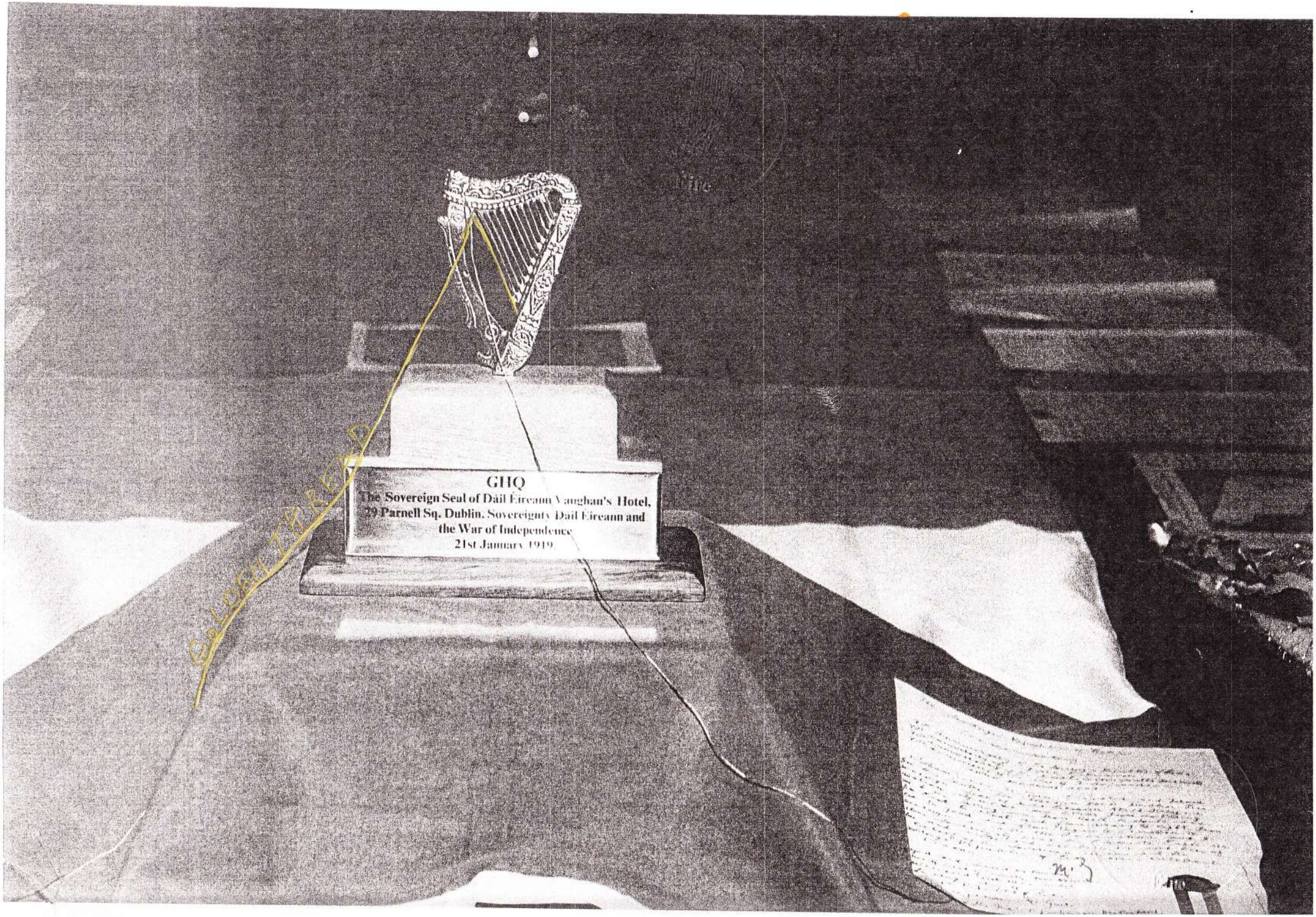
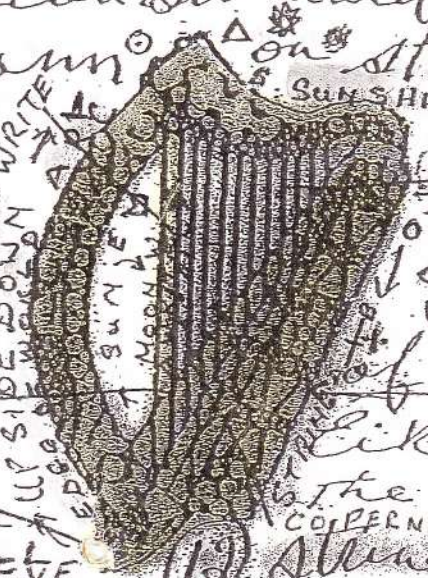
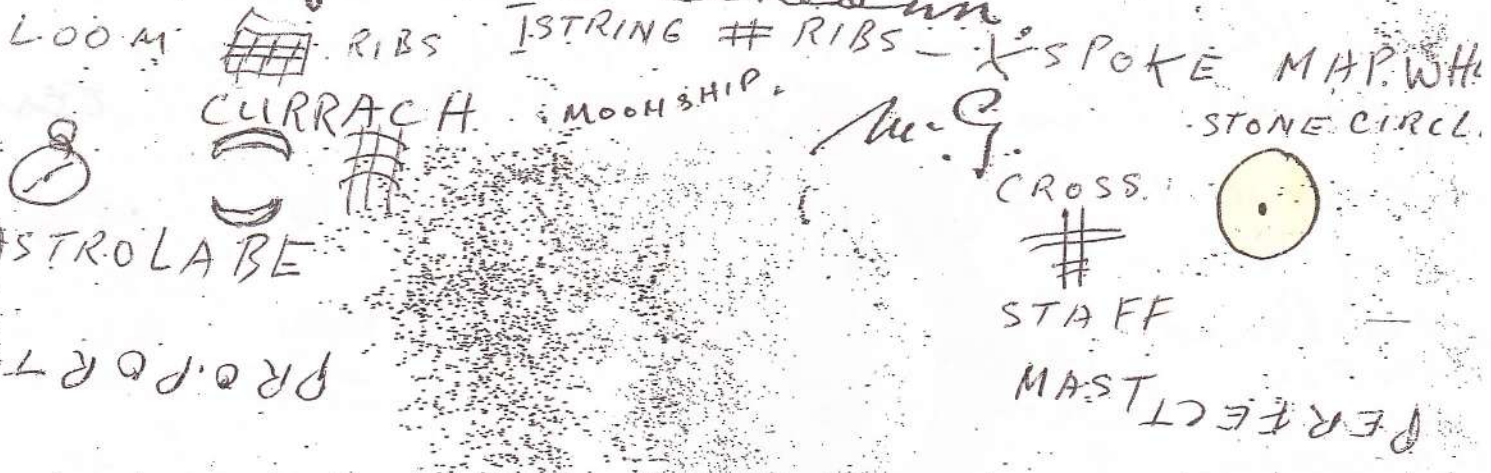

GHQ
The Sovereign Seal of Dáil Éireann Vaughan's Hotel,
29 Parnell Sq. Dublin. Sovereignty Dáil Éireann and
the War of Independence
21st January 1919

The Sovereign Seal of Dail Eireann
The Sovereign Seal of Dail Eireann has 12 Strings
a Christian Symbol and Ethos, and is
d on the design of the old Irish Harp
the Brian Boru Harp; and the segments. The Fenian Brotherhood Standard
Sovereign Seal on a green back ground
a gold Braid. "The Green and Gold"
Irish Republican Brotherhood Standard
Sovereign Seal on St Patrick's Blue back
d with a gold Braid and after the 21st-1-1919
Irish Republican Standard. The Sovereign
of Dail Eireann on St Patricks Blue
ground with the
em of Ireland in
old Blaiding
RAIN BOW
overeign Seal
IERIOLIAN
er the Dail
SCIENCE
has Voted on
1-1-
1919.
G.A.A


The four Provinces
and a Thirty two
ALPHABET
Psaltery
PSALTER
PSALMS
of Dail Eireann
Eireann Courts
SINE
ABACUS
the same day. LOOM
PTO
MATHEMATICS
TRIANGLE. PYRMID. EGYPT
COMPASSES
to Have the Sovereign
of Dail Eireann on their Emblem
Sovereignty of Dail Eireann
the 1916 Proclamation which was
ented in "Vaughans Hotel" on behalf of the
Republican Brotherhood by Tom McGuire
e 21st-1-1919. Who also vested the
reignty of Dail Eireann on the Dome
1-1-1919 and placed the Sovereign
of Dail Eireann in the Mansion
Dublin for the first Dail Eireann
MICHELANGELO
GEOMETRY
GRID
GRAPH
MAP

e knowledge and information for his civilisation
HARP
The Harp (12 Strings) B.C. M.Q
should be in Sound Eireann
and in an elevated position

Lift this side of the sheet of paper
up to the Light
What you see is the Harp (12 string
B.C. The Reverse side of the Sovereign
Seal of Oriel Eireann

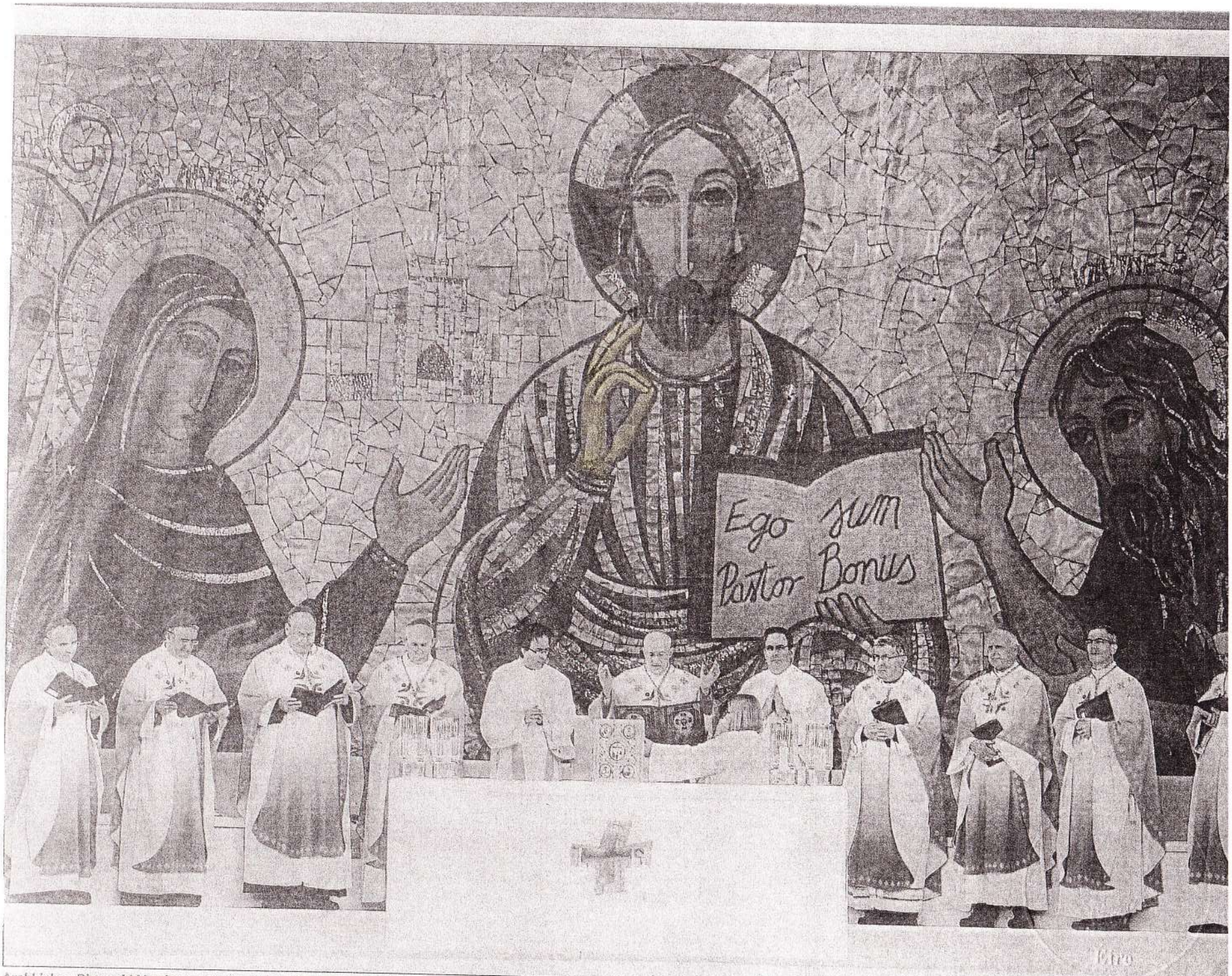


The Sovereign Seal and Harp are the keys to
A.D. B.C.
eltic and Irish Civilisation and History.

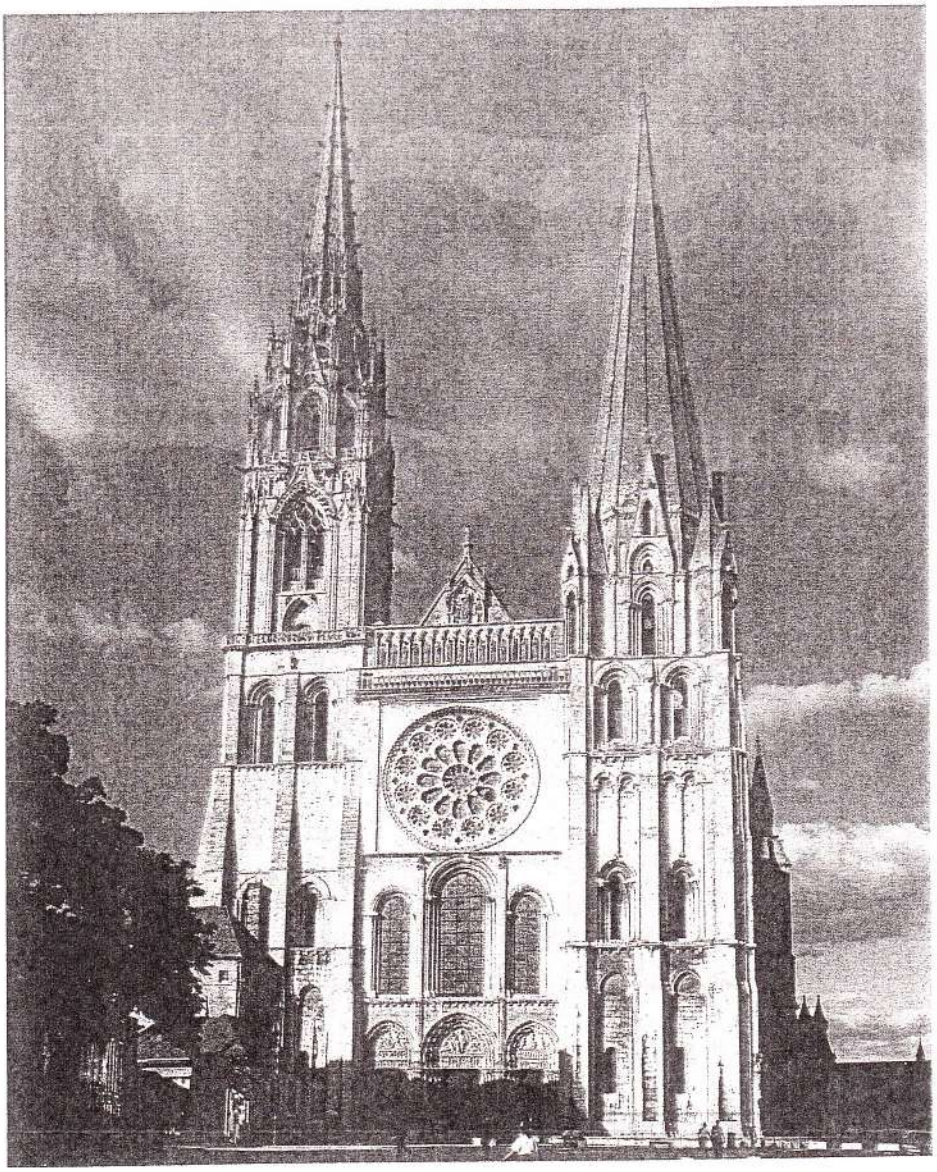
You would also need to study my
ancestors, Eugene O'Curry and
his brother-in-law John O'Donovan
Catherine O'Curry was married to
James Mc Gurk

he Sovereign Seal and the Harp as Sacred Symbols
nd Instruments to the Celts and the Irish Gael and Misc
ho carried the Sovereign Seal and the Harp to the
lein Known Edge of the World Ireland and Scotland
the Sovereign Seal and the Harp has all the accoutrement
or Civilization OR War. M.Q.

Hark
Blessing
M. G.



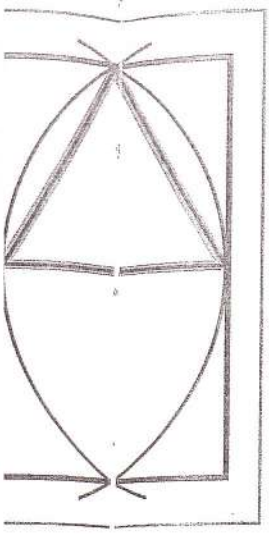
Archbishop Diarmuid Martin and Cardinal Seán Brady among bishops at a ceremony during the opening of the 50th International Eucharistic Congress in the RDS Theatre. Photograph: Alan Betson

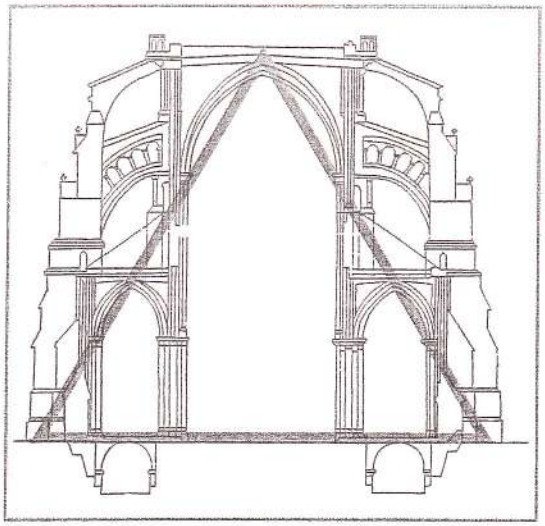


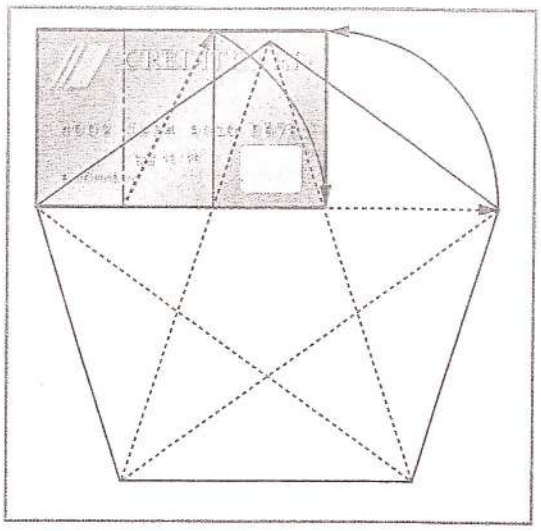
The twin towers of Chartres Cathedral. As they rise above the flat fields of Northern France on the approach it may be a coincidence that they resemble Christ's two fingers held aloft. If this wall was to be hinged on to the ground, the rose window would come to rest perfectly on top of the famous labyrinth within.

HARP BLESSING

on page 106 demonstrates, the centre point of the vesica sits at the very centre of the building so that the North and South doors are exactly positioned. The windows also conform to this shape. The great Belle Verrière window, for example, which depicts the Madonna and Child, sits perfectly within a vesica and thus perfectly within the floor plan of the cathedral, with every significant point in the design of the window corresponding to key positions in the geometry of the rest of the building. Christ's head sits over the Madonna's heart. As Professor Critchlow has shown, the infant Christ's throat, from which the entire Christian tradition was eventually spoken, falls at the very centre of the



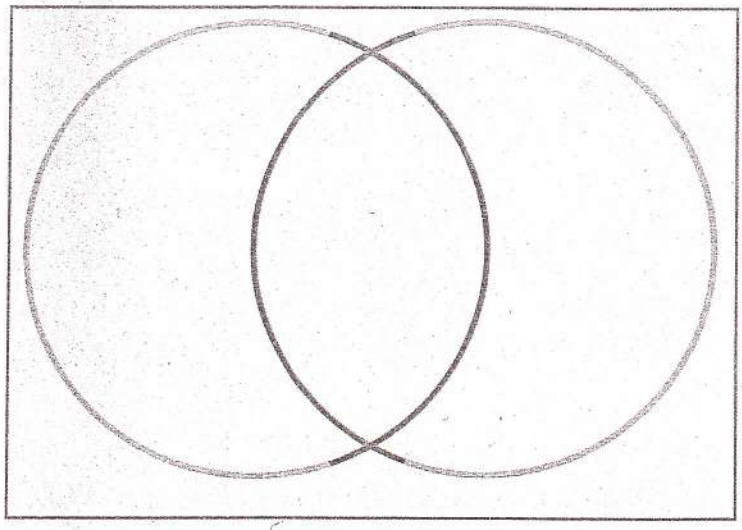


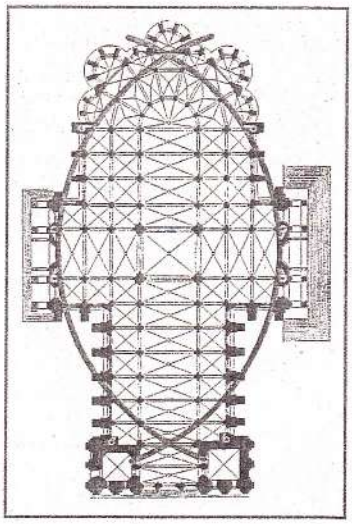


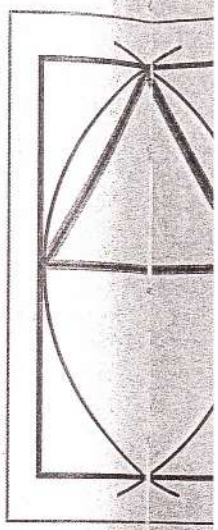
the entire vertical structure of the building. The diagrams on these two pages sit on top of a background made up of the pattern created when six circles surround the first. These 'six days of creation', as the Bible calls them, create 'the flower of life', a familiar tile pattern found in ancient Greek architecture, Islamic design and on the floor of many Christian churches. The flower of life contains in turn the coordinates of the five-pointed star, far left. These familiar shapes and patterns make up the grammar of harmony and have been used to attract the eye for centuries. Even the humble credit card employs the ratio of the Golden Rectangle, seen here in the five-pointed star. The lines of this geometry remain invisible in the patterns of traditional art. In the view of traditional philosophy, in Plato, for instance, symbolically they were used to represent the underlying structure of reality upon which the cosmos materializes. The word 'cosmos', incidentally, means 'adornment'.

GOLDEN THREAD.

HARP SIGN TRIANGLE



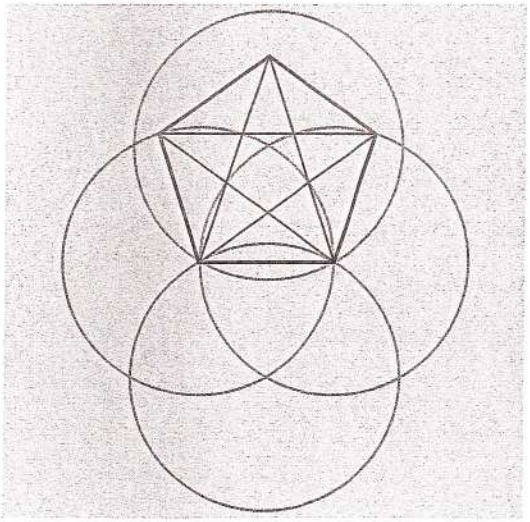


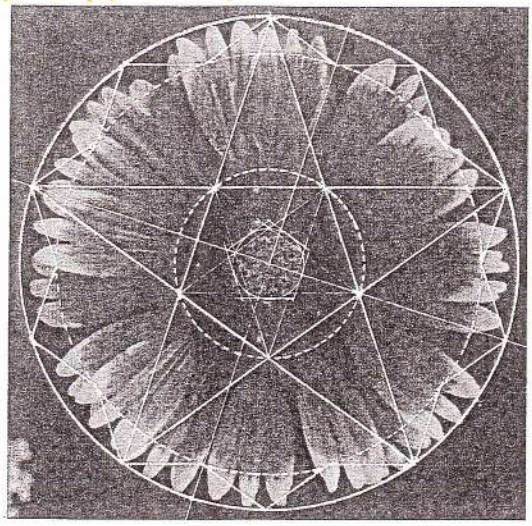


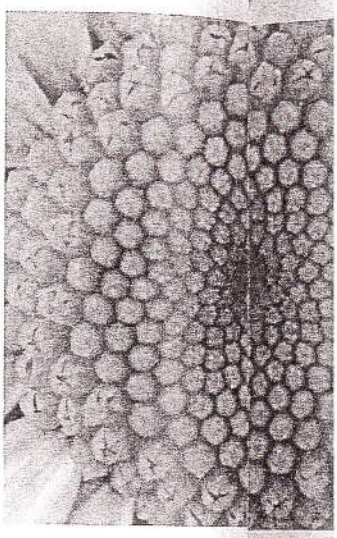
Far left, from one circle a second of the same size is created by placing the point of the compass on the circumference of the first. The vesica appears in the middle. Our own bodies draw this shape. If you held a pencil in either hand, stood with your face pressed against a large piece of paper on a wall and then let your arms describe their natural arcs, you would begin to create these shapes. The other diagrams, from left to right, show how the properties of the vesica underpin many familiar structures and every day objects. Second left, the vesica is the basis of the floor plan of Chartres cathedral in France. Many cathedrals of the High Gothic used the same design. The third diagram shows the 60° angled equilateral triangle within the vesica and also the so-called 'root three' rectangle that encases it. The 'trinity' of the triangle and the proportions of the Golden Ratio are as symbolic in sacred traditions as they are practical. They are implicit elements in the unity of the whole but also, as the fourth diagram shows in the cross section of Chartres, the equilateral triangle also suports

GOLDEN CIRCLE

MAP OF MUNDI







The grammar of harmony at work. From 'the flower of life' comes the pentagon and the five-pointed star, far left. As we shall see, Venus describes these shapes in the skies above us every eight years (or thirteen Venusian years). I wonder how much of a coincidence it is that the self-same five-pointed star and the relationships we will soon discover between Earth's orbit and size and that of her nearest neighbours are to be found in so many plants and flowers on the ground around us? In the image third from left, the two opposite spirals of the Fibonacci sequence are clearly visible in the head of a daisy.

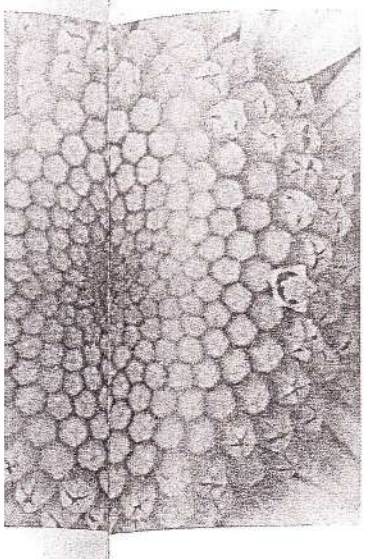
are laid out within its structure and the light that streams in through so many church windows is framed by it too. It is even there on many a modern car bumper – the two lines that form the fish emblem on a sticker used by many Christians who wish to declare their faith, but who perhaps are unaware of the geometric reason why that shape was chosen.

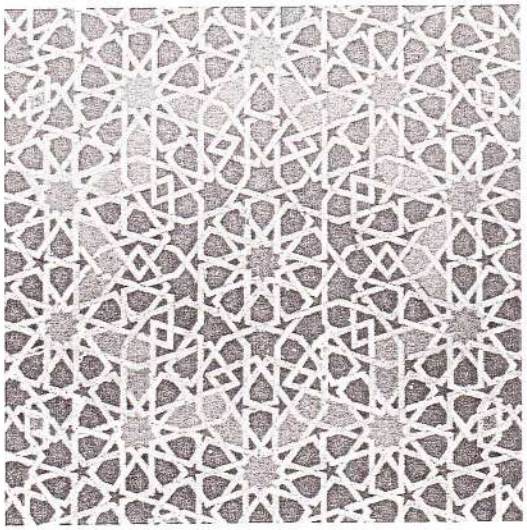
If you were to draw a line across the middle of this almond shape and then draw two more down from the top so that each one meets the baseline as it intersects the outer walls, you create a perfect equilateral triangle. This is a vitally important shape in geometry. Not least because it is one of the strongest, load-bearing shapes in all architecture. Plato called it the most beautiful of all triangles.

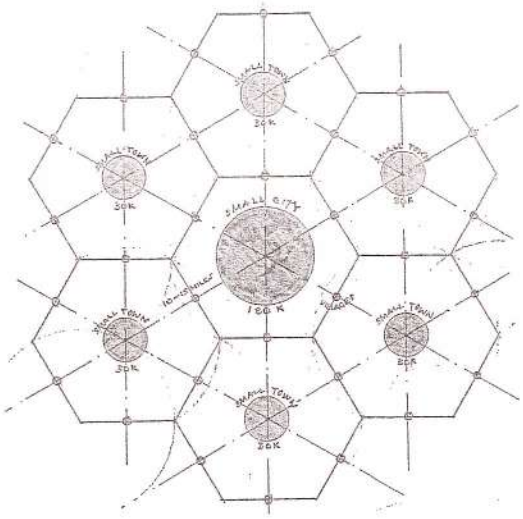
Constructing the equilateral triangle allows the construction of a square and from the square and the triangle comes a special rectangle which, down the ages, has also been profoundly symbolic. It has long been known as the Golden Rectangle. Technically it is called a 'Root Three Rectangle' and it is special because the ratio between the two lengths of the sides is 1:1.618. This may not look a very remarkable set of numbers, but this single ratio is a very significant relationship indeed.

In the twentieth century it was given the name *Phi* by an American mathematician, Mark Barr. *Phi* is the first Greek letter in the name Phidias, a sculptor whose work stood in the Parthenon above Athens and, like the Parthenon itself, the beauty and balance of Phidias's sculptures depend very much upon the use of this ratio of 1:1.618. The Greeks themselves referred to it as the 'Golden Ratio' or 'Golden Mean' and it has become famous of late because of popular books and films like *The Da Vinci Code*. Even so, it has long been understood

HARP SIGN
GOLDEN TRIANGLE







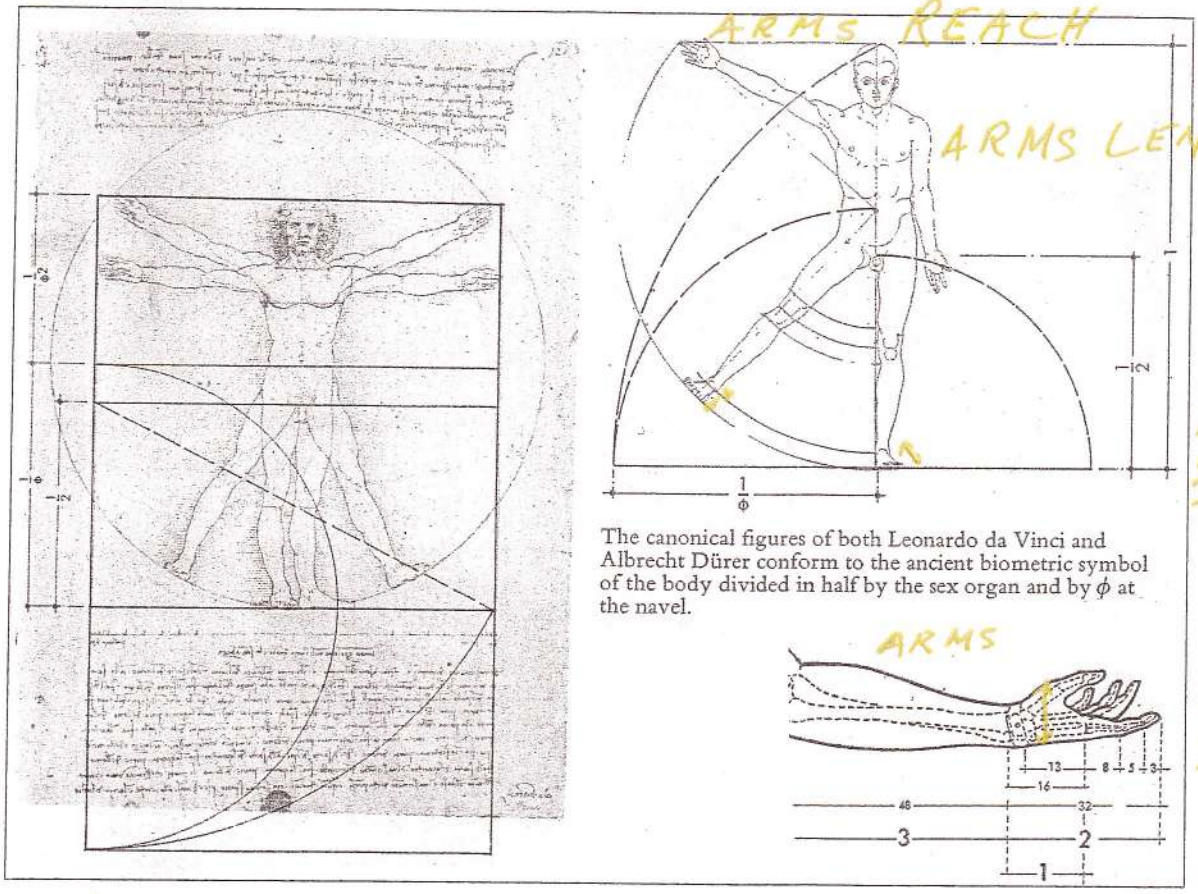
and employed in geometry and architecture because it is the ratio that rather miraculously governs the way that organisms unfold. Even by looking at something as small and as common as the head of a daisy, this ratio can be seen at work. The seeds swirl from the centre in a far from random vortex. The lines travel in two directions that have a precise mathematical relationship. The number of seeds we see swirling in one direction are related proportionately to those travelling in the other and that proportion is the Golden Ratio.

The sequence of numbers that describe this proportionate relationship has, for a very long time, been known as the Fibonacci sequence, named after the thirteenth-century Italian mathematician who made a long study of the way the number of rabbits increases in every generation. He noticed that the way rabbits multiplied followed the same sequence that plants conform to when they sprout new leaves or when a tree produces new branches. The sequence starts with one pair, then branches to make two pairs. Then, as the gestation periods of the different pairs progress at a different pace, so the branching follows a curious multiplication from 2 to 3 to 5 to 8 to 13. This sequence is more related than at first appears. Each is the product of adding the preceding two. What is even less obvious is that if any of these numbers is divided by the one that precedes it, the result hovers around the same number, the famous 1.618. The bigger the numbers become, the closer their division gets to this golden number, a number that Johannes Kepler called a 'precious jewel.'

There is an elegance to the Fibonacci sequence. If each of the numbers is measured either in inches or centimetres and plotted out on a piece of paper it produces a pattern of boxes. Joining the corners of those boxes with a single continuous line produces a very familiar shape indeed. Not only the spiral of

Such natural patterns have always been used in the Islamic traditional crafts, second from right, to depict the relationship between the order in Nature and the organic process of unfolding. It is this same geometric relationship that dictates a very modern application, far right. This is a sketch from my Foundation for the Built Environment demonstrating the idealized pattern underlying what we have called 'walkable towns' where buildings are clustered in spiral-like arrangements around the intersection of roads or pathways, creating a series of village centres. This is the pattern behind my development at Poundbury.

MANS WELL BEING & HIS FIVE SENSES



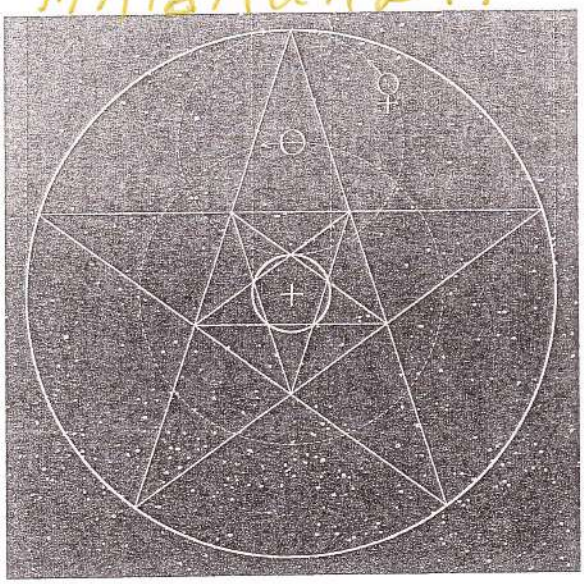
The canonical figures of both Leonardo da Vinci and Albrecht Dürer conform to the ancient biometric symbol of the body divided in half by the sex organ and by ϕ at the navel.

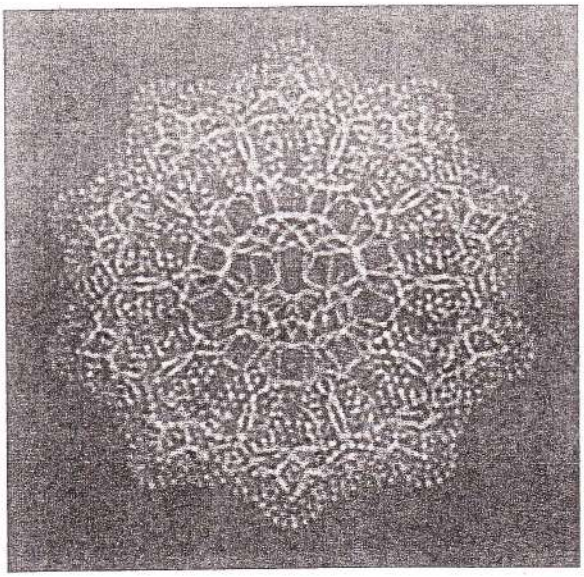
The geometry of flowers is the geometry that controls the growth and proportions of our own bodies. As Da Vinci demonstrated, these ratios are all related to the way the human body describes the circle of a given perimeter and the square of the same length. Many cultures have seen the squaring of the circle as the meeting of Heaven and Earth, where the ideal and the actual, spirit and matter come together.

the seeds on the daisy head, but the shape found all over the natural world, the sort inscribed on the shell of a snail or, indeed, the shape that our forefinger makes when a human hand is clenched in a fist. The same numbers are always at play. Each section of the human finger, from the tip to the wrist, is proportionate to the next section, according to the Fibonacci sequence, just as the proportions of the rest of the body are too – from the nose to the neck, from the neck to the chest, and so on. Even as we grow, these numbers play their part. The way our teeth grow follows the general pattern 1, 2, 3, 5, 8, 13.

This spiral shape is also present in every river of the world and for very good reasons. I was fascinated when I first came across the work of the Austrian forester Viktor Schauberger, who demonstrated in the 1920s that rivers do not flow as a block of water but via spiralling vortices. Our blood supply does the same. In this way the friction that the blood would cause as it moves through our bodies is reduced and, indeed, the immense pressure on the veins and arteries. If the blood didn't do so, our veins would burst and our fingertips would burn to a frazzle.

MAPA MUNDI





universe, especially when the same things happen at levels of the material world that we cannot see without the aid of a microscope. For example, we are now all familiar with the double-helix shape of the DNA molecule. Deoxyribonucleic acid is present in nearly all forms of life and transmits all of our genetic information from one generation to the next. The less familiar image of the molecule is the view taken from the top of the double helix. When we look down on the molecule through a microscope the image is not dissimilar to the one of Venus's journeys across the night sky. It is a swirl of patterns with ten protruding petals. If every other petal is connected by a series of straight lines, once again what emerges is the same five-pointed star. This five-pointed star, found in so many petal arrangements on flowers, appears constantly in the patterns and architectural designs in Islamic buildings as it does in Christian structures and it also underpins the structure of some of the most familiar man-made objects we know.

Take the image of a Stradivarius violin, for example, and place it in a circle that already contains a five-pointed star and the impact is just as breathtaking. All of the key proportions of the violin fit the geometry of the star perfectly. And notice that the base of the violin is also the product of those two overlapping circles that create the mandorla shape with which we began this demonstration. For the ancients the two overlapping circles also represented the Sun and the Moon. The Sun, of course, is much bigger than the Moon, although from Earth this does not always appear so. Every so often we are still drawn to marvel at a total eclipse of the Sun when the Moon, seen from Earth, is exactly the same size as the Sun. So, even in the sky, the grammar of harmony

ABOVE LEFT: *The relative mean orbits of Mercury and Earth superimposed over each other. The Earth's orbit contains a five-pointed star and the circle of Mercury's fits exactly over the inner pentagon of the star.*

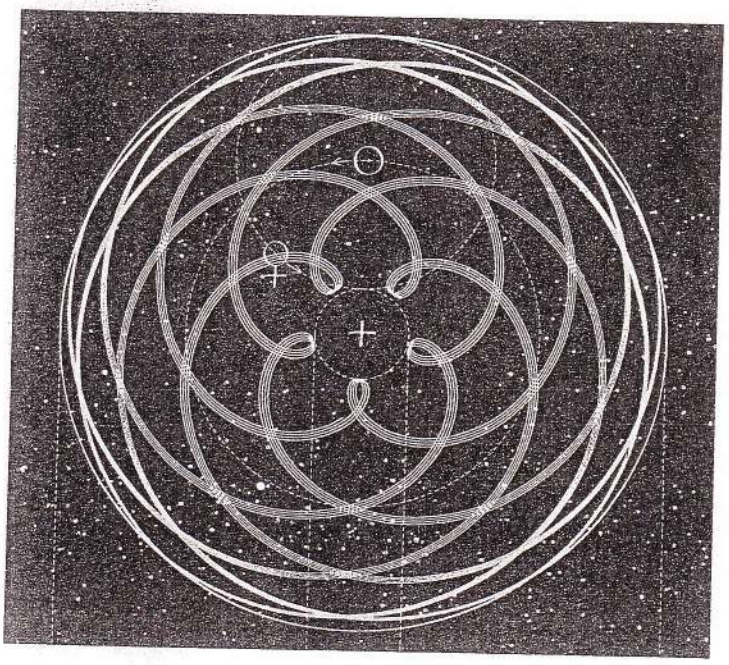
ABOVE: *A less familiar view of the DNA molecule from above reveals the ten points on its outer rim which allow two five-pointed stars to be drawn within it.*

short period on that one day, the light cast by Venus when it appears at sunrise as the Morning Star passes down the long entrance tunnel and hits the wall at the back of the inner chamber that lies at the very centre of the mound. It does this so regularly that the researchers who carried out their study claim its accuracy was only slightly improved with the invention of the atomicclock.

As ancient astronomers charted Venus's progress through its eight-year cycle, they discovered that it describes a swirling rose-like pattern. The illustration was made by John Martineau as he tried to verify how ancient cultures devised the symbols that are still so familiar today. The Earth is at the very centre of the picture. There are moments when the line comes closer to Earth and then moves away again, creating a circle of five petal-like shapes. If we were to join the tips of that pattern together, as ancient astronomers clearly did, then what is revealed is a shape familiar the world over, the endless line that forms the five-pointed star. It is a shape that contains some breathtaking secrets.

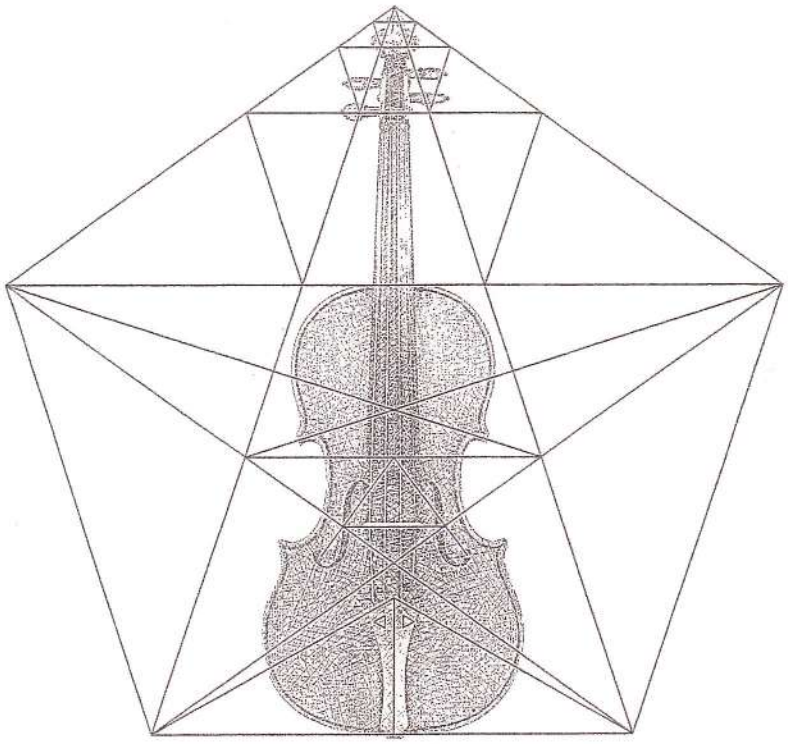
Although the Earth and all other planets circle the sun, from our point of view the planets appear to dance across the fixed zodiac of the sky. The word 'planet' means wanderer. This is the dance of Venus as seen from Earth, charted over its eight year cycle creating the heart-shaped set of five petals from which so many familiar geometric shapes are derived.

The orbits of the planets are not perfectly circular, but it is possible to refine their elliptical shapes without altering their length so that they become perfect circles. Such a circle is called the 'mean orbit' of the planet. John Martineau found that putting scaled drawings of the mean orbits of the Earth and Mercury together on a piece of paper reveals an extraordinary correspondence between them. In the image (above right) the Earth's orbit is the bigger circle that contains the five-pointed star. The smaller circle is the mean orbit of Mercury, which sits within the orbit of the Earth in such a proportion that it fits exactly over the pentagon at the heart of the five-pointed star. If that were not itself astonishing enough, the same thing happens if a scaled drawing of the actual physical body of the Earth is overlaid with a scaled image of the actual physical body of Mercury. Mercury, once again, sits inside the circle of the Earth's circumference in exactly the same proportion. The pentagon shape at the heart of the five-pointed star is once again enclosed by Mercury's circumference.



This may, of course, all be a coincidence, but such is their precision it does begin to challenge the popular notion that we live in an accidental

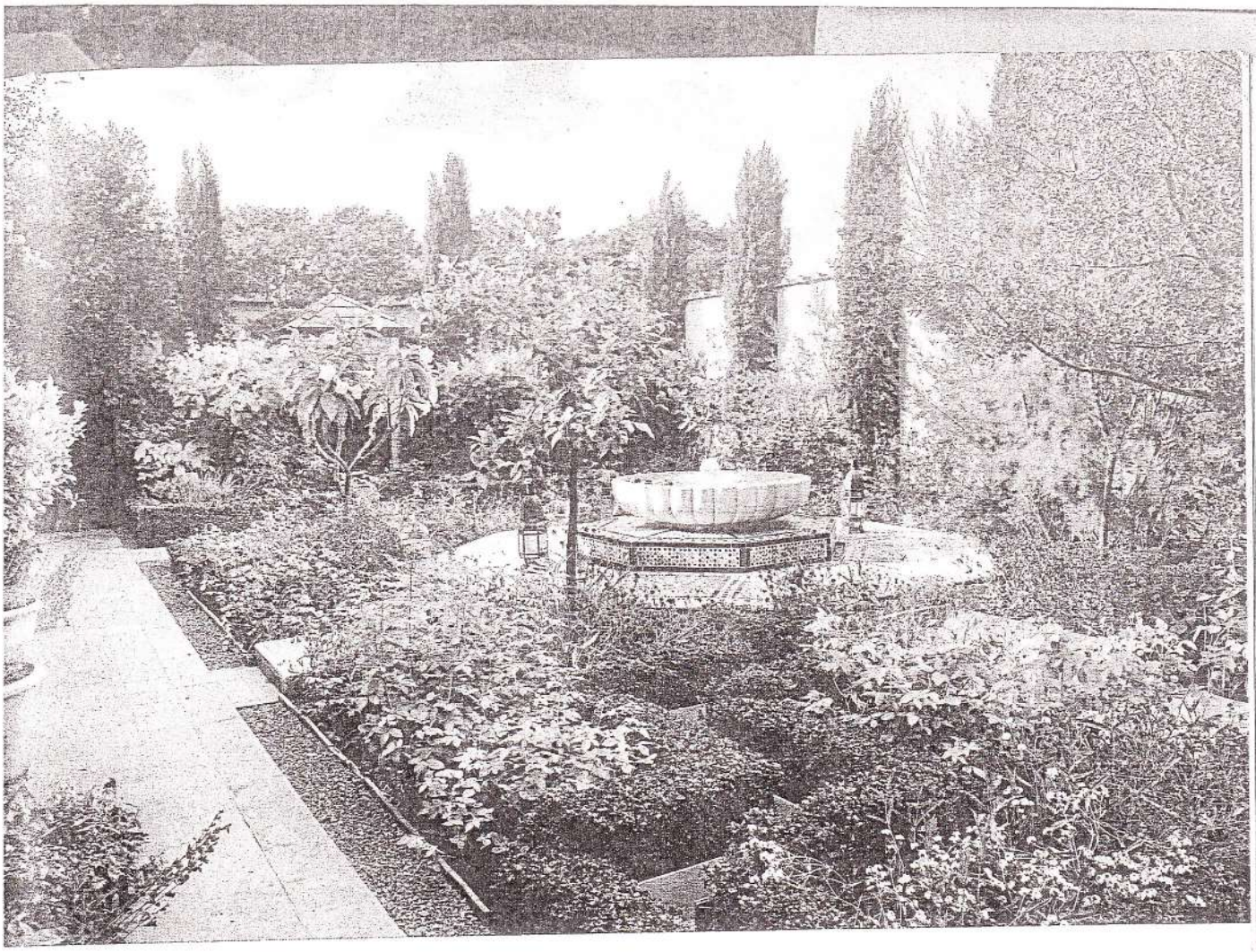
Some of the most familiar objects depend upon the geometry of the universe. Here the structure of a Stradivarius violin fits perfectly within the grammar of harmony. Even something as familiar as the front door on an English Georgian house, like the one on Number 10 Downing Street, accords with the interplay between circles and equilateral triangles.



is at play. This is all pretty remarkable evidence that there is a mysterious unity about the patterns found throughout the whole of creation. From the smallest of molecules to the biggest of the planetary 'particles' revolving around the Sun, everything depends for its stability upon an incredibly simple, very elegant geometric patterning – the grammar of harmony.

The weave towards modernity

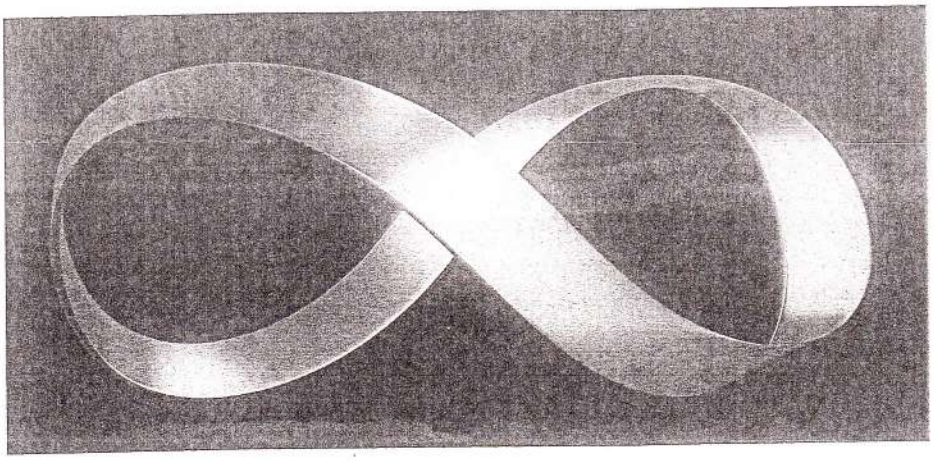
This geometric code that I have called the grammar of harmony was evidently understood by every one of the major civilizations of the world. The temples of India reflect it profoundly. Many of them follow a similar design. At the centre sits a dark chamber and this is surrounded by a series of rooms that become lighter as they get nearer to the outside world. The symbolism is missed by most, but the point here is that all of creation bursts out of what the mystics of India call the 'uncreated light' of the central unity. From this unity flows all of the teeming multiplicity of existence, symbolized by the rich decoration and intricately carved ornamentation of the temple's outer walls. Again, such temples are models of the universe, both its outer aspect and its inner one.



The Carpet Garden at Highgrove, my home in Gloucestershire, England. It was inspired by designs of Turkish carpets which were derived from the patterns of Islamic gardens. I planted fig, pomegranate and olive trees in the garden because of their mention in the Qur'an.

Quite clearly not an inch of this entire building is left to chance. Every angle and position conveys symbolic meaning. The medieval Christian architects who designed such a breathtaking structure were following the teachings of the mystics of their age and created what seems to me to amount to a profound prayer to all of creation. They made a building that offers us the direct experience of what the ancients held to be our true relationship with the world. To walk around within its soaring pillars and to bask in the gentle light that pours through its exquisite windows is to experience a sense of participation in the very 'patterning' of the soul. No sense here of being a disconnected observer in a dead and mechanical universe.

I have wanted to pay such attention to the principles of the world's sacred geometry because they stand in such contrast to the predominant way in which we view the world today. I am sure many people will say that you cannot organise 'modern' life around ancient, irrelevant concepts, but the point is that the sheer elegance of a building like Chartres Cathedral and the precision of its geometry was only possible because of the rediscovery of classical knowledge which was born of a tradition of wisdom which is not time-specific and



The double ouroboros, originally made up of two interlocking serpents, each one consuming its own tail and symbolizing the renewal that creates the unity of creation. This is used as our modern symbol for the endless loop of infinity.

him knew very well that without *harmonia* there is no possibility of relationship between the one and the many and therefore no possibility of unity and wholeness. I am no astrophysicist, but these terms ring with a certain familiarity these days. They could surely all be applied to what has so recently been discovered from quantum physics about the very nature of matter, as I will explore in the next chapter.

Hearing and seeing the grammar of harmony

Pythagoras would no doubt have been pleased had he been able to see what we can see with our electron microscopes, but he explained his insight best with his study of music. Musicians in his own day had known for a long time that if strings of different lengths are plucked together they make pleasing harmonies, but it was supposedly Pythagoras who worked out why. According to a famous Middle Eastern folk tale, Pythagoras was one day walking past a blacksmith's workshop when he heard the sounds of different hammers pounding the anvil. Mostly they just made a noise, but every so often he noticed they fell into a sequence that produced something special. When he went inside he discovered that the hammers were all of different sizes and when he measured them, all but one had a particular mathematical relationship. If these hammers struck the anvil in sequence, the notes they produced had a harmony to them. This was because one turned out to be half the weight of the biggest, another was two-thirds the weight and the next was four-fifths the size of the largest hammer. In this way Pythagoras is thought to have defined the octave and how it relates to the third and the perfect fifth. These are the key musical intervals that, for centuries, dictated the entire grammar of Western tonality.

Today music, like everything else, has been subjected to the influence of