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Published monthly.

Single copies 1s. 4d. (1s. 8d. with postage)
3 month sub. 5s. (postage included)
6 month sub. 10s. (postage included)

Subscribers will be reminded when their subscriptions
expire by a note enclosed with the last issue paid for.

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A non-profit magazine.

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LEAD-IN

The orthodox archaeologist has found the ley system a concept he is incapable of incorporating within the framework of his view of prehistoric society. He therefore dismisses it, but cannot argue against it. To accept it would mean a complete re-appraisal of, and re-writing of, the history of the Neolithic and early Bronze Ages.

Now the orthodox archaeologist must contend seriously with another discovery which he has damned and still regards with hostility. It is postulated that stone circles were constructed by people with an expert knowledge of the heavens and they used their constructions as calendars and computers.

The orthodox archaeologist still inclines strongly to the view that ancient man was at a low technological and a low intellectual level. Ley hunters will disagree with both views. As our study has developed from Alfred Watkins's researches, not only has the technological society - which there certainly was - been stated to be at a remarkably high level, but increasingly modifications have had to be made to upgrade his intellectual level. Astronomical studies with regard to our distant predecessors have been stated by Professors Gerald Hawkins, Fred Hoyle, Alexander Thom, and Lyle Borst. They have been attacked, but not utterly dismissed.

Ley hunting has never attracted academic interest in the way astronomical stone circle research has. I think the reason is that those four wise men I have quoted are professors and ley hunting seems to have no champions with such academic qualifications.

By LYLE B. BORST*

In previous reports the suggestion has been explored that Canterbury Cathedral, eight other English Cathedrals and Churches, and Churches in Scandinavia rest upon megalithic sanctuaries having geometries similar to Stonehenge^{1,2}. St. Stephen's Chapel in Westminster Palace is at a small angle to the main structure. Small angles in Churches such as Canterbury can be explained by the precession of the star upon which the site was originally aligned. At Westminster, St. Stephen's Chapel leads to the Central Hall or Lobby, from which three corridors proceed, accurately north, east and south (Fig. 1b). A similar geometry is found in Syria at the Church of St. Simeon Stylytes ca. 450 AD. (Fig. 2). Were it not for the great similarity, the Houses of Parliament would have escaped identification. Figure 1a shows the geometry which accounts for the singular features of the structure. In Syria the octagon is based upon four circles, transformed into apses, at the corners of a square 34 megalithic yards on a side. The megalithic yard (MY), discovered and named by Prof. A. Thom³ has a value 2.72 feet or 0.829 meters throughout Europe and Asia. At Westminster the circles are 17 MY apart. In Syria a pillar base is located at the center of the octagon. Historical records show that on this pillar St. Simeon spent more than twenty years⁴. A smaller pillar to the south-east was used as a practice pillar. The pillar base shown, cut from the geological formation, is assumed to be the practice pillar. At Westminster we expect no pillars to remain, but the Members' Small Conference

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Why should four professors research into stone circles as having astronomical qualities in preference to studying leys? Has it anything to do with the circles's compactness?

Also we should consider whether our public relations are wrong. Maybe it is repulsive to the likes of Prof. R.J.C. Atkinson and Dr Glyn Daniel that a researcher like myself should seek the answers to **Megalithic Man** in such a diversity of studies - archaeology, astronomy, geology, the occult, astrology, geography, acupuncture, dowsing, architecture, legends, ufology, etc.

Of course, too much specialization is one cause of this narrow-mindedness on behalf of orthodox archaeology. Through "The Ley Hunter" almost every conceivable path to finding the truth behind this study has been suggested. Readers of this magazine are rarely dogmatic - with ufology, however, having a share of ley hunters who believe we have weakened our case by introducing the link with orthoteny and consequently brought ourselves into the line of fire of extra barrages of ridicule from orthodox archaeology. But we must seek the answers from as many angles as possible, and if possible interest experts in each field to do research into our study. I believe the leys have a variety of properties which need to be looked at both as a whole and separately, and specialists will be needed before the whole value of the leys is appreciated.

A long discussionary article, with many diagrams, appeared on the subject of astronomy and archaeology in, of all places, the Spring issue of the Institution of Post Office Electrical Engineers North-East Region journal. In his concludory remarks, the writer, Mr K. F. Wood, writes: "My hopes are that one day soon we shall have the archaeologist and astronomer working side by side on the excavation of a stone circle for there is still much knowledge to be gained. Today, so few archaeologists have sufficient understanding of mathematics and astronomy, and astronomers so little knowledge of archaeological techniques, that an unbiased account is hardly to be expected. Who knows, some day the two disciplines may come together in a new science and ascribe to the circles religious use for the observation of heavenly gods."

I am sure that Prof. Lyle B. Borst, who has contributed to this issue, would welcome, as I do, such an approach as proposed by Mr. Wood.

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archaeology
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through this study has been suggested.

Room in the Cloister shows the same geometrical arrangement. At Gloucester Cathedral a well in the Cloister is geometrically related to the Lady Cathedral and the small apsidal chapels. At Westminster Palace the triangle is $28\frac{1}{2}$, 38, $47\frac{1}{2}$, or 3, 4, 5 in units of $9\frac{1}{2}$ MY. The triangle drawn in figure 2 is 24, 32, 40, but the pillar center as shown on available plans is 22 MY from the axis.

The choice of 17 MY for the side of a square is characteristic of Armenian and Syrian churches, and is found at Canterbury. The hypotenuse is then very nearly 24 MY ($17^2 + 17^2 = 578$; $24^2 = 576$). The rational approximation $24/17 = 1.4118$ for the correct irrational value $\sqrt{2} = 1.414...$ is thereby represented. This representation appears in the Rhind papyrus and was known to the Babylonians during the second millennium BC.

St. Stephen's Porch and Entrance are similar in geometry to Stonehenge, Woodhenge and numerous churches. At Woodhenge³ the oval is generated by sweeping arcs from the vertices of two identical Pythagorean triangles. These triangles have a common side and form an isosceles triangle. Identical triangles at Stonehenge account for the positions of the trilithons and the inner horse shoe. The axis is the axis of the Avenue and misses the Heel Stone². At Westminster the "Woodhenge triangles" are 5, 12, 13 set out in units of 2 MY. These generate the oval (of major radius 6 MY) which in the course of history has become St. Stephen's Porch.

The two towers at St. Stephen's entrance are spaced 17 MY between centers. Each center is 19 MY from the major center of the oval. The right triangles are therefore 17, 34, 38 in units of $\frac{1}{2}$ MY. This approximate Pythagorean triangle ($17^2 + 34^2 = 1445$; $38^2 = 1444$) is found at Canterbury and on the continent. It is used to define an isosceles triangle with base equal to altitude.

The fraction $38/17 = 2.235$ gives an excellent approximation for $\sqrt{5} = 2.236\dots$

The relationship of oval and small circles is just that of Wells Cathedral where the side chapels are related by Pythagorean triangles to the major center of the Lady Chapel. These two sanctuaries appear to face west, presumably toward a favourable horizon as at Wing Church, Buckinghamshire. At Wells there appears to have been no octagon, so the nave was built to the west of the megalithic monument. At Westminster the octagon was to the east so instead of becoming a feratory or Lady Chapel, the oval became St. Stephen's Porch. In Syria the east wing of the church terminates in a central apse of radius 7 MY and two side apses of radius 4 MY. The centers are colinear. If the geometry of Westminster once existed it had been lost before the fifth century when St. Simeon built the church.

Other dimensions are of interest. The north-south length of St. Simeon's church is 100 MY. The distance between the walls just beyond the Peers' and Commons' Lobbies is 100 MY. The distance between the center of the octagon and the major center of the oval at Westminster, and the center of the apse in Syria is 67 MY.

The width of the chapel itself is 30 ft. or 11.0 MY.

At the west end it enlarges slightly. An oval with major radius 6 MY will fit almost exactly if defined by triangles 24, 288, 289. Such a triangle has not been identified in England, but exists elsewhere. No equivalent proposal can be made for St. Simeon's church except by analogy, for the oval, if it existed has been lost.

 * Captions of figures on
 * facing page:
 *
 * Fig. 1. a. Geometrical
 * plan of square and
 * triangles. b. Center
 * section of Westminster
 * Palace including St.
 * Stephen's Chapel,
 * Cloister and Central
 * Lobby.
 *
 * Fig. 2. Church of St.
 * Simeon Stylytes,
 * Syria. Eastern wing
 * is drawn as symmetric,
 * but is known to be
 * asymmetric "by a few
 * degrees."
 *
 * *****

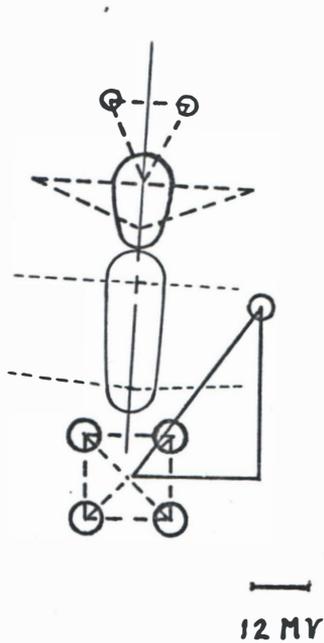


Fig. 1a

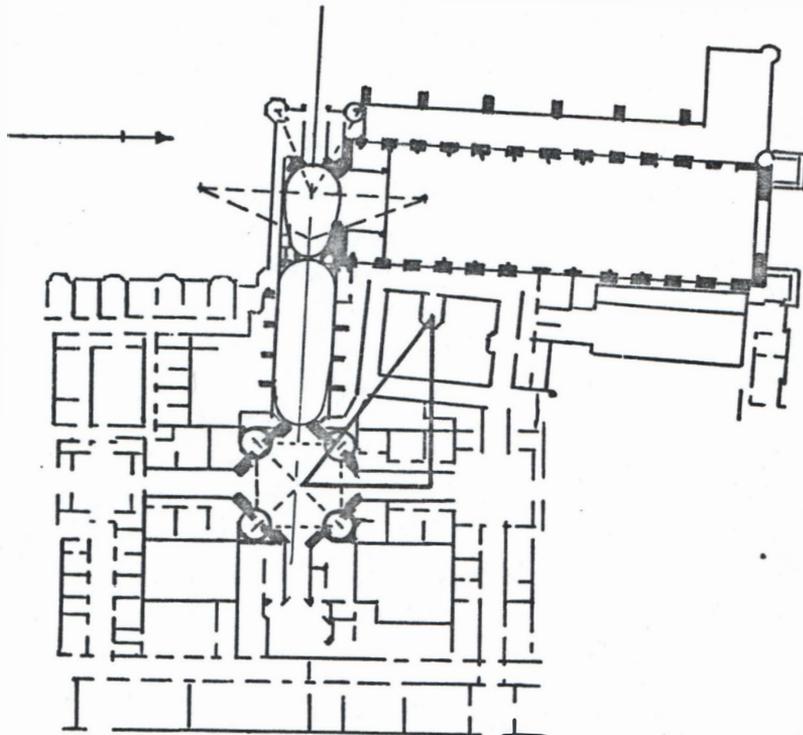


Fig. 1b

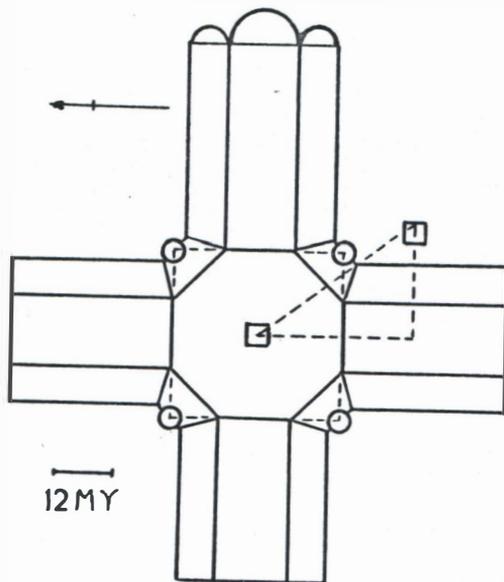


Fig. 2

The identification of four perfect or approximate Pythagorean triangles set out in megalithic yards leaves little doubt of a megalithic origin. If then the orientation of St. Stephen's Chapel is based upon alignment with the setting point of a star, its declination would be 14° north. If that star is the same one used at Canterbury, presently thought to be Bellatrix⁵, then the date would be 700 BC.

The present cloister is fan vaulted and was built in 1547. It is unusual among English churches for it is north of the chapel. Its position would appear to be dictated by the venerated position (the Members' Small Conference Room) and the 3, 4, 5 triangle. If the precession theory is accepted, the cloister would have a date 100 years after the chapel, for it is pointed 1° north of the chapel. This date is still pre-Christian and precedes the monastic movement by more than eight centuries.

Historical references become sparse earlier than the eleventh century. Westminster Abbey, a few rods to the west, was apparently founded 616 AD. and the first church was built by King Sebert⁶. There is good evidence that a tythe of the fish caught between Staines and Gravesend went to the Abbey, thus attesting belief in the earliest myth of the miracle of the fisherman. An important church stood at the time of Edward the Confessor, for in a letter he recorded that he built a new quire some distance east of the existing church. This is probably a reference to St. Stephen's. St. Stephen's Chapel itself was originally romanesque and its construction is attributed to King Stephen (1135-1154).

1 Borst, L. B., Science, 163, 567 (1969).

2 Borst, L. B., Nature, 224, 335 (1969).

3 Thom, A., Megalithic Sites in Great Britain, Oxford 1967.

4 Butler, H. C., Early Churches of Syria, Princeton 1929.

5 Borst, L. B., Science 166, 774 (1969).

6 Bond, F., Westminster Abbey, Oxford 1909.

THE NUTHAMPSTEAD ZODIAC: ESSEX/HERTFORDSHIRE/
CAMBRIDGESHIRE

By NIGEL PENNICK, B.Sc.

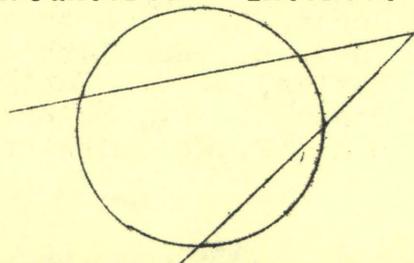
On October 18th., 1969, I was pouring over the 2½in. scale map showing Cross Leys, near Nuthampstead, when I noticed that at Meesden, nearby, a straight road, marked "Roman Road, Beards Lane", deviated. This road travels in a similar alignment to the Foss Way, and the deviation is almost identical to that at Babary, Glastonbury, where Virgo is found on the Glastonbury Zodiac. Upon investigation, the figure of Virgo was found, and after many hours' work, all the figures were found, being very similar to those Katherine Maltwood discovered many years ago.

The area is traversed by the Beards Lane ley and the St. Michael's ley (St. Michael's Mount - Bury St. Edmunds), the same ley that traverses the northern part of the Glastonbury Zodiac in a corresponding position. Other leys crisscross the zone in profusion, one of which is lined up upon 7 churches in the city of Cambridge, terminating at the round church. This, though rebuilt, was once a temple of the Knights Templars, one of only 4 round churches in the country. Another major ley that crosses the Cambridge 7-church ley runs from Rickling church, through Meesden church on Virgo, through a moated mound at Hale Farm, an Earthwork and moat at Biggin, on Taurus, through Bull moat on Aries, and on to Sandon church.

The bifurcated line had thus been seen to operate in the formation of Zodiacs, at least in the two I then knew.

Elated with my discovery I took it the next day to the place I thought I would get a hearing - Gandalf's Garden, which had published a piece by Mary Caine on the Glastonbury Zodiac. Entering the psychedelically-painted shop, I asked to see Muz Murray, editor of the said publication. I was referred to a girl, who seemed interested in leys, though she had never heard of the Glastonbury Zodiac. I referred her to Gandalf's Garden No. 4, which she studied, as I showed her my maps, spread on the floor of the shoppe (sic). Drinking free soup, we discussed my discovery, and she said that I should phone Mary Caine, and she would tell Muz Murray, who might print the discovery.

I left with Mrs Caine's phone number. On ringing her, an entirely different reception was encountered - interest and realization of the significance of the discovery. It transpired that she too had found a zodiac, at Kingston-on-Thames, Surrey. This, too, had the bifurcated line principle.



Weeks later, I had written the article that was intended for Gandalf's Garden. However, as letters I had written to them had remained unanswered, it was published in Cambridge Voice, as part of the Mystic Space Lore series.

After publication of the article, CVs were sent to organizations who we thought would be interested. Having seen "Glastonbury: A Study in Patterns", by Research Into Lost Knowledge Organization (RILKO), a copy was sent off. The reply was interesting - an unhelpful request for more information, and a criticism of CV's coloured ink. A correspondence ensued which showed RILKO wanted information, without any exchange of views.

Others were decidedly cool, excepting Mary Caine, from whom much useful assistance was gained. Presumably, the Cambridge area, despite Alfred Watkins's research ("Ancient Trackways Round Cambridge" 1932), is classified as "normal", i.e. not exceptional, as, supposedly Glastonbury.

The opposite is true. Cambridge possesses a Zodiac, an ancient mound with traces of a labyrinth, the remains of a stone or wood "henge", the largest hill-figure complex anywhere, and well over 60 leys traversing the numerous churches, ex-priories, nunneries, etc., (now the colleges). Kings College Chapel, for which a town church was demolished, and which was built across the town's main street, effectively destroying trade, and hence the town's docks, has never been analyzed, as has Glastonbury Abbey. Accurate ground-plans are not available to a townie like me! Cambridge has not been credited with its dues - its mystic heritage has been suppressed by University people alien both in creed and spirit. This attitude has been reflected in print in that nothing has come out about Cambridge's prehistory - before Cambridge Voice's Mystic Space Lore. Now the gaff is blown - and Cambridge awaits the attention Glastonbury has enjoyed for many years.

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MAN'S MONUMENTS AND THE LEYS

By ROSS NICHOLS*

I take the word "ley" to signify a line of power, sometimes coinciding with one of the "old straight tracks" of man's upland living and planning in neolithic times, sometimes with a line or triangle called a cone of power having a particular orientation.

Along leys are habitually viewed more UFOs than elsewhere. Maybe the leys guide them, maybe they also pick up power from them as an underground train from its electric rail.

* Chief of the Order of Bards, Ovates & Druids.

An obvious centre of power is Stonehenge, and as long ago as the 17th century a south-north ley was suggested there, given in the form of a line of planetary centres, popularised largely by Inigo Jones, the architect. Following the old astrology of Ptolemy of Pelusium and others, it makes the succession run from Saturn to moon and sun.

Now there really are reasons for linking Stonehenge with Saturn or Time. Not only does classical literature point to Stonehenge as the Temple of Apollo (Sun), it also gives the western isles as the place where Saturn is in bondage. If there is one thing more certain than another it is that Stonehenge is a time-measurer worked by sun and moon, with Saturn or Time tied up into measurements and therefore in bondage to Apollo.

Taking Stonehenge therefore as the south end of the axis, we find almost due north the next planet Jupiter indicated clearly by the square shape of the large pre-Roman Casterley Camp. Then comes Mars or Marden, three miles north along the Avon valley.

Before this, however, the scheme puts Venus in the succession of orbits centred upon Silbury Hill. Inigo Jones identifies Venus with some circles at Winterton Bassett to the north, so that Venus, alias the Mother Goddess, hangs over the scheme to the north and seems to preside over it (see diagram).

Possibly now that we know the West Kennet Long Barrow as a mother goddess-shaped shrine, it is better to take that as our Venus - all these landmarks are fairly near each other. Also, the Barrow which is clearly feminine forms a pair with the obviously masculine Silbury Hill - they are each side of this south-north line we are describing.

Fifth and last of the ancient planets was Mercury, shown by Knop or Milk Hill (964 ft.), a noble outlook and guide place suitable to the messenger of the gods and guide of souls.

Then comes that great group Silbury Hill and the vast circle of Avebury, with the two traceable smaller circles within it. Silbury the 17th century writer takes as standing for Earth - Gē or Ea - the centre of the solar system, and over it the inner Avebury circles are moon and sun, as Stukeley identified them in the 18th century.

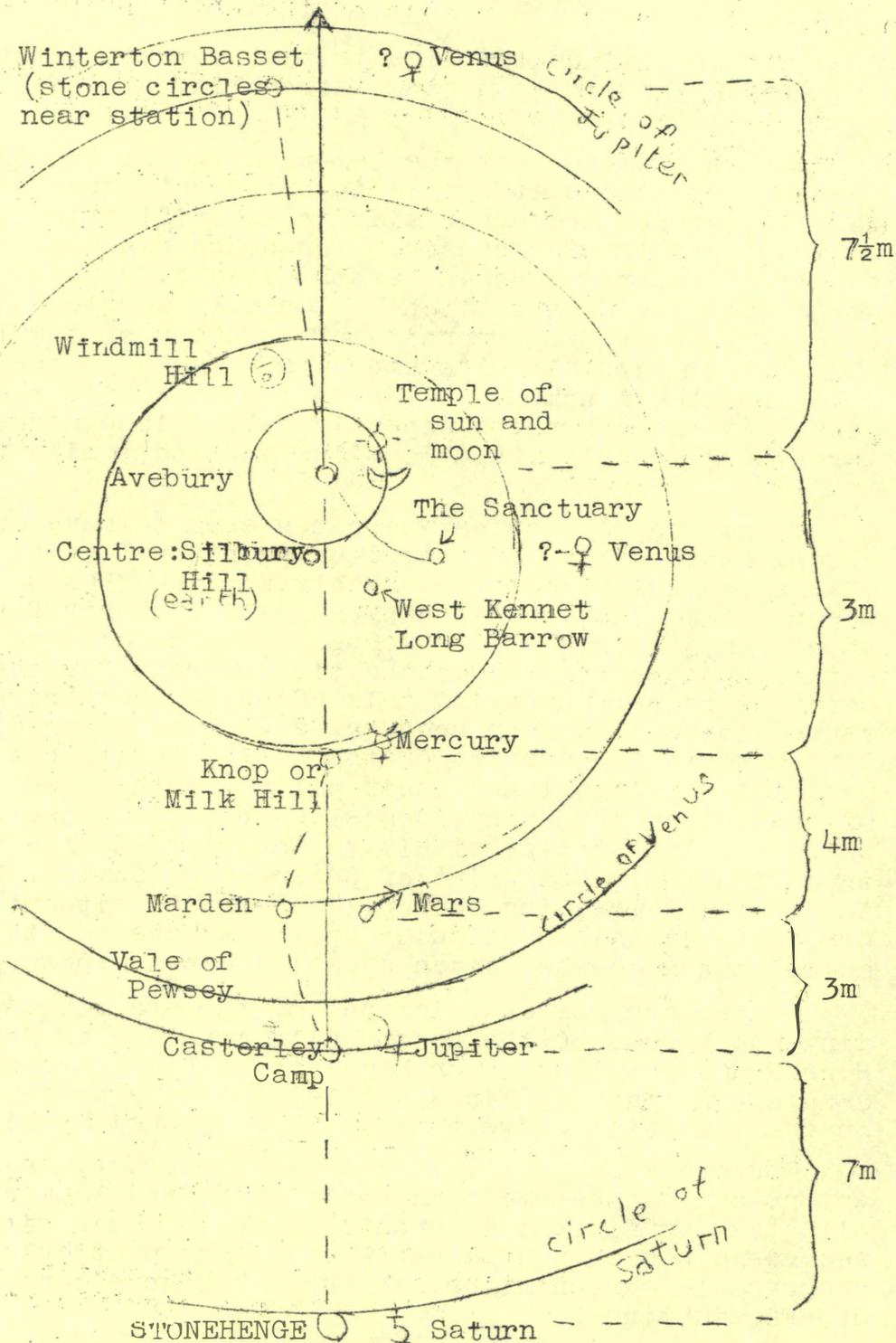
Recent excavations last year show indeed that different kinds of earth from various regions, many from far-away parts of England, were brought to Silbury, then a mere low rocky mound, and laid there; the great artificial cone was built up later. So that Silbury is earth indeed - many earths.

Whether or not this perhaps fanciful succession of identifications says much to ley hunters, the north-south ley Avebury-Stonehenge (some 17 miles, or $24\frac{1}{2}$ if you

THE STONEHENGE-AVEBURY AXIS

Total length some 24½ miles

N by W



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crowns it to the north with Winterton Bassett) has been found to have UFO sightings clustered thickly upon it. These ideas of planets at least show that earlier observers thought of this line as something that needed explaining. The ley of course may point south rather than north, and mean an observance of the great power of the sun.

Another obvious ley line is that between Glastonbury and Avebury, making a north-eastern line of power to the summer solstice.

It seems clear that the ley usually exists first and that men recognise it by placing monuments such as their temples, stones and other aids to identification at significant points of emphasis. Stonehenge has three clearly marked alignments crossing at the circle: running to the NE is the line Castle Ditches - Grovely Castle - Stonehenge - Sidbury Camp; running SE a number of tumuli, three small ones close together, a very large one some $\frac{3}{4}$ mile from the monument and another half a mile the other side. And then, running directly W-E, a line marked by three large tumuli, from $\frac{1}{4}$ miles west to $\frac{3}{4}$ mile to the east.

There are also cases where men seem to have created or completed a line of power, using natural features, by some strange instinct, presumably for the UFOs to use. A clear example is at Selworthy, a hill in North Devon where for some time UFO observers used to congregate, although no reason was at the time adduced for the appearances there. Surveying this after the gatherings had ceased to be so common however, a reason appeared. The line between two summits of the hills, together with the position of a small neolithic pillar at the base of one of them, formed a sharp isosceles triangle whose acute point was directed precisely to the North-East - the traditional highest point of power at midsummer. Man therefore by erecting this pillar - quite without other purpose - at this particular spot, had created the triangle that made what witches call a cone of power.

A more complex case is that of the structures surrounding the bosses of the Brown Willy mountain in Cornwall. Here Prof. Thom's book on Megalithic alignments showed a complex of sighting lines, whilst a little personal work on the spot will suggest other leys ignored by him.

The whole subject bristles with interest, and orientations can be observed and notified by any layman who will take sufficient interest. Those in touch with UFO records can easily find out whether any particular observed ley-orientation has shown a significant number of UFO sightings.

On Dartmoor long avenues of stones, double or single, run for miles between sighting points, presumably

forming ceremonial ways as well as lines of power, since some 60 of them lead to cairns. One well-marked was personally investigated near Batworthy, running partly over Shoveldown or Shuggledown. From some miles away the avenue approached, running always from the S or S by W, as though to the high sun of noon. On the Down as one moved north it developed into regular rows 3' 6" apart, for a distance of 596'. There was a triple culmination it would seem of a ritual kind (1) a large fallen dolmen, a kind of entrance to a temple, (2) triple concentric rings, (3) a square stone, a kistvaen, which would be the navel or holy spot of the system. A kistvaen or cairn is a stone box for contracted burial in the birth position, with knees drawn up. Crōm Cruach is one of the earliest cultic names we have and means the Bent One of the Mound or circle, i.e. the spirit probably of a dead chief so buried.

Here there joined in another avenue from the NNW, coming up from a distant valley. The joint avenue then swerved almost to NW - the 'death' orientation of the lowest sun of midwinter - and culminated in a great pointed menhir called Langstone, 10' 5" tall and indeed the tallest save one on all Dartmoor, phallic in shape and leaning to the north - traditionally, the place of evil or the material. The stone was roughly squared off.

Psychically it felt unpleasant and ambitious. Could it have been the stone put up to be inhabited by the spirit of the chief buried in the kistvaen that centred the three rings of stones?

The line of stones seemed to run on from here, originally to three great stones called the Three Boys which are now gone, and finally down to Fernworthy Circle where it vanishes below heavily carbonised layers indicating repeated fires.

Now ferns are usually associated with fairies, fernseed being used for bewitchment by sleep. At any rate in the west country you cannot possibly dissociate many of the old features, natural or man-made, from the beings who are the leprechauns in Eire, the fées in Brittany and pixies in Scotland and the South-west. They usually link with water, and the name of the farm whence this survey started, Batworthy, seems to mean beneficent, perhaps curative, water - Bat = Gaelic bad, water or 'bath', and worthy = good. Local names indeed should always be watched for indications of this kind.

The above is partly reproduced from the pamphlet "The Mysteries of Avebury", price 3/- post free, which treats the great monument fully and can be obtained from the O.B.O.D. Secretary at 42 Gledstones Road, London, W. 14.

THE MERIDIANS OF MAN

By JOHN WHEATON

The Ancient Chinese stated that vital energy or Ch'i permeates man and that the energy which ultimately came from Tao, enters into man in several ways, but mainly via what they call the 'three burning spaces'. Air, containing Ch'i, food and drink enter into the 'upper warmer' or 'burning space', whose main organs are heart and lungs. Then some of the Ch'i of air and the food and drink move on to the middle warmer, comprised of stomach, spleen and pancreas, where it is changed into 'blood' and the Ch'i of nourishment. Waste products then go to the lower warmer, the liver, kidney, small intestine, colon and bladder, where certain aspects are extracted for re-use and the rest excreted.

In the meantime, the Ch'i of nourishment and the blood ascends to the upper warmer, where the 'blood' takes up oxygen and the Ch'i of nourishment is united with the Ch'i of air, making 'true Ch'i'. This then divides into Jung Ch'i, which circulates round the body inside the meridians, nourishing it, and Wei Ch'i, whose function is to protect the body, which circulates outside the meridians under the skin.

What are these meridians? They are channels through which Ch'i flows, and it must be supposed that they have a suitable structure to carry this energy. That is they are probably 'etheric' or on a more subtle level than the physical. This is not to deny, however, that they do have a physical basis. This was discovered by Prof. Kim Bon Han in the early 1960s. Bon Han found that they contain a circulating fluid in which cells develop, and they can be traced by radioactive material injected into them.

There are twelve main meridians, each one linked with an organ or function. These twelve meridians are linked in such a way that energy flows from one to another in a set sequence, making a complete cycle in 24 hours. This cycle is tidal in that each meridian has an energetic high tide of 2 hours in every 24 hours. This gradually building up and tapering off again.

During the 24 hour cycle, Ch'i is controlled by the sun. That is one can calculate which organ/meridian has maximum energy at any place when the local time (sun time) is known. This cycle is upset by jet travel etc., and can cause illness. As well as the 24 hour cycle, the sun gives a seasonal variation of energy and the moon a 28 day cycle.

In addition to the twelve basic meridians, there are 8 extra meridians, called 'MEI', which act as energy regulators. (Editor: lung mei in Chinese means dragon pulse - or leys) It is also believed that they are

involved in psychic development. That is, if one builds up Ch'i or psychic energy to the extent that it starts to raise one to a higher level mentally/psychically, then the surplus energy flows through the extra meridians in the same way as Ch'i normally flows through the 'Ching lo' or ordinary meridians.

Apart from these there are linking meridians, joining the main ones to each other and to the internal organs, making a very complex network. According to certain Japanese authorities, the meridian in its physical aspect acts as a 'wire', but that the meridian function extends like a 'field' round the meridian, tapering off until it reaches the next meridian field.

Bon Han has also discovered a complex network of internal meridians which subdivide down until each cell has its link with the system. Even this does not exhaust the meridians, as the Japanese have discovered 2 'new' meridians closely allied to the basic twelve.

On the meridians are 'points', that is microscopic structures which can affect the flow of Ch'i energy if manipulated. These points are often junctions where Ch'i can flow from meridian to meridian. Each point has certain values of its own, and these include mental and psychic effects.

Ch'i energy is bipolar, its poles being Yin (negative) and Yang (positive). These are compliments and not opposites.

The energy as it flows through the body, changes its polarity from being predominately one to being predominately the other, but it is always the same energy.

As well as taking in Ch'i in the way described earlier, man picks up (and radiates) energy on different levels in other ways. It is said that Yin energy comes to man from the earth, in food etc., and also directly through his feet, changing to Yang as it goes towards his head, eventually being given off. The place at which energy enters the body in this context is via an Acupuncture point called 'Bubbling Spring'. Apart from this, Bon Han's work has shown that each point has a photo/synthetic action, that is, light affects the Acupuncture points enabling cell growth to take place in the meridians.

It would seem that there could be a relationship between the Ley system and the Acupuncture meridians in that both appear to be in one aspect at least, circulatory systems for energy with places, centres or points on them for the tapping or control of this energy, though obviously that of the earth must be of a less complex type, the planet being less evolved than man.

We must take into account that there must be energy

fields and circulatory systems on other levels in both the aura of man and planet, those of the planet being known in the East as Tatvic tides, but getting down to the physical structure of the earth itself, there is no reason why it should not have 'meridians' in a suitable form.

Straying from the field of pure Acupuncture for a moment, many Acupuncturists (and others) use a therapy based on zones. The theory of this is that all structures in a certain longitudinal zone of the body have a relationship with each other. Perhaps the same is true of countrys or planets as well.

(Editor: this article --- ---oOo--- --- was accompanied by two diagrams of the meridians, but it has been impossible to reproduce these. Anyone wishing to examine these may do so provided s.a.e. is enclosed to the editor.

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MAJOR F. C. TYLER REVIEWED

Book review by PHILIP HESELTON

One of the difficulties that confront present-day ley hunters is that it is often impossible to get copies of many of the early books on the subject - they are now nearly all long out of print. This is a pity as many of them are of great interest. I hope, therefore, from time to time to produce synopses of various books and papers by such writers as Donald Maxwell, Arthur Lawton etc. To start with I have chosen "The Geometrical Arrangement of Ancient Sites - A Development of the 'Straight Track' Theory", by Major F.C. Tyler, O.B.E., first published in December 1939 by Simpkin Marshall, Ltd., the firm that had previously published several of Alfred Watkins' works.

This book was based on a lecture given by Major Tyler to the London Antiquarian Society in October 1938, but due to the author's ill-health the material was prepared for publication by members of the Straight Track Club. Major Tyler died shortly after the book was published.

It may not be that Major Tyler himself actually made the discoveries, but certainly his book is the first indication in print that the "trackway" explanation put forward for leys was being seriously doubted by many who had been researching into the whole subject for many years. Tyler gives voice to these views and in his own way heralds the new approach to the subject which is now clearly evident.

Most of Tyler's work was done in the South-West of England, and in the first chapter he gives a general introduction and cites examples of leys in his own part of the country - a Somerset ley east from Ilchester passing through Weston Bampfylde, South Cadbury, Blackford, Holton and Silton churches, which also skirts Cadbury Castle; and a selection of six leys which focus on St. Michael's Church, Honiton. He also gives some church alignments in the Tiverton area. I have plotted these alignments on a map and I must say that in some cases they do not seem to be up to the standard of accuracy which most ley hunters would probably accept.

However, it is Major Tyler's interpretation of leys which is of most interest to us at the present time. He says that a doubt arose in his mind about the "trackway" theory of leys and he gives four main reasons to support his opinion. Firstly, the actual number of leys seems far too great for them all to have been tracks. Certainly this is something which I can bear out myself, particularly in areas such as the Vale of Blackmoor on the borders of Somerset and Dorset, where leys are particularly thick on the ground. Secondly, Tyler is worried by the parallelism exhibited by many leys. He gives some good examples of this in the Dartmoor area, where an examination of old crosses, stones and churches revealed a very pronounced parallel ley system.

Tyler then commented on the phenomenon which is familiar to all ley hunters - that of many leys intersecting at one point. "This crossing of alignments, two or more, at a mark-point is a very common feature in this investigation, and at the very outset starts in one's mind a doubt as to the origin of the alignment of sacred sites having been for the purpose of marking track-lines. Two crossings at a point - yes; that is very easy; but more than two needs explanation" (p. 13). He then gives an example of Woodburn Church in Buckinghamshire on which he found eight leys converging. "Strange indeed, if these alignments of sites were set out originally to mark the way for travellers, that they should intersect at a single point... There surely must be an explanation but I doubt if it lies in tracks."

Tyler's major contribution, however, and his last argument against the "trackway" theory is his discovery of the "concentric circle" arrangement. He quotes several points, including Woodburn church, Stonehenge, Churchingford cross-roads near Taunton, and Hut Hill near Thetford, from which concentric circles could be drawn, on each of which many "mark-points" were found to fall. Often six or more points would be found to lie on each circle, which, statistically, is even more convincing than a six-point ley.

Tyler also made a contribution in an examination of distances. He quotes Hadrian Allcroft's findings as early as 1908 that Maiden Castle, Eggardon and Pilsdon Pen hill-forts in Dorset were in a straight line, each nine miles from the next; and Sir Norman Lockyer's observation that Stonehenge, Old Sarum and Grovely Castle form an equilateral triangle

with sides of six miles. (This has, incidentally, been extended and extended by K.H. Koop to form an equilateral triangle system over the whole of Salisbury Plain.) Tyler took Allcroft's basic distance of 18 miles and by dividing it by one hundred found a "key distance" of 950.4 feet, multiples of which seemed to occur frequently as the distance between mark-points on leys. He also found the radii of the concentric circles he had drawn to be multiples of this "key distance." Tyler also found a dimension, equal to one four hundred and eightieth part of a degree of the equatorial circumference of the earth, the same as the length of the base-side of the Great Pyramid in Egypt, the implication being that this was a standard measure in ancient times.

Tyler was certainly moving away from the narrow theory of "trackways" which had been widely held, and he hints in his book of an awareness of the wider implications which we are now investigating. On p. 37, for example, he states: "I should like to stress that the things that matter are the sites on which the earthworks and other ancient constructions stand - not the constructions that we now see standing on them. These are mostly appropriate, as in the case of consecrated constructions, such as churches. The sites themselves are of ancient and everlasting sanctity." He goes on to suggest that this "sanctity" could be detected by those who constructed the leys, but that later the capacity for detecting this was lost. The implication here is that the "sanctity" existed before the leys were ever built, and that the leys were constructed to "mark the spot", which is in line with many recent ideas about a power system along the leys. Tyler remarked (p. 38): "I am not at all sure that the capacity does not still exist among many people not strictly 'priests'. It appears that there are a number of 'dowsers' (water diviners) who have (unwittingly) detected the consecration, which gives the same reaction to the dowsing-rod as is obtained from water."

That Tyler seemed to be aware of the wider implications of the subject is evidenced, I think, by his quotation from Evans's "The Sarns and Menhirs of Anglesey" - we must, in all our investigations into the mysteries of antiquity, infer some wonderful (and possibly world-wide) civilisation, as underlying all known history."

To end with Tyler's own conclusion - "...these alignments were not laid out (originally) for the purpose of marking the way for travellers, but are the remaining index of some great geometrical arrangement of these sacred sites, which seems to extend over a very wide area. What the purpose of this arrangement was is a problem for the future; but it seems to me that it was connected with the practice of the Ancient Wisdom, which we know so little about, but which was bound up with what we call 'Relig-

ious Worship'. The scientific knowledge which was bound up with this was lost, in very far-off days, after a gradual decline into the more recent times which we regard as 'barbarous', but which is being rediscovered, by different methods in these our own times."

This recovery of the "Ancient Wisdom" is surely one of the tasks which must confront us all in the years ahead.

(Editor: Philip enclosed with the review a transcript of appendix II to the book - a synopsis of a pamphlet by Dr. Heinsch entitled "Principles of Prehistoric Cult-Geography. However, I hope to get a copy of this, have it translated, and include it in a forthcoming issue. If anyone would care to undertake to translate it I would welcome their getting in touch with me.)

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(bibliography viii - cont. from July issue)

Suggested reading, contributed by Tony Northwood.

Eric S. Wood - "Field Guide to Archaeology" 1968.

A general primer on the subject. Sections dealing with Prehistoric, Roman and Mediaeval roads, and particular archaeological techniques are perhaps most relevant, though the whole book is useful and interesting background reading. In addition this contains useful lists of reference works, together with addresses and sources of information.

Morris Marples - "White Horses" 1949

A general reference work on chalk figures (including modern ones) with particularly detailed study given to the White Horse of Uffington.

Guy Underwood - "The Pattern of the Past" 1968

This is a complementary work to Watkins which seems to compound the mystery of leys. It concerns the parallel study of geodetics and the author appears to show that ancient sites were determined by natural lines of underground streams, or some other mysterious lines of 'force' perceptible by divining. It appears to show that not only were sites (of stone circles, churches, cathedrals, hill figures and dwellings) determined by this method, but also the detailed layout of circles and ecclesiastical buildings, and it would seem that the findings in many ways contradict theories of ley alignments since the lines on which the sites lie are not particularly straight. However, this is almost certainly an additional line of research to be pursued by those who are interested in the ley phenomena which may perhaps one day be of assistance in giving a final answer.

T.C. Lethbridge - "Witches" 1959?

A general study of the witch cult in Britain, tracing its origins back to a fertility religion involving worship of the forces of nature, especially the sun and moon. This book touches on the subject of sacred points, showing how the use of sites for the performance of religious rites continues through various phases of religious development (including the Christian religion). Of particular interest are the author's thoughts on azimuth alignments (of stone circles) as also is the suggestion that the circles were erected for the purpose of containing power, generated during the performance of certain rites in order to maintain the fertility of the land.

T.C. Lethbridge - "Gog-Magog" 1957

Interesting from the point of view that this is a study in hill figures - one in particular, which is sited near Cambridge, which until its discovery by research into local legends and historical records and subsequent restoration was thought to be non-existent. The 'sounding' method used to trace the outline (which subsequently turns out to be a series of figures) is also rather interesting and could presumably be used to trace other 'lost' figures.

Patrick Crampton - "The Prehistoric Ridgeway" 1965

A lighthearted account of a journey along the Chilterns Ridgeway by two campers and a donkey. Some interesting descriptions of sites visited nearby with particular emphasis on the white horse figure at Uffington.

Ivan D. Margary - "Roman Roads in the Weald" 1965

A detailed study of Roman roads in S.-E. England, impinging occasionally on Prehistoric and Mediaeval tracks. The method of presentation of findings (strip maps showing relationship to present day features) and the archaeological techniques employed to determine exact courses (such as map analysis and resistivity surveying) are perhaps of particular relevance to the study of leys.

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READERS' FORUM

From Dan Butcher, Ash Green, Hants.

Dear Mr. Screeton,

You may be interested to know that we have a mark stone in our village of Ash, which bears on it an engraving of a little "match-stick" man similar to, but not identical with that given by R.D.Y. Perrett in your June issue. It

is formed somewhat like this:
 a figure which is identical
 an pictograph given by H. T.
 his books on ancient South
 ly call this little man
 one day I asked my old



with a South Americ-
 Wilkins in one of
 America. I private-
 "Elijah", because
 schoolmistress, who

is now well over 80, if she knew anything about this stone.
 At first she was unable to understand which stone I was
 alluding to - there being two, at least, in Ash - but then
 suddenly thought of it and exclaimed: "Oh! you mean the
 stone where old Elijah was taken up into heaven!" - and
 then rather shamefacedly excused herself by saying: "Well,
 that was what we called it when we were children." She
 knew nothing else about it, but she had given me enough to
 ponder on.

The stone seems to be on a ley. It is situated at the T-
 junction of Star Lane with Ash Street; and a footpath, the
 continuation of Star Lane, forms what must have been an
 ancient crossroads, or star. At the other end of the vill-
 age is situated the other stone, on the corner of the Red
 Lion pub, at the T-junction of Harper's Road with the
 Guildford road, again an old footpath continuing Harper's
 Road to form the ancient cross. If a line is drawn through
 these two stones on a 6" map, it will pass along the nave
 and over the altar (?stone) of St. Peter's Church which is
 approximately equidistant between the two. The name St.
 Peter is, of course, derived from the Greek petra, meaning
 a rock or stone. There is another stone in Ash which prob-
 ably belonged to the substantial lump about 2' square and
 1' in thickness, all honeycombed with artificially drilled
 holes. (Editor: While staying with my in-laws recently in
 Gildersome, West Riding, I found a stone at the end of a
 lane, where a wall had been marginally re-aligned to miss
 the stone. It too had holes in, suggesting eyes and a mouth.)
 It is situated about 100 yards south of the line between the
 church and Star Lane, and is floating on the surface of the
 ground, so it looks as if it has been broken off from a
 larger stone which is probably buried on the line nearby.
 Again the vicinity is at a road junction and near a pub,
 The Anchor. I believe the pub is not all that old (it
 seems to have got its name from the Crimean War), but it
 may be situated on an ancient inn site. Another pub, The
 Greyhound (modern, at least, the building is), is also sit-
 uated at another crossroads on the same line. All of these
 sites are aligned within a distance of about 1½ miles.
 Extending the line N.E. it comes out near an old fort at
 St. George's Hill, Weybridge; and extending it S.W., it
 runs within a few yards of the pub (not old), on the cor-
 ner of Stone Street, Aldershot - I suspect that Stone Street
 eet anciently formed a junction with the line, and that
 there was formerly a pub at that point, and a stone.
 Still further to the S.W. the line skirts the side of
 Farnham Castle and eventually ends up somewhere in

Winchester - I have not studied these further points yet. Unfortunately I am unable to undertake field studies of this line since I am seriously disabled.

Concerning Elijah: was his last journey performed on a ley? He travelled from Bethel via Gilgal and Jericho to the unnamed spot on the other side of the Jordan where he was translated into the heavens. Bethel was the place where Jacob re-erected the stone which was already lying at that location, after having had the vision of the ladder; and the name Gilgal is from the same root as galgal, which word denotes a stone, or stones, set up in commemoration of a strange experience, or "Divine intervention," - and which word was also used by Ezekiel to define the mysterious aerial vehicle which appeared in his vision. Of Jericho I have no ley-clues, except to note that it was situated near the Jordan and therefore, presumably, near a ford or bridge. Perhaps some Biblical topographer would tell us if these places were on a straight line - and if so, then we would at least have the line of the unknown place on the other side of the Jordan.....

 From R. D. Y. Perrett, Sheffield.

Dear Mr. Sreeton,

I had hoped to be able to write an article containing a rational mathematical theory of the probability of the occurrence of a ley containing a given number of significant points, for publication, if you wished, in the August issue. However, in the time I have been able to devote to the matter so far, my mathematical ability has not been equal to solving the difficulties which I have come up against. For the moment, therefore, I must content myself with indicating the general line of my approach, so that better mathematicians than I who see it can either try to carry it further or criticise it. I make also a few comments on the publications of Peter Furness in the former Ley Hunter Vol. 2., No. 1 (Jan., 1966) and of Tony Northwood in your No. 8 (June, 1970).

There are at least two different types of assumption which can be made. One is that we are concerned with a line on a map of a certain finite width, the latter being in effect the degree of approximation we are prepared to accept to decide whether any particular mark-point is "on" the line. The other type of assumption is that an observer, standing at a certain point, will accept distant objects as appearing in line with himself and one-another provided that they all lie within a certain visual angle subtended at his eye. In the latter case, the permitted lateral error (at right-angles to the line of sight) increases with the distance from the observer. I will say no more about the second type of assumption; I got myself into "very deep waters" trying to pursue it and, anyway, I imagine that most ley hunters do not

concern themselves with it in practice.

Returning to the former, in my first efforts in late 1959 I started off as Furness did, by taking a line of a certain length and width, and considering the probability that points, dropped at random on the map, would land on it. Northwood expresses himself rather differently, but effectively starts in the same way.

This is all right so far, so long as we are concerned with a single line, of a specified length; but of course we have to go on to consider all possible lines, and it seems to be here that the real difficulties start. So far as I follow him, Furness seems to consider the possible lines between the "n" points assumed to be scattered on the map. Perhaps the fact that I do not follow him is partly attributable to the fact that he had not space to give the full theory; but in any case he seems to take a specified length of line. Northwood appears to try to take account of all possible pairs of points obtained by dividing the map into elemental units of area; but again he takes a fixed length of line.

Now it seems to me that this treatment must be inadequate for at least two reasons:-

(1) Taking any two points, joining them by a line of the agreed "pencil-line" width, and extending it in both directions to the boundary of the area of map considered, gives a line of the length which depends on the position of the two points and the shape of the area of map we are dealing with. The probability that so many of the remaining points will fall on that line therefore depends on the positions of the first two points. (If they are close together and both practically on the boundary of the area, the line will be very short indeed; if, however, they are diameters of a map-area which is circular, the line-length will be the greatest possible.) I cannot see, therefore, that any satisfactory theory can assume a fixed length of line.

(2) The shape of the map-area must come into it. If we scatter 60 spots on a piece of landscape which is very long and thin, there must surely be a greater chance of multi-point alignments than if we scattered the same number of spots on a circular piece of landscape having the same area as the long, thin one. Yet neither Furness's nor Northwood's theory seems to contain any factor depending on the shape of the map-area concerned.

In my own, so far unsuccessful, efforts, I have included a factor "f" which is the ratio of the length of any particular line considered to the greatest length of line which it is possible to draw across the map-area in question. I am hoping, for a few specified simpler shapes (circle, square) of map-area, to arrive at what amounts to a sort of "average value" of "f", taken over all the possible lines which we would get between all possible pairs of spots scattered over all possible positions in the area.

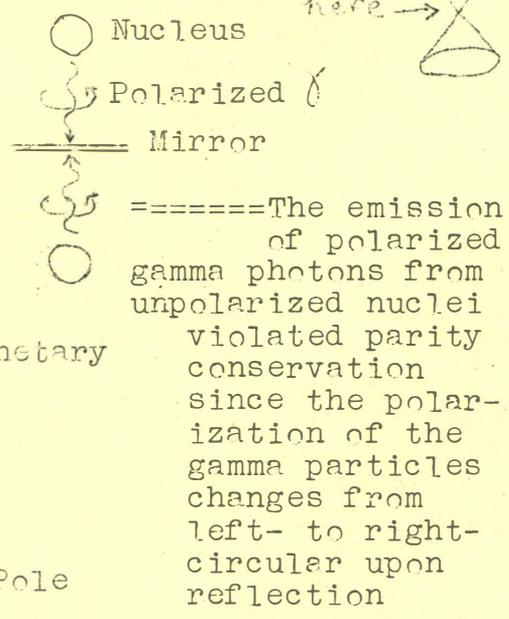
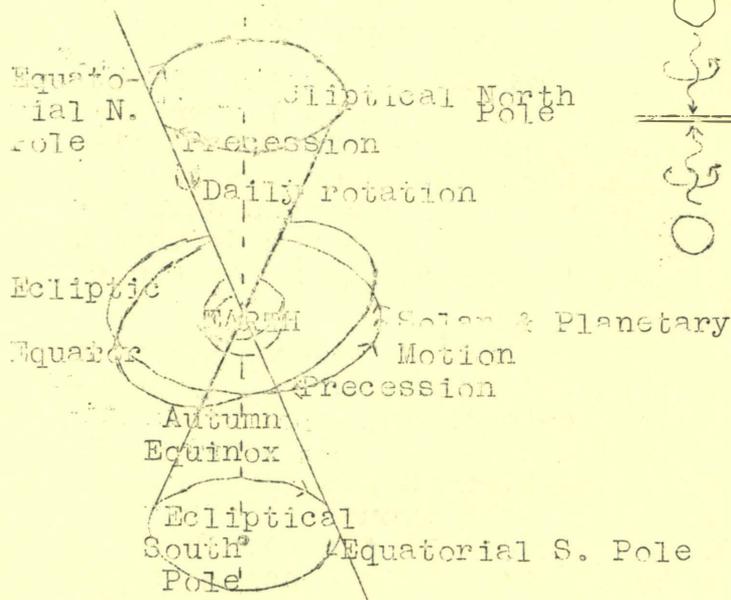
In conclusion, I would remark that whilst a precise result in any particular case, if we could evolve it, would give us a broad sort of guide to the order of magnitude of the probabilities we are dealing with, we must not forget that in any real landscape in this country the general tendency of hills and valleys to run in the same direction over at least a limited portion of the landscape must tend to increase the probability that features resulting from human activity in that landscape will line up.

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READERS' QUERIES

Dr. Oliver L. Reiser, Professor Emeritus at the University of Pittsburgh, has asked if I can see any connection between three diagrams he sent. One is included in a letter to Dr. Reiser, sent by a Californian friend (a brief portion I reproduce below), another has text beside it (also reproduced), The relevant part of the letter is: "Cosmic Humanism" (Dr. R's latest book) takes my breath away - the sweep of it, the learning, the thrilling ideas. The spiral as a basic has always been intensely real to me - we keep returning to the same point, but at a higher level. The old words take on new meaning every time around, as one's view heightens. I haven't read Cosmic Humanism enough times to try safely to question any minor details. You do throw out the Kabbalistic hierarchy pretty fast and I'm openmindedly sort of retaining a few cherubim and seraphim. And in my mental diagram - probably due to ignorance - on page 504 - I think I place a cosmic lens

Well, I must start reading the book again soon, when my mind stretches a bit".



The "why of equinoctial precession

Accompanying the equinoctial precession diagram was the following text: "In that age of Taurus, the polestar was alpha Draconis; at the time of the Greeks, it was beta Ursae Minoris; today it is alpha Ursae Minoris; in A.D. 14000 it will be Vega.

These are calendars of grand dimensions, which truly thoughtful men can contemplate only in awe. Undeniable works of science, they recall the existence of forgotten scientists with an almost forgotten perspective, who never allowed themselves the illusion that they and their less educated contemporaries could escape the restraints of their environment. ...-John Lear."

Can anyone aid Dr. Reiser?

Michael Hersty, of Newcastle-under-Lyme, asks if anyone can help him discover whether any work has been done on leys around the Newcastle-u-L., N. Staffs., S. Cheshire, and N. Shropshire areas. If anyone can assist Michael could they get in touch with him (35 Rothesay Avenue, N-u-L., Staffs, ST5 2LQ). He also asks what is the best book to get about the basics of ley hunting, and to him and anyone else I recommend "The Ley Hunter's Manual," by Alfred Watkins, available from Markham House Press Ltd., 58 West Street, Brighton, BN1 2BA. (6/6, postage included)

Judy Allen, of Putney, asks: "Am I right in thinking that the positions of constellations in relation to the Earth have shifted over the centuries, although we still use charts designed by the Babylonian astrologers?" Briefly, yes. Four-fifths of Cancerians are now Geminians, etc. For an explicit account see pp. 27-29 of "The Origin of the Zodiac" by Rupert Gleadow (Cape, 1968). "If this is so," adds Judy, "isn't it also possible that the lines of power have shifted on the earth? A ley which is discernible today might, in a sense, be barren, and the line of power might flow, unmarked, hundreds of yards to the right or left?" I'm afraid I cannot say yes or no. Maybe instead of causing any physical shift in power there could have been a changing influence in the time. There does seem to be a distinct ebb and flow of power in leys. I've found the large mark stone at Hart, in County Durham, particularly active at sunset and inactive at midday.