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Despite the warnings of astrologers and students of sacred history, many find themselves unprepared for the changes that inevitably occur as the spring point enters Aquarius. Yet, as events move towards the pattern foreshadowed by prophecy, as portents, long awaited, stir the primeval spirits from the depths of mythology, the changeable and impermanent nature of the structure evolved during the preceding two thousand years, the age of Pisces, becomes even more apparent. Certain predictable phenomena mark the beginning of each new cycle. Ignatius of Antioch in the first century of the Christian era described the surging spirit of the times that shattered tyrants and destroyed the power of the old magicians. Similarly, the late C.G. Jung in 1959 wrote of 'changes in the constellation of psychic dominants, of the archetypes or "gods", as they were called, which bring about or accompany long-lasting transformations of the collective psyche'. Old secrets rise to the surface and dissolve into the consciousness of the human race to fertilise the seed of evolutionary growth. The important discoveries about the past have been made not so much through the present refined techniques of treasure hunting and grave robbery, but through the intuition of those whose faith in poetry led them to a scientific truth. The gradual accumulation within each succeeding generation of the total knowledge of the past through the hereditary medium, known to biologists as DNA, is a phenomenon of which we have again become conscious, and this realisation ensures the ultimate re-establishment of the former belief in revelation on which the science of the ancient world was founded.

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Note to the new abacus edition

For the printer's convenience, the illustrations in this new edition have been collected together into three sections. Some have been omitted and a few new ones put in.

Notes to the Illustrations

1 William Stukeley at the Druid Temple. From Stukeley's *Stonehenge*.

2 The Avebury Serpent

3 St Michael's Church, Burrowbridge Mump

4 The Great Dog

5 St Michael and St George Alignments

A: From the church of Ogborne St George, the site of a prehistoric temple, the line of the road by Avebury Rings reappears some 40 miles away as the Pilgrim's Path over Glastonbury Tor with the ruined St Michael's Church on its summit. The Line extends westwards to pass over The Mump, Burrowbridge, on which the church, St Michael's, is also in ruins. The Western terminus is St Michael's Mount in Cornwall.

B: Three Somerset churches, two dedicated to St Michael and one to St George, align upon The Mump across the marshes 10 miles away.

C: The great astronomical lines that radiated from stone circles in prehistoric times were decayed and fragmented by the time of the Roman invasion. The Romans, however, paved many surviving sections to make up their system of roads. Here a stretch of the Fosse Way is aligned upon the centre of Avebury some 50 miles away through Witham Friary near Gare Hill. The line reappears south through Exmouth.

6 Standing stone on the West Cornish moors. Such instruments serve to concentrate the positive forces of the atmosphere to fertilise the receptive spirit in nature.

7 Holy Well, Ireland

8 Men-an-Tol, a Cornish monument which is oriented on a ley towards the May Day sunrise. It is also known for the cures traditionally effected there.

9 Glastonbury Tor, 1883

10 St Michael's Church on Brentor

11 'A faintly shadowed track'

12 Straight lines in the landscape are a mark of developed civilisation with centralised power. The avenues radiating from the palaces of seventeenth-century landlords were sometimes on the lines of ancient tracks, and their symbolic function as channels for the diffusion of power from the centre to the people and for drawing tribute from the people to the centre reflects the dynamic function of the prehistoric ley system.

- Wimpole near Cambridge laid out by Chicheley.
- 13 Badminton in Gloucestershire, seventeenth century.
 - 14 Chinese spirit path passes over marble bridges, by winged columns and the tombs of emperors and down the axes of temples towards the central hill and solar capital
 - 15 Alfred Watkins of Hereford
 - 16 Herefordshire ley
 - 17 Old straight lines, section of Stane Street
 - 18 Devil's Ditch at Newmarket
 - 19 Boscawen-un circle, west of Penzance, Cornwall
 - 20 Plan of Boscawen-un stone circle, reduced from the 6-inch O.S. map
 - 21 There is a universal tradition of certain lines as the routes taken by fairies or spirits, particularly on one day of the year. The photograph shows the corner of Paddy Baine's house in Ireland, inadvertently built on a fairy path, cut off and so ending the disturbances which its intrusion had caused.
 - 22 In England there are many stretches of old track said locally to be seasonal routes of spirits. This path between Bronham and Westbrook in Wiltshire is occasionally haunted by a white misty figure, and some people therefore avoid taking it. Details in *Ghosts and Legends of the Wiltshire Countryside* by K. Wiltshire.
 - 23 Stonehenge, Old Sarum and Salisbury Cathedral. The distance between the centres of Stonehenge and Old Sarum is precisely 6 miles. From Old Sarum to the Chapter House of Salisbury is 3520 yards (2 miles), and the line then passes over the site of an old chapel 440 yards further on, continuing to the corner of Clearbury Ring, exactly 3 miles beyond the chapel. The whole line from Stonehenge to Clearbury is thus 19,800 (660 x 30) yards in length, exactly thirty times the length (1980 feet) of the twin circles over Glastonbury (see *Plate 34*). Evidently the unit of measurement used here is the furlong (220 yards), the whole line from Stonehenge to Clearbury measuring 90 furlongs. The line crosses the old well in the centre of Old Sarum, and its course is clearly indicated in the earthworks.
 - 24 A Geometric spiral, as in a snail's shell or a budding fern, clearly visible in the triangular patterns of old fields, with its centre on the summit of Wilcrick Hill, Monmouthshire. Similar geometrical figures are found in prehistoric rock carvings in many parts of Britain.
 - 25 Knockhaulin Hill, Co. Kildare

- 26 Lines on Salisbury Plain
- 27 East Anglian alignments
- 28 Castle mounds, such as those at Old and New Buckenham in Norfolk, align with each other and with churches and tumuli. Extended from the map above, line a marks an exact alignment of five prehistoric mounds, ending at Trouston Mount. Line b passes through three churches and three tumuli, and six churches stand on line c.
- 29 Gare Hill, Wiltshire. Leys through Gare Hill include those aligning:
- a) Five churches, Gare Hill, Horningsham, Crocketon, Bishopstrow and Tilshead, the centre of Scratchbury Hill Fort and a long barrow.
 - b) Gare Hill, the old Priory, the Cursus and Woodhenge.
 - c) Glastonbury Abbey, Gare Hill, the Priory and Stonehenge
 - d) Roman temple on ancient earthwork, tumulus, Gare Hill, Witham Friary, Wells Cathedral.
- 30 The Old Straight Track
- 31 The mystical scheme of the city of Nola
- 32 Mystical plains of Nola
- 33 Glastonbury Abbey, Bligh Bond's groundplan showing the basic grid of 74 foot squares. This is a solar structure, referring to the number 666, expressed in terms of the three principal sacred units of antiquity, the foot, cubit and megalithic yard, for the rectangle which contains the abbey has the following dimensions:
- | | |
|--------|--|
| Length | 666 feet |
| Area | 66,600 square cubits (cubit = 1.72 feet) |
| or | 666 x 40 = 26,640 square MY (MY = 2.72 feet) |
- 34 The sacred geography of Glastonbury

PART ONE

THE LINES

Chapter One

The Old Straight Track

Just after Christmas in 1648 John Aubrey, out hunting with some friends, rode through the Wiltshire village of Avebury and there saw a vast prehistoric temple, the greatest of its age in Europe, which up to then had remained undiscovered. It was not hidden in some remote and desolate spot, for a thriving village stood within its rmaparts, nor at that date was it particularly ruinous. Yet Aubrey was the first of his age to notice it.

The instrument of all human enlightenment is an educated mind illuminated by revelation. Everyone is familiar with the phenomenon of synchronicity, whereby an idea which occurs to one person is repeated in the minds of others through some process that transcends physical communication. Past and present are linked by a thread of inspiration that runs through each generation. Everything that has ben known remains alive and may be invoked by one individual to become the common property of his time. Before Aubrey's visit untold thousands had passed their lives within the walls of the Avebury temple without noticing in its fabric anything more than a random assembly of mounds and boulders. But the moment Aubrey saw it, it became visible to all. Now every year crowds of visitors marvel at the huge scale of the work, the size and precision of the great stones, which three hundred years ago were considered merely an impediment to agriculture, and were broken up to clear the ground.

Those, like Aubrey, by whom the great discoveries in any age are made, are always men who have prepared themselves for revelation by the cultivation of such interests as characterise the natural philosopher. Auberey's appetite for information was insatiable, particularly when it related to the customs, legends and antiquities of his native country. He delighted in every aspect of natural and supernatural history, stories of ghosts, fairies, portents and strange phenomena. His eye, trained to look beyond the bounds of his time, perceived in the village of Avebury a spectacle which had eluded all others. The consequences of Aubrey's vision have been truly revolutionary, for since his time we have gradually become aware of the vast scale of the prehistoric works of engineering that cover the

entire landscape. This realisation is now reaching a climax, as we approach some extraordinary revelation about the extent and quality of the lost prehistoric civilisation and the achievements of its scientists and natural magicians.

A sentiment which frequently occurs, particularly, it seems, to English poets and mystics, alludes to some intangible mystery concealed within the landscape, an aesthetic law which ever defies formation. Some have attempted to frame this law in poetry, others in works of science and philosophy. Yet we still do not know why it is that certain spots on the earth's surface are by general agreement more inspiring than others or how it happens that these very places so often coincide with the centres of prehistoric sanctity. Since Aubrey's time certain aspects of this question have occurred to many individuals, and some have proposed answers in books which, because they in no way agree with the prevailing academic view of the past, have been either disregarded or ridiculed. Recent discoveries about the quality of prehistoric science, however, have made it clear that those writers who have sought to interpret the mystery of the native antiquities in terms of some former universal civilisation, have come far nearer the truth than those whose conclusions have been drawn exclusively from the limited evidence of archaeological excavation. The following pages contain some account of certain theories, which, though they are still far from being generally accepted, now seem far more relevant than they did a few years ago. These theories refer in general to some mysterious pattern in the landscape, to a former system of geographical arrangement whereby every one of the innumerable structures of antiquity was sited and shaped in accordance with principles quite unrecognised by modern science. Photographic aerial surveys have now been made over much of Britain, and anyone who studies the prints must be struck by the vast number and extent of the regular geometrical lines to be seen both in crop marks and in existing tracks and boundaries. From their obvious association in many cases with structures known to be several thousand years old, it is evident that these lines were set out in prehistoric times. The full purpose of this terrestrial geometry is not yet by any means clear. The evidence here assembled points to the former existence of a civilisation based on the manipulation of certain natural elements, a form of spiritual engineering whose implications are now barely conceivable.

Some years after its discovery Avebury was visited by the

remarkable Dr Stukeley, who, like Aubrey, was both a Freemason and an inspired antiquarian. Stukeley was one of the last of the scholars in the old tradition, in the archaic study of sacred history and cabalistic science, which informed the work of his great predecessor, Dr Dee. Like Dee he was drawn to visit the native sites of antiquity in which, following Aubrey's discovery, an increasing number of people were beginning to show interest. For some time Stukeley had been curious about a certain quality in the prehistoric landscape, an elusive meaning behind the arrangement of ancient stone circles and earthworks. At several places he had noticed a similarity between the groundplans of these monuments and the symbols of the former patriarchal religion, on which Christianity itself was constructed. At Avebury this intuition was confirmed, for here, stretched over several miles of the landscape, and perfectly shaped in structures of earth and stone, he perceived the twin symbols of the alchemical fusion, the serpent passing through the circle.

Since Stukeley's time the antiquities of the Avebury area have been largely destroyed. He himself was the helpless witness of the work of such men as Stone-Killer Robinson, the brutal farmer, who engineered the levering of old stones into fiery pits, where they were cracked with a dash of cold water and hammer blow. The giant serpent has been partly obliterated, and many of the details in Stukeley's plans are now beyond confirmation. Modern archaeologists have therefore been highly selective in their appreciation of Stukeley's work, approving the accuracy of his plans and drawings while rejecting his interpretation of the primeval serpent as the product of fantasy, even of fraud. The whole controversy rests on a misunderstanding between two different forms of science. Stukeley, a profound Bible scholar, widely acquainted with the literature of antiquity through his studies in Latin, Greek and Hebrew, considered Avebury in terms of comparative religion, as a monument of the old true faith, whose holy citadel has been founded in Britain. The tradition from which Stukeley drew his conclusions was one whose origins are said to coincide with the first moment of human enlightenment, a tradition based on endlessly renewed revelation and codified through the ages by philosophic schools all over the world. It illuminated the work of the Pythagoreans, Platonists and the mediaeval transcendental magicians, and was preserved above all among the Hebrew cabalists and the gnostics of the Christian Church. This tradition is not, as some have supposed, merely a

collection of facts or beliefs, jealously guarded by masonic and other hermetic groups. Its essential element consists of a method whereby certain incommunicable knowledge can be gained through a course of study in preparation for induced moments of perception, in which aspects of the hidden universe stand out clear and orderly to the inner mind. By this means, through the arts of geometry and music, their synthesis in numerical relationships and their further application in proportion, poetry and sacred history, the barrier of time can be dissolved and some further insight gained into past and future events. Stukeley's view of Avebury was formed through his education in the old tradition, a fact which explains much in his work that many now find obscure.

Stukeley's revelations on the subject of British antiquities were of profound interest to the learned men of his time who understood the nature of his scholarship. People began to visit ancient sites and to seek out surviving relics of Druid lore. Stukeley's approach to archaeology was that of a scientist and philosopher. Gay parties of friends accompanied him about the country, diverting themselves among the ruins of Stonehenge or Avebury while Stukeley measured the stones and recorded the scene in his beautiful drawings.

In one of these drawings Stukeley shows a great stone from the Avebury circle, levered into a pit of blazing wood, awaiting the dash of cold water and the blow that would split it in two. The smoke rising above the stone forms spirals and dragon shapes in the air. The same dragons or serpents Stukeley saw all over Britain. From the northern islands of Scotland to the southern plains of Wessex the Druids had stamped the country with the sign of the serpent and the winged disc. Stukeley perceived the entire ancient landscape laid out to a sacred pattern, etched with the eternal symbols of the one true faith. At Barrow near Hull he found a great Druidic earthwork representing a winged circle, its trenches ingeniously arranged to measure the seasonal tides of the Humber estuary. Always alert for a local name that might reveal some Greek, Hebrew or Egyptian god hidden in the English landscape, Stukeley's ear caught the sound of Navestock Common in Essex and detected a reference to Cneph, the winged circle of the Egyptians. Sure enough, a visit to Essex disclosed the symbol in the outlines of an ancient earthwork. Today the winged circle lies forgotten in a small wood, overlooking the North London suburbs, in curiously remote country near the terminal station of the Central Line. Wild deer shelter within its banks and flights of

duck pass overhead on their regular paths across the country.

In his book on Avebury, Stukeley described the vast scale of the Druidic achievements in shaping the landscape to a sacred pattern:

The ancients indeed did make huge temples of immense pillars in colonnades, like a small forest; or vast concaves of cupolas to represent the heavens; they made gigantick colosses to figure out their gods; but to our *British* Druids was reserv'd the honour of a more extensive idea, and of executing it. They have made plains and hills, valleys, springs and rivers contribute to form a temple of three miles in length. They have stamp'd a whole country with the impress of this sacred character, and that of the most permanent nature. The golden temple of *Solomon* is vanish'd, the proud structure of the *Babylonian Belus*, the temple of *Diana* at *Ephesus*, that of *Vulcan* in *Egypt*, that of the *Capitoline Jupiter* are perish'd and obliterated, whilst *Abury*, I dare say, older than any of them, within a very few years ago, in the beginning of this century, was intire; and even now, there are sufficient traces left, whereby to learn a perfect notion of the whole.

Stukeley's discoveries came as a revelation to his contemporaries. Aubrey had opened people's eyes to the antiquities of England, and Stukeley provided an exciting interpretation eagerly accepted by his generation. As, a few years earlier, the Duke of York, lying in bed with his wife at Bah, had called in Aubrey to explain the mysteries of Silbury Hill, so the Princess Dowager invited Stukeley to come and discuss the Druids. All conversation on Druidic topics was delightful to Stukeley and he passed a happy morning at Kew House, talking of Druids, oaks and mistletoe. As he walked out through the garden on his way home, he picked a branch of oak, heavy with acorns. His walk took him past the house of a lady and he sent the branch in to her as a present from 'the royal Archdruidess to her sister Druidess'. On his return home he found an invitation to dinner from 'My Lord Archdruid Bathurst'. It was beautiful autumn weather, and for Stukeley a perfect day.

Stukeley's vision of a whole country, marked indelibly by men of a past age with the symbols of their piety, was widely accepted by poets and scholars. William Blake understood the secret of the landscape giants. Chained within the hills and valleys of his native realm, the great spirit, Albion, lay powerless in fetters of iron morality,

his form obscured by the encroaching fog of a grey enchantment, his kingdom usurped by a host of petty tyrants. Like Stukeley, Blake foresaw an end to the enchantment, a glorious resurrection of the holy spirit in Britain by the reconciliation of all her people, Christians and Jews. In his preface to *Avebury* Stukeley had written,

We may make this general reflexion from the present work, that the true religion has chiefly since the re-peopling mankind after the flood, subsisted in our island: and here we made the best reformation from the universal pollution of christianity, popery. Here God's ancient people the *Jews* are in the easiest situation, any where upon earth' and from hence most likely to meet with that conversion designed them. And could we but reform from the abominable publick profanation of the sabbath and common swearing, we might hope for what many learned men have thought; that there was to be open'd the glory of Christ's kingdom on earth.

During the course of the nineteenth century the giant landscape figures, which Blake saw in a vision and Stukeley traced out on paper, gradually faded from sight and were forgotten. It was only in modern times that the hidden giants were again brought to view. In the 1920s a Gloucestershire lady, Mrs Maltwood, caused a sensation by the publication of her book *The Glastonbury Temple of the Stars*. In this she described her discovery of a group of enormous figures inscribed on the flat country between Glastonbury Tor and Camelot. These figures, their shapes suggested by natural folds of the earth and the outlines of hills and rivers, their details perfected by artificial banks, roads and ditches, represent the twelve signs of the zodiac, each figure placed in order beneath its appropriate constellation. Here on a landscape, every corner of which retains some traditional Arthurian association, the hidden astrological significance of the Quest was physically depicted.

Roaming the countryside where every episode in the history of the Holy Grail has its physical location, Mrs Maltwood was haunted by the feeling of imminent revelation. One summer afternoon, standing on a low hill and looking out across the plain towards the distant ramparts of Camelot, she saw both visually and intuitively the elusive secret. References in legends and old histories to hidden giants in the landscape, the story that King Arthur never passed away but sleeps for ever in the hills, the close identification of every feature

in the Glastonbury landscape with the heroic cycle, the great wheel of the constellations turning above the hills and plains, all these clues led Mrs Maltwood towards a secret lost for hundreds, perhaps thousands of years. Aerial photographs in Taunton Museum show the giants as she discovered them and a recent film reveals details of their drawing, every line formed by some feature of the landscape whose individual quality, perceptible to every sensitive person, contributes towards a fuller understanding of the figure of which it is part. Mrs Maltwood received the message, transmitted through time, that the peculiar quality of a certain spot is perceptible to men of all ages, that nothing is lost. For the men of some great civilisation, accustomed to measuring the greater cycles of time, of which we are now unaware, marked the landscape with signs that can be interpreted by human beings of any race or age.

At the same time as Mrs Maltwood in Somerset was tracing her vision of the zodiacal giants, members of the Woolhope Club, a Hereford antiquarian society, were investigating an extraordinary discovery in the surrounding countryside by one of their members, Mr Alfred Watkins. His claim, that he had seen the whole country covered by a network of straight lines, linking the centres and sites of antiquity, seemed incredible, but such was the quality of the evidence that he produced that it was impossible to dismiss without further inquiry.

Mr Watkins was a merchant well known and respected in his own country. His father was a farmer of a long-established Herefordshire family, who moved to Hereford to start a number of enterprises, including a flour mill and a brewery. Early in life Alfred Watkins entered his father's business, travelling about the country as outrider or brewer's representative. In the course of his journeys he developed strong antiquarian interests. At that time the pattern of the countryside was little disturbed. Railways had only recently replaced the coach and the carrier's cart as the chief means of rural communication. Hereford, until 1853 linked commercially with the outer world only by a branch canal from Gloucester, was still a remote city. Country people lived where they were born and repeated the stories they had heard from their fathers. Alfred Watkins delighted in these legends, particularly when they related to the features of a landscape with which he had become intensely familiar. Riding about the countryside he came to know every remote corner of Herefordshire as well as almost every member of its population. His

son, Allen Watkins, remembers how, when they travelled together through the country, everyone they passed greeted his father as a friend. To him as a little boy it seemed quite natural that his father should be so well known.

One hot summer afternoon in the early 1920s Alfred Watkins was riding across the Bredwardine hills about 12 miles west of Hereford. On a high hilltop he stopped, meditating on the view below him. Suddenly, in a flash, he saw something which no one in England had seen for perhaps thousands of years.

Watkins saw straight through the surface of the landscape to a layer deposited in some remote prehistoric age. The barrier of time melted and, spread across the country, he saw a web of lines linking the holy places and sites of antiquity. Mounds, old stones, crosses and old crossroads, churches placed on pre-Christian sites, legendary trees, moats and holy wells stood in exact alignment that ran over beacon hills to cairns and mountain peaks. In one moment of transcendent perception Watkins entered the magic world of prehistoric Britain, a world whose very existence had been forgotten.

Watkins marked out the churches and ancient sites on a 1-inch Ordnance Survey map and the truth of his vision was confirmed. Anyone who takes a map of this scale and marks with a ring the features already mentioned can see for himself how many centres stand on dead straight lines. The chances of five or six points falling accidentally on a line across a single sheet of the 1-inch map are remote, yet Watkins found eight and nine and even more sites aligned across quite short stretches of country. Extended on to neighbouring maps, the lines can sometimes be traced for many miles, often ending on a mountain peak or high cliff.

A peculiar feature of the old alignments is that certain names appear with remarkable frequency along their routes. Names with Red, White and Black are common; so are Cold or Cole, Dod, Merry and Ley. The last gave Watkins the name of the lines, which he called leys. His suggestion was, that in the days when large deserts and forests lay between scattered communities, travellers navigated by natural landmarks, sighting from mountain to mountain and taking the straightest routes across country. Where one peak was invisible from another, stone pillars or mounds of earth were placed clearly marked against all skyline along the path. Cairns were raised on mountain slopes, and notches were cut into the ridge to guide the traveller eblow. From the heights he saw his way by the light reflected

in small ponds and moats along his line. In this way the traveller was led straight on.

Certain lines were most used by particular trades. Watkins believed that this idea explained the peculiar groups of ley names. White names indicated salt routes; red lines were used by potters. The 'dodman', a country name for the snail, was a surveyor, the man who planned the leys with two measuring sticks like the snail's horns.

Watkins never found conclusive proof that the lines were trading routes and towards the end of his life he began to doubt this aspect of his theory. But he produced a great deal of remarkable evidence that many had once been used as roads. Often, when drawing leys on the map, he found they followed the course of old roads and footpaths. In the course of his travels Watkins heard many local tales of old tracks which had once led straight from one place to another. Often these forgotten paths were found to run along leys already marked on the map.

The system of prehistoric alignments that Mr Watkins discovered has never been fully investigated. That every prehistoric site does, in fact, stand in a straight line with several others, often across a great many miles of country, is beyond question. Mr J. Williams, a solicitor of Abergavenny, who has devoted many years to the subject, has found evidence on every 1-inch Ordnance Survey map of Britain for the former existence of a vast network of dead-straight alignments that once covered the entire country. Yet Mr Watkins's discovery is still an enigma. The objection has always been that not only could there have been no reason in prehistoric times why the country should have been measured and marked out in this way, but that such a thing was anyhow quite impossible. It contradicts all our assumptions about the nature of prehistoric life. Stukeley's figure of the devout, venerable Druid sage has been replaced in the minds of many historians by that of the ludicrous ancient Briton, naked and savage, engaged as in the illustration of the Ministry of Works guide to Stonehenge and Avebury in the frenzied construction of enormous piles of earth and stone to assuage some dark, superstitious nightmare. For such people to have laid down accurate alignments across miles of mountainous country is obviously out of the question and on this account Watkins's leys are ridiculed without further inquiry. It has been pointed out, quite truly, that chance alone will provide many examples of prehistoric sites standing on the same straight line. Yet anyone who has traced these alignments on a map

and found further evidence on the ground to confirm their validity must be struck by the vast number of cases where the possibility that they came about by chance seems utterly remote and where the accuracy, even the beauty, of the line points irresistibly to the conclusion that some former people with a deep understanding of the hidden nature of the countryside supervised their construction.

A number of leys, first discovered by plotting alignments of ancient sites on a map, have been identified through subsequent excavation or through the evidence of crop marks in aerial photographs as former tracks. Yet they could never have been simply tracks for ordinary use. They often seem to pick the hardest routes, straight across mountain peaks, through lakes and bogs. Watkins himself was never entirely satisfied that leys were always old roads; he may have suspected that they had some deeper significance than he was prepared to admit. Yet he was curiously unwilling to pursue the matter further. Early in life he and his sister had established between themselves a degree of telepathic sympathy, of a kind not unusual between closely related children. Watkins had taken this experience as evidence of the workings of the occult, a force which he was determined to avoid. He was therefore disinclined to see his leys as anything more than secular trade routes, straight versions of the tracks that ran in across country towards his father's businesses in Hereford.

Alfred Watkins was essentially a practical man, entirely honest, loved and respected by all who knew him. He was a pioneer photographer, the inventor of much apparatus, including the Watkins exposure meter which he manufactured at Hereford. In the City Museum the entire collection of his photographic plates is preserved, a unique record of the Herefordshire landscape of his time. Also in the Museum are the proceedings of the Straight Track Postal Club, formed by his admirers, and named after the remarkable book, *The Old Straight Track*, in which Watkins described his discovery of the ley system. Members of the club contributed papers and notes on various aspects of their subject, which were circulated by post and returned together with readers' comments. Particularly evocative are photographs of the club's annual expeditions to various ley centres, ladies and gentlemen, dressed in country clothes of the period between the wars, unpacking picnic hampers on some castle mound, just as Stukeley and his friends had done some two hundred years earlier. It may have been this approach that aroused the antagonism

of archaeologists. Watkins's vision was outside the scale of science. It was related to nothing known, and was therefore ignored, derided or repressed. Crawford, the editor of *Antiquity*, even refused a paid advertisement for *The Old Straight Track*. Yet now that the great astronomical lines across the country are at last becoming known, it will not be long before Alfred Watkins is recognised for what he was, an honest visionary who saw beyond the bounds of his time.

Whilst avoiding any excursions into unknown fields of occult speculation, Watkins was attracted by the religious aspect of leys, quoting many passages from the Bible which refer to the blessings of the straight path through the hills towards the beacon light. In *Jeremiah* he found,

Thus saith the Lord, Stand ye in the ways, and see, and ask for the old paths, where is the good way, and walk therein, and ye shall find rest for your souls (vi, 16)

Set thee up waymarks, make thee high heaps; set thine heart toward the highway, even the way which thou wentest (xxxix, 21)

Because my people hath forgotten me, they have burned incense to vanity, and they have caused them to stumble in their ways from the ancient paths, to walk in paths, in a way not cast up (xviii, 15)

and in *Isaiah*,

And I will cause thee to ride upon the high places of the earth (lviii, 14)

The mountain of the Lord's house shall be established in the top of the mountains, and shall be exalted above the hills; and all nations shall flow into it (ii, 2)

In the Koran (XLI, 53), he would have noticed a significant reference to the hilltop marks and to their sacred character: 'We shall show them Our signs on the horizons and within themselves until it will be manifested unto them that it is the Truth.' Watkins saw in the Bible, as in *Pilgrim's Progress*, a description of a man's journey towards enlightenment, a path, perhaps once physically illustrated by the ley system, both straight and narrow. Some mystical concept, now lost, must have inspired the regular laying out of the country. In *The Old Straight Track* Watkins concludes, 'I feel that ley-men,

astronomer-priest, druid, bard, wizard, witch, palmer, and hermit, were all more or less linked by one thread of ancient knowledge and power, however degenerate it became in the end.'

In the course of their researches Watkins and his friends grew more and more convinced that there was something more behind the ley system than a network of traders' tracks. It was as if some flow of current followed the course of these man-made alignments. Members of the Straight Track Club reported instances of birds and animals migrating along certain fixed lines, described the dead-straight antelope paths of the Himalayas, and wrote papers on the regular systems of tracks and landmarks in Norway, Palestine, Africa and America. Watkins himself, an expert beekeeper and photographer, noticed how bees, taken away and released at some distance from their hives, first describe hesitant circles in the air, and then, as if tuning in to some invisible current, make a 'beeline' for home. While making a study of ants, he became interested in the little hills these insects throw up. His deep love of the countryside and knowledge of its ways, particularly since its hidden structure had been revealed in the discovery of leys, had given him a true understanding of the conformity of all aspects of life and growth, both large and small, to certain basic patterns. With the eye of the natural philosopher he perceived the correspondences throughout nature. Ant hills, he observed, fall into certain patterns and alignments. Like the sighting mounds upon leys, they are conical and flat topped, covered with turf. Moreover, his measurement showed that the proportion in size between an ant and an ant heap is the same as that between a man and Silbury Hill. In all this Watkins raised the same kind of elusive questions as did the South African Naturalist E. P. Marais, who discovered that the man-sized white ant mounds of Africa contain a brain, heart, liver, digestive and circulation systems, and exercise all the same abilities of the human body save that of locomotion. This sort of observation, which we now tend to regard merely as a curiosity of the same value as the fact of the human body being the exact mean in the ratio between the dimensions of the sun and those of an atom, was typical of the scientific approach of the ancient world.

To the end of his life, despite much abusive criticism, Alfred Watkins continued to enlarge and confirm his discovery, without ever finding the ultimate clue to the meaning of the ley system. The evidence for its existence became overwhelming. Leys traced on one sheet of the map were found to continue exactly those started on

another. Over and over again a search of the ground revealed stones, mounds and sections of old tracks unmarked by the map. Parish boundaries were found to align upon leys. At one ley centre, a place where several leys cross, investigation disclosed an ancient cross which the Ordnance Survey had overlooked. All this Watkins recorded fairly and honestly. Though he never solved the riddle of leys, he came to recognise an unexpected aspect of their function. Anyone who has followed their paths across country will find that his life has been enriched, perhaps deepened, by the experience. The knowledge that this gigantic ruin, the old fabric of alignments, can be traced in every corner of the country while, like Avebury before 1648, remaining elusive to both reason and the eye, is a powerful inducement to wonder and humility, two qualities that particularly marked Alfred Watkins. In *The Old Straight Track* he expresses his vision in these words:

Imagine a fairy chain stretched from mountain peak to mountain peak, as far as the eye could reach, and paid out until it touched the 'high places' of the earth at a number of ridges, banks, and knowls. Then visualise a mount, circular earthwork, or clump of trees, planted on these high points, and in low points in the valley other mounds ringed round with water to be seen from a distance. Then great standing stones brought to mark the way at intervals, and on a bank leading up to a mountain ridge or down to a ford the track cut deep so as to form a guiding notch on the skyline as you come up. In a bwlch or mountain pass the road cut deeply at the highest place straight through the ridge to show as a notch afar off. Here and there and at two ends of the way, a beacon fire used to lay out the track. With ponds dug on the line, or streams banked up into 'flashes' to form reflecting points on the line, or streams banked up into 'flashes' to form reflecting points on the beacon track so that it might be checked when at least once a year the beacon was fired on the traditional day. All these works exactly on the sighting line. The wayfarer's instructions are deeply rooted in the peasant mind to-day, when he tells you -- quite wrongly now -- 'You just keep straight on.'

When he died, on 5 April 1935, members of the Straight Track Club received a poem by Mr H. Hudson, which ended,

...He only knew to climb

Amid forgotten way-marks on the old straight track
To where there gleamed for him the beacons of a world sublime.

Alfred Watkins, whose favourite poet was John Masefield, used to quote from 2 *Henry VI*, 'All the country is lay'd for me'. His vision opened the door to a magic country on the threshold of which we now stand.

The problem with which one is faced in investigating discoveries such as those of Mrs Maltwood and Mr Watkins has always been this. From the human point of view there appear to be two forms of truth, poetic and scientific, and the two cannot always be made strictly compatible. Scientific facts emerge in the first instance as revelations from the unconscious mind. Where these revelations can be shown to accord with what has already been established, they are accepted. Where they stand alone, they tend to be dismissed as fantasies, even though to certain people they are more real than the system which they appear to contradict.

Mrs Maltwood, although she never knew it, was not the first to recognise the zodiacal giants of Somerset. In about 1580 the famous scholar and magician, Dr Dee, discovered what he believed to be Merlin's secret in the Glastonbury plains. According to his recent biographer, Richard Deacon, he became interested in 'the unusual arrangement of the prehistoric earthworks in the Glastonbury area and he had diagnosed that those objects when carefully mapped represented the signs of the Zodiac and the stars'. He himself had made a map of the district on which he had noted that 'the starres which agree with their reproductions on the ground do lye onlie on the celestial path of the Sonne, moon and planets, with the notable exception of Orion and Hercules ... all the greater starres of Sagittarius fall in the hinde quarters of the horse, while Altair, Tarazed and Alschain from Aquilla do fall on its cheste ... thus in astrologie and astronomie carefullie and exactley married and measured in a scientific reconstruction of the heavens which shews that the ancients understode all which today the lerned know to be factes'.

The existence of the Glastonbury zodiac must for the present be accepted as a poetic rather than a scientific truth. Those who believe it to contradict what they assume to be established facts can never be convinced. Yet for many people both the zodiac and Mr Watkins's leys are, as it were, aesthetically correct. Somewhere in

our minds they evoke a response which is none the less real for being as yet undefinable. In the years which succeeded Mr Watkins's discovery, members of the Straight Track Club began to be aware of certain limitations in their researches. It is a physical fact that the prehistoric sites shown on a map do fall into dead-straight alignments. This has been shown beyond doubt by the work of numerous researchers over the last fifty years, recently confirmed by Mr Williams of Abergavenny, whose work in this field is truly monumental. It is also possible on occasions to detect the pattern to which they are arranged. Some alignments were evidently set by astronomical considerations. Others appear to be geographical in that they link prominent landmarks and coastal peaks and headlands. Yet there are many others, the evidence for which is extremely convincing, which seem neither to be lines of geographical triangulations nor to point to any obvious astronomical declination. Watkins's followers were confronted with this dilemma. In every part of the country they found traces of the old straight track in the alignments of ancient sites and in stretches of forgotten pathways. But they could never discover the principles behind the ley system. Until we discover why these alignments were laid out, there seems little point in tracing further lines on the map. For no one knows exactly what to look for. Anyone who seeks confirmation for the existence of leys as Watkins defined them can find all the necessary evidence in *The Old Straight Track* and in his other books on the subject. Yet whether or not one is convinced is still ultimately a matter of personal inclination. Those who uphold the attitude of believing only in what accords with previously established facts will find the question of leys of little interest. But if one suspects that we have not yet reached the limits of scientific knowledge, that there are in the universe certain areas, dimensions and influences which are not at present recognised, one must admit the possibility that there may be other forces, once known to men in the remote past, whose exact nature has since been forgotten. The following chapters, therefore, rather than including further lists of apparently deliberate alignments, are devoted to the evidence that this is in fact the case. In recognising the distinctions between the laws of prehistoric magic and those of modern science, we may come upon the true explanation of Mr Watkins's vision.

The hidden entrance into the prehistoric world that was revealed to Alfred Watkins has, since his time, been little used. The

apparent triumphs of the mechanistic approach to science, particularly since the nineteenth century, have led many people to believe that there is only one way by which any true knowledge can be acquired. The method of compiling an endless body of facts, each related to and depending on those already established, leads to the development of a great scientific system, entirely valid and coherent in its own terms. But the limitations which this system imposes upon original research become ever more onerous. New discoveries, unrelated to what is already known, tend to be ignored for a lack of a convenient category or adequate means of scientific expression. Few now doubt the existence of phenomena which transcend and even contradict the present structure of generally acknowledged facts; but where they relate to a scale which we have as yet no means of measuring, their elusive quality is often mistaken for evidence that they have no objective force or meaning. The human eye has a natural inclination to detect patterns, and specialists trained to detect and embellish one particular pattern can become so attached to it that they resent the suggestion that there may be others.

The ley system may be actually invisible to those whose previous knowledge tells them that it cannot exist. Until a few years ago, when the amazing prehistoric civilisation in Britain first became known, no one anxious to preserve a reputation for sanity and objectivity dared to admit the evidence for its existence which the ley system presents. Even Sir Norman Lockyer, who included maps showing the accurate alignment of ancient sites in his published works on Stonehenge and other British stone circles, never fully realised the nature and extent of the leys he discovered. Yet isolated pieces of evidence continually hinted at some forgotten principle behind the siting of churches and sacred centres. A number of references to an apparent pattern in the sites of churches lined up across the country were made by writers in the early part of this century. Sir Montague Sharpe published maps showing the remains of a regular grid over the county of Middlesex with churches, roads and various landmarks set out to a constant unit of measurement which he believed to be the old Roman *jugurium*; and Mr Rendel Harris found evidence of similar landscape geometry in the neighbourhood of Watchet. But for the most part those who followed up Watkins's discovery with further research and field work were not formally trained in the disciplines of archaeology and prehistory.

In 1939 Major H. Tyler published a small volume *The*

Geometrical Arrangement of Ancient Sites. Since this book is almost unobtainable, the British Museum copy having been lost in the war, some examples of his work are given here.

Major Tyler re-examined the physical evidence for the ley system. He followed on foot many of the lines described by Watkins in *The Old Straight Track* and others which he himself had discovered on maps. With remarkable regularity he came across further evidence to support their existence. Standing stones and sections of old track not shown on the map, footpaths and traditional boundaries were found to align exactly upon a ley already defined by mapped landmarks. Major Tyler with the assistance of a professional surveyor transferred lines from the 1-inch to the 6-inch Ordnance Survey sheets and found that their accuracy was in no way diminished. Weighing the evidence from both maps and fieldwork he concluded that Watkins's theory was based on fact, that ancient sites all over Britain stood in straight lines to an extent far beyond the likelihood of coincidence.

As more leys were plotted, it became evident that many of them share a common point of intersection. Eight alignments cross at the old parish church of Wooburn in Buckinghamshire; others, at St Michael's Church, Honiton, Brentor to the west of Dartmoor and Churchingfor on the borders of Devon and Somerset. In some cases, concentric circles drawn from these places revealed a number of sites equidistant from the centre. On Dartmoor and elsewhere alignments of standing stones, pointing towards hilltops and tumuli, form almost parallel lines running only a short distance apart. These lines could hardly have been roads. Tyler believed that they had some further meaning, that they formed part of a sacred geometrical pattern laid down in some remote age for an unimaginable religious purpose. Mounds and stones had been erected at intersections of lines, and the acknowledged custom of the early Christians in Britain of building churches on pagan sites preserved the pattern.

At a time when many archaeologists failed to recognise the astronomical significance of stone circles, hilltop enclosures and other structures of antiquity, Watkins had observed that a number of leys were set to mark some extreme position of the sun or moon. Major Tyler confirmed this and drew attention to a paper read to the International Congress at Amsterdam in 1938 by a German geographer, Dr Heinsch, entitled 'Principles of Prehistoric Cult-Geography'.

Dr Heinsch spoke of some lost magic principle by which the sites of holy centres had been located in the remote past. They were placed on the lines of great geometrical figures which they themselves constructed in relation to the positions of the heavenly bodies. Lines set at an angle of 6(degrees) north of due East joined centres dedicated to the moon cult of the West with those of the sun in the East. The regular units of measurement used in this terrestrial geometry were based on simple fractions of the earth's proportions. Dr Heinsch produced examples of this practice from all over Europe and the Near East, from Stonehenge, Chartres and other sacred centres as well as evidence for its survival in the early Christian and Muslim churches.

Like all who have studied the ley system Dr Heinsch was impressed by the vast scale and accuracy of its construction and by the evidence it provides for the past existence of a universal civilisation with an advanced knowledge of science and magic. The laying out of a network of astronomical and geometrical lines across the face of the earth implies a technology which would hardly have been developed to no practical purpose. Dr Heinsch suggested that some principle was involved which has since been forgotten. Human life was enriched by means of a force activated through the correct geographical relationship of sacred centres. He believed that a study of the cosmic laws that determine the most favourable location for various buildings might benefit the work of modern planners.

Ever since the time of Stukeley archaeologists, even more concerned with the accumulation of casual detail and less with the wider significance of the sites they investigate, have distracted attention from the possibility of an alternative approach to the problems of the past. Excavation can only test existing theories; and scientists, suspicious of the means by which they are reached, often fail to appreciate the views of poets and visionaries. Alfred Watkins's achievement in reconciling intuition with reality encouraged others to visit sites of antiquity and to see them in a new way, as signs on a pathway leading through a celestial landscape into a prehistoric country.

A friend and associate of Major Tyler was J. Foster Forbes who had spent his childhood in Aberdeenshire and came to know many of the stone circles in that part of Scotland. A unique feature of these monuments is that they each contain a large pillar stone, flanked by two others and marked by a series of carved circles and depressions,

known as cup and ring marks, on one of its sides. Bishop Browne, who in 1919 studied these markings, discovered that many of them were accurately arranged to form patterns of various constellations of the heavenly bodies. But in every case the image was reversed as if the stars were reflected in a mirror, and Browne formed the theory that they were used as stone blocks for printing charts of the night sky on to sheets of cloth or stretched hide. Watkins had noticed similar marks on Herefordshire stones and took them for ley maps, the depressions representing sites on the local system of alignments. He found positive evidence for this theory in a stone in the churchyard at Tillington in Herefordshire with four distinct cup marks on its upper surface. Watkins drew the diagonals between the four marks and took a northern bearing from their point of intersection which he believed to represent the position of the stone itself. Orienting his map on to this figure, he found that the cup marks pointed out two well-marked leys, crossing at the Tillington stone and giving the lines of the winter sunrise and sunset as they appeared from that spot.

Other cup-marked stones consulted by Watkins and his friends appeared also to indicate the direction of radiating leys. Mr Foster Forbes was struck by the evidence for the theories of both Watkins and Bishop Browne and wondered whether the two might not be compatible, especially since so many leys seemed to have been set by astronomical considerations. From early childhood he was aware of possessing something of the Highlander's faculty of second sight; as a little boy he spent a day hiding in the woods from one of his father's visitors who, appearing as a reincarnated Druid, seemed ready to sacrifice him at a nearby stone circle. He was therefore inclined to adopt a psychic approach to the problems of British antiquities. Prehistoric sites, he found, were laid out to reflect the constellations. Their relative positions were plotted by cup marks on various key stones, so these stones were both terrestrial and celestial charts. Accompanied by friends who practised the art of psychometry, Foster Forbes visited a great many stone circles and prehistoric mounds in an attempt to discover something of their meaning. He found that each of the sites had a different character depending on the nature of the celestial body it represented and the strength of the natural magnetic current that flowed through it. It was to channel this current to their own magical purposes that the survivors of some great disaster that had overwhelmed the centre of their own civilisation had come to Britain and erected their instruments of stone

at appropriate spots about the country. Stone circles, he writes, were erected 'not only in conjunction with astronomical observation by the advanced priesthood, but that the actual sites should serve in some measure as *received stations for direct influences* from heavenly constellations *that were known and appreciated by the priesthood* -- especially at certain seasons of the year'.

Every stone circle had an affinity with a certain part of the body thereby forming, as in the vision of Blake, giant figures stretched right across the face of the landscape. Extraordinary as this idea might appear, it is intuitively held by many people and forms a common feature of poetic expression. References to the countryside and its giants occur throughout literature from mythology to the present day. Gauguin painted his last Tahitian vision with the giants carved in the crags and mountain rocks; even the engineer Brindley, spreading the watery veins of his canals through the industrial body of the Midlands, spoke of water as a raging giant, 'but lay him on his back and he becomes as meek and docile as a child'. It was this geomantic vision that inspired Brindley and many of his successors to lay out the canal system in such a way that even today its lines enhance rather than violate the character of the landscape.

In magical terms the visions of Alfred Watkins and J. Foster Forbes are identical. Forbes saw in the landscape the gigantic body of man, Watkins the paths and centres of the terrestrial nervous system standing out like the sephiroth of the tree of life. These are figures from the vocabulary of magic; the lost world to which they refer is almost everywhere beyond recall. Only in certain remote parts of the world are there still people who preserve something of the old magical system, once universal; and of all those who still retain some knowledge of the less tangible aspects of their environment, perhaps the best known are the aborigines of Australia. The earliest memories of the aboriginal race are expressed in terms of their native country. Its natural features, hills, streams and rocks, were shaped by elemental beings of the dream time, an endless age which preceded our own, and which still continues to flow in a dimension normally beyond our perception. The creative gods once traversed the country along paths whose lines are still remembered, for at certain seasons of the year they become animated by a vital force which fertilises the earth and gives new life to plants and animals. To ensure the seasonal return of this force the aborigines perform certain rites. They paint tjuringas, arrangements of interlinked dots and circles exactly

like those found on cup and ring stones in Europe. These lines and circles represent the sacred paths and centres of the Australian landscape, and those who travel the paths find their way by consulting the tjuringa's pattern. Colin McCarthy, the Australian scientist who has travelled through little-known parts of the interior and has many friends among the aboriginals, says that their magicians use the tjuringas for divination. By contemplation of the pattern of lines and circles they receive messages from far across the country, accurately foretelling the arrival of strangers, the approach of sudden storms and changes in the weather.

In several other parts of the world lines linking the holy centres are not only mythological paths down which the gods representing the various heavenly bodies pass at regular seasons, but have some further quality known only to native magicians. American Indians, particularly the Hopi of the Southwest, appear to use them as cables of mental communication. In China they are known as *lung-mei*, the paths of the dragon, and run between astronomical mounds and high mountains.

These dragon paths are very mysterious and little is known about them outside China. Until recently, however, their course was studied with great care by the administrators of the provinces through which they passed and charted by some department of the central government. J. D. Hayes in *The Chinese Dragon* describes how, at the beginning of this century, a young student who had committed suicide was buried by his friends in a tomb placed on a dragon line, and how the Board of Rites in Peking sent urgent instructions for his disinterment, such burial sites being strictly reserved for members of the Imperial Family.

The peculiar legend of unseen tracks running straight across country aroused the interest of J. D. Evans-Wentz, who in the early part of this century travelled widely among the Celts of Britain and France, collecting fairy stories and other relics of the old mythology. In several parts of Ireland he heard about the fairy paths. These paths, sometimes visible as old roads, sometimes preserved only in local memory, were said to be the routes of seasonal processions. On a certain day the fairies passed through the land, and anyone who stood in their way might be struck dead or be taken off, never to return. A man whose house happened to be situated on a fairy path must on that day leave his front and back door open, for it was unwise to obstruct the fairy parade. In his book, *The Fairy Faith in*

Celtic Countries, Evans-Wentz tells how he asked an Irish seer for an explanation of the fairy paths, and was told that they were lines of some kind of magnetic current, whose exact nature had lately been forgotten.

The Chinese believed that *lung-mei* extended all over the world, and this belief is everywhere supported by the evidence of local tradition. In Australia and North America the dragon lines are creation paths, haunted by the gods and by the great primeval serpent, the ancestral guardian of all living things. In Ireland they are the roads of the fairies. In some parts of the world they can still be seen from the air, although their origin is obscure and even their very existence is no longer remembered among the people through whose country they run. Some years ago pilots flying above the Nazca plains of Peru noticed a remarkable geometrical pattern laid out on the country below. Long straight lines stood out against the desert landscape and among them the airmen saw a number of giant figures representing men, animals and strange symbols. The lines etched on the Nazca plains are now well known, and the German scientist, Dr Maria Reiche, has shown that they are the work of a vanished, pre-Mayan race, who marked their course by removing stones and pebbles, exposing strips of darker soil, clearly visible from the air. It is recognised that the straight lines on the Nazca plains are of astrological significance. In fact they are sun paths, for they are so set that a traveller walking down a certain line at the equinox or solstice would see the sun rising or setting on the horizon straight ahead.

The avenue at Stonehenge, aligned on the midsummer sunrise, is by no means unique in Britain. Watkins's discovery of leys, several of which he showed to be orientated towards significant astronomical declinations, has revealed the existence all over Britain of a pattern which bears a remarkable similarity to the lines on the Nazca plains. Much has faded, for most lines are now only discernible in the alignments of ancient sites traced on a map, and although a few prehistoric giant figures can still be seen outlined against the chalk hills of southern England, a great many more have vanished. Only a few years ago T. C. Lethbridge discovered the huge prone figure of the sun god lying across the Gogmagog hills of Cambridgeshire. Other lines, however, are still clearly visible, for several sections of the old sacred or astronomical tracks have survived as modern roads.

The belief, current until recently, that civilisation in Britain began

with the Romans, has blinded us to the significance of those remarkable straight lines which can be found on almost every large-scale map and which are commonly marked 'Roman road'. The extent of these roads and the amazing accuracy of their alignments have caused considerable speculation; but, for want of a better theory, it has generally been assumed that they were built by the Romans to consolidate their conquest, while their straight lines are supposed to have been the product of typical Roman ruthlessness and efficiency.

In fact it can be shown that the system of straight roads is far earlier than the Roman invasion. In the first place, they occur in Ireland, a country which never suffered Roman occupation, in just the same way as they appear on the English map. Secondly, the Celts were noted charioteers, and would scarcely have been without the paved roads necessary for running their vehicles; and finally, archaeological excavation has shown that many roads, previously considered to be of Roman origin, are prehistoric tracks which the Romans later repaired and resurfaced. Beneath the Roman surface of the Fosse Way, Ermine Street and Watling Street excavators have uncovered the paving stones of earlier roads, at least as well drained and levelled as those which succeeded them.

The straight roads of Britain could hardly have been less than 1500 years old at the time of the Roman invasion, and many must be even older. It has often been noted as a curiosity that roads attributed to the Romans are closely linked with the prehistoric monuments, many quite insignificant as landmarks and some already in ruins by the time the Romans saw them. These roads behave exactly like leys. Many stretches have obviously been set towards a prominent hill or mound. On reaching the landmark the present road may continue at a slightly different course; but time and again the former line can be found to extend as a ley over miles of country, crossing mounds and other prehistoric sites and terminating perhaps at some remote stone circle. Watkins gives several examples and many others can be found on the map. Readers of Mr B. Berry's *A Lost Roman Road*, in which the author describes a journey on foot across Wiltshire in search of a forgotten track, the continuation of an existing road used by the Romans, must be struck by the evidence which Mr Berry unconsciously provides to confirm Watkins's discoveries. Churches, mounds, moats and old farmsteads were found standing not beside, but right on, the path of the road, many with the

characteristic place name, ley, leigh or dod.

Obviously there could never have been an ordinary road, running straight over artificial mounds and stone pillars. In any case roads built for traders and travellers take the easiest routes, continually curving to avoid sudden changes of height and obstacles such as rocks and marshes. Plenty of such roads still survive from pre-Roman times, and their use and purpose is as clear as the long straight tracks are inexplicable. The enormous task of surveying a road for miles across country, so straight that not the slightest deviation from the line can be detected, would hardly have been undertaken for any purpose where a natural road, following a contour and avoiding natural obstacles, would have served better.

When the Romans came to Britain they must have found traces of a vast system of straight tracks so ruined that the principles and pattern behind its construction were no longer apparent. Where stretches of these old tracks ran in useful directions, the Romans repaired and used them for transport. A long Roman route never runs on exactly the same line throughout its length, but is made up of a number of individual straight sections, each one sighted upon some prominent natural or prehistoric landmark. The secret of the straight tracks must have perished centuries before the Roman invasion. Probably the Celtic Druids never fully understood the meaning of the system they inherited. Celtic legends are full of references to the great men of the past whose works have been left to decay. According to the old story retold by Peacock in *The Misfortunes of Elphin*, Seitherin ap Seitherin, the keeper of the sea wall, despaired of emulating the work of former giants, even to the extent of repairing their embankments, and allowed the sea to make a breach and flood what are now the lost lands of Wales. A wall such as this, of extreme antiquity, still lines the river coasts of Kent and Essex. King Arthur and his followers, haunted by the memory of vanished glory, set out along the old straight paths by adventurous mounds and castles in a last attempt to recapture the former enlightenment. Everywhere the later Druids must have seen ruins of a lost civilisation they could never regain.

The Romans were not particularly surprised to find so many stretches of straight track in Britain, for they came across them in every country they invaded. All over Europe, across North Africa, throughout Crete and as far as Babylon and Nineveh they laid straight roads along routes known to have existed long before their

arrival. It seems that the Romans' reputation as builders of straight roads was due to their deliberate policy of converting the sacred paths of the natives into imperial routes for the flow of militarism and commerce. Unaware of any source of power except through trade and conquest, the Romans may have thought that in laying their roads along the lines of their predecessors they were re-establishing a lost political empire.

The Straight paths which the Romans found, dried-up arteries of a waning current, conducted the legions to the very centres of the districts they set out to conquer. A new military power flowed through veins once animated by another, subtler force. Countries such as Persia, where the old system of straight tracks had best survived, fell rapidly before the invaders. Caesar in a short campaign pushed far into Britain along paths never before put to profane use. Centuries later the Spanish conquerors of Peru found their way straight to the heart of the empire along paved roads, running without deviation for hundreds of miles from centre to centre, roads whose use was formerly reserved for the king and his messengers. Fantastic efforts had been made to ensure that they ran dead straight. Stone causeways were laid across marshes, steps cut over mountains, tunnels were bored through cliffs and amazingly woven bridges spanned chasms. Obstacles were never bypassed but a way was built through or over them. In a very short time these roads conveyed the Spanish military power through every centre in the country. This was their last frantic moment of activity. Chariot wheels crushed their paving, previously worn only by the feet of runners. The native population, finding the old roads occupied by an alien force, lost interest in their maintenance and left them to decay.

Geoffrey of Monmouth attributed the old straight roads of Britain to the reign of the legendary King Belinus, who, he said, 'called together all the workmen of the whole island, and commanded a highway to be builded of stone and mortar, that should cut through the entire length of the island from the Cornish Sea to the coast of Caithness, and should run in a straight line from one city unto another the whole of the way along'. One road was built across the country and two others placed diagonally to meet at the centre. These roads were sacred ground where, as in a church, all men were safe either from attack or arrest. Along their course, freedom and protection were guaranteed to travellers, and strangers were everywhere given hospitality. In Wales the sacred paths were under the protection of

the spirit, Elen, the goddess of sunset, of whom Sir John Rhys said, 'There is a certain poetic propriety in associating the primitive paths and roads of the country with this vagrant goddess of dawn and dusk.' The legend of Elen or Helen is given in the Mabinogion as The Dream of Maxen Wledig. Maxen, the emperor of Britain, found himself on a dream journey, in the course of which he passed along a valley, over the highest mountain in the world to the sea, where he found a ship about to sail to a near-by island. He reached the island and travelled on until he came upon a castle and the most beautiful girl he had ever seen within it. The emperor awoke, but the memory of the girl was always with him and after a year's search for the road which led to her castle, he found himself at the spot where, in his dream, the journey had begun. His messengers, following the dream line past all the landmarks of which the emperor had spoken, arrived at the castle and gained Helen as the emperor's bride. She was a British princess of Anglesea, and during her reign she constructed a system of roads running straight between the various centres of the Kingdom, from one castle to another. The men of Britain, who built these roads, did so, according to the story, because Helen was a native of the country, for no foreign power could have compelled them to this undertaking.

All early accounts of the straight roads of Britain hint at their sacred or astronomical nature. The journey described in the stories of the Mabinogion are conducted as if in a ritual or dream. The roads of Maxen, like the midsummer sunrise avenue at Stonehenge, was only illuminated on one day of the year, and the movements of the oracular head of Bran from Ireland to its final burial place in the hill of the White Tower of London were regulated by a certain rhythm. The strange talisman rested for seven years on the rock of Harlech Castle, to which many alignments from Welsh stone circles are directed, and was then taken to a western island, perhaps Bardsey, the extreme western point of north Wales. Here was a great hall with two doors open and a third, in the direction of Cornwall, closed. The companions of the head of Bran spent eighty years in perfect joy and harmony, unconscious of the passing of time, until the day came for the closed door to be opened and a cycle of time to end. As they looked over the mountain towards Cornwall, they received a sign that they must leave the island and journey towards London. This sign, an astronomical omen of change, observed as from the purposefully orientated opening in a stone circle or an Irish round tower, initiated a

fresh cycle. The story of the ritual progress of Bran's head must be extremely old, referring to the time when every action, every journey and migration was performed according to the will of God, revealed according to some lost system through the astrological interpretation of the heavens.

Within the last few years discoveries at Stonehenge, Avebury and lesser stone circles have revealed remarkable similarities between the astronomical paths of other continents and the leys of Britain. Up to 1939, when their activities ceased, members of the Straight Track Club had become even more interested in this aspect of their subject. One of their number, Admiral Boyle Somerville, was a pioneer in the science of astronomical archaeology, and he long suspected that many leys were originally set out from a stone circle towards the observed azimuth of the sun, moon or a particular star. A vast number of stone circles must have been destroyed within historical times, for it was the policy of the early Christians to replace them wherever possible with a church. Even today megalithic stones are as remorselessly uprooted by tractors and bulldozers as they have been by farmers for many years past. Yet still a great many leys can be found to pass through a stone circle, and it is not improbable that at one time they all did so.

In 1967 a retired Scottish engineer, Professor Thom, who had spent many years of his life travelling the remoter parts of Britain and surveying most of the 500 or so stone circles still surviving, published a revolutionary work, *Megalithic Sites in Britain*, whose implications are yet barely recognised. Apart from Stonehenge, whose stones are carefully shaped and obviously set with great precision, and those like Avebury and Long Meg in Cumberland, which are impressive by reason of their size, most stone circles are inconspicuous and often appear to be placed at random in a shapeless ring. This impression, even though accentuated by the ruinous state into which most circles have fallen, is violently contradicted by Professor Thom's measurements. He found that in all cases the groundplan is based on an elaborate and infinitely precise geometrical figure. Circles, ellipses and other regular variations are set out with an accuracy which approaches one in a thousand. These figures are based on Pythagorean triangles, revealing on the part of their builders mathematical knowledge previously thought to have been first acquired by the Greeks some thousand years later. The discovery of

the megalithic unit of measurement, a yard of 2.72 feet, enabled Thom to recognise many of the problems which the British of 4000 BC set themselves. From basic right angle triangles whose sides measured in whole units 3, 4, 5 or one of the other five combinations of small numbers which demonstrate the Pythagorean theorem, they constructed ellipses and circles, either true or with a calculated distortion, in such a way that either perimeters and diameters both were, as near as possible, whole multiples of their yard, preferably expressed in units of 2 (1/2). At the same time the ratio between the diameter and perimeter of the distorted circle was contrived at 3:1, so that the incommensurate number represented by (PI) should be exactly 3.

The existence of an elaborate and sophisticated system of geometry and mathematics in the arrangement of stone circles is sufficiently remarkable. But the whole popular conception of the quality of pre-historic life is shattered by Thom's discovery that the geometry of stone circles is itself derived from the extreme positions of the sun, moon and stars as they cross the horizon. The lines of stones that produce and determine the circle's formation are set to point out these astronomical points in such a way that the heavenly bodies themselves create the figures on which the circles are based. The celestial movements are thereby reduced to a system of geometry and mathematics illustrating the basic universal laws and the patterns of life itself.

In many cases stones are set outside the circles forming alignments which point to a natural hill or mountain peak, to a stone or mound placed on the horizon or to a notch cut through a high ridge visible on the skyline. Only from the site of the stone circle itself have these works any significance, for they mark the spots where the sun appears or vanishes at the equinox or at the solstices or where the moon reaches an extreme position in one of its complicated cycles. The delicacy with which these marks are placed is so extreme that minor irregularities in the moon's orbit, unnoticed within historical times until quite recently, can be measured accurately from the central circle of stones.

To scientists the location of a site which satisfies the astronomical and geometrical conditions by which stone circles were erected seems almost impossible. Modern surveyors have no methods by which such a unique spot could be discovered. Yet men in Britain of 2000 BC must have known of some process by which the

positions of the heavenly bodies could be expressed in terms of the terrestrial landscape, for from the site of a stone circle the features of the surrounding countryside can be seen to represent the rising and setting points of the sun, moon and certain stars. Stones and earthworks stand out against the sky, perfecting the circle of a giant orrery visible only from the site of the stone circle itself. Anyone who stands within one of these circles or on a former astronomical hill such as St Michael's Hill at Montacute, Badbury Rings or Maes Howe in Scotland can become aware of a certain indefinable symmetry in the surrounding landscape where every eminence and furrow outlined on the horizon has some cosmological significance. Even today, the names of hills and mounds often reveal their former identification with an aspect of the sun, the moon or a star, or, rather, with the spiritual principle which it represents. The whole landscape of Britain has been laid out to a celestial pattern. Every hill has its astrological meaning, every district its centre of symmetry from which its hidden nature can be divined. Once these centres were all occupied by circles of stone, instruments by which the inherent harmony of the landscape could be expressed in numbers and geometric symbols.

Evidently stone circles were originally sited according to some principle which we have yet to rediscover. By an act of divination, perhaps by the invocation of some now unrecognised force, the true sacred centres of the country became known. Remarkable confirmation of the former existence of some such system can be found in a legend which occurs all over the British Isles. According to this legend the holy places, the sites of ancient and traditional sanctity, were first revealed in the performance of a magical rite, through some divine omen, in dreams or visions. There can be no doubt that the early christians looked for a sign from heaven to guide them to the spot where a church or cathedral was to be built. The fact that in almost every case the chosen site was already one of traditional sanctity indicates that their practice of divination was inherited from their predecessors. The methods used to discover the correct site for a church were the same as those by which the sites of stone circles and astronomical mounds had been located thousands of years earlier. Evidently they had much in common with the methods used by modern dowsers.

According to all tradition the important stage in the construction of a sacred building is the location of a suitable site, one where the

spiritual forces of the locality combine to the best advantage. Whereas today it is considered in no way incongruous to determine the site of a new church by purely secular considerations, the priests of former times would as soon have built a water mill in the desert as place a church on a spot where the sacred influences were absent. The practice of divination, by which the true holy centres can be located, has now lapsed so that, while our older churches are still capable of use as precise instruments for spiritual invocation, many of those built in modern times are nothing more than empty halls.

From the numerous accounts of churches whose sites were discovered by some form of magic, it is evident that a traditional system of geomancy was practised all over the British Isles up to a few hundred years ago. Almost every cathedral and many parish churches are said to have been founded with divine guidance, revealed in dreams, through portens or by some supernatural event. These stories, which can be found in the pages of every volume of country folklore, are so numerous that only a few typical examples can be given, but these few show something of the methods by which the centres of inherent sanctity were formerly made known, and why it is that so many churches still stand directly upon prehistoric alignments. We know both from inspection of their sites and from documented evidence of early Christian policy that churches were always built at places of former sanctity, particularly on artificial mounds and on hilltops within ancient earthworks, and the inspiration which led to the selection of these sites is still remembered. Sometimes the building was carried to the sacred hilltop by supernatural agency. Churchdown church in Gloucestershire, for example, is on a hill so steep that steps have been cut into the slope on the path to the summit. It is said that the Devil, to discourage churchgoers, continually remove the stones the builders placed on their chosen spot at the foot of Churchdown Hill and carried them by night up to the top. The same story is told of Brentor to the west of Dartmoor, where the Devil's persistence led to the church being placed on top of a steep crag, visible for many miles around. Rochdale church was three times removed by goblins and set on a high place above where the builders had intended. Holme church in Yorkshire was carried up a hill by fairies, and it was they who, it is said, placed Godshill church, Isle of Wight, on its beautiful green knoll.

Sometimes the correct site for a church was revealed to the

builders by inspiration or by some portent. When Wrexham church was being built on a low meadow, it was found every morning that the work of the previous day had been destroyed. One night a watch was kept. Nothing happened until towards morning when a voice in the air was heard crying 'Bryn-y-groy', the name of a field on higher ground. The stones were taken there and building continued without disturbance.

On other occasions the correct means to divine a particular site was revealed in a dream. St Brannock dreamed that he must build on the spot where he saw a sow with her litter. Next day he set out and found the sow at the place where Braunton church in Devonshire now stands. At Llangor the builders, whose attempts to erect a church had been thwarted by its mysterious nightly destruction, were suddenly inspired with the idea that a more auspicious site would be revealed to them by a white deer. They thereupon went into the forest where they saw a white deer spring out of a bush. On that spot they successfully built their church.

There are many stories of the site of a church being chosen through the intervention of birds or animals. Watchers round the foundations of the Church of St Peter, Burnley, saw a host of pigs pick up the stones in their mouths and run off with them to a nearby knoll. The same thing happened at another church in Lancashire; the pigs, as they removed the stones, squealed out 'Winwick', thereby naming the village as they were siting its church. In this case the site the pigs chose was a spot already sanctified by the martyrdom of St Oswald.

Durham Cathedral owes its position to a dream followed by a portent. The monks of Lindisfarne, driven from their island by hostile raiders, were wandering about the north of England with the body of their founder, St Cuthbert. One night their abbot had a vision in which St Cuthbert appeared and commanded him to build a shrine on the island of Dunholme. No one knew of this place and there appeared no means of finding it until one of the monks overheard a local woman talking about a cow which had strayed over to Dunholme. The island turned out to be a great cliff hanging over the river Wear and here was built the first church where for many years the uncorrupted body of St Cuthbert attracted pilgrims from all over the North.

Stories such as these illustrate the former belief that the true sacred centres could only be located by divination, by the interpretation of signs and portents. Not only churches were sited in

this way, for there are stories of castles and manor houses removed or erected by magic. Even as recently as a hundred years ago the foundations of Crom Castle on the shores of Loch Erne in Ireland, the original castle having been destroyed by fire, were nightly disturbed by fairies, and another site nearby had eventually to be selected. Everywhere we find legends of settlements and sacred places located through inspiration.

Through its policy of occupying and reconsecrating the old places of inherent sanctity the Christian Church quickly assumed the spiritual control of the country. With the help of those native priests and magicians who understood the secret of the old alignments, the first missionaries founded their churches at those places where the celestial forces asserted their strongest and most beneficial influence, proving thereby to the local population their knowledge of these forces and their ability to maintain the fertility and prosperity of the district by their invocation. There was little resistance to the Christian Church as it spread over the country. The Druid priests recognised in the new creed a more glorious expression of their own tradition, now degenerate. On their advice churches were placed on a sighting mound or on the site of a nearby stone circle. Here their towers and spires emphasised the astronomical lines, providing even more striking landmarks than the old stones they replaced. The steeples guided travellers along the old ways, now often no more than a footpath between parishes. Country people in the days of Thomas Hardy still found their way from village to village by following the old landmarks, stones and church towers, as did steeplechasers of the eighteenth century. The church itself was often approached by a surviving section of the old straight track, a tree-lined causeway known as the church walk, until recently a popular feature in parish life. The beauty of the scenery at the moment that preceded its violation by the imposition of meaningless, secular patterns, is evident in any contemporary view. For the last time the landscape could be seen in its old form, visibly and harmoniously laid out according to the rules of terrestrial astronomy. The doom that hung over it gave it, as always at such times of impending change, a certain quality which heightened its effect on all those who saw it in its last years.

It was not only as landmarks that churches helped to preserve the memory of the old tradition. In their structure they incorporated many of the features of the stone circle they replaced. The

proportions which lay unseen behind the arrangement of the old stones were repeated in the fabric of the church, and the new stone pillars were carved with the old astrological designs and with atavistic figures, unknown to Christian hagiology. Moreover, the azimuth to which the church was directed, its alignment east and west, was influenced by the orientation of the original stone circle, now embedded in its foundations. It is generally believed that churches are orientated due east. In fact that is rarely the case. Most churches point in varying degrees north or south of east. This is explained by an old popular belief that churches are orientated towards the sunrise of the day of the saint to which they are dedicated. Variations in the Church Calendar, uncertainty due to changes such as the loss of the eleven days and alterations to original dedications make it hard to check the instances where this custom was observed, but it is not hard to see what it is that lies behind the idea. All over the ancient world, as Sir Norman Lockyer demonstrated, the second stage in the erection of a temple after its site had been chosen was to secure the correct orientation by stretching a line along its axis towards the point where the sun, moon or a particular star crossed the horizon on a certain day. This practice, which still survives among the builders of masonic lodges, was universally adopted by the early Christians.

Not only the orientation but even, on occasions, their groundplan was determined by magic or by some supernatural event. At Alfriston the stones of the church were disturbed every night and the builders went in search of a more propitious site, having been told that it would be revealed to them by four oxen. They found the oxen in a field lying back to back in the form of a cross, and there they built a cruciform church. Whitby church in Sussex was twisted out of its original alignment by the Devil and so was that of Mayfield in Sussex. St Dunstan reorientated it to lie east and west, but when a stone church was being built to replace the original structure, the Devil again tried to alter the line, moving the stones and hindering the men in the quarry.

Many of the old mounds and hills now occupied by a Christian church were formerly places of astronomical observation as well as centres of astrological influence. The former dedication of each place to the god associated with a certain planet, or, rather, to some seasonal aspect of the influence which he represented, was often continued by the substitution of the Christian saint or angel whose attributes corresponded to those of the displaced deity. Local place

names reveal the history of the forgotten migrations of former times and of the strange gods who have settled on the English landscape. Thoth, the Egyptian Mercury whom the Druids called Theutates, and Baal the sun god can still be found at many spots where no church has been placed to obliterate their memory. There are hundreds of Toot or Tot hills and for Baal there is Ball Hill, Val Hill, and even Baalbeg, a deserted village above Loch Ness.

Cneph, the sacred winged disc, was invoked at places such as Knap Hill and Stukeley's Navestock. Elsewhere he was replaced by St Catherine and her wheel. Tan Hill, where the equinoxial bonfires blazed, became St Anne's. St George, the reincarnation of Og or Ock, the Celtic solar giant, assumed command of the high places together with his fellow dragon killer, St Michael, and his name is duplicated near Avebury in Ogbourne St George which like Child Okeford, a name of similar derivation in Dorset, is an outstanding ley centre.

(IMAGE) (pic36)

Fig. i Child Okeford, Dorset. Two Alignments are remarkable in that one continues to Salisbury Cathedral and the other to the Cathedral's former location on the mound of Old Sarum.

At one time it was recognised that every hilltop and sacred centre stands on the path of a line of current and at certain seasons this line is animated by the flow of those fertilising influences which derive from one or other of the heavenly bodies. Watkins describes his discovery of an old alignment set out in accordance with the position of the midsummer sun as it rises over the Malvern Hills. Near the summit, immediately below the Giant's Cave, is an old stone said by local people to have been an altar of Druid sacrifice, and from this stone the sun can be seen rising directly above the cave on the morning of the longest day. A straight line from the sunrise point through the stone continues as a well-defined ley through Aconbury church to the prehistoric Aconbury Camp, along several stretches of existing road, and over two churches, those of Woolhope and Holme Lacey. Both these churches, Watkins discovered, are orientated precisely on the alignment at an azimuth of 76(Degrees) pointing to the sunrise position as it appears from the sacrificial stone. All over

the country instances can be found of churches similarly orientated by local astronomical considerations. At certain seasons the lines on which they stand were believed to become animated by a current of invisible energy, and on one particular day, when the current was at its zenith, certain magic rites were performed by which the fertilising influences were drawn through the land. As the sun sank below the horizon, bonfires were kindled on the beacon hills where the local people had gathered with their cattle and livestock. From hilltop to hilltop the light struck straight across country, reflected in the ponds and moats, transmitted by flashing mirrors, celebrated with music and singing, the whole line illuminated by the flames and by the heavenly light. Its path was physically emphasised wherever possible in the shape of the hill over which it passed. Where the natural shape was out of accord it was altered by earthworks. In this way the direction of the flow of the influences which played on a hill or mound was deeply rooted in local tradition and even today certain annual fairs and festivals still mark the day when the stream of fertility passes through the land.

The lines which crossed plains and valleys between the hilltops often appeared on the ground as leafy tunnels. Sometimes they ran through parkland down avenues of trees, sometimes they passed along rides and forest paths to a mound in a central clearing or on raised causeways lined with twisted thorns stretching across a marsh. To travel along these lines was to pass secretly through the country by tree-lined passages, shaded from the sun by the branches meeting overhead. The endless soft, flickering light deepened the dream within which the traveller moved. It was this state of spiritual tranquillity that the architects of Gothic churches and cathedrals set out to recreate through their buildings. As late as the Middle Ages those who understood the magic science of invoking the spirit of revelation and ecstasy set up the nave, passages and cloisters of their great cathedrals to reproduce the harmonious proportions of a forest ride. The eye is drawn down the avenue between the pillars towards a veiled light far away at the east window. Overhead, the vaulted ribs of the roof, meeting at knots of carved foliage, spring out from the great stone trunks. Through the subtle broken patterns of stained-glass windows the light is diffused like that of a forest glade. Strange twisted faces peer from among the leaves and flowers carved on the pillars and roof and above the windows. These spirits of trees and plants, originally like every other carving within the

cathedral painted in their natural colours, must once have been instantly recognised as creatures with which every woodland traveller was familiar. The forest spirits, an inseparable part until recent centuries of the visible quality of every bush and tree, would in mediaeval times have given to all who entered a cathedral the sensation of walking through the dim, wavering light down an avenue through a great forest. In this way the churches orientated upon the course of a ley preserved not only its line but also its character and atmosphere. Placed at an angle which allowed the heavenly rays to shine at a certain season down the nave through the windows east and west, the church transmitted the beneficial influences of the line on which it stood. It became a powerful instrument in the hands of those who knew its secret. Even when the tradition was forgotten, the old observances, though ignorantly performed, continued to some degree to invoke the power inherent in the site and in the church structure. For centuries the church gave life to the community. It was the social and religious centre at a time when the two functions were harmonious. People met there, arranged assignations, prayed, sang, played music. Travellers sheltered under its roof; those with news proclaimed it in the church yard. Fairs were held under the tower and processions round the village with music and dancing ended in the church itself. People even conducted business there with no idea of guilt.

We appear today to have lost touch with some source of spiritual inspiration, known in former times, whose departure has left the churches as if under some malign enchantment. Empty, cold and shunned, their shelter denied to travellers, often locked up, the sensations they invoke are those of guilt and embarrassment. Squire-obsessed vicars drove out the musicians, banned plays and processions, washed the colours off the walls. Now the incumbent, hopelessly bewildered, often appears to see himself as the custodian of an ancient ruin, endlessly worried by details of the rotting fabric, his thermometer at the gate pointing out the sum required to prevent the whole edifice from crashing about his ears.

The more we study individual examples of ancient building sites said to have been located by divination, the more clearly we can see the vast pattern imposed on the landscape according to some harmonious, magic principle which we are now hardly able to conceive. Behind the accumulation of bricks and mortar, sited for temporary utilitarian reasons, which now smother much of the

landscape, there is still visible another layer, a network of lines and centres, arranged according to a system quite unknown today. All we have to explain the existence of this remarkable pattern is the legend that in former times there was a way of locating auspicious sites by magic. The stories themselves relate to some outward practice by which the diviner was led to the correct spot. The Druids had certain ways of achieving the ecstasy of direct communication with nature and the spirit. Like Alfred Watkins thousands of years later, they acquired a microscopic knowledge of the countryside. In flashes of revelation they could glimpse some underlying pattern. The arrangement of hills, the curve of streams, the flight of birds, all these assumed a fleeting significance at the moment when the secrets of the landscape were opened. At such times the acts of divination were performed by which the sites now occupied by Christian churches were discovered.

Long after the old system of science and divination had declined, it was still felt that churches should be sited by magical means. Magic without knowledge becomes superstition, and no doubt many once effective rites were repeated with no understanding of their true purpose. It is said that the early Cornish saints found the sites for their churches by inspiration. The patron saint of a newly built church would climb the tower and, swinging a hammer round his head, release it to fall where it would. On that spot another church was built. From the number of Cornish churches placed on pre-Christian mounds it is evident that in their divination the early Christians were perpetuating a former practice, inherited from the native geomancers by whom the system of stone circles and pillars had been planned some two thousand years earlier.

In 1220 the cathedral of Old Sarum was pulled down and the present Salisbury Cathedral erected at New Sarum to the South. It is said that the exact site on Merifield Lawn was determined by the fall of an arrow shot from a long bow from the top of Old Sarum mound. Yet the location of Salisbury Cathedral could hardly have been as much a matter of chance as the story of the arrow suggests. It has often been remarked, by Sir Norman Lockyer among others, that the Cathedral lies on a straight line drawn through Stonehenge, Old Sarum and the edge of Clearbury Camp. The distance between Stonehenge and Old Sarum is exactly 6 miles and from Old Sarum to Salisbury Cathedral is 2. Perhaps the Cathedral was moved along a fixed line at certain intervals for astrological reasons, such as we

known was done in China and Central America, and this line may have been further extended; for, going north from Stonehenge, it passes over St Anne's Hill near Devizes and continues over Circencester church and Cleeve Hill to many other hills and sacred centres as far as Dufton Fell in Westmorland. The golden arrow or arrow of Apollo, which the druids possessed and with the aid of which they were said to fly across the country, may, Stukeley suggests, have been a lodestone, for it seems that, like the Chinese, they used a form of geomancer's compass in locating their sites. The story of the arrow flying down from Stonehenge could well illustrate the use of this instrument.

One of the most beautiful of all the accounts which describe the dreams, portents and magic acts attending the foundation of sacred buildings is that of the siting of Waltham Abbey. In the reign of King Canute a man dreamed that a treasure would be found on top of St Michael's Hill at Montacute in Somerset. This hill, like the other St Michael's hills at Glastonbury, Burrowbridge and elsewhere, is of remarkable shape, perfectly conical, its flat top encircled by labyrinthine earthworks on the hillside. Below the hill is the village with the remains of its great religious foundation embedded in a farmhouse. From the hilltop the earthworks on Ham Hill nearby stand out in sharp points against the setting sun, and some great stones now lying in the ditches round the top of St Michael's Hill may once have stood on the summit itself, where now an eighteenth-century imitation Irish round tower gives from its windows vistas chosen for their picturesque rather than for any astronomical value.

When the man's dream became known, a trench was dug on the top of St Michael's Hill and a great flint cross came to light. This relic, so miraculously revealed, was obviously destined for an important holy centre, and it seemed right that the same inspiration which had revealed the burial place of the cross should be allowed to decide its final resting place. The cross was placed on a wagon harnessed to a team of twenty-four oxen, twelve red and twelve white. The oxen were urged first towards Glastonbury Abbey, then towards Westminster. They refused to move. Other suggestions were made, but suddenly the oxen started off, taking their own line across country. After many days they stopped at Waltham Cross in Essex and here was founded the great abbey where for many years pilgrims gathered from all over England to see the miraculous cross, the Holy Rood.

The same story appears in the Bible. The Ark of the Covenant, captured by the Philistines, had brought such misfortune to their people that they wanted only to be rid of it. According to the account in the *Book of Samuel* they placed it upon a cart drawn by oxen which were left to find their own way back to the country of the Israelites. The oxen set off down the road lowing, or as Hebrew commentators put it, humming as they went.' And the kine took the straight way to the way of Beth-shemesh, and went along the high-way, lowing as they went, and turned not aside to the right hand or to the left' (1 *Samuel* vi). Crossing the border they stopped at a certain spot by a standing stone and here they were sacrificed on a fire made from the wood of the cart, the Ark returning to the Sanctuary. This is a remarkable story, for the Ark by all accounts was an instrument of great magical potency and the description of its sonic journey straight across to a standing stone in a field indicates the possible use of prehistoric alignments for the transmission of people and objects.

These various stories of the magic location of sacred sites are not confined to Britain, but refer to a geomantic tradition once universally known. All over the world the centres of spiritual power were discovered by means of a system which combined science, astrology and intuition. Above all, in China, not only was every sacred building magically sited, but the Chinese geomantic principles are known, for the practice of divining the sites of houses and tombs was carried on well into this century.

A hundred years ago the practice of Chinese geomancy first became generally known in the West through the complaints of European business men, who found inexplicable resistance to their rational plans for exploiting the country. Continually they were informed that their railways and factories could not take certain routes or occupy certain positions. The reasons given were impossible to understand, for they had no relevance, economic, social or political, to the problem of laying out an industrial network. The Europeans were told that a certain range of hills was a terrestrial dragon and that no cutting could be made through its tail. Tunnels through dragon hills were forbidden, and a proposed railway to run straight across low, flat country was rejected on the grounds that the line would spoil the view from the hills. All this was laid down by practitioners of the science of *fung-shui*, 'wind and water', obscurely explained as 'that which can not be seen and can not be grasped'.

It has been suggested by modern Chinese nationalist writers

that *fung-shui* was in effect a kind of town and country planning measure, an attempt at preserving the harmony of the countryside. Certainly the practice of *fung-shui* gave the landscape a quality of beauty and order totally beyond the achievement of any modern western planner. This was because it was based not on merely secular considerations, but on a sublime metaphysical system in which scientific and poetic truth harmoniously united.

Geomancers, exponents of *fung-shui*, were consulted over the erection and siting of any building or tomb anywhere in China, and over the placing of any tree, post or stone which might affect the appearance and nature of the countryside. It was recognised that certain powerful currents, lines of magnetism, run invisible over the whole surface of the earth. The task of the geomancer was to detect these currents and interpret their influence on the land over which they passed. The magnetic force, known in China as the dragon current, is of two kinds, yin and yang, negative and positive, represented by the white tiger and the blue dragon. The lines of this force follow, for the most part, mountainous ridges and ranges of hills. The yang or male current takes the higher routes over steep mountains, and the yin or female flows mainly along chains of low hills. The most favourable position is where the two streams meet. The surrounding country should display both yin and yang features, ideally in the proportion of 3:5 yang and 2:5 yin. Gentle, undulating country is yin, and sharp rocks and peaks are yang. The best country is that in which the character of each part is clearly defined, but both yin and yang lines should display certain characteristics of their opposites in the country they cross.

The task which later geomancers most commonly undertook was the location of tombs. The Chinese attached great importance to the influences which played over the bodies of their ancestors, believing them to control the future course of the family's fortune. Great dynasties were said to have arisen from the particularly favourable placing of an ancestor's tomb, and the first action of the central government, when faced with revolt, was to locate and destroy the family burial mounds of the rebel leaders. Disputes between brothers over the spot where their father should be buried were common, each party hiring a geomancer to locate the site most auspicious to his own particular client's interests.

In finding a burial site a geomancer first located the main currents, yin and yang, that crossed the area where the tomb was to

be sited. A spot where the blue dragon met the white tiger, where a chain of low hills ran into a mountain range, was first investigated. At such a place the power of the dragon pulse is at its height, particularly if the site is quiet and sheltered, secluded 'like a modest virgin'. Under these conditions the beneficial force is strong and active. In open country it becomes dissipated, particularly where drained by straight stretches of flowing water or by other angular lines in the landscape. The presence of railways and the straight lines of canals greatly lessens the concentration of forces in their area.

The ideal spot for a tomb is at a junction of the two currents, the blue dragon to the left and the white tiger to the right. It should face south with a hill behind and lower, picturesque country in front. The soil should be of white sand, free of ants, near the curve of a slow, meandering stream. Noisy, violent features of the landscape should nowhere be evident. If such a spot could be found, intimate and charming in all its details, this was considered perfect, particularly if the meeting of the two currents was marked by a small, grassy knoll or follow.

Yet even here forces hostile to a particular burial might prevail. The astrological influences had to be consulted. This was done by means of a geomancer's compass, consisting of a magnetic needle suspended at the centre of a circular disc. The disc was divided into rings, the inner ring, immediately surrounding the needle, inscribed with the eight trigrams of yin and yang, the outer rings showing the twelve signs of the zodiac, the twenty-four houses and other astrological symbols. The compass was orientated south and the influence over the man to be buried compared with those over the proposed site. If the conjunction was favourable, the right burial place has been found.

Not only tombs were sited in this way. Every building and plantation had to occupy its correct position in the landscape. The geomancer's vision interprets the earth in terms of the heavens. They saw the mountains as stars, the ocean and wide rivers as the Milky Way. From the great mountain ridges which conduct the main lines of the dragon power smaller currents run like veins and arteries into the surrounding country. Each of these lines has its particular astrological character, its own harmony and colour. Chinese geomancers preserved the system by which the lines could be seen and interpreted. The fleeting vision which Watkins experienced on the Bredwardine hills could be achieved at will by men who understood

the secrets of terrestrial geometry.

It amazed the Chinese that materially advanced Europeans should be quite ignorant of the geomantic science, so culturally retarded that they could see no further than the visible surface of the landscape. Many believed that the foreigners knew *fung-shui*, but for some reason were keeping their knowledge secret. It was noted that a grove of trees, planted to give shade to a Hong Kong hospital, had been placed according to the best geomantic principles and that the richest foreigners had built their houses in a most favourable position below the finest dragon hill in the colony. Yet at other times foreigners seemed truly ignorant and gullible. They would accept as concessions the most inauspicious land in the country, flat, angular and featureless, where predictably they were subjected to flood, drought, attacks of white ants and other plagues and disasters. Moreover, their doomed proposals to build railways through obvious dragon lines seemed blatantly perverse.

In China until recently, as long ago in Britain, every building, every stone and wood, was placed in the landscape in accordance with a magic system by which the laws of mathematics and music were expressed in the geometry of the earth's surface. The striking beauty and harmony of every part of China, which all travellers have remarked, was not produced by chance. Every feature was contrived. The main paths of planetary influence, determined by thousands of years of astronomy, were discovered in the landscape, the smaller lines that ran between them reproduced in the crags and fissures of the earth. These were the lines of dragon current or *lung-mei*. The various parts of the earth each fell under a particular planetary influence passed down through the lines which ran above them. Besides their lunar or solar, yin or yang, characteristics, certain lines were related to one of the five planets, Jupiter, Mars, Venus, Mercury or Saturn. These planets correspond to the five materials, wood, fire, metal, water and earth. Their colours are yellow, red, blue, white and black. Other correspondences link the planets with the materials of the body, the internal organs and with the fortunes of men. Even the shape of hills should conform to their astrological position. Steep mountains with sharp sides and peak pertain to Mars; those with the top broken off, to Jupiter. Hills under Saturn have a flat summit, those under Mercury are low and dome shaped, and hills of Venus are dramatically high and rounded.

Certain influences go well together; others cannot lie happily in

conjunction. This is demonstrated in China by the relationships between the five material principles. Wood feeds fire but eats up earth; fire produces earth but consumes metal; earth produces metal but soaks up water; metal produces water but destroys wood; water produces wood but destroys fire. Metal and earth are compatible, but metal and fire are not. On the same principle Venus can go with Saturn but not with Mars. Thus a high rounded hill will harmonise with one with a flat top but not with a sharp mountain peak. The two could not therefore stand together. Where nature had placed two hills in discord, Chinese geomancers had the shape of one altered. The top of the peak would be cut off or the rounded hill sharpened with an earthwork or flattened into a high plateau. In this way the paths of the various influences across the country were visibly defined, the very bones of the landscape altered to reflect the celestial symmetry.

The lines of the currents streaming over the surface of the earth were traced out in the Chinese landscape. The direction and strength of their flow was measured and even modified for human convenience. A line was extended by removing some block in its course. Another, whose current was too powerful and violent, was weakened by breaks in the alignment. The eaves of a Chinese house were always set at a different height to those of its neighbours; if they were level, the long straight line might form a dangerously powerful conductor. Straight lines drain the beneficial influences from a quiet, secluded site; they introduce tempestuous forces into areas of peace. The lines of the dragon current run straight across country, but locally their course should be modified by a series of gentle curves. By this means the violence of their flow can be abated and their currents diverted into smaller channels to irrigate the surrounding countryside. The scenes in which geomancers delight are those where the full range of nature can be seen in microcosm, where great hills, mountains, rivers and oceans are reflected in small rock clusters, green hillocks, streams and pools, a vast landscape reduced to the scale of a garden. At such a place the nature and meaning of the surrounding country can be divined at a glance; the terrestrial harmony becomes apparent. From this secluded centre the lines radiate over the surrounding hills. Everywhere they influence the country over which they pass, and are themselves modified by the angles and undulations of the land below. Where they meet, the harmony of their mingling streams is perceptible to the poetic senses. The eye is enchanted by gentle curves, the ear by soft breezes and

trickling waterfalls, the mind, susceptible by soft breezes and trickling waterfalls, the mind, susceptible to the hidden proportions of the invading influences, is soothed by the unity and tranquillity of the holy centre. The secret rules of poetry and aesthetics, which we now believe to be beyond rational expression, can be demonstrated in numbers, ratio and angles of the confluent lines of terrestrial geometry. The mathematical rules of the universe are visible to men in the form of beauty.

To select the most auspicious site for any monument or building a geomancer must use both knowledge and perception. He has first to locate the course of the major lines of force in his area, to assess their strength and the directions of their flow. To this end the geomancer studies the heavens and relates the features of the local landscape to those of the celestial dome, interpreting the arrangements of hills and mountains in terms of the constellations and planets. In this way he will find the astrological centres where the rays from the heavenly bodies on the horizon converge, producing figures meaningful in terms of proportion and number. To find such a place by trial and error would not be possible for one man in a lifetime. It could not be done even with modern instruments by the most knowledgeable astronomer. The centre, once found, can be confirmed scientifically, but its first discovery must be through other methods. A geomancer must develop the instinctive perception like that of a dowser by which the spot he is seeking can be recognised. Certain parts of the earth's surface are, by general agreement, pleasant and charming; others are depressing. Houses and settlements are rebuilt on the sites of their predecessors because the qualities that commended the spot to men thousands of years ago have the same appeal today. When we select the best bit of ground on which to build a house, we are not merely indulging our individual fancy, but applying to our choice the poetic values common to men of all times and all races. A house placed in the landscape to please the western eye would probably be on the very spot most favoured by a Chinese geomancer.

Each line of the dragon current has a different quality reflected in the country beneath, and each has an affinity with certain parts of the body, with particular plants and animals. Their prevailing material and colour can also be deduced. Geomancers interpret the occult geography of their region. One range of hills forms a green dragon at rest; another the arm of a sleeping giant. Over thousands of years

these natural shapes have been adapted and emphasised. In China mountains were remade to improve the astrological conformity of nature. In Britain the outlines of hills were altered by mounds, earthworks, cuts and notches. From any stone circle the man-made feature on the surrounding ridges are clearly visible against the skyline. It may be that the double peaks discovered by Professor Thom to measure accurately the 9(Degrees) variation in the orbit of the moon are not placed so conveniently by chance. A great many hills, rocks and mounds, of which the Wrekin and Silbury are but two examples out of hundreds, are supposed according to local legends to have been set down on the landscape by a former race of earth-moving giants. It may yet be discovered that the engineering masterpieces of the prehistoric world are on an even larger scale than has ever been suspected.

Dr Stukeley saw the work of old British geomancers at Avebury and extended his vision to encompass the entire country. Mrs Maltwood looked with a geomancer's eye at the Somerset plains and understood in a flash the secret of the zodiacal giants hidden in the landscape. Alfred Watkins, envisioned on the Bredwardine hills, perceived the veins and arteries standing out clear against the Herefordshire fields. Blake, Wordsworth, Coleridge, Tennyson and many others sought the vital spots to penetrate the layers of time that cover the face of the country. The feeling they all shared was of some forgotten secret. They glimpsed a remote golden age of science, poetry and religion in which the vast works they saw in the landscape were accomplished. Each of these English visionaries knew that what he saw was but a fraction of the great mystery, the key to which had been lost. Britain, they felt, was the holy land under enchantment. As at the castle of the Grail King certain things must be asked before the spell is broken, so must the right question be found to lift the veil that hides the form and spirit in the landscape.

Chapter Two

Paths of the Dragon

A nineteenth-century traveller, Mr W. E. Geil, who visited the Great Mound of Ching, an artificial hill in North China, was told by the local people, 'the position of the Mound was fixed by men of magic as being auspicious. The dragon pulse, meaning the magnetic currents with which the dragon is supposed to be connected, is good. The mountain south is a dragon at rest. The river north is a dragon in motion.'

The whole of China south of the Great Wall was formed to a single design, in which the topographical features of the landscape were artificially moulded to produce their conformity with the required pattern. Few Europeans have realised the extent to which the whole face of China was contrived by human art, rivers raised or lowered according to the demands of geomancy. Many towns are placed on the southern slopes of an artificial hill, constructed to provide shelter from the unfavourable influences from the north. Of these the greatest is Coal Hill outside Peking, lying across the main axis of the city. The name Coal or Cold as in Cole's Hill or Coldharbour is commonly found in England in connection with a feature in the ley system, and appears etymologically to indicate a cavern or hollowed hill. Every year the Emperor ascended Coal Hill with his courtiers, priest and astronomers and made a ritual survey of the great meridian line which divided his kingdom from north to south. On the accurate determination of this line the whole sacred geometry of the country depended. Such hills were the centres of astronomical observation, for the whole system of alignments was closely related to aspects of the sun, moon and stars. The entire Chinese landscape was irrigated by a network of invisible canals, along which flowed the dragon current, the fusion of the terrestrial current with the influences emanating from the heavenly bodies.

In China, as in every continent of the world, the dragon chiefly represents the principle of fertility. The creation of the earth and the appearance of life came about as the result of a combination of the elements. The first living cell was born out of the earth, fertilised from

the sky by wind and water. From this union of yin and yang sprang the seed which produced the dragon. Every year the same process takes place. The celestial influences restore life to the barren earth, reanimating the minerals from which all vegetation derives its vital energy. Nourished by the virtue stored up within the minerals of the earth, trees and crops flourish and bear the fruit on which men and animals are sustained. At the year's end the minerals lose their vitality and fertility wanes.

The legend of the dragon, both in Britain and China, illustrates this cycle. The dragon is born from an egg beneath the water. It grows rapidly, devouring everything within its reach. Finally it is killed by its appointed executioner.

Every aspect of the dragon's career is represented in stories, songs and dances. The stages of its seasonal growth are celebrated all over the world in the rites and festivals which reach their climax at the beginning of winter in the processions that mark the dragon's death. In Padstow on the Cornish coast a monstrous figure called the hobby horse is paraded through the streets on the first day of May and at one time was thrown into a pond at nightfall. A week later a similar procession, the furry dance, takes place at Helston in the same county, and a hundred years ago these ceremonies were widely known all over the West Country. Elsewhere in England, notably at Burford and Norwich, until suppressed by jealous clergymen, seasonal fairs and carnivals were held on the day when the dragon was paraded through the streets.

Of the Christian saints and angels to whom the feat of killing the dragon came to be attributed, the best known are Saints Michael, George, Catherine and Margaret. Many villages, said to have been the scene of the killing of a dragon, have churches dedicated to one of these. Yet all over England we hear of local, secular figures as the heroes of this act. Often they are well-known members of local families, whose descendants still live in the neighbourhood. Miss Somervail, of the line of William de Somerville who killed the worm or dragon of Linton in Roxburghshire, still lives on a corner of the land granted to her ancestor for his achievement, as did until recently Miss Garston of Mordiford in Herefordshire, descendant of the slayer of the Mordiford dragon. Somerville was a Norman squire; Garston of Mordiford, a condemned criminal, who was given the option of exchanging his life for that of the local dragon, which he exercised by hiding in a barrel and shooting through a hole at the monster as it

came down Serpent Lane to drink at the river Lugg.

The Somerville crest is in the form of a dragon on a wheel. So is that of the Llewellyn family from which came the knight who killed the dragon of Unsworth in Lancashire. This badge is still displayed outside the inn, *The Dragon on the Wheel*, at Dinder in Somerset, a county where the legend of the killing of a dragon is widely recorded. In the north of England dragon-killing families include those of Lambton, Wyvil, Loschy, Latimer, Mowbray and Conyers. The last of these, Sir John Conyers, came from Sockburn in Durham, a notable spot of ancient sanctity on a remote peninsula formed by the river Tees where a ruined church in the now deserted village stands on a circular mound and contains some beautiful Celtic carved stone illustrating the legend. The last member of his family lost his estate at the beginning of last century and died a pauper in Chester-le-Street.

In the south John Smith killed the dragon of Walton Hill near Deerhurst in Gloucestershire; a member of a former local family, Hext, did the same at Aller in Somerset; Bardolph and Buslingthorpe killed dragons in Lincolnshire, where South Ormesby, Walmsgate and other villages of the Wold are traditionally the scenes of these encounters.

All over England the dragon-haunted hills and the spots where the dragon was killed are still remembered locally: Crowcombe and Trull in Somerset, Henham, Saffron Waldon and St Osythe's in Essex, Longwitten in Northumberland, Nunnington, Slingsby and Well in Yorkshire, St Leonard's Forest and Horsham in Sussex, Brinsop and Bromfield in the Welsh border counties and many others elsewhere. There are even relics of battles with a dragon: the Sockburn falchion, the sword of John Smith of Deerhurst, the spear of Hext in the church at Low Ham. A table carved with the dagger that dispatched the dragons of Unsworth was to be seen for many years in the Llewellyns' old manor house. A number of parish churches contains an effigy of the local dragon-killer and early Celtic stone carvings show that the legend is of an age far more remote than that of its traditional historical heroes.

The wide distribution all over Britain of these dragon legends, their vivid detail and historical associations, indicate something of the force which the idea of the dragon must once have possessed. The most complete form of the legend is, perhaps, that of Lambton. This tells how the family heir, fishing in the river Wear, caught a small worm or eel which he flung into a nearby well. The worm soon

outgrew the well and, while young Lambton was away at the Crusades, it moved to a mound on the river bank from which it devastated the country, consuming vast quantities of milk, corn and flesh and finally threatening the Lambton Castle itself. At this stage the heir returned and prepared to exterminate the monster. He put on a suit of armour set all over with sharp blades and stood on an island in the river. The dragon rushed upon him and tried to curch him in its coils, but the knives on the armour cut it into little pieces which were swept away by the current before the dragon could exercise its traditional power of reassembling its dismembered parts. Lambton had sworn that if victorious he would offer in sacrifice the first living creature he came upon, and had arranged for a dog to be set loose to meet him. But his old father, overjoyed at his success, tottered out of the castle to be the first to embrace the hero. Unable to kill the old man, Lambton was forced to break his oath, and as a result feel under a curse which affected the family for many generations.

This story was certainly one of those enacted by local or wandering players at fairs and religious festivals, and the life of the dragon, the annual rise and wane of the fertilising principle, must at one time have been seen as a seasonal dramatic ritual by almost everyone in the country. Several legends conclude with the skin of the slain dragon being taken to a local church and there exhibited. At Rudby church in Northumberland the dragon's skin is said to have been on show until recent times and this detail evidently related to the former practice of storing the ceremonial dragon regalia in the church in between its appearances at festivals. There is no doubt that the performance, which in later years became a mere decoration of rustic life, was once the crowning event of a magical cycle, invoking the fertilising currents to active and beneficial effects.

The places associated with the dragon legend, the nerve centres of seasonal fertility, appear always to coincide with sites of ancient sanctity. Churches on old mounds, flat-topped hills, holy springs and wells are pointed out as the scene of the dragon's life or death. Towns and headlands along the dragon's path preserve the name of the flying worm, lindworm or orm, of which Linton, Ormsby, Wormhill and Great Orm's Head are typical examples. Many old stones have the same associations. Ruth Manning-Sanders in *The River Dart* tells of the local belief in dragons haunting megalithic stone rows and writes, 'There is a tradition on Dartmoor that the circles were first set up at a time when winged serpents basked on

the logan rocks and flew around the tors.' Boswell described a stone avenue he saw in Scotland said to have been erected to attract a monstrous sea dragon from its lair.

When visiting some of these mounds, stones and ancient church sites associating with the dragon, it is hard to avoid the impression that they were located according to principles similar to those adopted by the geomancers of China. There it was said that the dragon's heart is to be found at a lonely knoll standing in a small plain or valley among the hills. From the central spot the veins of the dragon current run over the surrounding ridges. Near the heart its force, pent in by the hills, is strong and active. At this centre the dragon and the tiger, the male and female currents, meet harmoniously. Standing on a prehistoric mound one can look at the landscape with the eye of a geomancer and, perhaps, acquire some insight into the nature of the influences which determined its site.

In view of the existence of an identical belief associating the mounds and stones of both Britain and China with the winged serpent or dragon, it is not unreasonable to compare features of the antique sites of both countries. The churches of Linton, Brinsop, Sockburn and others of which the dragon legend is related stand on flattened artificial mounds like that once occupied by the Lambton worm. These mounds, like the stone rows and circles from which they form alignments, are typical of those once used in both countries in connection with astronomy. The mounds, which form the centres of the dragon current in China, were also used for planetary observation, as we know from living tradition and from the survival of the practice into modern times. In England, as Lockyer shows, sighting mounds were placed to mark the directions of astronomical declinations from stone circles. M. Cotsworth in *The Rational Almanack* demonstrated how Silbury Hill could have been used as an accurate solar observatory by means of the shadow cast on the carefully levelled plain to the north. The meridian line from Silbury runs through Avebury church across the artificial plateau, and on this line Cotsworth found the remains of a standing stone carved with a symbol he interpreted as a fish. Avebury church may have been placed on a site formerly associated with the dragon, for a mediaeval carving on the font shows a bishop stabbing an encroaching dragon with his crozier. Certainly it stands on a ley running between Stonehenge and the stone circle at Winterbourne Abbas and passing through two churches and the eastern slope of Silbury Hill. Silbury is

of course a noted centre for alignments of dead-straight prehistoric tracks, resurfaced by the Romans, and of standing stones, as shown by a photograph in Tyler's *Geometrical Arrangement of Ancient Sites*.

In view of the fact that in China mounds such as Silbury were erected upon *lung-mei*, the paths of the dragon, and reserved only for royal burials, there is good reason to suspect that Silbury itself was sited by pre-Celtic Druids on a dragon line with the assistance of a geomancer's compass and that any burial it may contain is that of a king. It may also be inferred that the Chinese *lung-mei* and the leys of Britain have an identical function, for the Chinese believe that *lung-mei* stretch over the entire globe. Many centres of the English dragon legend stand at the junction of well-marked leys, and in one case at least the straight line between them is of the highest precision, elaborately engineered and of obvious astronomical significance. This is the St Michael's line that runs from Avebury circle to the extreme west of Cornwall, of which more will be said later.

St Michael and St George appear to illustrate two aspects of the same principle. The archetype to which they related is the same as that represented by Castor and Pollux who directed the mysterious St Elmo's fire, a current of etherical electricity over which the Greeks seem to have retained some control even into historical times. St Michael rules over the high rocky crags and pinnacles and St George over the lower hills like the white tiger and blue dragon in the Chinese landscape. St Michael's shrines are especially characteristic. All over Europe, particularly on the coasts of Brittany and Cornwall, his churches and chapels crown the summits of rocks and mountains. Mont St Michel in Normandy, the chapel of St Michel L'Aiguille et Le Puy, the hilltop church of St Michel facing the stone alignments of Carnac, the Celtic monastic church on Skellig Michael, a sheer rock off the Irish coast, the chapel on the crag near Torre Abbey, Torquay, Roche rock hermitage, Brentor church, Gare Hill in Wiltshire, all these are typically dramatic examples of St Michael's citadels. It was on such an eminence that he is said to have killed the dragon, and he became a natural successor to the pre-Christian deity, the guardian of the dragon current that he supplanted. Like St Patrick's in Ireland, the story of his victory over the dragon or serpent, originally illustrating his control over a natural, elemental force, was taken by early Christians to represent the defeat of the old religion by the new. This selective interpretation hid the dragon's wider elemental and astrological significance.

It is easy to emphasise a particular aspect of a symbolical figure to suit a particular interpretation. Yet to do so is to misunderstand the whole nature of the language in which images such as that of the dragon have a precise though indefinable meaning. Symbols are only used where there is no literal expression of sufficient scope to comprehend the principle to which they refer. The dragon has many attributes and correspondences, none of which can be analysed in isolation. In Babylonian mythology the primeval serpent, Tiamat, was killed by her children; in Greece Apollo destroyed the father of the earth, the dragon Python. These are stories from sacred history, extracts from an elaborate astrological record of the cycles of ages. The policy of the Christian Church was to destroy all documents relating to the former system of spiritual science and to suppress the practice of astronomy. As a result of their rejection of the mysteries and of traditional scholarship, Christian philosophers lost the ability fully to appreciate the nature of the true names, numbers and symbols they had inherited.

In the *Queste del Saint Graal* Percival on a wild mountainous island killed a serpent which he found struggling with a lion. That night a woman on a serpent together with another woman mounted on a lion appeared to him in a dream and reproached him for what he had done. An old man interpreted the dream for Percival, saying that the woman on the lion represented Christ's new law, and the woman on the serpent the old law. Commentators believe that this explanation is a comparatively recent addition to an old legend, inserted at a time when the dragon and its slayer had lost their greater astrological meaning, and had come to simply represent the opposing principles of good and evil, thereby perpetuating the heresy of dualism.

Even at the celebrations of the shortest cycles of the ebb and flow of the dragon current, the seasonal feasts, the vital figure of the dragon itself became confused in the mummers' plays with that of the Saracen knight and other foes of Christianity. The places where Druids of the old religion invoked the power of the serpent were occupied by the new church. The former practices became a mere seasonal ritual in which the head of a prominent local family played the hereditary role of dragon-killer, the dragon itself degenerated into a grotesque pagan monster. St Michael and St George stood guard over the old dragon hills, first as heirs to the former mercurial deities, later as their adversaries. The former mercurial deities, later as their

adversaries. The former mercurial deities, later as their adversaries. The astrological aspect of their character, with St Michael's trumpet sounding the note of each new age, became obscured by their popular attribute as defenders of the faith. As Professor Elliot Smith remarks, 'The dragon was originally a concrete expression of the divine powers of life-giving, but with the development of a higher conception of religious ideals it became relegated to a baser role, and eventually became the symbol of the powers of evil.'

At certain seasons of the year the dragon passed overhead down a straight line of country, drawing in his wake the fertilising powers of life. Astronomers observed its passage, astrologers predicted the moment of its appearance, geomancers, Watkins's dodmen, marked its course with alignments of mounds and stones. Processions down the line from centre to centre for the annual invocation of the dragon current created straight tracks, sections of which survived until lately as traditional pilgrims' paths linking the holy places. It can still be found that the legendary haunts of the dragon stand in line with others, joined together by carefully set rows of stones and earthworks all over the country. A clear example is the St Michael's line, centred on Avebury.

The St Michael line of traditional dragon sites in southwest England, referred to above, is remarkable for its length and accuracy. It appears to be set between two prominent Somerset hills, both dedicated to St Michael with ruined churches on their summits. These two hills are Glastonbury Tor and 'The Mump' at Burrowbridge some ten miles to the south-west. Both these hills appear to have been artificially shaped so that their axes align with each other, and their orientation, 27(Degrees) north of east, can be read off a large-scale Ordnance Survey map, Together they point to the great stones at the southern perimeter of Avebury circle, and the line extended westwards passes over the island rock of St Michael's Mount to the extreme south-west point of England below Land's End. Continued east from Avebury, it takes the same general directions as the old Icknield Way, running along the ridge that marks the border between the chalk hills of the south and the Midland plain, and crossing the coast near its most easterly point above Lowestoft. It therefore marks the longest continuous stretch of land in southern England. Not only does that line link the two greatest abbeys of mediaeval England at Bury St Edmunds and Glastonbury, it is also remarkable for the number of hills and churches dedicated to St Michael which fall

directly on its route. Eastwards of Avebury it crosses the ancient site now occupied by the church of Ogbourne St George. The great rock to the west of Dartmoor on which stands one of the oldest, smallest and least accessible of all churches, St Michael's, Brentor, stands just off the alignment about a mile to the south. On the south edge of Bodmin Moor the line crosses above the triple stone circle, the Hurlers, over one of the most remarkable prehistoric sites in Cornwall, the hilltop enclosure within whose walls stand three massive piles of granite, the most spectacular known as the Cheesewring.

It is absolutely impossible to escape the sensation that these rocks are the centre of some form of influence which affects the surrounding country. If one travels in South Africa in search of rock shelters decorated with aboriginal paintings, it is soon possible to detect at a glance the likely sites, the natural holy centres of the landscape. The Cheesewring is just such a place. The delicately poised stone piles may or may not be of natural formation. Certainly none of the boulders is larger than the capstone of a dodmen. One fallen stone is carved into the shape of a huge wheel, of which half only now remains, and the flat summit of the central pile is carefully inscribed with prehistoric markings. Several alignments of ancient sites in Cornwall terminate on the coast at logan stones, great boulders so precariously balanced that they can be set rocking at a touch. Evidently they were objects of interest in prehistoric times, for not only do they stand at the end of ancient alignments, but many are heavily scored with cup marks. An older generation of antiquarians believed them to have been erected by the Druids in connection with their serpent worship, and until recently few doubted this to be the case. For the respect with which country people in the early eighteenth century still regarded the sites of prehistorical sanctity, stone circles and megalithic pillars, was also paid to rocking stones and to certain other curious rock formations, apparently of artificial origin. Dr Borlase, the Cornish historian, gives as the reason for the overthrowing of a celebrated rocking stone by a local Cromwellian governor that 'the vulgar used to resort to this place at particular times of the year, and payed to this stone more respect than was thought becoming good Christians'. Logan stones and isolated piles of rock are associated by tradition with the invocation of fertility, and it is evident, as Mr J. Williams has also concluded, that the great boulders, set up on the high moors and coastal cliffs, played an

important part in the generation of the terrestrial current and its transmission down alignments of pillars and stone circles.

The whole line from St Michael's Mount, over the Cheesewring, by St Michael's, Brentor, Burrowbridge, Glastonbury and Avebury may in some remote ages have formed a continuous sacred track, for a few isolated stretches still remain. From Burrowbridge to St Michael's, Othery, the next point on the line, there was once an old causeway over the marsh. At Glastonbury, in the same alignment, the Pilgrim's Path still runs right along the ridge of the Tor and at Avebury the line exactly coincides for over three miles with what is now the main road to Devizes from the southern entrance to the stone circle through Beckhampton. Obviously the alignment of these St Michael's hills through the west country was an important factor in determining the site of the Avebury rings.

All the way down the line from Avebury, the serpentine temple, to St Michael's Mount there linger relics of some former religion whose object of veneration was the spirit represented as a serpent. Some inspirational quality distinguishes the sites. To mediaeval pilgrims St Michael's Mount was a place of miracles, the scene of a visionary appearance by St Michael himself. At Trull below Taunton, where the line passes over the St Michael's church, Castleman's Hill nearby is pointed out as the traditional site of the dragon's death. At Glastonbury the message of Christ first took root in northern Europe. Like Hermes, who was born and had his sanctuary in a cave on the summit of Mount Kylene, St Michael was enshrined on the high places. Their common attribute as guides on the pathway between life and death identifies those two with the same archetype, for both Hermes with his serpent-entwined wand and St Michael, impaling the dragon on his sword, represent the principle known to geomancers as the dragon current.

The hills and churches dedicated to St Michael, or the corresponding Welsh Llanfihangel, play an important part in the system of prehistoric alignments. At Carnac, the great magnetic centre of Brittany, rows of standing stones are directed towards the dramatic St Michael's Mount that dominates the sacred plain just as many of the stone avenues of Dartmoor point to a hilltop cairn. The map of Somerset shows another striking St Michael and St George alignment which also features 'The Mump', Burrowbridge. From this hill with its ruined St Michael's church a line can be drawn through three other churches, St Michael's, Shepton Beauchamp, Seavington

St Michael on an artificial knoll and Hinton St George on a high ridge, looking north over the marshes. The Burrowbridge Mump, otherwise known as King Alfred's Fort, which forms such an outstanding feature of the otherwise flat landscape, has long been known as a place of sanctity and the scene of many notable events in the history of Sedgemoor. Its unexpected location and regular shape indicate that it is an artificial structure, and Collinson in his *History of Somerset* records the existence of local tradition to that effect. He describes the hill as 'a large borough or mount, very high and steep, which though generally reckoned natural, seems to have been thrown up by hands for the purpose of a sepulchral tumulus'. Moreover, he observes, the Mump is constructed of red clay, not a local soil, but one whose nearest deposits are otherwise found some miles distant. Many other striking topographical features of the English landscape, now assumed to be of natural formation, may yet come to be recognised as among the most remarkable achievements of prehistoric engineering.

The Rev. L. Lewis, former vicar of Glastonbury, collected many of the old traditions still surviving among the country people of Somerset about the sacred road followed by Christ and Joseph on their journey across Britain from the coast. According to some they made their landing on the north coast and travelled by way of the River Brue, which later became the Glastonbury canal, aligned, as the old print shows, upon the Tor. Others say that the holy spirit touched Britain first at St Michael's Mount and took the straight way to Glastonbury on the line of St Michael's dedication described above. As guardian of the spiritual path over the high places St Michael is, as suggested above, identified with Hermes, the mercurial god of roads and stone pillars. The romans found Mercury stones set in line over the Etruscan countryside. In Greece the phallic image of Hermes stood in the centre of the market place, and the roads that ran in from the surrounding districts were lined with similar stone pillars.

Watkins compared the straight track leading to the Greek cities with the leys of Britain and found in both cases an association with Hermes, known to the Egyptians as Thoth, to the Gauls as Theutates, the name surviving in the numerous Tot or Toot hills all over England. Hermits, he believed, owed their name to their former situation as servants of Hermes, and it does appear that at one time they acted as guides to pilgrims and travellers across the mountains and wild

places. Some kept lighthouses, others worked ferries or deep in the forest provided shelter for wayfarers. As so often during the course of his researches, Watkins found the old straight track pointing towards some occult principle in a direction he did not care to advance. For *The New English Dictionary* gives Hermes as an old name for the will o' the wisp, the native Puck or hobgoblin who leads travellers down forgotten paths to lose them in bogs and desert places. All over the world the ghost of the former mercurial deity hovers above the old paths and standing stones. In his own mind Watkins knew that leys were something other than roads of commerce. His psychic vision could not be blindfolded, nor could he avoid the impression that prehistoric sites were still haunted by a spirit invoked there thousands of years in the past. Mercury, Thoth, witches, fairies, lonely hermits, flying serpents, wandering lights, all somehow referred to a mysterious principle, a force which had once animated the lines between stone pillars, earthworks and mountain tops.

Chapter Three

The Serpent Power

Only within recent years, since the development of universal communications allowed us to compare the antiquities of our own countries with those of others, have we been able to see the extent of the vast ruin within which we all live. If we ignore all alterations to the landscape arising within the last three thousand years and consider the world as it must have looked in prehistoric times, the pattern that emerges is one so incompatible with our idea of civilisation that it is easy entirely to miss its significance. For what we find is this.

A great scientific instrument lies sprawled over the entire surface of the globe. At some period, perhaps it was about 4000 years ago, almost every corner of the world was visited by a group of men who came with a particular task to accomplish. With the help of some remarkable power, by which they could cut and raise enormous blocks of stone, these men erected vast astronomical instruments, circles of erect pillars, pyramids, underground tunnels, cyclopean stone platforms, all linked together by a network of tracks and

alignments, whose course from horizon to horizon was marked by stones, mounds and earthworks. W. J. Perry in *The Children of the Sun* traces the progress of these people across the Pacific, pointing out as an example of their amazing achievements the number of remote, uninhabitable islands bearing the ruins of great laborious pyramids and megalithic structures. Whether this enormous surge of energy, which within a few hundred years covered the whole earth with stone circles and earthworks, was released from one group or race, or whether it flowed spontaneously as a wave of universal inspiration is not yet clear. It appears to some that while the stone circles of northern Europe were built by the native inhabitants, those of Polynesia were the work of prehistoric inhabitants, those of Polynesia were the work of prehistoric missionaries. Yet Stonehenge, the latest and most perfect circle in Britain, has more in common with Crete than the native tradition, while local variations in the design and operation of astronomical structures indicate that every race made its own contribution towards a universal civilisation.

No one knows how the world-wide task was achieved, still less why. And this, of course, is the ultimate question. If we knew why these people outside the range of written history devoted their entire skill and resources to the construction of a terrestrial pattern that measured both the earth and the heavens, we would know the secret of their universal civilisation, a state which now seems hopelessly elusive.

The key, as many have previously suspected, lies within the contours of the landscape.

When Alfred Watkins experienced his extraordinary moment of clairvoyance in which the veins of the countryside appeared to stand out across the plains and hills, he saw or gained knowledge of something beyond the range of normal vision. We know that the whole surface of the earth is washed by a flow of energy known as the magnetic field. Like all other heavenly bodies, the earth is a great magnet, the strength and direction of its currents influenced by many factors including the proximity and relative positions of the other spheres in the solar system, chiefly the sun and moon. Other influences on the strength and activity of the magnetic current derive from the composition of the ground over which it passes. Over firm, flat country it is placid and regular, while over rocky, broken land it becomes violent and disturbed, reacting with the elements to cause magnetic storms and, in northern regions, auroras and polar lights. In

the neighbourhood of geological faults the magnetic flow becomes particularly agitated due to the springs of current which at these places burst through the earth's crust. Government stations all over the world measure the periodic and cyclical variations in the magnetic field chiefly to provide accurate figures for correcting the compass, and there are three such stations in Britain.

Yet although the flow of terrestrial magnetism is closely watched and a certain amount is known about the various factors that influence its rhythm, notably the twenty-seven-day intervals of its quiet and disturbed periods, and although its relationship to the sunspot cycle and hence to meteorological conditions is an established fact, little is understood about its nature and effect. Yet all the evidence from the remote past points to the inescapable conclusion that the earth's natural magnetism was not only known to men some thousands of years ago, but it provided them with a source of energy and inspiration to which their whole civilisation was tuned.

A map of Britain showing the distribution of prehistoric habitation is almost an exact reversal of one giving modern population density. The mountains of Scotland and Wales, the lonely islands, the rocky peninsula of Cornwall, the barren deserts of Dartmoor and the Derbyshire Peak are thick with traces of prehistoric settlement. Yet the fertile meadows of the New Forest are little marked. The places where we now live, the plain sand valleys, were less settled than the inaccessible wastes that today we find uninhabitable. Even in low country, among the Wessex plains, the centres of habitation four thousand years ago were places high in the surrounding hills.