).

Uncle Francis Kilvert, to whom Dillwyn had entrusted his son Lewis, lived in Bath but his household, like that of Kilvert's father, engendered work and usefulness. In a very real sense, Dillwyn and Francis had chosen each other because their values and attitudes coincided. The latter kept a record of men and women who had achieved great and good things, his Quaker wife (Kilvert's aunt Sophia) praised Quakers' 'patient industry' and 'toilsome acts of Christian charity,³⁵ Kilvert's Quaker mother had a horror of what she called 'Bathy people', meaning 'loungers'. Kilvert himself expressed contempt for 'the idle lounge' that was Bath's chief feature. Dillwyn and Francis also came together in their support for Lit and Phils. The former regularly visited the Bristol society and was President of Swansea's. When he wrote on 10 December 1827 'Spent the morning chiefly in introducing Lewis to Mr Kilvert, he added that he had also visited the Bath Literary and Scientific Institution, in which, as he knew, Francis played a central role. Furthermore, Dillwyn formed close friendships with John and Philip Duncan, Oxford academics, who also figured prominently in that body. One imagines that its activities were the subject of conversation on the many occasions when Dillwyn deposited and picked up young Lewis at the Bath school and dined and breakfasted as he did with its headmaster. Quaker links also cemented contact between Dillwyn and Francis because the former not only had the Quaker family connections,³⁶ which have been noted, but also knew Robert Were Fox. On 21 June 1847 Dillwyn recorded the visit to his home of 'the two daughters of my old friend Robert Were Fox' (i.e. Anna-Maria and Caroline).

The Fox and Dillwyn families had the same relish for their progressive society. We have already noted that Barclay Fox and Dillwyn made a point of seeing as many wonders of the time as they possibly could and supported the educational institutions that popularised them. Dillwyn, when he wasn't serving on Swansea committees concerned with paving, lighting, harbour and infirmary improvements, was working towards the founding of the Royal Institution of South Wales, which was thrown open to the public on 16 May 1842, when he noted: '5,000 people of all sorts attended, most orderly...very gratified'. A year before, he had attended a lecture at the Institution by a Mr Nichol³⁷ on phrenology. Initially cautious about railways - he voted in the Commons on 26 April 1836 in favour of a second reading of the Great Northern Rail Road Bill while considering it 'Humbug' – he quickly welcomed them.³⁸ He had complained in 1823 that a coach took eight hours to travel from Oxford to London. Bath to London took twelve hours. However, on 26 April 1844 he rejoiced that this latter journey took only five hours by rail. He wasn't going to miss seeing in April 1850 work on the new railway viaduct at Landore, near Swansea - Brunel's longest (1,760 feet) timber viaduct.

In addition to being a F.R.S., Dillwyn was a member of the Mineralogical Society (forerunner of the Geology Society), the BAAS, the British and Foreign School Society, and the Linnaean Society. He was also President of the Natural History Society: natural history, especially conchology, was his passion. The list of savants who frequently stayed in his home reads like a scientific who's who of the time: Sir Joseph Banks, Sir Humphrey Davy, Dr Daubeny (Oxford Professor of Chemistry), the astronomer John Herschel, Charles Babbage (whose calculating engine was the forerunner of the computer), Charles Wheatstone (inventor of the electric telegraph), and a clutch of geologists: Dr Buckland, Dr Wollaston, Henry de la Beche, W.D. Conybeare, Gideon Mantell, and Roderick Murchison. Many of these men were also friends of the Foxes of Falmouth.

Given this background it was highly likely that the lives of John and Lewis Dillwyn would follow the pattern set by their father. In choosing Henry Moule as his sons' tutor, on the recommendation of uncle Francis Kilvert, Lewis senior was exposing them to a man who steadily pursued useful inventions.³⁹ When John Dillwyn Llewellyn⁴⁰ was twenty-two, his father engaged for him a private tutor to teach him engineering and not long afterwards John was experimenting with a boat powered by an electric motor. By 1837 he had become a F.R.S. like his father. It was in photography that he made a name for himself. He married Emma Talbot of Penrice Castle, daughter of Thomas Mansel Talbot and Lucy Fox-Strangeways. Lucy was the sister of Elisabeth, mother of the pioneer photographer Henry Fox Talbot. Following the announcement in 1839 of revolutionary photographic processes by Fox Talbot and Henri Daguerre, John began to experiment with the encouragement of the former, who knew John's father through botanic interests.⁴¹ Fox Talbot spent some of his childhood at Penrice, home of the Welsh branch of his family. John's earliest daguerreotype dates from 1840. Fox Talbot's process, which he called the calotype, also known as the Talbotype, was superior to the daguerreotype because it produced a negative from which prints could be made. The Pencil of Nature, his collection of twentyfour calotypes accompanied by short texts, came out in instalments between June 1844 and April 1846. In it Fox Talbot characterised photography as a 'marvel'. It was 'The first commercially produced book to be illustrated with photographs'.⁴² While it was appearing, he published Sun Pictures in Scotland (1845). Emily Kilvert, sister of the diarist, whose passion for pictures will be illustrated later, referred in an informed comment to 'Mr Talbot who invented the talbo-type which either preceded or succeeded the daguerreotype, in the early days of sun-pictures'.43

Photography was quickly recognised as a valuable adjunct to botany, the specialism of Lewis Dillwyn senior, because applied to the microscope it could produce marvellously detailed images of leaves and cross-sections of plants. The *Journal* of Lewis junior shows a man interested in all aspects of natural history. Since later chapters will examine Kilvert's knowledge of natural history, it is relevant here to note those aspects that excited young Lewis, especially since both spent a considerable time as pupils at uncle Francis's school where, as we shall see, natural history loomed large. Lewis was especially interested to record when flowers and shrubs bloomed in spring as Kilvert was, so that at times the diary of the one reads like that of the other. On 24 May 1838 Lewis noted 'Bog beans in flower'; on 1 June 1872 Kilvert wrote: 'I went to see if the bog beans were yet in flower'. Lewis was most like Kilvert in his love of birds.

A marked similarity between the two men exists in their concern with geology, the study of which was actively encouraged by uncle Francis. Lewis had a laboratory and in 1838, when he was twenty-three, he recorded putting lime and silica into a furnace to observe changes in their composition. He conducted several similar experiments, the purpose of which was the reproduction of the very hard rocks, such as granite, found in nature. On some occasions he tried melting granite itself and porphyry. He was guided in these experiments by the geologist Henry de la Beche, with whom he spent much time in 1838. There had been controversy for some time over the nature of granite. Some naturalists argued that granitic mountains had been laid down at the Creation, but geologists like Hutton refuted this idea, insisting that granite rocks could not be primary since they were composed of several elements. While on honeymoon in North Wales in 1838, Lewis and his wife Bessie (de la Beche's daughter) climbed Cader Idris. He was impressed by the forbidding appearance of its summit, the result largely of the fact that it was composed of 'a sort of slate' and of 'a kind of greenish granite'. We shall see that Kilvert, when he climbed this mountain in June 1871, was similarly preoccupied with the composition of its rocks.

Like his father, Lewis was routinely concerned with practical improvements to Swansea and regularly attended paving, lighting, harbour board and infirmary meetings. He was equally keen to record more exciting developments such as the expanding railway system. He recorded with satisfaction on 7 June 1841 that the journey from Bristol to Bath took only twenty minutes. On 9 July 1850 he went to see progress on Brunel's revolutionary bridge over the Wye at Chepstow, considered his best, and the prototype for his bridge over the Tamar on the Cornwall line. An even greater wonder was what he called 'the gorilla ape', which he saw on display at the British Museum on 12 April 1859. He backed the building of the Metropolitan underground railway, travelling on its first trip with carriages on 30 October 1862. Time for viewing wonders had to be found even on his honeymoon in 1838 in North Wales. He journeyed from there by train to Liverpool, 'whisked along at an almost incredible rate of

30 miles an hour,' he wrote. Not many honeymooners would tour copper works, iron furnaces, and slate quarries, but he and Bessie did. The *Journal* entry on the iron furnace visit was written by Bessie, who said the processes were 'interesting and beautiful' and that she wanted to stay longer. She accompanied Lewis to lectures on the nervous system, the brain, galvanism, artificial light, phrenology, and chemistry.⁴⁴ They went together to view factories in Chippenham that made pins and buttons and one in Manchester that made paper trays. Lewis was keen, as his father was, that others were able to share knowledge. On 19 September 1839 he chaired a meeting to found a Mechanics' Institute in Swansea.

The account that follows of the elements constituting Kilvert's outlook will show that it was substantially the same as that of the Dillwyns with regard to the improvements and wonders of the age. He too toured iron furnaces, factories and dockyards, enthused over railways, steam-ships, viaducts, lathes, balloons, microscopes, and the electric telegraph; he too took a deep interest in natural history, geology, astronomy, archaeology, and phrenology; he too was regularly to be found at museums, art galleries, and displays of scientific and technological experiments and products. His parents, like Lewis Dillwyn (junior) and his wife Bessie, ensured that their children visited the Great Exhibition in 1851. Kilvert, like the Dillwyns, was shaped by the culture of the Lit and Phils and, like them, gravitated towards the mercantile and professional middle class who led and supported them. He was brought up as the Dillwyns were to admire entrepreneurial spirit and achievement, especially among the ranks of Quakers. Such humanitarian causes as abolition of slavery, espoused notably by Quakers and Evangelicals, was a major factor in his background as it was in that of the Dillwyns. Like them, he was habitually to be found at sacred music concerts at London's Exeter Hall, which was opened in 1831 and enlarged later to accommodate 3,000 persons. Every May it was used for the anniversaries of most of the leading Evangelical societies. When Kilvert visited London it was often in May (e.g. 1872, 1873, 1875); the Diary does not record his attendance at Evangelical Meetings, though that is the sort of thing Plomer omitted. Punch mocked Exeter Hall in 1842 as a building 'dedicated to piety and virtue' and to the 'moral excellencies of hundreds of pilgrims who . . . congregate to talk and sing there'. Although the Dillwyn family showed Evangelical traits, their approach to natural history was not marked, as was that of the Kilverts, by a disposition to see the hand of God in all created things. Perhaps



View of the Railway across Chat Moss. Laying a stable trackbed across the deep bog was a remarkable feat of engineering in its time.

the former took it for granted and declined to be explicit about it. The frequent visits of Dillwyns to balls and theatres and their cardplaying suggest that their Evangelicalism was less strict than that of the Kilverts. One feels that the latter would not have done what Lewis Dillwyn (senior) did on Christmas Day 1822: he went to see experiments at Vivians' Copperworks in Swansea in the company of a clergyman and Sir Humphrey Davy.

It is difficult to be too precise about the impact that uncle Francis Kilvert's teaching had on young Lewis Dillwyn. Inevitably, one feels that the latter appreciated the large presence of natural history in the school curriculum of the former. Two other facts should be emphasised: the first is that Lewis was Francis's pupil for $3\frac{1}{2}$ years; the second is that Lewis took the trouble to revisit his old teacher eight years after he left his school. We might note too that Henry Moule, tutor to both Lewis and his brother John, was invited to stay at the Dillwyn home on 6 November 1828 – $4\frac{1}{2}$ years after his tutoring ended. These facts tend to confirm that the Dillwyn boys acknowledged Francis Kilvert and Henry Moule not only as inspiring tutors but also as embodiments of an ethos complementary to their own.