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Bob Forrest and the estate of Sir Patrick Moore

For Vicky
from Bob

Preface

This book was begun over thirty years ago. It came about via Patrick's book *Can You Speak Venusian?*, first published in 1972, in which, at the end of Chapter 13, he had written:

During the present century, Pyramidology seems to have declined, and when I cast around for an enthusiast to discuss the matter with me, I met with utter failure. Perhaps the truth is that nobody could possibly hope to out-Smyth Smyth.

I wrote to tell Patrick of the existence of the Institute of Pyramidology, based in Harpenden, and that led to a lengthy correspondence about a variety of eccentric theories. Eventually Patrick suggested we collaborate on a follow-up to Can You Speak Venusian?, and to lay plans for that, we met up, face to face for the first time, in Liverpool, at the end of December 1979. Part of the plan was that I should research some more material about Velikovsky via The Society for Interdisciplinary Studies, which was what actually led to my writing A Guide to Velikovsky's Sources, published in the USA in 1987. As for the follow-up to Can You Speak Venusian?, for which Patrick chose the title More Things in Heaven and Earth, it was written piecemeal over the next few years following our meeting. Unfortunately, personal circumstances in both our lives meant that we didn't actually meet again to piece it together and edit it until early in 1987. Alas, having done that, we could find no interested publisher for it, and the manuscript was confined to a shelf to gather dust for the next twenty years.

In 2008, Ivor Hutchinson – a friend whom I had not met for many years – asked me one day what had happened about the book with Patrick Moore. When I told him, he very kindly offered to help me word process the manuscript, and to prepare neat and tidy digital images of the illustrations for it, so that we could give it another go. I got in touch with Patrick again, and he seemed keen to give it another go as well, so, after adding a few updates to the original manuscript, and an additional chapter (Chapter 18), I went to see him at his house in Selsey, just after Christmas 2009. Unfortunately, I hadn't realised the extent of his disability at that time, and it was sad to see him virtually wheelchair-bound, with

limited use of his fingers, and to see him so saddened by the fact that he could no longer play cricket for his local team. Though he expressed a wish to do the book and to publish it electronically (he seemed to have developed an aversion to orthodox publishing methods for some reason!), it became clear that it was not going to be. Sadly, though I spoke to him over the phone at intervals, I wasn't actually to see him again before his death in December 2012.

Following Patrick's death, it was my old friend Michael Behrend who suggested that since the book was not far off ready-to-go, we should go ahead and issue it as an ebook, as Patrick had wished. Here, then, thirty-three years on, is *More Things in Heaven and Earth*.

Bob Forrest, Manchester, January 2013.

Chapter 1. Charles Fort and the Forteans

There are many things that happen in this world that defy a reasonable explanation. For example, it does seem to happen sometimes that people glimpse the future in their dreams; it does seem to be a fact that a disturbing number of level-headed people can claim to have seen a ghost; and it does seem to be a fact that from time to time a "coincidence" happens that is altogether too extraordinary for words.

But are such things to be dismissed as the delusions of superstitious imaginations? Unfortunately, in their haste to explain away these phenomena as quickly as possible, many scientists put forward explanations which fall well short of the phenomena themselves. Of course, they don't call the witnesses of these events "weak minded" in quite so many words, but the 'explanation' almost inevitably implies that the witness was at best grossly mistaken as to the precise nature and correct interpretation of what he thought he saw. The future hasn't happened yet, the experts reason, so how can one possibly see into it, either in a dream or in a crystal ball? Again, when the brain dies, so too does the personality – ipso facto, there can be no such things as ghosts – merely misinterpreted tricks of the light. Finally, in a world as complicated as ours, coincidences are bound to happen somewhere, even extraordinary ones. Those who mumble of queer goings-on and the paranormal are merely ignorant of the laws of statistics.

The trouble is, of course, that scientists are like everyone else – they do make mistakes and they are not particularly keen on admitting it.

For example, it is not all that long ago that many astronomers dismissed the idea of meteorites as popular fancy, with no basis in fact. They "knew" there were no stones in the sky, and therefore no stones could possibly fall from the sky.

Again, when Edison's phonograph was demonstrated to the Paris Academy of Sciences in March 1878, one middle-aged scholar leapt to his feet and accused the demonstrator of ventriloquism. To the end of his days, that particular scientist believed that Edison and his phonographic followers were charlatans, one and all.

Charles Fort was a man who saw the explanationism of dogmatic science – the emphasis here is on the word "dogmatic" – as a distasteful cover-up job in the face of a riotously amazing universe. He reacted to all forms of dogma with anger and a fiery pen. He set out on an unparalleled crusade to amass a huge collection of case histories of unexplained events, and to fling them in the face of Dogmatic Science.

Fort was born in Albany, New York State, in 1874. After a tempestuous childhood, he left school without graduating and became a journalist in New York City. In 1909 he wrote of himself:

I've been a tramp and an editor; reporter, joke writer, fireman, cattleman, book agent, stoker, dishwasher – and what of it? Read the literary notices of other writers, and see how conventional and quite the ordinary thing that is.

In 1916, Fort inherited some money and became financially independent. It was this inheritance which left him free to amass his fantastic collection of unexplained phenomena. For twenty-six years, both in London and New York, he scoured the world's books, journals, magazines and newspapers for his data, literally ruining his eyesight in the process.

He collected accounts of lumps of coal or rock with man-made artefacts unaccountably embedded in them. He noted the sightings of sea-monsters, the mysterious disappearances of people, and the discoveries of the bones of giants. He compiled notes on strange objects sighted in the sky, and of mysterious lights seen in the vicinity of the Moon. He collected accounts of strange plagues of darkness, of occasions when the Sun turned blood-red for no apparent reason, or when the Moon really did turn blue. He was especially fond of falls of unusual objects from the sky: coloured rain, resinous substances, blocks of ice, coke, mussels, lizards, toads, black worms, ants, fishes and a host of other things as impossible as meteorites were once held to be. Yet down from the sky they came, nevertheless.

Fort called his precious items of data "The Damned" or "The Excluded", because they were damned by Dogmatic Science to be excluded from serious consideration. They were little more than superstitious follies.

In 1919 Fort published the first of his four books, *The Book of the*

Damned. It opens dramatically:

A procession of the damned. By the damned I mean the excluded. We shall have a procession of data that Science has excluded. Battalions of the accursed, captained by pallid data that I have exhumed, will march. You'll read them – or they'll march.

As we said earlier, Fort was particularly fond of falls of unlikely objects from the sky. He collected dozens of cases of this type on his travels, and he roared with laughter at the explanations offered for them by Dogmatic Science.

When large numbers of little snails fell from the sky in a thunderstorm in Cornwall in 1886, the experts declared that the snails had been on the ground all the time. When the thunderstorm started, they said, all the little snails in the district crawled out of hiding and went for a stroll in the rain. The yokels saw the rain start, saw the ground littered with itinerant snails, and jumped to the conclusion that they had actually fallen with the rain.

Or when a shower of frogs bombarded Birmingham in 1892, an explanation was readily found by the experts: the frogs had been scooped up from a pond somewhere by a whirlwind, then later released in mid-air.

And when periwinkles fell during a violent thunderstorm over Worcester in 1881, the experts said that someone had seen them there before the storm even started. They'd probably been dropped by a fishmonger....

Charles Fort was outraged by such explanations. He wrote:

If a red hot stove should drop from a cloud into Broadway, someone would find that at about the time of the occurrence, a moving van had passed, and that the moving men had tired of the stove – or something – that it had not been really red hot, but had been rouged instead of blacked by some absent minded housekeeper. Compared with some of the scientific explanations that we have encountered, there's considerable restraint, I think, in that one.

Not for Charles Fort all this nonsense about whirlwinds and fishmongers. Instead he postulated the existence of a Super-Sargasso Sea, a region in which gravity did not operate, high above the Earth's surface. Fort's hypotheses were rarely anything but bold and colourful. He wrote:

I think that things raised from this earth's surface to that region have been held there until shaken by storms. The Super-Sargasso Sea. Derelicts, rubbish, old cargoes from interplanetary wrecks; ... things raised by this earth's cyclones: horses and barns and elephants and flies and dodoes, moas and pterodactyls.

Fort was a pioneer UFO researcher who believed that the world was governed, almost invisibly, by beings from other worlds. "I think we're property," he wrote, "I should say we belong to something." The welter of UFO books so readily available today owes a great deal to the ideas of Charles Fort.

Fort was at his most venomous when it came to astronomical dogma. His scorn for orthodox astronomers knew no bounds: "the astronomers are led by a cloud of rubbish by day and a pillar of bosh by night," he declared.

He pointed out that in the seventeenth and eighteenth centuries, many astronomers reported seeing a satellite of Venus, but that today it is generally thought that there is no such satellite.

Again, in the 1850s, some astronomers claimed to have observed a planet which orbited closer to the sun than Mercury. It was given the name Vulcan, and yet today, this mysterious planet is declared non-existent.

Then came the third moon of Mars – that didn't exist either; and nor did the Martian canals. Charles Fort would have had a whale of a time over the way Comet Kohoutek, in 1973, refused to co-operate with the predictions of some astronomers who had reckoned that it was to have been a singularly spectacular event. (As it turned out, it wasn't only the astronomers who came out of the Kohoutek affair with red faces. More than one astrologer was caught with his pants down as well – but more of that later in the book.)

Of course, astronomers are like everyone else – they do make mistakes from time to time. Equally, they are very often right in their observations and predictions, so that we personally feel that Charles Fort takes his wholesale condemnation of modern astronomy just a little too far at times. But then Fort was never entirely serious in what he wrote. Here, for example, is his parody of astronomical prediction and its fulfilment:

I predict that next Wednesday, a large Chinaman, in evening clothes, will cross Broadway, at 42nd street, at 9 p.m. He doesn't, but a tubercular Jap, in a sailor's uniform, does cross Broadway, at 35th Street, Friday, at noon. Well, a Jap is a perturbed Chinaman, and clothes are clothes.

In fact, not only was Fort's tongue lodged very firmly in his cheek throughout his books, but the actor and author Tiffany Thayer wrote of him that he believed "not one hair's breadth" of his own imaginative hypotheses!

Thayer himself was an interesting character. It was he who was responsible for the foundation of the Fortean Society in 1931. Its aims were to promote Fort's books (*The Book of the Damned* was followed by *New Lands* in 1923; *Lo!* in 1931; and *Wild Talents* in 1932), and to follow up his lead by continuing to gather and publish "damned" data. Ironically, Fort declined to join the society: "I wouldn't join it any more than I'd be an Elk", he wrote.

One of Fort's early patrons and closest friends, the novelist Theodore Dreiser, became the first president of the Fortean Society, fittingly so, as it was he who had been responsible for the initial publication of *The Book of the Damned* back in 1919. This he accomplished by threatening to leave the publishers of his own work unless they published Fort's book as well! *The Book of the Damned* was accordingly published.

Fort died in 1932, but the Fortean Society laboured on until 1959, when, with the death of Thayer, it ceased to function.

However, in 1965, it re-emerged in modified form as the International Fortean Organisation (INFO), publishing its own journal with the latest news on falls from the sky, UFOs, seaserpents, Bigfoot (the American equivalent of the Abominable Snowman), and indeed news of anything "odd", from anomalous electrical phenomena to wolf-children. The journal has also carried articles on any Fortean hypothesis from Ancient Astronauts, Atlantis and the Bermuda Triangle, to the mysteries of the pyramids, the Moon's influence on earthquakes and the detection of ghostly voices. It still operates from P.O. Box 50088, Baltimore, Maryland 21211, and has its own web-site at http://www.forteans.com/.

Here in England in 1973 a sister magazine of the INFO Journal was founded by an avid follower of Fort's called Robert J.M. Rickard. In 1977, co-authoring with John Michell, Bob Rickard published a fine collection of damned data and Fortean hypotheses called *Phenomena – a Book of Wonders*.

INFO's sister magazine ran for several issues under the quiet unassuming title of *The News*, but later changed this to *Fortean Times*, under which name it is now quite widely known as a commercially available monthly publication with its own web-site: http://www.forteantimes.com/. Over the years, it has published accounts of a wide variety of anomalous phenomena which seem to defy a scientific explanation.

Of course, many of its readers are like Charles Fort himself – they are rarely in deadly earnest and they don't believe much of what they read about in their own journal, but they believe even less in the pontifications of Dogmatic Science. There's more to this world, they reckon, than most scientific Horatios dream about.

We chose to open our book with an account of Charles Fort and his followers because there is something refreshing about the way they rebel against the tenets of orthodoxy. There is nothing at all wrong in challenging orthodoxy, and in the history of the world, some good has actually come of such conflicts. (Rather more often, of course, nothing at all has come of them, but that is quite another matter!)

In the present book we take a look at a wide range of challenges to orthodox science. Like Charles Fort and the Forteans, though, we do so not entirely in earnest, and certainly with the reserved right to challenge anything and everything we write about!

Chapter 2. Earth not a Globe!

In the history of the flat earth movement there can hardly have been a more colourful character than its virtual founder member, Samuel Birley Rowbotham.

Born in 1816, Rowbotham grew up to become something of a medical man. We use the expression "something of" because his practice seems to have been a queer blend of orthodox and quack medicine, with a dash of misguided religious fervour to boot.

For the purposes of peddling a cure-all nostrum called "Birley's Syrup of Free Phosphorus", he called himself Dr Birley, in spite of being, by all accounts, a bona fide M.D.

In 1842 he published a book called *Biology, Hygiene and Hydropathy*, under his real name for once, but a few years later, he turned to the dubious pen-name of Tryon to push his latest thesis, *Biology: An Inquiry into the Causes of Natural Death*.

In it he claimed that natural death is brought about by "a general ossification of the system" induced by the bodily absorption of "earthy matter" from its intake of food and drink. In short, Rowbotham was what we today would call a health food fanatic. He wrote:

The more we partake of those articles which contain the largest amounts of calcareous earthy matter, the sooner shall we choke up and die.

And in those days, as now:

To enumerate all the filth and deleterious articles combined in artificially prepared food and drink would not only be tiresome but extremely disgusting.

Fish, milk, eggs, fruit, berries and leaves were good for the body in that they contained relatively little earthy matter. Dates, however, were very bad for the system, and as for bread made from wheaten flour, well that was positively dangerous. So much so that Rowbotham insisted on calling it "the Staff of Death" rather than "the Staff of Life"!

This curious thesis of bodily ossification was rounded off with the gory details of the dissection of defunct gouty subjects, whose tendons, ligaments and bones were literally covered in a sort of fine chalky powder.

No-one today remembers Rowbotham's quasi-medical ideas, which, incidentally, he later contrived to link up with the longevity of the Biblical Patriarchs, not to mention socialist politics. But that is another story, as is his positive refusal, under any circumstances, to travel on the railway. Even today there are some who share his views on the latter, but the less said about that, the better!

Anyway, it was under yet another pen-name, Parallax, that Rowbotham achieved notoriety, for it was under this pseudonym that he peddled his flat earth views, or "Zetetic Astronomy" as he preferred to call it.

"Zetetic Astronomy" means, literally, "Investigative Astronomy", as opposed to "Orthodox Astronomy", the stuff peddled by Patrick Moore et al., which was, in Rowbotham's view, unfounded theoretical codswallop.

Parallax seems to have begun his flat earth campaign in about 1850 with the publication of a fifteen-page pamphlet entitled: Zetetic Astronomy – a description of several experiments and observations tending to prove that the Earth is not a Globe, but an Extended Plane. A long title for such a little book.

In it Rowbotham raised the ticklish problem of curved water. Basically he argued that if the Earth was round, then so were the oceans.

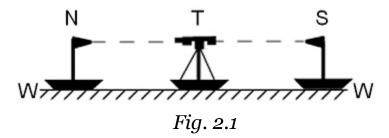
Now, the authorities were always boasting in the newspapers about how far out at sea their latest lighthouses were visible, so Rowbotham set out to test if the quoted figures were consistent with a curved Earth. They weren't. The way Rowbotham figured it, if the earth and its oceans were curved, all those lighthouses just could not be seen from where the authorities said they could.

Again, if the Earth was round, not only the oceans but any extensive stretch of water would have curvature, and this meant that the flat earth issue could be easily and conclusively tested. We quote Rowbotham:

Across the Bedford level, in the County of Cambridge, there is an artificial river or canal 20 miles long. The greatest part of it is a straight line, without locks, and, except at the ebb tides of the German Ocean, the water is stationary; so that, if the Earth is a globe, any part of

this river must be an arc of a circle.

To ascertain this, two small boats were obtained, and each provided with a flag staff. A theodolite was placed upon a bridge, and levelled, as at point T in Fig. 2.1.



The flag staves were so adjusted that the flags N and S were equal in altitude to the field of the telescope T. The boats were then sent out, one to the right, and the other to the left, each to a distance of 4 miles. On making an observation, the flags S and N still intercepted the line of sight TS and TN.

Conclusion: That the surface of the water WW was parallel to the eye-line NTS, and, therefore, *horizontal*!

Rowbotham's Fig. 2.2 shows what would have happened had the Earth really been round:

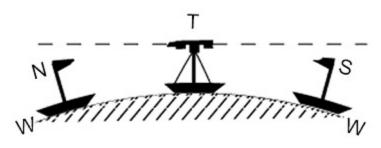


Fig. 2.2

The above summarises the theme of Rowbotham's first fifteenpage production, a seed which was destined to grow into something altogether bigger.

As time went on, the flat earth became entangled with other issues – the stationary Earth at the centre of the Universe, the nature of the Sun and Moon, the real truth behind gravity, and a fistful of Bible Fundamentalisms from the Garden of Eden onwards.

By the 1880s that fifteen-page pamphlet had grown into a 430

page tome with a very grandiose title indeed. We give it in full: Zetetic Astronomy: Earth Not a Globe: An Experimental Enquiry into the True Figure of the Earth, Proving it a Plane, without Orbital or Axial Motion, and the Only Known Material World; its True Position in the Universe, comparatively recent formation, present chemical condition and Approaching Destruction by Fire.

By this time, too, Parallax was peddling his New Map of the World, on a Zetetic Projection (Mercator's having been abandoned as a fictional heresy!) It even came with a moveable disc to illustrate the true causes of various phenomena such as sunset and lunar phases. He was also working on his *Life and Teachings of Jesus Christ Zetetically Considered*, but he never actually published this, which we feel is a great pity. If any of our readers knows the whereabouts of a manuscript of it, then we would be more than delighted to hear from them!

But we're forging ahead a little bit. Parallax's flat earth boating trip on the Bedford Canal, some time before 1850, was the precursor of one of the most curious wagers ever made, the outcome of which was a flat earth talking point for many years to come. But before going into details, we should introduce a couple of other characters in the drama.

First, William Carpenter. He was a London printer and proprietor of what we today would call an occult bookshop. He was also, incidentally, the sole London agent for "Birley's Syrup of Free Phosphorus", a real snip at ten shillings for a pint bottle.

In the 1880s, having been converted by Rowbotham to the faith, and writing under the pseudonym of "Common Sense", Carpenter published his own booklet, *The Earth Not A Globe*.

Though he wrote mainly in prose, one of Carpenter's peculiarities was a tendency to break into second-rate flat earth verse, of which the following is a sample:

Astronomers who say the Earth's a Globe must prove it,

Or else for ever from the books for youth must they remove it.

More, then, we have a riddle to the wise to be propounded;

And let it not be cast aside till its depths be fairly sounded.

Come, tell us, first, then, how it is, whatever else betide.

That WATER can be LEVEL and yet CONVEX beside.

That, of course, is a McGonagallesque reference to the curved water problem, a mainstay of the flat earth case. Elsewhere Carpenter waxed semi-lyrical about another flat earth favourite:

If the Earth's a Globe with people living 'round it I'd like to know what keeps 'em on, confound it!

Moving on from Carpenter now, we introduce the principal of the flat earth wager, John Hampden. He was the son of a Dorset clergyman and at the time Parallax was beginning his Zetetic Crusade, Hampden was busy studying Britain's coastal defences, with a view to improving them.

It was in 1869, when Hampden was fifty years old, that he became converted to Rowbotham's theories. Within a year his enthusiasm had run riot and he laid down a wager of £500, a great deal of money in those days, that no-one could conclusively prove that the Earth was a globe. The challenge was taken up by Alfred Russel Wallace, the famous naturalist.

As referee, Wallace chose J.H. Walsh, at that time editor of *The Field*, and Hampden, our old friend William Carpenter. Rowbotham appears to have stayed well clear of the whole affair for some reason, which is odd, because, of course, he had been directly responsible for converting both Hampden and Carpenter to the true faith.

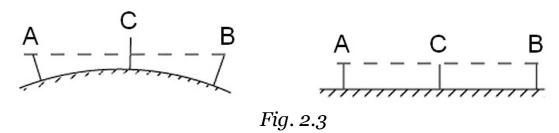
The bet was to be decided by a repeat of Rowbotham's own Bedford Canal experiment.

The first idea was to set up a series of markers at various points along the canal, each marker being fixed at exactly six feet above the water level. At one end of this line of markers, and at precisely the same height, there was erected a telescope. Everything hinged on the view through this telescope. If all the markers were hidden behind the first in line, then the Earth was proved flat. On the other hand, if the markers appeared one below another, the more distant ones falling progressively below their predecessors, then the Earth was proved round.

The first experiments were not satisfactory, largely on account of complaints from Carpenter. Also, Walsh had to return to London on

business, and his place as referee was taken by a local doctor called Coulcher.

For the second experiment, two tall poles were set up on canal bridges nearly six miles apart. Markers on top of each pole (A and B in Fig. 2.3) were fixed at a height of 13 feet 4 inches above the water level of the canal.



Next, in the middle of the canal and half way between the two bridges, they set up another marker at the same height above the water (C in Fig. 2.3).

Finally, a telescope was set up at B and carefully aimed along the line of sight AB.

The position of C as seen in the telescope was to decide the issue. If C appeared above A, the Earth was round. If C obscured A, the Earth was flat.

After some problems in levelling the telescope it became clear that A did indeed appear below C. Wallace and Coulcher believed the matter proved – the Earth *was* round – but there was one tiny loophole. Carpenter noticed that A was below C, but that C was also below the central cross-hair of the telescope field. *That*, claimed Carpenter, by a deft last-minute change of logic, showed the Earth to be well and truly *flat*, and, in addition, confirmed Parallax's theory of perspective.

It must have been a priceless moment. Wallace and Coulcher believed that the fact of the matter had been proved beyond doubt, and yet here was Carpenter arguing precisely the opposite on the same data! Hampden, incidentally, declined even to look through the telescope!

What made matters even worse was that later that same day, Hampden was actually claiming to have won the bet, and was virtually accusing Wallace of being a poor loser! Even the referees had fallen out with each other!

Coulcher couldn't make head or tail of Carpenter's reasoning in

the matter, and Carpenter wouldn't make head or tail of his.

Eventually they called in Walsh again to act as arbitrator. Why it took Walsh two whole weeks to settle the matter is something of a mystery, but in the end, predictably, he judged Wallace to be the official winner.

Hampden was furious and demanded his money back. When that failed, he began an unparalleled campaign of denunciation and libel aimed at poor old Wallace. A series of court appearances and no less than three jail sentences failed to silence the irate Hampden, and it was only when Hampden died of bronchitis in January 1891 – twenty years after the wager – that Wallace was finally free of the matter.

But then as our good friend the late Robert J. Schadewald once pointed out to us, even with Hampden's death, Wallace couldn't be absolutely sure it was all over. He was a firm believer in spiritualism, which was, of course, all the rage at that time!

The earthly libel was over, but the Bedford Canal issue certainly wasn't. A Mr Dyer wrote a little book called *The Spherical Form of the Earth* in which he defended both Wallace and the spherical Earth. On the other hand, a Mr Naylor, in his *Bedford Canal Not Convex – the Earth Not a Globe*, came out firmly on Hampden's side.

Carpenter himself went on to write *The Delusion of the Day*, which was a reply to Dyer's reply to Parallax's reply to the orthodox astronomers (!), and *Wallace's Wonderful Water*, which claimed Hampden as the true winner of the Bedford Canal wager in no uncertain terms:

Wallace's experiment was chiefly for the end of gaining £500 from J. Hampden; and it is tolerably well known that Mr Wallace succeeded in doing so. But it is not by any means tolerably well known in what manner this was effected. To supply this deficiency is the subject of the author. He was an eyewitness of the experiment for the whole of the week that was occupied with it, and is, consequently, able to say what he *knows* of the subject and not merely what he *imagines*.

By 1885 Carpenter had emigrated to America (we presume that the voyage was all plane sailing!) and was still vigorously promoting the flat earth theory in the umpteenth edition of his classic book *One Hundred Proofs that the Earth is not a Globe.*

Carpenter was a great one for the application of common sense in these matters – hence his early nom de plume of "Common Sense" – and many of his proofs depend upon apparent, intuitively felt, absurdities in the notion of a round earth.

Common sense tells us that there is an up and a down in the universe; it tells us that people living on a giant ball would tend to slide off it, or be literally thrown off it if that globe were spinning on its axis as all the scientists claimed. As for the notion of the Earth hurtling round the Sun at an incomprehensible speed, well, common sense tells us that our hats would surely be continually blown off our heads if that were the case! Certainly we ought never to be free of tempestuous gales howling about our ears. Finally, common sense tells us that a water surface is level, and that the idea of the Atlantic Ocean forming a hill of water, over a hundred miles high, is a monstrously absurd one.

As was pointed out to Carpenter by one Ebenezer Breach, if the Earth was round and rushing through space at impossible speeds, would an All-wise God have implanted in his children a faculty of common sense that dictated the opposite? Surely here was a theological proof that the Earth was flat!

We leave our readers to sort out that conundrum for themselves. Meanwhile, here are four interesting little puzzles raised by Carpenter in the course of his book. We slip them in mainly so as to prevent our more globally inclined readers from getting too cocksure of themselves.

First: The river Nile in the course of several hundred miles falls only a foot in vertical height. How could this happen on an Earth which is supposed to curve eight inches in every mile?

Second: The rivers and streams of the Earth flow in all directions – some north, some south, some east, some west. Therefore, if the Earth is a globe, it follows that some of those rivers must flow literally uphill!

Third: When next out at sea in a boat, look at the horizon. You will see that it looks dead level and *flat*. If the Earth is round, why isn't the horizon *curved*?

Fourth: Astronomers claim that the Sun appears to rise in the east

and set in the west because the Earth rotates in the opposite direction. But is this not the same as saying that "the man goes up the street" is equivalent to "the street goes down the man"?

But let's come forward from Victorian flat earthism to its present day counterparts.

In 1914 and on into the 1920s the banner of flat earthism was carried forward by William Edgell, who wrote a marvellous little book called *Does the Earth Rotate?*

As the title suggests, Mr Edgell was not so much concerned with the Earth's flatness – though he entertained no doubts at all that it was flat. What really got him going was the absurd claim of orthodox astronomers that the Earth was spinning on its own axis as well as hurtling round the Sun at breakneck speeds. He just couldn't see how it was that we didn't all end up in one dizzy heap on the ground, with hurricane force winds howling about our ears. Nor could he understand why, when the astronomers said that the Earth was at its closest to the Sun in January, his English country garden was covered in snow.

Thirty years study and experimentation, most of it from the confines of his own back garden, had taught Mr Edgell that the Earth is flat and stationary at the centre of the universe. In common with other flat earthers, he believed that the alternation of night and day, as well as the course of the seasons, was regulated by the movements of the Sun above the Earth, and not by the movements of the Earth itself.

One of his basic proofs of the flatness of the Earth relied on the common sense fact that any water surface must be dead level. We saw this argument in the Bedford Canal experiment, of course. Here is Mr Edgell's variation on the theme:

It is an old saying and a true one, that water always finds its level of its own accord. If so, the surface of the water at the landing Sea-port of Bristol and London are on an absolute level less the few feet on height of tides, with New Zealand.

The school book gives the highest point of land above Sea level in England and Wales as 3000 feet, and that of New Zealand as 5000 feet. Instead of New Zealand being underneath England, you will see that it stands higher by 2000 feet. May I ask, should not

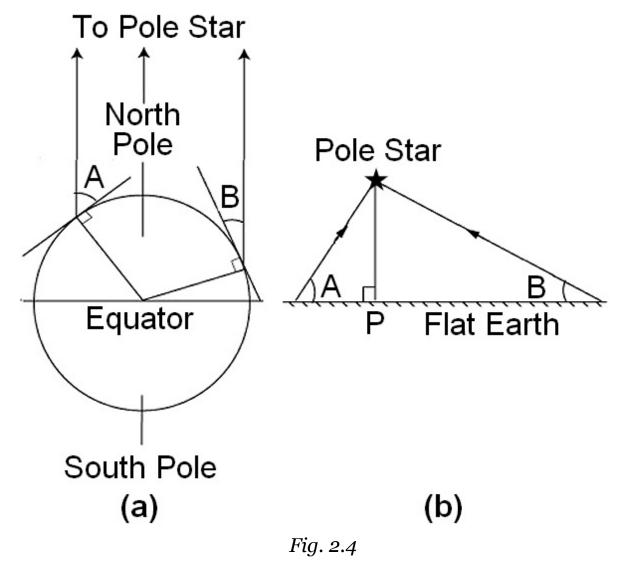
these heights of land above sea level of England and New Zealand convince you without a shadow of doubt, that the Earth to all intents and purposes is flat and not the shape of an orange or globe?

Nor was Mr Edgell very keen on the distances of millions upon millions of miles so freely bandied about by conventional astronomers. They were just too big to be true – so he set about cutting them down to size.

The Sun, he said, was a mere ten miles in diameter and never more than about 9500 miles above the surface of the Earth. The Pole Star, meanwhile, hung comfortably above the centre of the stationary Earth at a height of 4500 miles.

In fact, the Pole Star was very important to Mr Edgell because it afforded him absolute proof that the Earth was both flat and stationary.

In Fig. 2.4 we present, diagrammatically, the orthodox view and the Edgell view of why it is that the Pole Star appears to hang at different angles above the horizon in different parts of the world.



The way orthodoxy sees it (Fig. 2.4a) the Pole Star is so far away that its altitude is governed solely by the latitude of the observer. At high latitudes (A), it appears well above the horizon. Nearer to the equator (B), its altitude is much less.

But for this explanation to work we require a spherical Earth, and every self-respecting flat earther knows that if the Earth were a sphere, everyone in New Zealand would fall off it, and the oceans would just drip off into space.

The situation becomes simpler, and the distance of the Pole Star not so forbidding, if one assumes the Earth to be flat (Fig. 2.4b). The altitude of the pole star then varies because of the observer's distance from the point P vertically below the Pole Star. It all makes perfect sense, and it leaves the pole Star at a comfortable 4500 miles above a flat Earth, off which neither New Zealanders nor anyone else need ever fall!

Now, how to prove that the Earth is stationary using the Pole Star and a cardboard tube three feet six inches long. Ready? Set up the tube on a stand of some sort so that when you look through it you get a clear view of the Pole Star. Now, aside from the obvious fact that if the Earth were hurtling around in space we'd surely *feel* it moving, consider this. The Pole Star being at a height of 4500 miles, if the Earth were charging through space at many miles a second, it stands to reason that within a very short time the Pole Star would cease to be visible down the cardboard tube. It would be like trying to keep a tree in view down the tube whilst travelling on a very fast express train. Yet Mr Edgell assures his readers that he kept just such a cardboard tube set up in his garden for two whole years and that not once did the Pole Star step out of line!

Mr Edgell had a great regard for practical common sense and very little patience for new-fangled astronomical clap-trap. Great truths could be clearly demonstrated in the privacy of one's own back garden, as he never tired of telling his readers:

It is a mistaken idea, and a very prevalent one, to suppose that without great observations and complicated mechanical devices one cannot study and experiment on these subjects.

I contend that the most reliable sources of proofs and arguments will be found in one's own garden and with the aid of a tube such as I have mentioned in previous pages, it is quite simple but very reliable.

Because his approach was so practical, some of his 'proofs' are decidedly strange to modern theoretical eyes. At the drop of a hat Mr Edgell instructs his readers to face north-east and hold the book flat, or to face due south with the book held upright. Fans of Sellar and Yeatman will thrill with delight to learn that on p. 25 of *Does the Earth Rotate?*, Mr Edgell instructs his readers to, "Please hold the book upright when reading."

One of the highlights of this delightful book comes when someone is trying to drop a bomb on the Edgell household (Fig. 2.5). Nothing malicious, you understand – it is all in the cause of demonstrating the absurdity of a spinning Earth:

DOES THE EARTH ROTATE?

Aeroplane one mile from Earth dropping a Bomb on my house.

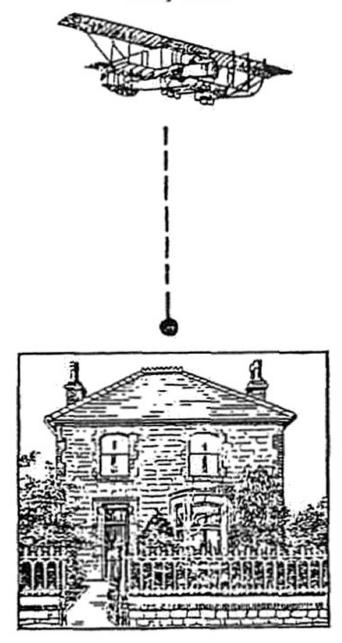


Fig. 2.5

The diagram on the next page depicts an airman bombing a building from his aeroplane at a great altitude. This is another illustration of the unreasonable theory of a rotating globular Earth. Readers will remember it takes about ten seconds for the bomb to reach the building from the aeroplane one mile up. Multiply eighteen miles by ten and it will give

you the distance which the house has travelled with the Earth according to astronomers, as readers will observe, the bomb would pitch 180 miles distant from the house. Is the rotation theory compatible with reason?

And if that doesn't convince you, well, if the Earth were really spinning on its so-called axis, what *keeps* it spinning, pray, and why doesn't it slow down and topple over like a child's spinning top?

Among modern or near-modern flat earthers, mention should be made of Rudolf Steiner, the eccentric educationalist, and President Kruger of South Africa. Of more immediate importance, though, are Wilbur Glenn Voliva in America, and Samuel Shenton in England.

Voliva was an evangelist, and presiding genius and absolute ruler of a fundamentalist Christian community in Zion, Illinois. He and his followers believed the world to be shaped like a pancake, with the North Pole in the middle and a wall of ice all around it. There is no South Pole, but the icy wall prevents ships from tumbling over into Hades, which lies below and is a sort of bargain basement inhabited by the spirits of a race of men who used to live on Earth before the arrival of Adam and Eve. Nor did Voliva think much of the astronomers' idea that the Sun was 93 million miles away from the Earth: if God in his wisdom had made the Sun to light and heat the Earth, why would he have put it so very far away? It would be like building a house in one town and putting the lamp to light it in another town, several miles away! No, said Voliva, the Sun can be no more than 3000 miles away from the Earth. Such were the ideas taught in the schools of Voliva's community in Zion. (Incidentally, Voliva once offered a \$5000 prize that no-one could prove that the Earth was a globe, spinning on its own axis and revolving around the Sun. Needless to say, though many tried, none actually managed to win it!)

When Voliva died, in 1942, his colony seems to have faded away; but in England the cudgels were taken up by Samuel Shenton, who lived in Dover and founded the Flat Earth Society in 1956. (There had been a flat earth society – known as the Universal Zetetic Society – founded by some of Rowbotham's followers in about 1890, but it had fizzled out sometime after World War I.) Originally, Mr Shenton maintained, the Earth was heaved up out of the waters, and he agreed with Voliva about the central North Pole and the non-

existence of the South Pole. When pressed, he was evasive about what lay on the underside of the flat Earth, but, like Voliva, he maintained that the Sun's distance was less than 3000 miles. The entire universe consists of the Earth, but there may be a series of 'heavens', made up of enclosed spaces and perhaps even inhabited.

When Apollo 8 went round the Moon, in 1968, and sent back pictures of the Earth from space, Mr Shenton's faith was only temporarily shaken. He concluded that the astronauts had followed a spiral path, and could not go very high; if gravity ends at a mere 9 miles above the ground, as some scientists had claimed (we are not sure just who), then a parachutist coming down from a great height would be in danger of missing the Earth altogether – and what would happen to him then?

Pictures taken from space showing the curvature of the Earth were, of course, fakes, propagated by 'globalists' in a final, futile attempt to halt the progress of true science. And it was true that during the Apollo 8 circumlunar flight, the mission commander, Colonel Borman, did refer to Mr Shenton and his beliefs. (Not, of course, that the Colonel believed in a flat Earth; it would have been rather difficult for him to do so, particularly at that moment!)

Mr Shenton died in 1971. Apparently the British branch of the Flat Earth Society died with him; but many of its documents were passed on to Mr Charles K. Johnson of Lancaster, California, who set up the International Flat Earth Research Society. (Apparently, though, a lot of Mr Shenton's papers ended up in a Flat Earth Society Archive in the University of Liverpool!)

In the late 1970s the society boasted over 1500 members, largely professional people, Mr Johnson claimed, and in running it he was helped by his wife, Marjory, who was living proof that the Earth was flat: she hailed from Australia and could testify that over there people just did not feel as if they hung upside down. She felt exactly the same in America as she did 'down under', she said, and was quite prepared to sign an affidavit to that effect.

The Society's equivalent of *The Daily Globe* was *The Flat Earth News*, a periodical devoted to erasing the lies put forth by orthodox scientists – a cartel of arch-criminals, as Mr Johnson used to call them.

Many of the points of issue, as well as their proofs and disproofs, stood essentially as they had in Rowbotham's day: the Earth is flat

and stationary at the centre of the universe. The Sun and Moon are both about 32 miles in diameter and they circle above the Earth, but below the dome of the sky, which, incidentally, is about 4000 miles above us. Sunset and the changes of the seasons are, of course, illusions of perspective. Finally, gravity is a "religious hoax" and the Moon shines by its own phosphorescence rather than by the reflection of sunlight.

Mr Johnson even repeated the Bedford Canal experiment on Lake North, near Fort Worth in Texas. The results proved conclusively that the Earth is as flat as Hampden had proved it just before he got swindled out of his £500.

But of course, there was one brand of spherical 'evidence' that Mr Johnson, like Mr Shenton before him, had to contend with that Mr Rowbotham and his cronies had never had to face: photographs taken from artificial satellites.

"Hoaxes one and all!" was Mr Johnson's simple answer to this one. The photos were merely the desperate propaganda of a decadent, atheistic science. Every so-called photograph of the Earth from space was a laboratory mock-up, and the entire series of so-called lunar landings were film-set concoctions written, produced and directed by Arthur C. Clarke!

Was Mr Johnson serious? He was asked just such a question in a newspaper interview in 1978. His reply was: "I'm on the level!"

Unfortunately, our good friend the late Bob Schadewald, an expert on the history of flat earthism, was definitely not "on the level" as far as Mr Johnson was concerned. He showed so much scepticism about the flatness of the Earth that in the end Mr Johnson expelled him from the Society for his "spherical tendencies" and his "inability to face the plane truth."

Alas, Mr Johnson died in 2001, without achieving his avowed aim of "restoring the world to sanity." The world, like Mr Schadewald, still fails to see "the plane truth". But the battle continues, only now on the Internet. We refer our readers to the web-site at http://www.theflatearthsociety.org/, and tip-toe quietly away....

Chapter 3. The Hollow Earth and Hollow Moons

One of the most colourful controversies in the field of UFOs is that of where they actually come from. There was a time when Outer Space was all the rage. But, thanks largely to the late Brinsley Le Poer Trench, the idea seems to have gained ground that they are not from space at all but from the cavernous interior of our own *hollow* Earth.

Lord Clancarty (Mr Brinsley Le Poer Trench before succeeding to the title) may be the most famous champion of this view, but he is by no means the originator of it. It is a theory with a long and eccentric history.

That the Earth is hollow is an old idea dating back to the early nineteenth century, and the ideas of John Cleves Symmes, who proposed that the Earth consisted of an outer shell, about 800 miles thick, with four concentric inner shells, all of the shells being open at the poles. Later, in 1906, William Reed published a book Phantom of the Poles in which he argued that a hollow Earth, without inner shells, this time, but still with holes at the poles, would neatly explain the formation of icebergs and the true nature of the aurora borealis, as well as various other natural phenomena. A few years later, in 1913, Marshall B. Gardner promoted similar ideas in his book A Journey to the Earth's Interior, but went further than Reed by giving the interior of the hollow Earth a central miniature sun to illuminate it! Both Reed and Gardner felt that the interior might be inhabited, though of course neither of these early authors mentioned UFOs for the simple reason that prior to about 1947, they hadn't really been invented! (The first UFO sighting was reported by Kenneth Arnold in June 1947, and publicised in his book The Coming of the Saucers five years later.)

The problem with UFOs from Outer Space was that since it seemed extremely unlikely that they originated from within the solar system, therefore they must have come from a planetary system orbiting another star. And that immediately introduced rather unbelievable stints of interstellar travel into the proceedings.

It was probably Gardner's intriguing concept of 'the people of the interior', coupled with the need to avoid these lengthy space

journeys, that prompted a group of Brazilian Theosophists to link the hollow Earth with UFOs.

Sometime in the 1950s, then, a theosophist called Huguenin got around to writing what was probably the first hollow earth UFO book. It was called *From the Subterranean World to the Sky* and it was this book that converted one Dr Raymond Bernard (apparently the pen-name of one Walter Seigmeister), probably the most extraordinary character that this strange belief has attracted to date.

By 1963 Dr Bernard had himself put pen to paper in the form of his own book *The Hollow Earth*. We summarise its major conclusions under six headings:

- 1. The Earth is hollow and access to the interior is gained via holes about 1400 miles across, one at each pole. The 'shell' of the Earth is about 800 miles thick.
- 2. Inside the hollow there is a small central sun about 600 miles across which illuminates and heats the interior. The light of this sun shining out through the polar openings causes the aurorae. The midnight sun of polar regions is, in fact, the interior sun, and not *our* Sun, which is hidden behind the rim of the polar hole.
- 3. On the interior are vast continents and seas having their own varieties of flora and fauna. Those giant woolly mammoths sometimes found encased in blocks of ice are not prehistoric remnants at all but creatures of the interior that ventured too near the polar opening, got frozen up in icebergs, and floated out onto the surface-earth with the tide.
- 4. The interior is also the home of an advanced civilisation, founded originally by the survivors of the destruction of Atlantis. This civilisation is known to Buddhists as Agharta and its capital is a city called Shamballah. An old Eskimo legend suggests that the Eskimo race came originally from the interior. The same is possibly true of the Chinese and the Gypsies.
- 5. Flying Saucers or UFOs are the flying machines of the Aghartans. Santa Claus may be a legend of a benefactor of humanity who emerged from the north polar opening (Toy Land) on his flying sled (UFO).
- 6. The interior is linked to the exterior by a world-wide network of tunnels and caves. Many of these tunnels emerge in sinister,

out-of-the-way places like the Brazilian jungle and the monasteries of Tibet. One of them even links the Great Pyramid with Agharta!

That, in a nutshell, is the enthralling saga unfolded by the mysterious Dr Bernard.

The obvious question is, if there are holes at the poles and people on the inside, why don't we know more about them? What about those famous flights over the poles by Admiral Byrd? Indeed, what about those commercial flights that now take routes directly over the poles?

There are answers to all these questions, never fear!

For a start, how do most people 'know' the Earth to be a globe rather than a pancake? The answer is that they don't. They merely believe what they are told in schools and that is the unquestioned end of the matter. The holes at the poles sound absurd, to be sure, but that is certainly not a disproof of their existence.

So why don't the Aghartans actually contact us instead of carrying on this cloak-and-dagger UFO business?

There are two possible answers here. Firstly, they don't want to know us. We surface dwellers are a warlike lot, with our nuclear weapons and such like. The Aghartans don't want to *mix* with us hostiles, but they do want to keep an eye on us lest we blow ourselves – and them – to kingdom come. You have to admit that the hollow earthers have something of a point here. Even more so when you consider that UFOs began to appear in ever increasing numbers about 1947 – a mere two years after Hiroshima and Nagasaki.

There is a veil of Aghartan secrecy, therefore, and in fact some UFO buffs claim that the Aghartans actively encourage surface dwellers to believe that UFOs come from Outer Space to distract us from their real purpose and place of origin.

The other explanation of why the Aghartans don't seem to want direct contact with us is linked to the problem of how on earth – in earth, rather – we today could fail to 'know' such incredible facts about our own planet as its hollow interior and its holes at the poles.

Government secrecy is the key. The top brass know all about the hollow earth and its super-civilised inhabitants, but are keeping quiet about it. Contact might have already been made. It is just that we run-of-the-mill citizens, fit only for paying exorbitant taxes, are not deemed worthy of being in on the secret.

This is not as unreasonable as it sounds – the secret, not the taxes. The nation that first persuades the Aghartans that it really is worth getting pally with it may well reap untold economic and political benefits, and thus end up as Top Nation. That being the case, whilst negotiations are in progress, the less said the better.

So what about Admiral Byrd and those trans-polar flights of today?

Dr Bernard claims that Byrd did fly over the poles, and that he did see at least a part of the lands of the interior, but that, being in the employ of the US Navy at the time, he was naturally sworn to secrecy. However, if one looks at Byrd's accounts of his flights, and one reads between the lines a bit, it soon becomes apparent – Dr Bernard says it does, at any rate – that Byrd let slip a few things. Why, for instance, did he say that, "That area beyond the Pole is the Centre of the Great Unknown"? (In recent years a secret diary of Admiral Byrd's is supposed to have been found, in which his 1947 flight to the inner Earth is graphically described, and in which he tells of being ordered by Top Security Forces to keep quiet about it. Some people suspect that the diary is a fake, though....)

As to trans-polar flights, well, they are not really trans-polar at all. Word has it that commercial airlines never get within 1500 miles of the hypothetical 'poles', either because the flights are ultimately controlled by the Official Secrets Act, or because any magnetic compass, or gyro-compass, on the rim of a polar hole behaves as it would if a pole really existed. In other words, when you get near the rim, if you trust in your compass, you will believe yourself to be at the pole, or, perhaps more to the point, up it.

For this same reason the exploits of Scott of the Antarctic need something of a revised interpretation, as do the so-called sub-polar exploits of the submarine Nautilus.

But let's go back to Dr Bernard's speculations concerning the lifestyle of the subterranean descendants of Atlantis. Why, for a start, did they go *underground*? Why, indeed, was Atlantis destroyed?

Dr Bernard is quite positive that Atlantis was destroyed in an antediluvian nuclear war and that the Atlanteans went underground to escape the fall-out. This would also account for their need to keep

an eye on our nuclear activities – a case of once bitten, twice shy. As to the Atlantean way of life, we quote Dr Bernard:

There is no old age in Agharta and no death. It is a society in which everyone is young looking, even if many centuries or even thousands of years of age. This seems incredible to surface dwellers exposed to the baneful effects of solar radiation and the autointoxication of food poisoning on a wrong diet. The symptoms of old age are not the natural result of the passage of time nor an assumed ageing process, but to adverse biological conditions and habits. Senility is a disease; and since Aghartans are free from disease, they do not grow old.

The sexes live apart in Agharta and marriage does not exist. Each is free and independent and one sex does not depend on the other for its economic support. Reproduction is by parthenogenesis; and the virgin-born children are all female. (In this matriarchal civilisation the female is considered the normal, perfect and superior sex.) Children are raised collectively by special teachers and not by private families. They are supported by the community. So are their mothers.

The superior scientific culture of the subterranean people, of which their flying saucers are an evident example, is the result of superior brain development and more energetic brains. This is due to the fact that their vital energies flow up to their brain, rather than dissipated through the sexual channel as among socalled 'civilised' surface races. In fact, sex indulgence is completely out of their lives, because of their fruit diet, their endocrines are in a state of perfect balance and harmonious functioning, as in little children, and are not stimulated to abnormal activity by metabolic toxins, as produced by such foods as meat, fowl, fish and eggs and by such aphrodisiacs as salt, pepper, coffee, tobacco and alcohol. By keeping their bloodstream pure and free from toxins, the subterranean people are able to live in complete continence,

conserving all vital energies and converting them into superior brain power.

We have quoted this at some length to show that the hollow earth is not Dr Bernard's only off-beat belief by any means. He firmly believes in virgin birth and has written a book proclaiming it as the method of reproduction by which a Super-Race will evolve. He has also written a book in which he claimed that Leonardo da Vinci and Isaac Newton both owed their genius to life-long celibacy. The sex act, according to Dr Bernard, is no more than a senseless debilitating indulgence. He has also written a book on the herbal elixirs of life, another on the serpent power at the base of the spine, and a third which seeks to show that Jesus wasn't Jesus at all.

Unfortunately, we have to stick with the hollow earth, so let us leave Dr Bernard and come back to his latter day followers. Two of these are Warren Smith, author of *This Hollow Earth* (1972), and our own Lord Clancarty, mentioned earlier, and author of *Secret of the Ages* (1974).

Mr Smith feels that sea serpents are really creatures from the interior, as are dinosaurs and Abominable Snowmen. He also quotes an account of "a strange animal with sixteen feet and one eye, like the legendary Cyclops of ancient times", but we rather feel that someone is being not altogether serious here.

Again, Mr Smith speculates that the infamous Lost Ten Tribes of Israel were not lost at all, but that they ended up inside the hollow earth. So, too, apparently, did Hitler at the end of the last war. Mr Smith quotes a hollow earther called Gunther Rosenberg to the effect that "a fleet of Nazi submarines took Hitler and his henchmen to a Nazi base set up under the ice cap at the south pole."

Mr Smith, as does Lord Clancarty, produces evidence that nature favours hollow structures rather than solid ones. There are nebulae with holes in them. Human bones and the stems of plants are both hollow. The Van Allen belts are hollow in the sense of being moulded about the Earth so as to leave 'holes' at the poles. And what about the so-called polar caps of Mars? Are they really the thin ice caps that astronomers claim or are they polar entrances instead?

Mr Smith and Lord Clancarty both point out that there is even biblical authority for a hollow earth. Well, sort of, anyway. Here is Job 26.7–8:

He stretcheth out the north over the empty place and

hangeth the earth upon nothing. He bindeth up the waters in his thick clouds; and the cloud is not rent under them.

The "empty place" of the north could be the north polar opening, and one of the reasons why these polar openings have remained unknown for so long is that it is always very cloudy in and around them. If you add to this "the angel of the bottomless pit" in Revelation 9.11 – an obvious reference to the King of Agharta – then the whole business becomes as clear as a foggy day at the north pole.

Talking of which, we come to Lord Clancarty's ultimate piece of evidence for the holes at the poles – the ESSA 7 photographs.

Lord Clancarty claims that most satellite pictures of the polar regions don't show the holes because they are obscured behind dense layers of cloud most of the time. Most of the time, but thankfully not all. On 23rd November 1968 a series of photographs taken from the satellite ESSA 7 caught a unique glimpse through the polar clouds of the north and revealed – A HOLE! We reproduce this remarkable photograph here as Fig. 3.1.

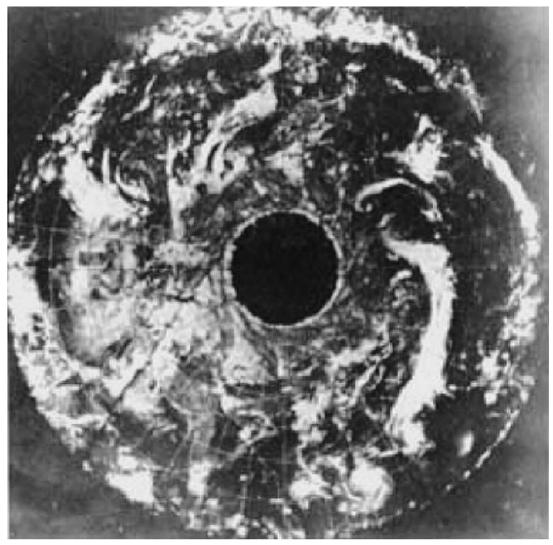


Fig. 3.1

Well, it certainly *looked* like a hole, though, perhaps predictably, the scientists were quick to step in with a denial of such an outrageous idea.

The ESSA 7 photograph, they said, was really a mosaic of photographs of sections of the Earth's surface, each section being photographed when under direct illumination from the Sun. That is, each section was photographed at a different stage of the Earth's rotation on its axis.

Now, in November, when these photographs were taken, the north pole was tilted away from the Sun. Consequently, those regions in the immediate vicinity of the north pole were never illuminated at any time during the Earth's rotation, and so they came out blank when the photographic sections were developed.

When the sections were put together, of course, the dark bits of each one fitted together to make a 'hole' – but not, alas, the one the

hollow earthers were looking for.

We are of the view that if there aren't really any polar holes at all, then there jolly well ought to be, if only for the reason that the hollow earthers have devised such marvellous stories of what goes on in the interior.

Apparently it is not all correct diet, celibacy and virgin births down there, and life is not one endless round of Atlantean sweetness and light.

Atlantis, remember, probably destroyed itself in a nuclear war. Lord Clancarty has a rather involved theory about just what went on, but basically most of the Atlanteans, or, shall we say, the cream of what was left of them, escaped into space in their UFOs (which is where, incidentally, they came from in the first place!) The rest, as we saw earlier, went underground, and it appears that that is where the Atlantean riff-raff ended up. Certainly there were some unsavoury characters amongst them.

One of these, a mad scientist called Satanaku, had an uncontrollable urge to create monstrous reptilian creatures by way of biological experimentation. Hence the legends of Satan and his subterranean Hell, into which, incidentally, Lord Clancarty assures us, both Dante and Christ really did descend.

But if you want the real hot gossip of what goes on down under then even Satanaku pales into insignificance when compared to the deros, a malicious subterranean race of malformed sub-human midgets who, by telepathy, vision rays and remote control devices, delight in plaguing the human race with disasters and misfortunes. All our troubles are stage-managed by the deros. By suitably directing mysterious beams of energy they cause train crashes, earthquakes and wars. By telepathic means they induce mental anguish, trauma, dreams, nightmares and even death.

The deros are the evil mutant descendants of the slave classes of Atlantis. Quite naturally, therefore, they have a chip on their collective malformed shoulder. For 12,000 years they have lived in their underground tunnels, turning the abandoned machinery of the Old Atlantean civilisation to their own spiteful ends. They are therefore very dangerous — like a little child with a machine-gun. We quote from Warren Smith:

A train is speeding across the surface of the world. In the dark recesses of his cavern, a dero focuses a tractor beam on a railroad switch. The track is opened; the train is derailed. The dero can instantly change highway traffic signals, sabotage industrial machinery, and ruin complex devices. Have you ever had a machine or object that refused to work, then performed marvellously when the repairman arrived? A dero may have been amusing himself.

Unlike the sexless Atlanteans described by Dr Bernard, the deros are sex-mad. In fact, they even have a machine to cater for it. It is called a Stim Machine, and Mr Smith knows all about what happens to the very naughtiest deros who just don't know when to stop:

Unfortunately, many of these stim machines have been captured by roving bands of deros. These complex mechanisms are used to create varied degrees of sexual intensity. The deros, who are totally degenerate, may spend their entire lives in a stim ray sex orgy. This debauchery can be heightened to such a degree, and prolonged for so many years, that the dero is deformed. They are transformed into even more frightening, more monstrous creatures. Perhaps a stim machine is addictive.

Mind you, when a dero gets fed up with his stim machine, no lady surface dweller is safe. The May 1967 issue of *Hollow Earth Bulletin* carried the lurid tale of a French woman who pressed the wrong button in a lift and ended being kidnapped by a dero in the basement:

His face was of a pale, whitish colour. His short, twisted body was covered with thick, bristly hair. His eyes were piggish, insensitive to any emotion, and gleaming with evil lust. The creature was fat, almost bloated. There were terrible scars and running sores over most of his body. He had no neck, so his head was placed squarely atop his muscular shoulders.

We are not told whether or not he spoke French.

Now, our readers can be forgiven for wondering if all this is really to be taken seriously, or if we are only the victims of a giant leg-pull.

The dero stories do have a suspicious origin, to be sure. They first featured in a science-fiction magazine called *Amazing Stories* in 1945, but the man who wrote about them, Richard Shaver, claimed

them as fact rather than fiction. How firmly his tongue was lodged in his cheek when he said this, we have been unable to discover, but such is the appeal of these underground adventures that many people certainly do believe them. Some people even seriously claim to have had their own encounters of the unpleasant kind with these creatures.

Certainly in the history of hollow earthism, with or without flying saucers, fact and fiction have walked hand in hand, and it has not always been clear where the dividing line lies.

The most famous fictional exploit in this vein, of course, was Jules Verne's *Journey to the centre of the Earth* (1864). An early foretaste of Mr Shaver's deros came in the underground dwellers, or Morlocks, of H.G. Wells' novel *The Time Machine* (1895), and the fore-runners of Dr Bernard's sophisticated Atlanteans feature in Bulwer Lytton's novel *The Coming Race* (1871). Finally, there is Willis George Emerson's novel *The Smoky God* (1908).

This last one is an oddity. Like Mr Shaver's stories, it reads like a novel but its author, with a twinkle in his eye, hinted that the contents might just be true after all.

Basically Mr Emerson posed as the recipient of the death-bed confession of an old Norwegian sailor called Olaf Jansen. Jansen's story was that in 1829, whilst on a fishing trip with his father, a mighty storm blew up that drove them over the polar rim and down into the interior. Here they were rescued by some 12 feet tall giants – fortunately friendly – and taken to the subterranean city of Jehu where, in the course of a year or so, they managed to pick up the local language. This was very similar to Sanskrit, as it turned out. Having mastered the language, they were in a position to learn all manner of extraordinary things, such as the location of "the navel of the earth" and the fact that on the inside of the Earth the land to sea ratio is exactly the reverse of that on the outside. That is, three-quarters land to one-quarter sea.

All in all it was an entertaining tale of adventure whose title, *The Smoky God*, was taken from the name given to the interior sun by the local inhabitants. But Mr Emerson didn't know what he was letting himself in for when he wrote:

A hundred times I have asked myself whether it is possible that the world's geography is incomplete, and that the startling narrative of Olaf Jansen is predicated upon demonstrable facts. The reader may be able to answer these queries to his own satisfaction, however far the chronicler of this narrative may be from having reached a conviction.

Mr Emerson just could not have known that within seventy years of the publication of his novel some people would be taking it all seriously. And that includes a penguin nine feet tall which waddles across the plot on page 146!

The notion of the Hollow Earth lingers on, and in 2008 plans were afoot to organise a voyage to the interior via the web-site http://www.ourhollowearth.com. It was advertised that a contribution of about \$20,000 would secure a cabin on board a Russian nuclear ice-breaker which was to be chartered for the expedition. If this seems like a lot of money, well, prospective participants were tempted with the prospect that once they got to the interior world they would have the chance to meet up with the Lost Ten Tribes of Israel, and to take a monorail ride to the Garden of Eden, which, by the way, is located on the interior directly below America! (Incidentally, that monorail ride to the Garden of Eden is based on material in part III of The Smoky God which is, remember, a novel!...) Whether the expedition ever actually took place, and with what results if it did, alike remain unclear. Though the web-site is still there at the time of writing (January 2013), the section of it devoted to the proposed voyage to the interior has quietly disappeared.

As we have seen, the idea of a hollow Earth goes back a long way – at least to the early part of the nineteenth century. The idea of a hollow Moon is much more modern. According to a writer named Don Wilson, who has written two books about it – *Our Mysterious Spaceship Moon* (1975) and *Secrets of Our Spaceship Moon* (1979) – it is due to two Russians, Mikhail Vasin and Alexander Shcherbakov, writing in about 1970. Even more surprisingly, it is claimed that the Moon is not a natural world at all, but a vast spaceship with a metal hull concealed beneath its outer surface. In this case it must have been inhabited in the past, and Mr Wilson himself inclines to the view that it is still inhabited now. He is supported by George H. Leonard, the title of whose book, *Someone Else is on Our Moon* (1976), speaks for itself.

Quite where and when the idea of a hollow - and inhabited -

Moon first appeared is not clear, but it is a fact that in 1926 Edgar Rice Burroughs, author of the Tarzan stories, wrote an adventure novel called *The Moon Maid* in which he pictured the Moon as a hollow sphere with a solid crust some two hundred and fifty miles in thickness, and which was inhabited by some rather strange creatures, which included flying toads and quadrupedal humanoids! The idea may also have been sparked off by an article written in 1959, at the start of the space age, by another Russian, Iosif Shklovskii. Unlike Vasin and Shcherbakov, Shklovskii was an eminent astronomer, and all students of astrophysics will know about his pioneer work in connection with the Crab Nebula – a mass of gas which we know to be the result of a supernova explosion, seen by the Chinese and others in the year 1054. Today we know a good deal about it, but most of what we have found out is based on Shklovskii's brilliant work in the early 1950s.

Iosif Shklovskii, then, is not a man whose opinions can be cast lightly aside. This is why his paper about the two dwarf satellites of Mars caused such a stir when it first appeared. Phobos and Deimos, the Martian satellites, are quite unlike our Moon. Neither is as much as 20 miles in diameter, and from Earth they look like tiny points of light, visible only with the aid of telescopes of considerable size. Phobos, the inner and rather larger of the two, moves round Mars at a distance of less than 4000 miles above the surface, and completes one circuit in 7½ hours. The interesting point here is that the Martian day amounts to 24½ hours, rather longer than ours. Therefore, to an observer on the planet, Phobos would rise in the west, scud across the sky in a mere 4½ hours, and set in the east.

There is no other natural satellite which has a period of revolution less than its primary's 'day', and it was also suggested that that Phobos was slowly spiralling downwards, so that in a few tens of thousands of years it would crash-land on Mars. In his original paper, Shklovskii suggested that this spiralling-down was due to the braking effect of the Martian atmosphere. Since the atmosphere at that height would be very tenuous, it followed that Phobos must have negligible mass; in other words it must be hollow, and came into the category of a spaceship built by the local inhabitants (either past or present) for reasons of their own. Presumably the same would apply to the other satellite, Deimos.

Shklovskii's announcement caused quite a stir, and it seems that

the USSR Academy of Sciences was not particularly pleased about it. Subsequently, it was found that the spiralling-down effect is not genuine – or at least, not to the extent that was supposed – and pictures taken in the 1970s by the Mariner and Viking space-craft showed that both Phobos and Deimos are irregular, crater-scarred chunks of material, as natural-looking as they could possibly be. They may well be ex-asteroids, which came from the belt of midget planets orbiting the Sun between the paths of Mars and Jupiter. In any case, in 1979 Shklovskii wrote an article in the British *Yearbook of Astronomy* in which he said that his original paper was "just a joke". He went on to say that in his view there was unlikely to be much intelligent life anywhere in the universe except on the Earth: perhaps none at all.

This was a complete reversal of the opinions he had expressed earlier in a book he had co-authored with Carl Sagan, which had been entitled *Intelligent Life in the Universe*. Whether his Martianmoon suggestion really was a joke, or whether the space-probe findings caused a rapid change of heart, is a question to which only Dr Shklovskii knew the answer. But joke or not, his paper was widely circulated, and could well have led others on to the idea that if Phobos and Deimos were hollow, our own Moon might be the same.

Mind you, there are differences. The Moon is planet-sized. Its diameter is 2160 miles, and it has 1/81 the mass of the Earth. It seems disturbingly large to be an artificial satellite, and there are actually grounds for believing that the Earth–Moon system is a double planet.

Nobody is certain about the origin of the Moon. The old idea that it used to be part of the Earth, and was hurled away in ancient times, has been so maltreated by the mathematicians that most astronomers have relegated it to the scientific scrap-heap. The Moon may have been an independent body which was captured by the Earth's pull of gravity, though this would involve some very special circumstances. It may have been formed from debris circling the youthful Earth. Or it may have been produced in the same way as the Earth itself, at the same time and in the same region of space, by condensing out of a 'solar nebula', a cloud of material associated with the Sun in its early stage. At any rate, analyses of the samples brought back by the Apollo astronauts and the unmanned Russian

Lunas show that the Moon and the Earth are about equally old; they date back between 4½ and 5 thousand million years.

It is true that the Moon is less dense than the Earth, but there is nothing surprising in this, because the Earth is denser than any other planet in the Solar System. The Moon's mass is known very accurately, and there is no chance of it being hollow – at least, not according to the majority view. The possibility of deep sub-crustal caverns is another matter, and is not out of the question; but we have these on Earth too. The lunar surface is pitted with craters, some of which exceed 150 miles in diameter. According to one school of thought, they are volcanic in origin. Other astronomers prefer to regard them as the scars left by the impacts of meteorites. No doubt both processes have operated to some extent.

(Of course, other theories have been proposed, ranging from coral atolls to the results of a nuclear war. One writer, who rejoiced in the name of Weisberger, even claimed that there are no craters at all, and what we are seeing is storms and cyclones in dense lunar atmosphere. Unfortunately, we now know that the Moon is to all intents and purposes airless.)

Sir William Herschel, arguably the greatest of all astronomical observers, regarded the habitability of the Moon as "an absolute certainty", and never changed his mind up to his death at an advanced age in 1822. Subsequently a German astronomer, Franz von Paula Gruithuisen, announced the discovery of a lunar city with "dark gigantic ramparts", though observers both before and afterwards could see nothing more than low, haphazard ridges of the type to be found almost everywhere on the Moon. Gruithuisen also paid attention to the so-called Straight Wall, an 80 miles long fault in the surface which can be seen with a small telescope near the edge of one of the so-called seas (the Mare Nubium). Gruithuisen regarded this as due to engineering works.

The Moon spins on its axis in exactly the same time that it takes to complete one orbit of the Earth: 27.3 days, so that it keeps the same face turned towards us all the time. Again there is no mystery in this. Tidal friction over the ages has been responsible, and all the other principal planetary satellites do the same thing with respect to their primaries. In the 1870s a Danish astronomer, Andreas Hansen, suggested that all the lunar air and water had been drawn round to the hidden side, which could be inhabited; and in his

famous book of 1954 George Adamski even said that during one of his trips in a flying saucer he had been right round the Moon and had seen little furry animals running about among the mountains and craters. However, in 1959 the Russians sent out their unmanned probe Luna 3, which obtained the first pictures of the hitherto-unknown regions; furry animals were conspicuous only by their absence. Today, thanks to the various probes, we have very detailed maps of the entire lunar surface. The "other side" contains mountains, valleys and craters, but it is just as stark and sterile as the hemisphere we have always known.

So much for the facts. Now let us see what Messrs Vasin, Shcherbakov, Wilson et al. make of them.

First, there are the craters, which are shallow for their size. Their diameters, as we have seen, may exceed 150 miles, but their walls rise to only a few thousand feet above their sunken floors, some of which contain central peaks. It is suggested, therefore, that there is something very strong and tough below the outer surface, which is where the metallic shell idea comes in. Yet the depths of both volcanic and impact craters on the Earth are about the same proportion – and it does not seem that anyone (not even Lord Clancarty) has suggested that the Earth, too, is a metal-hulled spaceship.

Next, there is the question of the make-up of the great plains which are still known as seas even though it has long been known that there is no water in them (in fact, all the current evidence indicates that there has never been a drop of water on the entire Moon.) The consensus of opinion is that they are lava. Certainly this is what is indicated by analysis of the specimens brought home. What seems to have happened is that at a much earlier stage in the Moon's history, several thousands of millions of years ago, there was tremendous volcanic activity; magma poured out of the interior, and filled the great basins which already existed.

Vasin and Shcherbakov, however, have another interpretation. They believe that the "spaceship Moon" had been fitted out for a long voyage across the galaxy, and, of course, had to be made extremely tough. Therefore, some 2½ miles below the outer surface there is an armour-plated shell. Inevitably the Moon is sometimes hit by meteorites, which – as we have seen – produce the craters; they cannot penetrate the inner shell, but merely dent it. Yet there

are occasions when the shell is damaged. After a particularly heavy meteoritic bombardment, the inhabitants found it necessary to open vents and undertake extensive repair operations. This involved sending out vast amounts of "artificial lava", producing the comparatively level seas – which are, therefore, nothing more nor less than areas from which the protective coating was torn away from the armour-plating. The Straight Wall, near the edge of the Mare Nubium, was formed as a result of one of the armour plates bending under the impact of these "celestial torpedoes", so that one of its straight, regular edges has been raised!

What about the interior itself? Below the armour-plating, between it and the core of the Moon (referred to by Wilson, perhaps significantly, as the kernel of the nut), there is the main living section, where a suitable atmosphere was provided. To quote the Russian sages: "The Moon is evidently a very ancient spaceship, the interior of which was filled with fuel for the engines, materials, and appliances for repair work, navigational instruments, observational equipment and all manner of machinery." They also compare the Moon to a cosmical Noah's Ark. There is, though, one important difference between Vasin and Shcherbakov on the one hand, and Don Wilson and George Leonard on the other. The Russians believe that the Moon's inhabitants are extinct, so that we are seeing a dead vehicle. The Westerners, on the contrary, are confident that it is inhabited at the present time, and that many of the current Flying Saucers come from inside the Moon.

Don Wilson gives various reasons for this. As proof of an artificial origin, he points out that from Earth, the Sun and the Moon appear virtually the same size, which can hardly be coincidence (this equality is the reason why we can sometimes see total solar eclipses.) The Moon is not a perfect sphere; it has a "huge Earthturned bulge", inexplicable on natural grounds. The sea surfaces are loaded with iron, indicating their artificial construction. There is a remnant magnetic field which is sufficient to affect Earth compasses at suitable times. Strange glows and moving lights are seen by Earth-based telescopic observers. There are various features, such as the formation Linné on the Mare Serenitatis, which are clearly non-natural. And finally, NASA has effectively covered-up the fact that there are pieces of machinery and miscellaneous gear scattered all around the lunar surface; they have also concealed the even more startling fact that the Apollo astronauts have had many encounters

with lunar-based Flying Saucers. They quote a Soviet scientist, Lev Mohilyn, who reveals that two cosmonauts, Ilya and Evgeny, went to the Moon in 1968, before the Apollo mission had achieved their aim, but Evgeny was killed by a "mechanical monster", leaving Ilya to return home in a state of considerable mental agitation. There have been other signs of habitation. A Japanese gentleman, Dr Kenzahuro Toyoda, has seen the letters PYAX JWA displayed on the surface; Robert Charroux, a French writer, has described voices heard by the astronauts, notably the meaningful sentence MARA RABBI ALLARDI DINI ENDEAVOUR ESA COUNS ALIM (the lunar module of Apollo 15 was named Endeavour, of course, in honour of Captain James Cook's ship of so long ago.)

This is all very well, but it is just possible that these authors are jumping to conclusions. Admittedly it is sheer luck that the Moon and the Sun appear equal in size as seen from the Earth, but there are other satellites in the solar system which can produce total solar eclipses as seen from their primaries. From Jupiter, for instance, the Sun has an apparent diameter of a mere 6 minutes of arc, and there are five satellites which would appear larger than that to an observer on the planet. The Earth-turned bulge is very slight in relation to the Moon's actual diameter, and is easily explained by tidal deformation. The sea surfaces are not particularly iron-rich; and there is no remaining general magnetic field, so that the Moon has no effect upon our compasses – and in fact, if you take a magnetic compass with you to the Moon, it doesn't work. Linné has been photographed in great detail from orbiting probes, and is a perfectly normal small crater – very probably due to meteoritic impact.

The great NASA cover-up is, of course, a now conventional ploy – in 1982 a gentleman by the name of William L. Brian even devoted an entire book to it – *Moongate: Suppressed Findings of the US Space Program* – in which he managed to conclude that Russia and America were really on the same side in the Space Race! Every eccentric believes that the forces of Orthodoxy are ganging up to hide the truth. Unfortunately, the allegedly "hidden recordings" turn out to be non-existent; authorities quoted, such as Dr Lev Mohilyn, cannot be found anywhere in scientific records – or, for that matter, anywhere else. And no astronomer, save the elusive Dr Toyoda, seems to have observed the phrase PYAX JWA displayed upon the Moon. It would be interesting to know what the words

mean in Lunarian – "Earthmen, go home," perhaps, or "UFO diversion ahead – delays expected"?

It is true that certain minor glows and other phenomena have been seen by telescopic observers, but they do not move around, and there seems no doubt that they are due to minor emissions of gas from below the outer crust. They can hardly indicate the presence of UFO bases!

Coming now to the "artefacts" which have been described on the lunar surface (we need do no more than mention in passing the dinosaur skeleton which has been reported by various investigators!), there are extensive descriptions in George Leonard's book *Someone Else is on Our Moon*. Various photographs are reproduced, showing details such as bridges, T-scoops, super-rigs, cosmic domes, pipes, nozzles, gas sprays, rope ladders, control wheels, platforms, T-bars, and (in the Mare Tranquilitatis) what is called a right-angled pipe. At least two races from different planets inhabit the Moon (perhaps three), and as one contingent moves out another moves in. Space-vehicles range from metallic disks to fuzzy globes which seem to be non-material, so that they can change shape at will and often swoop down to see just what we on Earth are doing.

Much stress is placed upon a NASA scientist, Dr Sam Wittcomb, who backs up everything that Mr Leonard says, and confirms the great policy of covering up. However, "Sam Wittcomb" is an assumed name (as is stated quite clearly in the book), so just who he is we will never know!

Looking for Mr Leonard's super-rigs, platforms, control wheels and right-angled pipes is considerably more difficult than looking for the legendary needle in the equally legendary haystack. And to sum up the whole concept of the spaceship Moon, with its hollowed-out interior, its Flying Saucer bases and its nutty kernel, one can only say, with regret: MARA RABBI ALLARDI DINI ENDEAVOUR ESA COUNS ALIM!

The idea of a hollow-moon 'spaceship' still persists today on the Internet (see, for example,

http://users.belgacom.net/gc674645/grave/moon.htm). Thus one N. Huntley PhD, in his article entitled *Our Enigmatic Moon* (see the web-site

http://www.redicecreations.com/specialreports/2006/01jan/moon.

assures us that the Moon is in the wrong orbit for its size, and that it "rings like a bell" when struck by meteorites! The latter idea is apparently derived from the *Moongate* book mentioned earlier (see http://www.bibliotecapleyades.net/tierra_hueca/esp_tierra_hueca
and click on "Hollow Moon"). Dr Huntley also assures us that several television viewers who watched the 1968 lunar landings saw one of the astronauts pick up what appeared to be a glass bottle, and blurt out "My God, I don't believe it, look at this ..." just before the screens went blank! Both of the authors of the present book must have blinked at the wrong moment back in 1968, because, unfortunately, neither of them remembers this at all! More worrying still is Dr Huntley's revelation that "renowned astronomer Patrick Moore" has discovered over one hundred dome-like buildings on the Moon! Unfortunately, PM himself cannot remember this....

Chapter 4. The Puerto Rico Lozenge

We have seen elsewhere the view that UFOs are flying machines from the Earth's interior. Here we consider the view that they – or at least some of them – come from the bottom of the sea. This is the startling idea put forward by Ivan T. Sanderson in his book *Invisible Residents* (1970).

Over 50% of UFO sightings have occurred over, coming out of, or diving into *water*, and, in the words of Mr Sanderson, "the authorities are keeping damned quiet about them."

Furthermore, Mr Sanderson produces an impressive catalogue of UFOs diving into or emerging from the sea, as well as another list of curious sightings of UAOs – Unidentified Aquatic Objects – objects which are observed either on ship radar screens or are visible beneath the waves as sinister lights of one sort or another.

Could it be, Mr Sanderson argues, that these things pop in and out of the sea, or hover above or below its surface at will because that is where they come from? Could there be an Undersea Civilisation?

It is an extraordinary idea and by no means as outrageous as it first appears. Three quarters of the world's surface is occupied by water to only one quarter land. Heaven only knows the full extent of what goes on down there, and many of our oceanologists would be the first to admit it.

So let us consider the evolution of *Homo sapiens* – us, in other words. Where did we come from in the first instance? The answer is: the sea. Of course, between the first water-bound blob of jelly and a fully-fledged air-breathing, tax-paying human, there are an awful lot of intermediate stages spanning millions of years – but the sea is first and foremost where we came from.

Next, Mr Sanderson asks if we can be sure that evolution led to intelligent life *only* on the dry quarter of this planet?

Not only that, but suppose that intelligent life simultaneously developed in the oceans but along a different evolutionary track. We land-bound creatures wasted hundred of millions of years of evolution in learning to breathe and stand upright. But they – assuming they exist – would have been getting on with more

interesting jobs. Consequently they would have had hundreds of millions of years 'start' on us.

It has been said that sciences like metallurgy, electromagnetism, or atomic physics could never have been developed had the human race continued to evolve under the sea. But as Mr Sanderson says, since we have never actually lived there, we can't be too sure of that!

Very well, then, suppose there is an underwater civilisation. Why has it taken so long for us to find out about it? And what are the undersea inhabitants like?

Mr Sanderson calls them OINTs, short for "Other Intelligences", and by which he means that he doesn't really know who they are at all. He is not even sure that these OINTs evolved in our oceans. They might have come from space, he admits, and simply taken up long-term residence there. But what he is reasonably sure of is that they have been here a long time and that they are technologically far in advance of us.

Given their millions of years evolutionary start on us, or even an extra-terrestrial leg-up, as it were, then it is not difficult to visualise them having developed sophisticated craft for popping out of the sea and up into the atmosphere. If we can get to the Moon and back, then they would surely have no problem in conquering our atmosphere.

So why do they bother with us? Research, possibly. To them we are interesting biological specimens. Examples of what can happen when evolutions sets foot on dry land.

So why have we failed to learn about them before Mr Sanderson's book came out? Two answers here. Firstly, we dry-land dwellers are a conceited lot. We view ourselves as the very pinnacle of evolution and pooh-pooh the idea that beneath our feet or above our heads are beings more wonderful than we are. If someone sees something mysterious in either sea or sky, and he dares to suggest that superior beings are afoot, then he is likely to find himself labelled as a nut-case, because, of course, no being could possibly be so superior! Consequently, not only are we not looking for evidence of such beings, we subconsciously ignore it, or dismiss it, or, at the very least, fail to recognise it when it does appear. Secondly, as long as we were a bunch of reasonably incompetent landlubbers, the OINTs might not have bothered much with us, beyond collecting the odd specimen now and again. But as soon as we started getting

smart and firing rockets to the Moon, or sending queer-looking machines down to the depths of the ocean, or, worse, drilling for oil through the main street of some underwater city, then the OINTs would start to get a bit uneasy. They would want to keep a closer eye or three on us – thus explaining the dramatic increase in UFOs and UAOs in the latter half of the twentieth century – and they might even try to put us off getting *too* close to their underwater cities (which Mr Sanderson believes are possibly built into the rock of the continental shelves.)

How would they put us off? Perhaps by inducing us to believe that the areas of ocean immediately surrounding their major residences are 'haunted'. There is nothing like a bit of superstitious dread to keep the savages in check — and what better way to spread such beliefs than by causing a few of the savages to 'vanish' mysteriously at sea. Such is Mr Sanderson's interpretation of the Bermuda Triangle.

The Bermuda Triangle needs no introduction. Roughly speaking it is the triangular area of sea defined by Bermuda, Puerto Rico and Florida into which multitudes of ships and planes are supposed to have mysteriously vanished without trace.

Why legend has called this area of sea the Bermuda Triangle is itself a mystery — it is actually more of an ill-defined lozenge shape and is as much associated with Puerto Rico as Bermuda. Hence the title of our chapter. It has also picked up a fistful of other dramatic names — like the Hoodoo Sea, the Limbo of the Lost and the Pentagon of Death.

The legend appears to have originated with a writer called Vincent Gaddis, who wrote an article called *The Deadly Bermuda Triangle* in the February 1964 issue of the magazine *Argosy*. It also seems to have gathered a good deal of momentum from sailors' yarns about the Sargasso Sea, a myth that has been with us since the days of Columbus himself. There is nothing like a good sea mystery to set a good legend in motion – the *Mary Celeste* is ample testimony to that – and the Bermuda Triangle is no exception.

Probably the most famous book in this vein is the best-seller by Charles Berlitz, *The Bermuda Triangle* (1975). Mr Berlitz tackles the mystery with electromagnetic forces, time-warps, anti-gravity, black holes, crystal lasers, UFOs, Hindu legends, sacred sites and the underwater relics of Atlantis. At the end of it all one of his

conclusions is that if the whole thing is stage-managed by UFO intelligences, then we may be wasting our time trying to figure it out at all! The UFO intelligences are so far in advance of us that we may be incapable of understanding their motives, and our 'disappearances' in the Bermuda Triangle may happen 'inadvertently'. If we may use an analogy, it would be rather like a dog trying to puzzle out why so many other dogs are run-over by mysterious man-operated craft called 'cars'.

Fascinating as all this speculation is, a large quantity of ice-cold water was poured onto the proceedings by a librarian called Lawrence Kusche. In his book *The Bermuda Triangle Mystery – Solved* (1975), Mr Kusche took the 'evidence' for the mystery and traced it back to its factual roots, where these were still available. He found that in a distressing number of instances 'facts' had been misquoted, misread, misunderstood and even deliberately tampered with in order to promote the legend of the Triangle. There were mysteries, to be sure, but not quite on the dramatic scale as the hoodoo addicts claimed.

Mercifully, in spite of Mr Kusche's interference, the legend continues to go its own sweet way, so let's get back to Mr Sanderson and his theories about the Bermuda Triangle and UAOs.

Mr Sanderson and a group of his associates happened to notice that the Bermuda Triangle had much the same latitude (30° to 40° north) as another mystery zone known as the Devil's Sea. This zone was a couple of hundred miles south of the Japanese island of Honshu, and about longitude 140° east. Furthermore, it too had the same sort of shape as the Puerto Rico lozenge.

Mr Sanderson heard that the Devil's Sea had been feared by Japanese sailors for years, which was a great mystery, because when Mr Kusche took the trouble to ask a few Japanese authorities about the matter, none of them had ever even heard of it!

Nevertheless, into the theory it went, closely followed by the Mediterranean Sea. It too lay between latitudes 30° and 40° north, and was sort of lozenge shaped. As to mysterious disappearances, well, these were a bit thin on the ground, but it was known that a few fishing boats and a couple of submarines had disappeared over the years, and that was enough.

The reasoning may seem a little loose here, it is true, but when we point out that all three lozenges seemed to be orientated in the same direction and also to have the same longitudinal width of about 30°, then we hope our readers will feel reassured.

Now of course it would be unreasonable to expect three lozenges in the northern hemisphere without three mirror images in the southern. So Mr Sanderson pretty soon found himself with no less than six "vile vortices" on his hands.

Then, in August 1968, an unnamed young lady told him some yarns of the sea that had been told to her by her brothers, and, bingo, then there were eight lozenges, the extra two being in the north and south Pacific.

The patterns formed by these eight vile vortices were not quite as symmetrical as Mr Sanderson felt they ought to be. So he called in some mathematical friends "with their slide rules and tridimensional trigonometry". The result of this little conference was two more lozenges, bringing the total up to ten. Five of these formed an evenly spaced band at 30° to 40° north, and the other five a similar band at 30° to 40° south. The two bands were not mirror images of each other, being displaced some 40° with respect to each other (see Fig. 4.1). Later Mr Sanderson added the north and south poles to his list of vile vortices or lozenges, and that made twelve.

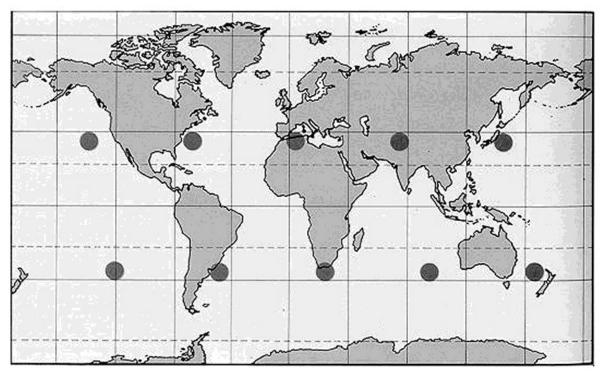


Fig. 4.1

The theory was neat, to be sure, and everyone seemed to be in

such neat geometrical ecstasies that it hardly seemed to matter that there were hardly any reports at all of strange disappearances in the Indian Ocean lozenge ("probably because no ships or planes ever pass through or over it") and that the Afghanistan lozenge owed its reputation to a rather vague and not terribly mysterious incident in World War II.

One would have thought that twelve vile vortices would have been quite enough to play with, but apparently not. In 1977 appeared Jay Gourley's book *The Great Lakes Triangle*. You've guessed it, boats, planes and people were seen unaccountably to vanish there as well, though when asked what really makes them vanish, Mr Gourley freely admits that he doesn't know for sure, but notes that there sure are a lot of UFOs about....

Nearer to home, now, yet another vile vortex was discovered by Peter Paget, and described in his book *The Welsh Triangle* (1979).

Actually, this isn't so much a triangle in which things *disappear* (though Mr Paget assures us that they have done so from time to time) as one in which UFOs and their giant alien pilots seem to like to *appear*.

The Welsh Triangle is in and around the south-westerly tip of the Pembrokeshire coast, an area rich in underground caves, tunnels and abandoned mine shafts as well as mysterious and ancient standing stones. All of these things feature in this enthralling saga.

Mr Paget is quite sure that the silver-suited giants who are reputed to stalk that neighbourhood are aliens from Outer Space and that they have at least two space stations orbiting the Earth, one of which passes directly over the Welsh Triangle. There is also an entrance to one of their subterranean bases on the rocky island of Stack Rocks, and Mr Paget located an eye-witness who had actually seen sliding doors in the rock face open wide to admit a hovering UFO. It would seem likely, then, that the aliens are using subterranean caverns as a base and Mr Paget points to various reports of strange "booming" noises as well as persistent humming sounds from under the sea as evidence for subterranean activity.

Now, why are they here? Mr Paget tells us that it seems to have something to do with an American base in the area which is supposed to be a sort of Oceanographic Institute, but which is probably something more sinister. Local residents told Mr Paget that the Americans are tunnelling away underneath their base for a

start, which is hardly the way a respectable Oceanographic Institute would carry on. It is not quite clear whether the Americans are tunnelling to get at the aliens or the other way about, but Mr Paget assures us that UFO visitations in this area increased dramatically with the opening of the American base and that pretty peculiar things have been going on ever since. He cites TV interference, electrical installation faults, panic stricken dogs, strange lights, immobilised cars and encounters with silver-suited giants of a clone-like uniformity.

In fact, we'll be quite frank and say that some of Mr Paget's tales of the Welsh Triangle sound even taller than the alien giants they are all about. Still, funny things do happen.

Take the extraordinary case of the 158 cows and the missing half hour.

Mr Paget solemnly assures us that one night a farmer left his milking complex securely bolted and walked up to the farm house for a cup of tea. It took him less than a minute but by the time he got there the phone was ringing with an urgent message to the effect that his cows were causing havoc among the crops of a neighbouring farm nearly a mile away, and that they had been at it for about half an hour.

The farmer dashed back to the milking complex to find it empty. With his sons he went down to the neighbouring farm to find that they were indeed his cows that were doing the damage. "There was no rational explanation," Mr Paget assures us. "The only explanation that seemed possible was that in some curious and unaccountable manner the cows had completely vanished from the milking complex and re-materialised over a mile away." The inference seems to be that this teleportation was brought about by some passing alien, possibly inadvertently. Hence, we suppose, the legend of the cow that jumped over the moon....

All this alien activity in Wales, needless to say, is the subject of a high-level government cover-up, and government denials of this claim are merely evidence in favour of this hypothesis. Mr Paget feels that open, official contact by the aliens is not made probably for political reasons, and that the aliens are watching us very closely prior to either integrating their civilisation with ours or else inviting us to join some sort of "cosmic club". Invasion as such is unlikely. If the UFO-nauts had wanted that, then with their superior technology

they could have done it already.

As to firm evidence for the existence of alien machines, he claims that the Norwegians have a complete UFO wreck and that the Russians even have the frozen body of a defunct alien.

Now what about those ancient standing stones we mentioned earlier? What have they to do with this tantalising plot?

Mr Paget tells us that for reasons which are not terribly clear, UFO activity seems to be more prolific in the vicinity of ancient structures. He also points out that no-one has ever explained why the bluestones of Stonehenge were transported all the way to Salisbury Plain from the Prescelly Mountains of South Wales, the neighbourhood of the Welsh Triangle.

So what is the link between the futuristic UFOs and the stones of the distant past? To the rescue comes the theory that Britain was once part of Atlantis and that the Old Stones were part of a sophisticated, but now dormant, power grid based on the piezo-electric properties of quartz crystals within the stones. The UFOs could be tapping this grid as a source of energy, though its original Atlantean purpose was probably that of an "effective telegraphic network, or Neolithic 'crystal set'."

As to the nature of the UFOs and their occupants, Mr Paget is quite firmly a nuts-and-bolts man, and will have none of the alternative view that UFOs are 'psychic manifestations':

Fragments of UFOs have to my knowledge been recovered from various countries in Scandinavia, North and South America, and France and appear to be small breakages that have fallen from the UFOs due to either minor damage on landing or to overheating in the propulsion system. I have myself seen a piece recovered by British investigators which appeared to be good old-fashioned aluminium. Everything that I have come across still confirms me in my assertion that UFOs are solid machines flown by flesh and blood operators. I think that it is only the advanced element of the technology which appears to give them their supernatural or ghostly qualities. It is very easy to dismiss the phenomena under the convenient heading of 'psychic', in order to diminish its importance or disregard its relevance to science and society. But I

have yet to find a ghost who has successfully burnt circular patches on green grass, left radiation traces or bent steel brackets on overhead power pylons.

Other authors claim that there is more to the UFO phenomenon than meets the purely material eye. One such author is F.W. Holiday, whose book *The Dragon and the Disc* first appeared in 1973.

Mr Holiday believes that UFOs were a fundamental part of ancient and even prehistoric religion. He calls it the cult of the disc and he finds evidence for it in English cup-and-ring marks as well as a variety of French and Spanish cave drawings. English disc barrows, he says, are representative of what we today know as saucer shaped UFOs or 'scout craft', and long barrows representative of cigar shaped UFOs or 'mother ships'.

Running parallel to the Disc Cult, apparently, was the cult of the serpent or Dragon. If the Disc Cult be likened to an equivalent of our Christian God, then the Dragon Cult becomes Devil Worship. Hence, in Christian mythology, dragons became synonymous with the evils of paganism and when St. George slew the dragon he was symbolising the triumph of Christ over the old gods. The Dragon Cult, like that of the Disc, was both widespread and ancient.

Of course, this doesn't explain what these discs and dragons were, but they must have been pretty dramatic things to inspire such widespread and deeply rooted feelings.

We have already said that Mr Holiday believes the Disc Cult was based on the same sort of phenomena that we today call UFOs. The dragons, he believes, were based on what we today call sea serpents and lake monsters – the most famous case of the latter being the Loch Ness Monster.

Now, not only were the cults of the Dragon and the Disc closely linked in the past, as the diametrically opposed forces of good and evil, but so too are the UFOs and monsters of today, if you take the trouble to examine the facts closely.

If UFOs were machines from Outer Space and the Loch Ness Monster nothing more than a dinosaur that never got the news of its own extinction, then we would know more about the phenomena than we do. The existence of both would have been settled years ago, instead of, as they do, remaining on the borderline of fact and fiction. Further, photographs of UFOs and monsters have been taken, but where these are not simply unworthy fakes, Mr Holiday claims, they have one and all been notoriously unclear and in some instances downright fuzzy.

Again, in spite of what Mr Paget and his followers might say, noone is really in possession of an actual bit of UFO let alone a whole wreck. True, some people say they have seen scorched patches of earth where UFOs have landed, but this, argues Mr Holiday, might simply be some sort of mass-energy trickery induced by the phenomena, and they are not as conclusive as a physical chunk of saucer. UFOs may make things 'hot' in much the same way as ghosts make them traditionally 'cold'.

On the dragon rather than the disc front, no dead bodies of any lake monsters have ever been retrieved, and neither have any of their droppings.

Likewise, radar sightings of UFOs or sonar sightings of monsters are only really secondary evidence of a physical nature and may only indicate the ability of the phenomena to manipulate our instrumentation by mass-energy force-fields.

Further, Mr Holiday notes that both UFOs and monsters, like ghosts and poltergeists, induce reactions of panic in animals such as dogs and horses (though not, apparently, in Mr Paget's cows: they just went on munching in spite of their experience.) They also, he says, induce in humans a tendency to dismiss or explain away encounters with them.

Lastly, the phenomena are not just obscure, they are actively evasive. Time and again, Mr Holiday assures us, monsters and UFOs just disappear the moment one reaches for a camera. Or if one manages to get hold of a camera, it fails to function at the critical moment.

All these things, Mr Holiday claims, add up not to a simple nutsand-bolts nature for UFOs and monsters, but to something distinctly other-worldly, a different order of reality that occasionally projects itself into our own. In this respect it is meaningless to ask whether or not UFOs come from Outer Space, or Inner Earth, or wherever, since such a question assumes a purely physical nature in the first place.

Mr Holiday admits that he doesn't know for sure what either UFOs or monsters really are, but he is pretty sure of what they're not – and that's physical entities. He admits, too, that his book is very largely speculative. His answer to that, though, is quite firm:

If the Wright Brothers had waited for flight to be authenticated, we would still be crossing the Atlantic by frigate.

It seems that the alien machine supporters and the psychic manifestation champions will continue to do battle with each other for some time to come. Certainly there seems to be no end in sight, and we look forward keenly to future developments.

Chapter 5. Visitors from Space?

The Old Testament gives some impressive descriptions in which God alone or his angels fly straight down from heaven making a tremendous noise and issuing clouds of smoke. One of the most original descriptions of such incidents comes to us from the prophet Ezekiel. ... Ezekiel gives precise details of the landing of this vehicle. He describes a craft that comes from the north, emitting rays and gleaming and raising a gigantic cloud of desert sand. Now the God of the Old Testament was supposed to be omnipotent. Then why does this almighty God have to come hurtling up from a particular direction? Cannot he be anywhere he wants without all this noise and fuss?

Most of our readers will immediately recognise the above passage as a typical specimen of Erich von Däniken's *Chariots of the Gods?* (1968).

It is a fact that, with a little pushing and pulling, the vision of Ezekiel (as orthodox theologians call it) can be made to look like an extraterrestrial visitation. If one squints a little, holds the thing upside down, and really tries hard, as Joseph F. Blumrich did, then one can write a whole book about Ezekiels's close encounter of the von Däniken kind.

Mr Blumrich was an engineer with NASA who began by reading von Däniken for mild amusement, but who ended up being converted to the faith. It was this very vision of Ezekiel which particularly attracted his attention as an aerospace engineer, and the results of comparing the biblical narrative with modern technology led him to publish *The Spaceships of Ezekiel* in 1974.

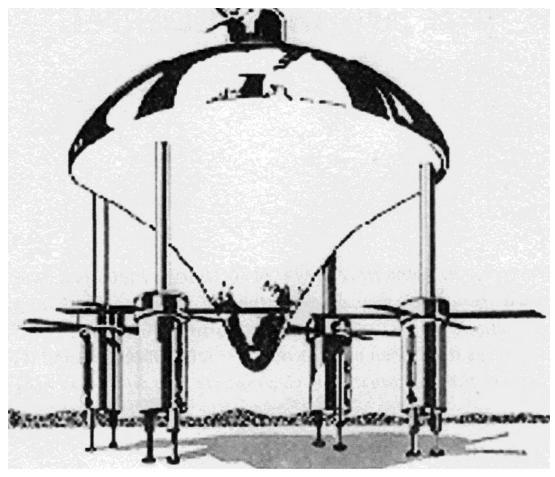


Fig. 5.1

The craft seen by Ezekiel, according to Mr Blumrich, was like that shown in Fig. 5.1 – a fairly compact, highly manoeuvrable shuttle-craft. The mother-ship, incidentally, would probably have occupied a polar orbit some 350–400 km above the Earth's surface. However, Mr Blumrich shows how the craft of Fig. 5.1 gave rise to the descriptions of it recorded in the text of Ezekiel. For example, the four supports with helicopter rotors were "the likeness of four living creatures" (Ezek. 1.5) and the landing pads "the soles of their feet" (Ezek. 1.7). "The likeness of a throne" (Ezek. 1.26) was, of course, the command module up on top.

Nor does Mr Blumrich flinch at the awkward bits of Ezekiel's description. We refer here to the verses that sound the least bit like a spaceship, and which Mr von Däniken conveniently swept under the carpet in his book. For example, consider Ezek. 1.10, referring to the four living creatures:

As for the likeness of their faces, they four had the face of a man, and the face of the lion, on the right side; and they four had the face of an ox on the left side; they four also had the face of an eagle.

Simulacra, Mr Blumrich claims. They were no more lions and eagles and so forth than are the faces an animals that we see today in the clouds or in the faded paintwork on the bathroom wall. In support of this claim he gives a picture of a full-frontal Gemini space-capsule which he points out could easily be described as "an abysmally solemn face".

Again, when Ezekiel uses the expression "the hand of the Lord being strong upon me", orthodox scholars regard it as evidence for the visionary nature of the experience. Not so for Mr Blumrich. Ezekiel chapter 3 describes the prophet's first trip in a spaceship (a sort of Biblical Adamski) and "the hand of the Lord" was Ezekiel's attempt to describe the effects of multiple g-force.

One advantage of writing a book on Independent Thought in general is that one can venture into realms where no UFO enthusiast has been before. That is just what we intend to do by introducing Mr Geoffrey Hodson into the proceedings. Whereas every biblical reference to an angel or a vision of God sends von Däniken and his followers into UFOria, they had quite a different effect on Mr Hodson (he died in 1983).

He was an expert on angels – and by that we *mean* angels and not misinterpreted spacemen – and he wrote a book called *The Kingdom of the Gods* (1952) in which he described his encounters with them. Angels not being at all photogenic, Mr Hodson had an artist friend paint some rather charming pictures of them and these are beautifully reproduced in his book.

Here is one interesting snippet very reminiscent of biblical angels:

The appearance of the angels is also remarkable to human sight on account of the continual play of energy within and through their glowing auras. ... In the auric discharges definite forms are produced, which sometimes suggest a crown upon the head and outspread wings of brilliant and ever changing hues.

In the introduction to his book, Mr Hodson describes how at the onset of an angelic encounter "the heavens suddenly become filled with light" and how his consciousness was "caught up into a realm radiant with that light."

We wonder if Mr von Däniken, were he to meet Mr Hodson,

would try to persuade him that he had really seen an alien or a UFO, or whether the argument would go the other way about.

Nevertheless, Mr Hodson considers that Ezekiel's vision describes his encounter with the Archangels of Light. These are four in number and are sometimes called the Devarajas of the Four Quarters of the compass. In Judaism they are represented as a cherub with four faces – those of a man, an eagle, a lion and an ox – thus explaining that curious passage in Ezek. 1.10 without having recourse to extraterrestrial simulacra.

We both tend to remain stubbornly orthodox over the issue of what Ezekiel saw. To us, the garbled descriptions, the flashing lights and the terrible noises sound too much like the symptoms of mental derangement to be otherwise – but then that view might just be *our* simulacrum! To which we should add that, given a little imagination, one can 'see' all sorts of things in the Bible – witness the fact that in 1863 one Tresham Dames Gregg published a little book under the self-explanatory title of *The Steam Locomotive as revealed in the Bible*! The vision of Ezekiel chapter 1 features prominently in it.... There is no doubt about it, Mr Gregg claimed, Ezekiel had a premonition of a steam train!

Though von Däniken claims that many biblical incidents were inspired by alien encounters, he nowhere says that the aliens intended it to happen that way. Barry H. Downing's theory, though, is quite different. Mr Downing firmly believes that Christianity wasn't just influenced by alien encounters, it was instigated by them. The biblical religion, he claims, from Old Testament to New, was manufactured and moulded by beings from another world and under God's supervision. The UFOs are still with us, so presumably the aliens are still keeping an eye on their handiwork.

Mr Downing's book *The Bible and Flying Saucers* was published in 1968, the same year as von Däniken's. Like von Däniken he sees Abraham, Ezekiel and Elijah as contactees, or at least witnesses of alien visitations, but, unlike von Däniken, he sees them all as connected links in a chain. Each encounter was a step towards the ultimate goal of Christianity.

The first major step in the process was the extra-terrestrial stagemanagement of the Exodus.

Moses, Mr Downing tells us, was given powers by the spacemen to lead the Israelites out of Egypt. The Exodus was guided by a UFO – the pillar of cloud by day and the pillar of fire by night. The parting of the Red Sea was accomplished by an anti-gravity beam, and the Burning Bush was neither more nor less than a glowing UFO in a thicket.

The role of clouds in all this is definitely odd. The pillar of cloud was clearly under divine control. In Psalm 68.4 we read: "lift up a song to him who rides upon the clouds." In Exodus 34.5, the Lord himself descends upon a cloud and in Acts 1.9, Jesus is lifted up in a cloud. As Mr Downing says, "Ordinary white, fluffy cumulus clouds do not carry people off into space" – and we find it hard to disagree with that.

Christ, of course, was an alien, the events of his birth being stagemanaged by spacemen under the supervision of God. The Star of Bethlehem was clearly a UFO, and did not Christ himself say, in John 8.23, "I am not of this world."

In terms of extraterrestrial capabilities, the miracles, the transfiguration, the ascension and the resurrection take on new meaning. As for Christ's mysterious appearance within a locked room, described in John 20.19, well:

If we can suppose, however, that we live in the midst of an invisible spatially curved resurrection universe, then perhaps Jesus came through a space tunnel into the room where the disciples were gathered with the door locked.

Christ already hinted as much in John 14.2 when he said, "In my father's house are many mansions." If walls be viewed as the boundaries of curved space, then rooms become dimensions and the many mansions parallel universes. Well, that is Mr Downing's view, though we would point out that other Independent Thinkers with a leaning towards Karmic Cycles rather than UFOs cite the same "many mansions" verse as evidence of the compatibility of Christian belief and reincarnation. Each mansion becomes a different earthlife, but then that is another story that we won't go into here.

UFOs have added a whole new dimension to biblical interpretation, particularly when it comes to the study of the Second Coming, the Resurrection and the End of the World.

Mr Downing, for example, considers Matthew 24.30 to mean that at the Second Coming, Christ will appear with a whole fleet of UFOs and an army of aliens. The verse in question refers to "the Son of Man coming in the clouds of heaven with power and great glory."

Another dramatic reinterpretation of the Bible in extraterrestrial terms comes in Gerhard Steinhauser's book *Jesus Christ, Heir to the Astronauts* (1973).

Mr Steinhauser does not claim that Christ was an astronaut, or even the son of one. Rather he claims that the historical Jesus was one of several zealous holy men of that time who was more or less 'set up' by St. Paul as the 'true' messiah. Paul, according to Mr Steinhauser, was a superb messianic 'agent' or PR man, and to promote his messiah, he grafted onto the life story of the "miracle making rabbi from Palestine" a few fictional extras based on various middle eastern myths. Mr Steinhauser claims, for example, that the Star of Bethlehem, the virgin birth, the ability to walk on water and to raise the dead, plus the resurrection and ascension to heaven were all mythological addenda to the life of Christ concocted by the over-zealous St. Paul.

But these myths that St. Paul so neatly adapted, where did *they* come from? Ultimately, Mr Steinhauser reckons, they can all be traced back to extraterrestrial encounters thousands of years ago. Let us take, for example, the idea of the virgin birth, or what amounts to the same thing, of supernatural impregnation. Legends of such births abound in world mythology. The Babylonian hero Gilgamesh had such a birth, for example, and in the Old Testament itself, Samson owed his existence to supernatural intervention. Mr Steinhauser is pretty sure he holds the key to such stories, and he described their original model in frank but graphic terms. The 'gods', of course, are ancient astronauts:

It would appear that gods holding subordinate rank were amusing themselves on Earth, posing as emissaries of the Lord, sleeping with the wives of the mortals and vanishing without revealing name or rank – a tradition among soldiers of all times. ... Left behind were the earthmen and their impregnated wives, and, to cap it all, they regarded the whole event as miracle and grace.

We emphasise that this is not to say that Mary was impregnated by an unscrupulous spaceman. In fact, Mr Steinhauser claims, Jesus was actually the illegitimate offspring of Mary's affair with a soldier called Pandera, but of course, St. Paul couldn't print that sort of thing. Accordingly, he adopted the virgin birth motif, and grafted it onto his messiah's life story:

Of course, his story was no more new and original than most of the other stage properties of the Pauline Messiah story; virgin conception and virgin birth originate from models which are thousands of years old, and thus from the gods; and any 'son of god' of that era *had* to be of divine-virgin birth. His public expected it of him, just as today they expect film stars and top sportsmen and women to be and to remain unmarried. ... Considered from this angle, the whole story of 'Jesus, Son of God' is nothing but the last yellowed copy of a film which was shot umpteen thousand years ago.

Not only this, but in passing we should note that some of the illicit offspring of the gods with earthly wives ended up floating down the river in a basket – which immediately explains the origin of the Moses legend!

Noah's Ark, the Garden of Eden, the Ark of the Covenant, the Tabernacle, and the parting of the Red Sea – all these things and more – are legends based on encounters with the space gods and their 'magical devices' many thousands of years ago. Christian baptism, too, is nothing more than a partial memory of the gods' 'splashdown' into the sea when they first arrived on Earth:

As they came down from heaven, gods plunged into the water and emerged again: man is merely emulating them.

The idea of symbolic cleansing associated with the act of baptism, Mr Steinhauser claims, probably only came much later.

Even the very architecture of our churches and cathedrals carries distant memories of the way the gods went about their business. At least, that is how Mr Steinhauser sees it. Personally we find it hard to believe that a church spire is "an attempt to copy the gods' rockets" or that the steps to the pulpit are, like Jacob's Ladder, a copy of the rope ladder by which the gods climbed into their spaceships prior to ascending to heaven.

But Mr Steinhauser doesn't just speculate on biblical matters, their mythological forerunners and their space-god origins. Fearlessly – some archaeologists would say "recklessly" – he

speculates that the famous Sun Gate of Tiahuanaco is a copy of one of the space-gods' energy gates into the fifth dimension. The gods, he explains, had three methods of space travel – ordinary spaceships, physical transformation, and "zero-time transport through energy gates". The second of these was the basis for St. Paul's account of Christ's resurrection, and the last the basis for a number of mysterious legends connected with gateways and doors – for example, the Gates of Paradise, not to mention the custom of carrying a bride over the threshold.

Again, Mr Steinhauser tackles the knotty problems of the location of Hell; why the seedless banana hasn't become extinct; and whether or not the Abominable Snowman is a remnant of a subhuman species of slave developed by the gods thousands of years ago. Add to these the origin of jewellery, dragon legends, magic swords and laser beams, not to mention Mr Steinhauser's extraordinary idea that in the dim and distant past children were sacrificed to make cosmetics for spacemen! Our favourite quote from Mr Steinhauser's book, though, is this one. It has nothing to do with space gods or UFOs, but we simply cannot resist quoting it:

The humble Jewess Miriam presumably had as much trouble with her son Jesus as any of today's mothers whose offspring become hippies.

Like Mr Downing earlier, Reginald A. Bradbury, long-time editor of the monthly newsletter *The Kingdom Voice*, agreed with the view that at the Second Coming, Christ may well appear with a fleet of UFOs. In the August 1969 issue, under the heading "The Biblical Significance of the UFO Phenomena", he wrote:

In our considered view the great manifestations of Divine Power in ancient times, with their very clear association with 'clouds' gives an indication that when Jehovah 'spoke out of the cloud' to His assembled Nation, that He was in fact broadcasting from the communication centre of a Great Space-Ship. ...

Similarly when the Father spoke to Jesus, Moses and Elijah 'out of the cloud' – He was using what to us is a modern technique for speaking to great open air gatherings ... yet again from a Space-Ship. ...

Finally, when the Son of Man comes 'with the clouds of heaven' – the gleaming 'chariots of God' will

appear. First, to Air-Lift His believing Saints 'in the clouds' (see 1st Thessalonians 4.17) and finally to take over World Government, when He establishes His righteous rule.

In the same issue Mr Bradbury outlines the mission of the UFOs:

The Heavenly Hosts of Jehovah look down with sad compassion upon a Planet torn by strife, 'nation against nation'; racial tensions; crime, lust and drugaddiction sapping the fibre and destroying the character and security of our vaunted 'civilisation' etc etc.

They await the divine Command to intervene, as and when the peoples of this Fallen Planet cry out for deliverance to the Divine Father.

On the same theme, this time in the October 1972 issue, Mr Bradbury wrote:

Other worlds are observing us; watching us; waiting for us. They stand, as it were, in the corridors of eternal time. The Messengers of God, the Angelic Hosts, the Ambassadors of Other Universes, the 'old souls' of great wisdom and experience, of deep love and compassion weep for a world that has lost its way, and has strayed from the Everlasting Arms of the Great Father – God, whose mighty power holds the vast galaxies in the Hollow of His Hand.

In July 1973, Mr Bradbury began a series of articles under the title, "How Near is the End?", though by "End" he meant the end of the current Age, as opposed to the physical destruction of the Earth, as preferred by other propheteers.

The End of the World, of course, has always been "nigh". Traditionally there are ten signs that the end is near, and amongst these are wars, earthquakes, famines and widespread iniquity. Because these are all ever-present at least somewhere in the world, this has tended, in the past, to promote the illusion that the end was nigh even when it wasn't.

True, the collapse of the Ottoman Empire in 1917–18 could be seen as the fulfilment of an important prophecy. One could see in it the fabled 'End of the Time of the Gentiles', which was very widely

acclaimed to signify the approach of the end in surer terms than earthquakes and pestilences. But, as Mr Bradbury points out, one other equally important prophecy still remained unfulfilled – which is where UFOs come in.

One of the ten signs mentioned above predicts that just before the End, "great signs shall there be from heaven" (Luke 21.11). This prophecy is given in even more graphic form in Isaiah 66.15:

For behold the Lord will come with fire, and with his chariots, like a whirlwind, to render his anger with fury and his rebuke with flames of fire.

Of course, UFOs have been coming and going for over sixty years now, so it would appear at first glance that the heavenly hosts are rather sluggish at getting things going, but then when you're a god or an astronaut, what is a mere sixty years?

Mr Bradbury did not attempt to answer the question, "How near is the End?" in precise terms, but in the fourth article of the series of that title (October 1973), he did quote Mr Yul Verner's letter of 12th August 1973. Mr Verner had rather more definite ideas and in his letter to Mr Bradbury firmly hinted that the Great Judgement Day, a symbolic 'day' of 24 years, would begin with the period November 1973 to November 1974. May 1975, he added, would see the coming of the Sun of Justice. We presume that Mr Verner went back to the drawing board as the appointed day passed peacefully by, but alas, we do not know with what results.

But what about possible contacts with the denizens of other worlds?

One of the contactees of the late 1950s was Howard Menger, who related his adventures with aliens in a book called *From Outer Space To You* (1959).

Mr Menger's contacts came mainly from Venus, Mars, Jupiter and Saturn, though he does say that one or two came from further afield. They told him that he was a unit in a world-wide system of human contactees and that the purposes of contact were to help guide humanity to a higher level of civilisation. This help was to be on technological as well as spiritual planes.

As is usual in contactee tales such as this, there are dire warnings against the follies of nuclear warfare, biological pollution and over-dependence on the artificial aids of modern life. The way to higher

levels of development, Mr Menger was told, lay in a greater emphasis on spiritual welfare, vegetarianism, yoga and the study of metaphysics. Our society needs to be more conservation-minded, to have a greater regard for Nature, and to learn that it is we who must rule the machines, not the other way round.

Mr Menger claimed to have had a large number of contacts with the space people and even took some rather fuzzy photographs of saucers and their pilots to back up his story. He was also taken for trips in flying saucers, a couple of times to the Moon and once to Venus.

On one of his trips to the Moon he describes an alien lavatory, and mentions in passing that he ate a vegetarian meal which included nuts from other planets. His landing on the Moon comes complete with descriptions of cloud formations, panoramic views of dome-shaped buildings and exotic vegetation. In an alien space terminal he paused to watch TV programmes from other planets and to sip alien drinks served by alien waitresses. Then it was off on a lunar train for a sightseeing tour and a visit to a sort of interplanetary world fair.

Venus was "fantastically beautiful", Mr Menger assures us, with well planned zones of habitation harmoniously set into natural surroundings of lush vegetation and large bodies of water. He mentions Venusian vehicles (but without wheels) and gives a brief description of Venusian fashions:

On Venus and some planets, the women wear kneelength, billowing, tunic-like gowns of pastel colours. Some have no sleeves; yet some have long, full sleeves. The waist is sometimes held by a jewelled belt. The women do not wear girdles, bandeaux, or any tight undergarments. The clothes are comfortable, airy, loose and beautiful, enhancing the contours of the female form.

Mr Menger's very first contact with an alien came one day in 1932 when he was ten years old. This was his meeting with "The Girl on the Rock" and we quote his description of that meeting:

There, sitting on a rock by the brook, was the most exquisite woman my young eyes had ever beheld!

The warm sunlight caught the highlights of her long golden hair as it cascaded around her face and

shoulders. The curves of her lovely body were delicately contoured – revealed through the translucent material of clothing which reminded me of the habit of skiers.

I halted in my tracks, and for a moment my breath stopped. I was not frightened, but an overwhelming wonderment froze me to the spot.

She turned her head in my direction.

Even though very young, the feeling I received was unmistakeable.

It was a tremendous surge of warmth, love and physical attraction which emanated from her to me.

Suddenly all my anxiety was gone and I approached her as one would an old friend or loved one.

She told him that she was from Outer Space and that his mission on Earth was to help her. She told him she would contact him again in a few years' time, and that others, wiser than she, would contact him also. Of course, whilst she said all this, "Her eyes, opalescent discs of gold, turned their smiling affection on me with tranquil luminescence", and poor old Howard was so choked with emotion that, in the end, "my wails of a happy kind of sadness grew and filled the forest."

In 1946, sure enough, Mr Menger met the girl on the rock again, only this time aboard an alien space craft. Fourteen years had gone by, yet she hardly looked a day older, which was perhaps not surprising – she was over 500 years old anyway!

Part of their conversation went like this:

"Although you haven't realised it, you have been under constant observation from the moment we parted years ago."

I turned red again, and hung my head. She laughed.

"No, you haven't always been a good boy. There have been times when ..." And she made as if she was going to take a whack at me where people usually sit down. I flinched and recovered my composure. Then I laughed with her.

She realised, she said, how my mind and interests had deviated from spiritual teachings they had given to me.

As it turned out, Mr Menger's mission on Earth was to assist the aliens to raise the spiritual awareness of mankind, and to this end they told him that there is no such thing as death – the spirit lives on to reincarnate, possibly on other worlds – that aliens worship God as well, and that Jesus was from Outer Space. Armed with knowledge such as this, as well as alien help via telepathy, astral projection and teleportation, Mr Menger was sent forth to hit the American lecture circuit with messages from his Space-Age chums.

Meanwhile, too, he was hired to brief infiltrating space people in the customs, slang and habits of Earth folk, as well as to supply Earth clothes to newly arrived aliens. He mentions that alien women had a great deal of trouble getting used to high heels, and that they couldn't understand why Earth women wanted to make walking so difficult for themselves. They also positively refused to wear bras.

Part of Mr Menger's mission was apparently to reassure people that divorce was not against any universal law. Indeed, if a couple stayed together in unhappy discord, rather than seeking an amicable divorce, then *that* was more against universal law than the act of divorce. (In the 1950s, remember, the subject was far more controversial than it is now.)

In fact, Mr Menger himself got divorced from his first wife and married to his second, a woman called Marla whom he met on the lecture circuit. She was an Earth woman in this incarnation, Mr Menger assures us, but her spirit had once been the sister of the Venusian girl he had met on the rock when he was ten.

Eventually Mr Menger actually claimed to have met Marla in one of his own previous incarnations. He was a Saturnian teacher on a trip to Venus, she was a Venusian "more beautiful than a storybook princess", and it was love at first sight:

> Our love on Venus was intense and overpowering; but it was fated we should not stay together, since I knew I must travel to Earth and complete a mission which had been outlined from my day of birth on that planet.

> I remember clearly now the day I left her. Both of us pretended to be very brave about it. Marla made little

jokes and tried to laugh musically; but she found it hard to choke back the tears which crept into her laughter.

As I turned to look upon her for the last time, I made a promise to her. Someday, somewhere, I would find her again.

Equally strange was Mr Menger's explanation of how it came about that he issued a gramophone record.

It was the fall of 1956 and he was out walking in the woods. He was drawn towards an old cabin from which came "the strains of the most inspiring, soul tingling music ever to fall upon my ears."

Mr Menger entered the cabin and found what looked like a camper playing a queer sort of piano. As it turned out he was a Saturnian Liberace who kindly showed Mr Menger how to play the haunting melody. But this was no ordinary piano lesson, and no ordinary piano. After his little lesson he was assured that, in spite of the fact that never before that night had he been able to play more than the odd note, from now on he would be able to play any tune he wished, even on an ordinary Earth piano. His fingers would be instinctively 'guided' to the correct keys.

But back to that haunting melody:

The Saturnian spoke: "You're wondering why we brought you here for a musical exercise, and it probably seems foolish to you. But it isn't. You're going to play this melody on the piano, Howard, and thousands of people of Earth will hear it."

And so it came about that "Music From Another Planet" was issued on Slate Records in the United States!

Of course, a lot of people tend to dismiss all this as third-rate pulp fiction issued in the guise of fact to give it a bit of zest. But the aliens forewarned Mr Menger that large numbers of people would be sceptical to the point of hostility about his story, so he was well prepared, as, no doubt, was his bank manager.

But scepticism was the least of Mr Menger's worries. Much more disturbing was the revelation that as well as there being good, helpful and constructive aliens on this planet, there were also some pretty evil ones. One of Mr Menger's space chums described them in these terms:

"You don't know, Howard, that there is a very powerful group on this planet, which possesses tremendous knowledge of technology, psychology, and most unfortunate of all, advanced brain therapy. They are using certain key people in the governments of your world. This group is anti-God, and might be termed instruments of your mythical 'Satan'."

When Mr Menger asked how he could tell the goodies from the baddies, he got the following reply:

"My friend, this earth is the battlefield of Armageddon, and the battle is for men's minds and souls. Prayer, good thoughts and caution are your best insulation."

Mr Menger appears to have been very fortunate, though. He doesn't seem to have had to deal with any bad aliens, only good ones.

Now and then there are unforeseen complications in being a contactee. Truman Bethurum, an American author, found this out in 1955, with his book *Aboard a Flying Saucer*. This was subtitled 'Non-fiction. An account of a true experience', and described a journey in a space-craft piloted by a beautiful lady from Venus, Captain Rhanes. Sadly, Mr Bethurum's wife did not appreciate his near obsession with this glamorous pilot. She promptly sued her husband for divorce, cited the lady from Venus – and won!

Another gentleman fortunate enough to have several encounters with aliens was Dino Kraspedon, who, in 1959, published an account of his encounters in a book called *My Contact with Flying Saucers*.

The book records the subject matter of five conversations with aliens – one aboard a flying saucer, one in Mr Kraspedon's own home, two in the main square of São Paulo, Brazil, and one in the Roosevelt Station of São Paulo.

The space beings, as it turns out, are an essentially friendly lot who want to help us. They repeatedly warn against man's misuses of atomic energy, and the possibly dire consequences of it, as well as bemoaning our increasing tendency to wander off the paths of Divine Righteousness. If man could only become more peace-loving and less hostile, the aliens advise, then the Elder Brothers of the Solar System could show him how to turn the Earth into a veritable

Garden of Eden.

In his chats with the space folk, Mr Kraspedon is fed some curious ideas. For example, "Man can only truly understand the phenomena of Nature when he understands the nature of God", which sounds reasonable enough, if a bit hack. But then we learn that, "God is an isotropic line parallel to itself and vibrating on itself at right angles." Or again, "God is an oscillating charge superimposed on an infinite point."

For those more interested in science than theology, Mr Kraspedon's chums have a lot to offer. Gravity does not exist, the inverse square law is a nonsense, and Relativity is living on borrowed time. We learn that the Sun is a cool body whose luminosity is of electrical origin. That it is 'hot' is an illusion, and the claims of astronomers that it has a surface temperature of several million degrees Centigrade are sheer nonsense. "Light," we are told, "is deformed space turning itself back into primordial space." And since light repels matter, the force which impels the Earth to rotate on its own axis, at the same time as orbiting about the Sun, is neither more nor less than the pressure of sunlight. The tides of the world's seas and oceans are likewise regulated not by gravity but by the interplay of sunlight pressure and moonlight pressure. Finally, the upper layers of the atmosphere govern the incidence of earthquakes. For this reason, if we disrupt the upper atmosphere with our atom bombs, not only will we let in some pretty fearful cosmic rays, at the same time as spreading radioactive fallout, but we will also open the floodgates to world-wide earthquake devastation. Mr Kraspedon describes the results in fearful detail:

Nursing mothers will weep with sorrow, knowing that their milk, which should nourish the child, carries lethal poisons which will destroy its bones and bring leukaemia. Many, unable to withstands such suffering, will seek death, cursing life and those who launched such despair upon the world.

Then humanity will see whither progress without God has brought them: maniacs in the streets, the maimed everywhere, hospitals overflowing, cemeteries full, larders empty, millions destroyed by war, orphaned children, ravaged cities, contaminated fields, poisoned waters, terrorised multitudes, plague, terror, blasphemy, grief, desolation. On Earth, people in anguish; in heaven the cosmic laws upset.

But there's worse to come. Mr Kraspedon has it on the authority of his space chums that another sun is about to enter the solar system. One of the missions of the aliens is to warn us of this.

The second sun, which will be a dark star, will enter the solar system from the direction of the constellation of Cancer, and will pair up with our present Sun to form a binary star. The orbits of the planets will be drastically altered, of course, and the Earth will take up an orbit roughly in the vicinity of where the asteroids are now. The Moon will cease to be a satellite of the Earth, and will become a planet in its own right, orbiting the new dual sun. Mars, too, will lose a moon, though this one will not become another planet. Rather, alien calculations show that after its ejection from the Martian system, the itinerant moon will break up in the vicinity of the Earth, and bombard most of Europe, North Africa and Central America with meteorite showers.

According to Mr Kraspedon's contacts, this will all take place towards the end of the twentieth century, and will be a sign of something suspiciously like the Second Coming:

On this day, many will understand the triumph of the just and he will see why God did not immediately punish the wrongdoers. The Sun which is to come will be called the Sun of Justice. Its appearance in the heavens will be the warning signal of the coming of the One who will shine even more than the Sun itself.

Mr Kraspedon's space chums are strangely conversant with the Bible of the Earthlings, particularly the Book of Isaiah, and several times they cite chapter and verse. For example, in Isaiah 65.17 is a prophecy of the rearranged solar system with the coming of the second sun. ("For behold, I create new heavens and a new earth; and the former shall not be remembered nor come into mind.")

On the subject of alien life in the solar system, Mercury, Venus, Earth, Mars, Uranus, Neptune and Pluto are all inhabited. Jupiter and Saturn are not, though some of their satellites are. For instance, the inhabitants of the satellites of Jupiter range in height from 7 foot giants to beings of Lilliputian stature; on one of Saturn's satellites, the inhabitants are immortal. Finally, the inhabitants of

Pluto are such a debauched lot that God has planned it so that when the second sun enters the solar system, Pluto will be expelled into outer Space by way of punishment for its inhabitants' sins.

There is not much else to say, really, except that if you want to know why Latin should be dropped from the school curriculum in favour of the study of photosynthesis, then you'd better read Mr Kraspedon's book.

It seems that some extraterrestrials prefer to make contact with Earthlings by telepathic means rather than by direct physical faceto-face contact aboard a flying saucer. It is at this point that UFOlogy begins to look more than a little like spiritualism.

It must be said at the outset that the messages purporting to come from these intelligences do not always have the air of having come from members of civilisations advanced enough to cross the dizzy depths of space. Indeed, in some cases, their content is so poor that they wouldn't even pass as third-rate science fiction let alone science fact. We make no apology for the length of the following masterpiece of banality, taken from Hildegard Bender's book *Knights of the Solar Cross* (1963), a book of messages from Outer Space obtained through a medium who "sat" for the circle of interested persons mentioned in the text. It runs exactly as a spiritualist séance, except that the medium tuned into space folk rather than spirits:

I would like very much tonight to speak for a few moments about the mechanics of contact. Now first of all before we start, I would very much like, as you are on the condition of what you term Christmas, to wish you all the joy of what it means. First of all I like you to understand the principle that, that child whom you call Jesus in your Christian calendar – has it ever occurred in your mind the perimeter from which He came? ... He came from a scheme of great cosmos conception long before men was [sic] made to appear upon your earth plane, and today you are finding in your world the repercussion of atomic warfare emanating from the bowels of the earth which you know as a scientific standpoint of hot lava, a perimeter around the ethers of eternal truth; its life there is bringing forth the onion system of protection in the

cosmic vibrations of oxygen and the energy of nitrogen, which in its turn thickens in its conception of rock and iron ore until eventually it appears as the foundation garment of what is known to be your soil. ...

Now tonight I want to say that my name is Dr Echo, and I come from a very ancient planetary habitation. I am sliding down into the consciousness of this group through the very heart centre of him who is deemed your mediat, or your medium. ...

In the meantime we want to suggest to you what the great Ashtar did in your last meeting and it was this: in the pit of your stomach muscle, that is in the etheric level of what you term the abdomen, is the umbilical cord that at birth, as you probably realise, is cut by the medical doctor. In the other side of this cord, that is in the inner portion of your abdomen, there is etheric cord to which we can plant at any time a piece of socalled metal of the dimension of the size of a pea. That contact we are able, through the etheric vibration of meditation and quietness and peace, to give you a reflection from the mirror of light which comes from the Milky Way. In the Milky Way as you look at from your balcony, you will find that it seems to be without a beginning or without an end. That Milky Way is what is termed a spiritual ladder in much the same way that in the vision of Jacob he was able to see the angels or they who belong to other systems.

Dr Echo's message goes on to tell how the South Africans are in some way a chosen people (needless to say, this space age séance is taking place in South Africa); how there will be great upheavals in England as well as "in the place of the Frenchmen, the place of France", and "in the Germanic habitation of Germany". The circle, it appears, is receiving "vital statistical contacts from Venus", curiously interspersed with the details of a mustard-bath cure for influenza!

Another message from an entity named Ariel included the useful piece of information that the Earth was fifteen degrees out of orbit, but that through "the salvation of the Moon" and an unusually early Easter, nothing serious would come of it. Ariel concluded his message thus:

I shall come again, and I am glad you saw my ship. Try and see me waving my antenna at midnight. Nothing is left to chance: a pattern is formed, and when you pour water from a glass, it must be drunk and not wasted. This is what God is doing; He is drinking well of the waters of life, but you on terra firma are disturbing everything that God has made. Goodnight!

In a communication from a certain Hotep of Venus, the question was asked as to whether or not there were animals on Venus. Hotep said there were, "especially those who left your earth plane through disaster, accident or cruel slaughter." Apparently they get there under the auspices of St. Francis of Assisi. In this same communication we read that all Venusians are vegetarians, and that a band of beings from Pluto are hollowing out Table Mountain. It also transpires that certain types of persons who incarnate on Earth have had 'training' for their earth-roles on other planets. These include teachers, preachers, musicians and eccentrics. Hotep, who, incidentally, was once incarnated on Earth (in the Stone Age "where the great dinosaurs roamed"), also proffers the information that all earth insects originated on Mars, and got here by being "shot down in one of the cosmic plastic conditions of upheavals." We're not too sure what these upheavals are, but they sound pretty spectacular all the same. Finally, we are assured that the sun is a cold body, an assertion that no longer holds any surprises for us.

It only remains for us to say that anyone who is concerned about the whereabouts of Donald Campbell's body should read Hildegard Bender's book, for the solution to the mystery is contained therein. At least, we think it is. Unfortunately, both of us were more baffled by the 'explanation' than by the actual disappearance of the body, but there it is.

By contrast, George Hunt Williamson's book *The Saucers Speak* (1954) is a masterpiece. It is a record made between August 1952 and February 1953 of communications "with several planets in our own solar system and with space-craft in our atmosphere from other solar systems."

The story begins with an experiment in automatic writing, performed after a discussion of flying saucers. According to Mr

Williamson, "the people of other worlds were watching and waiting for a sign of receptivity on the part of their brothers on Earth, standing by and ready with their superior equipment to contact any and all who sought an answer to their presence in the skies of the Earth."

We might ask why, if these beings were so eager to communicate with us, they didn't arrange mass public landings rather than transmitting rambling and banal messages through Ouija boards or spirit mediums. The answer to this was actually given by the Venusian who contacted the infamous George Adamski in the Californian desert back in 1952. It has been a stock answer of saucery ever since: public landings are not attempted because they would probably lead to panic amongst the earthlings, and subsequent harm to the Flying Saucer occupants. So, no public landings.

But returning to Mr Williamson's automatic writing experiment, the space people rapidly decided that this was rather a crude method of communication, and opted to make contact instead through a sort of generalised Ouija board. This consisted of all the letters of the alphabet, the numbers 1 to 10, a "Yes" and a "No", and finally, a plus sign on the right and a minus sign on the left.

A message received by this means on 2nd August 1952 began thus:

"Masar to Saras" (After much questioning we learned that Masar was the planet Mars and Saras was our planet Earth. It is interesting to note that Saras or Saros means 'repetition' in the ancient Chaldean language.) 'By your year of 1956 there must be a new Saras. Bell Flight 9 (Crystal bells are the saucers) should land on Saras in 1956. Organise yourselves. There must be peace of mind. You are all for a purpose. You have a destiny. Don't fight Universal Truth!

You are a dead civilisation. We want your cooperation. Time is limited. I am Nah-9 of Solar X Group. I am the leader of a contact group.

As was quite normal in the 1950s, Mr Williamson's space chums issued repeated warnings about earthlings meddling with H-bombs, and expressed a certain amount of disgust that some earthlings

entertained serious doubts as to the very existence of UFOs. In the course of time, Mr Williamson logged little messages from beings with fascinating names like Jupiter-9999, Anhar 22, Wolf 359 and Andromeda-26470. This last one sounds to us like some Andromedan phone number, but we'll do our best to be serious. Then came Kadar Lacau, head of Interplanetary Council-Circle, who was "elected from the Universe", and who spelt out through Mr Williamson's modified Ouija board:

Why don't you all go eat now? We were wondering when you were going to wake up to the fact that you are hungry. We have stomachs too, and we are empty. Meet you here at 8.20 tonight. Signing off.

Further messages obtained by this means revealed the space beings' intentions to attempt contact by radio, and they suggested that Mr Williamson and friends contact a Mr R towards this end. This mysterious Mr R, incidentally, was a radio ham that lived in Mr Williamson's neighbourhood. The reason for this change in the method of communication is not at all clear, but Mr Williamson suggested that "they did not want to give too much information over the 'board'." Also, radio code is a more conclusive type of evidence than either automatic writing or a Ouija board communication. Most of the radio messages came through in International Morse Code, but there was one instance of a message coming through voice-wise. This was announced well in advance, through the Ouija board, by an entity named Zo, who was the head of a Martian contact group, though he came originally from Neptune.

Mr Williamson's book is a curious carnival of extraterrestrial messages from beings with exotic names: Suttku, judge of the Saturn Council; Wan 4 of the Safanian Solar System; Artok of Pluto and a host of others. From their messages Mr Williamson learnt of the evil Orionians and their intentions, all of which we looked at earlier in the present chapter. But most comforting of all is the knowledge that the saucers are not intent on invasion, but simply act "as a father warns a child of danger."

We come now to the subject of unorthodox space travel.

In the eighteenth century the Swedish scientist, philosopher and mystic Emanuel Swedenborg published two works entitled *Earths* in our Solar System which are called Planets and Earths in the Starry Heaven, their Inhabitants, and the Spirits and Angels there.

Both works were allegedly based on personal observation. Basically Swedenborg used to put himself into a trance and project his spirit to other planets, a method which proved to be considerably cheaper than the American space programme. In his projected state he was able to converse with the spirits and angels of these other worlds, and his books were compiled from the results.

The inhabitants of Mars, for example, are dwarfish, and their voices come from the abdomen rather than the lungs. The inhabitants of Mercury, by contrast, are averse to all verbal communication, abdominal or otherwise, and Swedenborg had to converse with them by telepathy! Jupitereans, meanwhile, though not against verbal communication, prefer instead to use 'face language'. That is, they communicate entirely by facial expression.

Swedenborg's books, despite their promising titles, are actually rather dull affairs for the average reader. Most of them consist of interminable and drab analyses of the spiritual state, moral welfare and religious beliefs of extraterrestrial spirits. The only detail from all these that held our attention, aside from the description of a sort of spiritual customs post at the boundary of the solar system, was Swedenborg's assertion that some of the inhabitants of Saturn worship the ring system as a god, thus adding a whole new dimension to the expression "Lord of the Rings"!

But despite their dullness, Swedenborg's books do give the patient reader food for thought in a few places. Here, for example, is a description of how the inhabitants of Jupiter walk:

With respect to their gait, they do not walk erect like the inhabitants of this and of many other earths, nor do they creep like animals, but as they advance they assist themselves with their hands, and alternately half raise themselves on their feet, and at every third step they face about sideways and behind them, and at the same time also bend the body a little, which is done quickly; for among them it is considered unbecoming to be looked at by others except in the face.

After Swedenborg, space travelling seems rather to have fallen out of fashion for a while. Then, in the 1890s, things picked up again when a Swiss psychologist called Thédore Flournoy began a detailed study of the medium Hélène Smith.

Hélène was no ordinary medium, for in addition to holding orthodox séances and putting folk in touch with the spirits of their deceased relatives, she had a series of remarkable visions of life on the planet Mars.

Actually, the Martian Cycle, as Flournoy called it, was more complex than we have just indicated. Hélène received information about Mars through a number of channels, the most spectacular of which were direct visions. But she also received information by automatic writing, verbal automatism and dictation from hallucinatory voices. That is, when she wasn't actually seeing what was going on on Mars, the spirits were, one way or another, telling her what was going on. Many of these second-hand descriptions came from Hélène's own spirit-guide and protector, Leopold, and by the end of the Martian Cycle, Leopold must have been a very well seasoned interplanetary traveller indeed!

The inhabitants of Mars, it seems, were visually indistinguishable from Earth-people, and as regards their dress, they seem to have anticipated unisex fashions here on Earth by many decades. Their equivalent for the motor car was a carriage "without horses or wheels", and Hélène noticed that they emitted sparks as they glided back and forth. For some reason it was all the rage for Martians to erect fountains on the roofs of their houses, but, all in all, life on Mars was not too dissimilar to its terrestrial counterpart. Hélène went on to describe their customs, their flora, their fauna, and, most extraordinary of all, their language. Her spirit-guide, Leopold, seems to have taught her the rudiments of the Martian language, and pretty soon her automatic writing started to come through in pure Martian!

Thédore Flournoy's book *From India to the Planet Mars* was originally published in French in 1900, but was republished in English in 1963. It is an extraordinary analysis of just where all the spiritualist outpourings of Hélène Smith really came from.

Leopold, it seems, was a fictitious character modelled on a man who, in Hélène's childhood, had saved her from being mauled by a savage dog.

As for the Martian Cycle, that had several threads. Firstly, Hélène had several times been involved in conversations about the possibility of life on Mars. Shortly before the Martian Cycle began, the 'canals' of Mars had been 'discovered', and life on Mars was a

good talking point. Secondly, a friend of Hélène's, a Mr Lemaître, had hinted to her that it would be interesting to see what went on on other planets. Thirdly, a Mrs Mirbel, a friend of Mr Lemaître's, had lost her son shortly before, and had attended one of Hélène's séances in order to contact him.

All of these, Flournoy showed, contributed to the Martian Cycle, and Mrs Mirbel's son had become a reincarnated Martian, passing messages to his mother across the depths of space, these being interspersed with descriptions of his Martian lifestyle! (Hélène was a firm believer in reincarnation. She believed herself to be the reincarnation of Marie Antoinette, for example.)

As for the Martian language that Leopold had taught her, Flournoy showed that it was a crudely codified form of French, despite the distinctly alien-looking forms of the Martian alphabet. Though it was remarkable that she had concocted this language entirely in her subconscious, it was, nevertheless, just a spurious invention.

All in all, Flournoy was not very impressed with Hélène's experiences. By all accounts, she wasn't very impressed with his scepticism either, and in the end they rather fell out. Later in life, Hélène came to believe that she was the reincarnation of the biblical Mary, sister of Martha, and instead of Martian landscapes she took to painting scenes of the New Testament. She died in 1930.

Before the flight of Sputnik 1, in October 1957, there were some interesting ideas about space-travel which were fascinating in themselves, but would probably not appeal to NASA. One of these was the edible space-ship, proposed by Mr Theodore B. Dufur, of the United States, in 1955. To fly to the moon, he said, you merely constructed a dirigible out of something such as frozen oleo margarine, so that on landing you could put a lid over a weak lunar volcano, to keep yourself warm, and simply nibble away at your space-craft until the next expedition arrived. And in Zambia, rather later, Mr Edward Mukaka Nkoloso, Director-General of the Zambian Academy of Space Research, prepared to organise an expedition of four astronauts and a seventeen-year-old girl. However, he had his problems. We quote: "I've had trouble with my space-men and space-woman. They won't concentrate on spaceflight; there's too much love-making when they should be studying the Moon. Matha Mwamba, who has been chosen to be the first

coloured woman on Mars, has also to feed her ten cats, who will be her companions on the long space flight. ... I'm getting them acclimatised to space-travel by placing them in my space-capsule every day. It's a 40 gallon oil drum in which they sit, and I then roll them down a hill. This gives them the feeling of rushing through space. I also make them swing from the end of a long rope. When they reach the highest point, I cut the rope – this produces the feeling of free-fall."

Alas, Mr Nkoloso – who was by all accounts perfectly sincere – failed to obtain his requested \$700,000,000 from NASA, and after 1971 nothing more seems to have been heard of him, so that, as we now know, Zambia was not the first nation to enter space; the Academy was pipped at the post by both Russia and America. However, no doubt Zambia will catch up in due course.

Chapter 6. The Mystery of the Great Pyramid

There are some scientists, eminent in their own fields and who carry out excellent work, who seem to have what can only be termed blind spots. Sir William Herschel, discoverer of the planet Uranus and arguably the greatest observer of all time, firmly believed the Sun to be inhabited. Much more recently, the pioneer meteor astronomer and cosmologist Ernst Opik maintained that political revolutions in Earth were associated with sunspots. And going back to the last century, there is the strange case of the Astronomer Royal for Scotland, Charles Piazzi Smyth.

Smyth was born in 1819, and at an early age showed that he had immense ability. He was without doubt an excellent astronomer, and his appointment in Scotland was based purely on merit. His 'blind spot' concerned those remarkable structures, the pyramids of Egypt, and in particular, the Great Pyramid of Giza.

Apparently his attention was drawn to it by a book *The Great Pyramid: Why was it built and who built it?* written in 1859 by John Taylor, a London publisher. Taylor, who seems never to have been to the Great Pyramid himself, was convinced that it was set up by the Israelites under the direct supervision of God, and that its dimensions, when measured in units very close to the British inch, were linked to the size of the Earth and the length of the year. He was also the first person to point out that the pyramid enshrined the number pi, the ratio of the circumference to the diameter of a circle – but more of this later. Unlike Taylor, Smyth actually went to Egypt to make an on-the-spot investigation, and eventually he may be said to have out-Taylored Taylor. His book *Our Inheritance in the Great Pyramid*, first published in 1864, but which ran into five ever-expanding editions, the last of which appeared in 1890, is a classic of Independent Thought.

Thus, the base of the Great Pyramid symbolises the length of the year, the divinely appointed unit of time, and its height represents the distance of the Earth from the Sun. The entrance passage leading to the interior of the pyramid is oriented towards the pole of the sky, about which the Earth turns ceaselessly, regulating the days and nights, and the site on which the pyramid stands was chosen to

be at the very centre of the habitable land surface of the entire globe.

But the pyramid is also a monument of prophecy. Smyth (following Taylor) devised a unit of measurement called the pyramid inch and using it he showed that the events of biblical history were symbolised in the arrangement of the passages and chambers within the pyramid, one pyramid inch of stone representing a year of time.

Nor is it just the events of the past that are shown. The future is there too for those who know how to go about finding it. So it has come about that, since Smyth's time, a wearisome number of books have prophesied the End of the World on the basis of the Great Pyramid's nooks and crannies. In 1912, for example, a Colonel Garnier, in his book *The Great Pyramid: its Builder and its Prophecy – with a Review of the Corresponding Prophecies of Scripture relating to Coming Events and the Approaching End of the Age*, predicted that in 1917 all the fountains and rivers of the world would turn to blood, and that the Mediterranean Sea would turn thick and viscid. Again, in 1957, Adam Rutherford – author of a massive four-volume work *Pyramidology*, and founder of the Institute of Pyramidology here in England – predicted Divine Judgements and the end of the present world order for 1979.

PASSAGES AND CHAMBERS OF THE GREAT PYRAMID

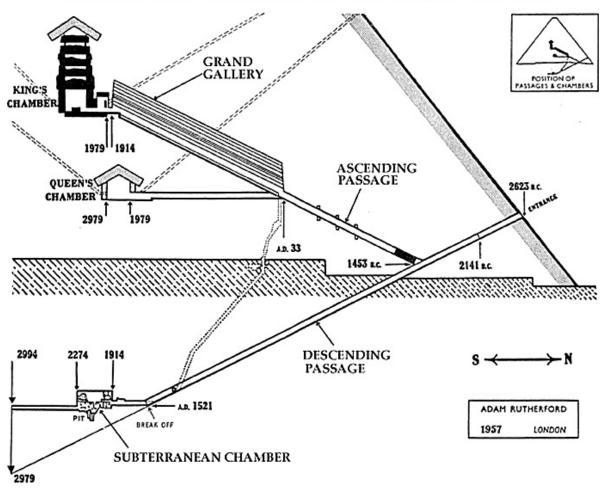


Fig. 6.1

We give an adapted version of Dr Rutherford's scheme in Fig. 6.1. The entrance to the pyramid represents 2623 BC, the date at which, according to Dr Rutherford, the Great Pyramid was built. The Descending Passage represents the Fall of Adamic Man, 1453 BC being the date of the Exodus of the Israelites from Egypt, and 1521 AD the beginning of the Reformation. Going up the Ascending Passage, 33 AD represents the Crucifixion of Christ, and the Grand Gallery, ending in 1914 with the First World War, represents the Christian Dispensation. The King's Chamber represents the New Heaven, and the Queen's Chamber the New Earth, that will be inhabited by Adamic Man following the 1000 years' reign of Christ and his saints, this starting in 1979 and finishing in 2979. The year 1979 was to be the Annus Mirabilis: the prophet Daniel would be raised from the dead in that year, and Jerusalem would become the Central Capital City of the whole world. Alas, Dr Rutherford died in 1974, so his explanation of why things didn't quite turn out as the

Great Pyramid indicated must forever remain unknown.

All the foregoing is quite well known, and we mention it by way of introduction to one of the finest pieces of pyramid lunacy ever to be published: W. Hamish F. MacHuisdean's book *The Great Law* (1924).

Most books on pyramidology and the 'science' of the Great Pyramid tend to be rather dull, somewhat technical, and heavily larded with biblical symbolism. Not so *The Great Law*, which is written in the form of a play, "so that one of Cranston's waitresses and a first class brain may understand it", we are told in the preface. The dramatis personae are:

The Boss, Who is the Revealer.
Jack, The youthful hubby of Bud.
Bud, The youthfuller spouse of Jack.
Sandy Bagster, The financial adviser to the Stunt.

By way of explanation, Jack and Bud are an everyday couple. The Boss is the pyramidologist incarnate, who reveals great pyramid truths to Jack. Sandy Bagster is the man with the money, whom Jack tries to persuade to finance the Stunt – the spreading of the Great Pyramid's message.

The play opens thus:

Scene: A sitting room in a flat in Riddrie. The only occupants are Bud and Jack. Bud is sitting, just as a nice girl should sit, in a chair, and Jack is, as usual, sitting on the edge of the table, smoking a fag. Bud is intently scanning a chart of the cross-section of the Great Pyramid of Gizeh which Jack has just purchased and pinned over one of Bud's pet pictures. Jack says nothing, as he is waiting in silence, knowing that Bud must soon speak or burst.

And this is how the dialogue opens:

Bud. Well, Jack, after getting over it with both optics, I can't say that I'm particularly impressed with it as a desirable dwelling place for a young newly married couple. What is special about it, anyway?

Jack. Why, old thing, it is the only building on earth right round and back to Ecclefechan that was built on squaring the circle. It does not do it only once; it keeps

on doing it, and that's what riles the big noises among the astronomers and mathematicians. They can't square the circle any more than Jimmy Dalrymple's sparkies can lift first prize as the Aurora Borealis.

Before going any further, we had better pause and explain this business of squaring the circle.

The problem was initially one posed by the ancient Greeks, who were very partial to setting themselves geometrical puzzles. The object was to construct a circle having either the same perimeter or the same area as a given square, but with the proviso that only an unmarked straight-edge and a pair of compasses were to be used in the construction. And it had to be done *exactly*.

Over the centuries many earnest minds puzzled over the problem without ever solving it. In fact, the story of the circle squarers is itself an interesting study in Independent Thought. However, in 1882, it was finally proved that such a construction was impossible, and that the circle squarers had been labouring in vain.

Returning to the Great Pyramid, now, if one takes the perimeter of the pyramid's base, and divides it by twice the vertical height, one gets a quantity which is very close to pi in value. In other words, the height of the Great Pyramid is the radius of a circle which has the same perimeter as the square base of the pyramid. This fact was first noticed by John Taylor in 1859. Since this was more than twenty years before circle squaring was proved impossible, Taylor's observation of pi in the Great Pyramid led to the now famous myth that the Egyptians had somehow cracked the problem of squaring the circle and had embodied their construction in the Great Pyramid itself.

In actual fact, the Great Pyramid only approximately squares the circle, and quite by accident. The explanation of just how this came about is too long to go into here, though it is a simple enough matter of gradients. The plain facts of the matter are that the squaring of the circle, as posed by the Greeks, was a problem quite unknown to the pyramid builders, and that there is a simple explanation of Taylor's observation. However, you would be quite unwise to try to tell this to a dedicated pyramidologist, even today. We have tried, and we can assure our readers that it wasn't worth the effort. And it certainly wouldn't have been worth trying to tell Mr MacHuisdean, who not only believed that the Egyptians, under divine guidance,

had squared the circle in the Great Pyramid, but also that they had "duplicated the cube", another geometrical impossibility. But then that is another story.

So, here is Jack explaining to Bud the nature of the problem and the shattering implications of the Great Pyramid for modern mathematicians who believe that circle squaring is impossible:

Well, Bud, the big idea seems to be to get a square of a certain area constructed direct over a circle of exactly similar area, but although every top-notcher since the years of the short corn has had a shot at it, no single blighter, or married blighter, has ever solved it, except, of course, the Boss. Now, whoever solves the blinking puzzle will be able to spot the winners, find the gueen, and burst up all the bookies' coupons. It will muck up all the Gaming Laws and knock the Scottish Football Association's place off the map. ... Anyhow, Bud, this squaring is new. It is something to write home about, for it will give you pi to the nearest blank file of decimals, form fours with the autumnal equinoxes and give the sol-fa notation of the evening star. It might also help Kern Rivers to buck up and pay a decent divvy again and solve the latest Fair Isle jumper jazz design. You put your bottom dollar on the Boss's squaring stunt, and touch wood.

Later in the play Bud asks Jack if every maths professor will lose his job when the truth of the Great Pyramid hits the headlines. Jack replies:

Not a bit of it, Bud. They'll raise his screw and give him the O.B.E. You know, if I, even this bright lad, went along to the big noise in the Glasgow University, or Cambridge, or Skerry's College, bunged in my card – the Ace of Diamonds – and shot-up the Senate and told them I could square the circle, double the cube, trisect the angle, and juggle with rhomboids, trombones, polygons, tesseracts, samovars and droskies, etc, and so forth, three in the air and one sliding round my port eyebrow, would I land a job at a thousand a year? I'd land on my ear on the syver. ... They have made up their minds that the circle can't be

squared and a charge of dynamite won't shift them: nothing but the income-tax man.

We'd dearly like to know if *The Great Law* was ever actually performed as a play on stage. We doubt it – but then you never know. Some very queer things go on in the theatre.

But whatever became of his play, *The Great Law* was not the last that the world heard from Mr MacHuisdean. In 1943 he published a booklet of 52 pages entitled Yesterday's Impossibilities. Needless to say, in it he squares the circle with ease, being, as he puts it, "a commando of the finite school"; he duplicates the cube, by challenging orthodox mathematicians to answer the question "how can one geometrise with a quantity that won't stand still?"; and he trisects the angle, another feat which conventional mathematicians say is impossible using only ruler and compasses, by taking "a small part of the largest circle in the universe." Having solved three great impossibilities before breakfast, as it were, he then goes on to consider "The Circle as a Straight Line", "The Mass of the Hydrogen Proton" and the knotty problem of "Does 1 squared = 2?" (Regarding this last, he writes: "Are we to maintain the fiction here that $2 = 1^2 + 1$ instead of $1^2 = 2$?" – adding that, "the shuttlecock 1, which is constantly subtracted, is the Wandering Jew in the number world." There is not a lot one can say about that really....)

But continuing our theme of looking into the more curious corners of the strange field of pyramid interpretation, we turn to Conar MacDari's extraordinary book *Irish Wisdom* (1923). It is a masterpiece of Independent Thought.

Its main thesis is that civilisation began in Ireland, and spread from there under the guidance of the Irish Magian Priests of the sun God Iesa. Agriculture, astronomy, navigation, medicine, chemistry and mathematics were all born in Ireland. Atlantis was, in fact, Ireland.

Colonising the shores of the Mediterranean, the Irish were responsible for the foundation of Rome. The very name (in Irish) proves this: Ro = Heaven and Ome = Earth. Hence Rome = Ro-Ome = City of Heaven and Earth = the Eternal City etc.

The Irish were responsible for the foundation of civilisation in Egypt, Persia, India and the Americas. They built the Great Pyramid as a Temple of Initiation into the mysteries of the Sun God, Iesa – hence the name of the plateau on which the pyramid stands, Giza.

And they left their mark on the mythology, geography, and language of almost all the known world. Taoism was born in Ireland, the original Hercules was an Irish hero whose legend was adopted by the Greeks, and Hebrew, Sanskrit and Latin are all derivatives of the Irish tongue. Irish, we might add, was the language of Adam and Eve.

But strangest of all is Mr MacDari's theory that the entire Bible is a plagiarised book of Old Irish myths. The plot thickens here because the plagiarism is part and parcel of a dastardly plot by the Roman Catholic Church to take over the entire world.

There is no doubt about it, Mr MacDari claims, the Bible is a book of Irish origin, and a long line of unscrupulous popes were responsible for the deliberate suppression of the old religion and all traces of Irish culture.

Let's start with the Bible. The whole book revolves about a cycle of Irish Sun myths, Mr MacDari claims. For example, the name Abraham is made up of three Irish words, Ab meaning 'father', Rah meaning 'the revolving Sun' and Am meaning 'time'. Thus Ab-Rah-Am means, literally, 'Lord of the Seasons', a clear reference to the Sun. Further, in the biblical narrative, Abraham came from Ur, a city in Chaldea. Mr MacDari claims that in Irish Ur = Fire, and that Chaldea is a name based on the Irish word Caul = secret or hidden. Finally, Abraham's two wives were Sarah and Hagar, the first coming from the Irish Sore = delight, symbolising day, and the second from Acor = desire, symbolising night.

The Sun god Iesa makes two obvious biblical appearances, one as the prophet Isaiah = Iesa-ah = prophet of Iesa, and the other in Jesus, of whom more presently. Mr MacDari points out that Bethlehem comes from a compound of Irish words, Beth-lah-em meaning 'house of the day', a fitting birth place for the Sun god Jesus-Iesa!

Of course, Mr MacDari was aware that his views clashed somewhat with a long chain of seemingly watertight historical fact. But then he had a ready answer to that too: almost the whole of orthodox history is faked. In its zeal to obliterate the true origins of Christianity, the Roman Church literally re-wrote the history books according to its own formula.

Totally fictitious histories were passed off as factual, and backed up by forged documentation. Julius Caesar was one such concoction, and St. Patrick another. "Saint Patrick is a bogus personage," Mr MacDari wrote, "set up to deceive the Irish Catholics." Another notable fictitious character was Constantine the Great, and the histories of Herodotus were, from start to finish, just another papal fraud.

Naturally, all traces of the Old Religion had to be obliterated if Christianity was to 'stick'. Accordingly, expeditions were launched to far-flung corners of the world to destroy all traces of Irish colonisation. The Crusades to the Middle East were actually launched for the purposes of altering various place names there so as to back up the new and fictitious Bible. The wholesale slaughter and vandalism of Cortez and his cronies in South America was similarly launched for the purposes of destroying all traces of Irish colonisation there. In Ireland itself, the pope hired the English to obliterate 'true history' through their repeated invasions of Irish soil. Finally, the Roman Church deliberately plunged the world into the dark ages as a cover for their plans to stamp out the old and bring in the new.

If you are bemused by the audacity of this theory, you should read it in the original, for *Irish Wisdom* is a very readable book. Here, for example, is Mr MacDari expounding on how the "Romanist tricksters" got their fictitious Jesus:

Through this campaign of destruction and silence, bolstered up by a false history, Rome figured that none would ever know of the part she played in the undermining of the great Irish Church or the Religion of Iesa. Iesa was the Irish symbolical saviour, crucified on the cross, and from him Rome got her saviour 'Jesu', substituting the letter j for i. It is translated into the English language as Jesus.

It was the worship of Iesa, more than any other religion, that prevailed among the people of Europe at the time the Church of Rome began her mission to plunge the world into ignorance and darkness in order that mankind might forget all of the past. Her intention, no doubt, was to destroy all evidence (and she thought she had succeeded well in doing so) by which men in future ages might be able to refute the false and absurd statements which she has given out

regarding the source from which she got her Saviour Jesus and her Bible. She appropriated them from the Irish, and, to cover up this fact, committed the most heinous and awful crimes against mankind. They were crimes which involved persecutions, slaughter, and untold suffering, the misery and effects of which have remained with us to this day.

But let's get back to the Great Pyramid. As we said earlier, it was built by the Irish as a temple of initiation into the mysteries of the Old Religion. The name of the plateau on which it stands, Giza, is derived from the same root as the name Jesus – namely, that of the sun God, Iesa. Lastly, the builder of the Great Pyramid, the pharaoh Cheops, is one of those historical fabrications we mentioned above. His name is obtained by spelling the Irish word for 'spirit' (speech) backwards!

When the popes sent their emissaries around the globe to obliterate all traces of Irish influence, one of the things they did was to close up the pyramids and to strip them of their outer limestone casings. (For some reason the casings would have given the papal game away.) They then set about promoting the view that the pyramids were actually just outsized pharaonic tombstones – a misconception that continues to fog the vision of today's archaeologists.

As for the Irish origin of the word 'pyramid', well, let Mr MacDari himself explain that one:

The word Pyramid is formed from the Irish word Peir, meaning the buttocks or hips, and the English word Amid, meaning literally the middle of the hips or buttocks, the phallus, or organ of sex; and, by changing the form of the word for deceptive purposes, they (i.e. the Roman Catholic Church) have made it pyramid.

The symbolism here is quite involved. According to Mr MacDari the Giza group of pyramids were symbolic of various levels of human existence. The Great Pyramid represents the sex principle, and we feel our readers will find everything crystal clear when we point out that since man is born through the medium of sex, the phallus may be taken to represent the creative power of the Sun God, and this may in its turn denote "the Spirit of God, and its

regenerative power in man."

If this isn't at all clear, we suggest that our readers consult Mr MacDari's book for themselves!

One would perhaps think that a theory as strange as Mr MacDari's would not attract many followers today, but no! His ideas have been taken up, and expanded upon, by an Irish-American by the name of Michael Tsarion, in his book *The Irish Origins of Civilisation*. Mr Tsarion, who is an expert on the occult history of both Ireland and America, not to mention psychic vampirism, has also written a book entitled *Atlantis, Alien Visitation and Genetic Manipulation*, and another on *Astro-Theology*. You can find details at: http://www.michaeltsarion.com/.

But getting back to the Great Pyramid, it is worth pausing to ask why it has such a perennial fascination for Independent Thinkers.

Its sheer size is certainly one factor. Each side of its base is 755 feet long and its vertical height was originally about 481 feet. But even these figures do not convey the sheer size of the monument. Its square base takes up an area of no less than 13 acres, and people have amused themselves by calculating that the houses of Parliament and St Paul's Cathedral could be contained in the area of its base with ample room to spare.

Granting the size of the thing, what really sets the Independent Thinkers going is the claim of the orthodox archaeologists that this incredible mountain of stone was intended as a tomb for one man, the pharaoh Cheops.

For ourselves, we do not doubt that the archaeologists are quite right in their assertions. The pharaoh was a god, and in the name of religion men do seemingly irrational things, like torturing women into confessing that they are witches, and then burning them at the stake.

For many Independent Thinkers, though, the Great Pyramid just has to be more than a tomb. Many of the resulting theories are of an occult or supernatural nature. Many – but by no means all.

In 1845 a Frenchman claimed that the pyramids were built as barriers against "the sandy interruptions of the desert." At about the same time, an Englishman was claiming them as the storehouses of the Queen of Sheba's gifts, and a Swede that they were "contrivances for purifying the water of the muddy Nile." In medieval Europe the view prevailed that the pyramids had actually been Joseph's Granaries, though in Arabia there was a strong tradition that they were built for the preservation of learned manuscripts at the time of the Flood.

In 1962, though, Edward J. Kunkel entered the arena with his 84-page booklet *Pharaoh's Pump*.

Mr Kunkel's theory is that the passages and chambers of the Great Pyramid are the conduits and reservoirs of a gigantic water pump. Of course, the pyramid was possibly intended to serve as a monument as well, but nevertheless its primary purpose was to serve as "Pharaoh's Pump".

In fact, Mr Kunkel tells us, the huge stone blocks of the pyramid were manoeuvred on wooden barges, which were floated into position via a network of locks and canals. The water level in these was raised or lowered, as required, by the central pyramid pump.

Once completed, the pyramid could be used to pump water out to the desert regions, thus enabling crops to be grown there. In such an irrigation project, the pyramid could have been helped out by the Sphinx, since, according to Mr Kunkel, the Sphinx is hollow, and may have been intended as a sort of booster pump for the Great Pyramid itself.

Not being well versed in hydraulics, we neither of us follow some of Mr Kunkel's reasoning, but he does claim that a scale model of the Great Pyramid's interior catapulted half a gallon of water up to a distance of 22 feet, which is quite something. In fact, Mr Kunkel includes in his booklet some photographs of these extraordinary proceedings, presumably to prove to the world that his theory really does hold water, if you'll pardon the expression.

Some years ago, Mr Kunkel patented his Hydraulic Ram Pump, an adaptation of "Pharaoh's Pump". He writes:

To be sure, modern gadgets have been added to it to conform with certain Patent Office regulations, but basically the modern ram pump is identical to the ancient ram pump. In this respect, not a thing has been changed. I, really, am not the inventor of this pump. It was invented thousands of years ago in Ancient Egypt. All I did was supply the missing parts.

To this Mr Kunkel adds a postscript: his idea has yet to earn him

"50 bucks" for forty years' work. He has also yet to earn a glimmer of recognition from orthodox archaeologists, who persist in their belief that the Great Pyramid is a tomb and nothing but a tomb.

Incidentally, Mr Kunkel, like Mr MacDari, has acquired his followers and we are pleased to note that there is now an organisation known as the Pharaoh's Pump Foundation which actively promotes Mr Kunkel's ideas. See their web-site at: http://www.thepump.org/. For a delightful animated view of the Great Pyramid Water Pump in action, see: http://www.energy21.freeservers.com/pump.html.

In the latter part of the twentieth century, the Great Pyramid entered the Space Age, and became the focus of attention for those gentlemen (for no ladies appear to be involved) who persist in seeing extraterrestrial influence in every nook and cranny of world history.

W.R. Drake, in his book *Gods and Spacemen in the Ancient East* (1968), claimed that the Great Pyramid was a space-beacon. He wrote:

Sensitives today claim that the Great Pyramid still radiates magnetic force and that the immense blocks of stone were levitated by extraterrestrials utilising anti-gravity or sonic vibrations, perhaps the same power motivating the spaceships.

Erich von Däniken, that champion of the Space Gods and wellknown hotelier, even went so far as to claim that without alien help, the Great Pyramid could never have been built. He wrote:

> Today, in the twentieth century, no architect could build a copy of the pyramid of Cheops, even if the technical resources of every continent were at his disposal.

One day, feeling in a quizzical sort of mood, we put Mr von Däniken's 'challenge' to Wimpey's construction company. Having quoted the 'challenge', we feel it only fair that we should quote Wimpey's reply to it. It came from Mr R.C. Vowels, their Chief Public Relations Officer, and after stating that Mr von Däniken's claim seemed to be something of an exaggeration, it concluded thus:

We see no reason why the great Pyramid should not be built using modern construction methods. Such an enterprise would, however, cost a great deal of money and we rather doubt whether in present times anyone would wish to sponsor such an undertaking.

But the most curious of all space age incursions into the field of pyramid speculation is undoubtedly George Hunt Williamson's book *The Secret Places of the Lion* (1958).

The basic idea is that the human race is being guided from beasthood to godhood by "The Goodly Company", a race of beings who came to Earth from space eighteen million years ago. These superior beings regularly reincarnate themselves in human form in order to be able to pursue their mission, and to us they appear as the outstanding leaders and innovators of history, as well as the various "gods" of world mythology. Thus, for example, Pythagoras, Buddha, and the Egyptian god of learning, Thoth, were all alien incarnations.

Naturally, the Goodly Company wield a great deal of occult power and transcendental wisdom, of which "the Lion" in Mr Williamson's title is a fitting symbol. The "Secret Places" of the Lion are the repositories of this occult wisdom – rather like Time-Capsules containing messages from the Goodly Company to an ailing humanity. Solomon was one of the Goodly Company, and Solomon's Temple one of the Secret Places of the Lion.

To go into the full ins and outs of Mr Williamson's extraordinary reconstruction of world history would require more space than we can give it here. Suffice it to say that UFOs, space people, Atlanteans, teleportation, telepathy, reincarnation, prophecy, pyramidology and a host of other occult fancies combine together in such a fantastic danse macabre that one is left wondering if Mr Williamson is entirely serious. For example, in an appendix to his book, he reveals to the world the inside story of the reincarnational patterns of the Goodly Company. Thus, the prophet Isaiah, the philosopher Aristotle, the apostle John, and Leonardo da Vinci were all reincarnations of the same soul. Tutankhamun, on the other hand, was a reincarnated Venusian who later became, in succession, Aaron, Ezekiel, the father of John the Baptist and the Inca king, Atahualpa!

As for Mr Williamson's reinterpretation of the Exodus, we freely admit to being more than a little puzzled. In his version, Moses, Aaron and pharaoh Rameses II are all on the same side – that of the

Goodly Company. Apparently the Exodus was set up as part of an elaborate plot to undermine the Egyptian priesthood, a corrupt organisation that wanted to turn the powers of the Goodly Company to even more corrupt ends.

Needless to say, the pillar of cloud that guided the Exodus was a spaceship – flying saucers are actually the guardians of the Secret Places of the Lion – and it was this same spaceship that was to reappear many years later as the Star of Bethlehem. Christ, of course, was one of the Goodly Company, who in previous incarnations had been Gautama Buddha and Zoroaster.

Be that as it may, we must get back to the Great Pyramid, one of the most prominent Secret Places of the Lion.

Built by Atlanteans under the direct supervision of men from other worlds, sometime around 24,000 BC, its construction enshrines the esoteric secrets of number, weight and measure, as well as being a compendium in stone of sacred astronomical and astrological knowledge.

Within the Great Pyramid, Mr Williamson tells us, are a number of secret chambers containing manuscripts rescued from the burning library of Alexandria, as well as clay tablets and papyri which tell the story of the coming of the Space People to Egypt and of their great mission. Historical records from other planets are stored there as well, not to mention two mysterious crystal balls:

These objects were not solid crystal, but were made up of nine sections, fitted and locked together to form a globe or ball. As light passed through them, it was changed in a most unusual manner, and the past and future could be partially ascertained in the ball. However a certain amount of mental control was needed by the user during the period of concentration using the crystal ball.

These balls, Mr Williamson assures us, were used by the Goodly Company as time scanners, and in fact, it was by using one of them that the adept Nostradamus was able to make his remarkable prophecies.

We feel our readers will also be fascinated to learn that deep beneath the Great Pyramid is buried a giant spaceship. We are not sure why it was put there, or even how deep down it is, but Mr Williamson has it on the authority of a top-secret Peruvian manuscript that it is there.

Of the great Pyramid itself, Mr Williamson writes:

It will be revealed – and no doubt within a comparatively short time now – that there are many secret chambers within the Great Pyramid and that its true entrance lies under the silent object that is like lion and yet like a man – the Sphinx! It will not remain silent much longer. That celestial force which conquered the animal nature and resulted in a race of perfected human beings in a far distant 'Golden Age' enabled them to build a monument that would withstand the wear and tear of the ages and be a beacon light for fellow travellers along the same Great Path, a path that is narrow and sharp as a razor's edge, a path filled with stones that bruise and cut the feet. As one persists, the stones become fewer – green, velvet grass and beautiful flowers spring up beside the way; the heart of the aspirant is cheered and strengthened, and he picks himself up again and vet again and goes on with eyes ever fixed on the flaming star in the distance.

The incomparable Great Pyramid shows us what was done in past ages, what is being done now, and what will be accomplished by future generations until all humanity shall kneel at the feet of God – Ultimate Perfection – for all of God's children ... for we are *all* his.

Going along, as we do, with the views of orthodox archaeologists that the great Pyramid was erected in the third millennium BC as the final resting place for the pharaoh Cheops, we often wonder what the Ancient Egyptians themselves would have said about some of the marvellous tales woven about their handiwork. What would they say if they could come back from the grave for a while to hear the theories of George Hunt Williamson, W. Hamish F. MacHuisdean, Conar MacDari or Edward Kunkel? And what would they have made of the extraordinary ideas of William E. Peterson, a structural and civil engineer of Seattle, Washington, USA?

Mr Peterson believes that the pyramids – Mexican and Egyptian – were once nuclear powered cannons for controlling the Earth's

rate of rotation, its axial tilt, and its orbital speed about the sun. In other words, the pyramids once acted like propulsion jets for a space-ship Earth, and could be used to control the journey of our planet through space. The pyramids were built, according to Mr Peterson, by the people who were later to become known as the Atlanteans – possibly a race of beings from outer space. Only later were these "pyramid cannons" appropriated as temples of the Sun in Mexico or tombs for the pharaohs in Egypt.

Mr Peterson came to formulate his theory through a study of the Earth's wobbles and subsequent roll-overs. We deal with the ideas of polar shifting elsewhere in this book, so for the moment all we need to say is that Mr Peterson believes that accumulations of ice at the Earth's poles cause it to wobble on its axis. Eventually the wobbles get so serious that the Earth flips over onto a new axis of spin through points that were formerly on its equator. The new equator is thus ice-bound as the former polar ice spreads out in a band around the Earth, and an Ice Age is the result. Gradually this equatorial ice melts and new polar ice builds up until conditions are ripe for yet another roll-over. Mr Peterson estimates that the period between roll-overs is about 110,000 years, and that each roll takes about 40 days to complete.

According to Mr Peterson, the effects of a roll-over are pretty drastic:

The Earth becomes like a gigantic washing machine with huge chunks of ice and rock propelled by waves up to 3 miles high scouring the continents.

Obviously, then, the Atlanteans – whether advanced earthlings or extraterrestrials – needed to prevent such disasters. Indeed, Mr Peterson believes that another such pole shift is imminent today, and that *we* should be doing something about it.

It was while he was toying with designs for nuclear cannons with which to control the Earth's wobbles, in much the same way as propulsion jets are used to correct the motions of orbiting space-capsules, that Mr Peterson began to realise that the shape of what he was working towards was a pyramid!

Looking at the pyramids around the world, he noticed that most had central chambers at their bases, surmounted by tons of tight fitting stone blocks. If the central chamber were a fusion reactor it would require just such a strong, massive and heat-resistant casing to hold it in. Indeed, the word "pyramid" or "pyr-amid" suggests "fire in the middle" – a graphic description of the nuclear proceedings. A reactor, of course, requires a cooling system, and Mr Peterson interprets the mortuary temples and causeways associated with some Egyptian pyramids as the pump houses and water conduits of just such a cooling system. Finally, the entrance passages of the pyramids could be the barrels of the nuclear cannons that the Atlanteans needed to control the Earth's wobble.

But mastery of the Earth's motion was only one application of this pyramid nuclear energy. This same power could also have been used to generate electricity, purify water, or reclaim minerals and fertilisers from the sea. Not only this, but the pyramids are at the heart of the legend of the Fountain of Youth. According to Mr Peterson, if a series of pyramid cannons around the globe were made to evaporate large quantities of water vapour up into the atmosphere, this vapour would form clouds which, under the action of the Sun's rays, would eventually result in the formation of a protective ozone canopy conducive to the prolongation of human life – perhaps up to the 1000-year spans recorded for the Biblical Patriarchs. Of these pyramids, Mr Peterson writes:

It has reached the point where I can explain what they looked like when operating, including appurtenant structures, and can explain the processes that went on. The straight line that went up from some of the pyramids appeared bowed from the ground. The builders said that the bow was their promise that the world would not have another flood. Also the byproduct of the fusion reaction in the chamber (could be called the pot) at the base of the pyramid was gold. You have probably heard both of these expressions many times. Only this bow was probably confused with the rainbow. Also the arch of the covenant was confused with the ark of the covenant.

This pyramid gold, Mr Peterson claims, explains the origin of the term "Golden Age", as well as admitting a new interpretation of the alchemical transmutation of base metals into gold.

There is another aspect of Mr Peterson's theory that needs to be mentioned. The Great Pyramid itself has an interior layout quite unlike any straightforward pyramid fusion reactor, and this is a great mystery to Mr Peterson. "One of my pet theories," he told us, "is that this pyramid was built deliberately to confuse earthlings. Perhaps to keep them from knowing what went on in the past. There is much evidence in ancient writings that advanced knowledge was considered harmful and was to be kept secret."

Before the pyramid builders left, presumably for outer space, they took care to prepare a massive cover-up of the technology they left behind. That cover-up was effective until AD 1972 when Mr Peterson finally decoded their secret. It was all a matter of approaching the problem from the right angle. He writes:

The fact that I have been thinking about the concept of earth orbit control ever since the first sputnik went over, and started making calculations as early as 1960, it is not surprising that I should be the first to recognise the pyramids for what they are. ... I am not offering this as a mere speculation that the pyramids were reactors. It is my conviction that they were definitely reactors, serving as 'Fountains of Youth' amongst other things, and in some cases as cannons.

Starting in 1972, Mr Peterson tried to convince various world governments that it might be worthwhile trying to switch the pyramids back on again. But in spite of the possibility that it might completely resolve the world's food and energy crises, Mr Peterson's pleas seem to have fallen on deaf governmental ears.

Undoubtedly the strangest pyramid craze to develop in recent years, largely in the USA (discovered by the Irish – as followers of Conar MacDari, we'll have none of this Columbus jiggery popery!) is the cult of pyramid energy.

The idea stems from the notion that since the Egyptians buried their defunct pharaohs in pyramids, therefore the pyramid shape must have some sort of preservative power. It kept the mummies fresh, as it were.

This was the idea which occurred to a Frenchman called Antoine Bovis, who, whilst poking around the King's Chamber of the Great Pyramid one day, discovered a perfectly mummified dead cat, and a few equally mummified bits and bats – particularly the latter.

Mr Bovis returned to France, built himself a scale model of the Great Pyramid, and placed a dead cat inside it, in a position which corresponded to that of the king's Chamber in the great Pyramid itself. The cat mummified, Mr Bovis claimed.

He then experimented with other types of organic matter and claimed that in each experiment 'mummification' took place. Mr Bovis deduced from this that somehow the pyramid shape had a dehydrating effect upon the specimens placed inside it, the result of which was a slowing down of any decay process.

Mr Bovis's work inspired what has probably become the classic case of pyramid energy use: the sharpening of blunted razor blades,

The first man to try this was one Karel Drbal of Prague. He found that by putting blunted razor blades in the King's Chamber position of a correctly oriented model of the Great Pyramid (the edges of the base must point magnetic north-south and east-west) the razor blades became sharp again. Mr Drbal even patented his discovery as "The Cheops Pyramid Razor Blade Sharpener."

Curious, we wrote to the Prague Patent Office, quoting the patent number, and asking for details. It seems that this innocent enquiry from the western world aroused some Iron Curtain suspicion (this was some 13 years before the collapse of communism). At any rate, the reply we received some weeks later, by international registered post, was curiously non-committal. It went like this:

With reference to your letter of July 19th, 1976, concerning "Cheops Pyramid Razor Blade Sharpener", we are sorry to inform you, that Office for Inventions and Discoveries cannot furnish you with any information in this regard.

Whether it is on account of the collapse of communism or not, we are not clear, but in recent years details of the patent have become readily available on the internet. See:

http://www.gnucash.org/mirrors/www.amasci.com/freenrg/tors/dr with the Czech version at: http://silesia.wz.cz/drbal.htm and facsimile of it at: http://silesia.wz.cz/91304.pdf.

Incidentally talking of razor blades, it occurred to us to write to Gillette Laboratories about all this. Mr Jonathan Dickens, the manager of the Blade and Razor Division, very kindly replied as follows:

I have talked to our technical expert who was involved in conducting pyramid experiments and his comments would tend to counteract the "pulp" merchants. A supporter of the pyramid energy theory was allowed to set up pyramids with used razor blades placed within whilst a control was also set up. Not only was there no instrumentally detectable improvement following the treatment, but neither did this supporter experience the improvement he had previously encountered, even after a two-week period.

Other tests relying on purely instrumental measurements indicated no improvement to a blade's condition wrought by a period within a pyramid. Consequently, as far as we are concerned, the claims of pyramid energy with regard to razor blades are highly questionable.

On the other hand, we suppose that supporters of pyramid energy might accuse Gillette Laboratories of having a vested commercial interest in the matter!

The above account of Messrs Drbal and Bovis was based on information contained in a book called *Psi: Psychic Discoveries behind the Iron Curtain* by Sheila Ostrander and Lynn Schroeder, first published in 1970. Since then a host of pyramid energy books and articles have been published, including Lyall Watson's well-known book *Supernature*, and a lot of new applications of pyramid power have appeared. Needless to say, there is also much on the subject to be found on the internet. Ostrander and Schroeder, however, can fairly be said to have set the pyramid energy ball rolling, at least in the western hemisphere.

You can, for example, preserve fruit and even fresh meat in a replica of the Great Pyramid. Some experimenters claim that these things will be preserved for up to several months. Of course, the meat or whatever will dehydrate – will mummify, if you like – but it will not spoil. It will, in fact, retain its flavour, and some people actually claim that the flavour will be enhanced.

Pyramid energy has also been used to keep milk fresh, to take the bitterness out of coffee, and to revitalise stale wine, simply by storing these things under a scale model of the Great Pyramid.

There are also some strange reports on the properties of water which has been left under a pyramid. If you water your pot plants (granny's aspidistra, that is, not the illegal substance) with it, for example, they will grow stronger and faster than ever before. (There was a time when people used to talk to their plants to achieve this: nowadays they use pyramid-treated water, or simply keep their plants inside a pyramid for a couple of hours each day. The latter is supposed to work just as well.)

Another use of pyramid treated water is in the healing of wounds. Simply apply the pyramid water to the wound in question, and it will heal faster than normal. Or so we are told.

There must be hundreds of other pyramid claims and we'll look at some of the really wild ones shortly. But just to be going on with, if you sit under a pyramid tent, or even just wear a pyramid hat, it is supposed to help you meditate, to achieve inner peace, as it were, and even to enhance your psychic powers. In Serge V. King's *Pyramid Energy Handbook* (1977), for example, you will find a rather curious little photograph of a group of people, sat in a circle, and all wearing little pyramids on their heads. They all look happy enough, to be sure, but whether or not this is due solely to pyramid energy is debatable.

So how much truth is there in all this pyramid stuff? Having corresponded with various people who have experimented with pyramids, and having conducted pyramid experiments of our own, we are inclined to think that there is, unfortunately, very little basis for all these pyramid claims. But then we are rather sceptical types at the best of times.

One correspondent, Frank Dineen, said that he had had no success in razor blade sharpening, but that he knew someone who could "do it all the time". Frank had also watered a cutting in a plant pot with pyramid water. The cutting flourished, alright, but the parent plant, in the same pot, withered and died.

Another correspondent, Frank Adey, said that he had tried rejuvenating stale wine under a pyramid, and that it had apparently worked. However, his surprise was tempered when it was pointed out to him that his pyramid was incorrectly aligned. He had placed the pyramid with its corners to the cardinal points, rather than its faces. As Frank wrote later: "I now have a sneaking suspicion that the same results might have been obtained if the wine had been stored under, say, a top hat."

Another pyramid claim tested by Frank Adey was that of coin polishing. Pyramid energy is supposed to be able to remove the tarnish from coins, but Frank found that leaving an old penny beneath a pyramid for six weeks resulted in no noticeable difference.

Again, in 1979 some interesting experiments were carried out by two London daily newspapers. Various people were contacted, and asked to co-operate, which most of them did. The volunteers were of all types – scientists, sceptics and believers. The main test involved setting up a skeleton pyramid (the kit was provided), and placing underneath it some cheese. Outside the pyramid was placed some identical cheese – that is to say, of exactly the same vintage. The experiment was designed to see which cheese went mouldy first. All the experimenters agreed that the two pieces – pyramid protected and pyramid free – went mouldy at precisely the same rate!

Bob Forrest's experiments in the field of pyramid energy were performed with the aid of that great British institution, the potato chip.

The reason for this choice of subject was simple: the pyramid is supposed to mummify by dehydration, and the uncooked potato chip is an ideal subject for testing dehydration. Not only that, but it doesn't raise a stink if the experiment goes wrong.

He built himself a scale model of the Great Pyramid, with a little pedestal one third of the vertical height of the pyramid. Putting chips on top of the pedestal was thus equivalent to entombing the said chip in a King's Chamber position. The pyramid was correctly orientated with its faces pointing to the cardinal points.

He also built another pyramid, with steeper sloping faces than the Great Pyramid, and also a rectangular box, so as to compare the effects of dehydration inside these with the effects obtained inside the Great Pyramid.

By weighing the chips at the start of the experiment, and weighing then again after three or four days inside their respective tombs, it was a simple matter to calculate the percentage weight loss due to dehydration. (It was far more difficult to explain to his colleagues at work why on earth he was periodically engaged in weighing potato chips, in various stages of decay, to an accuracy of a thousandth of a gram. But to continue...)

In a lengthy series of experiments, which were published in *INFO Journal* no. 21, he found that there was no difference whatsoever in the dehydration rate. The chip in the King's Chamber position of a correctly aligned model of the Great Pyramid dehydrated at the

same rate as another chip placed any-old-how in a rectangular box whose faces were not even aligned to the cardinal points.

When the results of these experiments were published, Bob expected a barrage of indignant letters. In the past his rather sceptical view of matters out-of-the-ordinary had brought in letters eager to point out the errors of his ways. Most of these were friendly, and only a few of them hostile. He had only one letter arising from the INFO article, and that was from a mystic in Fulham who had written several letters to him prior to the INFO article anyway, all of them telling him he was an ignoramus. The pyramid experiments merely prompted him to write again to reiterate his views on Bob's spiritual damnation.

But to continue, the article "Notes on the Great Pyramid and the Mummification of the Potato" went totally unheeded, and the world of Independent Pyramid Energy Thought continued to plunge ever deeper into the abyss. In fact, pyramid energy became – and remains – a thriving business.

Thus, the Nick Edwards Environmental Systems Inc. of California announced its pyramid matrix system – lattices of inverted wire pyramids designed to be hung over the bed. "Enjoy the experience of sleeping under the most advanced system ever created," the advert said. "Our matrix technology works like a giant lens to focus the energy fields for new highs in sex, meditation, dreams, psychic powers and well-being." A five by five matrix (twenty-five pyramids in all) cost about \$100; a three by three matrix, \$40. At least, these were the prices when the advert appeared in 1976. There is no evidence, then, that pyramid power keeps prices down....

There was also an advert published by Progress Books of New York, which began: "Let the amazing Prosperity Pyramid fill your life with Riches, Money, Cash, Gifts, Favors, Rewards, or anything else you want – EASILY."

This extraordinary advert quoted several "I've tried it, and it sure as hell worked for me!" type affidavits from the general public, and these too were rather odd. For instance, one lady reported that only two days after "using this secret", her ex-husband gave her an extra \$300 alimony; a gentleman identified only by the initials M.Y. reported a sizeable win at the Tijuana dog races; a shy girl reported sending out a powerful blast of pyramid energy to a boy she was soft on, and within minutes he rang her to fix a date; another lonely girl

procured for herself five eligible suitors in only three days, and all by a judicious application of pyramid energy.

The book on how it is all to be done used to be obtainable from Al G. Manning, the author, for a mere \$2. We don't have Mr Manning's book ourselves, but his system is explained in Warren Smith's book *The Secret Forces of the Pyramids* (1975):

Manning supplies a small cardboard pyramid. It is accompanied by several sheets of paper cut into triangles, "Blue is for healing, green for love", Manning explained. "Orange is for mental power. Yellow denotes intuitive requests. The experimenter selects the triangular paper best suited for their request. Then the request is written on the paper."

As an example, an experimenter wanting to cure an illness would select a blue piece of paper, writing their goals on that sheet. Manning has found that the request should be written in plain, simple language. "Next, the experimenter folds the paper between their palms," Manning went on. The triangle of paper is then folded down to the base, then folded again so the paper ends up folded three times.

When this is done, the paper is placed in the base of a cardboard pyramid aligned to the north-south direction. Manning calls these requests "thought forms". They're laid in the bottom of the pyramid and the incubation period begins. This gestation time requires from three to nine days, according to Manning. The paper is then removed from the pyramid and burned. "This allows the thought form to be released," said Manning.

Meanwhile, the House of Collingwood, of Rhode Island, used to offer a pyramid pendant for a mere \$10. "You can have the secrets of the universe in the palm of your hand," the advert explained. "Put it round your neck. See if you don't feel more energetic, more alert, more attractive, more truly alive." But they were cautious people at the House of Collingwood. This pyramid pendant, which was, by the way, unisex, *might* make lovemaking far more enjoyable, *might* even help improve your telepathic powers, but if it didn't, well, the House of Collingwood did offer their customers a money-back

guarantee.

But enough of the pyramid industry – one could make a hobby out of collecting these curious advertisements, and we cannot help thinking that the pyramid craze deserves a place in an updated version of Charles Mackay's book *Memoirs of Extraordinary Popular Delusions and the Madness of Crowds*, first published in the middle of the nineteenth century.

Two final applications of pyramid energy that we cannot resist citing here are to hairdressing and dentistry.

The first of these is discussed in Bill Kerrell and Kathy Goggin's book *The Guide to Pyramid Energy*, published by Pyramid Power V Inc. in 1975. It concerns the bleaching of women's hair. We quote:

By placing a wooden pyramid over a woman's head after the bleach has been applied, facing one flat side towards magnetic north, and keeping the woman still, we found that the pyramid could shorten the bleaching process time. This finding also applies to the tinting of hair. The pyramid seems to keep the activity of the peroxide and bleach at its full bleaching power for a longer period of time. The pyramid treated hair was lightened to the same degree in 35 minutes that would ordinarily have required a full hour.

Incidentally, the authors of this curious book, which offers information about pyramids having been discovered on the Moon and Mars, reject as 'suspect' the claim from one lady that, "My baby, raised under a pyramid, began to talk when only six weeks old."

The application to dentistry was reported in the USA *National Enquirer* for 10th August 1976. A Dr Paris Garefis, of Santa Monica, California, had suspended 72 pyramids, constructed from aluminium alloy rods, with their bases towards the ceiling, over his dentist's chair.

He told the *Enquirer* that his patients felt less pain, and healed much quicker, when operated on beneath this pyramid complex.

We just hope that our own dentists never get wind of this!

Since the 1970s ideas on pyramid energy seem not to have changed much. On the internet you will find much discussion still about keeping food fresh and purifying water under pyramids, as well as the sharpening of razor blades and knives. You will find too, pyramid paraphernalia still advertised, as, for example, on the website at https://dowsing.com/shop/product-list.php?
Pyramid_Energy-pg1-cid12.html, where, at the time of writing (January 2013), you can buy pyramid frameworks for meditation purposes, for horticultural uses, or merely to keep your pet cat happy! But there are one or two new things to be found, as for example the rotating pyramid gamma ray transducer and negative ion generator, which, unfortunately, has a nasty habit of self-destructing occasionally! For details, see http://www.gizapyramid.com/Parr/Index2.html.

But to finish off this chapter, we leave the bewildered reader with some late news (of 1970s vintage) of the proposed Pyramid of Aquarius. This was to be the world's tallest man-made pyramid. It was to be built as a tribute to God, and would contain chambers at various levels. These chambers were to be used for psychic healing and metaphysical experiments, and multi-rapid-transit elevators would connect the various levels within it. It was to be built in Texas, New Mexico, Arizona or California, whichever gave the most favourable site. Alas, it never seems to have been built. Nevertheless, we here reproduce (Fig. 6.2) the strange circular which heralded this extraordinary structure.



WORLD'S TALLEST MAN-MADE PYRAMID!.. to be built as a Tribute to God,..... the Pyramid of Aquarius will be constructed of the finest and strongest materials in accordance with a precise mathematical formula. To be built in the South-Western U. S.,

probably in Texas, New Mexico, Arizona, or California depending upon topography, altitude, climate, etc. Will contain chambers at various levels for psychic healing, meta-physical experiments, and related work. Multi-Rapid-Transit elevators and escalators permit many simultaneous operations. Will have adjacent community hospitals, hotel and motel, restaurants, air, rail, and roadway connections. Sponsored by: Pyramid of Aquarius Publishing Co., PO Box 163, Dearborn Hts., Michigan 48127

Fig. 6.2 (front)

Pyramids & Healing



CAN PYRAMIDS HEAL? Use an election of recorded history. Most major pyramids have been built within a few degrees of the 30th parallel of North Latitude. The pyramids of Giza are almost on it. The very first pyramids of which we have any knowledge were probably built on the lost continent of Lemuria, when it sank, the people migrated to Mexico and to the islands of the Pacific. Pyramids were built there and then on the Continent of Atlantis. Civilization is presumed to have reached a peak on Atlantis, people there lived very long lives in pence and perfect health. When Atlantis sank, they migrated to Asia and Africa. The pyramids of Giza probably contain the records of Atlantis and also of the Children of Mu (Lemuria). The religion of the Egyptians, Atlanteans, and the Children of Mu survives today in the Eastern Religions,...Hinduism, Buddhism, Taoism, Shintoism, and Theosophy (Esoterics).

A gigantic project is being undertaken to build a very large pyramid in the South-Western United States. The proposed area is indicated on the map above. This pyramid is to be called "The Pyramid of Aquarius." A drawing of it is on the reverse side. The pyramid will be the nucleus of a New World Health Mecca,.... to be the largest complex of its kind in the entire world. At the Mecca will be doctors, surgeons, healers, and psychics of every description. The very latest equipment of all kinds will be readily available. The central theme of the Mecca will be The Seven Arts of Healing (see below). If a disorder of the body does not respond to one method, then perhaps it can be healed by another. A massive computer is to be an integral part of the complex and all ailments of the body will be categorized and stored in random access along with all their known cures according to The Seven Arts of Healing. The Mecca will be open to all the peoples of the world and will be staffed by an international team of experts.



Fig. 6.2 (back)

Chapter 7. Ancient Astronomy?

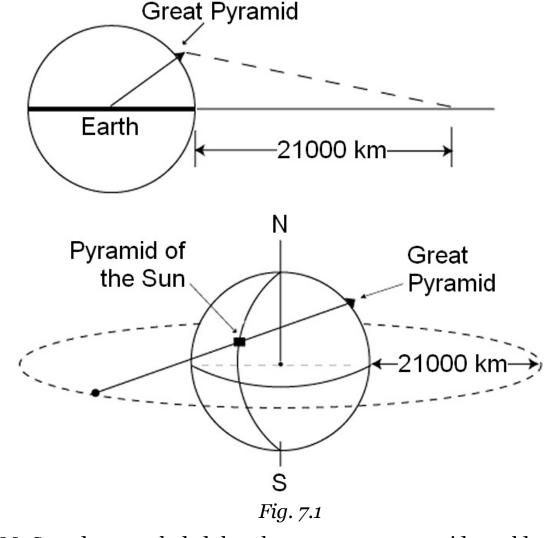
In the field of Independent Thought one is never very far away from either the Great Pyramid or Atlantis, and in the present chapter we're rather afraid that we must grapple with the first of these yet again. This time we follow Michael W. Saunders, an electronics engineer from Chaldon, Surrey, in his fascinating attempt to reconstruct from the monuments of past ages the memory of an extraterrestrial visitation.

But this is not the usual run of von Dänikenish intervention. Mr Saunders' ideas are an altogether more ingenious and sophisticated kettle of fish, with an intriguing mathematical background to boot.

Mr Saunders' basic approach to ancient monuments was well illustrated by his excellent little book *Destiny Mars*, first published in 1975. This was later augmented by two other booklets, *Pyramid Mars Connection* (1976) and *Extraterrestrial Databank on Phobos* (1976).

But Mr Saunders does not just deal with the Great Pyramid in Egypt. His theory also involves the giant pyramid of the Americas, the so-called Pyramid of the Sun at Teotihuacan, in central Mexico.

He discovered two things. Firstly, that the north face of the Great Pyramid, if extended into space, met the plane of the Earth's equator at a height of just over 21,000 kilometres above the Earth's surface. Secondly, that a line joining the Great Pyramid to the Pyramid of the Sun, when extended, met the equatorial plane at very nearly the same height. Both these ideas are illustrated in Fig. 7.1.



Mr Saunders concluded that these two great pyramids could hardly be so related by accident, and he postulated that they had been designed to indicate a particular orbit in the plane of the Earth's equator, and at a height of 21,000 km above it. But an orbit for what?

At first he thought it might be an alien time-capsule, a satellite containing information useful to an earth civilisation capable of interpreting the pyramids correctly, and of retrieving such a satellite from its orbit. But it was pointed out to him, by Duncan Lunan, that such a satellite must have been put into orbit many centuries ago, and that the gravitational pull of the Sun and Moon would long since have disrupted its orbit. Mr Saunders agreed with Mr Lunan, and began to think, instead, that this orbit was probably only an "intellectual signpost". That is, it had never actually been occupied by a satellite, but that instead it was meant to indicate in some way the actual location of such a satellite or time capsule elsewhere in

the Solar System. The Pyramid Orbit was just a hint of something bigger.

It was Mr Lunan who noticed that if a satellite were to move around the Earth in such a pyramid-indicated orbit, then it would complete one revolution every 0.515266 days (its sidereal period), and that this period of time was very close to half a Martian day.

Furthermore, the height of this pyramid-indicated orbit, 21,000 km, was close to the equatorial circumference of Mars.

Here already were two striking indications of the planet Mars. Accordingly, Mr Saunders studied the Great Pyramid even more closely, and was gratified to find even more pyramid–Mars connections.

For example, he found a link between the Great Pyramid and the two tiny moons of Mars, Phobos and Deimos.

During the time it takes the Earth to rotate once on its own axis, Deimos does nearly $\pi/4$ revolutions around Mars, whereas Phobos does nearly π revolutions. The slope of the Great Pyramid, as is well known, seems to be based on π as well, so that the Great Pyramid and the Martian satellites are linked via this universal constant, the ratio of the circumference to the diameter of a circle.

Again, the entrance to the Great Pyramid is not exactly half way along the northern face, but about 0.53 of the way across instead. And it so happens that the equatorial diameter of Mars is about 0.53 times that of the Earth.

Finally, the principal chamber of the Great Pyramid (the King's Chamber) is displaced from the central axis of the structure by an amount which Mr Saunders claims is representative of the displacement of the Sun from the geometrical centre of the orbit of Mars.

From these observations and others, Mr Saunders concluded that the two pyramids and their indicated orbit were a significant signpost to Mars, and by various ingenious methods he set about finding potential locations for his hypothetical time capsule.

The most promising of these was on the satellite Phobos, and by an convoluted argument involving pyramids and volcanoes, Mr Saunders claimed to have determined its theoretical position to within 10 metres. Retrieving it – or even verifying its actual existence – was quite another matter, of course.

In 1975, when *Destiny Mars* first appeared, NASA seemed to be neither impressed by nor even mildly interested in Mr Saunders' predictions, but in 1976 and 1977, photographs of Phobos were taken by the Viking orbiter craft for the purposes of compiling a map of its surface. The photographs did not reveal any unusual features at or near Mr Saunders' predicted site, but then Mr Saunders was not really surprised by this. Such a databank would have been well hidden anyway, to minimise the chances of accidental discovery. Consequently its location would have been made to look like any other part of the surface, and so we could hardly expect to spot it even on a close-up photograph.

But let us return to Earth.

After this intriguing reinterpretation of the Great Pyramid and the Pyramid of the Sun, Mr Saunders turned his attention to Stonehenge.

Now, if one looks at a plan of this monument, it is not at all difficult to imagine that the various rings of stones and holes may represent planetary orbits, and this was the basic idea that Mr Saunders set out to explore in his book *Stonehenge Planetarium* (1979).

We reproduce two of Mr Saunders' diagrams here (Figs. 7.2 and 7.3) as they form a convenient platform from which to discuss his theory.

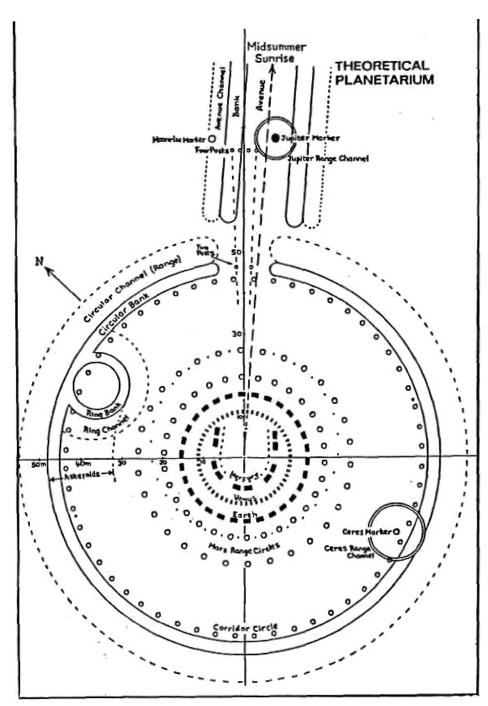


Fig. 7.2

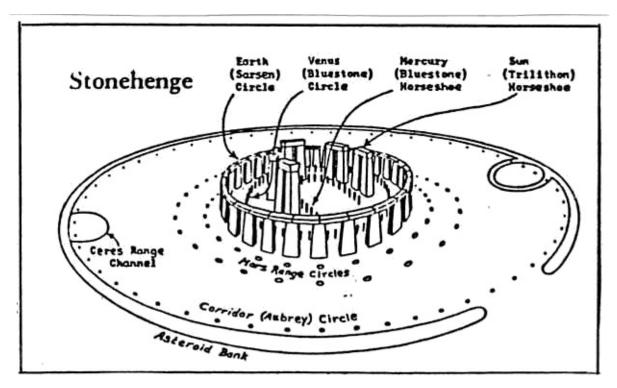


Fig. 7.3

The first point which immediately strikes one about the Stonehenge model of the inner planets is that this can be no ordinary planetarium. Inside the circular asteroid bank there are two horseshoes of stones (the Bluestone Horseshoe and the trilithon Horseshoe), two circles of stones (the Bluestone Circle and the Sarsen Circle), and three circles of filled in holes (the Y holes, the Z holes and the Aubrey holes). That is, *seven* 'rings' of one sort or another.

Now, unless one accepts Velikovsky's theory that planets can come and go within the solar system, then these seven rings are a few too many for the four inner planets, Mercury, Venus, Earth and Mars.

Then again, if this is a model of the solar system, why are there *horseshoes* as well as *circles* of stones? And why are the circles and horseshoes of stones of different heights as well as compositions? If Stonehenge is a planetarium, then all these things must symbolise something.

According to Mr Saunders, they do indeed represent planetary attributes, but before discussing some of them, let's explain why there are seven rings to only four inner planets.

The Stonehenge planetarium, Mr Saunders calculates, represents the solar system on a scale of 1 in 10,000 million. The Bluestone

Circle represents the orbit of Venus and the Sarsen Circle that of the Earth. The Y and Z holes represent the minimum and maximum distances of Mars from the Sun. The Aubrey holes relate to the orbit of Ceres, the largest of the asteroids, and the Bluestone Horseshoe to the orbit of Mercury. Next the Trilithon Horseshoe. This represents the Sun, not on the same scale as before, but on a new scale of 1 in 100 million. The reason for this change of scale, Mr Saunders explains, was because if the builders had put the Sun in the middle on the same scale as the orbits, it would have been a little stone about 7 centimetres in radius, which might have got displaced or even lost. Actually, for reasons of space, we've rather simplified Mr Saunders' theory, and anyone who is puzzled by the uses of rings of holes and horseshoes of stones, should refer to Mr Saunders' book for details. As to the Outer Planets, if these had been represented on a scale of 1 in 10,000 million like the Inner Planets, then they would have entailed enormous circles of stones and holes which would have been guite impracticable. Consequently, Mr Saunders believes that these were given only a single token representation. Thus, the so-called Heel Stone represents the mean Jupiter-Sun distance, and the length of the so-called Avenue represents the mean Pluto-Sun distance. Unfortunately, there is no trace today of anything that might once have represented Saturn, Uranus or Neptune, but Mr Saunders is quite sure that they were once there.

Having explained the basis of the planetarium, we must refer the interested reader to Mr Saunders' booklet for further details.

Now, let us just pause for a moment to consider what all this rather sophisticated astronomy means. Either the whole thing is a mare's nest from start to finish; or the ancients were vastly more sophisticated than we today give them credit for; or, the ancients were not *that* sophisticated, and had outside, extraterrestrial help.

Discounting the first explanation as altogether unworthy, let us consider the other two possibilities. Thanks to the likes of Gerald Hawkins and Alexander Thom, we now know that the ancients were a lot more accomplished in astronomy than we tend to give them credit for. On the other hand, the Great Pyramid Indicator and the Stonehenge Planetarium, are, if Mr Saunders is correct, altogether *too* clever. Which implies something like an extraterrestrial intervention, but why?

We saw earlier that Mr Saunders interpreted the Great Pyramid as a signpost to a time capsule or databank that would be of use to a civilisation developed enough to interpret the monuments correctly and retrieve the capsule.

Stonehenge could well have been a sort of extraterrestrial visiting card, as Mr Saunders explains:

If there have at some time been visitors to the solar system, it could be reasoned that they might have installed something that would reach the attention of, for instance, an advancing, yet conservation minded, society.

The message is reinforced even further by the relationship which exists between Stonehenge, the Great Pyramid and the Pyramid of the Sun. For, taking Stonehenge as the Solar System, and retaining the scale of 1 in 10,000 million, then the Great Pyramid represents the star Alpha Centauri, and the Pyramid of the Sun the star Sirius. Or more precisely, their positions in 2500 BC. Why these two stars in particular? Probably because Sirius is the brightest star in the sky and Alpha Centauri the nearest.

In *The Wiltshire Galaxy* (1979), Mr Saunders turned his attention to Salisbury Plain and the proliferation of tumuli and long barrows that surround Stonehenge. These – or at least some of them – Mr Saunders sees as representations of the stars in the immediate vicinity of the Solar System.

The scale, of course, has to change from that of the planetarium itself. We have already seen that on a scale of 1 in 10,000 million, Alpha Centauri, the nearest star, is way over in Egypt. If we are to get a local star map to fit on Salisbury Plain then clearly we have some adjusting to do.

After due deliberation Mr Saunders deduced that the new scale of representation was 1 in 119 million million, this being deduced from a consideration of the length of the Stonehenge Avenue, or, more precisely, the length of that portion joining the centre of Stonehenge to the first sharp bend of the avenue. It is this bend, incidentally, that represents the Sun in the star model, and not Stonehenge proper.

The star map that emerges is shown in Fig. 7.4. Of course, we are looking at a two-dimensional representation of a three-dimensional array of stars, but nevertheless, Mr Saunders claims, these tumuli

roughly summarise directions from the sun as well as representing their distances from it.

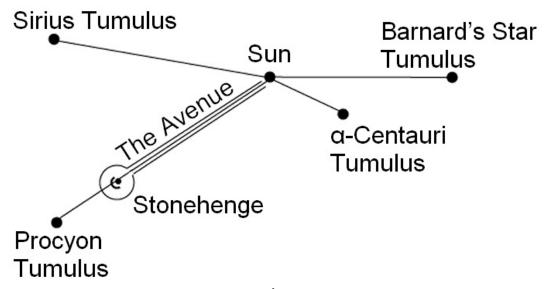


Fig. 7.4

But there is more to come. Sirius is a binary star. That is, it consists of two separate stars, each revolving around the other, and Mr Saunders claims that this is actually shown by the tumulus which represents Sirius. For the outer radius of this tumulus, 26 metres, represents the distance between the two components of Sirius on a scale of 1 in 119,000 million. If this figure looks vaguely familiar, it should do – it is precisely 1000 times the scale of the basic star map.

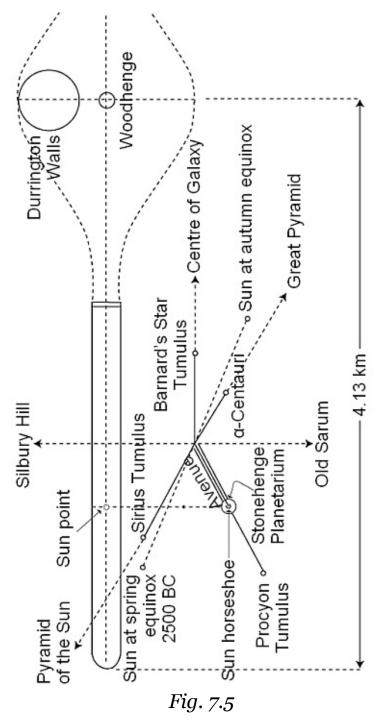
The Alpha Centauri tumulus, to the same scale, likewise represents the separation of the two main components of Alpha Centauri to tolerable accuracy.

But what of the Wolf 359 tumulus? If we apply the same reasoning then it follows that this too has a binary component at something like 14 Earth—Sun distances. To date, no astronomer has ever had any reason to suspect that Wolf 359 has a second component at all, so that Mr Saunders is rather putting his money where his theory is, and making a rather fascinating prediction for the future.

The tumulus star model theory likewise indicates a companion for Barnard's Star, and this is interesting because some astronomers have suggested that Barnard's Star has at least one something revolving around it.

Nor have we exhausted the message of the Salisbury Plain tumuli.

Fig. 7.4 is only an 'inset' into a map of the entire galaxy, with Woodhenge representing its centre, Durrington Walls Enclosure part of the bulging nucleus and the long linear earthwork known as the Cursus representing the plane of the spiral arms. Fig. 7.5 will make this clear.



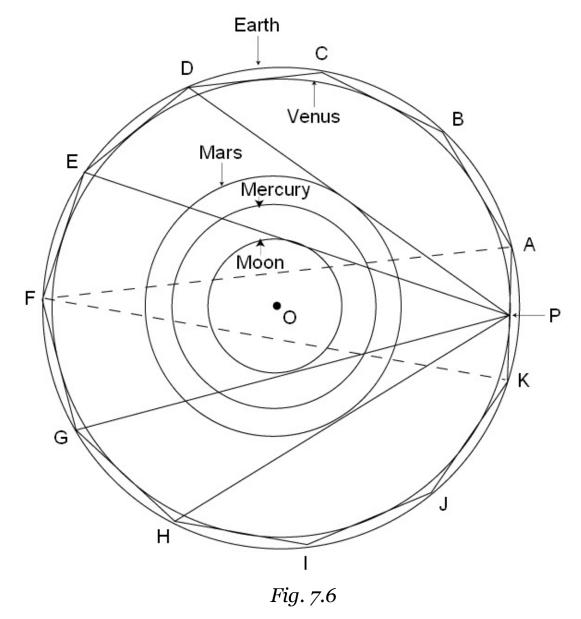
As can be seen, the Stonehenge 'inset' is placed vertically below the position occupied by the Sun in the spiral arms, and of course, the galactic representation is on a different scale to that of the localised inset. Fig. 7.5 is on a scale of 1 in 100,000 million million. To sum up, then, the Wiltshire Galaxy begins as a side-on picture of the Milky Way, into which is inset a map of the stars in the immediate vicinity of the Sun, and into which, in its turn, is inset the Stonehenge Planetarium itself.

It is an extraordinary and ingenious theory, even if one is left wondering about the hundreds of tumuli on Salisbury Plain that don't figure in Mr Saunders' stellar maps.

Curiously, at about the same time that Mr Saunders published his *Stonehenge Planetarium*, two Russians called Vladimir Avinsky and Valentin Tereshin were proposing a rather different planetary theory of Stonehenge.

We had a great deal of trouble getting to grips with this theory because every reference to it in English was rather vague. Eventually, though, we got hold of a curious document consisting of three pages of pidgin English, one of pure Russian and a poorly explained diagram to boot. The following, then, is what we *think* the Russian theory is all about.

It begins with a rather involved geometrical construction whose end product is a set of concentric circles, each of which represents a planet. Insofar as the Russian theory deals with the sizes of the planets rather than their distances from the Sun, it is a very different planetarium to that proposed by Mr Saunders.



Referring to Fig. 7.6, ABCDEFGHIJK is a regular eleven-sided polygon. That is, all its angles are the same size and all its sides are the same length. The geometrical centre of this polygon — we call it the 11-gon for short — is at O. It is this point which acts as the centre for the set of planetary circles, the diameter of each circle being in proportion to the equatorial diameter of the planet it represents. Thus, to the same scale, the circles represent the Moon, Mercury, Mars, Venus and the Earth in ascending order of size.

These circles are constructed from the 11-gon as follows. P is the mid point of AK. The Moon circle touches EP; the Mercury circle passes through the point where EP crosses AF; the Mars circle touches DP; the Venus circle touches each side of the 11-gon at its mid point; and finally the earth circle passes through all the corners of the 11-gon, A to K inclusive.

On seeing this scheme for the first time it is tempting to dismiss it as something of a Mickey Mouse construction, and yet it is surprisingly accurate – no more than 1.5% in error.

So where does Stonehenge come into it?

Avinsky and Tereshin claim that the builders of Stonehenge were aware of this remarkable geometrical unity between the moon and the Inner Planets, and that they incorporated it into the groundplan of Stonehenge.

The Sarsen Circle is the Moon; the Z holes represent Mercury and the Y holes Mars; and, roughly speaking, the inner and outer edges of the surrounding bank represent Venus and Earth respectively.

In the version that we have seen of the theory, there is no mention of the Outer Planets. Furthermore, the two central horseshoes of stones, the Bluestone Circle and the Aubrey Holes, do not seem to be representative of any planet at all. Finally, no reason is given for the use of stones for one planet and holes for another.

Newspaper accounts of the theory published around September 1979 hinted that a "pentagram" was involved in the construction, but this now seems to have referred to the figure PDEGH rather than the traditionally mystical five pointed star familiar to western readers. It was an extension of this pentagram, apparently, which enabled Avinsky and Tereshin to link Stonehenge, the Cursus, Woodhenge and seven long barrows in a marvellous astronomical plan. Unfortunately we haven't got the details for this, so that we must leave our readers on something of a cliff-hanger here.

But it must not be supposed that all this planetary jugglery with Stonehenge is exclusively a product of the space age. Far from it, and we close this chapter with two other interpretations of the monument which were published in the middle of the nineteenth century.

The first of these appeared in the Reverend E. Duke's little book, *The Druidical Temples of the County of Wilts* (1846), and is reproduced in Fig. 7.7.

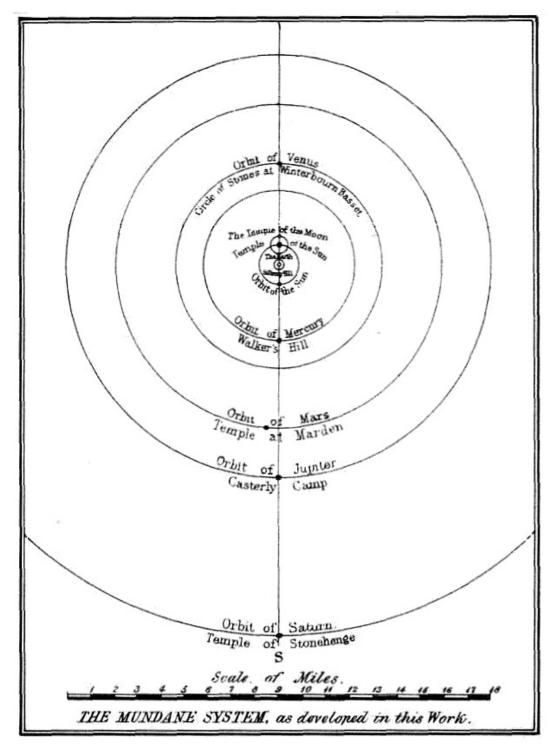


Fig. 7.7

Here is how Rev. Duke summarised his thesis:

My hypothesis then is as follows: that our ingenious ancestors portrayed on the Wiltshire Downs, a Planetarium or stationary Orrery, if this anachronism may be allowed me, located on a meridional line, extending north and south, the length of sixteen miles;

that the planetary temples thus located, seven in number, will, if put into motion, be supposed to revolve around Silbury Hill as the centre of this grand astronomical scheme; that thus Saturn, the extreme planet to the south, would in his orbit describe a circle with a diameter of thirty-two miles; that four of these planetary temples were constructed of stone, those of Venus, the Sun, the Moon, and Saturn; and the remaining three of earth, those of Mercury, Mars and Jupiter, resembling the "Hill Altars" of Holy Scripture; that the Moon is represented as the satellite of the Sun, and, passing round him in an epicycle, is thus supposed to make her monthly revolution, while the Sun himself pursues his annual course in the first and nearest concentric orbit, and is thus successively surrounded by those also of the planets, Venus, Mercury, Mars, Jupiter and Saturn; that these planetary temples were all located at due distances from each other; that the relative proportions of those distances correspond with those of the present received system; and that, in three instances, the sites of these temples bear in their names at this day plain and indubitable record of their primitive dedication.

Going from north to south in Fig. 7.7, the temples representing the planets are: Venus (a stone circle in Winterbourne Bassett); the Moon and the Sun (two stone circles within the Avebury enclosure, the easterly one being the Sun; the westerly one, the Moon); the Earth (Silbury Hill); Mercury (a long barrow on Walker's Hill); Mars (a large tumulus called Hatfield Barrow, near Marden, now destroyed); Jupiter (Casterly Camp); and Saturn (Stonehenge).

The "indubitable" place-name evidence for these correspondences, to which Rev. Duke refers, is clear only in one instance: Marden = Mars-Den = House of Mars. The other two survivals are less obvious. The link between Walker's Hill and Mercury relies on the fact that a tumulus in the same locality is called Knap Hill, and that Knap = Knoph = the Egyptian equivalent of Mercury. The link between the Sun and the Moon and Avebury is the other, and this one depends on the fact that Avebury = Abury = Abiri = the Hebrew expression for "The Mighty Ones"!

Rev. Duke, incidentally, saw nothing amiss in hopping back and forth from Druid Temples to Egyptian or Hebrew etymology. He was a firm believer in the theory, prevalent at the time, that the Druids (whom he erroneously believed to have erected Stonehenge and the rest of the planetarium) originated in the east, in the same cultural atmosphere that spawned the great civilisations of the Middle East.

Of course, even in Rev. Duke's day it was generally believed that Stonehenge was a Temple of the Sun, and he stressed that he was not rejecting this popular idea at all. After a careful analysis of the monument, he assured his readers that Stonehenge was really two temples rolled into one – an early solar one and the later Saturnine addition built at the time the planetarium was conceived. The Heel Stone, over which the Sun rose at the summer solstice, was part of the early solar temple, to be sure, but was not the bank of earth surrounding the monument wonderfully representative of the Rings of Saturn? Incidentally, before any of our readers quibbles at this, we would point out that Rev. Duke had watertight evidence that the Druids knew of, and used, the telescope!

The major objection, though, was that Rev. Duke had put the Earth at the centre of the Solar System, that he had the Moon revolving about the Sun rather than the Earth, and that the distances were all wrong.

The good Reverend had a ready answer: "I am not endeavouring to prove what is the true astronomical system, but am only labouring to show what was the system believed in, and actually portrayed on the face of the land by our heathen ancestry, however erroneous that system may have been."

Finally, the reader might like to know why the Druids placed the planets on a meridional line and in the positions shown in Fig. 7.7. Why did they put Venus, the Sun and the Moon to the north of Silbury Hill, and Mercury, Mars, Jupiter and Saturn to the south?

Rev. Duke claims it was because the Druids believed that these were the positions the planets occupied on the day of creation, and that when all the planets returned again to these positions, "the old world would end, and a new world spring into being."

So much for Reverend Duke. Another planetary interpretation of Stonehenge – not to mention the Great Pyramid and a host of other antiquities – was put forward by Mr John Wilson in his book *The*

Lost Solar System of the Ancients Rediscovered (1856). It came in two volumes, totalling some 960 pages, and is still guaranteed to give its readers a headache within minutes.

By a process that is not at all clear, Mr Wilson deduces that the monuments of the ancient world – nearly all of them, so far as we can gather! – were constructed in terms of a unit of measurement called simply "The Unit". One unit was slightly over 14 inches in length.

It is an extraordinary book. Straight from the word go, Mr Wilson plunges into a treatise on gravitational attraction, the summation of mathematical series, Kepler's Laws of Planetary Motion, and the origins of the shape of the Egyptian obelisk. After an abstruse discussion of Babylonian weights and measures, Chinese junks, and a statue of Peter the Great, he is ready to tackle the mystery of the Great Pyramid, which he does with characteristically incomprehensible gusto:

Since pyramid of Cheops = ½ circumference and cube of Cheops = ¼ distance of moon, Height: side of base of pyramid of Cheops :: 406 : 648 :: pyramid of Cheops: a pyramid having same base and height = side of base. Distance of moon = 4 cubes = 12 pyramids each having height = side of base. So 406 : 648 × 12 :: ½ circumference : 9.57 circumference. Thus distance of moon = 9.57 circumference.

We are not at all sure what Mr Wilson is on about here, but it is definitely to do with planetary distances. We did catch up with him, though, in one of his more lucid moments, so we are able, reliably, to inform our readers that if all measurements are in units, then 1600 times the cube of the base side of the Great Pyramid gives the distance of the Earth from the Sun, and that 5 times the cube of the base side of Chephren's Pyramid (the second largest at Giza) gives the distance of the Moon from the Earth.

As for Stonehenge, and again stressing that everything must be expressed in units, the cube of 3 times the circumference of the Sarsen Circle gives 6 times the circumference of the Earth; the cube of 10 times the circumference of the Bluestone Circle gives the distance of Mercury from the Sun; and 10 times the cube of 5 times the length of the Avenue of Stonehenge gives the distance of Saturn from the Sun.

And if all that doesn't clear	up the mystery o	f Stonehenge, then i
has certainly added to it!	_	_

Chapter 8. Blueprint for the Solar System

The story of science – particularly astronomy – is peppered with colourful characters. Of special note was Tycho Brahe, an eccentric Dane who had a false nose (his own had been sliced off in a student duel!) and whose observatory included a prison cell as well as a pet dwarf who was reputed to have second sight. Tycho was an expert observer who drew up the best star-catalogue of his time, but until his death, in October 1601, he declined to believe that the Earth might be in orbit round the Sun. He preferred a curiously hybrid system, according to which the Sun moved round the Earth, but the planets circled the Sun.

Tycho's last assistant was Johannes Kepler, who will always be remembered as being the man who proved that the Sun is indeed the centre of the planetary system – but that the orbits of the planets are ellipses, not circles. Kepler had his own problems, too: he had to supplement his income by casting horoscopes, and he also faced a crisis when his mother was brought to trial as a witch. (She was eventually acquitted, though by all accounts she looked every bit 'witchy'.)

In many ways Kepler was modern in his outlook, but in others he was firmly rooted in the past. He believed that each planet must have a sphere or layer of space in which it is dominant; so that no space should be wasted, these spaces should touch each other, and he decided that the answer was to be found in the five regular solids of geometry: from the cube (six equal faces) to the icosahedron (twenty). He fitted these solids in with the spaces between the planets, using the following sequence: Saturn – Cube – Jupiter – Tetrahedron – Mars – Dodecahedron – Earth – Icosahedron – Venus – Octahedron – Mercury (see Fig. 8.1.)

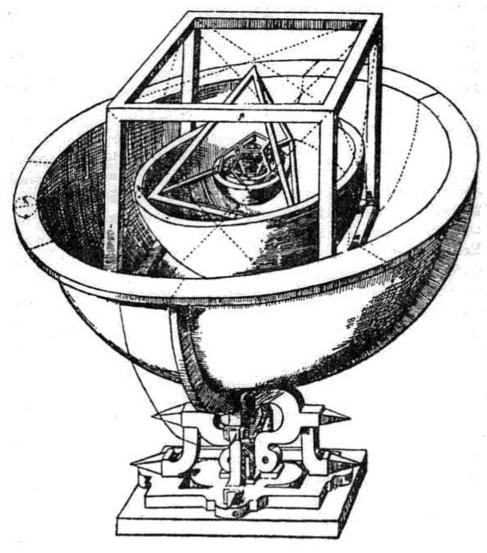


Fig. 8.1

That is, the five regular solids separated the six then known planets, each solid being inscribed and circumscribed by the planetary spheres either side of it. The model worked to quite a tolerable accuracy and Kepler always regarded it as the greatest of all his discoveries. It was published in 1596, in a book with the snappy little title of *Prodromus Dissertationem Cosmographicarum continens Mysterium Cosmographicum de admirabili Proportione Orbium Coelestium deque Causis Coelorum numeri magnitudinis motuumque periodicorum genuinis et propriis, demonstratum per quinque regularia corpora Geometrica.* Tycho Brahe, at least, was impressed, and did not look disapprovingly down his false nose! Unfortunately, of course, Uranus, Neptune and Pluto later turned up to spoil the mathematical harmony of what had been a really elegant theory, but by then Kepler was long dead.

Another of Kepler's ideas was that the planets had to be

constantly 'pushed' along by some effect of the Sun, as otherwise they would stop in their tracks. As an addendum, he claimed that universe began with the planets stretched out in a line from the Sun, out to the origin of the Zodiac, and that the universe would end when the same thing happened again – though unlike most end-of-the-worlders, he stopped short of giving a definite date.

Actually, this last idea is one which dates back to classical times. For example, the Roman author Seneca, in his *Natural Questions*, refers to a current theory which ascribed catastrophes to the movements of the planets. The Earth would be destroyed by fire when all the planets lined up in the sign of Cancer, and would be destroyed by water when all the planets lined up in the sign of Capricorn, these being the signs of the summer (heat) and winter (cold) solstices. We shall see a modern re-emergence of such ideas in chapter 16.

Even when the layout of the solar System had been firmly established, efforts were made to find a hidden meaning behind the overall picture. For instance, there is the curious relationship known as Bode's Law, though it was actually discovered by a mathematician named Titius. It runs thus: to find the mean distances of the planets from the Sun, start with the following simple sequence of numbers: 0, 3, 6, 12, 24, 48, 96, 192, 384. From 3 onwards, each number is double the preceding one. Now add 4 to each number, giving the sequence: 4, 7, 10, 16, 28, 52, 100, 196, 388. Now divide by 10, giving the sequence: 0.4, 0.7, 1.0, 1.6, 2.8, 5.2, 10.0, 19.6, 38.8. This sequence models, quite remarkably, the actual sequence of the mean distances of the planets from the Sun, as follows:

Body	Actual	Bode's Law
Mercury	0.39	0.4
Venus	0.72	0.7
Earth	1.00	1.0
Mars	1.52	1.6
		2.8
Jupiter	5.20	5.2
Saturn	9.54	10.0
Uranus	19.19	19.6

What is remarkable is that when Titius (1766) and Bode (1778) first spotted this 'law', Uranus hadn't been discovered, and yet it fitted the 'law' when it was discovered in 1781! Furthermore, the 'law' seemed to 'predict' a missing planet between Mars and Jupiter, which was precisely where the asteroids later turned up – Ceres, the first, was discovered in 1801. Though the 'law' gained some respect after these 'successes', it lost it again when Neptune was discovered in 1846, and was found not to follow the pattern – its mean distance from the Sun was 30.06 compared with a Bode's Law prediction of 38.8. When Pluto turned up in 1930, Bode's Law fared even worse, and the 'law' was effectively abandoned as a numerical curiosity.

Admittedly Bode's Law was a purely scientific concept and did not involve any form of mysticism. But the idea of searching for "God's Plan" in the planetary system did not die out with Kepler, and even in the twentieth century it was far from fading away. This brings us to 1940, and the publication of Frank Lonc's booklet *The Key to the Cosmos*.

Mr Lonc believed that the key to the layout of the solar system – the key to the entire cosmos, even! – lay in one number, phi. Phi is equal to 1.618 and a bit. It is a number which has fascinated mathematically minded people with occult inclinations for hundreds of years.

Since we do not intend in this book to delve into mathematical crankery, fascinating as it is, we must content ourselves with saying that phi is a number encountered repeatedly in the geometry of the mystical five-pointed star, or pentagram, and that sages and seers persist in seeing it at the root of anything and everything from human anatomical proportions and the harmony of nature to the Great Pyramid and the design of the Solar System.

Frank Lonc was the undisputed champion of phi. Every corner of creation from the tiniest atom to the entire galaxy seemed to be governed by it. Mr Lonc saw phi operating where others saw nothing at all, and because he saw it as universal, he named it "The Cosmic Constant".

Orthodox scholars did not share his enthusiasm. They claimed that phi was nothing but a harmless mathematical toy and that Mr Lonc was forcing it into a universe that would have worked quite happily without it. At best, he was making a mountain out of a molehill; at worst, he was crackers.

But this did not worry the steadfast Mr Lonc, who believed that the scientists had all been hoodwinked by the charade of Einstein's Theory of Relativity. In Mr Lonc's opinion, Relativity was a load of incomprehensible gobbledegook which had been accepted by scientists because they couldn't understand it, and they didn't want to lose face by admitting it. Don't let it worry you if you can't make head or tail of Relativity, was Mr Lonc's philosophy, because there isn't an ounce of sense in it anywhere. Would God, in all his wisdom, have created a universe that ran according to such hopelessly complicated mathematical formulas? No, answered Mr Lonc emphatically. He'd have opted for a much simpler arrangement built upon one single Cosmic Constant like phi. Thus it came about that Mr Lonc decoded the blueprint for the Solar System.

Starting with the Earth 1 unit from the sun, multiply by phi to give 1.618 units, the distance of Mars from the Sun. Multiply this by 1.618 again to give the distance of the asteroid belt from the Sun, and so on. Each planetary orbit has a radius phi times that of its predecessor.

Working the other way, and starting again with the Earth say 1 unit from the Sun, divide by phi to give the distance of Venus from the Sun, then divide by phi again to give the distance of Mercury from the Sun.

The scheme is summarised in the table below, and aside from the fact that some of the planets seem to have wandered away from where God put them and Mr Lonc wanted them, plus the small matter of a missing planet between Jupiter and Saturn, it all works

rather splendidly.

Unfortunately, the world of orthodox astronomy didn't share this view, and like band of learned donkeys, plodding along after a relativistic carrot on a string, they continued to worship Einstein's theory at the expense of Mr Lonc's.

Planet	Distance from Sur Earth = 1	
	Lonc	True
Mercury	0.382	0.387
Venus	0.618	0.723
Earth	1	1
Mars	1.618	1.524
Asteroids	2.618	2.65
Jupiter	4.236	5.203
Missing?	6.854	???
Saturn	11.090	9.539
Uranus	17.944	19.182
Neptune	29.034	30.058
Pluto	46.979	39.52

Another extraordinary excursion into the problems of the hidden harmony of the Solar System was the subject of a paper delivered before the Literary and Philosophical Society of Liverpool by Mr James Smith on 25th January 1864. It bore the grandiose title, *On the Relations existing between the Dimensions and Distances of the Sun, Moon and Earth.*

The harmony was hidden, Mr Smith claimed, because astronomers were in such a muddle over the actual measurements of the dimensions and distances involved. Almost at the drop of a hat, he claimed, astronomers would "adjust" their estimates of the distance of the Sun by a colossal 4 million miles, and when it came to guessing the distance of Neptune, they couldn't be at all sure to within 100 million miles. Little wonder that they couldn't see the subtlety of the relationships involved – it was lost behind a mountain of errors.

The astronomers' muddle started with the size of the Earth itself. In Mr Smith's day, to measure the distance to the Moon you

couldn't just do it by sitting in an arm-chair and bouncing laser beams off the lunar surface. Laser beams just hadn't been invented. The only way to measure distance in the 1860s was by trigonometrical surveying, and *that* implied an accurate knowledge of the size and shape of the Earth. But, as Mr Smith pointed out, some astronomers weren't all that sure of the diameter of the Earth. He wrote:

Now, it will be obvious to you, sir, and to every member of this society, that if we are unable to ascertain truly and exactly the dimensions of our own planet, the Earth, we must forever remain ignorant of the true dimensions of the other celestial bodies composing our solar system, for this is the source from which all our information on this subject is derived, and the base upon which all our knowledge rests. And it is equally certain that a very slight error in the Earth's diameter and distance from the Moon leads to errors of enormous magnitude in the dimensions and distance of the Sun and of all the still more distant bodies — the planets.

Casting aside the unreliable figures of orthodox astronomy, Mr Smith drummed up his own more harmonious figures – or, as he himself saw it, glimpsed the truth behind the approximations and the guesses bandied about by the astronomers of the day. The following table gives the orthodox figures (as of 1864) and Mr Smith's figures for various diameters and distances, in miles:

Quantity	Orthodox Value (as of 1864)	Mr Smith's Value
Earth's Diameter	7912	8000
Moon's Diameter	2160	2000
Sun's Diameter	880,000	960,000
Earth-Moon Distance	237,000	240,000
Earth-Sun Distance	95,365,000	115,200,000

Adopting Mr Smith's figures, the harmony of the Solar System becomes immediately apparent. Thus:

Earth–Moon distance = 120 × Moon's Diameter Sun's Diameter = 120 × Earth's Diameter Earth-Sun Distance = 120 × Sun's Diameter

Mr Smith claimed that these relations gave "a demonstration of the littleness of man's wisdom, and the superlative wisdom of the great Creator."

The rest of the Liverpool Literary and Philosophical Society weren't so sure. According to a report of the meeting:

The Chairman said that notwithstanding the elaborate calculations of Mr Smith, which were very ingenious, they were not one bit nearer the matter than they were before. He assumed that if the heavenly bodies did exist at these supposed distances at which he made them out there would be a great harmony and beauty in the solar system, but whether harmony did exist or not was a question that had to be proved by observation.

This was really a polite way of asking which was more reliable – the measurements of orthodox astronomers or the assumptions of Mr Smith. Being well aware of the opposition which his paper would evoke, Mr Smith wrote:

The mathematical and astronomical authorities who have attempted to write me down a fool, may, and probably will, continue to make a mystery of their craft, and jealously guard it, but I venture to tell them that they may fiddle upon the strings of their mathematical ingenuity until their heads ache but they will never succeed in controverting these mathematical and geometrical truths.

A few years before Mr Smith, Mr John Wilson (whom we met in the last chapter, of course) had done battle with the weighty matters of the harmony of the Solar System in his book *The Lost Solar System of the Ancients Discovered* (1856). As Mr Wilson saw it:

Thus the square of the number of ½ diameters of the moon that equal the diameter of the earth will equal as many ½ diameters of the earth as equal the ½ diameter of the moon's orbit.

Or the cube of the number of ½ diameters of the moon that equal the diameter of the earth will equal as many ½ diameters of the moon as equal the ½

diameter of the orbit of the moon.

And again:

Thus the square of the number of ½ diameters of the earth that equal the diameter of the sun will equal as many ¼ diameters of the earth as equal the semi diameter of the earth's orbit.

Also the number of semi diameters of the earth that equal the diameter of the sun will equal as many semi diameters of the sun as equal the semi diameter of the earth's orbit.

We assume that all this is as clear to our readers as it is to us.

Even orthodox astronomers are not averse to spotting patterns in the dimensions of the Solar System. G.F. Chambers in his *Handbook of Descriptive and Practical Astronomy* (1889) wrote:

The following coincidences may or may not deserve to be mentioned:

- 1. Multiply the Earth's diameter (7912 miles) by 108 and we get $854,496 = \pm$ the Sun's diameter in miles.
- 2. Multiply the Sun's diameter (852,584 miles) by 108 and we get $92,079,072 = \pm$ the mean distance of the Earth from the Sun.
- 3. Multiply the Moon's diameter (2160 miles) by 108 and we get $233,280 = \pm$ the mean distance of the Moon from the Earth.

Finally, in a footnote, Mr Chambers wrote:

Many attempts have been made by ingenious dabblers in Astronomy to discover other arithmetical coincidences formed after the spirit of Bode's Law. The following is the only one I have met with which deserves reproduction. Take the series 0, 1, 2, 4, 8, 16, 32 and 64: add 4 to each and the resulting figures represent with some approach to accuracy the relative distances of the satellites of Saturn from their primary.

Chapter 9. Zodiacs

Have you ever wondered how some of the constellations got their names? It is easy enough to see in the stars of Orion the figure of a man wearing a belt with a sword, or even to see the lion in Leo. The Plough is not too obscure, either, though under its alternative name of the Great Bear it leaves most people rather puzzled. Try as they might, they cannot see a bear in the thing at all. As for the flying horse in Pegasus, well, that requires such a giant leap of the imagination that most people *never* see it.

E. Raymond Capt, however, is certain that he holds the key to the mystery of the constellations, and you can read all about it in his little book The *Glory of the Stars*, published in America in 1976.

Basically Mr Capt claims that the constellations were deliberately set out by God to convey a marvellous message to all mankind. Through "the glory of His handiwork" God revealed His Divinely Appointed Plan for the human race – the triumph of God through Christ, the overthrow of Satan, and the ultimate redemption of man.

The message is conveyed primarily by the twelve signs of the zodiac, but also by their associated constellations. Each zodiacal sign has three associated constellations – for example, Coma, Centaurus and Boötes are associated with Virgo, whereas Orion, Eridanus and Auriga are associated with Taurus. The function of these associated constellations is, if you like, to amplify the message of their zodiacal signs.

Now, God revealed the message of the constellations to the Biblical Patriarchs. Hence we read in Genesis 1.14 that the "lights of the firmament" were to be "for *signs* and for seasons, and for days and years." And in Job 26.13 that "by his spirit he hath garnished the heavens", and again in Psalm 147.4 that "he telleth the number of the stars; he calleth them all *by their names*." What could be clearer from these Biblical quotations than that God did indeed intend to convey some sort of message in his arrangement of the stars in the sky?

Unfortunately, the message has become badly obscured over the centuries that now separate us from the Biblical Patriarchs. Indeed, it is now so obscured that without Mr Capt's help, neither of the present authors would have spotted it at all! You see, some

constellations known to us today have been made up in modern times – the Sextant, the Giraffe and the Painter's Easel are examples of these – and obviously such constellations have nothing to do with the primitive constellations and their message from God. They merely confuse the issue.

Not only that, but the forms of many of the original constellations were tampered with by the Greeks, who would insist on reading into the stars their own mythological figures. Since our own view of the zodiac is essentially descended from the Greek view, we have to ignore many familiar interpretations in our quest to recover the original Divine Message.

To get at the true message of the stars, we have to go back to a time before the Greeks or Romans. In fact, we have to go back about 5000 years to the time of the Divinely Inspired Patriarchs themselves. Fortunately this is still possible because the forms of the original constellations have been partly preserved for us by two sources.

The first source is the so-called Dendereh Zodiac. This was a circular representation of the zodiac, about eight feet across, which was carved into the roof of a temple at Dendereh in Egypt. Though it is thought to date from the Ptolemaic Era (circa 330 BC), its representation of the zodiac is thought to be considerably more ancient.

The second source is that of the surviving Arabic names for the stars and constellations. A ninth-century Arabic manuscript has preserved these names for us as they were in the earliest times. This manuscript, and a similar but later one, were studied by a Miss Frances Rolleston of Keswick in the nineteenth century. Miss Rolleston's translation of these inspired a clergyman with the resounding name of Ethelbert W. Bullinger to write a book called *The Witness of the Stars* in 1893. It was the Reverend Bullinger's book, a beautiful volume now long out of print and rather scarce, which inspired Mr Capt to make his contribution to the Divine Constellation game.

Working, then, from the Dendereh Zodiac and Arabic sources, Mr Capt does a tour of the signs of the zodiac and their associated constellations, merrily linking the stars with various biblical events and prophecies, and thus decoding God's message. Some of this linking is rather obscure, unfortunately, and just occasionally we

feel it might even be a little bit forced, but to Mr Capt it is all as clear as day.

Five thousand years ago, he claims, the zodiac began with Virgo and ended with Leo. Then, as now, Virgo was a Virgin, pictured with a branch in one hand and some ears of corn in the other.

The Virgin is, of course, the Virgin Mary, prophesied in Isaiah 7.14, and fulfilled in the events of the New Testament, but what of the branch and the corn?

If you turn to Zechariah 3.8, you will read: "For behold, I will bring forth my servant *the Branch*." Now turn to John 12.24, and you will see how Christ referred to himself as "*the corn* of the wheat."

Again, take the nearby constellation of Coma, one of Virgo's three associates. Today, via the Greek interpretation of the stars, Coma represents Berenice's Hair, a sort of celestial wig. But in actual fact, Mr Capt claims, this constellation reinforces the message of Virgo insofar as it represents Christ as being born of the Virgin – Coma's original name was Comah, meaning "the desired or longed for", as in Haggai 2.7: "...and the desire of all nations shall come." That is, of course, Christ shall come. The Egyptian name for this constellation means "the desired son" and Mr Capt claims that it was in the constellation of Comah that the Star of Bethlehem appeared. (Elsewhere he claims that the name of the star Sirius is from the Egyptian Naz-Seir, meaning "the sent prince", and that it is no accident that Christ spent his early years in Naz-Seir-eth or Nazareth!)

The second of Virgo's associated constellations is Boötes, and if you labour under the delusion that Boötes is a ploughman, then you had better forget it. That is another of those Greek misinterpretations – his so-called plough faces the wrong way for a start, Mr Capt explains. In fact, Boötes is a shepherd, another Christ image as in Isaiah's prophecy of Christ as "he who shall feed his flock like a shepherd."

The third of Virgo's associates is Centaurus, which at first sight looks distinctly unlikely as a Christian symbol, but by a few devious biblical cross-references, Mr Capt manages to get at its inner message. It is that Christ was destined to achieve manhood and that "as a man having two natures (Divine and Human) he should suffer and die."

Moving around the zodiac, now, Libra symbolises Man weighed in the balance and found wanting, and its neighbouring constellation of Crux, the Cross, the price of Man's redemption, the crucifixion of the Saviour.

Further around the sky we find Corona Borealis, the Crown. Isaiah 28.5 states that: "In that day shall the Lord of Hosts be for a crown of glory", and there is also a link with Sagittarius (the Archer) here, for in Revelation 6.2 we read: "And I saw, and behold a white horse; and he that sat on him had a bow, and a crown was given unto him, and he went forth conquering, and to conquer." And of course one immediately recalls, in the same vein, Psalm 64.7: "But God shall shoot at them with an arrow"

We needn't go on. By now you are either groaning under the weight of biblical verses and obscure symbolism, or you are a total convert of Mr Capt's and the Reverend Bullinger's remarkable thesis. If you want to know why Aries represents the Lamb of God; why Gemini represents the ultimate union of Christ and Israel; or why Leo is the Lion of the Tribe of Judah, well, we suggest you read Mr Capt's book *The Glory of the Stars* (or the Reverend Bullinger's book, if you can get hold of a copy!)

It will probably come as no surprise to our readers to learn that in addition to having decoded the Christian symbolism of the zodiac, Mr Capt is also a firm believer in the Christian symbolism of the Great Pyramid. Jeremiah 32.18–29, which states that God "has set signs and wonders in the land of Egypt", is a clear reference to the Great Pyramid, Mr Capt claims. In his little book *The Great Pyramid Decoded*, he writes:

God's Stone Witness, the Great Pyramid, designed by the Divine Architect in the dim past, today stands decoded. Within its structure lie the architectural drawings of God's great plan for our planet. Now, at the time appointed, it witnesses and proclaims the now imminent Divine Judgements and the glory to follow.

Mr Capt has also written a couple of other curious little books, one of which is called *Jacob's Pillar* (1977). It concerns the stone that Jacob used as a pillow, then set up as a pillar, in Genesis 28.10–22. This stone, Mr Capt claims, was later taken to Egypt by Joseph, and thence out of Egypt again by Moses at the time of the Exodus.

In fact, during the Exodus, it was this very stone that Charlton Heston – sorry, Moses – smote in order to get water for the thirsty Israelites (see Exodus 17.6 for details.)

In the fifth century BC, Jacob's Pillar was brought by the prophet Jeremiah, via Greece and Spain, to the Hill of Tara in Ireland, and thence, in 498 AD, taken by someone with the unlikely name of Fergus Mor McEre to Scotland. The stone, which was used as the coronation stone of both Irish and Scottish kings, was taken to Iona by St Columba in 575 AD, and thence to Scone, near Perth, for the coronation of Kenneth MacAlpin in 843 AD.

The reader has perhaps by now got a glimmer of what is coming, for in 1296 AD Edward I removed the stone from Scone and transported it to Westminster Abbey, where it has stayed ever since (except when stolen by Scottish Nationalists!) Our present Queen was thus crowned over the same stone that Jacob set up so long ago in the Book of Genesis!

Perhaps, like us, you find this difficult to believe. Even more so if we tell you that the Royal Family are descended from King Solomon himself, or that the Scots are one of the Lost Ten Tribes of Israel (why else would Jeremiah bring Jacob's Pillar, not to mention the Ark of the Covenant, to Ireland?)

But let us return to zodiacs, though this time to zodiacs on the ground rather than in the sky.

Should you happen to be flying in an aeroplane over the area of Somerset lying between Somerton and Glastonbury, then make a point of looking down at the landscape below you.

According to Mrs Katharine Maltwood, writing in her book *Glastonbury's Temple of the Stars* (1929), there is a magnificent spectacle to be seen – a circle of giant effigies carved into the landscape by our ancient forebears nearly five thousand years ago.

The circle of effigies, called the Glastonbury Zodiac, is about ten miles across. As its name suggests, the effigies are supposed to represent the zodiacal constellations, their outlines being marked by ancient earthworks, land boundaries, woodland areas, stretches of ancient track and artificial water courses.

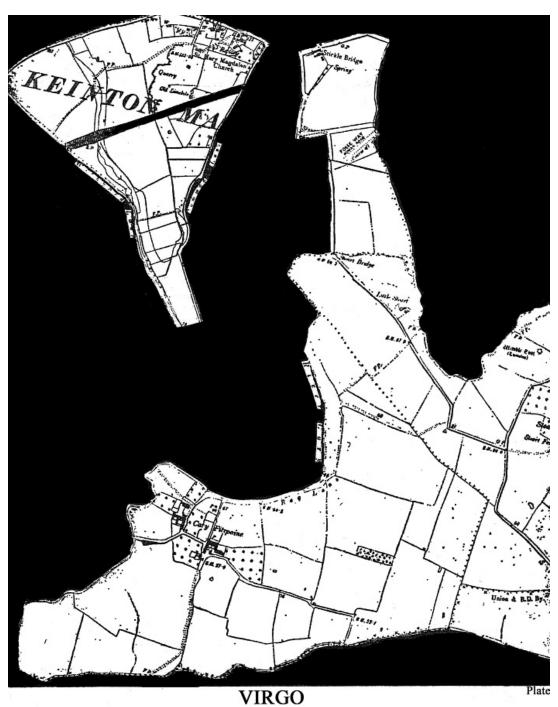
We say the effigies are "supposed" to be zodiacal figures because there is considerable debate as to whether they were ever actually carved by anyone at all. Orthodox archaeologists deny the zodiac's existence altogether, and say that the whole thing is merely a figment of Mrs Maltwood's overactive imagination. They say that the Glastonbury Zodiac is like the faces and animals that children delight in seeing in the clouds. It has no real existence at all.

The trouble is that the Glastonbury Zodiac is a rather hazy affair today. Parts of it have been worn away or destroyed, and generations of farmers and builders have overlaid the 'effigies' with field boundaries, land alterations, building developments and so forth. These fog the picture quite considerably, but nevertheless, beneath this mish-mash of modern landscape features, Mrs Maltwood was convinced that the zodiac was still plainly discernible on Ordnance Survey maps and aerial photographs.

Before giving examples of the effigies, we should point out that this zodiac is not quite the same as the familiar one in the sky. Cancer as a Crab is nowhere to be seen, the constellation having been swallowed up by the neck of Leo the Lion. Similarly, Libra is absent, having been incorporated into Scorpio. Sagittarius and Hercules are fused together as the Centaur; Aquarius is a Phoenix; and a Dove has joined the proceedings, possibly in place of part of Libra.

However, this is not actually an argument against Mrs Maltwood. Interpretations of the zodiacal constellations in terms of man and beast vary quite markedly from culture to culture, and there is nothing particularly suspect in Mrs Maltwood's variations. What *is* suspect – at least to many people – is the unconvincing nature of most of the effigies. But we'll come back to that presently.

We show two examples of figure detail (Virgo and Leo) and also the panoramic view of the Glastonbury Zodiac as a whole, in Figs.9.1, 9.2 and 9.3.



The Cary River outlines her bonnet, face, sleeve, and breast which is marked by Wimble Toot, meaning Augur's teat.

The 'Kern Baby' is inset at the corresponding angle. The Hyperborean priestesses "In the celebrating of the mysteries, held handfuls of corn".

Fig. 9.1



Chabrick Mill Stream outlines the nose and mane, "Ancient Road" the neck, and "Linches" the jaw.

Fig. 9.2

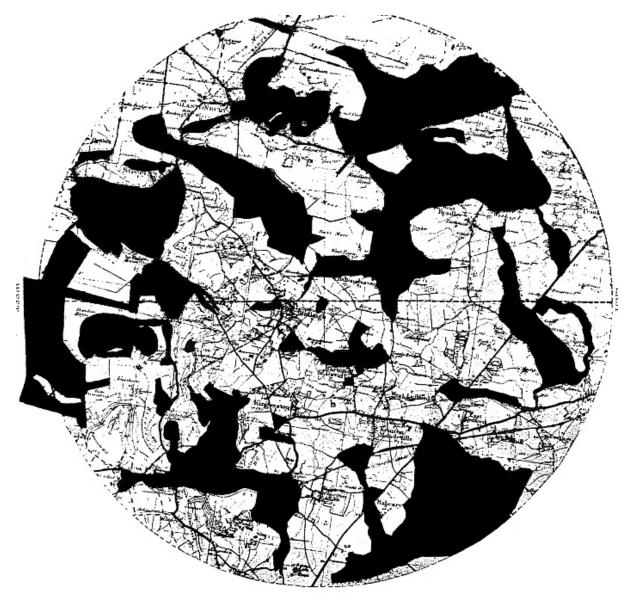


Fig. 9.3

Here is Mrs Maltwood describing the way the old Ilchester Road and the river Cary delineate parts of the effigies:

Many years of questing on that trail proved that a Romano-British road from Ilchester, which crosses the Cary at Somerton Erleigh on the Lion's chest, outlines the Giant Orion's raised forearm; the Bull's lower jaw; the Ram's bent knee, neck and head; and goes over the bridges connecting the Whale and the Fishes at Street. This road then outlines one of the Fishes; part of the tail and head of the Glastonbury Phoenix; the top of the head of the Goatfish; the two legs of Hercules that straddle the withers of the Archer's horse; and the tail of the Scorpion as far as

Stone on the Fosse Way.

And here is how the river Cary carves out part of Virgo:

Having drawn Virgo's sleeve, the river follows Rag Lane, up her throat and under her chin, round her now sunken gums, to Cary Fitzpaine, where prosperous looking farm buildings still fill her mouth with plenty; in Doomsday Book this place was called Cari.

Then, outlining the nose, it passes under a bridge to give her a high bonnet.

The river now crosses the Fosse Way to the hind leg of the Lion, to outline the under part of his body.

Personally speaking, we have looked at these effigies time and again, and try as we might, we fail to see much evidence of ancient landscape engineering in them. After all, if the ancients went to all the trouble of conceiving and laying out such a massive tableau, constructing huge earthworks and diverting rivers in the process, then would they have left the end result looking little better than a small child's drawing? Why would they make Virgo look like a dalek with sunken gums and a wilted top hat? Why would they leave Leo looking more like one of the Muppets than a conventionally fearsome lion? Sceptics argue that crude representations like these are consistent with the view that the whole zodiac is the outcome of a sort of Rorschach Test rather than a piece of ancient landscape engineering.

Nevertheless there are many people who sincerely believe that Mrs Maltwood's zodiac is a relic from our remote past. One such person is Mary Caine who is now (Mrs Maltwood having died in 1961) the leading authority on the Glastonbury Zodiac. In 1978 Mrs Caine published her book *The Glastonbury Zodiac: Key to the Mysteries of Britain*, which is a very interesting read.

Mrs Caine follows Mrs Maltwood's scheme in the main, accepting most of her figures in full. As regards the problem cases mentioned earlier, Aquarius is replaced by a Phoenix. Libra and Cancer, which at first seem to be missing, are actually to be found on closer inspection, Libra as a dove and Cancer as a boat. As Mrs Caine points out, a dove is actually a better symbol than a set of scales when it comes to symbolising qualities of peace, harmony and justice. As for the boat of Cancer, well, we can do no better than

quote Mrs Caine:

This boat expresses the character of Cancer better than the Crab has ever done. It cradles a baby; Cancer is the Zodiac's maternal sign. It is crescent shaped, like the Crab; Cancer is ruled by the Moon. Cancer is a water-sign; our vessel is so low-lying that despite the drainage-rhines that draw its planks it is still often flooded. Like the Whale in Pisces' water-sign, it is all drawn by canals. The stars of Lepus the hare fall upon it; the hare was sacred to the moon. To the Egyptians, Lepus was Osiris's boat, his funeral barge, like Arthur's. How then can the Crab vie in symbolism with this poetic ship, at once Cauldron of Annwn, moon, womb and tomb. Let it scuttle away and bury its head in the sand for shame!

As with Mrs Maltwood's zodiac, Mrs Caine's has Cetus the Whale included alongside the two fish of the traditional Pisces. However, she wasn't happy with Mrs Maltwood's Scorpio, and replaced it with another one, the other way up. She also added a modification to Mrs Maltwood's Capricorn, namely a well drawn back leg.

All this is relatively minor stuff, however, compared with Mrs Caine's major discoveries about Gemini. To begin with, Mrs Maltwood believed that in the Glastonbury Zodiac Orion had replaced one of the conventional twins, and that the other twin had become a griffon for some reason. However, Mrs Caine disagrees with this. She sees Orion as one of the twins alright, but she denies that the other figure is a griffon. She is quite adamant that it is the missing twin after all, but seated in a yoga posture and at right angles to his brother. (Presumably this curious orientation and posture explains why Mrs Maltwood mistook him for a griffon!) But more than this, Mrs Caine has discovered another effigy actually inside the Orion twin! This is the Messianic Figure or Bethlehem Babe, "the goal of Evolution towards whom all the other effigies turn in hope", the position of his inspirational pineal gland being clearly marked by a beacon tumulus. The reader should not be surprised to find biblical symbolism in the Glastonbury Zodiac, for the message of the Bible is but one manifestation of a spiritual message of a much more ancient date, so that to some extent the Bible and the Zodiac echo each other. Thus the drama of the Garden of Eden is symbolised in the Zodiac as well as in the Bible, for Sagittarius is Adam, Virgo is Eve, Gemini is Cain and Abel, and Draco is the Serpent. Note, however, that the symbols of the Zodiac are multi-purpose: Sagittarius is also King Arthur, for example.

We should also mention that Christ's association with the Glastonbury Zodiac answers in the affirmative that famous question posed by William Blake: "And did those feet in ancient time walk upon England's mountains green?" Christ *did* visit Britain, a view Mrs Caine shares with Reverend C.C. Dobson, who championed the theory in the 1930s. Apparently he – Christ, that is, not Rev. Dobson – came here with his uncle Joseph of Arimathea, though we won't go into that here.

Mrs Caine believes that Glastonbury was a key centre of learning in the ancient world, possibly even part of the fabled Atlantis. She believes that knowledge of the Zodiac and its message spread from here to other parts of the ancient world. Thus Diodorus Siculus mentions a distant island off the coast of Gaul on which is "a remarkable temple of a round form." Mrs Caine believes this to be the Glastonbury Zodiac, though we must point out that other people think it may refer to Stonehenge. Again, Mrs Caine believes that she has found reference to the Zodiac in Homer's *Odyssey*. Unfortunately the references are not terribly clear, and are as debatable as the effigies themselves. Nevertheless, it is interesting to learn that Ulysses visited Wales on his voyages, but didn't like it much!

Mrs Caine also has an interesting chronological theory about the Glastonbury Zodiac. She starts at the beginning of the sign of Cancer at 780 AD, when the Danes began to invade England in their longboats, and works round the Zodiac, taking one degree to represent one year. Each sign (30°) thus represents 30 years. Following the Zodiac round in this way, one finds a symbolic representation of English history. For example, the Battle of Hastings comes under Aries, the ruling constellation of England, and "nothing more symbolic of Aries, ruled by Mars, can be imagined than William the Conqueror." Going forward 360 degrees or years from 780 AD takes us once round the Zodiac to 1140 AD and back to Cancer again, with the crowning of Queen Matilda in 1141. Cancer's female influence, apparently, helps in the founding of dynasties. Mrs Caine denies that she is selecting facts of history

which fit her theory and ignoring others that don't. The scheme suggested itself quite naturally to her, without any jiggery pokery:

Alfred and the cakes suits the Libran equality of the sexes. Canute and the waves fits Pisces nicely. Projecting further back it was fascinating to find that the "legendary" visits of Jesus and Joseph to Britain came in Gemini's Messiah-sign and Cancer's Ship respectively.

Before we leave Mrs Caine, we must mention one of her remarkable 'coincidences', a number of which she mentions in the course of her book. Our favourite concerns a place called Keynsham and a dead snake, but as that would take too long to explain, we shall have to settle for telling our readers a shorter one about the effigy representing Taurus the Bull. Apparently the eye of this effigy is today marked by a rifle range. Think about it.

But the Glastonbury Zodiac is not alone. Other investigators believe that there are similar landscaped zodiacs in other parts of Britain besides Glastonbury.

One such zodiac investigator is a micro-biologist from Cambridge called Nigel Pennick. In 1975 he founded the Institute of Geomantic Research, its aim being the study of legends, folklore, megalithic monuments, ancient metrology and, of course, terrestrial zodiacs. Our ancient forebears, Mr Pennick believes, were an altogether more sophisticated lot than orthodox archaeologists give them credit for. In 1976, Mr Pennick co-authored a book with Robert Lord called *Terrestrial Zodiacs in Britain: Nuthampstead Zodiac and Pendle Zodiac*. As the title suggests, the book deals with two zodiacs, one discovered by Mr Pennick near the village of Nuthampstead, about fifteen miles south of Cambridge, and the other by Mr Lord, in the vicinity of Pendle Hill in Lancashire.

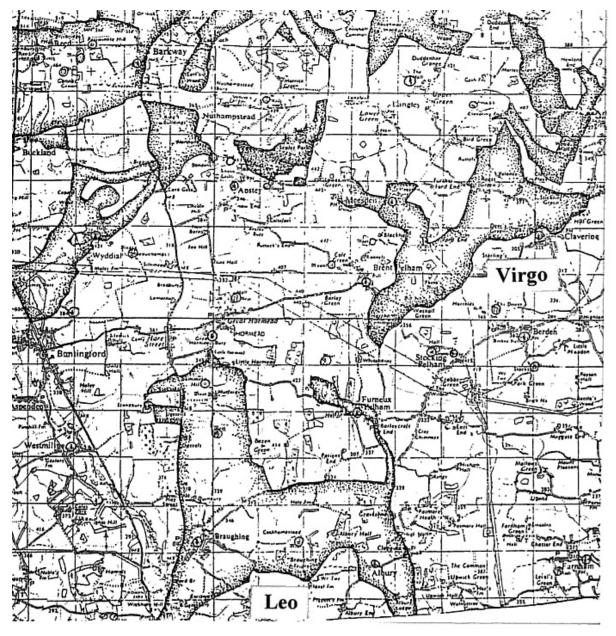


Fig. 9.4

In Fig. 9.4 we reproduce Leo and Virgo from the Nuthampstead Zodiac, and, as you can see, the figures have the same suspicious crudity about them as Mrs Maltwood's figures.

As with the Glastonbury Zodiac, there are differences between the Nuthampstead Zodiac and its stellar counterpart. Cancer is again absent; Capricorn and Sagittarius overlap slightly; Libra is a Dove; and Gemini has become Wandil the Giant.

We asked Mr Pennick to comment on the standard argument of sceptics that these 'effigies' are neither more nor less than glorified faces-in-the-clouds. He very kindly replied as follows:

It has been alleged that proponents of Terrestrial

Zodiacs are merely responding to a Rorschach Test in which the random patterns of field and river are seen as zodiacal figures. However, it must be remembered that all field patterns have been deliberately created by human agency and as such were subject to various cultural influences. Their dimensions, shapes and positioning were determined by various rules which in some countries survive to this day. The overall planning of whole areas of earthworks and astronomical alignments show us that in antiquity a grand view of the whole landscape was taken, and the terrain modified accordingly. An ancient society ruled by (to us) alien values carried out works and acts inexplicable to the modern post-industrial mind. The concept of giant figures concealed in the earth has existed in many cultures from America to China. Practitioners of feng shui (Chinese Geomancy) recognised pre-existing natural patterns and modified them to enhance their resemblance to certain forms. Large plateaux such as that at La Venta in Mexico were altered to bring their forms closer to idealised animal shapes. In Terrestrial Zodiacs we see this enhancement of natural forms rather than the imposition of patently artificial shapes upon the landscape, but the occurrence of consistent modifications in different places demonstrates that an overall concept was behind the artificial shapes which we can see today.

In other words, the figures are crude in outline because they are not totally artificial constructs. They are based on natural forms which were woven into effigies by our ancestors.

Mr Pennick's other contention – that our scepticism is based on modern attitudes to landscaping, rather than on ancient ones – is well worth serious consideration. Our ways of thinking are not the same as those of our ancestors, and though it may seem absurd to us that anyone in his right mind should engineer vast circles of crude effigies, this is no guide at all to the way our ancestors may have looked at things. We would suggest that our readers delve into Mr Pennick's later book *The Ancient Science of Geomancy* (1979) if they want to know more about his views on all this. For ourselves,

we find his arguments interesting, though we remain stubbornly sceptical.

In the late 1970s and early 1980s zodiac hunting seems to have become something of a craze, to the point where there were at least a dozen of them in various parts of the British Isles. For example, the previously mentioned Institute of Geomantic Research published accounts of the Ongar Zodiac in Essex and the Holderness Zodiac in East Yorkshire. There was even a *Terrestrial Zodiacs Newsletter* (TZN), edited and published by Paul Screeton, of Hartlepool, in which devotees of the art could trade their views.

In TZN 6, Mr Sam Wildman put forward the interesting view that the Glastonbury Zodiac was not constructed in 2700 BC, as Mrs Maltwood claimed, but in medieval times, by the monks of Glastonbury Abbey!

In other issues, TZN promoted the Stonegate Zodiac, the Kingston Zodiac, the Cuffley Zodiac, the Bury St Edmunds Zodiac, the Bolingbroke Zodiac and the Welsh Temple of the Zodiac.

Of course, sceptics will argue that all these zodiacs popping up hither and thither show nothing at all beyond the fact that it is easy to read human and animal forms into the variegated structure of an Ordnance Survey map.

But the true believers will continue to believe that they indicate the widespread existence of large scale landscape engineering. Distant voices from an incredible by-gone age.

The believers may be wrong, but it's a beautiful idea all the same.

As a postscript to the above, we should mention a rather interesting experiment that was carried out in June 1980 by six members of the Northern Earth Mysteries Group. Six people were each issued with a copy of the same six-inch Ordnance Survey Map. The area covered by this map was thought to contain the Taurus figure of the so-called Letwell Zodiac, whose discoverer, Phil Reeder, was one of the organisers of the experiment. The idea was simplicity itself: the six participants were invited to search, independently, for potential zodiac figures on their respective map sheets. John Barnatt, the other organiser of the experiment, told us what happened.

When the participants were allowed to search for any figure they could find, they turned up large numbers of results. These included

a lion, a hare, a bird, a donkey (which might actually have been a coypu!), a bubbly ghost and an unspecified "fabulous creature". All this, remember, in the same five kilometre square of the landscape!

When the participants were told they had to look for dragons, they met with little success. But when the theme was switched to bulls, three or four fairly convincing specimens turned up, none of which, incidentally, matched Mr Reeder's Taurus!

We would agree with Mr Barnatt that these results do seem to suggest that zodiac figures are ten-a-penny chance configurations of the landscape. But the debate is far from over, we are pleased to announce. Champions of the terrestrial zodiac point out that finding the odd figure here and there may well be easy enough, but that the odd figure is a long way from a complete and coherent set of zodiac figures. For that reason, they deny that Messrs Barnatt and Reeder's experiment proves very much at all....

But let's get back to the zodiac up in the sky.

A friend of ours once had a rather whimsical idea. He reasoned that since everything else had either already gone metric, or was about to do so, then it was about time that we adopted a zodiac of ten signs rather than twelve.

Seriously, though, why are there twelve signs in the zodiac rather than any other number? The answer that naturally springs to mind is that it is because there are twelve months in the year.

But then why are there twelve months?

The answer to that depends on the way we measure time. The year, as everybody knows, is defined by the time it takes for the Earth to go once round the Sun – the familiar 365½ days. In order to subdivide the solar year, ancient man had recourse to the Moon, which naturally goes through a complete cycle of phases in about 29½ days. Each of these Moon cycles became known as a moon-th or month, and since the Moon went through about twelve of these cycles in a year, it came to pass that the year had twelve months and, by inference, the zodiac twelve signs.

Of course, this is a much simplified account of our calendar. Twelve cycles of 29½ days don't quite make up a full year, falling about 11 days short of the requisite number 365. Hence it came about that, thanks largely to the Caesars, it was decreed that some months should have 30 days and others 31, so as to make things fit

more exactly. February works to its own sweet rule on account of Augustus Caesar not wanting his month (August) to have fewer days than Julius Caesar's (July). He should really only have had 30 days, but he pinched the equaliser from poor old February.

Having said all this, we come to James Vogh's book *The Thirteenth Zodiac*, a controversial one for students of astrology and calendar history alike, which was published in 1979.

Mr Vogh claims that there haven't always been twelve signs in the zodiac at all, and in his remarkable book he puts forward the novel idea that there was once a thirteenth sign, that of Arachne (the Spider), but that it became 'lost' in the mists of history, thus giving rise to the present day zodiac of 12 signs.

In a way the idea of a thirteenth sign is not as outrageous as it at first appears. The twelve signs known to us are not all the same width, and in some instances actually overlap, as in the case of Pisces and Aries. Slipping in an extra sign – or, to be fair to Mr Vogh, 'losing one' – wouldn't be at all that difficult in the general zodiacal confusion. Except to modern astronomers, who have drawn arbitrary and immutable boundaries between the constellations, the signs of the zodiac are by no means well defined.

So why thirteen signs?

Mr Vogh argues that the ancients used a lunar cycle of 28 days, the time taken for the Moon to return to the same position in the sky, rather than to the same 'phase' of its cycle. There are thirteen such cycles in a solar year, each of 28 days, making a total of $13 \times 28 = 364$ days. Thus one extra day would have to be added in somewhere, and, in fact, Mr Vogh claims that the expression "a year and a day" owes its origin to this type of lunar calendar.

To back up this part of his thesis, Mr Vogh has recourse to a Druidic calendar, each month of which is named after a tree. There are thirteen such tree-months, he tells us, the lost sign corresponding to that of the Hawthorn.

Next, Mr Vogh cites the so-called Ouachita Calendar. This is a set of none-too-clear carvings incised into a rock face near Hot Springs, Arkansas. There are thirteen of these carvings, including a bird, a fish, a flower, a spider, a deer and a bison, but one is left with the uncomfortable feeling that they might not actually be part of a calendar at all. Nevertheless Mr Vogh counts it as 'possible' evidence.

Even more distressing is Mr Vogh's 'evidence' for the use of a thirteen-month calendar in Ancient Egypt. He himself admits that he is on a sticky wicket here on account of the fact that the six known Egyptian zodiacal carvings all have twelve signs. But, he argues, all six were carved late in Egyptian history, and thus *after* the thirteenth sign had already been 'lost'. Their twelve signs are therefore not surprising.

So where *is* his evidence for the thirteenth sign? It is admittedly indirect, but it comes from a rather eminent source – Robert Graves.

Graves points out that in Egyptian mythology, Osiris reigned for 28 years before he was torn into 13 pieces, not including the phallus, by his wicked brother, Set. The 13 pieces (= months) each of 28 years (= days) make 364 days, with the phallus representing the odd day required to complete the year. That, at any rate is how Graves sees it.

Very well, then, suppose we accept that there was once a year of thirteen months and that, just possibly, it had associated with it a thirteenth zodiac sign. Where is it today, why was it a spider, particularly, and how on earth did it become 'lost'?

Mr Vogh argues that the lost sign of Arachne lay between Taurus and Gemini, and that today we know its component stars as part of the constellation of Auriga, the Charioteer.

As evidence for this claim, Mr Vogh points out that many British stone circles are directed to the rising point of Capella, the brightest star in Auriga. Why should so many circles be oriented on Capella, a star which, though prominent enough, is by no means the brightest in the sky? Why the fuss over Capella when Vega, a rather brighter star, was virtually ignored by the circle builders? Why, unless Capella held some significance now lost? Mr Vogh seems content to ignore the possibility that Vega just wasn't at the right place at the right time for the circle builders' purposes.

"Why a spider?" and "How did it get lost?" are closely linked questions, both involving rather devious arguments based on involved symbolism.

Arachne was never actually 'lost' in the ordinary sense of the word. She was actively suppressed. Mr Vogh claims that Arachne was the sign associated with the psychic faculties in Man, and he quotes the work of A.R. Ramsden, a man who claims to have shown

that psychics tend to be born with the Sun in that portion of the zodiac hailed by Mr Vogh as that of Arachne.

The suppression of psychic or sacred knowledge is nothing new, and the history of the occult is riddled with oaths of secrecy, hidden truths and terrible persecutions. The active suppression of 'false' gods by over-zealous Christian missionaries is one example that springs to mind.

If the thirteenth sign were the province of some sector of society at odds with the religious or political authority of the time, then it is conceivable that it might 'disappear' in the manner of one of Al Capone's gangster enemies.

Such a campaign of active suppression would have its side effects in the beliefs of the people, and Mr Vogh wonders if this is why 13 is generally reckoned to be an unlucky number, and why so many people have a positive loathing for spiders.

For reasons of space we do not here recount the long and tenuous chains of reasoning linking the Druid Moon-goddess, Arianrhod, with the Cretan goddesses Ariadne (the spinner) and Arachne (the spider). The central theme is that of the wheel. On the one hand, a wheel, with its spokes, is like a spider's web. On the other hand, the wheel is symbolic of the lunar cycle, and hence the Moon-goddess. Perhaps Auriga, as the 'Charioteer', preserves the memory of at least some of this symbolism. Readers must decide for themselves.

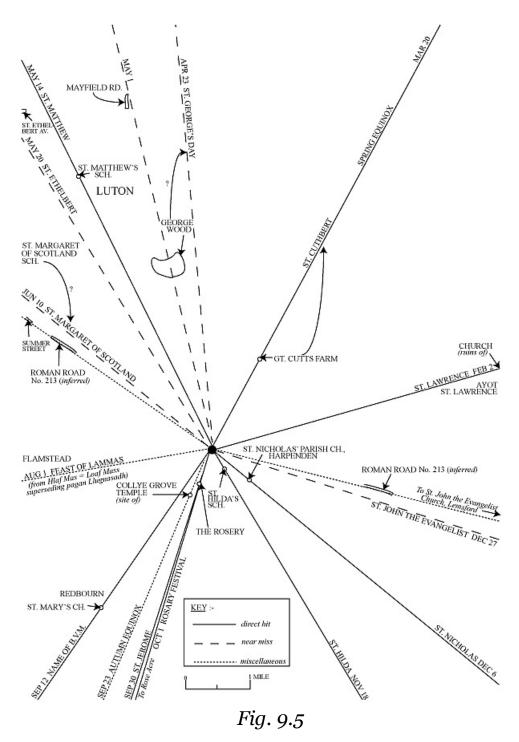
Finally, one might suppose that if Mr Vogh is right about the thirteenth sign, then this would make a nonsense of traditional astrology. Not so, he argues. The thirteenth sign does not contradict the other twelve, rather does it complement them and clarify their message. It adds a new dimension to the horoscope, as it were — that of the psychic element.

Now, all of the foregoing sounds just as authentic as many of the other works we have cited up to now, and indeed, it is still taken seriously in some circles. But the book was actually a hoax, and James Vogh was the nom-de-plume of a science fiction writer and opponent of 'fringe' science called John Sladek. The thirteenth sign of Arachne was, in fact, a web of intrigue!

Our final candidate for this chapter is Peter M. Hughes, an aircraft design engineer, who reckoned to have discovered something rather extraordinary in the vicinity of his home town, Harpenden. He called it the Harpenden Calendar.

Basically Mr Hughes claimed to have found a sort of giant clockface laid out in the Hertfordshire landscape. The idea is that when standing at the centre of this clock-face, the days of the year are indicated by surrounding antiquities of various types. If an observer at the centre were to turn round once, his gaze would pass through all the days of the year in their correct, panoramic, order of succession.

This clock face, however, is not of a conventional design because the antiquities marking the various days are not all situated at the same distance from the centre. The clock-face, then, is not a circle or any other regular shape, but a highly irregular one. In fact, it is better described as a set of spokes radiating from the centre, the end of each spoke being marked by an antique structure of some sort. Reference to Fig. 9.5 will make all this clear.



Unfortunately, in this area, as in every other part of the British Isles, vast numbers of antiquities have disappeared over the years, many of them having been destroyed deliberately for one reason or another. Some dates of the calendar are therefore not marked today, if indeed they ever were. The centre of the clock, too, now lies in a heavily built up area, so that it is quite impossible to say whether or not any ancient structure ever marked its position. Mr Hughes feels that it was indeed once marked, and he points to the nearby Round Wood as possibly suggestive of the yearly round of the surrounding

calendar.

In addition to parts of the calendar having been destroyed, the issue is further confused by antiquities of a more recent date than the calendar itself. These have been built over the top of the calendar and without regard for it. Consequently many antiquities in this area do not fit into the calendar because they were never meant to.

Finally, even where traces of the calendar have not altogether disappeared, the evidence which the remnants supply of their former purpose is frequently distorted and indirect. Original datemarkers have been built over and replaced by more modern structures which reveal the underlying purpose only via their names or other indirect means.

The reader will appreciate, then, that this calendar does not present itself as an unambiguous and self-evident piece of ancient engineering. In fact, most archaeologists would say that the whole thing has been manufactured by Mr Hughes's fertile imagination working overtime on the variegated elements of the Hertfordshire landscape. Mr Hughes, however, believes that by painstaking research he has sorted out what is part of the calendar and what isn't, and that he has unearthed by his labours convincing evidence for the former existence of the Harpenden Calendar.

Before taking a look at what is left of this giant calendar, we should perhaps explain the role of churches in its present-day state.

When Christian missionaries first came to these islands, they were instructed by Pope Gregory not to destroy the sacred sites of the indigenous pagans, but to incorporate them into Christian use. Hence formerly sacred springs became holy wells, ancient standing stones were converted to crosses, and pagan sanctuaries were incorporated into Christian churches. Most churches, of course, are dedicated to some saint or other (e.g. St Mark's Church), and each saint has a feast day allocated to him – or her – in the yearly round.

Mr Hughes has found that the feast dates of certain churches coincide with the dates represented by the calendar radial through them (that is, the line joining the centre of the calendar to the church in question.) Hence, churches figure in the Harpenden Calendar as possible date indicators, memories of earlier pagan structures. Of course, the sceptic will point out that many more churches *don't* fit than *do*, but then we've already dealt with that

problem, so we will move on to take a look at what Mr Hughes actually did find. We start at the northern end of the calendar, representing the month of April:

- 1. The radial corresponding to St George's Day (23rd April) passes close to George's Wood.
- 2. The radial representing 1st May passes close to Mayfield Road, Luton.
- 3. The radial for St Matthew's Day (14th May) passes directly through St Matthew's Junior School, Luton.
- 4. The radial for St Ethelbert's Day (20th May) passes close to one end of St Ethelbert's Avenue, Luton.
- 5. The radial for St Margaret of Scotland's Day (10th June) passes close to St Margaret of Scotland School, Luton.
- 6. The radial for 12th June passes along Summer Street, Luton, and a nearby pub called the Rising Sun continues the summer theme.
- 7. The radial for the Feast of Lammas (1st August) passes close to the village of Flamstead or F-Lammas-Stead.
- 8. The radial for a Feast of the Virgin Mary (12th September) passes through St Mary's Church in the village of Redbourn.
- 9. The radial for the Autumnal Equinox (23rd September) passes through a Roman Temple, itself built over an earlier shrine, Mr Hughes claims.
- 10. The radial for St Jerome's Day (30th September) passes through Old Jerome's Farm.
- 11. The radial for 1st October, the Rosary Festival, passes through an old house, now demolished, called the Rosery, and also close to a place called Rose Acre, further out from the centre of the calendar.
- 12. The radial for the Feast of St Hilda (18th November) passes through St Hilda's School, Harpenden.
- 13. The radial for St Andrew's Day (30th November) passes close to St Andrews Avenue, Harpenden.
- 14. The radial for the Feast of St Nicholas (6th December) passes through St Nicholas's Church in Harpenden.
- 15. The radial for St John's Day (27th December) passes close to St

- John's Church, Lemsford.
- 16. The radial marking the very beginning of the year is followed for about a mile by an ancient Roman Road.
- 17. The radial for the feast of St Lawrence (2nd February) passes close to the church at Ayot St Lawrence.
- 18. The radial for the Feast of St Cuthbert (20th March) passes directly through Great Cutts Farm, whose name could be a distortion of that of the saint.

To be added to the above is some zodiacal name evidence. Aries seems to be indicated by Ramridge and Ramridge End, and Taurus by Bulls Wood. Then again, in St Leonard's Church we have a tentative reference to Leo, and in St Mary's Church, Redbourn, we have a potential Virgo = Blessed Virgin reference, this being reinforced by the name of the local river, Ver.

Mr Hughes took these to indicate that the calendar might also have a terrestrial zodiac associated with it, and he did in fact find several landscape figures after the manner of Mrs Maltwood and her followers. We give a sketch of Mr Hughes's Taurus in Fig. 9.6.

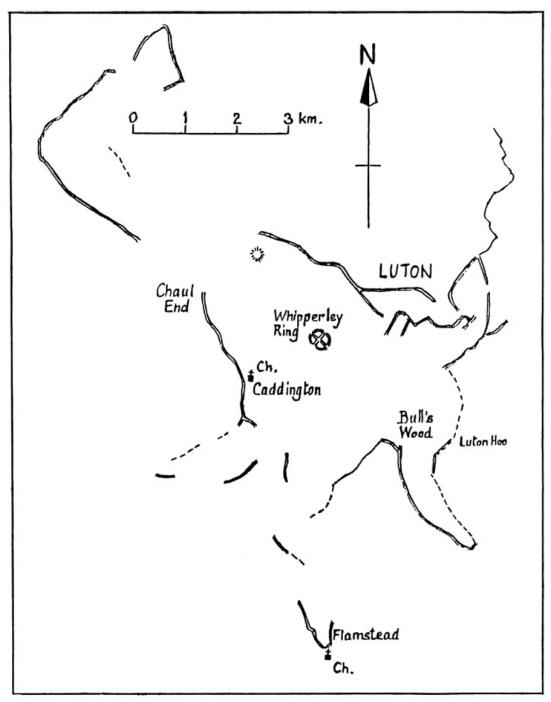


Fig. 9.6

Some of Mr Hughes's zodiacal links seem decidedly circumstantial. For example, in his Aquarius figure he found that the Tin Pot Pub indicated the position of the Water Pot, and that Cleggy Bottom indicated the obvious part of the Aquarian anatomy. Again, a shop called Centaurs, which sold riding gear, seemed to be representative of Sagittarius!

Mr Hughes readily admitted that there may have been a lot of wishful thinking in his calendar. It *is* a bit of a long shot that a

modern junior school or not-so-ancient street name has actually preserved, by some devious means, the memory of an ancient terrestrial calendar. It is even more of a long shot that a pub or a shop adopted its name, via some highly obscure clue, from a long lost landscape.

He admitted, too, that some of his calendar was not as accurate as he would have liked. Some of the supposed date markers were either put in the wrong places by the builders, or have been moved in the course of their history.

However, Mr Hughes could not be persuaded that the whole thing, from start to finish, was no more than a figment of his imagination. Somewhere in the middle of it all, he felt, there was something to it.

We once asked him to sum up just how he saw his calendar. He replied as follows:

Though it is difficult to prove its validity conclusively, on account of a good deal of background noise and inevitably a certain amount of obliteration over the centuries, it is equally difficult to disprove it, for precisely the same reason. So I think it is worth searching for additional evidence, and, in particular, worthwhile looking for parallels elsewhere. Whatever is found is more likely to help prove than disprove the concept.

Even if we regard Mr Hughes's discovery with a great deal of suspicion, no-one can deny the ingenuity that has gone into it.

Chapter 10. What the Stars Foretell

Of all pseudo-sciences, astrology is overwhelmingly the most popular. It is very ancient, and up to the time of Newton it was regarded as co-equal with astronomy – indeed, Newton himself believed in it. Even now there are people who regulate their lives by it, and many more who admit that they turn first to their horoscopes when opening their daily papers. And today, with a credit card and internet access, you can get your personal horoscope done at any time of the day or night, just with the click of a mouse.

Of course, there are two sorts of astrologers. Serious practitioners of the 'royal art' look askance at the newspaper seers who are concerned largely with dark ladies coming across the water; they award themselves 'degrees' such as D.F.Astrol.S. and F.Astrol.Soc., and altogether they must be classed as astrological snobs. They are, moreover, perfectly sincere – just as are the Flat Earthers, the Hollow Globers, and the Flying Saucerers. They are convinced that astrology works, and that destinies and characters really are controlled by the positions of the Sun, Moon and planets at the time of the subject's birth.

On the other hand, they are remarkably evasive when challenged as to just *why* the planets can affect our lives and careers. Generally they retreat into their shells, muttering darkly about 'vibrations'. So what exactly is it all about?

First, let us be clear on one point: the constellations of the Zodiac (or any other part of the sky) are purely arbitrary. We use patterns such as the Lion, the Crab and the Scorpion; if we had followed the Egyptian pattern, say, we would have had the Cat and the Hippopotamus instead. Moreover, the stars are at very different distances from us, so that what we call a constellation is nothing more than a chance line-of-sight effect. How anyone can claim that, for instance, Pisces, the Fishes, is a "watery sign" is rather difficult to see. The stars in Pisces make up long lines of dim objects which have no resemblance to the pattern of anything at all. And the planets are far closer than any star, apart from the Sun. To say that a planet is 'in' a constellation is about as sensible as holding up a finger, aligning it with a cloud, and then claiming that your finger is 'in' the cloud.

However, this sort of argument does not bother a D.F.Astrol.S. in the least. He may argue that the constellation merely represents a particular direction in space and that planetary influences from that direction govern our lives in particular ways. Or he may not argue at all, and simply say that his successful results prove his point, regardless of the objections of the sceptics. But then anyone who makes a sufficiently large number of predictions is bound to be right in some cases; as Judge Stephen commented, "it is impossible always to be wrong", though admittedly some modern politicians seem to prove the contrary. Coincidence-hunting is great fun, and astrologers are past-masters at it. But when it comes to important events, they are signally unsuccessful, and this was shown vividly by their predictions as to what was likely to happen in the late 1930s, when most people were convinced that the Germans were making ready for an onslaught upon the rest of the world.

Some time between June and August 1939, an astrologer called Leonardo Blake published a book entitled *Hitler's Last Year of Power*. It was an unfortunate choice of title with some even more unfortunate contents:

Is there going to be war?

The European War which the Mars in Hitler's horoscope tells us so much about will not break out.

Before localised and minor conflicts extend themselves to a world conflagration, something that is least expected will happen.

A change of temper will come about in Germany and there will be a new German revolution.

Mr Blake was quite sure that Hitler's downfall would come about in the summer of 1940, and that it would come about from within his own ranks. With Saturn squared to the Sun on 11th June of that year, it was even possible, though not certain, that Hitler would suffer a violent end on that day.

Mind you, if the Germans didn't kill him off, it was quite on the cards that either his throat or his heart would. The relative positions of Mars, Uranus and Saturn hinted at a strangulation by tuberculosis of the throat, and Saturn in Leo, aggravated by Mercury and Uranus doing their own thing, suggested that Hitler's dicky heart might give way at any unduly critical moment.

Mr Blake was very reassuring. From a progressive Mars in trine to the Moon, he was able to deduce that the French need not fear war, and by an unspecified, but equally reliable, piece of astrological jiggery pokery, he was able to assure his readers that Japan would not enter into hostilities.

The year 1939–40, Mr Blake concluded, was undoubtedly Hitler's last year of power.

In a supplement to the book, he went even further:

In the summer of 1940, the first rays of peace will shine over Europe after all the difficult times we have been having. In May 1940, the prenatal Sun in this war horoscope reaches the radical position of Venus. In June 1940, the progressive Moon is in trine to the radical Venus, in July in trine to the progressive Venus and to the Sun. At the beginning of August, the progressive Moon is in trine to the progressive Sun.

There is no doubt about it: PEACE.

Just as spectacular was a prediction by an astrologer called R.H. Naylor. In the *Sunday Express* for 22nd June 1941 Mr Naylor assured his readers that there was no chance of Germany and Russia falling out with each other. Unfortunately, the Germans had other ideas, and on 22nd June 1941, they invaded Russia.

In his book *History of Astrology and Prediction* (1972), Eric Russell wrote:

The biggest blow which has struck predictive astrology in modern times was the universal failure of all astrologers to predict the onset of the Second World War. Petulengro was later to claim that he had foreseen the fall of France but kept the news to himself so as not to dishearten his fellow countrymen and it may well be that the astrologers who did foresee the war kept quiet out of humanitarian terms. But lack of any evidence to the contrary forces the observer to the conclusions that the stargazers, to a man and a woman, somehow overlooked one of the most titanic events in human history. And the sceptical can be forgiven for wondering how the astrologers can spot the minutiae and yet miss an event of this nature.

Our account of astrology would not be complete without a mention of C. Everard Mitchell, who in 1936 privately published his own documentary proof of the validity of astrology, in the form of his autobiographical book *Foretold by the Stars*.

Mr Mitchell was born with Jupiter in the ninth house, a clear indication that he should have been a lawyer. Unfortunately his parents had no knowledge of astrology, and decided that he had better become an electrician instead. This didn't work out, so he went into advertising. This didn't work out either on account of the opposition of his progressed Moon to the Radical MC. We're not sure what that is exactly, but Mr Mitchell says that it "never fails to bring disaster in one's financial affairs." A spell as an inventor likewise failed when Mars formed a conjunction with the Sun in his seventh house. Next a political career was indicated when Mr Mitchell came under the aspect of his Ascendant trine Sun at birth, so he contested for a seat on the Halifax Town Council. Unfortunately the planets didn't get things quite right, and he lost the election by a two-to-one vote. Not that he blamed the planets for his lack of success, for as he was quick to point out, one must assist the influences of the planets with *some* degree of personal effort, and this he had failed to do. Had he assisted the planets, his friends assured him, he would have won the election easily.

If Mr Mitchell's workaday life was dogged by failure, his career in astrological prediction was not. For example in 1924–5 he drew up the horoscope of Sir William Bulmer and saw financial chaos on account of an unwise investment in artificial silk. Unfortunately Sir William took no notice, and in 1927 suffered the severe financial setback predicted. According to Mr Mitchell "his Ruler the Moon formed the opposition to his Radical MC degree by direction, whilst his MC also squared his Mercury at birth, which brought about a financial crash."

In 1928 there was a by-election at Halifax and the editor of the local newspaper asked Mr Mitchell to predict the outcome. A study of the horoscopes of the three candidates revealed that the Labour candidate had the best planetary influences, "with the Sun par Jupiter" no less. Sure enough, Alderman Longbottom, the Labour candidate, was duly elected.

In 1932 Mr Mitchell successfully predicted the winner of the Derby. It wasn't difficult. The Hour Planet was badly aspected with

the Moon, so the Favourite had no chance. He didn't like using the noble science of astrology to do this, he assures his readers, and he only did it lest in turning down the challenge he might be considered "a quitter".

Finally, following a rule given to him by an Indian astrologer friend, Mr Mitchell was able to predict the death of the King of Belgium in 1934, the death of the Queen of Belgium in 1935, and the death of the King of Egypt in 1936. Well, actually, he predicted that *some* royal disaster would happen *somewhere* on those dates, and the deaths of these three particular monarchs fitted his predictions to within a day or two.

Thus far, then, up to 1936, when Mr Mitchell published his book. He was looking back on his career, his success rate was good, verging on the excellent. But he didn't stop there. He went on to give some predictions for the then future, so let us take a look at them.

Mr Mitchell took a look at Hitler's horoscope and concluded that "he will fall from power quite as suddenly as he arose from obscurity." His fall, Mr Mitchell predicted, would be on account of his friends, and would begin in his fiftieth year (i.e. 1939). "Hitler means well," he wrote, "he is a Libra man with Uranus rising at birth in that sign, which signifies that he will become over zealous ..." The fact that in Hitler's horoscope Saturn was elevated in the tenth in the sign of Leo signified that Hitler had no love for France, and that as long as Hitler remained in power it boded ill for that country. Though that might be counted as a fulfilled prediction, there is still no sign of Mr Mitchell's second French Revolution and its resulting civil war. And, of course, no mention of the Second World War as such, with the defeat of Germany and the suicide of Hitler as its outcome. Without wishing to be unkind, it does seem as if Mr Mitchell's success rate declined somewhat after the publication of his book, compared to what it was before. But then we can suggest one reason for his failure in the case of Hitler who, having been born on 20th April 1889, was no Libra man!

But how successful is astrology?

As a spot astrological check we chose Old Moore's Almanac, the original Foulsham edition, and decided to check out whether or not it had predicted six specific and notable events. For the record, the events chosen, and their dates of occurrence, were as follows. Note that these events were selected by us *before* any almanac was ever

opened.

Death of Queen Victoria	22nd January 1901
Sinking of the Titanic	14th April 1912
Great Britain declares war on Germany	4th August 1914
Great Britain declares war on Germany	3rd September 1939
Assassination of President Kennedy	22nd November 1963
Aberfan disaster	21st October 1966

Our man in Cambridge, Michael Behrend, went along to the University Library there to check Old Moore's success rate for us. Unfortunately, the University Library had not been overly keen to maintain a complete collection of Old Moore prior to 1936, so that Mr Behrend was unable to check for possible forebodings of either the Titanic or the 1914 declaration of war. Of the remaining four events, however, Old Moore failed totally to foresee either the Kennedy assassination or the Aberfan tragedy. Regarding the death of Queen Victoria, the nearest Old Moore got to this in his predictions for January 1901 was as follows:

The planetary influences for the month of January are of deep importance, and prefigure strange and unexpected events in our happy land.

If we allow Old Moore two months' grace, he actually does get something like a hit, as his predictions for March 1901 say that "death will lay a heavy hand on a notable person, for whom the whole nation will weep." However, a two-month error seems a bit too much to us – but then maybe we're just being overly sceptical again. Or perhaps royalty just isn't as astrologically tied down as the rest of us!

Regarding the Second World War, Mr Behrend found that Old Moore had gone embarrassingly wrong:

The New Moon of 13th September, which takes place at 11.22 a.m., is a remarkable one, for the Luminaries are in the tenth conjoined with Venus, and Mercury – paramount ruler of the theme – is exactly culminating. These positions are most helpful for the preservation of Peace both in industrial and international disagreements. Important work to that end will now be achieved both at home and abroad – work which

may include the final settlement of at least one War abroad – perhaps to usher in a new, better, happier and more prosperous era for all mankind.

This prediction was accompanied by a picture of the northern hemisphere with the word "PEACE" shimmering above it.

Next, comets....

Almost as catastrophic as the astronomers' predictions concerning the brightness of the comet Kohoutek, were the astrologers' interpretations of it. Kohoutek, it seems, was no respecter of persons, orthodox or otherwise.

For example, one English astrologer predicted that Kohoutek heralded the abdication of Queen Elizabeth II in favour of Prince Charles. This interpretation, along with others, can be found in Joseph F. Goodavage's book *The Comet Kohoutek* (1973).

Comets, Mr Goodavage claims, coincide with earthly disasters of every description. Their appearances are frequently accompanied by earthquakes, widespread floods and volcanic disturbance. Riots, social unrest and even military invasion seem to accompany them, and rumour has it that years in which great comets are visible are good wine years!

Fires in New York; outbreaks of bubonic plague in Europe; riots in Germany, earthquakes in Greece and disastrous floods in Paris – all were heralded by comets, Mr Goodavage assures us. A comet was in the sky when Pontius Pilate committed suicide; Mark Twain was born under Halley's Comet and correctly predicted his own death on its return; and what was the Star of Bethlehem if it wasn't a comet heralding the coming of the Messiah?

"Today," Mr Goodavage writes, "Some are predicting that Comet Kohoutek will be the actual agent of world devastation!"

There is a lot in Mr Goodavage's book that is worth the attention of any student of Independent Thinking. He is, for example, a convert of Immanuel Velikovsky and is firmly convinced that the planet Venus is a reformed comet that was once violently expelled from the surface of Jupiter. The Great Red Spot today marks the point of its emergence, he claims.

So what has this to do with comet Kohoutek? Well, Mr Goodavage reckons that as Kohoutek was first spotted this side of Jupiter, on its sun-ward trajectory, it too could have been expelled from Jupiter.

But getting back to the astrological significance of Kohoutek, here is what Mr Goodavage has to say:

What then, can be expected of the Comet Kohoutek?

For one thing, vast changes in the structure and function of American government, as the repercussions from the death of a prominent South American leader will fan the fires of anti-Americanism from Tierra del Fuego to the Rio Grande.

One astrologer friend of Mr Goodavage went so far as to predict an assassination for President Nixon before March 1974, the assassin being an army officer with the rank of colonel or lieutenant.

Needless to say, the influence of a comet depends on the constellation in which it happens to lie at any given time. For example, a comet in Leo heralds a shortage of wheat and a death of a Prince of the Church. Or again:

The comet's proximity near Jupiter in Capricorn will have adverse effects on Muslim countries and cause increased friction between India and Pakistan.

Working along similar lines, "unprecedented violence" in Central India was predicted for 17th October 1973, and "political turmoil" in North East India for 10th December. Arab—Israeli troubles were predicted before mid-March 1974, bringing the Middle East to "the very brink of all-out warfare". By July 1974, it was thought Amin and Sadat would be fallen leaders.

With unintended irony, Mr Goodavage wrote:

Look at it this way: if intelligent people for thousands of years have been reporting that comets and troubles always go hand in hand – which they have – then the Comet Kohoutek is a superb opportunity for us to keep a track record and try to determine how *much* truth there is to it.

As it turned out, the Comet Kohoutek refused to co-operate. Nor was it the first comet to thwart the prophets of doom. Increase Mather, the son of Cotton Mather, issued the following predictions regarding the comet of 1680:

The floods of great water are coming. I am persuaded that God is about to open the windows of heaven and to pour down the cataracts of his wrath ere this generation is passed away. Let us then prepare for trouble, for the Lord has fired his beacon in the heavens.

Though neither of us believes in astrology, it would be wrong for us to line up a collection of hilariously wrong astrological predictions and to claim them as 'disproof' of astrology. Equally wrong, of course, would be the opposite process – that of lining up a collection of predictions that had actually materialised and heralding it as proof of the validity of astrology. The mere marshalling of suitably selected evidence is proof of nothing, however meticulously it is conducted.

The only way astrology can be proved or disproved is statistically, and the classic works in this field are those of Michel Gauquelin and his first wife, Françoise.

Actually, Gauquelin (who committed suicide in 1991, apparently as a result of the prolonged controversy over his work) denied that his work was supporting traditional astrology in any sense. His methods were very different, and in some respects they went against traditional astrological beliefs.

What he did claim, however, was that there exist curious connections between the type of career followed by prominent persons and the positions of the planets in the sky at the moments of their births.

This sounds very familiar to the traditional horoscope idea, but it isn't. Let us explain the nature of Gauquelin's method via a little lesson in elementary astronomy.

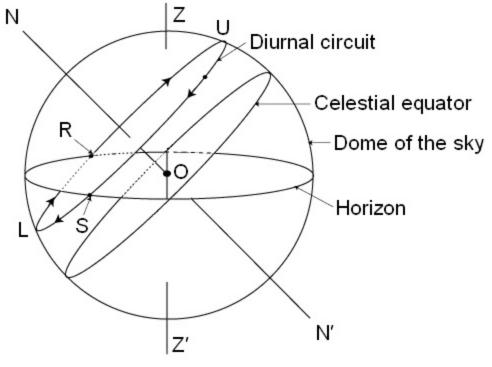


Fig. 10.1

Referring to Fig. 10.1, O represents an observer at the centre of the sky dome. Z is the zenith, the point directly overhead, and Z' the nadir or point directly beneath the observer's feet. N marks the north pole of the sky, currently marked (or nearly so) by the pole star, Polaris or Alpha Ursae Minoris, and N' the southern pole of the sky.

The Celestial Equator, like the Earth's equator, is a plane at right angles to the NN' axis of the sky, dividing the sky dome into two equal hemispheres. The horizon is defined by a similar plane through O at right angles to the vertical ZZ'. East and west are defined by the points where the Celestial Equator crosses the horizon.

Now suppose P represents a planet in the sky. In the course of a day, the Earth rotates from west to east, in consequence of which P appears to the observer to perform a circuit of the sky along what astronomers call its diurnal circuit.

The planet rises above the horizon at R, achieving its maximum elevation (Upper Culmination) when due south of the observer, at U, moves down the sky again until it sets at S, after which it is carried, invisibly, to its lower culmination, L, due north of the observer. Thereafter it swings further round the sky until it rises again at R.

Traditional astrology considers the positions of the planets, at the moment of birth, with respect to the fixed stars of the zodiacal constellations. Gauquelin didn't. He departed altogether from this concept and considered the positions of the planets on their diurnal circuits at the instant of birth.

It is for this reason that Gauquelin's results cannot be considered as evidence for traditional astrology. Nevertheless, they are difficult to explain as far as orthodox science goes, and astrologers tend to view Gauquelin as more in their favour than in the scientists'. After all, if the planets can 'influence' our careers on a diurnal basis, can we afford to be so glib as to claim that their positions in the zodiac can have no effect on our lives? We make no attempt here to resolve the claims and counter-claims, though we will indicate one or two possible arguments later.

So how did Gauquelin make his measurements?

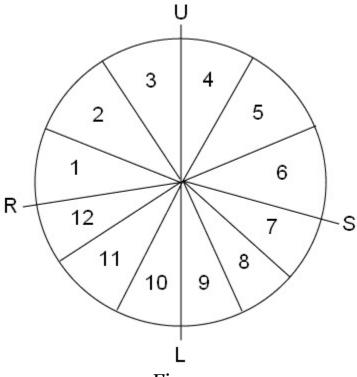


Fig. 10.2

Imagine you are sitting astride the pole star and looking down on the observer, O, along the polar axis NN'. The diurnal circuit of P looks like the circle of Fig 10.2, O being at the centre, with R, S, U and L representing, respectively, rise, set, upper and lower culmination.

The sector ORUS represents the portion of the diurnal circuit

above the horizon, and the sector ORLS the portion below it.

For the purposes of measuring the position of a planet on its diurnal circuit at the instant of birth, Gauquelin divides the diurnal circuit into twelve sectors – six above the horizon and six below it.

That is, sector ORUS is divided into six equal sectors, and ORLS is likewise divided into six equal sectors. Note that the sectors above the horizon may not be quite the same size as those below the horizon, on account of P not being on the celestial equator, but usually, on average, they will not be very much different. The sectors are numbered 1 to 12 as in Fig. 10.2.

Very well, then, let us consider the planet Saturn. At a person's birth Saturn will lie in one of the twelve sectors of its diurnal circuit on that day. Traditional science blandly assumes that people are born with a total lack of regard for the position of Saturn, so that, allowing for the fact that sectors 1 to 6 may be slightly different in size to sectors 7 to 12, then as followers of science we should not expect to find Saturn falling into any sector markedly more often than the others.

But then consider a sample of Gauquelin's results. He analysed the sector occupied by Saturn at the moment of birth of 3647 prominent scientists, the results being summarised in the following table:

Sector	Frequency
1	355
2	292
3	286
4	349
5	284
6	282
7	318
8	290
9	289
10	311
11	267
12	324
Total	3647

If orthodox science predicts what should happen, on a basis of Saturn having no preference for one sector rather than another, then it predicts that, on average, we ought to find 299 individuals in each of sectors 1 to 6 and 309 in each of 7 to 12.

The trouble is that Gauquelin's figures stray a bit too far away from orthodoxy's predictions. Statistically, too many observations fall in sectors 1 and 4-355 and 349 instead of 299 on average. To the casual eye, such discrepancies may not look drastically much, but to a statistician they are way too high. So high, in fact, that one is forced to reconsider those bland assumptions made by orthodox scientists regarding the roles of the planets in our lives.

The conclusion that Gauquelin's results seem to suggest is that prominent scientists tend to be born just after the rise or just after the upper culmination of Saturn.

This is speaking statistically, of course. A glance at the table shows that large numbers of scientists come into this life – and probably depart for the next – with a total disregard for the comings and goings of Saturn.

Gauquelin, in his book *Cosmic Influences on Human Behaviour*, produced similar links between planetary sectors and other career-classified births.

Famous actors showed a statistical tendency to be born with Jupiter in sectors 1 and 4; with sports champions the same tendency was observed, but with Mars instead of Jupiter; with prominent writers, the Moon tended to be the operative body in these sectors.

Curiously, these statistical effects only appear to work on samples of *prominent* scientists, actors, sportsmen, writers or whatever. Tests on ordinary persons following the same professions yield distributions among the 12 sectors entirely consistent with the 'no preference' expectations of orthodox science.

No fully satisfactory explanation of these results has been forthcoming. There has been some argument about the way Gauquelin's database was compiled, and how exactly he defined "prominent" in relation to scientists, actors, sportsmen and so forth – changes in the definition of "prominent", it has been argued, can severely affect the significance of the statistics. So, might the significance of Gauquelin's figures be somehow the result of how he chose his "prominent" persons? It is a possible line of argument, but not fully convincing, somehow. Gauquelin, meanwhile, had his own

ideas of planetary heredity, and of biological clocks which are triggered by planetary influences, but these were little more than working hypotheses. The whole business remains something of a fascinating mystery.

Certainly no one is saying that Saturn, for example, induces a scientific frame of mind in infants born under its auspices. The matter is not that simple, and the connection between profession and sector number may not be as direct as is frequently assumed.

A fine (though not necessarily related) instance of an apparently mystical connection which is in fact nothing of the sort is afforded in the following.

If one plots a graph of the birth rate in Britain against the production of pig iron in the United States for the same year, plotting one such point for each of the years 1875 to 1920, then the points of this graph will lie very close to a straight line.

To most people this indicates some almost mystical connection between the two types of event in spite of an intuition which says that they ought not to be related at all. Yet no such connection exists and the explanation of this straight line graph (basically mathematical and rather too long to go into here) involves no overthrow of traditional scientific concepts of either birth rate or pig iron production.

The straight line graph is indeed no accident, but neither does it indicate the type of conclusion to which our intuitions impulsively leap.

To take another example of the same type of phenomenon, some years ago a paper was published linking radio reception conditions with the weather in the United States (which is not unreasonable) and the positions of the planets. One of the present writers (PM) followed this up by showing that the same link could be extended to the number of evening newspapers published in Australia, the number of runs which Boycott was making in the current Test series, and the frequency of evening performances at the Folies Bergère in Paris. All the graphs fitted excellently.

So, what Gauquelin's figures indicate remains in dispute, but the figures themselves are there, for all to see.

Finally, where is astrology going, if anywhere? It is now admitted officially that the rift between astrologers and astronomers is

unbridgeable, so that the link must henceforth be with the psychologists and psychiatrists. This leads on to a vision of the future. If your believer of, say, AD 2100 finds himself in a quandary for any reason, is he likely to race off to consult his astropsychiatrist? Well, it's a thought! And here's another: will the astropsychiatrist use the traditional zodiac of 12 signs, or will he use the revised zodiac proposed by Steven Schmidt in his book *Astrology 14*, published in 1970?

According to this book, astrology is way out of date. For a start, Mr Schmidt claims, there should be 14 signs of the zodiac, not 12, the extra two being Cetus, the Whale, and Ophiuchus, the Serpent Slayer.

Astrology 14 makes quite a mess of traditional astrology. With 12 signs, each occupies a nice, round, 30 degree sector of the zodiac, which can be conveniently sub-divided into 3 equal 10-degree subsectors called 'decans'. Furthermore, with 12 signs, astrologers can associate 3 signs with each of the traditional 4 elements, earth, water, fire and air. But with 14 signs, each occupies 25.71 degrees and a bit, which is not so easily subdivided into decans – or anything else for that matter – and any attempt to equally distribute signs amongst the 4 elements results in 3.5 zodiac signs per element.

None of this deters Mr Schmidt from proposing a 14-sign zodiac, however. Fearlessly, he casts aside both decans and elements as outmoded. "Astrology must change," he tells us, "if it expects intelligent people to go on believing in its precepts."

By introducing Cetus between Aries and Taurus, and Ophiuchus between Scorpio and Sagittarius, Mr Schmidt claims to have developed a more subtle system of astrological interpretation than the more usual 12-sign system – and that is despite throwing decans and elements to the winds.

But there is worse to come. Two extra signs are only the beginning.

Traditionally, if you were born between 21st March and 20th April inclusive, then you are said to have been born under Aries the Ram. These are the dates associated with your familiar newspaper horoscope sign. A traditional astrologer would describe Aries as your Sun sign.

But Mr Schmidt has other ideas. Aries, he says, should be 16th

April to May 11th inclusive, and, furthermore, all the other zodiacal signs should be similarly displaced date-wise. The following table compares Mr Schmidt's *Astrology 14* system with the dates of the traditional system:

Sun Sign	Astrology 14	Traditional
Pisces	Mar 21 – April 15	Feb 20 – Mar 20
Aries	April 16 – May 11	Mar 21 – April 20
Cetus	May 12 – June 6	*****
Taurus	June 7 – July 2	April 21 – May 21
Gemini	July 3 – July 28	May 22 – June 21
Cancer	July 29 – Aug 23	June 22 – July 23
Leo	Aug 24 – Sep 18	July 24 – Aug 23
Virgo	Sep 19 – Oct 14	Aug 24 – Sep 23
Libra	Oct 15 – Nov 9	Sep 24 – Oct 23
Scorpio	Nov 10 – Dec 5	Oct 24 – Nov 22
Ophiuchus	Dec 6 – Dec 31	*****
Sagittarius	Jan 1 – Jan 26	Nov 23 – Dec 21
Capricorn	Jan 27 – Feb 21	Dec 22 – Jan 20
Aquarius	Feb 22 – Mar 20	Jan 21 – Feb 19

The implication of this, if Mr Schmidt is right, is rather startling: whenever you look up your horoscope in a newspaper, the chances are that you are not looking at your 'birth sign' at all!

The reasons why Mr Schmidt proposes such radical alterations are actually quite simple.

In the course of a year the sun traces out a 360-degree circuit of the sky called the ecliptic. There are twelve constellations through which the ecliptic passes and these gave rise to the twelve signs of the zodiac known to traditional astrologers today. (We ignore for the time being the two extra signs.)

Now, when astrology was first being formulated several thousand years ago, the Sun, on its path along the ecliptic, was in the constellation of Aries from 21st March to 20th April. Thus, in the early days of astrology, it was true to say that anyone born between these two dates had Aries as his/her 'Sun Sign'.

But that is not true today. Because of the prolonged wobble in the earth's axis known as precession, the Sun has got out of step with

the astrologers.

From 21st March to 15th April, the Sun is now in Pisces not Aries. Surely, Mr Schmidt argues, to say that someone who was born on (say) 25th March has the Sun Sign Aries is utter nonsense if the Sun was actually in Pisces at the time of his/her birth. We have to admit that Mr Schmidt has a point here. Yet the traditional astrologers persist in giving us all sun signs which are out of step with the real Sun.

Mr Schmidt is quite convinced that this sign discrepancy, plus the extra signs of Cetus and Ophiuchus, are quite enough to warrant a radical revision in astrological thinking. He writes:

Unless you're a collector of antique cars, you would not pay for an automobile designed by Leonardo da Vinci or even the youthful Henry Ford. No, you want the latest design, with the most advanced engineering developments, and you are quite right to demand it. Why, then, should you be expected to pay for a horoscope cast according to data that are not dozens or hundreds, but thousands of years out of date?

Ask your astrologer if he takes Cetus and Ophiuchus into consideration and whether he places the spring point in Pisces instead of Aries. If he does not (or if he evades the question), I would strongly advise you to go to another astrologer – one who is afraid neither of new ideas nor of the harder work involved in casting a horoscope according to up-to-date information.

Strong words indeed! So we asked a couple of orthodox astrologers what they thought of Mr Schmidt's revolutionary talk.

Both of them agreed that it really makes no odds how many signs of the zodiac are adopted. "Twelve" was probably chosen originally because it afforded a simply constructed division of the zodiacal circle, and probably also because twelve has a traditionally mystical significance. As one of our astrologers put it, "twelve was the obvious choice because in it and by it could be expressed all the ideas represented by the numbers 1, 2, 3, 4 and 6." Aside from these numerical reasons, there is really no need, our astrologers assured us, for anyone to make too much of a fuss over an extra sign or two – they will not overthrow traditional astrology, merely complement it. (Our readers will recall that James Vogh claimed this about his

thirteenth zodiac sign, Arachne, the Spider. But then he wasn't being entirely serious....)

As to the argument that the signs and constellations are out of step because of precession, thus invalidating traditional astrology, again our two astrologers agreed that there was really no problem at all.

The apparent problem arises from a confusion of two quite distinct zodiacs – the one of *signs* and the other of *constellations*. That they share the same set of names (Aries, Taurus etc.) is due entirely to the fact that when the rules of astrology were first formulated, the signs were named after the constellations underlying them *at that time*. Thus, a couple of thousand years ago, someone born on (say) 25th March was defined to have the *sign* Aries because the sun was in the *constellation* named Aries at that time. Astrologically, therefore, someone born on the same date in the present era still has the same *sign*, Aries, even though precession has now shifted the stars so that today the Sun lies in the *constellation* of Pisces. Most astrologers deal in *signs*, and these haven't changed at all over the ages. The fact that precession has shifted the constellations is, astrologically speaking, quite irrelevant and not at all the disaster claimed by Mr Schmidt.

Actually we have rather oversimplified matters here. An astrologer *can* work with either the sign zodiac or the constellation zodiac, though these are quite distinct approaches to astrology, and the latter *is* subject to precessional drift. No astrologer worth his salt, though, would confuse the two approaches, and start demanding precessional compensation for a zodiac of signs. This, however, is exactly what Mr Schmidt is trying to do, and both our astrologers were quite firmly agreed that Mr Schmidt was really all of a muddle. Consequently his arguments against traditional astrology are quite unfounded. In fact, one of our astrologers got rather cross about it all and called Mr Schmidt's claims rather silly!

Whilst we were about it, we asked our astrologer friends why it was that the Second World War just hadn't shown up in the stars. Here we got two rather different explanations.

One explanation concentrated on the fact that astrology is based on a large measure of intuitive interpretation of the horoscope, and that intuition is inevitably coloured by the wishes of the individual. Astrologers missed the Second World War because they unwittingly allowed their interpretations of the stars to be distracted by their deep-seated and entirely understandable wishes that such a terrible thing as a world war would not take place.

The second explanation was more contentious and was to the effect that astrology today has become virtually useless for all practical purposes, not because there is no truth to astrology, but because of the way it has been handed down through the ages. In its present form, it has been perverted from a true science into "an ossified jumble of ideas". Missing the Second World War was the fault not of astrology itself but of its perversion.

By the time our enquiries had got this far, both our astrologers seemed reluctant to have anything further to do with us. In fact, the reason we don't name them is because, in the end, they rather fell out with us and wanted nothing to do with our venture. One of them went so far as to suggest that both the present authors would be well advised to write about matters other than astrology. Being on the wrong wavelength, as it were, the prospect of us writing anything at all sensible on the subject was "quite frankly silly". That, we felt, put us in much the same boat as Mr Schmidt.

Feeling that we might be more nearly on Mr Schmidt's wavelength, we wrote to him to get his comments on this thoroughly emotive business. He replied as follows:

The English astrologers you consulted seem much more reasonable than their American counterparts. My book received such acute critical comments as "Insane!" and "The book was written as a hoax!" (This last from the American Astrological Society in reply to a reader who had written for the opinion of this august body.) As I have repeatedly pointed out, I did not really invent anything; I merely attempted to *update* astrology so that people would know what stars they were actually born under, and be able to chart their horoscopes accordingly. The backward motion of the spring point through zodiacal constellations has long been recognised by sidereal astrologers, and I simply added this practice to my fourteen sign system.

I have never been able to agree with the Ptolemaic astrologers' contention that it is the sign and not the constellation that matters. If that be the case, why call it astrology at all? Following Jung, I thought that astrology was an art on its way to becoming a science, and hoped that my contribution would help it on its way. Astrologers chronically complain that their field is not recognised by the scientific community; yet they stoutly resist any attempt to transform their static art into a dynamic science that attempts to keep up with the ever-changing universe.

I did not know, then, that their complaints were not serious. Astrology is neither art nor science; it is a *game*. Astrologers no more wish to change the rules of their game than chess enthusiasts would welcome an updating of the rules of chess.

From Mr Schmidt's *Astrology 14*, we turn to another curious astrological backwater – perhaps the most unusual we have come across: namely, the discovery of new planets by astrological means. First, though, we need to look at a little astrological – and astronomical – background.

From time immemorial it has been known that there are five planets in the Solar System, not counting the Earth: Mercury, Venus, Mars, Jupiter and Saturn. Tack on the Sun and the Moon, and you have a grand total of seven. Since seven was the mystical number, this was extremely satisfactory, and nobody seriously thought that any more planets could await discovery. Even the astrologers were well satisfied.

Then, in 1781, an amateur astronomer named William Herschel caused a sensation of the first magnitude by discovering another planet – the one we now call Uranus. True, he did not immediately recognize it for what it was, and mistook it for a comet; but before long its real nature was proved beyond all doubt. Moving round the Sun at a mean distance of 1,783,000,000 miles, it takes 84 years to complete a full circuit; it is much larger than the Earth, with a diameter of around 30,000 miles; and it is just visible with the naked eye if you know where to look for it.

The mystical 7 was exceeded. Could there be any more planets?

Now, there is the curious relationship known as Bode's Law, which we met back in Chapter 8. As we saw there, this is a numerical sequence linking the distances of the various planets from the Sun. Uranus was found to fit in well with the series, but at

the end of the eighteenth century there was an unfilled gap between Mars (the outermost of the smaller planets) and Jupiter (the closest of the giants), and it was suggested that there could be a small, faint planet in that part of the Solar System. A group of astronomers calling themselves the Celestial Police banded together in 1800, and started searching telescopically. Ironically, they were forestalled, because on 1 January 1801 – the first day of the new century – Piazzi, Director of the Palermo Observatory in Sicily, happened upon a faint, starlike object which proved to be a planet at just the right "Bode distance". Piazzi called it Ceres, in honour of the patron goddess of Sicily. However, it was a puny thing, only a few hundreds of miles in diameter, and within the next eight years the Police had discovered three more dwarf planets in the same region of the Solar System. By now we have located well over two thousand of them, and it seems that the total number may well be over 40,000. They may be parts of an old planet(s) which broke up; they may be the material left over, so to speak, when the principal planets were formed. Even if lumped together, all these minor planets or asteroids would not make one body as massive as our Moon.

(Needless to say, there have been some unorthodox ideas about the asteroids. It has been suggested that they were hurled away from the Earth at the time of the cataclysm which destroyed Atlantis; alternatively, that the original asteroid-planet was blown up by some careless extraterrestrial scientist who let off a nuclear bomb in the wrong place at the wrong time. However, most modern astronomers incline to the theory that the asteroids are mere Solar System debris.)

The next development was delayed until 1846. By then it had become only too clear that Uranus was not behaving itself. Mathematicians worked out the way in which it ought to move; Uranus refused to obey. Something was dragging it out of position, and it was inferred that this 'something' must be another planet, moving at a greater distance from the Sun. Two astronomers, Urbain Le Verrier in France and John Couch Adams in England, set out to discover its position by sheer calculation. They worked independently, and Adams finished first, but owing to a series of muddles and misunderstandings nobody made a telescopic search until Le Verrier had finished his calculations, leading to an almost identical result. The race was on. Le Verrier won it. Using his calculations, Johann Galle and Heinrich D'Arrest, at Berlin, tracked

down the expected planet – now called Neptune. There followed a somewhat undignified squabble about priority, but by now Adams and Le Verrier are recognized as co-discoverers – except in France, where Adams' claims are even now dismissed with sceptical grunts.

Neptune was much closer than it should have been according to Bode's Law, and it is hard to resist the temptation to dismiss this Law as a sequence of the take-away-the-number-you-first-thought-of variety. Like Uranus, Neptune is a giant world, but it is too dim to see with the naked eye. Binoculars will show it, but no surface details were ever seen on its tiny, bluish disk prior to the images taken on the Voyager 2 flyby in 1989.

Astrologers were somewhat upset at first by the discoveries of Uranus and Neptune, but before long they were fitted quite neatly into the overall pattern, and were given their own astrological characteristics. Then, in 1930, came yet another discovery. Making calculations of much the same kind as Le Verrier and Adams had done so long before, Percival Lowell in America had given the position of an even more remote planet. For a long time it refused to show itself, and when Lowell died, in 1916, it remained undiscovered. It was finally found at Lowell's observatory fourteen years later, by Clyde Tombaugh, close to the expected position. Fittingly, it was named Pluto in honour of the King of the Underworld.

Since its discovery, Pluto has given astronomers a great deal of trouble. It just didn't seem to be an ordinary planet. It has the wrong type of orbit, for a start – at its nearest to the Sun it is closerin than Neptune, a state of affairs which prevailed from February 1979 until February 1999. Also it is very small and lightweight. Modern measures indicate that it is much less massive than our Moon, in which case it could not possibly exert any measurable influence upon Uranus or Neptune – and yet it was by these very influences that Lowell had predicted its position accurately! In 1977, photographic investigations led to the discovery of a satellite of Pluto, subsequently named Charon, which seems to be around 750 miles in diameter – just over half that of Pluto itself. And both Pluto and Charon may be little more than large lumps of ice.

When Pluto turned out to be as dwarfish as this, astronomers started to think that it should not continue to rank as a bona-fide planet, and there were suggestions that it may once have been a satellite of Neptune which broke free in a sort of cosmical U.D.I. and moved off independently. Certainly it is smaller than Neptune's remaining large satellite, Triton. Actually, it could well be simply one of the largest of a whole swarm of icy bodies in the far reaches of the Solar System known as the Kuiper Belt. All the same, the astrologers took Pluto into their considerations, just as they had done earlier with Uranus and then Neptune. Unfortunately, in 2006, the International Astronomical Union officially demoted Pluto from its full planetary status, classifying it instead as a "dwarf planet". Quite where this leaves the astrologers, we are not sure, but we await developments with eagerness.

For a long time it was felt that if Pluto was too small to be responsible for the observed discrepancies in the orbits of Uranus and Neptune, then either Lowell's successful prediction of the existence of Pluto was a complete fluke (highly unlikely), or else there was another planet out there awaiting discovery. Thus began the search for the so-called Tenth Planet. (Actually this proved to be unnecessary, for the Voyager 2 flyby of Neptune in 1989 revealed that astronomers had slightly overestimated the mass of that planet, and when this was taken into account, another planet was no longer needed to explain things.)

But let us look round, and see just what the prospects for extra planets really are. We must confine ourselves to planets with diameters of over, say, 1500 miles; anything smaller than that is on a par with an asteroid, and they are tacitly ignored by all astrologers.

The first theory is that of the Counter-Earth. This is a planet moving in the same orbit as our own Earth, but on the far side. The line Earth–Sun–Counter-Earth is always straight, so that Counter-Earth is always behind the Sun (or virtually so), and therefore unobservable.

This is an attractive theory, and a planet in that position would admittedly be impossible to see, but it doesn't work – because of perturbations. Each planet pulls on each other planet. For instance, our orbit is measurably affected by Venus, Mars and all the other members of the solar family. These influences would very soon drag Counter-Earth out of alignment, and it would become visible. A very few years would be enough for this to happen. It hasn't; and so we can say, with utter confidence, that Counter-Earth doesn't exist.

Secondly, what about a planet very close to the Sun, moving within the orbit of Mercury? Mercury, at a mean distance of 36,000,000 miles from the Sun, is considerably larger than our Moon – its diameter is 3000 miles – but it always keeps fairly near the Sun in the sky, and is never brilliant, though it is an easy naked-eye object when best placed, either very low in the west after sunset or very low in the east before dawn. A smaller, closer-in planet would be extremely elusive. Flushed with his success with Uranus, Le Verrier turned his attention to Mercury; here too he found unexplained perturbations, and announced the theoretical discovery of an intra-Mercurial planet. It was even given a name: Vulcan.

The only real hope of seeing Vulcan would be to catch it passing in transit across the face of the Sun (as both Mercury and Venus do from time to time). In 1860, Le Verrier heard that an amateur astronomer, Dr Lescarbault, had actually observed such a transit. The two men duly met. It must have been a strange encounter, because Lescarbault was a real amateur – he had a tiny telescope, a timekeeper that lacked its second hand, and a plank of wood upon which he used to write his observations, planing them off when he had no further use for them. Le Verrier had the reputation of being the rudest man in France. Nevertheless, the meeting went off well, and Le Verrier was convinced that Vulcan really had been found. Alas, it has never been seen again; there is no doubt that what Lescarbault saw was an ordinary sunspot, and much later on Einstein's theory of relativity cleared up the problem of Mercury's movements without the need for an extra planet.

If there really had been an intra-Mercurial planet, it would unquestionably have been found by now. There is one asteroid (Icarus) which can go within 20,000,000 miles of the Sun, but Icarus is a mere mile or so across, and any other asteroids moving into the same regions can be no larger. Around the 1860s and 1870s, when Vulcan was regarded as real, astrologers fastened on to it and described its influences; when Vulcan faded out, the astrologers did their best to forget all about it.

Certainly there can be no large planet anywhere between the orbits of Mercury and Neptune. But there could well be another planet further away; there could even be several – there is no theoretical reason why not, and searches, both theoretical and practical, have been made from time to time. Unfortunately, the

hypothetical planet is bound to be so remote and so faint, even if a giant, that it will be extremely hard to find – particularly since we have no idea of its position. To undertake a really thorough search would mean using a large telescope for a very long period, and no astronomer will want to do that – observing time is too valuable. So on astronomical grounds, the trans-Neptunian (or trans-Plutonian) planet will be extremely elusive, even if it exists, and as we saw earlier, astronomers are not now concerned with searching for the Tenth Planet.

Some astrologers are confident that another planet does exist – all the more so because they may well have to drop Pluto from their charts. But if astronomy fails in the search for it, can astrology come to the rescue? This brings us on to the researches carried out by Dr and Mrs Christopher Coulson.

Before looking at their methods, we must briefly take a look at a bit of astrological history:

Traditionally the planets are said to rule specific signs of the zodiac. Before the discoveries of Uranus, Neptune and Pluto, it was generally believed that each planet (apart from the Earth) ruled two signs of the zodiac, and that the Sun and Moon ruled one apiece. For example, Mars used to rule both Aries and Scorpio. However, when Uranus, Neptune and Pluto turned up, this neat symmetrical arrangement was upset, and though Mars continued to rule Aries, for example, the rulership of Scorpio was taken over by Pluto.

Today, when the signs have been redistributed amongst eight planets (the Earth itself does not rule any signs at all, remember) and the Sun and Moon, we are still left with two planets ruling two signs each. Mercury rules Gemini and Virgo, and Venus rules Libra and Taurus.

Dr Coulson and his wife were not happy with this arrangement. They felt that Mercury was the true ruler of Gemini, but not of Virgo, and they suggested that the asteroid Vesta might make a more appropriate ruler for this sign. This rulership perhaps found one expression in the Vestal Virgins of Ancient Rome. As for Venus, the Coulsons felt that though it was an appropriate ruler for Taurus, it was not so well suited to Libra. Eventually they came to believe that Libra might well be governed by a hitherto unknown planet.

The sign of Libra is characterised by partnership and the qualities of justice, law, peace and harmony (particularly musical). It is

equally characterised by the opposites of these concepts – injustice, anarchy, war and discord. Thus the ruling planet of this sign ought to be discoverable through a study of these factors in the lives of selected individuals.

Dr Coulson and his wife named this hypothetical planet "Isis and Osiris", after the best known partnership in the Egyptian pantheon of gods and goddesses. Osiris, in Egyptian mythology, was the ruler of the dead, and when a soul passed into the underworld its heart was weighed against Truth in a pair of Scales. Hence the association with the Scales of Libra, the Libran concept of justice, and the need to achieve balance.

Given the sort of influences in life this planet might be expected to govern, there are two methods by which one can determine its possible locations. The first of these is rather complex, and is called the symbolic method of Solar Arc Directions. Dr Coulson explained it to us thus:

Here the natal Sun is moved on the birth-chart using the scale of one year of life to a day after birth. For example, at age 40, one would look up the Sun position for the fortieth day after birth in the ephemeris and subtract the natal position to get the Solar Arc. This measurement is added to the natal planets to get the symbolic movement. Any interactions the hypothetical planet then makes by angle with the natal planets are frequently observed to synchronise with events in the life of the person. By working retrospectively and from the nature of the events, and the age when they occur, we may calculate the position of the hypothetical planet at birth. We have deliberately chosen events like marriage, the award of the Nobel Peace Prize etc. since these events are completely objective, and thus more suitable for a scientific study. This method of locating the hypothetical planet has an accuracy in the region of ±30 minutes of arc.

To non-astrologers, a symbolic method – that is, one which does not depend wholly on actual configurations in the sky – seems a strange way to set about discovering a new planet. "All I can say is that it works," Dr Coulson assured us, "and not only in my hands

but as one of the major techniques in astrology. As to how and why it works we really do not know."

The other method used by the Coulsons for finding the position in the sky at any given time of Isis and Osiris is much easier for nonastrologers to follow, though Dr Coulson told us that it is less accurate. It can only give the location to within about 3° either way.

It is called the Method of Transits, and it determines possible locations of the hypothetical planet by the angles one would astrologically expect it to make with the other planets of the solar system. For example, in a study of marital harmony and discord, one would expect to find Isis and Osiris forming angles of 0°, 90°, 120°, and 180° with the other planets in a horoscope cast for the time of marriage. The first, second and last of these angles (or aspects, as they are called) indicate strain and difficulty, whilst the third and occasionally first, indicate ease and harmony.

Using the two methods – Solar Arcs and Transits – Dr Coulson and his wife claimed to be able to describe "with reasonable certainty" the position of Isis and Osiris in the sky over a period stretching back to 1770. "The result of the calculations," Dr Coulson told us, "show that the planet appears to have moved at a rate of approximately 1° a year up to 1959, Subsequently it has begun to move faster until it is now (1980) moving at about 3° 15′ a year." This change in speed implies that Isis and Osiris has a very eccentric orbit, and the Coulsons felt that this was entirely in accord with the extremes of human behaviour that the planet governs.

To give some idea of the astrological effects of Isis and Osiris, as well as to throw some light on the processes of its discovery, Dr Coulson gave us the following data, gleaned from the horoscopes of Nobel Peace Prize winners:

- 1. Miss Mairead Corrigan has natal Jupiter at 144° 7′. When she was awarded the prize in October 1977 for her work in initiating the Northern Ireland Peace Movement, Isis and Osiris was within 3° of this point.
- 2. Various events link the planet with the peace initiative between Egypt and Israel. Sadat made the first move on 13th November 1977 when the planet was moving direct and very close to 143°. Menachem Begin's Sun is also very near 143°. The first Camp David Summit started on 4th September 1978 when the planet

was again in the region of 143° moving direct. The Nobel Peace Prize was awarded to both Sadat and Begin on 28th October 1978 when the planet was at 146°. The second Camp David Meeting started on 21st February 1979, when the planet had turned to go retrograde, and was again moving towards 143°. The first stage of peace was finally consolidated by the signing of the Israel–Egypt peace treaty on 26th March 1979 with the planet at 142°.

3. Mother Teresa of Calcutta has her Sun at 152½° approximately. She was awarded the Peace Prize in October 1979 when the planet was within 3° of this position.

According to the Coulsons' calculations, Isis and Osiris moved from Cancer into Leo in 1972, and in April 1980 it was still in Leo at about 22° 12′ declination north, and at about 10h 6m right ascension.

Most astrologers know nothing at all about Isis and Osiris, and if any astronomers ever heard of it, we suspect that they dismissed it without even reaching for their telescopes. The Coulsons were fully aware that they were sticking their necks out both astrologically and astronomically. Nevertheless, they stood by their calculations, and felt that they had a case worthy of the serious consideration of both fields of study. As Dr Coulson pointed out to us back in the 1980s:

Uranus' discovery in 1781 was spanned by the American and French revolutions, Neptune's by the rise in spiritualism and sea-bathing, and Pluto's by atomic energy and depth psychology. The radical change in the balance between the sexes and the recent peace initiatives in the Middle East, Rhodesia and Northern Ireland suggest that the discovery of the hypothetical planet may be imminent.

Chapter 11. One Finger, One Thumb

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Put up your thumb, hold it out at arms length, and look at it carefully. It may just look like an everyday thumb to you, but it is thumbthing – sorry, something – else entirely to a cheirognomist.

A cheirognomist can deduce your character from the shape of your thumb, and maybe even tell you something about your future, for cheirognomy is closely related to the better known art of cheiromancy, or palm reading.

We once met an Indian lady, a doctor as a matter of fact, who assured us that whilst still in India she had met a holy man who could foretell someone's future purely from an examination of his or her thumbs. The predictions he had made for her were, at any rate, startlingly accurate, and furthermore, we have no reason to doubt that she was telling us the truth.

Actually, most cheirognomists would not rely purely on a rule of thumb: they tend to study the shapes of the fingers, the length and width of the finger nails, and the shape of the hand as a whole. Frequently, too, they are palm readers as well – the arts of cheiromancy and cheirognomy walk hand in hand, as it were.

According to Cheiro in his book *Cheiro's Palmistry for All*, first published in the early part of the twentieth century, there are seven types of hand, but as these all blend into each other like the colours of the spectrum, it is sometimes difficult to say who falls into which category.

Short, stubby fingers indicate "very little mental development or ability" whereas a wizened, almost claw like hand is that of the psychic or idealist: "Its possessors live in a world of dreams and ideals."

Bob Forrest has a square hand – he thinks – which indicates a logical or materialistic nature, and his thumb is 'supple jointed', indicating an un-miserly nature. It also indicates, apparently, that he often makes good friends whilst travelling – which he must confess is news to him, though the other qualities are reasonable enough.

As for palmistry, we have both met a fair few people who swear by

it, but though we have tried palm reading ourselves, we always seem to have great difficulty linking up the lines and so forth in our hands with those shown in the standard palmistry text-books.

The theory of palmistry, however, is quite interesting. Cheiro puts it like this:

As regards the future being foreshadowed, it has been demonstrated that the brain is always growing, changing, increasing or diminishing. These changes commence years before the effect is shown by the thoughts or actions of the individual. A boy ten years old may at that point commence a development which will not be felt until he is thirty, and then it may change his whole life and career. As this development commences at ten, even at that age it has affected certain nerves, and they in their turn have already affected the Line of Head – a full twenty years before the point of change or action has been reached. It therefore follows that the future may be seen and told by a careful examination of the hand, which, as Aristotle has said, is the "organ of all organs, the active agent of the passive powers of the entire system."

It would be interesting to contact a genuine palmist, for he or she is to the fairground gypsy as the genuine astrologer is to the newspaper horoscope merchant. Regrettably, to date, we have not met one, but we are always open to offers.

One of the most intriguing means of divining the individual's character, and his future destiny, is through the study of moles. Not the furry little quadrupeds that bore holes in lawns, you understand, but the discolourations of the skin akin to birthmarks. If you want to know all about the significance of moles, we can heartily recommend Maud Wheeler's book, *Moles and Birthmarks*, *and their signification to Man and Woman*, published in 1894. It will tell you, within the limits of Victorian decency, what a mole on any part of the body signifies.

The interpretation of moles is connected with astrology insofar as each part of the body is under the influence of a particular planet. The lungs and backbone come under Jupiter, for example, whereas the legs and right ear are governed by Saturn, and the left ear and bladder by Mercury.

Everybody is governed not just by the influence of one planet, but rather by a combination of planets. In fact it is the planets which govern not only our illnesses, but also our physical appearance, including our moles and birthmarks. Thus, unfavourable Jupiterian influences can lead to quinsy, sore throats and pleurisy, and you can be sure that a tall slight person, with heavy jaws, jug ears and bad teeth is predominantly influenced by Saturn, an unfavourable planet at the best of times.

At first we didn't think that there was a name for the practice of divining the future from moles, and we rather relished the thought of inventing one – we thought "Moleology" had rather a nice ring to it. Unfortunately we subsequently found out that there are already at least two words for such a practice – Moleosophy and Moleoscopy – and so our ambitions were thwarted. Be that as it may, the size, colour and prominence of a mole, as well as its position on the body, can tell the moleosopher a lot about you and your future.

The forehead is divided horizontally into zones by seven planetary lines, and the significance of a mole on the forehead depends upon its position with respect to these lines. Here is an example:

A mole to the right of the forehead, on the line of Mars, shows to a woman a good and rich husband and money from her parents. If honey coloured, a man will be successful in anything to do with horses; if red he will gain military honours; but if black it threatens danger from a quadruped.

On the other hand – or rather – nose:

A mole in the centre of the bridge of the nose signifies to a woman a happy marriage, but if black a short life. To a man, wit and good ability. If red he will lead a wandering unsettled life; and she may lose the use of her feet.

Beware, gentlemen, of marrying a woman with a black mole just below the tip of her nose, because such women almost invariably plot against their husbands and sometimes even murder them! A black mole on the upper part of the right ear of a man indicates possible death by drowning, whereas a honey coloured mole on a man's lower lip indicates wealth abroad and marriage to a rich foreigner. But enough of moles. Let us turn now to bumps on the head – the so called sciences of phrenology and physiognomy. The former concentrates on the shape of the skull, the latter on the facial features, and both hold that the human form is indicative of the individual character.

Consider the following self-analysis carried out by Bob Forrest.

Using Lorenzo N. Fowler's *Self Instructor in Phrenology and Physiology* (the 21st edition of 1918), he attempted to find out about his mathematical abilities. The area of study for this faculty is located just beneath the outer termination of the eyebrows. As he has hardly any bump there at all he seemed to fall somewhere between, "Can hardly count, much less calculate", and, "will make a better salesman than a book keeper". This is disturbing news, since he is a mathematician by trade!

Somewhat disgruntled, he turned for consolation to J.W. Redfield's *Outlines of a New System of Physiognomy*, published in 1852, and looked up the subject of teeth. Here, in part, is what he found:

The breadth of the lower canines, which indicates the love of reform, is great in those who are disposed to inflict chastisements, and also those who are disposed to use 'line upon line' in a moral sense, the former being the perverted, and the latter the legitimate action of this faculty. The sign is very great in the carnivorous animals, and indicates in them cruelty, or the disposition to tear and rend, and inflict corporeal suffering; and we should expect to find it large in the Russians and the Chinese as we do in those who practice corporeal correction or reform in schools and families, and in those who advocate capital punishment.

Glancing hurriedly at his lower canines he was relieved to find them relatively narrow, though fairly long. Looking up the significance of the length of the lower canines he found it indicated love of triumph: "In warriors, duellists, murderers, cannibals and carnivorous beasts, the sign is large."

He then looked up the upper incisors and found that he was deeply entrenched in the tenets of republicanism, whilst his upper canines indicated a love of possessions, goods and chattels. Turning from teeth to ears, he read as follows:

It has been thought by some persons that a large ear indicates good nature, and this approximates very nearly to the truth, for the whole size or expansion of the ear indicates Susceptibility of Improvement, or, in other words, Docility. ... Men in a civilised condition have much larger ears than those in a barbarous or savage state, and domestic animals have much larger ears than those of the same species which run wild. The Indian, who resists with such pertinacity the influence of civilisation, has a comparatively small ear; while the white man has a comparatively large one. By far the largest ears are to be found among the refined classes, and the smallest ears among the most natural and uncultivated.

Having read this and examined his ears, Bob felt that he'd had just about enough of Mr Redfield's insults, and resolved to tip-toe quietly away.

Here in the twenty-first century these age-old ways of divining the future are still with us, but now on the internet. Those with a curiosity about such things might like to try Serena's Guide to Divination at http://www.serenapowers.com/. Here you can get a free Etruscan Oracle Reading in any one of ten languages, and learn all there is to know about Podomancy (divination by the shape of the feet and toes), Omphalomancy (divination from the size and shape of the navel) and Phallomancy ("the art of judging a man's character and lovemaking style and capability by the shape of his penis.") Regarding this latter, Serena tells us:

The traditional forms of palmistry and face reading can reveal much about a person's sexuality and approach to sexual matters. But when it comes to matters of love and lust, nothing is as efficient and accurate as the field of Phallomancy! ... Despite what men may claim and boast, the penis does not lie!

From teeth and ears, moles and bumps on the head, not to mention other bodily parts, we turn to the recovery of lost objects.

An old method of securing the return of lost objects was to invoke the aid of St Anthony of Padua. This reputation of St Anthony's appears to have arisen from an event which occurred in the saint's lifetime. St Anthony owned a book of psalms that was very dear to him, but it was 'lost', having been stolen by a Franciscan novice who had decided to abandon the religious life. St Anthony prayed that his book would be returned to him, and as a result of his prayers the wayward novice not only brought the book back, but he rejoined the Franciscan Order and led an exemplary life thereafter.

There is an amusing story of Flamsteed, the astronomer, who was approached one day by a little old lady who was anxious as to the whereabouts of a bundle of linen that she had misplaced. She asked Flamsteed to cast a horoscope in order to locate the missing bundle.

As an orthodox astronomer, Flamsteed was horrified at being lumped together with the astrologers, but to pacify the old woman he gravely etched out on a piece of paper a circle with a square inside it, and sent the lady on her way with instructions to look in a certain spot.

The old lady was delighted. She was even more delighted than Flamsteed himself was dumbfounded, when the bundle turned up exactly where predicted!

So, let us suppose you have lost your tie-pin, or your cigarette lighter. You turn the house upside down, discovering a dozen or so long lost objects, but not, alas, the one you set out to find.

The frustration of finding that all the junk on the floor will just not fit back into the drawer from which it came, might just have charged you up psychically enough to try a method used by Sepharial for the recovery of lost objects. It is very simple and it uses numbers.

All you do is concentrate hard on the lost object, then write down on a piece of paper nine digits, from 0 to 9 inclusive. Just write them down as they pop into your head, and don't worry about repetitions of digits. It is essential that the numbers flow out from your subconscious unhindered by conscious worry over what is going on.

For example, suppose you choose 2, 5, 1, 6, 5, 3, 9, 2, and 8. Now add them up to get 41, then add 3, to get 44. Now consult Sepharial's book *The Kabala of Numbers*, originally published in 1913.

There you will find listed the possible scores up to 84. (This is the maximum score with 9 digits, since $9^2 + 3 = 84$.) You merely

consult the particular number you obtained in order to find out where the missing article lies. For example, the total of 44 indicates: "You have it. Look among the oil pots or lamps. It will need purifying."

Unfortunately, some of the numbers indicate circumstances which, though applicable in the early years of the twentieth century, are a little unlikely today.

For example, if you get a total of 7, you should, "Ask your servant, a maid especially connected with the wardrobe." With a total of 16, "the cook will enlighten you", whereas a total of 27 indicates that you should ask the coachman, and possibly even search the stables.

We think that maybe Sepharial's numbering needs updating. "Ask the milkman or the postman" would perhaps be more appropriate these days than asking the maid, and "Try looking in the glove compartment of the car" more fitting than searching the stables – but then these are just suggestions.

Next, how to determine the sex of an unborn child? Scientists, of course, have now discovered how this can be done, but there is a much older and simpler method. It doesn't use moles, and it has nothing to do with numbers — in fact, all you need is a lily and a rose. The technique is preserved in Oswald Cockayne's wonderful collection of Old English lore, *Leechdoms, Wortcunning and Starcraft of Early England*, published in three volumes between 1864 and 1866. All you do is take the lily in one hand, the rose in the other, and approach the pregnant lady. Then ask her to choose one of the flowers. If she chooses the lily, the child will be a boy, if the rose, a girl.

And a word or two of advice to the mother-to-be from Mr Cockayne's book:

Again, another matter, if a woman be four or five months gone with child, and she then is often eating nuts or acorns or any fresh fruits, then it sometimes happens thereby that the child turns out silly.

Ladies, you have been warned!

Finally, if you are the sort of person who feels he suffers from more than his fair share of accidents, then, biorhythms aside, you cannot afford to be without a copy of C.E.O. Carter's book *The Astrology of Accidents*.

It is a fascinating little volume, this one, originally published about 1930, but republished many times since by the world-famous Theosophical Society. It forms a bridge, if you like, between our chapter on astrology and the present collection of divinatory curiosities.

Consider the case of the naval pensioner born near London on 17th June 1890 at 2.02 p.m. He was aboard ship to collect some back-pay, and had just come up on deck in response to a call from his wife when his head was struck a terrible and fatal blow by some swinging crane tackle.

Mr Carter plotted this unfortunate man's horoscope, and, lo!:

The action of the wife appears through Venus and Libra; the fact that he was aboard for the purpose of drawing back-pay is indicated by Mars in the 2nd; Neptune in the 8th points to an end near the sea; Uranus, conjunction ascendant, must be held responsible for the blow to the head.

Or again, consider a twenty-year-old man knocked down and killed by a car in Nottingham in 1931. His horoscope shows why – or, rather, Mr Carter says it does. We're not quite as sure of the ins and outs of it as he is:

By one-degree Mars is square radical Moon, exact, and asc. in conj. Uranus. By ¼°, together with some apparently good directions, there is Saturn opp. Jupiter. Note that Uranus is getting near the square of Mercury-Saturn by o-d. By primary direction the asc. is opp. Pluto cum latitudine – latitude being a very important item in regard to this planet.

We leave our readers with one final snippet of useful astrological information:

Skids are probably Uranian, accidents in fogs Neptunian or possibly Plutonic, though one would probably do well to guard against collisions with drainage works in the road when under the malevolent action of this body.

Chapter 12. The Little People

Do you believe in fairies? If not, you will probably not go along with the idea that they are more frequently seen in even centuries, such as the eighteenth, as opposed to odd centuries, like the nineteenth. Or that the fairies come from the stars. Or even that they are the spirits of unbaptised children who died in infancy.

Yet all these beliefs, and more, have been held at one time or another, as you can read in W.Y. Evans Wentz's book, *The Fairy Faith in Celtic Countries*, published in 1911.

The natural reaction to the mention of fairies is one of ridicule. We can vouch for this, because one of us (BF) once ordered an obscure reprint of a book on fairies at a very well known bookshop, and got some very peculiar looks in between the yes, sirs and the no, sirs.

But it might just be that this urge to ridicule is quite wrong. Wentz had something rather interesting to say on this:

The great majority of men in cities are apt to pride themselves on their own exemption from "superstition", and to smile pityingly at the poor countrymen and countrywomen who believe in fairies. But when they do so they forget that, with all their own admirable progress in material invention, with all the far-reaching data of their acquired science, with all the vast extent of their commercial and economic conquests, they themselves have ceased to be natural.

Wentz goes on to argue that the herding together of people in modern cities, and the bustle of modern living, have resulted in the submergence of the psychic faculties required to see into the realm of the fairies. Modern man, therefore, should be asking not so much why some people can see fairies, but rather, why the rest of us cannot. The country-people should be pitying us, not the other way round.

Of course, we don't really believe this argument ourselves but it *is* rather ingenious all the same. So is this one.

Most people disbelieve in fairies because they have never seen them for themselves. Very well then, take a group of people and sit them in a room. They can even wear pyramids on their heads if they wish, but this is optional. Then, when they are all sitting comfortably, stand outside the door and blow one of those very high-pitched dog whistles. Peoples' hearing being what it is, the chances are that at least one person in the room will hear some sort of whistling sound, whereas the majority will hear nothing. The person who hears the sound will say something like, "What's that funny high-pitched whistling sound?", but the rest will say, "What whistling sound?". Somebody else might say, "Oh yes! I can hear it too!", but in the end, the "don't hears", who outnumber the "do hears", will come to the conclusion that this high-pitched whistle business is just a fanciful imagination at work amongst the weakerminded brethren of the group.

According to Mrs Daphne Charters, this is precisely the sort of thing that happens over fairy vision. The fairies are a race of beings who live on this planet with us, but in a different dimension, as it were. 'Seeing' them is like 'hearing' the dog whistle. The whistle is there alright, but if your ears don't respond to it, that does not give you the right to call those who do hear it 'nut-cases'. It is a beautiful argument.

Mrs Charters wrote, in her marvellous little book, *A True Fairy Tale*, published in the 1950s:

I have no doubt that many of you are convinced that Fairies are imaginary beings which have been invented for the amusement of children, and in stating that I have conversations with them every day, I am in great danger of being labelled a fanciful idiot.

But, like all true Independent Thinkers, she is not in the least perturbed by the scorn and scepticism of the world at large. She *knows* that the fairies are real.

So what exactly are fairies, and what do they do? Essentially they are Nature's helpers, and they come in various grades, ranging from the minute Rudimes, who have little intelligence or consciousness, and whose function is largely to stimulate plant growth, to the Fares, who move amongst men, and help to heal the sick.

There are fairies of one sort or another everywhere, Mrs Charters tells us. They tend to our plants, they help our fires to burn more brightly, they direct the waters of our streams and rivers, they control the winds and forest fires, and they even help sailors guide their ships through storms. In fact, the fairies are involved in almost everything.

And what a bewildering world it would be if we could see them all at work, simultaneously, every minute of the day. Mrs Charters describes it in graphic terms:

There are so many tiny entities of various evolutions in every corner of the universe that life would become like a drunkard's nightmare if everyone was tuned-in to all of them at once. We would realise that we sucked minute people in, and blew them out again each time we draw breath; we would see them in our soup and in our favourite chair, popping out of the wireless and into the flour bin. Therefore everyone keeps tuned-in to his own evolution and, when he has learned how to do so, to any of the others for long or short periods at will. Thus nobody gets in anyone else's way.

In her delightful little book, Mrs Charters explains how she came to know the fairies in her garden on first name terms. Some of the names sound a bit suspect, we must admit, but we must remember the parable of the high-pitched whistle. At any rate, their names were Normus, Gorjus, Myrris, Mirilla and Namsos.

Here is a sample of fairy conversation:

"Namsos is very shy," Normus explained, and I had a mental picture of a little figure hanging his head and sucking a finger nervously. "Never mind," I said quickly. "Don't press him. Namsos dear," I added in the direction of the ground, "would you like to tell me about your work?"

There was no reply.

"It's with worms and insects," Normus told me.

"He likes even the worms?" I enquired.

"He really loves them," Normus assured me.

"Well, I think that's wonderful," I said. "I know, of course, that we should love all creatures but it isn't always easy."

That is certainly true!

If you find the fairy conversation a little far-fetched, let us tell you

at the outset that it gets even more so, so you had better keep that high-pitched whistle well in mind.

Mrs Charters had a spirit guide called Father John. A spirit guide, of course, is not a fairy, he is a sort of counsellor from the world beyond the grave, come back to Earth to help in the struggles of the living. Father John, along with the spirits of six other departed, actually helped Mrs Charters write her book. Incidentally, the six were a tea planter called George, a German Prince called Ludwig, a stockbroker called Ronald, a factory foreman called Andrew, a playboy called Peter and an estate agent called John.

But it was Father John (not the estate agent) who was incidental in the organisation and description of the Fairy Congress.

Let us explain. Though Mrs Charters could occasionally see and even converse with the fairies, her abilities to do so were limited. So occasionally she got her spirit guides to describe the antics of the fairies to her, since they, the spirit guides, were psychically more able to tune into the fairy realm than she was.

One day she asked Father John if there were such things as Black Fairies. Father John replied that there were fairies of every nationality, so Mrs Charters then asked if it would be possible to invite fairies of various nationalities to come to her garden for a Fairy Congress. (We assure our readers that we are not making all this up, and that, at the time of writing, neither of us had touched a drop for days. We can only remind our readers to hang onto that high-pitched whistle for dear life.)

Father John liked the idea, and they asked Normus, who asked his boss, who in turn asked his boss. (Fairies are graded into hierarchies, a bit like the civil service, really, and are ultimately controlled by the Devas, or Angels. The organisation of a Fairy Congress clearly involves a considerable amount of Fairy red-tape.) At any rate, permission for the Congress was granted.

Weeks and even months went by, until it was finally announced, by Normus, that the Congress was fixed for 15th September 1955. Three thousand fairies from all over the world were to attend, but unfortunately, Mrs Charters was not to witness the spectacle. The reason for this was that with so many fairies about, there would be too many vibrations for her limited psychic faculties to cope with, so it was left to Father John to describe the scene.

Here is the account by Father John of the male fairies, normally

resident in Mrs Charters' garden, awaiting the arrival of the international fairy delegates:

Normus was clad in his usual green jerkin and tights but instead of his feathered cap he was sporting an Indian chief's head-dress. Movus' dark hair was entirely covered by a turban; this was a great concession on his part as he always goes bareheaded. Nuvic was wearing a pair of sandals and a richly embroidered Chinese kimono; Namsos was covered from head to foot in Arab garb; Gorjus was resplendent in an Indian tunic and a Chinese coolie hat, and Nixus displayed legs encased in cowboy chaps and a tiny black mandarin's hat.

But stranger things are still to come. There is a congress within the congress, at which various international fairies discussed the problems of maintaining world peace amongst the humans (and heaven only knows, we need all the help we can get.)

One despondent fairy remarked that it was difficult to see how the fairies could help if the humans didn't believe in them. At this point Normus announced that they had a champion amongst the humans – "A most important person. We have met him and his love for us is strong." (This was Lord Dowding, who wrote a foreword to the book.)

The other fairies wanted to meet him too, but Normus explained that this was not possible. He was a very busy man, and in any case, Normus explained, there were psychic difficulties – he couldn't see them, literally. Mrs Charters had therefore to act as an intermediary so that the congress could send a message to this important supporter of the fairy peace movement! Whether the message ever got there, we do not know – but we suppose not, as the world seems still to be in pretty much of a mess!

Mrs Charters died in 1991, but not before she had attracted a follower by the name of Michael Pilarski, to whom she entrusted the publication of her collected manuscripts. These are to be published in three volumes, the first of which, *Forty Years with the Fairies*, is currently (2008) available. Mr Pilarski has also organised a series of Annual Fairy and Human Relations Congresses, the eighth of which took place at North Cascades, Wichita, at the end of June 2008. Various (human) speakers gave talks and ran workshops on such

diverse topics as talking with trees, connecting with the Fairies of the Periodic Table of the Elements, Dolphin Energy Healing, and Water Element Therapy. There is another Fairy Congress coming up in 2015, and you can read all about it at http://fairycongress.com/daphne-charters/.

More polished in style, but no less strange to the orthodox reader than Mrs Charters' book, are the books of Mr Geoffrey Hodson. His classic is undoubtedly *Fairies at Work and at Play*, first published in 1923.

Again we are told that the fairies are essentially Nature's helpers, and some of the descriptions are really delightful. We quote two.

The fairies are flitting through the air in short flights, taking very graceful poses as they fly. ... They flit from place to place, pausing a moment between each flight. They seem to be bearing something which they give to the grass or the flowers at each stopping place, at least they put out their hand and touch the place where they come to rest, as if applying some substance, then move swiftly away again. They become more clearly visible as they alight and as they move away; one loses them after they have landed. They are female, dressed in white, or very pale pink, clinging, sheeny material of exceedingly fine texture. It is drawn in at the waist and shines with many colours like mother-of-pearl. The limbs are uncovered, the wings are oval, small and elongated.

Next we have Mr Hodson describing the not-so-nice fairies involved in the great storm in London, 10th July 1923:

Demoniacal and terrific beyond description are the beings who are to be seen exulting in the aerial regions while the jagged flashes of the lightning and the deafening roar of the thunder continue hour after hour through the night.

Their appearance suggests gigantic bats. Their bodies are human in shape, yet it is no human spirit which, brilliant as the lightning itself, shines through those large upward slanting eyes. Black as night is their colour, red and flame-like the aura which surrounds them, dividing into two large pinions

behind their bodies; hair that is like a fire, streams back from the head as though in tongues of flame.

If these descriptions are not more worthy of study than some of the plays served up on today's television, then we don't know what is.

Mr Hodson died in 1983, at the grand old age of 96. Such is the esteem in which he is held in theosophical circles, that there is today a web-site devoted to him and his work:

http://geoffreyhodson.iinet.net.au/.

Neither of us ever met or corresponded with Geoffrey Hodson, but we did correspond with a lady who did know him. She was one of the founder members of the Fairy Investigation Society, now, alas, dissolved, and part of one of her delightfully intriguing letters ran as follows:

Old ruined castles are soon beautified by creepers when the little gnomes get busy. There are fairies inside houses too, of course, and they are attracted to people who believe in them. Since they are the manipulators of the forces of nature there must be elemental beings wherever there are water taps, fires, stoves, steam from kettles etc.

We do not give this lady's name, nor that of the town where she lives, because, in the past, she has been repeatedly pestered by journalists who, she says, "keep quoting remarks which I am supposed to have said, and which I have *not* said."

But we can say that she is totally sincere in her beliefs and that at the time of writing, she is compiling a book of true accounts of various peoples' encounters with the little people. When it appears, it will make very interesting reading indeed.

But no account of Geoffrey Hodson and the fairies would be complete without some sort of mention of the Cottingley Photographs.

These were allegedly genuine photographs of fairies taken by two young girls, Elsie Wright and Frances Griffiths, in the Yorkshire village of Cottingley, in 1917. At least, that was when the first two photographs were taken. The other three were taken in 1920, after the first two (one showed a prancing gnome carrying a set of fairy bagpipes, and the other a group of fairies dancing in front of one of

the girls) had been brought to the notice of the Theosophist Edward L. Gardner, and later, of the author of the Sherlock Holmes stories, and ardent spiritualist, Sir Arthur Conan Doyle.

Both men were convinced that the photographs were genuine, and both were to write classic books of Independent Thought about the case. In 1922, Doyle wrote *The Coming of the Fairies*, and in 1945, Gardner wrote *Fairies – The Cottingley Photographs and Their Sequel*.

Shortly after the first two photographs had been sent to Gardner by a friend, he took them to a professional photographer he knew called Snelling. Snelling pronounced them genuine, untouched photographs, and said they could not have been faked.

Kodak, however, declined to give a statement, for reasons best known to themselves.

Next, Gardner went to Cottingley to interview the two girls, and came away convinced that the photographs – and the girls – were genuine.

At that time Doyle was writing an article for *The Strand Magazine* on the subject of fairies, and it was decided to include the first two photographs in the article. Meanwhile, the girls were given a camera each, and asked if they could take some more fairy photographs. As we said earlier, they took three more — unfortunately, no-one else was present when they did this — and the last of the three was a rather fuzzy photograph which some fairy experts later said was a photograph of a fairy taking a magnetic sun bath.

The appearance of the first two photographs in *The Strand Magazine* in December 1920 caused a world-wide sensation. Accordingly, the other three photographs were incorporated into an article by Sir Arthur which appeared in the same magazine for March 1921.

For many years no-one was able to conclusively crack the case. Some people pointed out that the photographs could have been of cut-out cardboard figures, and that, coincidentally, one of the girls was quite a good artist and also worked at a photographic studio for a time. Others threw caution to the winds and stated flatly that the case showed nothing more than the absurd gullibility of Sir Arthur and E.L. Gardner at being completely taken in by two teenage girls. The blatant fraud squad view was well summed up by an American

friend of ours, the late Robert J. Schadewald, who remarked that simply to see the photographs were frauds, all you needed was "a half-way functional set of eyeballs".

Doyle was not one to be deterred by charges of excessive gullibility. After all, Geoffrey Hodson had visited Cottingley Glen and verified that it was literally teeming with fairy life. That was in 1921. Bob Forrest visited Cottingley Glen in 1976, and even took some photographs there, but he neither saw nor captured on film any fairies. In fact, he had a hard job angling the camera so as to avoid photographing an old oil drum and part of a defunct bicycle frame that had been unceremoniously dumped in the stream there. But then neither of the present authors would expect to see or photograph anything – the two girls, according to Doyle, Gardner and Hodson, had a rare combination of psychic gifts, and we, unfortunately, are decidedly non-psychic.

In 1978 the American Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP for short) put the Cottingley photographs through an image enhancement process. This is the computer technique developed and used in the American Space Program for increasing the definition of photographs taken from spacecraft. The process smooths out photographic blurring and reveals details which would otherwise be invisible to the eye. When the technique was applied to the Cottingley Photographs, there came to light what can best be described as the images of the strings which had held up the cardboard cut-outs of the fairy figures. This damning and disturbing news was reported in the magazine New Scientist on 10th August 1978, and it certainly looked for a while as if the Cottingley Photographs were done for. But then in the same publication, on 21st September 1978, Mr A. Weyman of High Wycombe stepped in to save the day: "The string in the fairy photos," he explained, "must be fairy string."

Thanks to Mr Weyman the Cottingley photographs lived on to reappear in the April 1979 issue of *Gnome News*, the official publication of the Gnome Club of Great Britain (a curious organisation run by Mrs Ann Atkin, partly to help humans to come to terms with gnomes and fairies, and partly to sell a wide variety of ornamental garden gnomes. Not to be confused with the Fairy Investigation Society.) It was an article by Robert Sheaffer, and quite simply it claimed that the Cottingley Fairies were really

winged UFO pilots from outer space. Today, UFOnauts do not have wings. They do not need them, Mr Sheaffer explained, because they have now developed techniques for nullifying gravity. When the Cottingley Photographs were taken, though, in 1917, extraterrestrial technology was not as developed as it is now. In those days, they still needed "external apparatus" to hop about – hence the fairy "wings". Incidentally, the small size of the "fairies" indicates that they came from a massive planet where the force of gravity was large, and their preoccupation with flowers and such like was probably botanical experimentation rather than play. That was Mr Sheaffer's view of things, at any rate.

Of course, if the fairies were really UFOnauts, it is natural enough to ask why no-one saw their spaceship. We now quote Mr Sheaffer's article:

The first series of fairy photographs was obtained during the First World War, in the summer of 1917. It is thus quite likely that the fairies' craft, when sighted, was mistaken for one of the many German dirigibles that were seen over England at that time, and hence it would not be correctly identified as a UFO. It seems likely that these creatures may even have deliberately disguised their craft, painting German markings and emblems on it so that they could carry out their reconnaissance unrecognised. Likewise, they may have deliberately adopted the dress and mannerisms of terrestrial fairies so that their true identity as extraterrestrials would not be suspected.

Speculation would doubtless have continued well after Mr Sheaffer's extraordinary article had it not been for the fact that in 1982 Elsie and Frances actually confessed that the photographs were fakes after all. The 'fairies' were paper ones, cut-out figures. It seems that the girls took the first two pictures, in 1917, principally to fool their parents. What they couldn't foresee was the involvement of Gardner and Doyle in 1920. The joke got out of hand, and in the end it simply became too difficult to reveal the truth without severely embarrassing someone somewhere. So they stayed silent, and the controversy went on for sixty years. Actually, it didn't *quite* end there, for Frances still maintained that the last of the photos – the so-called fairy sun-bath – *might* have shown real fairies after all.

...

We only ever knew one person who had actually seen the little people for herself. She was a young girl at the time, and confined to bed with mumps. One afternoon, she said, she suddenly saw a group of little men tumbling and somersaulting about the end of her bed. Of course, conventionalists will point out that these little men were the product of a fevered brain, but we have been told otherwise, again by the lady at the Fairy Investigation Society. She wrote:

Your friend was *really* seeing into the Fairy World when she had these visions, because her illness must in some way have affected her etheric body (which is closely allied to the physical) and brought her nearer to ethereal things. Sometimes the fairies or elves are trying to entertain the invalid, and they can also help to heal them.

Before any of our readers dashes out to catch some deliriuminducing disease, and thence retiring to bed in the hope of coming up with a fairy vision or two, let us put their minds at ease by reproducing a less drastic method of inducing fairy vision.

It comes from a strange book called *The Secret Commonwealth of Elves, Fauns, and Fairies* which was written by the Reverend Robert Kirk, and published in 1692. The method is quite simple, but involves the services of a wizard. So, first find yourself a wizard. After that, you simply follow a few basic rules. As the original account makes somewhat confusing reading to modern eyes, we have taken the liberty of modernising it, thus:

- 1. Put your left foot under the wizard's right foot.
- 2. Get the wizard to place his hand on the top of your head. Apparently, it doesn't matter which hand he uses.
- 3. Look intently over the wizard's right shoulder.

According to Rev. Kirk, anyone who tries this will notice that the view over the wizard's shoulder will take on a sinister appearance, which sensation will be followed by "a Multitude of Wights (i.e. fairies), like furious hardie Men, flocking to him haistily from all Quarters, as thick as Atoms in the Air."

Rev. Kirk also gives another method for inducing fairy vision, but frankly, we can make neither head nor tail of it. It involves winding a lock of hair about your waist – the hair having been taken from a corpse, by the way – then bending down and looking back between your legs. It is the bit after this that we don't follow, but then we think that wizards are probably easier to come by than corpse hair these days, so we are not unduly worried about being left behind by the intricacies of Rev. Kirk's alternative method.

If, after trying the wizard experiment, you can't get rid of the fairies again, then here is how to do it. It is not exactly pleasant, we grant you, but apparently it works. It comes from the book of translations of Old English manuscripts, referred to in the last chapter, *Leechdoms, Wortcunning and Starcraft of Early England*, by Oswald Cockayne:

Mix the hopplant with wormwood, bishopwort, lupin, ashthroat, henbane, harewort, viper's bugloss, heathberry plants, cropleek, garlic, grains of hedgerife, githrife and fennel. These elements are placed in a vessel under an altar, nine masses are to be sung over them, and later they must be boiled in butter and sheep's grease, to which should be added holy salt. They are then to be strained through a cloth, after which the worts must be thrown into running water. The foreheads of those afflicted by elves should be smeared with this salve, and it should be put on their eyes and where the body is sore.

Here is another 'cure', from the same source:

For a man haunted by apparitions, work a drink of a white hound's thost, or dung, in bitter ley; wonderfully it healeth.

Personally, we are not surprised. We should think that the very thought of it would cure more or less anything!

So there you have it. If you are willing to take the risks, and have a ready supply of wizards, lupins, heathberry plants etc., then do write to us to let us know what happens.

Chapter 13. Occult Chemistry and Psychic Archaeology

Once upon a time, atomic physics was a relatively simple affair. Every atom was like a miniature solar system with a nucleus of neutrons and protons at its centre, and with a host of electrons orbiting around it like tiny planets.

But then came a shock. These particles were not just particles. They were, paradoxically, waves as well, and many a physicist spent a sleepless night trying to reconcile these two equally valid opposites.

Then up popped the positron and the neutrino, followed by a deluge of new "elementary" particles, each as elementary, if not more so, than its predecessors, and sporting increasingly strange names. Even the quark is now old hat (there are now six types of them, including one with the delightful name of a charm quark!) As many readers will know, after a long and very expensive search for the elusive particle known as the Higgs boson, it is now thought to have been found. One wonders, though, if even that will be the last word in particle physics!

Nowadays to understand what is going on in atomic physics you need at least a degree in theoretical physics and a few million pounds worth of complex electronic gadgetry.

Or do you?

Not if the Reverend C.W. Leadbeater and Mrs Annie Besant are to be believed, for in the first two decades of the twentieth century, they claimed to have investigated the structure of the atom without so much as using a single equation, and without even spending a penny – if you see what we mean.

Their method was devastatingly simple. They just 'looked' at the atom in question, not with the ordinary eye, of course – an atom is far too small for that – but with the clairvoyant eye.

The theory seems to be that the same faculties that can be used to see into the fairy realms, or to communicate telepathically with the cat, or even to contact the spirit of your deceased grandfather, can also be adapted to act like an incredibly powerful microscope. They can be tuned to zoom in, as it were, into the very heart of the atom.

This extraordinary theory was put forward in their book *Occult Chemistry*, published in 1919. It is actually quite a complicated book, and not at all easy to read, but here is one of the simpler accounts of their procedure and its results:

The first chemical atom selected for this examination was an atom of hydrogen (H). On looking carefully at it, it was seen to consist of six small bodies, contained in an egg-like form. It rotated with great rapidity on its own axis, vibrating at the same time, and the internal bodies performed similar gyrations. ... The six little bodies are arranged in two sets of three, forming two triangles which are not interchangeable, but are related to each other as object and image. ... Further, the six bodies are not all alike; they each contain three smaller bodies – each of these being an ultimate physical atom – but in two of them the three atoms are arranged in a line, while in the remaining four they are arranged in a triangle.

By clairvoyant means, the Rev. Leadbeater and Mrs Besant actually discovered one or two hitherto unknown chemical elements:

... we found three chemical waifs: an unrecognised stranger between Hydrogen and Helium which we called Occultum, for purposes of reference, and two varieties of one element, which we named Kalon and Meta-Kalon, between Xenon and Osmium; we also found four varieties of four recognised elements and prefixed meta- to the name of each, and a second form of platinum, that we named Pt.B.

The world of orthodox chemistry remained totally unmoved by all this. For some reason, the scientists were unwilling to rearrange their precious periodic table of the elements, even in the face of Besant and Leadbeater's extraordinary revelations.

However, just for the record, the four meta-elements they mention in the above passage were meta-neon, metargon, metakrypton and meta-xenon.

For those of our readers who want a very simple account of what an atom really looks like, the following delightful description was given in one of Rev. Leadbeater's later books, *The Science of the*

Sacraments (1920):

It would be out of place here to describe them in detail, but I should perhaps say that an atom is roughly heart-shaped, and looks as if it were constructed of wires like a bird cage. Each wire is a spiral made in turn of still finer spirals which we call spirillae.

Nor is probing the structure of the atom the only application of clairvoyant vision. Geoffrey Hodson, whose investigations of the fairy realms we looked at in Chapter 12, was in addition to being an Occult Chemist (he fully confirmed Besant and Leadbeater's findings) an Occult Astrophysicist. No need for almanacs with Mr Hodson around, for example. If he wanted to know the positions of the planets in the sky at 8.42 p.m. on July 3rd, 1861, all he had to do was tune up his psychic powers to clairvoyantly "see" where they had been at that time. He was also able "by purely visual means", or so Mr Alexander Horne assures us, to distinguish the north and south poles of any magnet, and to follow the flow of its "magnetic emanation". Both of these feats are quite impossible for the ordinary, unaided senses, of course. Readers keen to know more about these experiments might like to dip into the book *Some* Experiments in Four-Dimensional Vision, co-authored by Geoffrey Hodson and Alexander Horne, first published in 1933.

Since about the 1930s Occult Chemistry and its associated studies seem to have fallen from grace. At least, neither of us knows of any present-day practitioner of them. By contrast, though, the field of Occult Archaeology is undergoing a boom.

There are several ways of investigating the past by psychic means, none of which is received at all well by the orthodox archaeologists and historians of this world. These may be briefly described as follows:

- 1. Communication with the spirits of the dead: For example, if you want to know anything about the history of a medieval castle, then you get a psychic to ask the spirits of its departed inhabitants all about it.
- 2. Psychometry: A psychic, by handling, say, an ancient statuette, can tell you for what purpose it was carved, what god or goddess it represented, and all about the artist or craftsman

- who made it, as well as the style of life he led and the type of community in which he lived and worked.
- 3. Clairvoyant excavation: If you are interested, say, in early Incaruins, you can get a psychic to tell you just where such ruins are to be found, and exactly where and to what depth to dig in order to find them. He can also tell you what artefacts you will find in the course of your excavations.
- 4. Memories from previous incarnations: Here a hypnotised subject is regressed into past lives and questioned about them.
- 5. Dowsing either out in the field or on a map: Just as one can dowse for water or minerals, one can also dowse for buried artefacts, ruined walls, coins, bones, pottery etc.

Jeffrey Goodman's book *Psychic Archaeology* (1977) involves every one of these methods. Mr Goodman's own excursion into psychic archaeology started with a dream of exploring a desolate landscape which he instinctively knew to have been the location of a prehistoric village. Unfortunately the dream gave no clue as to where this location was, but Mr Goodman felt that it was somehow all to do with the long-standing riddle of who the first inhabitants of America really were, and where they came from.

At the suggestion of a friend he sent the details of his dream to a psychic called Aron Abrahamson, who psychically focussed on the spot of Mr Goodman's dream and found it to be in the mountains near Flagstaff, Arizona.

Mr Goodman's book is largely concerned with the finding and excavation of this site and the pushing back of the origins of Man in America to some half a million years ago. This in itself is enough to give orthodox archaeologists the shudders (they claim that the first inhabitants of America came from Asia only a few thousand years ago), but it is by no means the only shock in store for them. According to the psychic, the first Americans were not nomads from Asia, but refugees from the lost continents of Atlantis and Lemuria, and orthodoxy has never been overly keen on any theory involving either of those two places. Atlantis, historians claim, is no more than a myth run wild, and Lemuria an even less respectable nineteenth-century fantasy.

Here, however, is Mr Goodman's story – or rather the story passed on by the spirits through Aron Abrahamson to Mr Goodman:

Aron said the first people in this area came in small numbers 500,000 years ago. They had high ideals and were a priestly and peaceful people who lived in communes. In time other people arrived, having heard about the good new land. He said the different groups of people came from the lost continents of Lemuria and Atlantis. Some worked their way first through South America. He said they had a symbolic writing similar to Egyptian hieroglyphics, and that one of their key symbols was the ankh. He said the later groups also had cultivated seeds, domesticated animals, and cured leather. Instead of some prehistoric Buck Rogers culture, he describes a quiet, sleepy community which was technologically advanced in more subtle ways. He described how the culture rose and fell several times in this one area: that buried deepest was the highest civilisation. The big fall came as the population grew larger, an unequal distribution of land and property took place, and a ruler was set up by some self-appointed power grabbers.

For the actual dig, Aron selected a ten-foot square inside the area of the Flagstaff site and predicted what Mr Goodman and his team of diggers would find as they excavated a shaft at that position:

He told of major changes in the geology at eight feet and at fifteen feet. He also predicted that throughout the test shaft we would find hammerstones, cutting tools, choppers, and scrapers. He also thought that we would find one piece of fabric and some potsherds in one section. At twenty to twenty-three feet, Aron said that we would find the bones of three different individuals. They would be the bones of a mother and two children who had perished while huddling together against an avalanche of ice and water coming from the snowfield above them. He said that they were overcome so quickly that even their horses fell beside them.

According to Mr Goodman, most of Aron's predictions were fulfilled, though there are a few doubts expressed by some archaeologists as to whether some of the 'stone tools' found were actually artificial or whether they were just an amalgam of natural stone and Mr Goodman's imagination. The potsherds and the cloth, however, failed to turn up, as did the skeletal material. Of the latter, Mr Goodman wrote, rather optimistically, "Maybe the bones lay just beyond the periphery of the shaft."

The field of psychic archaeology is by no means a new one. In 1880 one Leonard Herbert Nason published a book called *History of the Prehistoric Ages: written by the ancient historic band of spirits*. It was a mediumistic affair, the ancient band consisting of twenty-four spirits, the oldest of whom lived 46,000 years ago and the youngest 3,000 years ago. Their account of history began with the origin of the solar system and ended with the story of Romulus and Remus. One critic said of it that every page showed "preternatural dullness and ignorance so characteristic of all the spirits with whom mediums have dealings".

The Atlantean strain of psychic archaeology is not new either. In 1911 a Joseph B. Leslie published his book *Submerged Atlantis Restored*, an 800-page history of the lost continent as supplied by the spirits of its deceased inhabitants.

As for archaeological excavation per se under the guidance of spirits, in 1907 a church architect called Frederick Bligh Bond delved into the history of Glastonbury Abbey by consultation with the spirits of deceased monks. In particular Bond claimed that he was led to rediscover the lost Edgar Chapel at the east end of the abbey through spiritual guidance.

One monkish communication, dated 26th November 1907, reads as follows:

There is much under the grass deep down and unrifled. The east of St Mary's has a vault under the stairs and under the nave there are vaults – the destroyers feared, and the ruin of the walls hid the entrance in. Under the tower the vault is perfect, and many names of those buried therein deep down.

When Bond asked where they should start digging, the spirit replied: "The east end. Seek for the pillars, and the wall(s) at an angle. The foundations are deep."

Sometimes the message came through in typical old English:

And beyond rose a Capella of Edgar ye sainte, faire and high with grete windowes with transomes and between ye windowes were pillars as panellae the whych did holde ye roofe.

Occasionally there were bursts of Latin, as was the case with the sitting of 18th April 1911, at which Bond asked the spirits who built St Dunstan's Chapel:

Edgarus ybuilded long syne. Radulphus hoc opus restoravit. After hym, ye fyre yburned yt. Then he was a capella in muro ...

Rediscovering a lost chapel via spirit agency seems impressive at first glance. Unfortunately some people denied that Bond had been guided to make his archaeological discoveries by these spiritualistic communications. Rather, they claimed, Bond had retrospectively fitted the communications to discoveries that were made by distinctly non-psychic means.

Let us explain. The spirits allegedly communicated through the pen of a mediumistic sitter. That is, they were delivered by the process known as automatic writing, with the occasional automatically drawn sketch-map thrown in.

However, automatic writing is frequently none too clear, and even Bond was forced to admit that (for example) the word "eastwards" in one communication could just as easily have been read as "westwards" or "outwards", and that the distance "nineteen yards" might actually have been "thirteen yards".

Add to that the fact that the maps drawn by the spirits could usually, at best, be described as vague "blindfold tracings" and it becomes hardly surprising that the sceptics accused Bond of fitting his scripts to later discoveries. And this does become all the more plausible when you realise that *The Gates of Remembrance* was published about ten years after the events it purported to describe. Sincere though Bond might have been, the critics argued, the "fit" was made to seem far better than it had really ever been.

The idea of finding out about the past by contacting the sprits of the long dead is still with us here in the twenty-first century. Thus, a former footballer, security guard and now TV medium, Derek Acorah, has delved into some of the puzzles of Ancient Egyptian history. In a TV series called "Paranormal Egypt" broadcast by Living TV in 2008, he claimed to have communicated with the

spirits of Queen Hatshepsut and the boy pharaoh Tutankhamun, amongst others. In addition, whilst filming in the Great Pyramid he sensed a lot of "spiritual activity" going on, the experience being terminated when he was struck in the face by "a paranormal substance or powder", and started to choke. "Something didn't want me there in the Great Pyramid," he said later. Unkind critics said that it was probably the Ancient Egyptian way of telling Mr Acorah to stop messing about; others wondered why the spirits that possessed Mr Acorah on camera spoke with the same Liverpudlian accent as the unpossessed Mr Acorah; and yet another wondered why the spirits that spoke through Mr Acorah didn't tell viewers anything that wasn't readily available through Wikipedia. But there it is – that might only serve to show how good Wikipedia is!

Let us turn now to archaeological dowsing. One of the most extraordinary investigations of the past by dowsing is undoubtedly Guy Underwood's book *The Pattern of the Past* (1969).

Mr Underwood's studies began with the observation that there might be some relationship between the religion of the Stone Age and water divining. This idea was largely inspired by a man called Reginald Smith. Mr Smith, in addition to being a former Keeper of British and Roman Antiquities at the British Museum, was also a dowser, and his investigations, in the 1930s, of a large number of prehistoric circles and earthworks revealed the presence of underground water beneath each of them. To be more precise, Mr Smith discovered that beneath the centre of every prehistoric temple lay a "blind spring" – that is, a point from which several underground streams radiated outwards. From this he inferred that the sites of those temples had been fixed by dowsing.

Mr Underwood took Mr Smith's observations much further. He claimed that not only was the location of ancient monuments fixed by dowsing, but so too were their sizes, shapes and internal groundplans. Furthermore, blind springs were only a small part of the story. Mr Underwood claimed that virtually every detail of every prehistoric structure was determined by reference to a complex system of what he called "Geodetic Lines".

Roughly speaking these are lines of force, rather like those associated with magnets, and they come in three types. First, water lines, which are associated with underground streams, and which are the things normally detected by a dowser in his search for

underground water supplies. Second, track lines, which are so called because all old roads, tracks and pathways seem to follow them. Third and last, aquastats which are the lines of force mostly involved in the layout of ancient monuments. Incidentally, as with the magnetic variety, a geodetic "line" is not necessarily straight – in fact, it is often decidedly crooked. Nevertheless the term "line" is adopted rather than alternatives like "course" or "contour".

Now before we go any further we had better explain that it is no use our readers grabbing the nearest hazel twig and heading for Stonehenge. You see, there are two types of dowsers, negative dowsers, who are sensitive to water lines but not track lines or aquastats, and positive dowsers, who are sensitive to all three. Most water diviners are negative dowsers, so that even if you are lucky enough to be able to dowse for water successfully, you are not certain to be able to "see" the aquastats and track lines that form the basis of Mr Underwood's theory. However, if you consult *The Pattern of the Past*, you will find a variety of special geodetic dowsing rods with which to try your luck, and a list of hints to point you in the right direction should you prove to be a suitable candidate for positive dowsing. Even then it isn't a straightforward business since your sensitivity is governed by such factors as left or right handedness and grip control.

Next, even if you turn out to be a competent positive dowser, the situation is far from simple, for although there are only three types of geodetic line, there is a wide variety of secondary effects associated with them. The would-be interpreter of ancient monuments needs to be aware of these, and to proceed with care and caution, as many of them are easily missed. We won't go into details here for lack of space but, to take one notable example, one effect of a blind spring is to cause local geodetic lines to spiral into it. The number of coils, Mr Underwood assures us, is invariably a multiple of 7 in the case of water lines and aquastats, and of $3\frac{1}{2}$ for track lines. According to Mr Underwood, since the blind spring became the religious "heart" of an ancient temple, we may have an explanation here for the prevalence of both the spiral symbol and the mystic number 7 in ancient religions.

What with spirals and loops, nodes and parallels, reversed circles and feathers, haloes and overlapping arcs, the geodetic investigation of our ancient monuments is a complicated business. Even Mr

Underwood likened it to "some strange, complex and incomprehensible branch of physics", and when you consider that many of these secondary geodetic phenomena shift their location and intensity according to the time of year and the phase of the moon, then you can quite understand that Mr Underwood's theories are something of a closed book to all but the competent positive dowser.

Of course, things have to be neither simple nor openly visible for them to be real, and a multiple aquastatic left-handed spiral is no queerer than a quark when all is said and done.

But even granted all these lines of force exist, why should ancient man have built his temple so as to incorporate them? The answer lies partly in nature and partly within ourselves.

Nature responds to the geodetic phenomena of the Earth Force. According to Mr Underwood, many animals give birth to their young over blind springs. Cows sleep over them; horses meditate over them; and owls have their favourite roosts over them, to cite but three examples. Migrating fish and birds, Mr Underwood assures us, follow well defined geodetic paths, and the buffalo trails of North America, as well as the 'tracks' followed by farm animals, are likewise geodetic in origin. Again, ant-hills tend to be located on water lines, and various trees, such as mistletoe, hawthorn and willow, tend to flourish near blind springs or geodetic nodes (sharp bends in the line of force). Indeed, those curiously deformed trees with twisted trunks are actually responding to particularly strong vortices of geodetic force.

The effects of the Earth Force on animal and plant are plain to see, Mr Underwood claims, if only one knows where to look. To civilised, desensitised, modern man, however, the influences of the Earth Force on himself, though still present, are rarely perceived. To our ancestors, though, more sensitive to these things, their influences were clearly perceived. Aquastats were beneficial and water lines harmful – hence the curative legends associated with some ancient sites and the malignant 'presences' supposed to inhabit others.

Mr Underwood theorises that Ancient Man believed a "Life Spirit" dwelt inside the Earth and that geodetic phenomena were manifestations of it. He rendered this system 'visible' by using a sort of code of monuments to mark the places at which the various

aspects of the Earth Spirit were manifested. According to Mr Underwood, our ancestors used about thirty different types of topographical marker to render the Earth Spirit visible – from simple standing stones to long barrows, from stone circles to linear mounds. The curious markings on certain stones, Mr Underwood explains, actually convey local geodetic information, and the reason that so many old English roads twist and turn so inexplicably is because they are following the course of the track lines beneath them.

According to Mr Underwood, ancient man knew his Earth forces, and lived in harmony with them. Some of his geodetic practices even survived into medieval times under the guise of Freemasonry, and made their appearances in the groundplans of medieval cathedrals. What seem to the casual eye of today to be anomalies of church architecture – such as skew groundplans or superfluous doors – are actually geodetic necessities, Mr Underwood explains. Skew groundplans are actually following the course of a central aquastat, and a superfluous door arises from the geodetic convention that no track line or aquastat should be obstructed. Perhaps, not surprisingly, the altar marks the position of a blind spring – the religious 'heart' of the site.

Fascinating as Mr Underwood's theory is, it does have its shortcomings. For example, menhirs and dolmens were both used to mark blind springs, and yet Mr Underwood fails to explain why a menhir should mark one blind spring and a dolmen another. Why weren't both marked by dolmens or both by menhirs? He has to confess that this must rest on some factor "not yet recognised or identified".

Again, one gets the distinct impression that Mr Underwood sees geodetic implications in just too many places. For example, it seems fairly obvious that a standing stone lying on its side has at some time or other just fallen over or been vandalised. Yet Mr Underwood sees marvellous geodetic symbolism in such recumbent stones – so much so that he denies they were *ever* upright! Again, for him, the flying buttresses of medieval cathedrals cease to be devices for structural support, and become instead aquastat bridges. Finally, we find it hard to believe that the tombs of Edward the Confessor, Henrys V, VI and VII, not to mention Queen Elizabeth I, were one and all deliberately sited over blind springs, or that the famous

White Horse of Uffington was carved because the geodetic lines in that particular locality just happened to form the shape of a horse!

The geodetic picture fits rather *too well*, if you see what we mean. Nevertheless, Mr Underwood's book is a fascinating read and noone can doubt the utter sincerity and sheer hard work that went into its pages.

Moving onto psychometry now, Jeffrey Goodman writes about a Canadian archaeologist, Dr J.N. Emerson, who works in association with a psychic truck driver called George McMullen. When handed a black argillite stone carving of the head of an ape-like creature, Mr McMullen "saw" that it had been carved by a Negro from Port-au-Prince, Haiti. Mr Goodman goes on to describe how Mr McMullen proceeded to make Sherlock Holmes look like an amateur:

He studied the object further and gave Emerson an even more fantastic tale. He said that the carver was a black man who was a native of West Africa who had been captured and taken as a slave to the Caribbean by the Spanish. Later he had been taken on an English ship sailing to British Columbia where he escaped and was sheltered by the native Indians. There he married an Indian, raised a family and died.

This type of investigation is not new either. In 1938 John Foster Forbes published a little book called *The Unchronicled Past* which he described as "an investigation of our past history by psychometry".

Mr Forbes had an almost irrefutable argument that he was on the track of 'real' history. It was to the effect that his discoveries were just too fantastic for a normal mind to have made up — and with that we won't argue.

According to Mr Forbes, psychometry reveals that England is a "truly favoured land" (in a spiritual sense) which in its ancient past was "controlled most perfectly by the masters and past masters of ancient masonry". These masters, needless to say, came originally from Atlantis and constructed their temples "to respond in proper formation to the magnetic influence of the sun, the moon and the stars." The Atlanteans, it seems, could, by means lost to today's science, harness the powers of the cosmos and turn them to their own beneficial ends.

On certain occasions and at certain annual

recurrences, many of these temples would be used for specific purposes. The domed vaults would be constructed of precious substances that, being highly magnetic and volatile, they would yield adequate response at certain conjunctions. These temples and their amazing avenues would have therefore a most special significance on certain days of the year at times when these conjunctions took place.

Psychometry reveals that the temples of Cornwall were dedicated to the enrichment of the body, whereas those of Devon were dedicated to the revitalisation of the spirit. The Tors of Dartmoor, incidentally, are not natural formations according to Mr Forbes, but are "the vestiges of at one time tremendous inter-connected power storage temples."

There is much that is delightfully intriguing about Mr Forbes's book and one feels that if history wasn't actually the way he pictured it, then it jolly well ought to have been:

I feel that the only true tales are fairy tales. Tales that speak of people being suddenly cast into a magic sleep or stupor from which by the touch of one who understands the law and the formula, sudden awakening will come again and all the forgotten past of ancient days will come to life once more.

Closely related to psychometry is the process whereby a psychic actually looks back in time. Jeffrey Goodman writes of Dr Emerson and the psychic truck driver:

Besides his obvious psychometric ability, George becomes psychically sensitive to any site he visits. According to Emerson, who directly observed him, George would walk very rapidly over a site area to orientate himself and would then give a reading about it. He would first give the age of the site, then describe the people, their dress, dwellings, general behaviour, and even their economic system. Then he would really get fancy. He would "go back in time" and put himself right out on the limb by giving specific information as to where ruined structures could be excavated.

But then, as with psychometry, there are times when one can't help but wonder if there isn't just a dash of romantic fiction that gets mixed in along the way. Here, for example, is an extract from Grace and Ivan Cooke's curious book *The Light in Britain* (1971). It concerns the large and impressive hill fort of Maiden Castle in Dorset:

I feel that this was originally a temple of sun worship for the early people who came from Atlantis. Only later did it become a fort. I feel there are particular parts of Britain and the rest of the world where cosmic rays are focused. ... Gods and spirits referred to in mythology were once all real spirits. I contact a sungod messenger. ... God-men such as these came to this place from outer space.

The Cookes' book is an interesting one as it demonstrates a sort of displaced patriotism, all too rare these days:

Our purpose in this book is to reveal something of the pure and holy light which ancient Brotherhoods in Britain have left as our heritage and for our blessing – a light which (as in the age-old legend of King Arthur and his knights) lies dormant, only waiting to break forth to inspire and lead the people to victory over the darkness of materialism.

Later in the book:

It looks to me as though Britain is as it were the central or "grail cup" of this whole planet. There are other beautiful centres in various parts of the world, but something uniquely pure and holy is here.

In a curious sort of way Comyns Beaumont's book *The Riddle of Prehistoric Britain* (see Chapter 14) says the same thing, and Foster Forbes believed that England was a "truly magic land" that would one day rise again.

But getting back to psychic archaeology, the use of hypnotism to transport people back to their past lives is well known, and the craze for this kind of investigation of the past really began with Morey Bernstein's book *The Search for Bridey Murphy* (1956). Mr Bernstein was a businessman and amateur hypnotist who claimed to have regressed an ordinary American housewife into her past life as a nineteenth-century Irish colleen called Bridey Murphy.

The trouble is that you have to be very careful with past lives.

Convincing as they can seem, it is a known fact that hypnotised subjects have a distressingly ingenious ability to concoct "past lives" from the half remembered trivia of childhood. Unfortunately, some persistent reporters from the *Chicago American* showed that Bridey Murphy was one of these – a fictional character based on childhood memories. They deduced this principally by tracking down the original – a lady called Bridie Murphy Corkell, whom Mr Bernstein's housewife had known in her childhood!

But the craze for investigating past lives under hypnosis continued. A hypnotherapist called Arnall Bloxham had for many years been performing such hypnotic regressions on subjects before becoming the subject of a TV documentary narrated by Magnus Magnusson. This was followed by Jeffrey Iverson's book about Mr Bloxham and his subjects, *More Lives Than One?* (1976).

Again, a hypnotist called Joe Keaton has published an account of his own experiments with regressed subjects in a book called *Encounters with the Past* (1979). This in its turn inspired a series of programmes on BBC TV entitled "Voices from the Past?" Chaired by TV presenter Bill Grundy, they showed that although the voices did *seem* to come from the past with conviction, sincerity and chilling realism, they were more likely than not elaborate fantasies issuing from the subconscious. When the histories related by the hypnotised subjects were checked against historical facts, the correspondences were poor and frequently non-existent. Fascinating as the phenomena of hypnotic regression to "past lives" undoubtedly are, it does seem that we haven't progressed very far since the original Bridie Murphy.

One of the present authors (BF) decided, in 2005, to visit a professional hypnotherapist who had some experience of regressing folk to their past lives. Unfortunately, he was not to be one of them, and despite the hypnotist trying three different hypnotic techniques, he saw nothing more than the back of his own eyelids. He did have a vague image of the outside of an old building, it is true, but it could actually have been either one of two old pubs that he was familiar with, and when asked by the hypnotherapist what was on the inside of the said building, he had to say that he hadn't the faintest idea, as he was on the outside. The experiment was a failure, and actually quite a costly one! But then as someone less sceptical said to him afterwards, maybe his scepticism actually stopped things working!

But do you need a hypnotist to get you back into your past lives? Can you not get yourself back there?

According to Colin Bennett's little book *Practical Time Travel* (1971), you can – by crystal gazing. Usually crystal gazing is associated with trying to see into the future, but Mr Bennett claims that by giving one's concentration a backward impetus in time instead of a forward one, the crystal can just as easily reveal scenes from your past lives. Nor do you need an expensive quartz crystal ball for this. Since the crystal is probably only a concentration object for inducing a light hypnotic trance, a small goldfish bowl filled with water (but minus goldfish!) would probably do just as well. Mr Bennett writes:

Gaze at the crystal intently. Picture time to yourself as a road of living memory. Think of the road as though proceeding from yourself into the heart of the crystal. As you concentrate you feel a subtle link beginning to grow between the crystal and yourself ...

The procedure, apparently, requires some practice, and it is not guaranteed to work at a first attempt, or even at all, but if you do try it, we are told that a sign that something is about to happen is a clouding of the crystal's surface and the appearance of a thin blue mist immediately above it. When the clouding parts, scenes from your past lives will materialise before you in the body of the crystal.

Another method of seeing back into your past lives, if you can't afford the going rate at the local hypnotist, and if the goldfish bowl doesn't deliver the goods, is to get a couple of friends to give you a special massage. Whilst you are lying comfortably on the couch, one person massages your ankles and the other rubs the lower centre of your forehead with a rhythmical circular motion. Eventually, we are told, you will feel yourself floating in the sky, and from this elevated position you can bring yourself down into the comings and goings of a past life.

This method was devised originally by a lady called Jacqueline Parkhurst, but received its widest airing in a book by an Australian novelist called Gerald Glaskin. His book was called *Windows of the Mind* and was published in America in 1974. On 13th June of that year, the English newspaper the *Sun*, noted mainly for the contents of its third page, based an article on Mr Glaskin's book, and invited actors Tom Baker and Derek Nimmo to be massaged into the past

by scantily clad young ladies. Hardly the most scientific of procedures but nevertheless, though Mr Baker failed to identify himself in a past life, Mr Nimmo recalled his past life as one of the Duke of Wellington's officers.

Naturally enough the *Sun* invited its readers to try out the experiment and to send in their experiences. On 25th June 1974, they published a selection of replies, including those from the reincarnations of a Roman soldier, a Victorian servant, a Wild West saloon hostess, and a dog!

Ironically, Mr Glaskin himself probably hit on the key to this whole business when he likened the experience to dreaming whilst awake.

This brings us to a 21st-century internet cutting-edge technological route to your past lives. For a mere \$30 you can buy, from http://www.past-lives-regression.com/past-life-regression/, a set of books and CDs to help you access your past lives by a sort of auto-hypnosis. The technique uses "binaural beats or brainwave entrainment." As the internet flyer explains:

This is where sound waves of different frequencies are played in each ear. Just by listening to the correct combination of alpha and theta wave frequencies with headphones it has been scientifically proven to induce the state necessary to achieve Past Life Regression very quickly.

If binaural beats aren't quite what you want, then you might try the Psychic Today website at http://psychictoday.uk/readers/past-lives. They offer phone readings, web-voice readings, email readings and video-chat readings of your past lives. They employ a number of "specialist hand selected psychics", each with their own PIN number, and by keying in the number of your chosen psychic (the details of each are given on the website, together with their availability at the time of viewing) you can have them unlock the secrets of your past lives. At the time of writing, calls cost £1.53 per minute from BT landlines; other providers and mobile costs may vary.

One man who had no trouble seeing into not just his own past lives (he had tramped the Holy Land with Christ, for example!) but those of other people as well, was the "Sleeping Prophet", Edgar Cayce. Mr Cayce, who died in 1945, claimed to be able to put himself

into an hypnotic trance and thence to read what he called the Akashic Record. This is supposed to be a sort of vast and detailed Cosmic Register of Events covering the entire history of the human race down to its minutest details. It can be 'read' like any ordinary book by a sufficiently advanced psychic, such as Cayce. Jeffrey Goodman, whose book *Psychic Archaeology* we referred to earlier, calls Cayce "the world's first documented psychic time traveller".

Mr Cayce's timetable of world history is enough to make any conventional historian or archaeologist take to his heels. In part it runs roughly as follows:

1,000,000 – 800,000 BC	Early Lemurian development
500,000 BC	Lemuria inundated by water; peoples scattered
400,000 – 300,000 BC	Lemuria inhabited & civilisation advanced
250,000 BC	Second Lemurian catastrophe, possibly by fire
200,000 BC	Early Atlantean culture emerged
80,000 BC	First Atlantean disturbance; final Lemurian submergence
28,000 BC	Second Atlantean disturbance; recorded Biblically as the Great Flood
10,700 BC	Final destruction and sinking of Atlantis
10,390 BC	Completion of Great Pyramid in Egypt by the priests Ra-Ta and Hermes.

Incidentally, in addition to fanning the contentious fires of both Lemuria and Atlantis, Mr Cayce seems to have firmly put his foot in it as regards the Great Pyramid. It was almost certainly built in about 2600 BC by the pharaoh Cheops and not at all as Mr Cayce claimed. Perhaps the Akashic Record is as subject to journalistic bungling on an astral level as some of our newspapers are on an earthly one!

Many people who consulted Cayce to find out about their past lives found that at some stage of their karmic careers they had been citizens of Atlantis. But even more curious karmic facts came to light when Mr Cayce read what the Akashic Record had to say about Jesus, for apparently Adam, Enoch, Joseph, Joshua, Jesus and a certain Amilius the Atlantean were all reincarnations of the same

being! (George Hunt Williamson's reincarnational patterns amongst historical figures, mentioned in Chapter 6, drew their inspiration from Cayce, even down to the extraordinary detail that developing souls reside in the vicinity of the star Arcturus, supposed to be the centre of the whole universe, before deciding in which planetary system to be reincarnated!)

"Does Cayce know what he was talking about," Jeffrey Goodman asks, "or does his time machine have a loose screw?" Mr Goodman concludes decisively that there are no loose screws at all, though for ourselves we have the sneaking suspicion that there are several. Certainly we can quite understand why the majority of archaeologists put not their faith in psychics.

Mr Goodman, however, has other ideas. He sees a rosy future for psychic archaeology in all its forms:

Decades ago we drilled for oil only in areas where that commodity literally seeped from the ground. Then came seismography and geophysics and we were able to "see into" the ground. A whole new age of oil discovery was ushered in. Today we are still excavating archaeological sites where artefacts, like oil, seep from the ground. Psychic archaeology heralds a whole new age of discovery. It provokes man to take an even closer look at himself – and everything around him.

All this may seem a little far-fetched, but one does have to be cautious and avoid the trap of being over-sceptical. One of us (PM) found this out forcefully many years ago. The subject of dowsing came up – not in any archaeological context, but more conventionally for water. Tests, carried out under controlled conditions, were, alas, conclusive. PM could dowse. He still can. On the whole, he rather wishes he couldn't, but the facts cannot be denied. Just how and why it happens is another matter altogether!

Chapter 14. Catastrophists in Collision

Legend has it that the world passes through cycles of history, each of which is terminated by either fire or water. But what gave rise to such legends? According to Immanuel Velikovsky, they probably arose, in part, from events that accompanied the Earth's encounter with a giant comet in the second millennium BC.

But this comet was not one of those flimsy little things known to orthodox astronomers as the ghosts of the solar system. This comet was a far more fearsome beast that stalked menacingly about the solar system, raining fire upon the Earth, and leaving its terrible imprint on the mythologies of those peoples unfortunate enough to witness the encounters. Velikovsky's comet never did things by halves.

Velikovsky published several books about catastrophic influences in world history, but the most famous of these by far was his book *Worlds in Collision*.

The theory goes like this. Contrary to the opinion of orthodox astronomers, the solar system was not the same a few thousand years ago as it is now. The Earth was closer to the Sun, the Moon was more distant from the Earth, and the planet Venus didn't even exist.

Then, sometime before the middle of the second millennium BC, there was a great commotion on the planet Jupiter, and a huge comet, later to lose its tail and become the planet Venus, was expelled violently from it. The Venus Comet shot out into the solar system and adopted a highly elliptical orbit about the Sun, which path carried it across the orbits of both Earth and Mars. Straight from the start, then, there was a danger of collision, though the title of Velikovsky's book is actually something of a misnomer, since nowhere in it did Velikovsky claim that worlds actually collided. Rather, Velikovsky's "collisions" are to be interpreted as somewhat hair-raising near-misses!

Be that as it may, twice in the 15th century BC the Venus Comet, with its spectacular trailing tail, approached the Earth and all hell was let loose. Earthquakes, volcanoes and tidal waves were

generated by the forces of attraction between the Comet and the Earth. Violent electrical discharges shot back and forth between the two bodies, and in the commotion the polarity of the Earth's magnetic field was reversed. The rate of the Earth's spin on its axis was affected too. As a result of the latter, the Sun seemed to stand still in the sky, and other parts of the world experienced a prolonged night. The Earth rocked on its axis, and on at least one occasion, it tipped completely upside down, so that the Sun rose where once it had set, and vice versa.

The year lengthened as the Earth was pushed further from the Sun, and the Moon's orbit around the Earth was seriously disrupted. Showers of meteorites tumbled from the sky, and clouds of dust and gas from the Comet's tail descended to pollute the atmosphere, and in some places, to blot out the light of the Sun altogether.

Tidal waves swept around the world, giving rise to the ubiquitous legend of the Great Deluge, and as the gases of Venus's cometary tail reacted with the oxygen of the Earth's atmosphere, naphtha or crude petroleum was formed. Some of this burned fiercely – hence those legends of destruction by fire – and some of it, in liquid form, soaked into the ground to form some of the oil fields known to us today.

They were stirring times, those days of the Venus Comet. Their memory, Velikovsky claims, is preserved in the myths associated with the destruction of the world, the disruption of natural order, and the wars of the gods. The battle between Zeus and Typhon, the legend of Phaethon, the floods of the Epic of Gilgamesh and the Greek Deucalion, not to mention the plagues of the Exodus, are all 'memories' of the catastrophes associated with the Earth's encounter with the Venus Comet. Legends from Greenland and Mexico, China and Peru, Scandinavia and Polynesia, Japan and Africa, all tell the same story, Velikovsky assures his readers. True, these myths and legends frequently describe the events in veiled and jumbled terms, but nevertheless the terms are plain enough for those who know what they are looking for. At least, according to Velikovsky they are. Conventional scholars have other ideas. They claim that these same legends have much less dramatic explanations which do not entail global catastrophes and rampaging planets. They also claim that Velikovsky is very selective in the way

he handles his evidence, often ignoring material which doesn't support his theories.

Velikovsky had a ready and ingenious explanation for why some of these myths and legends are on the vague side, and why our history books contain not a single explicit reference to these extraordinary events. He believed that the human race had been so traumatised by these catastrophes that the memory of them was effectively erased from our collective subconscious as time rolled on. He called this his hypothesis of collective amnesia. Orthodox scholars called it his excuse for flagging evidence.

But let's get back to the Exodus, as it is Velikovsky's reinterpretation of this part of the Bible which makes up a crucial part of his thesis.

In Ex. 7.17–21, the Nile is turned to blood, the fish die and the river stinks. This, of course, was caused by the reddish cometary dust, poisonous to fish, and a harsh irritant to the skins of man and beast alike – hence also the plague of boils and sores in Ex. 9.8–11.

As the comet drew closer to the Earth, swarms of meteorites tumbled noisily from the sky – hence the "grievous hail" of Ex. 9.18 and "the almighty thunderings and hail" of Ex. 9.28. With the closest approach of the comet came the plague of "darkness which may be felt" (Ex. 10.21–23); earthquakes (Velikovsky's interpretation of the tenth plague of Ex. 12.29); and hurricanes, the "mighty strong west wind" of Ex. 10.19. All these, he claims, are symptomatic of a catastrophic encounter with a giant comet. Incidentally, the comet itself is the "pillar of cloud and fire" in Ex. 13.21.

As to the parting of the Red Sea with "a strong east wind", Velikovsky argues that this was produced by a combination of hurricane-force winds and monstrous tidal forces which, whilst rolling tidal waves around the rest of the world, obligingly held the Red Sea apart for the Israelites to cross.

The Exodus, then, is one record of this world-wide cometary disaster in the fifteenth century before Christ.

As we said earlier, the Earth suffered two such encounters at that time, separated, Velikovsky claimed, by a period of fifty years. The Venus Comet then retreated, and though it continued to move in an erratic orbit around the Sun, it no longer threatened the Earth.

It did, however, have a catastrophic encounter or two with Mars, and this had two effects. First, it diverted Venus into its present nearly circular orbit around the Sun; secondly, it sent Mars into an orbit which brought it catastrophically close to the Earth every fifteen years. Incidentally, when Venus and Mars collided – in the eighth century BC, according to Velikovsky – the asteroids were formed, this neatly explaining something that has puzzled orthodox astronomers for many years.

Not being as heavy as the Venus Comet, which by the eighth century BC was starting to lose its tail and become a planet, Mars was considerably less dangerous. Even so, encounters with Mars were not to be sneered at, and they brought about the downfall of the Etruscan civilisation and the decimation of the army of Sennacherib (II Kings 19.35). They also explain why Mars came to be regarded as the god of war, and they provide Velikovsky with the basis for an entertaining reinterpretation of Homer's *Iliad* in terms of a cosmic saga rather than a human one. But that is a debate in which we propose not to get entangled here!

After the catastrophic encounter of 23rd March 687 BC, on which occasion Sennacherib's army was destroyed and the Moon's surface was boiled up into its present cratered form, Mars settled into its present orbit. Since the seventh century BC, then, all has been comparatively quiet on the planetary front.

All this is the briefest summary of Velikovsky's extraordinary book *Worlds in Collision*. Its publication in 1950 caused an uproar which has not entirely subsided even yet.

Generally speaking, scientific eccentrics do not have much power, official or otherwise. The main modern exception is Trofim Lysenko, who succeeded in putting back the science of genetics in the Soviet Union by at least twenty years. Velikovsky has never had official backing; nonetheless, he has become very much a cult figure, not only in the United States but also in some other countries. One hears him compared favourably with Newton, Galileo and Einstein. Why?

Well, there can be no doubt of the amount of scholarly research that has gone into *Worlds in Collision* and its successors. Every literary reference is correct, and there are many of them. In fact, we have a classic case of excellent research being twisted into an eccentric theory – just as one author proved, some years ago, that

according to *Hamlet*, Shakespeare must have been a scratch golfer; again, every reference quoted from the Bard's work was correct. Readers are impressed by this sort of thing, and Velikovsky does it very well indeed. He also writes well; and his doctorate is genuine enough. What is too easily forgotten is that although he knows a great deal about the Bible and such like, his knowledge of astronomy and physics leaves much to be desired. (This he demonstrated in his booklet *Cosmos Without Gravitation*, published in 1946.)

Secondly, there is no doubt that in tackling Velikovskianism, scientists made some grave errors of judgement. When *Worlds in Collision* first came out, it was greeted with considerable amusement – just as would have been the fate of a new book proclaiming the Earth to be flat – but also some alarm, because it was put out by an erstwhile respectable publisher (Macmillan) and was advertised as a new, profound, important and far-reaching work. Because of its erudition (so far as its literary dexterity was concerned), it started to have a real influence. Had scientists continued to chuckle at it, the whole episode would probably have been over in a few months. Instead, Velikovsky was bitterly attacked, and some educationalists threatened to boycott the whole of the Macmillan list unless Velikovsky was removed. This was duly done; but it made Velikovsky into a martyr, and he benefited hugely.

Thirdly, there was the point made earlier: Velikovsky virtually made up his own brand of astronomy and physics to accommodate his historical reconstruction, so that there was little common ground on which to base a sensible argument. Orthodox scholars argue that the most elementary mathematics will show that the whole concept of an object of the mass of Venus being shot out of Jupiter is absurd. Velikovsky and his followers, however, postulate hitherto unheard of mechanisms by which they claim this could have happened. Likewise, orthodox scholars claim that the orbital changes involved in Velikovsky's scenario are impossible, and again Velikovsky and his followers step in with hypothetical forces which they claim can account for such changes. Orthodox scholars also believe that Velikovsky's time scale is all wrong. For instance he believed the lunar features to be only a few thousand years old instead of a great many millions. The Velikovskians however dispute the methods by which the scientists arrive at their

conclusions. Occasionally Velikovsky did hit the nail on the head (e.g. the high surface temperature of Venus and the radio noises from Jupiter) – but whenever he did so, it was always for the wrong reasons, and much more often he was wrong (e.g. he predicted that the Martian atmosphere would be made up of argon, neon and nitrogen; actually, it is almost pure carbon dioxide.) All of which goes to show that if you make enough predictions, some of them must be right.

Eventually the scientists had had enough. They challenged Velikovsky to defend his theories in a public symposium, and he duly did so; the results were published in a book in 1977, *Scientists Confront Velikovsky*, edited by Donald Goldsmith. In the end, Velikovsky's own contribution was not included, simply because he refused to allow it to go through. Orthodox scholars considered that the symposium had torn Velikovsky's whole picture to shreds. Velikovsky's supporters had other ideas. The American Velikovskian journal *Kronos* launched its own counter-attacks with issue number 10, *Scientists Confront Scientists Who Confront Velikovsky*. The debate went on, then, reaching ever dizzier heights – or murkier depths, depending on how you look at it – not just in America but here in England, too, under the auspices of The Society for Interdisciplinary Studies. *Worlds in Collision* was just the beginning.

(For interested readers, the Society for Interdisciplinary Studies still continues – see: http://www.sis-group.org.uk/. For the journal *Kronos*, which ceased publication in 1988, see http://en.wikipedia.org/wiki/Kronos_(journal), but for list of contents of all its issues, see http://www.catastrophism.com/cdrom/pubs/journals/kronos/index. Kronos Press still continues, see http://www.kronos-press.com/. The catastrophist journal that succeeded *Kronos* was *Aeon* – see http://www.aeonjournal.com/.)

Among Velikovsky's followers special mention must be made of Professor Alfred de Grazia, a professor of Social Theory at New York University. He has taken Velikovsky's ideas as a starting point and turned them into a whole new way of looking at the world, from astrophysics to psychology, and from geology to the origins of human speech. He calls his system Quantavolution which means, roughly, that the solar system, and in particular our Earth, have come to be as they are, not through gradual evolutionary processes, but through dramatic transitions related to Velikovsky-style planetary catastrophes. Professor de Grazia has published a series of fifteen volumes on his quantavolutionary theories (full details can be found on his website – http://quantavolution.net), and fascinating reading they make even if, like us, you find it difficult to believe more than about one word in ten. We shall concentrate here on one volume of that series, *Solaria Binaria*, published in 1984, which he co-authored with Earl R. Milton, Associate Professor of Astronomy at Lethbridge University in Alberta. If our readers find the following account of the history of the solar system rather unbelievable, they should remember Professor Milton's qualifications!

As the title of the book suggests, the authors believe that our Sun was once one half of a binary star. This binary star was formed when a primitive Sun, containing about 11% more matter than our present Sun, became unstable and "fissioned" or split into two parts. (It should be said here that Professors de Grazia and Milton postulate involved electromagnetic mechanisms in their model, mechanisms quite unrecognised by most orthodox astronomers. So, on their model, a star can become electrically unstable and "fission" in this way.) One of these parts is our present Sun and the other they call Super-Uranus. Between the Sun and Super-Uranus was a sort of tube of material or debris, held in place by electromagnetic forces, and in this tube, from the debris of the fissioning process, were formed the so-called terrestrial planets, Mercury, Earth, Mars and Apollo. If our readers wonder where Venus has got to, and why Apollo has put in an appearance, well, we'll return to that below. This fissioning process, incidentally, took place about 1 million years ago. (Such a late creation poses no problem for dedicated quantavolutionists, for they can easily explain the errors of conventional scientists who see everything taking place in millions and billions of years!) For the record, the Sun and Super-Uranus were separated by about 65 million miles. The terrestrial planets occupied the zone between 38 and 60 million miles from the Sun, though they didn't orbit the Sun independently, as they do now, being held inside the tube. Fig. 14.1 will make the configuration clear.

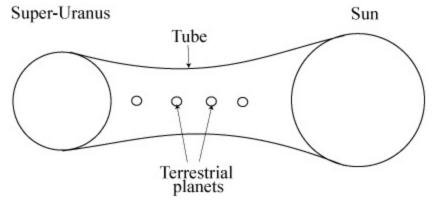


Fig. 14.1

For many thousands of years the dust and debris in the tube would have obscured a direct view of either the Sun or Super-Uranus, and according to Professors de Grazia and Milton it was only about 13,000 years ago, with a thinning of the debris in the tube, that men became aware of them as heavenly bodies. Before then the world had been illuminated by diffused light, and also, incidentally, by a sort of 'neon tube' glow set up by electrical interchanges between the Sun and Super-Uranus. Super-Uranus appeared as a luminous disk about twice the size of our present Sun, and with the earth locked in a position about two-thirds of the way along the tube from the Sun end, the Sun would at that time have appeared about five times its present size. We should perhaps mention that the Earth was also locked with its then north pole facing Super-Uranus and its then south pole facing the Sun, but that is by the way.

Then Super-Uranus became unstable, and shells of matter were exploded out of it at intervals. This sequence of events is preserved in Indian mythology, our authors add, for we hear of the Cosmic Egg (Super-Uranus), which floated for thousands of years in the primordial waters (= space) until it 'burst' (= nova stage, and ejection of shell) to reveal the Lord of the Universe (the next phase of the Super-Uranus.) This apparently went on until about 11,000 years ago when Super-Uranus itself fissioned and ejected a huge chunk of itself down the magnetic tube towards the Sun. This chunk was Uranus Minor, and on its way down the tube, so to speak, it had a close encounter with the Earth. During this encounter our present Moon was torn from the Pacific Basin of the Earth, the Earth's tectonic plates were formed (*not* millions of years ago, note, as conventional geologists claim!), and the present geography of our modern world was established. Uranus Minor was also responsible

for dumping a deluge of water on the Earth as it passed by, and this was the beginning of our present oceans. (More water was dumped later, as we shall see.)

As Uranus Minor passed by the Earth it was deflected, and then further deflected by the Sun, so that it settled into an orbit entirely outside the binary pair. It became the planet Uranus known to us today. Meanwhile, back at the other end of the tube, Super-Uranus had turned into Super-Saturn – hence, our authors claim, the Greek legend that Saturn was the son of Uranus (i.e. formed from Uranus.) It appeared as a dull red disk, about three times the size of the present Sun.

But Super-Saturn was not stable, and eventually fissioned into at least three major fragments, these becoming the planets Jupiter, Saturn and Neptune. Jupiter orbited the Sun at about the Earth's present distance, Saturn moved out beyond Mars's present orbit, and Neptune moved out further still, somehow managing to dump yet another deluge down the tube and onto the Earth. This deluge occurred about 5700 years ago and is known to us as Noah's Flood. It topped up the oceans, started by Uranus Minor, to their present levels, and this neatly explains why Neptune is a god of the sea. This major disruption of Super-Saturn apparently also resulted in the disruption of the tube, and for the first time the planets Mars, Earth, Apollo and Mercury began to orbit the Sun independently. This was bad luck for Apollo, as he had a disastrous encounter with Jupiter, the end result of which was a lot of asteroids and no more Apollo.

Jupiter was now the binary partner of the Sun, of course, and it is no accident that in mythology Jupiter is the god of the thunderbolt. Electrical discharges still passed between the planet and the Sun, and every so often, when the Earth passed between the two, it got zapped with a cosmic thunderbolt. The idea that Jupiter governed thunder and lightning in ordinary atmospheric storms was simply developed from this cosmic original.

The rest we know from Velikovsky. Venus was expelled from Jupiter, Mars dive-bombed the Earth, and after some involved planetary manoeuvres, the solar system settled into its present configuration just after 700 BC.

These, then, are some of the later developments of Velikovsky's theories, and whilst we are about it we should perhaps mention some of the ideas put forward by some other followers of

Velikovsky. Again, they make interesting reading even if we ourselves cannot believe them. For example, Ralph Juergens believes that Tycho, the most prominent crater on the Moon, was gouged out by an electrical discharge springing from that part of the Moon's surface, and earthing, if you'll pardon the expression, at the South Spot (or Arsia Mons) on Mars. Talking of thunderbolts, Dwardu Cardona follows Velikovsky in claiming that ancient references to the sulphurous smell of the thunderbolts hurled by Jove may be a memory of the nuclear transformation of atmospheric oxygen into sulphur. This could only be effected, it is claimed, by a cosmic thunderbolt, since ordinary thunderbolts cannot accomplish such a thing. When we pointed out to Mr Cardona that the "sulphurous smell" reported by the ancients might refer to the pungent smell of ordinary ozone, which is produced when ordinary lightning strikes, and which is often reported, he declined to comment. "I have long made it a rule never to defend any of my published work in private", he replied to us somewhat huffily, though to be fair he did suggest that we might like to enter into a debate in the pages of the then current *Kronos* journal. In recent years, two of Velikovsky's followers, David Talbott and Wallace Thornhill, have even written an entire book about cosmic thunderbolts. Entitled *Thunderbolts of the Gods*, it introduces the reader to "an age of planetary instabilities and earth-shaking electrical events in ancient times." Finally, let us not forget Herbert C. Kaufman, who believes that the Egyptian god Ammon was associated with the planet Jupiter, and that it is no accident that Ammonia is found in the atmosphere of that planet. The Egyptians discovered this when the Earth and Jupiter had a close encounter of a Velikovskian, and, one imagines, pungent kind!

But Velikovsky is not the only contender in the catastrophe stakes. Two of his predecessors, William Whiston and Ignatius Donnelly ("The Prince of US Cranks") were mentioned in *Can You Speak Venusian?* But there is a third, much neglected, contender in this field, William Comyns Beaumont.

Beaumont's theory does not have Jupiter erupting, nor Venus changing from a comet into a planet, nor Mars doing a military three step about the solar system in the eighth century BC. It introduces only *one* approach by a giant comet, some time during the fourteenth century BC, and yet, simpler as this theory is at first sight, it has altogether more complicated and astounding

implications for world history than the wildest Velikovskian dream. For Beaumont rearranges not only world history, but its geography as well!

Beaumont was an English journalist who developed his catastrophic reinterpretation of world historical geography as early as the 1920s. By the time of his death in 1955 he had published four books on the subject and prepared the manuscript of a fifth. Though his extraordinary ideas preceded Velikovsky's, and foreshadowed many of them, the conclusions are very different and much less well known. Accordingly, with the help of Robert C. Stephanos, Beaumont's leading convert, we would like, in some small way, to help rectify this imbalance of fame.

Mr Stephanos was born in 1925 and has followed the careers of psychologist and teacher. About 1950 he became a student of catastrophism and for some time was a close associate of Velikovsky himself. But once having fallen under the spell of Velikovsky's less illustrious opponent, Comyns Beaumont, there was no looking back. Velikovsky was wrong and Beaumont was right. So, in 1975, he founded "the Beaumont Society". Its objects were to publicise more widely Beaumont's extraordinary hypotheses and to publish his last catastrophic manuscript, *The Great Deception*.

No finer summary of Beaumont's basic thesis exists than the following extract from Mr Stephanos's booklet, *Catastrophists in Collision*, from which, with his kind permission, we take our chapter heading. It was published by the Society in September 1976:

Beaumont's catastrophic theories, summarised from his four books, relate that sometime near 1322 BC, a comet or its fragments as a "twin comet" entering from the north-east to south-west grazed or struck the earth in the north of Europe and Britain. The concussion was so violent that it caused the earth's axis to wobble and alter its inclination, causing changes in the climate as revealed by geology. This collision, because of its magnitude and severity, ended pre-existing civilisation by the most destructive natural catastrophe ever known in the annals of history. The disaster submerged the continent of Atlantis, or a great part of it. Beaumont believes this was the real Flood of Noah.

The centre of that pre-existing civilisation (Atlantis), he suggests, lay in the region now occupied by Scandinavia and Britain. Some time after the terrestrial cataclysm, and owing to the gradual chilling of the climate, survivors of this old northern civilisation spread southward to a sunnier clime, carrying with them the old traditions and legends, and founded the later civilisations of the Near and Middle East – Greek, Phoenician, Egyptian and Roman. This reverses the generally accepted geographical tenet that civilisation spread northward from the Middle and Near East.

The cometary encounter, then, gave rise to the same quota of tidal waves, earthquakes and general conflagrations as Velikovsky's comet, but on a local rather than global scale. The world-wide legends came about via a spread of migrating peoples, carrying with them their myths and legends, which, though orthodoxy sees them as having developed in the Middle East, were actually originally developed in Britain and Scandinavia, the original site of these disasters. Even the familiar Bible stories are based on events which in the first instance took place in Britain. Their Middle Eastern associations are merely secondary mythological intrusions.

The name of Noah is today preserved in Glen Noe, and the true Ark drifted from Inverlochy down the Caledonian Chain. The Scottish Lochs are not the results of Ice Age glaciation, as orthodox geologists claim, but of forcible gouging by a grazing comet.

Sodom and Gomorrah are preserved in Sodbury and Loch Morar; the Biblical Lot and the Arthurian Lot of the Orkneys were one and the same; the Tribe of Ham gave their name to Hampshire; and before the Earth's axis was tilted by the cometary collision, the climate of Britain-Atlantis was a perfect Eden.

Egyptian legends began here too. The Shetlands preserve the name of the evil god, Seth; the Faroe Isles were literally Pharaoh's Isles; and the entrance to the Egyptian Underworld was Fingals Cave. Beaumont even deduced that all Egyptian history prior to the beginning of its twentieth dynasty actually took place in South Wales.

Greek history, too, began in Britain. The Argonauts gave their name to Argyle, Perseus and Erse are obviously linked; the Temple of Poseidon was a memory of McKinnon's Cave; Parnassus, of Ben Cruachan; and Hades was located somewhere in the West of Scotland. Beaumont even attempted to track down the original Athens (the one in Greece being a mere copy), but, alas, was unable to find it, though he was reasonably sure that it too was in Scotland. Finally, Ben Nevis was the original Mount Olympus.

Now all this may sound a little far-fetched, and in fact Beaumont had considerable difficulties in getting his books published for just that reason. The publishing world regarded him as something of a crank, he once said. But of course we must remember that all revolutionary ideas induce such a reaction at first.

To get the full flavour of Beaumont you must read the originals. His geographical and chronological arguments are rather detailed and involved, so we merely quote some of the more extraordinary results here without giving a full account of their derivation, beyond certain obvious name similarities which orthodox historians dismiss (too readily, in our opinion) as 'mere coincidence'.

Beaumont, then, has a whole dimension to his theory that has been totally missed by Velikovsky and his followers – that of geographical location. There are time-scale differences as well – for example, Beaumont dates the Exodus at 1334 BC, and Velikovsky at nearer 1500 BC – but the geographical issue rather dwarfs the chronological one. Stephanos argues that Velikovsky's vision of history is like a two-dimensional drawing of a three-dimensional object: it is limited in value and of necessity distorted.

Consider the mystery of the Hyksos capital.

Let us explain. At one stage of its long history, Egypt was invaded by a warrior race called the Hyksos who erected their fortresscapital at a place called Avaris. But where actually was Avaris? Egyptologists have argued over this for years, but seem to basically agree that it was somewhere in the eastern part of the Nile Delta.

Velikovsky identifies it as the el Arish of today, a town on the eastern border of Egypt, and rather further east of the archaeologists' estimates of its position. And this, claims Stephanos, shows the limitations of the Velikovskian model of world history, for in proving that el Arish was Avaris, Velikovsky has implicitly assumed that Biblical geography is correct.

It isn't, of course. The events of the Bible, as we have seen, were legends based on actual events, people and places located in ancient

Britain-Atlantis. But the truth of this has not just been forgotten, it has been deliberately obscured as well. Biblical history has been tampered with by Christian writers eager to give their religion an ancient and respectable pedigree. Towards the end of his life, Beaumont came to believe in a historical conspiracy, and it is this that is the theme of his unpublished manuscript.

Little wonder it was never published, for the book reveals either the most extraordinary fraud in history or else the peculiar paranoid delusions of its author. The publishers of its day chose to believe the latter.

Beaumont adduces evidence to show that medieval maps were tampered with by monkish cartographers so as to fall in line with the requirements of their biblical preconceptions and the theological tenets of their time. Real history and geography were suppressed and altered, and the firm relocation of biblical holy sites in the Near East was brought about largely by the decrees of Constantine the Great. So successful was his purge that we today are convinced that all this history really did take place in Egypt and Palestine, and so successfully have we been duped that when the truth is revealed to us, we reject it as 'crank'.

Going back to Avaris, now, since Velikovsky assumes the correctness of biblical geography, he has been unwittingly duped so as to fall in line with the fabricated 'history' of medieval Christian fanatics. Avaris was not really in the Middle East at all, but in Britain, at the famous site of Avebury, the Borough of Avaris.

The Hyksos worshipped Set, otherwise known as Typhon, the Celestial Serpent, or personification of the comet. Avebury quite clearly expresses this in the symbolism of its layout (Fig. 14.2).

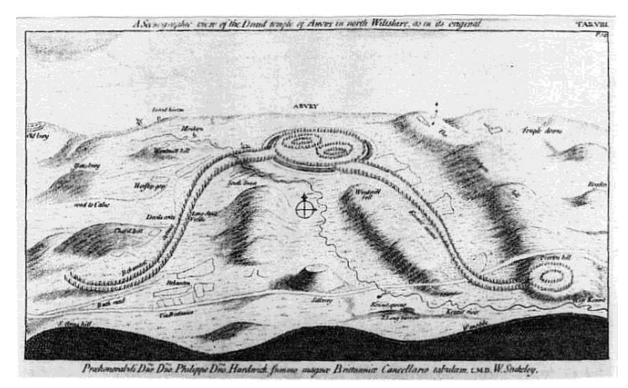


Fig. 14.2

From here it is but a short step to see that Shiloh was formerly Silbury Hill, and Hebron formerly Barbury Castle.

In the Bible, too, we hear of Mount Nebo, in the land of Moab, and Balak, the King of Moab. Can it be coincidence that in the hills just north of Avebury there is a Mount Nebo, and that on the Wiltshire-Berkshire border is a Balak Farm? Again, is it merely coincidence that an old name for the inhabitants of Worcestershire, Warwickshire and Gloucestershire was "Hwiccas", a word which is similar in form to Hyksos?

It will now be clear why Mr Stephanos intended publishing Beaumont's final work under the sub-title: *After Atlantis: The Greatest Story Never Told.* (Unfortunately, so far as we know, the book was never actually published.)

We close with Beaumont's reconstruction of the Exodus, having given Velikovsky's version elsewhere. Readers are advised to consult the accompanying map (Fig. 14.3) in order to get their minds attuned to Somerset rather than Egypt.

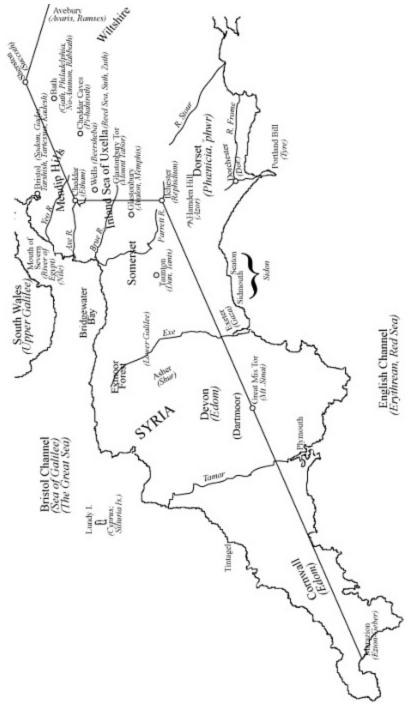


Fig. 14.3

The Exodus began at Ramses (near Avebury) and proceeded via Succoth (Sherston, in the Cotswolds) and Etham (in the Mendips) to Pi-hahiroth, "the mouth of caves" (Cheddar). Here came the crossing of the 'sea'. Not the Red Sea, as is commonly assumed, but the valley of the Somerset River Axe, formerly known as the Northern Bay of Uxella, the inland sea.

The Bible story takes a bit of a knock at this point since Beaumont's transference of geography implies a set of climatic conditions which favour a very ingenious explanation of the Exodus miracles. This explanation has hitherto been missed on account of the fact that the necessary climatic conditions just do not happen in the Middle East, the usually accepted scenario of the Exodus.

In Ex. 14.19–20 we read of the mysterious pillar of cloud that stood between the camp of Israel and the camp of the Egyptians, thus effectively shielding the former and aiding their escape. Might this not have been a typically English pea-soup fog?

And in Ex. 14.21 we have the famous parting of the Red Sea, so grandly portrayed in the movies. But it wasn't quite like that according to Beaumont. Here is what Ex. 14.21 says:

And Moses stretched out his hand over the sea; and the Lord caused the sea to go back by a strong east wind all that night, and made the sea dry land, and the waters were divided.

Stephanos, following Beaumont, interprets this as follows:

In plain, everyday language, the waters of the inland sea were frozen over, congealed, and with this situation confronting them, the fugitives took the opportunity during a heavy night fog to cross over the frozen water. It was not a long crossing, but in the morning when the sun peeped through the fog and the host of Pharaoh saw they had eluded them, they chanced the crossing also, but their heavy chariots cracked the ice and they were drowned.

You've got to admit – it is certainly a novel idea! From the inland Sea of Uxella, it was south to Rephidim (Ilchester), where Moses struck "the Rock in Horeb" (Ex. 17.6) to procure water for the thirsty Israelites, before arriving at Mount Sinai (Great Mis Tor on Dartmoor) to collect the Ten Commandments (Ex. 19.2 ff.)

For some reason Velikovsky has never acknowledged his rival's ingenuity. Mr Stephanos feels that this is not simply a lack of awareness on Velikovsky's part, but an active evasion of a better and altogether more daring theory. Dr Velikovsky is now, alas, dead. It is to be hoped that his followers will give Robert C. Stephanos and the Beaumont Society a better reception. So far, though, there is no sign of this.

Another brand of cosmic catastrophe has been proposed by

Réginald Trestournel of Sceaux in France, who in 1973 published a book called *Terre, Planète Meurtrie* (Earth, the Battered Planet). The book is largely an attempt to explain various geological formations and processes such as the folding of the Alps, Ice Ages, and Continental Drift, but it also, en passant, seeks to solve a riddle of Babylonian mythology – namely, the nature of the cosmic body depicted in various ancient stelae, such as that of Melishipak II (1186–1172 BC), shown in Fig. 14.4. The Sun and Moon are there, but just what is that extra star-like luminary on the left? Conventional scholars say that it is the planet Venus, emblematic of the goddess Ishtar, but just not drawn to scale. M. Trestournel, however, dubs it the Baryplanet, and that is the key to his theory.



Fig. 14.4

The primitive Earth, he claims, was smaller than the Earth we know today, its radius being about 2900 miles as compared with the modern 3960 miles. It consisted mostly of rock, with little or no

iron. It rotated about an axis perpendicular to the plane of the ecliptic (compare Firth Scott's theory in Chapter 17: great minds think alike!) so that days and nights were of equal length all year round and there were no seasons, merely a perpetual spring. The climate was ideal and the vegetation luxuriant as a result. This was the Garden of Eden. There were no high mountains and no deep seas, and since the Earth was smaller then, the force of gravity was correspondingly less. This, according to M. Trestournel, was a key factor in the development of the gigantic dinosaurs.

At the end of the Tertiary Period a body about three times the size of the primitive Earth entered the solar system. This was the Baryplanet. For millions of years it orbited the solar system, approaching the Earth and then moving away again. But then came the collision. According to M. Trestournel the Baryplanet, which consisted mainly of iron, hit the softer rocky primitive Earth, and embedded itself into it as a cannonball would in a lump of dough. Fig. 14.5 will make this clear.

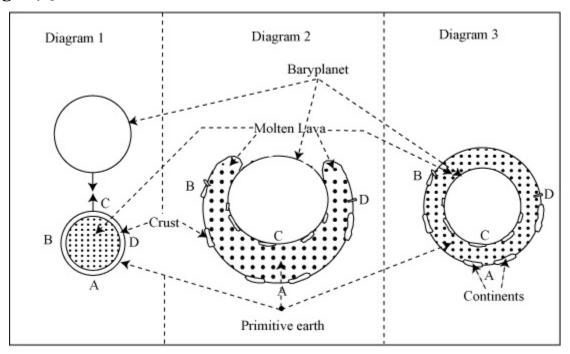


Fig. 14.5

M. Trestournel argues that the hard Baryplanet would have resisted all deformation, but that the impact would have partly melted the primitive earth, enough for it to mould itself around the Baryplanet and return to a spherical shape. This explains how the Earth came to have a rocky mantle and a metallic core, and provides the forces which produced the folding of mountains and the motion of massive

continental 'rafts'. It explains why the axis of the Earth is no longer perpendicular to the plane of the ecliptic (and hence why we now experience seasons). M. Trestournel's scenario also explains the wiping out of large numbers of plants and animals – the extinction of species. Furthermore, with the increased mass of the Earth, and hence the increased gravity, any surviving large dinosaurs would find movement suddenly more difficult, and this may rather neatly explain the final extinction of these creatures, a subject we shall return to in the next chapter. We put it to M. Trestournel that *any* creature would have been unlikely to survive such an impact, let alone live on to struggle against increased gravity, but he was quite adamant that this was possible for creatures on the opposite side of the primitive earth from the point where the Baryplanet hit it.

According to M. Trestournel, the heat generated by the impact almost instantly vaporised a sizeable percentage of the oceans, forming dense clouds which virtually blotted out the Sun for many months. This was the start of the Quaternary Ice Age.

Of course, this was all very long ago, so how is it that the Baryplanet features on Babylonian stelae so many thousands of years later? The answer is that the memories of these events lodged in the subconscious of the human race, and were preserved in such mythological stories as that of Phaeton. All this, of course, brings us back yet again to Velikovsky, so there is little more to be said.

But if the Earth is not destroyed by a cosmic collision, can it end by going off "pop"? This is the theory propounded by a Swiss financier, Louis Jacot, whose book, *Earth's Flight Beyond*, was published in French in 1977, and subsequently translated into English. It is without doubt one of the weirdest books of modern times, particularly since it was written by a man who had achieved distinction in other fields. It was written, as the author tells us in his Foreword, as "a protest against the tyranny of official science."

Jacot was born in 1906, read law, and was called to the Bar in 1929. He was called upon to reorganize the Neuchâtel Canton Bank, and then entered the services of the Swiss Confederation, becoming head of its finance department. He took part in drawing up financial agreements between Switzerland and other states, and also lectured on financial matters at university level. It was only later that he entered the field of cosmology. So let us now listen to what he has to tell us.

First, the concept of universal gravitation is nonsense. It would apply only to a completely empty universe. But the universe is not empty; as the famous philosopher René Descartes had discovered long before, it is filled with a host of contiguous vortices which are of supreme importance. According to Bode's Law, the distances of the planets from the Sun can be expressed as a geometric progression, with 2 as the common ratio (this is not quite true – see the beginning of Chapter 8 for details); this is the simple result of the centrifugal force of the vortex movement, and means that planets are periodically expelled from the Sun and then move progressively away from it. In fact, the orbits of the planets are neither circles (as Ptolemy believed) nor ellipses (as Kepler maintained). They are spirals, and the Earth, like the other planets, moves further away from the Sun each year.

As they move away from the Sun, the planets move into zones of ether which are less and less dense. They are therefore subject to lesser compression, and expand. Originally the Earth did not rotate upon its axis; it kept the same face turned toward the Sun all the time. (M. Jacot added that this is how Mercury behaves now. In fact it doesn't; Mercury takes 88 Earth-days to complete one orbit, but only 58½ days to spin once round.) From the original non-rotating stage, the Earth moved outward and entered the Venus stage, spinning very slowly; one day then lasted for several millennia. From then until the end of the Tertiary era, there were only six full rotations, which of course correspond to the six days of creation described in Genesis. With each rotation, huge ice-caps formed on the darkened hemisphere, which accounts for the four major glaciations ending at the start of the Quaternary era. Between glaciations, tropical vegetation spread as far as the polar regions.

Now we come to the arrival of the Moon – or rather its formation. The slow rotation made the Earth's globe bulge out, until at last a chunk of it broke off to form the Moon, leaving the gaping hole now filled by the Pacific Ocean; this happened during the Tertiary era, during the sixth 'day'. The land-mass was disrupted, so that the continents broke apart; mountain chains were formed because of pressures brought about by the flattening of the globe.

The slow phase of rotation ended with the final Ice Age. The rate speeded up, until a 'day' lasted for two months; the cycle of the seasons was due solely to this, which explains the chronologies and

the longevity of the patriarchs. The change to a 24-hour rotation caused a general melting of the ice-caps, and, naturally, Noah's Flood – dated about 3500 BC (the Earth itself, by the way, is no more than about 100,000 years old).

In future, the Earth will continue along the same lines. More moons will be ejected, and, in M. Jacot's own words, "that part of the globe which will form the next moon is already marked by Destiny". But what will happen then?

Presumably a new planet will be expelled from the Sun, and will spiral out to the present orbit of Mercury, while Mercury moves out to the present path of Venus, Venus into that of the Earth and so on – a sort of cosmic musical chairs. The Earth, of course, will move out to take the place of Mars, and Mars to Jupiter, which by then will have moved out to its Saturn stage – and so on. But remember! With every increase in distance, the ether pressure becomes less, and the final result is that when the pressure has been reduced to a negligible amount, the planet will explode. This is bound to happen first to Neptune and Pluto, then to Uranus, then to Saturn, Jupiter, and – horrors! – the Earth. If humanity survives until that epoch, we must be prepared not for the Big Bang, but for the Big Pop.

Comment seems to be superfluous. M. Jacot's book is very detailed, and written with the care which one would expect from a trained legal mind. He describes his book as "a cry of alarm", but at least there is time for us to take stock and see what can be done – if anything. No doubt we will find out eventually!

Before we leave Velikovsky and the catastrophists we must mention Elfriede Tingleaf, who once described herself to us as "a fuzzy little gray-haired old lady", and who lived in Arizona, USA. Actually, Mrs Tingleaf was not a catastrophist as such. In fact, she once told us that she wasn't even a Presbyterian any more. But she does belong in this chapter if for no other reason than that she was somewhat sceptical of our claims that Velikovsky often manipulated his sources into saying what he wanted them to say. This was because Mrs Tingleaf claimed to have found the source of some of Velikovsky's sources, original and very ancient accounts of the planetary catastrophes, and the source of inspiration, too, for Homer's *Iliad* and the dialogues of Plato. Incidentally, Mrs Tingleaf suspected that the latter may have been tampered with in the 10th century AD, and not written entirely by Plato in the 4th century BC,

as orthodox scholars claim. But that is something that need not concern us here!



Fig. 14.6

So what are these sources of Velikovsky's sources? Let's start with Fig. 14.6, which is a rock carving in Arizona. According to Mrs Tingleaf, the principal figure in the middle represents "the androgynous native American god, the Aztec bisexual primordial expression of the divinity Ometeotl (twice god)", Mother Earth and Father Sky, back to back, or side to side. Mother Earth is on the left, "her breast ripped out, and her benevolent hand on fire". There is an unholy din, the noise of cosmic catastrophe, so unbearable that Father Sky, on the right, is plugging his ear. The disk to the left of Mother Earth is Venus. That to the right of Father Sky is Mars, and his 'sons' Deimos and Phobos. Here is Velikovsky's scenario in primitive petroglyph form. (Incidentally, Mrs Tingleaf wasn't at all sure what the donkey-like figure to the left of Venus was, but

thought it might represent "the angry wolf star".)

Our first reaction to all this was frankly one of scepticism. After all, the petroglyph is as much like a frog as anything else, and we did in fact put this to Mrs Tingleaf. Certainly an element of subjective interpretation is involved here, and Mrs Tingleaf freely admitted this. But as she pointed out, "Thunder", as she called Fig. 14.6, is not alone.

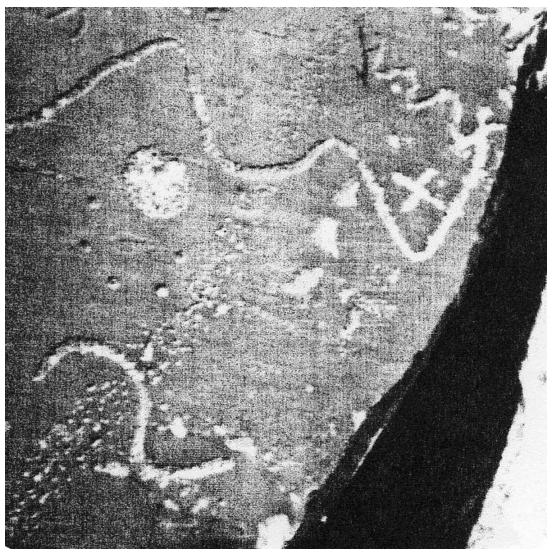


Fig. 14.7

Its message is backed up by another petroglyph on the same rock, here Fig. 14.7, which she says shows a meteorite shower coming from the north-west, possibly through the constellations of Draco and Boötes. Again, Mrs Tingleaf finds the same "coming-down-star" story in the petroglyphs recorded by A.P. Okladnikov along the Angara River in Siberia. This is our Fig. 14.8.

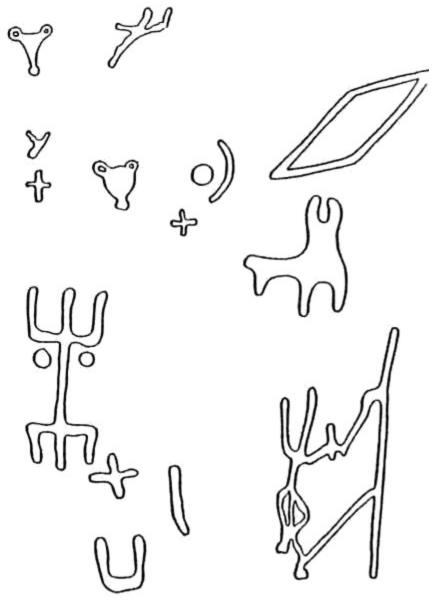


Fig. 14.8

Not only this, but the Superstition Mountains in Arizona tell a story of catastrophe on an altogether grander scale. According to Mrs Tingleaf "the rock formations have been 'carved' so that every change in angle of the Sun creates new and different pictures in highlights and shadows, providing a year-round continuous performance of moving pictures." Who 'carved' them, when or how, Mrs Tingleaf had no idea, but she claimed that it is these "kinetic displays" of the Superstition and Goldfield Mountains which "were used by Homer in his mythistories, propounded by Plato as philosophy, sprinkled through the Bible, read by the Norse and Teutonic peoples, used by the Amerindians, and now being enjoyed by Tingleaf."



Fig. 14.9

For many years Mrs Tingleaf and her camera stalked the Mountains, at different seasons and different times of day, photographing these 'sculptures', as she called them. But are they really sculptures? Mrs Tingleaf sent us several examples, one (shown here as Fig. 14.9) purportedly showing Homer's god Ares on the left, "now almost totally dissipated", and Homer's Athene on the right, "now quite frazzled, setting her last fire on Poor Tiger." This scene appears in Homer's *Iliad*, and according to Velikovsky it represents the clashes between the planets Venus and Mars. According to Mrs Tingleaf the Ares figure is a little bird and the Athene figure a fallow deer. Unfortunately our scepticism is aroused again, for these photographs look to us just like ordinary mountain scenes, and the 'sculptures' no more deliberate than the faces one sometimes sees in clouds or peeling paintwork. (There is, of course, a strong comparison with terrestrial zodiac hunting here.) Likewise, when Mrs Tingleaf told us that in the Goldfields, further to the north, is carved the story of Mars and Rhea Silvia, the wolf, and the birth of Romulus and Remus, well, we couldn't help but wonder if Mrs Tingleaf was just seeing things.

Mrs Tingleaf also believed that she had located a map of Plato's Atlantis on a sculpted rock in Arizona. According to the map,

Atlantis is — and was, before it sank beneath the waves — a large island situated just where Plato said it was, beyond the Pillars of Hercules (the Straits of Gibraltar). At the risk of sounding repetitive, we wondered if Mrs Tingleaf's map was really a map at all, or whether it was just a bit of stone that looked something like a map if you squinted a bit. Certainly geologists are confident that no large island ever sank at the place indicated by Plato and Mrs Tingleaf's map. However, we leave our readers to make up their own minds, and reproduce the map here as Fig. 14.10. Incidentally, Mrs Tingleaf also came up with a map which, she claimed, "can 'read' the whole of the Western Hemisphere on a modern map by going in circles."

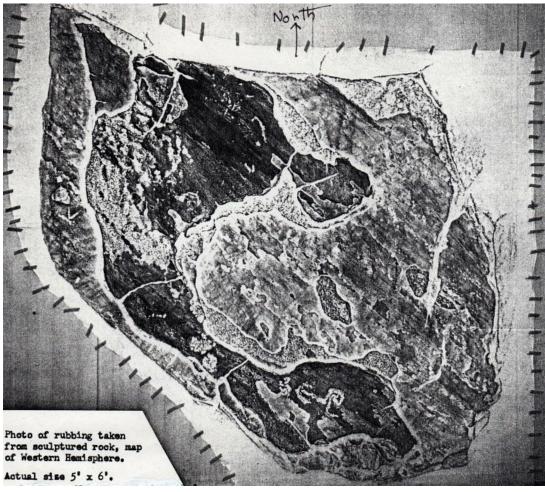


Fig. 14.10

Mrs Tingleaf's views on the Exodus were similarly unorthodox. In one of her many fascinating letters to us she seemed to be implying that manna was derived from man-na, meaning "Hemp, please!" We wondered if this implied that the Israelites were hooked on drugs, but Mrs Tingleaf was quite emphatic: "I did *not* say that, *you* did. Any time you want to write up that, we'll go back into the (Biblical)

Garden of Eden and start with the original 'Big Bhang' theory!"

Some of Mrs Tingleaf's conclusions were so strange that even she abandoned them. For example, she once set out to decipher a cryptic message from the Exodus plague story, when she realised that the Hebrew word for "locust", ARBE, could be translated also as "barge", and that ARB meant "lie in wait, ambush." All day, far into the night, and all the next day until evening, she worked at it. Then at last, she told us, she found she had extracted the hidden significance: it was the Boston Tea Party! "That was too much for even me," she told us, "so I ditched the whole lot into a folder and haven't touched it since."

Mrs Tingleaf's observations on Homer's *Iliad* were similarly startling. She thought that Achilles represented what might be called "the life history of iron", that Ajax and Aeneas were catapult machines, and Hector a siege tower. As for Helen of Troy, it was Virgil, not Homer, who sprung the final clue to the truth of her identity. "The face that launched a thousand ships was the west coast of Denmark!" As for Zeus, in one of her early letters Mrs Tingleaf seemed to imply that there was some significance in the fact that Zeus read backwards was Suez, the famous canal. However, this turned out to be another of *our* misconceptions, and it later transpired that Zeus backwards was connected with Sus, the Latin word for hog or swine, and Ursus, the Latin word for a Bear. Any connections with the Suez Canal were purely fortuitous.

No doubt some people will dismiss Mrs Tingleaf's observations with scorn as the ramblings of an old lady with a hyper-active imagination. But we can assure our readers that right or wrong, a letter from Elfriede Tingleaf was worth half a dozen from ordinary mortals!

Chapter 15. Dinosaurs, Comets and Earthquakes

There is no well-defined line which divides the orthodox from the unorthodox. Rather do respectability and heresy blend into each other like the opposite ends of the spectrum.

In the middle of that spectrum is the grey area in which multitudes of theories jostle to explain the same set of facts. The more divergent the theories, the brighter the intellectual fireworks, and the more one gets the distinct impression that, orthodox or not, one is watching a sort of academic caucus race.

Take the controversy that surrounds the extinction of the dinosaurs.

It is fairly well known that about 70 million years ago, at the end of what geologists call the Cretaceous Era, the dinosaurs unaccountably died out. Attempts to explain why they did so have led to a fine example of a learned caucus race.

The most basic theory puts down the extinction to climatic changes. At the end of the Cretaceous, there is good evidence that the world's climates began to get decidedly colder. Many theorists agree that this affected both the dinosaurs themselves and the vegetation on which they fed. However, within this vague agreement lie a wide variety of disagreements.

One theory assumes that the dinosaurs were cold-blooded reptiles. They needed to absorb heat from their environment, and when temperatures began to fall, they could no longer do this properly, and they died out rapidly. But then the problem with that theory has always been that not all the dinosaurs died out. Some of the smaller ones – by that we mean about large turkey size – survived, and they oughtn't to have done so on the reptile theory.

An alternative theory denies that the dinosaurs were coldblooded, and says that they did have some measure of internally generated body heat. When temperatures began to fall, some form of winter hibernation became necessary. The smaller dinosaurs survived because they could find places to hibernate, but the larger dinosaurs died out because they were just too big to find such places. We have to admit that the image of a brontosaurus trying to bury itself in the garden for the winter is a deliciously absurd one.

Yet another theory accepts warm-bloodedness, but claims the extinction was a result of area-to-volume ratios rather than hibernation problems. In short, larger dinosaurs were more naked than smaller ones, and so suffered more from heat loss in the increasingly cold winters of the late Cretaceous. Their primitive body heating mechanisms just couldn't cope, and they died out.

Other theories concentrate not so much on the dinosaurs themselves, as on the vegetation on which they fed.

Far and away our favourite theory is the one that blames dinosaur extinction on chronic constipation! By the end of the Cretaceous, the argument goes, the oily laxative conifers on which the dinosaurs fed had given way to more modern flowering plants. The enforced change of diet resulted in the chronic constipation which eventually killed off the dinosaurs.

Other explanations concentrate on the atmospheric rather than the dietary consequences of plant evolution.

According to one of these, rapid plant evolution virtually flooded the atmosphere with oxygen, and this had the effect of overenergising the lumbering dinosaurs to the extent that they almost literally burnt themselves out. Another theory, however, says that it wasn't so much the oxygen added to the atmosphere that caused the trouble, as the carbon dioxide taken from it. Removal of large amounts of carbon dioxide would allow the Earth's heat to escape more easily into space, thus explaining the sharp drops in Earth temperatures at the time. (Other theorists claim that the climate changed because of continental break-up, but that is by the way.) As we've already seen, once you've explained the falling temperatures, there is no shortage of explanations for its dire consequences on the dinosaurs, large or small, hot-blooded or cold.

However, just as we were getting used to the theories of falling temperatures and depleted carbon dioxide, up popped another theory of rising temperatures and increasing carbon dioxide. The argument goes that at the end of the Cretaceous, there was a fall in sea level and a reduction in the numbers of marine algae as a result of it. Marine algae consume atmospheric carbon dioxide, so a reduction in their numbers would result in an accumulation of carbon dioxide, a subsequent "greenhouse effect", and a rise in global temperatures. According to this theory, the rise was slight,

but critical. It didn't kill off the dinosaurs themselves, but it did upset the delicate balance of their sperm production. In other words, the rise in temperatures resulted in what can best be described as the climatic castration of the dinosaurs.

Now it is claimed that two things support this theory: Large numbers of unhatched fossilized eggs, suggesting that something went wrong with the fertilisation process; and the thinness of their shells, suggesting environmental stress. The same thinning, we are assured, is observed today in birds under various types of stress conditions.

But then just as we were getting used to *thinner* dinosaur shells, up popped yet another theory based on *thicker* shells. A pathological thickening of dinosaur egg shells would not only have adverse effects on the mother (e.g. decalcification of bones and teeth), but worse, it would mean that the baby dinosaurs couldn't even break out of their shells – an obvious evolutionary stumbling block to any species, large or small!

But then what caused the egg-shell thickening? Genetic degeneration is one explanation, and, wait for it, environmental stress is another. We are assured that thickening is observed today in birds under various types of stress conditions....

At this stage the caucus race is really gathering momentum. We have hot-blooded and cold-blooded dinosaurs dying out because of falling temperatures at the same time as their sperm production is being affected by rising temperatures. Their eggs are getting thicker as well as thinner. On one theory they are burning themselves out in an oxygen-rich atmosphere; and on another they are virtually choking through lack of oxygen. Plants are lowering carbon dioxide levels at the same time as marine algae are effectively raising them. And in the meantime, the dinosaurs are constipated....

But that is only the half of it. There is another theory that newly-evolved mammals either outwitted the dinosaurs in the competition for food, or else ate so many of the dinosaurs' eggs that extinction became inevitable. There is also yet another theory that the dinosaurs were more or less pre-programmed automata that fell out of step with the changing ecological conditions. Like machines badly in need of adjustment, but with no-one around to adjust them, a breakdown point was inevitable, and it just happened to come at the end of the Cretaceous.

And again, what about sea-level? Many of the dinosaurs were either aquatic or semi-aquatic (remember, ichthyosaurs and plesiosaurs were dinosaurs). Moreover, they were heavy — at least, most of them were; and it has been suggested that they had to live in regions where they could, so to speak, buoy themselves up by keeping in marshy or swampy ground. When the climate changed, the swamps receded; the dinosaurs were left high and dry, with disastrous results. Their legs just couldn't take the strain.

Next, what about destruction from outer space? We come at once to the idea of a supernova, which is a tremendous outburst resulting in the destruction of a star. When a massive star runs out of nuclear energy, things become out of control; the star collapses, blowing most of its material away into space, so that all that is left is an expanding gas-cloud plus a tiny, incredibly massive body made up of neutrons (that is to say, particles with no electrical charge). A neutron star may be only a few miles across, with a density about 100 million million times that of water. Quite a number are known by now, though only two have been identified optically; one in the famous Crab Nebula, known to be the remnant of a supernova observed by the Chinese and Japanese in the year 1054, and the other in the southern constellation of Vela. The rest betray themselves by their rapidly-varying radio emissions.

At its peak activity, a supernova may radiate as fiercely as over 15,000,000 Suns put together, and such an event close to us would have distinctly unpleasant results. Luckily, they are not common. Only four have been seen in our Galaxy in the last thousand years (those of 1006, 1054, 1572 and 1604), and all have been distant — the Crab, for example, is 6000 light-years away, so that the outburst actually happened 6000 years before the Chinese and Japanese saw it. Astronomers would very much like to study a galactic supernova with telescopic equipment, but so far they have had to be content with observing supernovae in outer galaxies, millions of light-years away.

Coming back to the dinosaurs, it has been proposed that a comparatively local supernova flared up, soaked the Earth's atmosphere with deadly radiation, and caused a fall in temperature. But in this case it looks as though extinction would have been fairly universal, and not confined to the dinosaurs. Besides, where is the supernova remnant now? There is no neutron star close to us (we

would have been almost certain to find it), and the whole supernova theory seems to be, at best, highly speculative.

Yet another theory involves a temperature drop in terms of a geomagnetic reversal. According to this theory, the Earth's magnetic field normally acts as a shield against lethal radiations coming from beyond. However, it is widely thought that the Earth periodically reverses the polarity of its field, so that if you wait long enough your compass needle will point south instead of north. But during the process of changing polarity, there is a period when the magnetic field is virtually absent. The radiations come through – and if this happened at the end of the Cretaceous, it would have done the dinosaurs no good at all, though again there is the difficulty that the damage to life on Earth would not have been selective.

Finally, there is the theory that the extinction was brought about by the Earth's collision with an asteroid. This theory, proposed by Dr L.W. Alvarez and his colleagues at the University of California, was put before the American Association for the Advancement of Science towards the end of 1979. Shades of Velikovsky, here, and we'll return to that controversial point a little later.

Collision with an asteroid of about 10 km diameter would be roughly equivalent to a hundred-million-megaton explosion — a big enough bang to hurl clouds of pulverised rock and dust high into the atmosphere, where much of it would stay for as long as 5 years. The shock of the explosion would itself wipe out huge numbers of animals, of course, but worse in the long term would be the reduction in sunlight caused by the dust in the atmosphere, and its effects on the plant life. Plants need sunlight, and animals need plants, so that the food chains of large numbers of animal species would be seriously disrupted.

Such a catastrophic theory is not favoured by other theorists. They argue that the dinosaurs didn't die out quite as suddenly as such a theory would require. The extinction of the dinosaurs was 'sudden' only in geological terms – it might actually have taken something like 100,000 years – and the effects of an asteroid collision would not be nearly so far-reaching.

But Dr Alvarez is not the only contender in the catastrophic extinction stakes. In the journal *Nature* for 29th November 1979, Dr W.M. Napier and Dr S.V.M. Clube, of the Royal Observatory, Edinburgh, proposed a catastrophic theory of a rather different

kind.

Clube and Napier still postulate a collision, not with an asteroid from within the solar system, but with a large meteorite or planetesimal from outside it. This may not look like much of a difference in theoretical approach, but in fact it has rather far reaching implications insofar as it seeks to explain several other things of a curious nature, besides dinosaur extinction. And it all depends on where that planetesimal originates.

Clube and Napier argue that the Sun, on its journey round the galaxy, periodically passes through zones of space debris or planetesimals. Most of these planetesimals are very small, though a few of them can attain sizes roughly equal to that of our Moon. On each passage through such a zone, an assortment of planetesimals get pulled into the solar system by gravity.

According to Clube and Napier, most of this space debris escapes from the solar system again within a few million years – a short time in astronomical terms. Since the last passage through such a zone was a mere 10 million years ago, they claim that some of the last lot of picked-up debris may still be with us in the form of comets or meteorites. The heavy cratering on the Moon and inner planets may well be explained in terms of such debris, for example. Also, they claim that their theory could explain why the outer satellites of Jupiter orbit in the opposite direction to the rest, and why some asteroids have orbits which are steeply inclined to the plane of the rest of the solar system. Such anomalies, they say, are not the permanent fixtures of the solar system that some astronomers claim, but are in fact temporarily captured chunks of space debris awaiting their escape.

The extinction of the dinosaurs (not to mention the induction of Ice Ages) is also explicable in terms of the Earth's collision with passing planetesimals. At this point, Clube and Napier's theory is very similar to that of Dr Alvarez, the mechanisms involved being roughly summarised as follows:

- 1. Blast waves set up by the impact would flatten forests and preferentially kill larger land animals such as dinosaurs.
- 2. Gases generated in the heat of impact would be injected into the atmosphere. Their effect would be to destroy the ozone layer and to admit a flood of harmful ultraviolet radiation.

3. Large quantities of dust would be flung high into the atmosphere, thus blocking out sunlight and disrupting the food chains of many forms of life.

Few of our readers will fail to notice that Clube and Napier's planetesimal collision, and likewise Dr Alvarez's asteroid, bear an outward resemblance to Velikovsky's catastrophism; and in his book Earth in Upheaval, published in 1955, Velikovsky proposed that the extinction of the dinosaurs was the direct result of a cometary collision in prehistoric times. Clube and Napier are well aware of certain similarities, and in their later book The Cosmic Serpent even go on to propose that cometary impacts may have had dramatic effects on the course of human history in historical times. Striking as the similarities are, however, their brand of cometary catastrophe is very different from Velikovsky's theory that Venus used to be a comet, and that the planets were responsible for wreaking havoc on the Earth in the first and second millennia BC! Clube and Napier are eminent astronomers who firmly reject as "impossible" Velikovsky's proposed rearrangements of the solar system.

Clube and Napier also believe that a planetesimal impact may well explain the Tunguska explosion of 30th June 1908, when a blazing fireball plunged into the tundra of Central Siberia, devastating 1200 square miles of peat bog and pine forest, and setting up earthquake-like tremors which were felt over five hundred miles away. Explanations of this event range from the Earth's collision with a mini black hole to the crash-landing of an out-of-control UFO, though let it be stressed that Clube and Napier would be the last to suggest anything so unlikely as a crippled alien space-ship!

There is not the slightest doubt that something cataclysmic happened in the Tunguska area at 7.17 local time on 30th June 1908. The object — whatever it was — was seen falling, and was brighter than the Sun. When it struck, it caused tremors and blast effects which were felt by people many miles away, and pine-trees were blown flat like matchsticks. Unfortunately, no expeditions reached the site for many years, because the situation in Russia was so unstable. The first man to mount a successful expedition was Leonid Kulik, in 1927. By then, of course, erosion had taken its toll, though there was still plenty of evidence of devastation.

What Kulik did *not* find was a large crater. Meteoritic falls can produce craters; go to Arizona, and you will find Meteor Crater, almost a mile wide, which was certainly produced by an impact around 22,000 years ago. Other meteorite craters are known. In the case of Tunguska, the nature of the ground would probably have resulted in the filling-in of a crater fairly quickly, but not within twenty years or so; and, significantly, no meteoritic fragments were found either. If not a meteorite, then what was it?

The obvious answer is that it was the nucleus of a small comet. Comets are flimsy things, made up largely of ices. If such a body plunged through the Earth's atmosphere, and hit the ground, it would evaporate. Presumably the comet was small, and could well have escaped detection (many faint comets do, even today, when the sky patrolling is much more thorough than it was in 1908). This is the view of most Russian scientists, such as K. Florensky.

But inevitably, the "fringe" writers joined in, led by one Alexander Kazantsev, a science fiction writer of considerable repute. Could the explosion have been atomic?

Nobody suggests that, in this case, the bomb was of Earth origin. Nuclear weapons are a product of our modern enlightened civilisation, not of the early part of the twentieth century. If atomic, then, the missile must have been extra-terrestrial – and we are back with flying saucers. The favourite idea was that of a crash-landing, so that the luckless astronauts were blasted out of existence together with their space-craft. Stories of enhanced radiation in the area were circulated, and were not easy to dismiss out of hand simply because so few people have been to the site (Tunguska is not exactly a tourist centre). But the evidence has never been forthcoming; and though books on the subject continue to come out – *The Tungus Event*, by Rupert Furneaux (1977) and *The Fire Came By*, by John Baxter and Thomas Atkins (1976) are typical – the comet theory is by far the most likely.

It is just as well that the missile hit an uninhabited area. Had it landed on a city, the death-toll would have been colossal. The only comparable fall of recent times occurred on 12th February 1947, again in Siberia, and again in an uninhabited region (Sikhote-Alin). This is more accessible than Tunguska, and there is absolutely no doubt that it was due to a meteorite which broke up during the final stages of its descent, because over a hundred small craters were

produced.

As for the black hole theory – well, there were suggestions that the mini black hole went straight through the Earth and came out on the far side, but attempts to discover any records of a comparable disturbance in the sea antipodal to Tunguska proved to be abortive.

Much the oddest theory was that the 1908 event was a signal. In 1883 Krakatoa, in the East Indies, blew up with a shattering explosion. It was suggested that this was seen by the denizens of some far-off world, who thought that we were trying to attract their attention – and replied in a manner which, quite innocently, proved to be rather too effective! We seem here to be drifting steadily toward the realm of Professor Quatermass.

Continuing our theme of the continuity between orthodox and unorthodox, we come to the eminently respectable but nevertheless controversial book *Lifecloud* (1978) by Sir Fred Hoyle and Professor Chandra Wickramasinghe.

The usual view of the origin of life postulates a beginning here on Earth approximately four billion years ago. The first and most primitive organisms, the orthodox theory goes on to say, had their origin in a sort of primeval chemical soup activated by solar radiation and perhaps electrical discharge.

Not so, claim Hoyle and Wickramasinghe. The basic chemicals of life originate in supernovae explosions, and are flung out to permeate interstellar space in the form of lifeclouds: that is, clouds of gas and dust which are composed of the basic chemical building blocks of life. The first and most primitive forms of terrestrial life, they say, did not originate here on Earth, but out in space, in the chemical broth of a lifecloud. Thereafter they were literally dumped on the Earth in cometary collisions, where, since conditions were favourable, they began to evolve into more complex life forms. Hoyle and Wickramasinghe write:

The best explanation therefore of the known facts relating to the origin of life on the earth is that in the early days soft landings of comets brought about the spreading of water and other volatiles over the earth's surface. Then about four billion years ago life also arrived from a life-bearing comet. By that time conditions on the earth had become sufficiently

similar to those on the cometary home for life to be able to persist here. The long evolution of life on the earth had begun.

On the subject of organisms surviving and developing in the heads of comets, Hoyle and Wickramasinghe write:

Primitive life forms may even have evolved extraterrestrially on comets. Heat released at some depth below the surface of a comet could have melted a fraction of the underlying ice, the heat being released by chemical reactions between the organic molecules. Moreover, once some ice was melted, there would have been further heat-releasing chemical reactions between the organic molecules and liquid water. Such a situation, adequately insulated against heat loss by overlying surface layers, could well have provided the most favourable conditions for the emergence of life – the best locations of all for a primeval soup.

The same theme of life-bearing comets occurs a little further along the orthodox–unorthodox spectrum where Velikovsky, in *Worlds in Collision*, describes how the comet Venus brought plagues of vermin to the Earth:

The question arises here whether or not the comet Venus infested the earth with vermin which it may have carried in its trailing atmosphere in the form of larvae together with stones and gases. It is significant that all around the world peoples have associated the planet Venus with flies.

Joseph F. Goodavage, a follower of Velikovsky's, whose book on the comet Kohoutek we mentioned in Chapter 10, follows the same theme in his book *Storm on the Sun* (1979). After assuring us that the Sun is a binary star whose other half is dark or invisible, but shortly before he speculates on the possibility that the Sun is under the control of aliens, the unstinting Mr Goodavage hails Hoyle and Wickramasinghe as confirmation of the traditional view that comets and plagues are intimately connected. Did not the outbreak of the plague in 1665 occur immediately after the Earth had passed through the tail of a giant comet?

But the most striking orthodox-unorthodox parallel of all is that

between Hoyle and Wickramasinghe, and Velikovsky's predecessor William Comyns Beaumont. Under the pen-name "Appian Way" Beaumont wrote a book called *The Riddle of the Earth* (1925) in which he wrote:

To the womb of Mother Earth it may truly be said do we owe the organic existence in the first place of all forms of independent organisms, when that womb has been fructified by contact with the heavenly fires. Yet, if this be indeed the case, it may truly be said that every plant, insect, fish, reptile, crustacean, bird, beast and man has been transferred from, or is the evolution of, a similar entity from other worlds, evolved as the result of meteor impact and shaped in accordance with the chemical and gaseous formulae of which the living unit in varying circumstances and ages is the product.

Again Hoyle and Wickramasinghe claim that the Earth's volatiles (including the atmosphere and oceans) were brought to Earth by comets, and Beaumont claimed much the same thing (see below).

Of course, scientists will point out that virtually the whole of Beaumont's book, which we'll look at in a moment, is nonsense, and that he was right about volatiles and life-bearing comets for completely the wrong reasons. But wrong reasons or not, we find it rather remarkable that he was 'right' about any of it at all. After all, it is rather like guessing Rumplestiltskin's name correctly, and without any cheating! Of course, the parallels might arise because Hoyle, Wickramasinghe and Beaumont all took their cue from the same earlier speculations on the subject (for example Arrhenius's ideas on spores of life in space) – but then where did those earlier speculations come from, granted that they came from an era without either spectroscopy or radio astronomy? Whichever way you look at it, someone somewhere had a remarkable hunch about what was going on. But then again, there remains the possibility that Hoyle and Wickramasinghe are up the same gum tree today that Beaumont was up back in 1925!

Subsequently Hoyle and Wickramasinghe published other books, such as *Diseases from Space*, in which they elaborate their theories. Arrhenius, in his panspermia theory, maintained that life was brought to Earth via a meteorite; Hoyle and Wickramasinghe prefer

a comet. They go so far as to suggest that the water in our oceans is also of cometary origin, and they believe that even today comets can inject viruses into our atmosphere, causing epidemics such as influenza. They have carried out careful analyses, largely by checking on illnesses suffered by schoolchildren in Cardiff, and believe that diseases are not contagious in the way usually believed; comets are the main villains. If so, then the old idea of comets as bringers of ill-fortune is not so far-fetched after all.

Hoyle and Wickramasinghe paid particular attention to Halley's Comet, which is the only bright comet to return regularly; it paid us its last visit in 1986, and will be back once more in 2061. And certainly they scored a major point when the Giotto space-probe passed through Halley's Comet, in March 1986, and sent back our first direct information about the nucleus. Most if not all authorities had assumed that the nucleus would be bright and icy. Hoyle and Wickramasinghe maintained that it would be dark; and they were right – Halley's heart was as black as coal-dust. But then there was no outbreak of influenza or anything equally unpleasant following the passing of the comet, or at least none that made the news!

Before we take a closer look at Beaumont's book *The Riddle of the Earth*, we need to listen to the orthodox view of the causes of earthquakes and volcanoes.

The crust or outer layer of the Earth varies in thickness between 10 and 30 miles. Beneath it lies a semi-plastic layer of denser rock known as the mantle. The mantle is not uniform but consists of a series of concentric shells of rock. It is about 1800 miles thick, and beneath it lies the Earth's core, once thought to be molten liquid, but now believed to be a solid under immense pressures and high temperatures.

In general, the Earth's crust is composed of two layers, the upper one called sial and the lower, denser one, called sima. In places, though, the surface sial layer is non-existent and the sima shows through. This happens, for example, on the floor of some parts of the Pacific Ocean.

Now, though sima might look to you and me like solid rock, it is in fact a super-viscous liquid rather like glass. Consequently the continents (sial) can be thought of as immense rafts floating on a bedrock sea (sima), and, like anything else afloat, they move. This is what is meant by the term "continental drift". The movement is very

sluggish, to be sure, but the immense masses involved mean that, sluggish or not, titanic forces are required. These forces are responsible for the folding of mountains, and it is the slipping and scraping of one continental raft against another that gives rise to what we know as earthquake disturbance.

Actually not all earthquakes arise from the sudden release of pent-up friction between rafts. Some seem to arise from little-understood 'explosions' in the mantle, thought to be associated with changes in crystalline structure. Be that as it may, most earthquakes originate either in the upper 12 miles of the crust, or in the mantle directly beneath the crust.

Next, volcanoes. The rock of the mantle below the Earth's crust is at a high temperature but also at a very high pressure. This combination of pressure with temperature keeps the rock in a more or less solid state, but if and when the pressure is relieved locally, the rock may become fluid and rise through any line of weakness to the surface. Here it emerges in the form of lava.

Not surprisingly, such lines of weakness are associated with areas of instability in the crust, and such areas tend to be those in which earthquakes also occur. Thus it comes about that earthquakes and volcanoes are related phenomena.

The Riddle of the Earth is a remarkable book that seeks to take this relationship much further at the same time as merrily throwing overboard any remotely orthodox ideas on the subject.

On Beaumont's theory, not only are earthquakes and volcanoes related to each other, but both are further related to atmospheric phenomena (for example hurricanes), meteorites and comets.

Firstly, according to Beaumont, meteorites and comets are magnetic bodies which are attracted to the Earth along what he calls isodynamic lines of longitude. Thus, he tells us, meteorites approach the Earth always from a northerly direction. (This is Beaumont's Law: some meteorites are obviously ignorant of it!)

If a meteorite (or comet) actually hits the Earth, it forms a volcano, the lava coming not from inside the Earth, but from the meteorite itself. A volcano, Beaumont says, is "the residue of another world, the deposit of a meteor", and its lava neither more nor less than "meteoric incandescence".

Sometimes, though, the meteorite doesn't actually hit the Earth,

but skims close over its surface before hurtling out into space again. In that case, as it passes overhead, its magnetic forces tug at the Earth beneath it, and cause the upheaval we call an earthquake.

Insofar as both have a common meteoric or cometary origin, differing only in degree, as it were, Beaumont's theory does explain why earthquakes and volcanoes are observed to be associated phenomena. Needless to say, though, his version of the proceedings is totally at odds with orthodox geology.

Now, Beaumont continues, once a volcano has been formed by meteoric impact, it becomes a sort of magnetic centre of attraction, and pulls towards it other passing meteorites to "refuel" itself. In fact Beaumont claims that successive eruptions of the same volcano mark the arrival of new meteoric refuelling from outer space. Further, the secondary or parasitic cones of a volcano mark the points where refuelling meteorites have been attracted towards the primary cone but have either fallen just short of it or else have slightly overshot it.

Beaumont denies the now orthodox theory that mountains are folded by the titanic forces generated by shifting continental masses. He claims instead that they are built out of accumulated meteoric debris that for one reason or another never quite made volcanic status. The entire Pennine Range, for example, is meteoric in origin, its north—south direction following the north—south direction of meteoric approach.

Before any of our readers objects that some mountain ranges run east—west rather than north—south, well, we had best explain that such mountain ranges, when formed, did indeed point north—south. However, large meteoric impacts have a nasty habit of shifting the Earth's axis, so that what was once north—south could quite easily point east—west today.

Again, if meteorites are constantly being drawn into the Earth from the north, we would expect more of them to fall in the northern hemisphere than the southern. This is why, Beaumont claims, there are more earthquakes and volcanoes in the northern hemisphere, and also why there is more land surface north of the equator than south of it. It all fits beautifully – at least to Beaumont.

As to weather phenomena, well, it stands to reason that if meteorites are all the time whizzing through our atmosphere along magnetic lines of force, then they are bound to stir up trouble, and Beaumont claims that hurricanes and gales are direct consequences of the turbulence induced by meteoric passage through the atmosphere. Waterspouts and tidal waves are likewise caused by meteorites plunging into the sea. And the heavy rains associated with volcanic eruptions are composed of water formed from the explosive mixtures of meteoric gases.

Indeed, Beaumont claims that our atmosphere would long ago have dissipated itself out into space were it not for its constant replenishment by meteoric gases. (If the atmosphere weren't constantly being renewed, he argues, we'd all still be breathing the same air as Julius Caesar, and that would be absurd!)

Likewise, the oceans would long ago have evaporated away into space were they not replenished by the water created whenever a meteorite or comet strikes the Earth and forms a volcano.

Thus Beaumont writes:

Without volcanoes the earth would become an utter waste, with no life, no atmosphere, no waters or oceans. Such has become the fate of the moon, a planet consisting of enormous extinct volcanoes, but without atmosphere or oceans.

As we pointed out earlier, Beaumont's idea that the Earth's atmosphere and oceans are constantly fed by comets parallels Hoyle and Wickramasinghe's theory that the Earth's volatiles were brought here by comets. Of course, Hoyle and Wickramasinghe do not share Beaumont's enthusiasm for volcanoes, but that is another matter.

On matters geological, too, Beaumont has well-defined, if unorthodox views.

For example, he believes that geologists have failed dismally in their collective attempts to explain the formation of coal. According to orthodox ways of thinking, a coalfield is a sort of fossilised peat bog. Beaumont rejects this idea and claims that coalfields are the remains of forests that were literally carbonised in the conflagration of some prehistoric cometary collision. This idea was later to turn up in Velikovsky's book *Earth in Upheaval*.

Again, Beaumont believes that geologists have got it all wrong when it comes to explaining erratics. These are boulders, frequently weighing many tons, which are geologically "out of place". That is, they are composed of entirely different minerals to the rocks of the landscape surrounding them. Geologists explain this by saying that they were actually picked up elsewhere and transported to their present positions by the glaciers of the last Ice Age. Beaumont, however, has different ideas. For a start, the Ice Ages are no more than an absurd geological fantasy. Nothing of the kind ever actually happened, he assures us. The erratics are out of place simply because they are of meteoric origin.

Nor is it just the geologists who must stand corrected in the light of Beaumont's revelations. The astronomers, too, are all of a muddle, being, as they are, blissfully unaware of the fact that a sunspot is a solar volcano — a point where a comet has fallen into the sun's surface. By their reckoning sunspots are centres of intense localised magnetic fields which affect the heat flow at the Sun's surface. They are 'dark' in comparison with the surrounding surface of the Sun simply because they have a lower temperature.

Again, orthodox astronomers persist in believing that if the Earth passes through the tail of a comet, nothing at all happens except, perhaps, to the minds of the timid and gullible. Beaumont, however, has other ideas, some of which later resurface in Velikovsky's books. Beaumont raises the old issue of the links between plagues and comets, only this time, earthquakes and volcanoes enter the picture as well:

Daniel [he means Noah] Webster, the lexicographist, considered that influenza was caused by the gases of a comet projected into our atmosphere. The Black Death of 1333, which depopulated enormous areas in Europe, and was thought to have begun in Italy, was accompanied by an earthquake and volcanic eruption and a peculiar haze in the atmosphere. The Plague of London in 1665 was simultaneous with a great comet and a haze mentioned by Defoe, and even recently the sleeping sickness which reached the proportions of an epidemic in Japan coincided with the earthquake of September, 1923. The belief of the ancients that a comet brought pestilence and death was universal, as may be seen in the account of King David's terror at the vision of the Angel of the Lord, with a bent arm holding a sword, witnessed by him at the threshingfloor of Ornan. As a result of this comet, a pestilence broke out, and thousands died.

Finally, Beaumont claims that because of cometary impacts in prehistoric times, "certain species were totally exterminated either by being rained on, or by shock, or by exhaustion of air." The expression "rained on", of course, refers to molten meteoric debris rather than volcanic cloudbursts!

Which brings us back, full circle, to the extinction of the dinosaurs, and the curious parallels between Beaumont and Velikovsky's ideas, and those of the orthodox catastrophists like Alvarez or Clube and Napier.

Chapter 16. Of Solectrics and Other Matters

Let us now stick with earthquakes and delve a little deeper into the orthodox–unorthodox spectrum.

Almost as unlikely as Beaumont's earthquake triggering via the magnetic pull of a passing comet or meteor was the supposedly more serious theory of John Gribbin and Steven Plagemann, put forward in their book *The Jupiter Effect* (1974).

Gribbin and Plagemann believed that in 1982 there would be a grand alignment of the planets. That is, all the planets of the solar system would be strung out in one long straight line radiating outwards from the Sun. At this time, they claimed, the combined effect of all the planets pulling in the same direction would trigger off earthquake activity in the Earth.

The mechanism they postulated was not so much the combined gravitational pull on the Earth as the effects it would have on the Sun. The combined tidal force, they claimed, would influence the Sun in such a way as to increase the flow of charged particles that constantly streams out from its surface. This stream of particles, known as the solar wind, is responsible for a variety of effects in our atmosphere, so that any increase in the solar wind would, in effect, stir up atmospheric turbulence. According to Gribbin and Plagemann, this increased turbulence would result in an increased atmospheric "drag" on the Earth's rotation, the effects of which would be small but sudden changes in the Earth's rate of spin. Any area of the Earth's surface in which the friction between continental rafts had built up to unstable levels could then quite easily be jolted into a sudden slip (earthquake) by these jerky changes of spin. That is, the grand alignment could, via a complex chain of causes and effects, induce earthquake activity on the Earth.

California's San Andreas Fault, which was the scene of the great San Francisco earthquake of 1906, would be particularly at risk under the grand alignment, Gribbin and Plagemann claimed. They were quite definite about this: "Within two years of 1982 (between 1980 and 1984) there will be a major disaster, probably in the Los Angeles area but perhaps in the San Francisco Bay area."

Thankfully, the San Andreas Fault declined to act in accordance with this extraordinary theory. There is, moreover, one other minor objection. There wasn't any real alignment at all in 1982! The planets were actually spread out over some 60 degrees of sky, and in fact there was a distinctly closer alignment in 1980, when nothing happened either. Certainly the San Andreas Fault will cause trouble eventually, but Jupiter will almost certainly have had nothing to do with it.

Reverting now to our observations on the orthodox—unorthodox spectrum, the idea of a grand alignment triggering an earthquake is almost astrological in character, as even Gribbin and Plagemann admit in the preface to *The Jupiter Effect*.

Likewise embarrassingly close to the spirit of astrology was a short paper printed in the journal *Nature* for 18th July 1959, in which Dr R. Tomaschek published an account of his curious observations regarding earthquakes and the position in the sky of the planet Uranus at the time of their occurrence.

In a study of serious earthquakes recorded in the present century, Dr Tomaschek found that Uranus was close to its upper or lower transit of the meridian of the epicentre in an unexpectedly high proportion of cases. The correlation was particularly marked, Dr Tomaschek claimed, for earthquakes occurring in 1904 to 1906 inclusive. In 1906, he noted, Uranus entered into direct opposition with Neptune, though he did not claim this fact as significant in any way. In fact, Dr Tomaschek didn't claim to know why Uranus seemed to have an earthquake association at all, and concluded with the remark that it might not be "a relationship of cause and effect in the usual mechanical sense."

Before going on we should perhaps consider the gravitational pulls which the planets exert on the Earth, as this is obviously the first thing one thinks of in connection with theories like the Jupiter effect or Dr Tomaschek's observations about the apparent effects of Uranus. Just what effects *do* the planets have on the Earth, gravitationally speaking?

Much the most important and massive planet is Jupiter. In fact, Jupiter's mass is greater than those of all the other planets combined; Saturn comes next, but has only 95 times the mass of the Earth, as against 318 earth-masses for Jupiter. The values for the other outer planets are much less; 17 earth-masses for Neptune,

only 14 for Uranus. As for Pluto, it seems to be a puny thing – perhaps a large ice-ball. It is quite definitely far less massive than our Moon, and the idea of its having any effect upon the San Andreas Fault (or any other fault) is frankly weird.

Even if all the planets lined up, their combined pulls would be almost inappreciably greater than those of Jupiter and Saturn combined. And remember, too, that the main pull on Earth comes from the Sun – if it didn't, our orbit would be very different from the one we actually follow. (The Sun's pull on the Earth is far, far stronger than that of the Moon. True, the lunar tides are stronger than the solar ones, but that is only because of the greater *difference* in pull exerted by the Moon on the moonward and far sides of the Earth's globe.)

Which brings us to the knotty problem of earthquake prediction in general. Geologists have been puzzling over this one for years, but so far they freely admit that they haven't got very far. In fact, so desperate have they been to find *any* method of prediction – orthodox or otherwise – that in the late seventies the United States Geological Survey took to keeping files of predictions sent in by amateurs. These included predictions based on astrology, dreams, psychic forebodings and just plain old hunches. In fact anything that anyone cared to send in.

Over the period of collection they logged upwards of 2500 predictions sent in by more than 230 amateur earthquake-prophets, but when the predictions were matched against occurrences, the scores were little better than pure guesswork.

Of course, there are always claims of successful predictions *after* the event, and a few vague ones, sometimes, from *before* the event. An example of each can be cited in connection with the great English earthquake of 1884 (for which see Peter Haining, *The Great English Earthquake*, published in 1976.)

Geologically speaking, England is a very stable little island, so that earthquakes are few and far between. They are not unknown, though, and the most destructive ever known here occurred on 22nd April 1884. It was centred on the rural farming areas to the southeast of Colchester, and though over in less than a minute, the shock was felt up to 150 miles away.

On the day of the great English earthquake, a correspondent signing himself "W.W.S." wrote a letter to the *East Anglian Daily*

Times. He began by quoting I Corinthians 14.22 (what else?) and went on (in part):

The Ancients say, When you find at the vernal equinox the close proximity of Saturn to the cusp of the fourth house of the heavens in Gemini it pre-signifies earthquakes and high winds in the Western parts, viz., England, London and the United States &c. This was the position on Thursday, 20th March 1884. The serious earthquake shock in Essex and Suffolk this day is, to say the least, a strange coincidence.

Of this letter the Editor of the *East Anglian Daily Times* wrote: "What a pity W.W.S. did not write last week." We suspect that the Editor shared our own views of prophecies which emerge from the woodwork *after* the events they are supposed to prophesy.

On the other hand, in the first week of April, 1884, the astrological column of the London *Daily Echo* predicted that during that month there would be "an upheaval in eastern England of a kind not before experienced."

The question is, of course, whether one counts such a prediction as unequivocally referring to the earthquake, or whether in fact the prediction was neatly twisted to fit the events after they had happened. It is rather like reading in your horoscope one morning that you are "due for a windfall", and coming home that same evening to find your chimney stack blown down. Is that a fulfilled prediction or isn't it?

But to return to the problems of earthquake prediction, it is entirely understandable that geologists would like a method of prediction that is totally free of the vagaries and double meanings associated with many types of prophecy. Which is where Alfred Jopling Cooper comes in, because, when it came to predicting earthquakes, Mr Cooper had no doubt at all that he had got it all taped, and with scientific precision to boot.

We are back again at that ill-defined boundary between orthodox and unorthodox, because Mr Cooper's ideas are something of a riotous extension of Dr Tomaschek's.

Mr Cooper began his studies in the late nineteenth century. Having been shipwrecked three times by stormy weather, on three consecutive voyages, he decided to set about finding a method of predicting where and when stormy weather would strike. He wrote: On the west coast of South America I was frequently disappointed by the non-arrival of a calculated storm, until it became apparent that on these occasions an earthquake took the place of an absent storm.

This showed that under some conditions the same forces which brought about a tempest, under other conditions caused an earthquake.

Twenty-three years of study of these forces resulted, in 1910, in the publication of his extraordinary book on the subject: *Solectrics: A Theory Explaining The Causes Of Tempests, Seismic and Volcanic Disturbances, And How To Calculate Their Time and Place.*

The term "solectric" seems to have come from the compound "solar electricity", for Mr Cooper believed that the solar system was governed by an all pervasive, multi-purpose, partly electromagnetic power called Solectric Power. He put it like this:

The term solectric power may be defined as the power which the sun exerts on every member of the solar system. ... Solectric power is the combined energy emanating from the sun, which, when analysed or resolved into its component forces, includes light, heat, chemical action, gravity, electricity, and vital force, according to circumstances and surrounding conditions.

In some ways, solectric power acts like static electricity insofar as the planets get solectrically charged up by the Sun. As they move in their orbits with respect to the Sun and each other, their "charges" attract and repel each other to varying degrees, and, on occasion, solectric discharges occur between them. On such occasions a solectric "spark" will pass either directly from a planet to the Sun, or else from one planet to another and thence back to the Sun. (According to Mr Cooper, the Sun generates all the solectric power in the solar system, radiating it out to the planets, and charging them up. But then one way or another that power must eventually return to the Sun.)

All the Earth's climatic effects, from heatwaves to hurricanes, as well as earthquakes and volcanic eruptions, are the results of discharges of pent-up solectric energy from the Earth.

The Earth is like an electrically charged sphere inside an

insulating layer (the atmosphere). Discharges follow lines of least resistance and for this reason are particularly prone to happen in mountainous districts where the Earth reaches up into the atmosphere like a lightning conductor. Less severe discharges may happen over the relatively flat expanses of the ocean, and these give rise to such phenomena as waterspouts – the ocean's version of a lightning conductor. Similar solectric discharge effects occur on other planets, incidentally.

Now, such discharges can occur only when the planets have the right configurations with respect to each other. Consequently, hurricanes, tornadoes, quakes and volcanic eruptions can only happen when conditions are astronomically ripe for them.

In order to set down Mr Cooper's theory in terms understandable to the general reader, we must first define a couple of technical terms. Firstly, we shall say that the 'angle' between two places on the Earth's surface is the angle subtended by those two places at the centre of the Earth. Secondly, we shall define the 'Sun point' at any given moment to be that point on the Earth's surface at which the sun is directly overhead. The Moon point, the Venus point and so forth are similarly defined.

Now, a place on the Earth's surface becomes solectrically active whenever the Sun point or the Moon point makes an angle of 57½° or 88° with the place in question. The situation is solectrically aggravated when combinations of planetary points reinforce the action of the Sun or Moon. An example will make this clear.

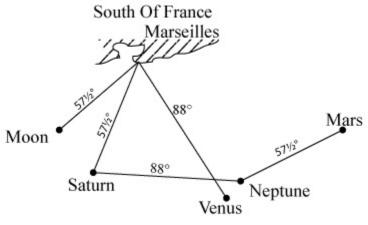


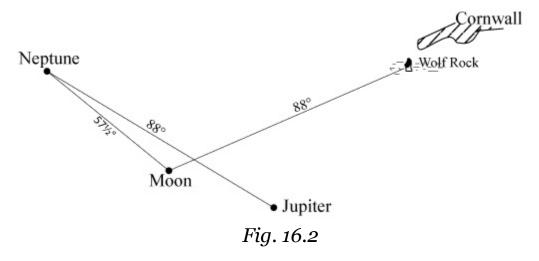
Fig. 16.1

On 11th June 1909 at 9.06 p.m. GMT, an earthquake shook the south of France. Fig. 16.1 shows the solectric situation of Marseilles at the time of the quake. As can be seen, the Moon point makes an

angle of 57½° with Marseilles. Venus and Saturn reinforce the Moon, with their points forming angles of 88° and 57½° respectively with Marseilles. Meanwhile, Neptune and Mars have an indirect effect insofar as the Neptune point makes an angle of 88° with that of Saturn, and the Mars point 57½° with that of Neptune. Thus, Mars acts solectrically on Neptune; Neptune acts on Saturn; and Saturn acts directly on Marseilles itself.

According to Mr Cooper, the Sun is the central generator of the solectric power cycle, and as such is the primary solectric influence in the solar system. Thereafter, the solectric pecking order, at least as regards effects on the Earth, runs as follows: 1. The Moon; 2. Jupiter; 3. Venus; 4. Mars and Saturn; 5. Uranus and Neptune; 6. Mercury.

Mr Cooper's book catalogues dozens of hurricanes, gales, waterspouts, storms, heatwaves, earthquakes and volcanic eruptions, each case accompanied by a solectric diagram like Fig. 16.1. All of these events are shown to be consequences of planetary interaction at angles of 57½° and 88°. Figs. 16.2, 16.3 and 16.4 give solectric interpretations of a violent snowstorm, a waterspout and a volcanic eruption respectively.



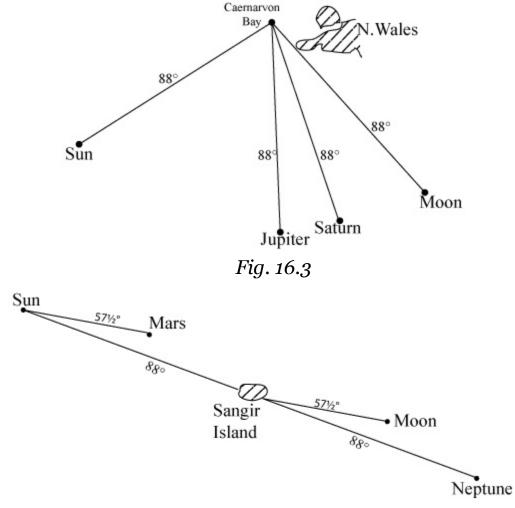


Fig. 16.4

Incidentally, Mr Cooper never did explain the significance of the 57½ and the 88 – he merely found them to work and left it at that. He did hazard a guess that these two angles represented "different conditions of solectric force, such as positive and negative", but the precise mechanics of solectric interaction remained shrouded in a good deal of mystery. For example, he never really did sort out why some solectric configurations led to heatwaves or cyclones, whereas other very similar configurations led to volcanic eruptions. Nevertheless, his catalogue of case histories provided a common solectric background for these diverse phenomena, and this in itself was quite something. At least to Mr Cooper.

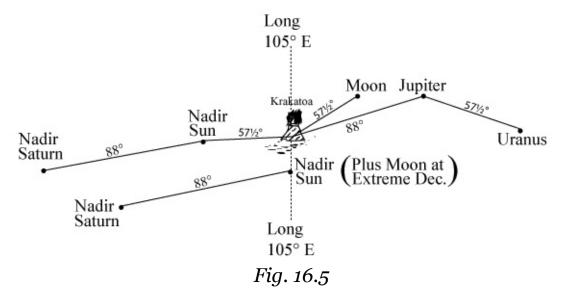
Actually, we've simplified Mr Cooper's theory a bit, because not all atmospheric or seismic phenomena have a solectric explanation quite as straightforward as those summarised in Figs. 16.1 to 16.4. Mr Cooper found that sometimes it wasn't the Sun point that governed an event but one of the Sun's "supplementary points".

There are two of these, one having the same longitude as the Sun point but opposite latitude and the other having the same latitude but opposite longitude. For example, if the Sun point is at 100° W and 15° N, then its supplementary points are at 100° W, 15° S and 80° E and 15° N, and either of these points can as easily govern a solectric phenomenon as the Sun point itself.

Then there is the "nadir Sun". This is opposite the Sun point in both latitude and longitude. For example, if the Sun point is at 100° W and 15° N, then the nadir Sun point is at 80° E, 15° S. This point, too, can solectrically govern events as effectively as the sun point itself.

The Moon and each of the planets likewise each have two supplementary points and a nadir point, so that the reader can be forgiven for thinking that with all these points, supplementary points, and nadir points, dotted about the globe (36 in all!), one would be hard pressed to find a corner of the world not in imminent danger of solectric discharge of one sort or another. The more so when one considers that errors of up to 2 or 3 degrees or even more either way are allowed in a 57½° or 88° angle.

However, we consider this argument to be an unwarranted slur on a marvellous theory that plunges ever deeper into solectric meridians, differences in solectric hour angles, the effects of eclipses on earthquakes, and the dangers of the Moon approaching its limiting declinations.



In Fig. 16.5, for example, we give a solectric portrait of Krakatoa. The upper lines show the position on 26th August 1883, 8.53 p.m.

GMT, the volcano being under the direct influence of the Moon, Jupiter and the nadir Sun. The nadir Sun point is boosted by the nadir Saturn point, whilst the Jupiter point is enhanced by Uranus. Earlier that same day, at 5 p.m. GMT (lower diagram) the nadir Sun was on the solectric meridian of Krakatoa, with the nadir Saturn in attendance at an angle of 88°. At this time, too, the Moon was at its extreme northerly declination (i.e. point furthest north of the equator), and this is always a signal of strong solectric activity:

An immense wall of cloud was observed with bursts of forked lightning, like large serpents, rushing through the air. Balls of fire rested on ships' mastheads and extremities of yardarms.

The rest is violent volcanic history.

Meteorites, too, are of solectric origin. Mr Cooper wrote:

If a tremendous volume of solectric force is hurled against an irresponsive earth, the surrounding gases in its path between, say, Jupiter and the earth are caught and fused together, and these are changed into metals. The solectric forces tend to become latent in solidity and we see on a small scale the making of a world.

Hence the points of impact of meteorites are governed by the now familiar patterns of 57½° and 88° solectric angles.

Mr Cooper's ideas on comets were similarly solectric. He believed that every comet orbited two suns, one our own and the other a distant star, "thus lightly linking up two far distant solectric systems."

In fact Mr Cooper saw solectric powers in action wherever he looked, from the creation of life and the power that keeps the Earth spinning on its axis, to the destructive forces of an earthquake or volcano. He wrote:

The Solar System is so rigidly and beautifully linked up that not a shock in Saturn nor a tremor in Venus takes place without a sympathetic thrill through the earth and a response from the rest of the planets.

And on the scale of human rather than cosmic affairs:

It is not too much to assert that, judging from actual cases, the planets strike down or kill, while if the sun

is assisted by the moon, madness takes place, and riots in such places as asylums.

It is worth remembering that Mr Cooper was a very caring man. He wanted to find a means of predicting, and thus avoiding, the large-scale human tragedies frequently associated with natural disasters. It is worth remembering, too, that he did all his calculations before the advent of electronic calculators and minicomputers, and that in itself was no mean feat. His book is a remarkable instance of Independent Thought.

The most celebrated exponent of modern earthquake control was Mr P. Norcott, of Broadstairs, who in 1970 published a little booklet entitled *Bigger and Better Earthquakes*. Unlike most astronomers, he believed that the Earth was formed by material splashed out of the Sun when it was hit by a huge meteor. Be that as it may, according to Mr Norcott the Earth's rotation is slowing down, and therefore the centrifugal force around the equator is decreasing; pressure is building up below the crust, and eventually something has to give way, resulting in an earthquake.

If we could stop the slowing-down of the Earth's rotation, then, clearly, earthquakes would cease. One of Mr Norcott's answers (he has three) is to use gyroscopic force. Build huge flywheels, erect them at the North and South Poles, and start them whirling. They will, so to speak, give the Earth 'a bit of a spin', and thus keep the rate of rotation constant!

There is, however, a second method. The Moon influences the slowing-down of the Earth's rotation via the tides; by building vast dams to stop the ocean waters from sloshing around from one seabasin to another, tidal friction can be more or less eliminated.

The third alternative, of course, is to slice the Moon in half, towing one hemisphere of it round to the far side of the Earth so that the contrary gravitational forces will cancel each other out. Just how this could be achieved is, admittedly, a problem, but no doubt it could be solved with sufficient application.

Clearly close attention must be paid to this matter. If nothing is done, earthquakes will continue; if anyone has a better answer than Mr Norcott's, we would be delighted to hear about it.

We now come to the Coons Theory of Wet and Dry Steam. Burton C. Coons was a retired inventor and machine designer who lived in Honolulu. After forty years of pondering the forces involved in the generation of earthquakes, volcanoes and tidal waves, he came to the conclusion that such violent phenomena simply could not result from the stresses and strains generated in geological faults. In his opinion, only steam could generate sufficiently large forces to cause these things.

According to Mr Coons, sea water seeps down into pockets of molten lava beneath the Earth's crust. The water immediately turns into steam – wet steam, that is – and this rapidly becomes dry steam as the moisture is removed from it. This dry steam then expands "as fast as lightning, in all directions, looking for a way out", and in doing so it causes first earthquakes and second either volcanoes or tidal waves, depending on whether the steam blows out through the land or through the sea.

We had better explain a little about wet and dry steam, more particularly the latter, which to the uninitiated may sound like a contradiction in terms. Wet steam is always visible, Mr Coons assures us, whereas dry steam is not. This is because dry steam has had its moisture dried out, and so it is essentially an air-like gas. "Wet steam confined has a 200-pound pressure per square inch," Mr Coons tells us. "When changed into dry steam it immediately has a 650-pound pressure per square inch." Dry steam is dangerous stuff, then.

Incidentally, Mr Coons once worked for the New York Central Railroad when he was a young man, and it was his job as a fireman on soft-coal-burning locomotives which gave him his knowledge of the awesome power of dry steam. For example, he once saw a heavy steel boiler explode when the water in it was very low and the coals had been left burning beneath it. Obviously, he deduced, the water had evaporated, the wet steam had turned to dry steam, and boom! The eruptions of Mauna Loa and Mount Etna are similar explosions on a larger scale, and as evidence that his theory is correct Mr Coons points out that one of the first things to appear at the start of a volcanic eruption is *steam*....

Chapter 17. Pole Tilting

One of Velikovsky's many claims in his book *Worlds in Collision* was that the Earth had been turned upside down in the cosmic upheavals that accompanied the Exodus. Could such a thing really have happened? In the eminently respectable *Journal of Physics*, in October 1978, there appeared a paper by physicist Peter Warlow which sought to prove that pole tilting, and even total 'flips', were not as impossible as most scientists deemed them to be.

Mr Warlow claimed to show that if a planet-sized body were to pass close enough to the Earth, then the gravitational torque acting on the Earth's equatorial bulge could be big enough to tilt the Earth's axis, without, however, altering its rate of spin. In an extreme case, the tilt could become a full-blown 'flip' in which the Earth's north and south poles would change places.

Mr Warlow's paper was ostensibly an attempt to explain the phenomenon of geomagnetic reversal. This requires some explanation. To all intents and purposes the Earth acts as if it has a giant bar magnet embedded in its interior, one benefit of which is that navigators are able to use their magnetic compasses to find their way about. However, geological studies of rocks show that several times in the Earth's history the polarity of that hypothetical bar magnet has become reversed, with north and south switching roles. To date, no-one has confidently explained how such magnetic reversals could come about, but prior to Mr Warlow's paper, no-one ever seems to have been adventurous enough to suggest that magnetic reversals are a consequence of the whole Earth turning upside down! Indeed, Mr Warlow's idea might have been dismissed as an eccentric piece of idle speculation had it not been that he assembled a battery of impressive equations to show just how such a polar flip, magnetic as well as physical, could be induced by the gravitational pull of a passing cosmic body.

Before going any further, we had perhaps better pause to examine a few details. Magnetic reversals are generally reckoned to occur at intervals of several hundred thousand years on average. The last reversal known to have occurred, geologically, is generally quoted as having taken place about 700,000 years ago, though it is thought that a brief reversal also took place between 30,000 and 40,000

years ago. More recent reversals are thought to have taken place by some scientists, but then other scientists, with equal conviction, dispute these conclusions. There is, for example, a claim that a magnetic anomaly occurred in the ninth century BC. There is also, however, good evidence for believing that no magnetic reversal at all has taken place during the past 30,000 years. In other words, controversy rages about the more recent magnetic events.

But what sort of close approach would have to occur for the Earth to be flipped upside down? According to Mr Warlow's calculations, a body of ten times the mass of the Moon at a distance of 33,000 km could 'flip' the Earth. A body of about the same mass as the Earth could accomplish the same feat from a distance of about 66,000 km.

Now, Mr Warlow didn't actually say this in his paper, but Mars just happens to have a mass about ten times that of the Moon, and Venus just happens to have very nearly the same mass as the Earth. Consequently if, on their Velikovskian tours of the solar system, Mars had got within 33,000 km of the Earth, or Venus within 66,000 km, then the Earth could have been 'flipped' just as Velikovsky said it was. Or so Mr Warlow claims.

In fact, without Velikovsky's proposed scenario, Mr Warlow's theory of geomagnetic reversals has got problems. The reason is that if Venus and Mars have been on their present orbits for billions of years, as most astronomers believe, then a Warlovian 'flip' would have to be induced by a passing chunk of space debris, and what we know of space debris at the present time suggests that it is very unlikely indeed that a big enough chunk would get close enough to do the trick. The vast majority of chunks are much less massive than even the Moon, let alone Mars or Venus.

So, then, Messrs Warlow and Velikovsky walk very much hand in hand, and, in passing we would mention that Mr Warlow has told us in personal correspondence that he believes that Velikovsky will eventually be proved to be one of the greatest thinkers of our age. Likewise, the Velikovskians tend to regard Mr Warlow's paper as a scientific breakthrough for Velikovsky's theories. Or at least they did until Victor Slabinski came along.

Dr Slabinski is a physicist whose work is concerned mainly with the problems of the orbital mechanics of satellites, and in 1981 in the *Journal of Physics* he published an article entitled "A dynamical objection to the inversion of the Earth on its spin axis". Dr Slabinski showed quite conclusively that Mr Warlow had got his equations wrong (something that had apparently not been noticed by the referees of his paper) and that the torque required to invert the Earth was actually 200 times greater than estimated by Mr Warlow. Such a torque could not be produced by the gravitational pull of any known body in the solar system making a close passage past the Earth. (Slabinski showed it would require a body of 417 Earth masses passing at two Earth radii.)

Some Velikovskians were quick to leap to Mr Warlow's defence, however. They pointed out that Dr Slabinski had only showed that a torque sufficient to invert the *whole* Earth could not be produced by the *gravitational* pull of any known planet. Suppose, they argued, that electromagnetic forces were involved as well as gravity, or that only the shell of the Earth inverted, 'slipping', as it were, round the core. Unfortunately no-one has yet turned these suggestions into a feasible mathematical model, and some unkind people accuse the Velikovskians of arm-waving here. So far as we know, Mr Warlow himself has not made any reply to Dr Slabinski, but he did go on to publish a book, *The Reversing Earth*, in 1982 in which he expanded on his ideas of polar flips.

So, let us go back to circa 1500 BC and the polar flip which Messrs Velikovsky and Warlow believe to have taken place then, despite Dr Slabinski. If the Earth *had* turned upside down at that time, then the inhabitants of the Earth would (astronomically speaking) have noticed two major things. Firstly, all the familiar constellations would have disappeared, to be replaced by a new set which formerly adorned the opposite hemisphere – northern constellations would have been replaced by southern ones, and vice versa. Secondly, the direction of rotation of the sky would have been reversed. That is, the Sun, the Moon, and the stars would have risen where formerly they had set, and vice versa.

Unfortunately, no historical records have survived which refer directly to such an extraordinary happening, but this no more deters Mr Warlow than it did Velikovsky. Both of them believe that there are clues that it did happen, along with a host of other catastrophic events, in a variety of myths and legends from all over the world. The fact that most of these references are garbled and rather vague is of course neatly explained by the Velikovskian concept of collective amnesia.

For example, in the Bible (Amos 8.9) it says that God caused the Sun to go down at noon, and Mr Warlow explains how it would indeed appear to do so during an axial flip. Orthodox Bible scholars, however, say that Amos was merely referring to a total eclipse of the Sun.

Again, Mr Warlow notes that, according to the ancient historian Herodotus, the Egyptians claimed that the Sun had reversed its direction four times within their recorded history.

Actually what Herodotus 'said' varies slightly from translation to translation, but basically it seems to have been pretty much as in the Reverend Cary's 1901 translation:

During this time, they related, that the sun had four times risen out of his usual quarter, and that he had twice risen where he now sets, and twice set where he now rises; yet, that no change in the things in Egypt was occasioned by this, either with regard to the productions of the earth or the river, or with regard to diseases, or with respect to deaths. (*Histories* 2.142)

The last sentence of this passage, of course, is a far cry from Velikovskian catastrophism, but we will let that pass. (Actually Mr Warlow believes he can explain it in terms of the way the Earth turned over.) Most importantly, Herodotus did not say that the Sun had suddenly reversed its course, merely that the reversals of rising and setting had taken place over a long period of time.

Now, assuming that this isn't just pure Egyptian fancy being foisted on a gullible Greek historian, could it have any basis in fact whatever? The answer is that it could, though not quite in the way Herodotus indicated. The explanation probably runs somewhat as follows.

The Egyptian civil calendar consisted of 365 days, made up of 12 months of 30 days apiece, plus 5 extra days known as the epagomenae. The actual solar year, however, consists of 365½ days, so that the civil calendar would have fallen behind the solar (seasonal) calendar by ¼ day every year, or by 1 day every 4 years. Left without correction, therefore, the civil calendar would have drifted with respect to the seasons, and eventually, for example, summer festivals would have ended up taking place on winter days, and vice versa. We prevent such calendar drift by having leap-years, but the Egyptians didn't. As a result their civil calendar did drift

through the seasons in a way which seems most peculiar to us today.

With summer festivals taking place on winter days — or vice versa — it could be said that the Sun was operating "out of his usual quarter" — that is, "out of his proper course" or "not as he should be". This could have been misinterpreted by Herodotus — or by his informant — as a literal reversal of the Sun's motion.

Mr Warlow also quotes a passage of Plato's *Statesman* as follows:

God himself guides and helps to roll the world ... and there is a time ... when he lets go, and the world ... turns about and by an inherent necessity revolves in the opposite direction. ... Hence there occurs a great destruction of animals which extends also to the life of man.

Unfortunately Mr Warlow omits to tell us that this 'reversal' is actually part of a complete and fictitious reversal of nature, rather like running a film backwards, so that time itself reverses: for example, the old grow young, and birth and death are interchanged. So we rather doubt that Plato was talking about a close passage of the planet Venus or any other cosmic body!

One intriguing myth that is quoted by Mr Warlow, though, is the following extract from a myth of the Hopi Indians, as related by Frank Waters in his book *The Book of the Hopi* (1969):

So again, as on the First World, Sotuknang called on the Ant People to open up their underground world for the chosen people. When they were safely underground, Sotuknang commanded the twins, Poqanghoya and Palongawhoya, to leave their posts at the north and south ends of the world's axis, where they were stationed to keep the earth properly rotating.

The twins had hardly abandoned their stations when the world, with no-one to control it, teetered off balance, spun around crazily, then rolled over twice. Mountains plunged into seas with a great splash, seas and lakes sloshed over the land; and as the world spun through cold and lifeless space it froze into solid ice.

Now of course there is no mention of anything like a passing

Venus Comet or super-massive chunk of space debris, but we have to admit that this legend – or should we say Mr Waters' version of it – *could* be seen as an account of the Earth toppling over, and an Ice Age starting as a result of it.

This is interesting because in 1931 a man called Firth Scott published a curious book called *This Reeling World* in which he linked the onset of Ice Ages to a rocking of the Earth's axis.

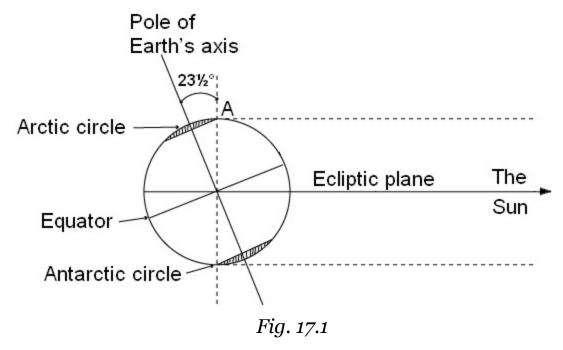
Mr Scott was in some ways a forerunner of Velikovsky, though in many ways his theory was quite different. He believed that originally the Earth's axis was at right angles to the plane of the ecliptic – that is, the plane of the Earth's orbit around the Sun. In those days, every part of the Earth enjoyed a perpetual summer, and Mr Scott believed that the legend of the Golden Age actually referred back to this particular period of history. But something happened to disrupt this state of affairs. Mr Scott did not go into details, but it is interesting that in the earlier part of his book he quoted a theory that in the distant past a comet had collided with the Earth. But whatever it was that caused this disruption, one of its effects was to push the Earth's axis away from its Golden Age vertical, and set it quite literally reeling like a disturbed top.

This reeling was not a very simple affair, and depended on what Mr Scott vaguely described as a balance between gravitational resistance and strain of deflection. The astronomers had latched onto part of this reeling in their observations of the precession of equinoxes, he claimed, but they had only got half of the story, and they were entirely wrong in their belief that the Earth's axis was precessing always at the same angle (23½ degrees) to the ecliptic.

However, though Mr Scott's account of the complex and painfully slow reeling of the Earth's axis was not particularly simple – or specific – its implications regarding the Ice Ages were both elegant and ingenious.

We begin by considering the position of the arctic and antarctic circles.

The arctic circle is today some 23½ degrees away from the north pole, an angle which is determined by the tilt of the Earth's axis, as shown in Fig. 17.1.



Here the Earth is shown at the winter solstice – that is, at midwinter in the northern hemisphere. At this time the Earth's north pole is tilted away from the Sun, and at the point A, on the arctic circle itself, the sun's rays strike the Earth's surface at a tangent. That is, to an observer standing at A, the sun is barely peeping over the horizon, even at its maximum elevation. Anyone to the north of A is at this time hidden from the Sun entirely, and experiences a prolonged night that may last literally for months. Six months later, of course, the arctic regions experience varying degrees of midnight Sun by way of compensation.

If the Earth's axis were tilted even more than its current 23½ degrees – as it is in Fig. 17.2, where the tilt is 60 degrees – the arctic and antarctic circles would be correspondingly further away from their respective poles.

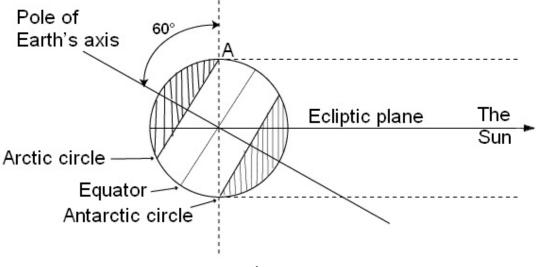


Fig. 17.2

Now, Mr Scott's argument is that if the tilt of the Earth's axis increases, the area of the Earth's surface that suffers arctic and antarctic conditions also increases. Correspondingly, if the tilt decreases, the arctic and antarctic zones shrink towards the poles again.

He went on to deduce that as the Earth's axis reeled back and forth after the impact of the comet or whatever, arctic weather conditions advanced and retreated in accordance with the principles illustrated in Figs. 17.1 and 17.2. This, Mr Scott argued, is precisely what geologists see as the alternating advances and retreats of the glacial ice sheets.

The most severe tilt, and thus the most severe Ice Age, came just after the Earth had been hit by the comet. The Earth's axis was pushed over to an angle of 60°, as shown in Fig. 17.2, and arctic conditions prevailed in any area outside a zone extending from 30° north latitude to 30° south latitude. This was perhaps a quarter of a million years ago and, amongst a number of other things, it neatly explains the formation of the Sahara and the origin of the pygmies! (Mr Scott firmly believed that many riddles of race, custom, creed and language were explicable in terms of the effects of advancing and retreating ice sheets.)

Let us take a look at the climatic conditions associated with the great-tilt Ice Age of Fig. 17.2. Mr Scott describes them thus:

Reconstructing the terrestrial conditions as they would be in the circumstances, there would be, within the equatorial zone, a wide belt, some 60 degrees

across, where a high temperature and a humid atmosphere would induce intense and prolific vegetation wherever a land surface existed. Beyond that belt the polar ice caps would extend both north and south, the zone of contact, where the ice line reached its nearest to the equator, being the scene of perpetual inundation caused, firstly, by the thawing of the ice along the extreme edge of the ice caps, and, secondly, by the cold air over the ice precipitating the humidity in the atmosphere as rain along the zone of demarcation and as snow farther in over the ice.

Torrents of rain and gushing water would wash away the soil and materials necessary to plant growth, leaving behind an insoluble residue of silica. This took place at or near the 30° latitude parallels, remember, and is precisely where we find the Sahara, the Kalahari and the Syrian deserts, not to mention the deserts of Australia and America. The Gobi desert was formed at the same time, Mr Scott argued, the awkward fact that it is rather north of the 30° north parallel being neatly explained by the presence of the Himalayas.

At that time, of course, the entire human race was forced to live in the equatorial regions, which meant that, on the whole, things got a bit crowded. There was fierce competition for living space, and, inevitably, some folk just had to live up near the ice lines.

Mr Scott had a theory that the human race was naturally rather indolent, and that progress was made only when and where it had to be made. Many teachers observe much the same phenomenon in their classrooms even today, so that on this count at least, Mr Scott's hypothesis is not entirely implausible! Thus, those tribes who had to fight for survival up near the ice line and who had to migrate in accordance with the whims of the ice, made more progress towards civilisation than those tribes who stagnated in the comfort of the equatorial forests.

That, according to Mr Scott, is why the pygmies are still stuck in an equatorially distributed stone-age rut, and why civilisation flowered in regions well away from the equator.

Applying similar reasoning to later Ice Ages, Mr Scott came up with some novel ideas on European prehistory. He rejected traditional archaeological thinking, particularly its ideas on the antiquity of man, and boldly ventured to explain stone circles,

camps, dolmens and earthworks in a pre-glacial context. According to Mr Scott, European history can be divided into three ice-linked phases, which can be roughly summarised as follows:

- 1. 70,000 to 40,000 years ago: the arctic circle retreated from the 45th to 57th latitude parallel, then advanced again from the 57th to the 50th.
- 2. 40,000 to 16,000 years ago: the arctic circle retreated from the 50th to the 62nd parallel, then advanced from the 62nd to the 55th.
- 3. 16,000 years ago to the present day: the arctic circle retreated from the 55th parallel towards the 67th; it will reach the 67th parallel in about 400 years time.

According to Mr Scott, the ancestors of most modern Europeans migrated here from Asia some 70,000 years ago — that is, at the beginning of phase 1. Their migrations were governed, as we have already seen, by the advancing and retreating ice lines, and because their lives were constantly threatened by hostile natural forces, their ascent towards civilisation was rapid. (The pygmy, of course, had already stagnated in the equatorial regions, as had the aborigines in Australia.) Between 50,000 and 60,000 years ago, Mr Scott went on, the migrating tribes reached Britain, and about 40,000 years ago, the beginning of phase 2, they began erecting the stone circles, the dolmens and the earthworks so familiar to us today. All this is news to the orthodox archaeologists, of course. They stubbornly persist in the belief that the age of megalithic building in Britain was a mere 4000 years ago. But that is the least of their worries, if Mr Scott is anything to go by.

To tribes living on the hostile ice line, the Sun was the god who fought against the eternal menace of the arctic ice. Here, then, is one reason for the growth of Sun worship. But more than that, if the Sun was, in effect, the bringer of life, and if it was his movement that governed the lives of the people, then any tribe with an ounce of megalithic common sense would keep a very careful eye on him. According to Mr Scott, this is precisely what all the dolmens and the stone circles were built to do. Mr Scott describes the dolmen building of phase 1 thus:

With the Arctic Circle in the 45th parallel of latitude,

the angle of obliquity would be 45 degrees. This would mean sunrise at the winter solstice at 45 degrees south of east – in other words, due south-east – instead of the 23 degrees south of east as at the present. The Brittany dolmens, which have been oriented, face south-east. The inference is inevitable. They were constructed as a means, crude perhaps, but for all that serviceable, whereby the southern trend of the sunrise at the winter solstice could be watched and recorded.

In answer to those folk who slavishly adhered to the archaeologists' idea that dolmens were constructed simply as tombs, Mr Scott argued that they were pressed into service as tombs only later. This was long after they had served their astronomical purpose, and at a time when they had acquired something of a religious significance as shrines. "Thus as time went on," he wrote, "and the original use of the dolmen was lost in the haze of legend and myth, ambitious chiefs, or honoured leaders, might be buried in or near it, and the fundamental purpose for which it was originally reared would thus be further obscured."

As for Stonehenge, Mr Scott claimed that it was built to observe the Sun at the winter solstice some 13,000 years ago — its ditch and ramparts being the remains of a sort of interglacial camping site!

Curiously enough, many archaeologists now agree that Stonehenge was at least in part an astronomical observatory, though of course not in the sense envisaged by Mr Scott, and certainly not in the same historical context. The way the archaeologists see it, there wasn't a polar bear in sight when Stonehenge was being built.

The subject of ice, though, brings us to another brand of pole tilting, as proposed by Hugh Auchincloss Brown in his book *Cataclysms of the Earth*, published in 1967.

Every year, it is calculated, some 293 cubic miles of ice are added to the south polar ice cap alone. It stands to reason, argues Mr Brown, that sooner or later the sheer weight of ice at the Earth's north and south poles will literally tip the Earth off its present axis.

He likens the Earth to a spherical spinning top in a state of perfect balance. If a blob of molten lead is allowed to fall onto the top, and somewhat away from its axis of spin, then the top will begin to wobble, and eventually topple on its side.

Mr Brown argues that this is precisely what happens to the Earth

when its ice caps get so heavy that they disturb the balance of the Earth on its axis: the Earth topples on its side, and the polar regions end up on the new equator.

The consequences of this are both sudden and severe. Anyone who has ever tried to move a pan full of water too suddenly will know that the water has a tendency to slosh over the side of the pan. When the Earth goes into a tilt, Mr Brown believes, the Earth's oceans do much the same, and the result is a gigantic tidal wave that sweeps the globe. The severe flooding caused by the last such catastrophe (about 5000 BC) is today still remembered in the story of Noah, and in connection with the final submergence of Atlantis.

Again, if the polar and equatorial regions were to suddenly switch places, this would explain several very puzzling things.

For example, Mr Brown points out that several mammoths have to date been found frozen inside blocks of arctic ice. That the creatures died suddenly is evident from the undigested food in their stomachs, Mr Brown argues, and indeed, some of them died so suddenly that they didn't even have time to swallow their last mouthful of food. Finally, the vegetation on which these creatures fed is shown on analysis to be essentially tropical. All these things, Mr Brown believes, fall simply into place if we accept that one minute the mammoths were munching away in the tropical undergrowth and the next minute, following a sudden pole tilt, they were freezing to death in the Arctic!

Then there are the Berbers. Why, in the Sahara desert, of all places, do we find Berber rock carvings that depict swimmers? Mr Brown argues that just after the last pole tilt, about 7000 years ago, the Sahara Basin was a vast inland sea around which the Berber culture developed. But its position near the new equator, following a pole tilt, meant that by 3000 BC the Sahara Sea had simply evaporated away, leaving only the carvings of the swimmers to remind us of its former existence.

The inevitable question, of course, is how long have we got before the ice builds up again to such an extent that another pole tilt becomes due?

Mr Brown estimates that the last tilt occurred about 5000 BC, and that the previous one occurred some 6000 years before that. In other words, we can expect a tilt any day now since, on past performances, one is several hundred years overdue already!

But Mr Brown is not defeatist about all this. On the contrary he has very definite plans for averting this imminent disaster. He proposes that a number of meteorological stations be established to keep a watch on the rate at which ice is being added to the polar caps. Once we know that, he argues, we can simply artificially destroy, possibly using atomic energy, enough ice to maintain the Earth's equilibrium. Simple, but expensive, and so far as we know, no-one has yet taken Mr Brown's ideas seriously enough to actually act on them. Meanwhile, the ice keeps piling up ... though of course global warming has now entered into the picture!

Of equal import are the theories of Dr Adam Barber of Washington, DC, who is the President, Managing Trustee, Director and (we believe) sole member of the Barber Scientific Foundation. His work, *The Coming Disaster Worse than the H-Bomb*, describes how within the next few decades the Earth will tip onto its side, so that the seas will sweep across the continents and produce a global flood – unless, of course, we do something about it.

The theory is based upon the behaviour of a gyroscope. Apparently Dr Barber made his discovery while constructing one of his seventy-five perpetual motion machines (none of which has actually worked). The Earth has a 'small orbit', spread over the main one, which is 9,865,621,106,441,698,602 miles long — a figure derived by means of a calculation which would no doubt be crystalclear if only we could make head or tail of it. When the Earth's axis makes a right angle with both the large and small orbits, as may happen around 21 June or 21 December each year, the Earth may tilt, completing its shift in a mere 1½ hours. The last occasion was (naturally) at the time of Noah's Flood, so that another tip is just about due.

To guard against this, Dr Barber suggests fastening jets on to high peaks on opposite sides of the Earth, so that when the shift starts the jets can be switched on to jerk the world back to its original position. It is also wise to have boats moored by one's front gate, so that they can be used if the flood waters become too threatening – or, perhaps, construct a large gas balloon complete with rope ladder, so that members of the household can swarm up the ladder at the first sign of danger, and stay inside the balloon until the waters have subsided. Whether all these precautions are really necessary remains to be seen. Dr Barber thinks that they are – and,

of course, he may be right!

So far, our pole tilters have been in deadly earnest. But our review of the subject would have been incomplete without the inclusion of Dorothy Starr's 'Pole Watchers' Club'.

As an organisation, they tend to follow Hugh Auchincloss Brown's idea that it is the build-up of ice at the Earth's poles which causes the tilting. The consensus of opinion seems to be that a tilt could hit us any day now, but despite this, the pole watchers are a far from miserable lot. Indeed their approach to tilting is conducted in more of a party atmosphere than an academic one, and the club is as much a pen-pal organisation as anything else, with pole tilting as its unifying theme. A monthly magazine, called *Pole Watchers' Newsletter*, is issued to all members, and though pole tilting is the major talking point, several issues have found time to consider a variety of other unorthodox topics such as pyramid energy, astral projection, Atlantis, flying saucers and health foods.

The front cover of the newsletter, by the way, is a very jolly affair. In one corner it sports a delightful little picture of the globe, its poles clogged up with ice, and in imminent danger of tilting! In the opposite corner is a charming picture of a penguin, and therein lies a tale.

The penguin motif dates back to the newsletter for May 1971. That was when the Pole Watchers' Club celebrated its second birthday, and, naturally enough, they had a party to celebrate. It was at this party that the Pole Watchers' Puppet Theatre presented its first (and by all accounts only) performance of the miniature play "Lucky Penguins". The dramatis personae are a family of penguins living in Antarctica, when, in the middle of scene 2, the Earth begins a pole tilt:

GRANDPA PENGUIN: That Ice Mountain is going to move!

PAPA PENGUIN: Why? Its been there for thousands of years. How do you know?

GRANDPA PENGUIN: Something in the air. I *feel* it. And we move with it!

MAMA PENGUIN: You're growing childish, Grandpa!

Suddenly, the stage shakes. Rocks and ice cubes fly around. The stage turns slowly, then faster and faster until it fades out of view. Under it a green carpet with

flowers appears in bright sunshine.

Hence the penguin motif.

But the *Pole Watchers' Newsletter* does have its more serious side, and some pole watchers have formed a Polar Shift Protection Committee for the purposes of persuading the US government to prepare for the coming cataclysm. One pole watcher called Paul Doerr has even bought a cabin up in the mountains, well away from the tidal-wave dangers of the coast. And the August 1980 newsletter carried a report by Mrs Starr on the Shelter Cave Community, who, as their name suggests, are well prepared for any pole shift.

But just how drastic would a pole shift be? Pole watcher Robert Schiller believes they can get very violent indeed. In the September 1980 issue of *Pole Watchers' Newsletter* he put forward the novel idea that the asteroid belt may have been formed by a planet that tilted its poles a bit too rapidly for its own good! We rather doubt that Mr Schiller is right about this, but just in case, perhaps we had better keep an eye on the Earth's polar regions. After all, you never know....

Chapter 18. Odds and Ends

Religion has probably spawned more eccentric literature than any other field of human study, and indeed, in the course of this book, we have seen several instances of what might be called "religious zeal"- in association with the Flat Earth doctrine in Chapter 2, for example, or with the Biblical UFOs in Chapter 5, or again with the Great Pyramid in Chapter 6. Though religious Independent Thought is fascinating in itself, most such literature does not come within the scope of this book, insofar as it is not of a scientific nature. This is a pity, as it is difficult to resist a book with a delicious title like *Did the* Virgin Mary live and die in England? written by Victor Dunstan and published, amid much controversy, in 1985; or a book with a wonderful title like LOUIS NAPOLEON – THE DESTINED MONARCH OF THE WORLD: foreshown in Prophecy to confirm a seven years' Covenant with the Jews about, or soon after 1864-5, & (after the Resurrection & the translation of the Wise Virgins has taken place 2 years & from 4 to 6 weeks after the Covenant,) subsequently to become completely supreme over England & most of America, & all Christendom, & fiercely to persecute Christians during the latter half of the 7 years, until he finally perishes at the descent of Christ at the Battle of Armageddon, about or soon after 1872–3, by the Reverend Michael Paget Baxter, first published in 1866; or again, a website like http://www.666truth.org/history/666-antichrist-

http://www.666truth.org/history/666-antichrist-myths/articletype/articleview/articleid/901/pageid/914/666-antichrist-myths-and-folklore.aspx which demonstrates, at least to its own satisfaction, that Ronald Reagan was the prophesied Beast of the Book of Revelation (his full name, Ronald Wilson Reagan, has 6 letters in each of the three names for a start!)

But there is one branch of religious eccentricity which does merit a place in this book insofar as it has an astronomical basis, and it is the theory that Jesus Christ never really existed, and was, in effect, nothing but a solar myth, his life story being based on the yearly passage of the Sun through the signs of the zodiac!

Thus Christ is the Sun (of Righteousness), the 12 signs of the zodiac being associated with his 12 disciples on the one hand, and symbolising the events of his life on the other. Scorpio is a fitting

symbol of Judas Iscariot, whilst Virgo is the Virgin Mary, Sagittarius is Pontius Pilate, Aries, the Ram, is Jesus as the Lamb of God, and – our personal favourite – Aquarius, the man with the watering pot, is John the Baptist! The cycle of the seasons as the Sun completes its circuit of the zodiac becomes Christ's birth, death, and resurrection. Thus the Sun (Christ) dies at the winter solstice, 22nd December, but then is resurrected three days later on 25th December, Christmas Day, when Christ is born in Bethlehem, attended by the Three Wise Men, who are none other than the three stars of Orion's Belt and who were guided there by the Star of Bethlehem – the star Sirius, to which Orion's belt points, of course!

This theory has a long and complex history. One of its earliest appearances was in post-revolutionary France, in the form of a book, subsequently translated into English, The Origin of All Religious Worship by Charles-François Dupuis. In Germany the theory was taken up by Arthur Drews (pronounced Drefs) in a book, again subsequently translated into English, The Christ Myth, first published in 1910. In England, the theory was taken up by J.M. Robertson in books like *Christianity and Mythology*, first published in 1900, and by Edward Carpenter in his book *The Origins of Pagan* and Christian Beliefs published in 1920. The theory still has its champions, both in book form and on the internet – Malik H. Jabbar, for example, in his series of four books under the general title of The Astrological Foundation of the Christ Myth, all available at the time of writing, with an associated website at http://www.thechristmyth.com/. Also of interest, and active at the time of writing (January 2013), are the websites http://www.stellarhousepublishing.com/jesussunexcerpt.html and http://jesusastrotheology.com.

Not that devout Christians have taken all this lying down. Thus Frederick Cornwallis Conybeare published his book *The Historical Christ* in 1914, and H.G. Wood published his book *Did Christ Really Live?* in 1938. There is much, too, on the internet – see, for example, http://www.tektonics.org/jesusexisthub.php, and on the solar myth theory in particular, http://www.jstor.org/pss/536766. But perhaps the most amusing refutation of the solar myth theory was that published in a pamphlet, in 1827, by one Jean-Baptiste Peres. In it, Peres "proved" that Napoleon Bonaparte had never existed either and was, in fact, another solar myth! After all, his name, Napoleon, incorporated that of Apollo, the Sun God (in fact,

his full name, "Napoleon Bonaparte" means "the true Apollo of Light", though we won't go into details here), and his mother's name, Letizia, was similar to that of Apollo's mother, Leto. Plus he had 12 active marshals corresponding to the 12 signs of the zodiac!

The Star of Bethlehem has been the subject of much speculation, some of it gloriously wild-eyed. We saw an excellent example back in Chapter 5, in the form of Barry H. Downing's theory that the Star was an extra-terrestrial spaceship keeping an eye on messianic human affairs!

Rather more down to earth is the theory that the Star of Bethlehem was a blazing comet, and indeed the artist Giotto depicted it thus in his painting "The Adoration of the Magi", now in the Cappella degli Scrovegni in Padua. One very interesting theory in the comet field, proposed by Nikos Kokkinos in his essay "Crucifixion in AD 36: The Keystone for Dating the Birth of Jesus" published in the book Chronos, Kairos, Christos - Nativity and Chronological Studies presented to Jack Finegan, edited by Jerry Vardaman and E.M. Yamauchi (1989), relates the Star of Bethlehem to an appearance of what we now know as Halley's Comet, in 12 BC. This is an early date for the birth of Christ, but Mr Kokkinos argues guite persuasively that Christ was crucified in 36 AD, and that he was nearly fifty years old at his death (John 8.57), not in his early thirties as is commonly supposed (on the basis of Luke 3.23). Incidentally, it is sometimes argued that the Star of Bethlehem could not have been a comet, since comets were generally held to presage doom and gloom. This is generally true, but Mr Kokkinos does produce several instances of comets being held to portend the birth of the great and the good.

One of the most persistent theories of the Star of Bethlehem began with the astronomer Johannes Kepler in 1603. Basically it proposes that the 'Star' was a symbolically/astrologically significant triple conjunction of the planets Jupiter and Saturn in the constellation of Pisces in 7 BC. The conjunctions of 7 BC took place on or close to 29th May, 29th September and 4th December. It is suggested that the Wise Men saw the first and/or second conjunctions, realised their significance, and set out for the Holy Land on account of them, arriving in Bethlehem for the conjunction of 4th December. (At this point readers should note that — assuming that Christ really existed, and that he wasn't simply a solar myth run

riot — not only is his *year* of birth uncertain, but his *date* of birth is too. The commonly held belief that Christ was born on 25th December of 1 AD is now widely reckoned to be a combination of pious, but erroneous, counting up of years, combined with a deliberate Christian adaptation of the date of the Roman pagan festival of "Dies Natalis Solis Invicti" — "the Birthday of the Unconquerable Sun" — effectively the winter solstice.)

This basic conjunction theory of the Star of Bethlehem has been variously embellished. According to astronomer Dr Percy Seymour, writing in his book *The Birth of Christ – Exploding the Myth* (1998), Christ was born at sunset on 15th September 7 BC, for not only did a conjunction of Jupiter and Saturn take place on that day in Pisces (according to his calculations, at any rate), but also the Sun was in Virgo then (hence Christ as the Son of a Virgin etc.) Furthermore, this planetary–solar configuration sparked off the Northern Lights, hence the "glory of the Lord" which "shone round about" the shepherds in Luke 2.9. Dr Seymour also thought that the planetary conjunction in Pisces explained the famous use of the Fish as a Christian symbol.

Some even more peculiar twists to the tale are to be found in Adrian G. Gilbert's book Magi – the Quest for a Secret Tradition (1996). He again has Jupiter and Saturn in conjunction in Pisces, but his calculations lead him to deduce that Christ was born on 29th July 7 BC at the time of the heliacal rising of the star Sirius (= Mary, in her symbolic role as "Star of the Sea") with the Sun (= Christ) in the constellation of Leo (= the Lion of Judah). Mr Gilbert argues that in the traditional nativity scene, not only is Mary the star Sirius, but Joseph is the constellation of Orion; the Three Kings are the planets Jupiter, Saturn and Mercury; and the Three Shepherds (Mr Gilbert seems guite sure there were three) are the stars Capella, Castor and Pollux. (By our reckoning this would make two of the shepherds twins, but neither the Bible nor Mr Gilbert mentions this, so we won't pursue it either.) As for the animals traditionally present at the nativity, the ox is clearly Taurus and the ram is clearly Aries. (Yes, we know the traditional animals were an ox and an ass, but you try finding an ass in the zodiac!) As if that weren't enough, Mr Gilbert has the constellation of Orion symbolic not only of St Joseph but also of John the Baptist (who was apparently a reincarnation of Elijah), with the seven veils of Salome symbolic of the seven planets, and the platter on which John's head was

delivered to Salome symbolic of the Moon's disc!

There is one problem with the conjunction theory, though, and it was explained by the Reverend C. Pritchard in an article entitled "On the Conjunctions of the Planets Jupiter and Saturn, in the Years BC 7, BC 66 and AD 54", which was published in *Memoirs of the Royal Astronomical Society* in 1857. Rev. Pritchard made the interesting point that since the conjunction of Jupiter and Saturn in Pisces in 66 BC was more spectacular than that of 7 BC, it ought arguably to have aroused more messianic interest than the conjunctions held to have accompanied the actual birth of Christ in 7 BC. In short, why didn't the fathers of the Three Wise Men set out for the Holy Land in 66 BC if such conjunctions were so significant? No-one seems to have answered this question to date.

But let us now move to a different field altogether — exactly how much does the Sun affect our lives? Insofar as it is the source of all the Earth's light and heat, the obvious answer is very much indeed, even to the effects that it has on our general mood. But what of some of the lesser and more controversial effects? It is, for example, a fact that the solar wind generated by sunspots affects the transmission and reception of radio waves on Earth. More controversial is the theory, mentioned briefly in Chapter 6, that revolutions here on Earth are correlated with intense sunspot activity. The idea is not that sunspots *cause* revolutions as such, but that if social conditions are unstable at a time of maximum sunspot activity, then the side-effects of the solar wind at such times can "tip the balance" of war and revolution.

The idea seems to have come into prominence at about the time of the First World War and the Russian Revolution of 1917. Thus the Russian Alexander Tchijevsky looked at the period from 500 BC to 1922 AD and reckoned that about 80% of wars, revolutions and periods of civil unrest were associated with sunspot maxima. In the West, William James Sidis, writing in (of all places) the *Journal of Abnormal Psychology* in 1918, concentrated on revolutions during the nineteenth and early twentieth centuries. He compiled a list of 33 revolts, "of which seventeen occurred nearer the minimum of sunspots than the maximum, and sixteen occurred nearer the maximum." Even Mr Sidis had to admit that "this looks unsatisfactory at first sight", but then he happened to notice that the revolts closer to sunspot minima occurred in *warm* countries,

whilst those closer to sunspot maxima occurred in *cold* countries.... Interest in the subject still continues on today's internet – see, for example, the website of feminist and libertarian Carol Moore, who predicted the fall of the Iron Curtain on the basis of sunpots (http://www.carolmoore.net/articles/sunspot-cycle.html) and the website http://universalastrologer.com/articles/sun-spots.html which tells us that Tony Blair was born at a time of low sunspot activity whereas George Bush was born at a time of high sunspot activity. (Interestingly, Hitler was born at a time of no sunspot activity at all.)

Moving from the Sun to the Moon, now, there is great amount of controversy about exactly how much the Moon affects us here on Earth. Few people dispute that it causes the tides, but much more controversial is the notion that it affects the mentally ill – the word "lunatic" preserves this belief, of course, as does the image of the werewolf howling at the Moon. Arnold L. Lieber's book *The Lunar Effect*, published in 1978, and which was updated and republished under the title *How the Moon affects You* in 1996, is devoted entirely to this field.

According to Dr Lieber, just as the Moon causes the tides on the Earth, so also it causes biological tides in the human body (which consists largely of water, of course). Not only that, Dr Lieber believes that the Moon also influences the Earth's magnetic field, which in its turn influences the working of our bodies in more subtle ways. Thus not only is mental illness really influenced by the Moon, but aggression (including murder and suicide) and epilepsy are as well, not to mention the incidence of heart attacks and the human birth rate. Dr Lieber also quotes a Russian scientist who has a theory that the Moon has more than a little to do with disappearances of ships and planes within the Bermuda Triangle.

Now here's a question; are we affected by radiation from the Pole Star? Both of the present authors have to admit that the possibility has never occurred to them, but it did to Frances Barbara Burton, who in 1845 wrote a rather strange book called *Elective Polarity:* the Universal Agent. Her most startling conclusion was that the Earth's fossil record is a testimony to the magnetic influences of the star Vega at those times when it has been the Earth's pole star!

Let us explain. The Earth rotates on its axis once every day, but, like a spinning top, its axis of spin itself rotates, performing a

gyratory circuit of the heavens once in every 25,000 years or so. One result of this is the so-called precession of the equinoxes, but more important here is that the North Pole of the sky – the point about which the northern sky appears to rotate – changes with time. At the present day the North Pole of the sky happens to be close to the relatively dim star Polaris in Ursa Major, but it has not always been thus, and 12,500 years ago it was close to the much brighter star Vega in the constellation of Lyra. According to Miss Burton, we today are used to the relatively weak magnetic influences of Polaris channelling, almost imperceptibly, into our magnetic north pole, and so we can have no conception of what it must be like when "the glowing splendour" of the star Vega "diffuses its powerful vitalities throughout this planet." Rock strata become folded, creatures like the dinosaurs are mutated, climates are changed and the Aurora Borealis goes berserk. Thus it comes about that we find fossil seacreatures high up in the mountains, and fossils of tropical animals in the frozen wastes of the north, and all because of Vega.

Quite how all this works exactly is not terribly clear. For readers who are puzzling over what Miss Burton might mean by the "elective polarity" in the title of her book, here is how she explains it:

By Elective Polarity is therefore understood effluvial impetuses of ineffable activity, which circulate throughout all organizations; each emanation whereof, comprising certain elementary or magnetic properties, in accordance with the angular and polaric diversities inherent in its classification, and its activity being determined, as before stated, by the proportional polaric obliquity and angular acuteness, of its circulating qualities. Because from the infinite variety in the elements which excite polaric effluviums, the ACTIVITY of elective polarity must be correspondingly diversified: – and countless must be the circulating impetuses, everywhere propelling polarities within, and around one another, throughout the universal confluence. Impetuses, – multiform in activity; - which extract - modify - interchange propel – and transfuse, countless renovatory effluxes - essences - elixirs, &c, &c, around the mighty Laboratory of Space: – and these, again and again,

remodifying themselves, into fresh and fresh diversities of polaric impetuses; – consequently, into fresh and fresh remodifications of renovatory properties.

In a nutshell, then, by some means unfathomable to all but Miss Burton, the magnetic effluxes of Vega, when it was the pole star, caused extraordinary "organic convulsions" here on the Earth, the results of which are traceable through the geological record, and in particular, through fossils.

Incidentally, Miss Burton didn't think much of Sir Isaac Newton. If he'd stuck to algebra, she said, all might have been well, but his attempts to sort out astronomy were lamentable. "One might as well look at Jupiter through a microscope," she wrote, "as study astronomy under Sir Isaac Newton's auspices." We rather doubt that she would have been any more impressed with Albert Einstein.

•••

So, if the Pole Star affects us without our knowing it, what about the rotation of the Earth? Surely the Earth cannot rotate on its axis as fast as astronomers claim, and it not have *some* effect on us?

A book which set out to show exactly this was Arabella Kenealy's *The Human Gyroscope: A Consideration of the Gyroscopic Rotation of the Earth as Mechanism of the Evolution of Terrestrial Living Forms; explaining the Phenomenon of Sex; its Origin and Development and its Significance in the Evolutionary Process,* first published in 1934. Despite the promise of its extended title, it is not the most riveting of reads, and not the clearest either.

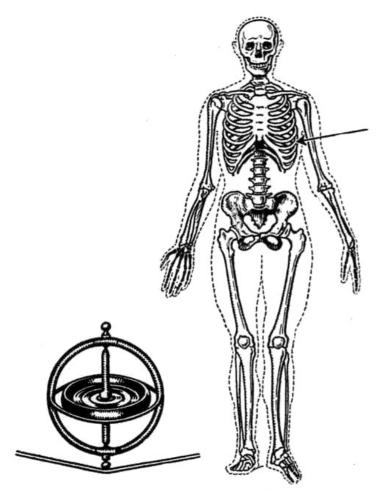
The gist of Miss Kenealy's theory is that the spinning of the Earth generates an upward centrifugal force in opposition to the downward centripetal force of gravity. If you watch a potter as he shapes a pot on his wheel, you will see that the pot grows *upwards* on account of the spinning of the wheel. The spinning of the Earth operates in much the same way as the spinning of the potter's wheel. Thus the mighty oak is thrust ever upwards by the centrifugal force of the spinning Earth, at the same time as its roots are drawn ever downwards by centripetal gravity. Again, the giraffe's long neck is a centrifugal phenomenon, whereas the kangaroo's long tail is a centripetal one. Again, it is a fact that in northern latitudes, where the spin of the Earth generates lower centrifugal force, one finds primitive lumbering animals like the seal

and the walrus, whereas in lower latitudes, where the centrifugal force is greater, one finds the cradle of the human race: *Homo sapiens* became an erect biped in Africa, remember! The evolution of man owes much to the spinning Earth. Indeed, according to Miss Kenealy, the human skeleton shows the very centrifugal and gravitational force-patterns of the Earth in much the same way as iron filings show the force-patterns of the Earth's magnetic field!

In addition to the simple effects of centrifugal force, Miss Kenealy also believed that the law of the conservation of angular momentum implied that the spin of the Earth imparted gyroscopic momentum to everything living on its surface, and that organisms – and in particular, Man – were influenced by it. As she saw it, the human skull is "a highly specialised bony and muscular gyroscopic mechanism", and of the brain she wrote:

That the brain has been shapen by centrifugal motion of rotation is indicated by the central hollow spaces, or ventricles – corresponding to the interior cavities of the trunk and its hollow organs, and those of the long bones. Its convoluted outer surface indicates centrifugal and expansile developmental impulsions, resisted by a reactionary centripetalising and contractile impulse. Akin to the similar shapings of the Earth's crust by the dual impulsions of her own rotations, causing folds and crinkles; mountains, valleys, in its surface.

According to Miss Kenealy, the act of walking works via a gyroscopic balancing act, involving "the concentreing trend of the negative left leg", and as for dancing, why, the rotatory movements of a couple on a dance floor are akin to the Earth's rotation in the plane of the ecliptic! We reproduce Miss Kenealy's frontispiece as our Fig. 18.1 in the hope that it clarifies at least some of these novel ideas.



HUMAN SKELETON.

- (1) Showing the modified gyroscopic mechanism maintaining man in upright posture. Adapted to locomotion forward over the solid ground, human body does not rotate completely on its vertical spinal axis, but the automatically-recurring respiratory expansions and contractions of the thoracic gyroscopic mechanism result from actual rotation—in reflex of Earth's—of the singularly curved ribs of its opposite sides alternately forward and backward on the rigid spine to which they are jointed behind. And these expansions in girth evoke reactionary movements by the spinal extensor muscles, which extend the column in the vertical, imparting levitative movements to the upper half of the trunk, gravitative movements to its lower half, and thereby maintain it in upright posture, supported upon its vertical legs.
- (2) inset. SIMPLE GYROSCOPE. By rotation of its equatorial surface on its vertical axis, it maintains its upright poise as it travels forward along the stretched string.

Fig. 18.1

More than this, the human body operates in three pairs of opposing directions, each having male/female connotations. Thus we have downwards gravity which is male, opposed by upwards centrifugal force which is female; we have sideways right, which is male, opposed to sideways left, which is female; and we have the forwards direction, which is male, opposed by the backwards direction, which is female. Quite how all this, combined with the potter's wheel effect and the conservation of angular momentum,

leads to the origin of the sexes, via "the cumulative shapings of rotation" with its "levitative vertical impulse" and its "kinetic horizontal impetus", is far from clear – at least to us – but it was all as clear as day to Miss Kenealy, who had very firm ideas on the natural gyroscopic order of things: that men should be men, and women should know their rightful evolutionary place. Yes, women could use their brains and skills, but they should not aspire to be men, and they should not forget that first and foremost nature intended them to be mothers. The title of her Chapter 13 ("Feminist Doctrine diametrically opposed to Civilised Progress") will give readers a good idea of her views!

Miss Kenealy was far from happy that in her day there were so many "male-faced, grim-jawed" feminist "sex-intergrades" around, and so many "weedy" men who had been given inferiority complexes by them. The natural gyroscopic order of things was being disrupted by girls doing too much sport at school – so much so that some girls had even been heard to say, "I *loathe* going home for the hols. There's no hockey or lacrosse there!" The inevitable result was the athletic distortion of the natural female frame:

Such raw-boned un-feminine frames, prominent noses, and big hands and feet, of many of them, resulting from their strenuous training, have earned for our unfortunate, excellently-meaning Girl-Guides, their cruel title of 'Girl-Guys.'

The natural order of things is that masculine men breed feminine daughters and feminine women breed masculine sons – interfere with that, as the Feminists have done, and it is not surprising that there are increasing numbers of "sex-intergrades" of one sort or another – feminine men as well as masculine women; women who must hide their masculinity under layers of make-up; and women in whom the traditional womanly qualities of "reserve, modesty and dignity" are sadly lacking. Even savages instinctively wear a loin cloth, Miss Kenealy points out, but some women, in their urge to become successful and famous, are content to appear half naked in the newspapers, or in films at the cinema! And when it comes to "the degrading cult of Nudism" – which involves both men and women, of course, but alike perverted from traditional standards of decency – this is no more than a reversion to a primitive form of sexual Bolshevism, "to that state of polyp-colony in which man

began as a unit, subconscious and unaware of itself as an entity"! As for "the hideous promiscuousness of prostitution", Miss Kenealy writes:

Natural history shows us many degenerate and loathly forms of inherently female parasites: tape-worm with tenacious suckers gripping to its living host and sapping his resources; mosquito sucking blood, and injecting poison; hook worm, fluke and others; subsisting all by similar repulsive methods. But none are so loathly as the parasite woman-prostitute who to live easily lives bestially; trafficking her body as a common sewer for the *excreta* of lust and vice – drunken, perverted, debased; broadcasting her pestiferous diseases wholesale to blast the lives of babes. Subject of much false and soppy sentiment, she is the anti-Christ of Evolution.

We will leave readers to discover for themselves Miss Kenealy's proposals for a Parliament for Women; her views on terrorism; her "continual telepathic communication" with her fiancé of many years before ("a splendid specimen of vigorous manhood", needless to say) who was killed in a riding accident, and whose death she saw in a vision "as though seen through the wrong end of a telescope"; and her view of X-rays as "a form of 'black magic', and a violation of natural law". *The Human Gyroscope* is a very strange read, and well worth the considerable effort of reading it.

It is not very often that one comes across a never-before-seen piece of Independent Thought, something truly original and with no apparent antecedents, but such is T.J. O'Connor's little book *High Vision* first published in 1981. In a nutshell, Mr O'Connor's theory is that the Earth doesn't orbit around the Sun at all, but moves around a circle to one side of the Sun. To be more precise, the Earth moves around a circle of circumference 9,083,250 miles (this being 365 times the equatorial circumference of the Earth) once a year, and the centre of this circle moves around the Sun once every 25,800 years, this being what is known to orthodox astronomers as the precession of the equinoxes. Fig. 18.2 should make this clear.

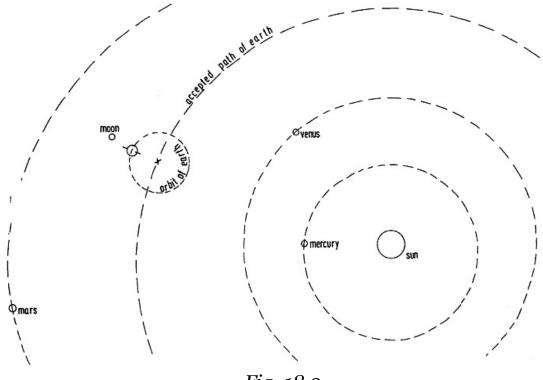


Fig. 18.2

Mr O'Connor was an Irish building contractor who lived in County Cork. In his youth he had spent much time walking at night in the Slieve Mish Mountains, where he could see and study the night sky more clearly than any city-bound astronomer. It was during these youthful excursions that he first noticed that the full moon is always south, never north, at midnight. Thus it follows that the Sun must always be to the north at midnight., and this can only happen, according to Mr O'Connor, if the Earth moves round a circle entirely to the south (and thus on one side of) the Sun. Now we must confess that we do not fully understand some of Mr O'Connor's reasoning, but he does seem to argue that the Sun really rises in the north, and that the belief that it rises in the east is a sort of delusion arising from a confusion of earthly north-south-eastwest with ecliptic north-south-east-west. By the same token, of course, the Sun really sets in the north as well.... But whatever, the revelation that the Earth did not move around the Sun, but around a small circle to one side of it, led to Mr O'Connor to explain the precession of the equinoxes without resorting, as orthodox astronomers do, to having the Earth behaving like a child's spinning top that is gradually falling over: all was explained much more simply by having the centre of the circular orbit of the Earth itself slowly orbit around the Sun once every 25,800 years. So in fact, the Earth does go around the Sun, but once every 25,800 years, not

once a year as we are all apt to suppose! Once one has grasped this concept (plus its corollary that the Ice Ages are merely precessional 'winters'), it becomes child's play to grasp the notion that starlight has two components: the glow which surrounds the star, and the light of the star itself as seen directly. This leads Mr O'Connor to pose the interesting question: "if an observer stood on Jupiter would he then see its starlight in between himself and the sun?" We have to confess that we do not even understand the question, let alone Mr O'Connor's answer to it!

Alas, Mr O'Connor's book *High Vision*, and its sequel, published in 1993, *Beloved Planet* (which acknowledges the help and assistance of, among others, a member of the Kinsale Golf Club, the Third Order of Franciscans, and the staff and customers of the Blackrock Castle Pub, Cork), appear to be largely forgotten today. At least, no trace of them can be found on the internet, in any shape or form, and that, we feel, is a great pity.

Another theory which seems to have been largely forgotten is the Theory Of Everything (TOE) proposed by R.J. Gault in his book *The* Big Balance, published in 1998. Discarding the Big Bang Theory as blatantly incorrect (if it was correct, Mr Gault argues, it would surely have been mentioned in the Bible!), the Big Balance Theory proposes that magnetic fields formed first of all in space, and that they proceeded to form the material universe (a theory which, Mr Gault believes, is mentioned in the Bible, as we shall see presently.) Thus, in Mr Gault's view, "it is not planets that have magnetic fields, but magnetic fields that have planets." Furthermore there is a fault in Newton's Law of Gravity – there has to be, because if Newton was correct the Moon would have fallen onto the Earth long ago. Since it hasn't, something must be holding it up, and according to Mr Gault it stays up there because it occupies a neutral zone in the Earth's magnetic field, a zone in which positive and negative magnetic polarities are balanced. Likewise, the planets don't crash down into the Sun because they are balanced in the neutral zones of the Sun's magnetic field. Indeed, the planets orbit the Sun in a plane which is the zone of magnetic balance between the north and south magnetic poles of the solar system.

Mr Gault also tackles the knotty problem of why the Earth spins on its axis, and this too is a matter of balance. If a person faces a fire too long, they turn away from it to avoid overheating, and this is exactly what the Earth does, to achieve a temperature balance, in respect of the Sun:

When a planet receives too much heat on one of its sides, that hot side immediately begins to back away from the excess heat, and conversely, the side which is sitting in the cold shaded position begins, of its own volition, to move in towards the heat of the Sun. The outcome of this effect is that the planet "spins"...

Again, the last Ice Age and the current phenomenon of global warming are extreme swings of a sort of temperature pendulum, and the Earth is seeking a balance point, exactly as a swinging pendulum does, somewhat akin to the equinoxes, which are the balance points of the Earth's annual orbit around the Sun.

The interplay of positive and negative polarities or extremes, and in particular their states of balance, explains many things, on a terrestrial as well as astronomical scale (which is why Mr Gault's theory is a TOE). It explains sex, for example: the male is positive and the female negative, "and in a desperate urge to magnetically balance themselves" the two sexes feel "a great need to join up with their opposite numbers". It explains the origins of the need for "a balanced diet" and why the mentally ill are indeed "unbalanced"; it explains memory ("an attempt by the brain to balance itself magnetically"); it explains why revenge is indeed "to redress the balance" and why the figure of Justice holds balanced scales; it explains the popularity of quiz shows on TV (the balancing-up of positive questions with negative answers); it explains bird migration and why people like going on holiday (to balance themselves up); and it explains the origins of the Christian Cross, which can be seen as consisting of a positive (+) sign united with a negative (-) sign, the two together (+-), united, and thus in a state of balance! "The secret of life," Mr Gault calmly announces on p. 102, "is, quite simply, balance." And unlike the Big Bang Theory, this theory, which unites Religion and Science, is mentioned in the Bible, in Proverbs 11.1: "Unbalance is abomination unto the Lord, but balance is his delight." (Actually this seems to be Mr Gault's paraphrase of the verse, but we'll let that pass....)

Another of Mr Gault's revelations is that the planets do not move around the Sun in ellipses at all. Because the Sun is moving through space and taking the planets with it, each planet traces out a wave, and it is their wave patterns "which actually cause the ellipses as they etch their way sideways through space." Indeed, Mr Gault believes that "our Solar System was initially created by a 'Big Wave' pattern, and *not* due to a 'Big Bang'." From here it is but a short step to the idea that "a Balancing Wave Pattern is the universal modus operandi of all life systems." There are waves everywhere — water waves, sound waves, crime waves and microwaves to name but a few. Speaking of waves, Mr Gault points out that it is quite a coincidence that he was born in the Waverley Hospital, Ballymena, in Northern Ireland ("So, I must have been meant, from birth, to find all these truths.")

Yet another of Mr Gault's revelations concerns our Sun. "I do not believe that our solar system was only meant to be lit on one side," he writes, and he is not happy that the Sun is a sort of concentrated spotlight – a 'fist' of light in the sky – that strikes us with sunburn and skin cancer, and causes hurricanes and typhoons. Not only that, but "our Sun causes the 'colour problem' on Earth by creating different skin colour pigments, to counterbalance its uneven onslaughts, creating light skins near the North Pole and, conversely, dark skins on the Equator." Now, if the Sun were to be rollered out evenly around the sky, it would bathe the whole world in a gentle uniform light. There would be no shadows, no night, no sunburn, no drought, no hurricanes and no racism – this last, of course, because everyone would then have the same even-toned skin colour half way between the present extremes of black and white! In this idyllic world there would be no more pain, misery or suffering; human beings would cease to age, wither and die; and, if we understand Mr Gault correctly, we would no longer need "to go to the toilet"! Furthermore, with the Sun spread out round the sky like this, its gravitational pull would be spread out too, and we wouldn't all feel quite so heavy! Mr Gault writes:

I believe that the Sun is really meant to embrace and cuddle us, like the many other star systems known as Planetary Nebulae, which exist alongside us in space, who have already changed into a more balanced shape and "cuddle" their planets in a diffuse halo of light and warmth. Our Earth should not be unevenly lit, and I wish that our Solar System could, like many other star systems before us, be turned into a beautiful diffuse halo, when the Earth would become, what it was

always meant to be, a balanced Planetary Nebula. If the Sun corrected itself, then the Earth, in response, would also perfect itself.

But this is not just wishful thinking. Mr Gault thinks it will really happen, and he knows exactly why — comets! Comets sweep in from the so-called Oort Cloud which surrounds the solar system, gather up some of the Sun's heat as they wing their way round the Sun (solar prominences help in this by throwing some heat up into space), then take it back to the Oort Cloud. Eventually, then the Oort Cloud will become the smoothed-out Sun! Exactly when this is going to happen is not clear, but when it does the Earth will become a veritable Garden of Eden — or Garden of Even — bathed in the smoothed-out light of a wrap-around Sun.

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