## The mystery of the great labyrinth at Chartres

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The labyrinth set into the floor of Chartres cathedral measures almost thirteen meters across. It is the single largest decorative item in the building, larger than the rose windows and larger than the sculptured doors. In many churches the prelates placed them in prominent positions as testaments to their faith, but it took the eighteenth century to recognise their essentially pagan origins. They destroyed many of them: at Reims, Sens, Arras, Auxerre and St. Omer, and in the next century at Amiens and Caen.

Yet would the Middle Ages have used a pagan motif without ensuring that it had a Christian message? And would they have given it such prominence in the centre of the nave if its Christian qualities had not superseded its pagan ones? I feel that after the sacred relics and the cathedral building itself, the labyrinth was the most meaningful cult-object of the twelfth and thirteenth centuries. Its sacred nature is indicated by the names given it throughout Europe of 'Chemin de Jérusalem', 'Iherusalem' and 'City of God'. The one in San Savino,
Piacenza, is inscribed
The labyrinth represents the world we live in so he who is ensnared by the joys of the world and weighed down by its vices, can regain the doctrines of life.
It is not a maze, but a single way, with a layout that was repeated in many other places, as even a glance at Hermann Kern's collection shows. ${ }^{1}$ This is why the Chartres labyrinth is so important - it is a canonic arrangement approved by the clergy, repeatedly used from one end of Europe to the other.

Labyrinths have been around for five thousand years, and were mostly constructed with five or seven rings. The eleven concentric rings split into four parts, the centre with its six petals, and the surrounding 'cogs' is a creation of the twelfth century. $n$ this arrangement one enters on the left of the centre-line, and passes straight into the fifth ring; and exits into the centre from the seventh. This order is standard, as is the arrangement of tracks in between, Fig. 35-1. The way we traverse the inside five rings and then the outer five has a symmetry from side to side, and from the outside to the centre.


## The bronze plaque

The brass plaque at the centre of the Chartres labyrinth was taken up and melted for cannon during the Revolution. On it was incised the most un-Christian tableau of Theseus killing the Minotaur with Ariadne holding the thread which was to show him the way home. ${ }^{2}$ The motif was not unusual as the Amiens labyrinth was called the House of Daedelus, while Lucca and Cremona both depicted Theseus in the centre and many of the others were popularly known as 'Dardale'.

In the Greek myth Daedelus was the legendary architect who created the skills of building, built a flying machine, and designed the Cretan labyrinth. He is the archetypal mason. Were these many labyrinths built to celebrate the architects? Though Reims and Amiens commemorated the names of the building's masters, yet the other names such as Chemin de Jerusalem show that this was not their only message.

Chartres was famous as a school for Platonic scholarship, and ranked in the twelfth century as the foremost school in Europe. Their way to God was Gnostic, being through knowledge rather than relying only on faith. Their kindred in the Moslem world, the Sufis, wrote

Beware, for love alone without knowledge, remains unfocused, unaimed, undirected. The consequences of such a love is pointless, leading to a confused state of perpetual 'Hallelujah' comparable to the village idiot's perpetual good humour. Through the medicine of knowledge joy is anchored so that love is directed to the Subject of all love. ${ }^{3}$
We should expect that in Chartres of all places, every object in the cathedral should have the same purpose - to help pilgrim find the correct path, to give him Ariadne's thread to lead him through life's maze.

## Basic symbolism

Through symbol the labyrinth is linked to man's inner world and to the collective unconscious and through that to the sacred myths of most cultures. Among those that strike the profoundest chords of our subconscious are the circle, the cross and the spiral.

A circle is the most perfect geometric figure. The four arms are like a cross, the symbol for Christ.. They also represent the four points of the compass. When we mentally place ourselves at the centre of a cross we know where we are, for with arms outstretched we can face the four ways and can locate ourselves - we are 'centred'. We say we stand 'foursquare' by something, and if we are upset, we are 'disoriented'.

The city of pilgrim's search, the mystical Jerusalem, has four walls and four gates facing the four cardinal points. In our subconscious its four-ness tells us that we are 'there'. Similarly, the altar, where we know God, is placed on four legs, while His truth is contained in four Gospels. Paradise likewise has four walls through which issue four rivers, and the life of Christ has four stages: conception, birth, crucifixion and resurrection.

To combine the cross with the circle "represents the synthesis of the four elements which are forever tending to fall apart". ${ }^{4}$ It unites the circle of wholeness and of spirit with the square of matter and security. Jung goes on to write

The squaring of the circle is one of the many archetypal motifs which form the basic pattern of our dreams and fantasies. It could even be called the archetype of wholeness. Because of this significance, the 'quarternity of one' is a schema for all images of God.
In Chartres the labyrinth is a little more complex, for the circle has a smaller one at the centre, held in suspension by the arms of the cross as in a gun-sight. The centre is approachable only with great difficulty, as with the Garden of Eden which is separated from the rest of the world by a very great space - sometimes water and sometimes a ring of fire. Gerwain has to approach an island to find his true love; Sharon rows the dead over the water; Theseus has to come to an island to face his moment of truth.

The central circle in the labyrinth is the Rose, which is the Lamb described in Revelation as being in the centre of the Heavenly Jerusalem. Dante's Christ resides with the great Rose in the centre of Paradise. The rose garden is one of the favourite allegorical devices used by alchemists, poets and painters. Mary was called the 'Rosa Mystica' in the litany of Loreto.

The rose is the central calyx that has been called the 'seat and birthplace of God'. Rosicrucians refer to it as the Mystic Rose. It is like the lotus in the third word of the great mantra, Om Mani Padme Hum. This is man's search, to reach Christ in the garden, Buddha on the lotus, Rhea in the depths of the cave. It is the journey that underlies the symbolism of the labyrinth, and being the Way it is the path we must travel if we are to find that 'still, calm centre'.

There are many spiral labyrinths, such as Bunyan's in Pilgrim's Progress. Snake-like the spiral typifies death, yet within it lies the dream of cheating death and being reborn. Hence the spiral is also a symbol for life.

The snake has a beneficent side - that of wisdom. The two images are conjoined in the Gnostic way in which we can be reborn through knowledge.

The most long-lived myths of heroes and sun-kings are those in which the inevitability of death is broken Theseus, Daedelus in flight and Christ are only three of a multitude. The labyrinth combines the symbols of the spiral, the cross and the circle into a single life-promising format connoting rebirth, certainty and peace, perfect peace.

The myth of the Minotaur enshrined at its centre is a further death-defying image. It was originally a moon myth: sacrifices are held every nine years; this is the third occasion; there are seven boys and seven girls - all moon numbers and so belonging to the Goddess. The Minotaur symbolises our uncontrollable mental forces. Theseus is naked when he kills the Minotaur. He uses the double headed axe called by the Greeks the labrus. Without the help of Ariadne, he would still have failed for the labyrinth was a maze - an entangling confusion symbolic of the unconscious. Only Ariadne's thread can show him the way home (0M) after he has entered the depths of the unconscious. Significantly Ariadne is the daughter of king Minos who ordered the sacrifice; and is she not an aspect of Arianna, or Anna or Diana - the mother Goddess herself? And hence, for the middle ages, the Virgin Mary.

To reinforce this important feminine aspect, Daedelus was guided by Pasiphaë to build the labyrinth. She is moon goddess, mother and lover of Minos, and so the mother of Ariadne. Confusing? No, just different aspects of the same truth. By guidance (be it thread or knowledge) the goddess (the virgins Ariadne, or Mary) shows him (Theseus the pilgrim, or Daedelus the master mason) how to reach into the unconscious to overcome blindness and find enlightenment.

In Chartres the essence of the myth remains unaltered though the pagan elements have been Christianised. Theseus becomes the Pilgrim, the Minotaur his sins, and Ariadne remains the Virgin whose intercession helps pilgrim find his way. Mary, by her bodily Assumption to which the cathedral is dedicated, and by her patronage of the seven Liberal Arts which was the basis of the Chapter's Gnostic beliefs, shows man the way through the labyrinth of life's temptations. It is a perfect pilgrimage myth and, as Jung explains, symbolises the liberating aspects of the mother image rather than its devouring aspects, and thus frees man from his anima. Rightly did the Church engrave these pagan figures into the central bronze plaque of the labyrinth.

## The arrangement of rings

The path to the centre passes around the left before the right, reflecting a deep level of imagery. The Arabs, the ancient Egyptians and the Indians eat with their right hands that is reserved for all honourable purposes, leaving the left for actions which, though necessary, are unclean. In the Talmud the Prince of Demons sits on God's left. His name is Samael sharing the same root as se'mol meaning left.

Our 'left' comes from the Old English lef or weak and the Anglo-Saxon lyft broken. The Latin sinistra gives our sinister, and the French gauche our gauche and gawky. Christian ritual is predominantly right-handed (bread and wine administered in the right hand and from left to right, and is taken by the communicant in his right hand), Tibetan prayer wheels turn to the right, as do clocks, dancing Dervishes and Moslem pilgrims circling the Ka'aba. Penitential movements around the cathedral are always clockwise.

In the transept portal sculpture at Chartres the lesser truths are on the left or north side - including the past, the Old Testament and the Church - while the fundamental truths of the New Testament, the future and the Last Judgment are on the south, the right side. Similarly, in the sculpture of the three western doors the left concerns Christ's Resurrection where the gross becomes spirit while the right shows His Incarnation, or God's appearance on earth, and the relationship between Him and His Mother to whom the cathedral is pledged.

The left or north door of the cathedral is concerned with Knowledge, while the south is concerned with Understanding. ${ }^{5}$ First to know, and then to realise - this is the Gnostic way in a nutshell. The Chartres labyrinth was known as the 'Chemin de Jerusalem' and as the 'lieue' or the league - though I am inclined to think that this may be a pilgrim's interpretation of the more appropriate title of 'lieu', the place. Or perhaps, as discussed later, from 'laye', the French for the double headed axe used by the masons to shape their stones. If so, the labyrinth is the path to the place, the home; to sainthood or Nirvana via a knowledge of the things of the left and then of the right, followed by an understanding of both left and right aspects.

Jung saw this as the positive action of the psyche moving into a deeper understanding of the unconscious. It is a progress from the lesser to the greater, and from the mundane to the spiritual. This suggests that the meaning of the labyrinth may be found in the sequence of its paths.

## The meaning of the word labyrinth

The word labyrinth, according to Graves, comes from the pre-Greek word labrus, a thing to be held, and in particular the double-headed axe. ${ }^{6}$ The sacrificial bull was killed with the labrus. The word has the same root as the latin lapis, ex the Greek la'as meaning stone, from which the earliest axes may have been made. It was used by the medieval alchemists to name the most important object of their search - the lapis philosophorum. There are common meanings here, with a link through the axe to a far more ancient symbol, which first occurs in Catal Hüyük eight thousand years ago.

Zeus holds in his hand a thunderbolt, or so it was called and drawn in nineteenth century pictures. But the Greeks showed him holding something much more interesting, that looks like a dumbbell, at times drawn like the labrus.

Indian and Tibetan mystics have a symbol called the dorjé, representing the perfect state where all the contradictions are united - masculine and feminine, right and wrong, yin and yang.

This is the centre of the Hridayama around which all things move. Here the world of illusion (the so-called real world) vanishes and all energy is gathered together into its initial state. Is this related to the Zeus thunderbolt?

The point of perfect rest is called in Chinese alchemy the 'Diamond Body', and in Hindu the 'Diamond Thunderbolt'. Thunderbolt? The diamond is the hardest stone and cuts all others, yet its translucence is mobile, quick. It is the second word in the great mantra, Om Mani Padme Hum. Mani is the diamond full of light, yet solid - a symbol of durability; whereas the thunderbolt is the light and sound of heaven, the power without substance and the clap that awakes the universe. Here lies a host of interrelated connections: diamond, lapis, thunderbolt, axe and labyrinth.

Alchemy was the study of the relationship between man and the cosmos as it manifests the will of the Creator, and if correctly understood would yield the key to His intentions. The transmutation of base metals into gold was an esoteric symbol for their main objective, the transmutation of the soul. Like the Gnostic teachers of Chartres, the alchemists sought God through knowledge. Mary Attwood, the famous nineteenth century alchemist, wrote that "Alchemy is the finding of the Sophia of the mind". The word itself is Arabic, al chemia.
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Many of the oldest symbols for chemical substances come from alchemy [above], from left to right for gold, salt, garnet, Venus and for the earth. When in state the king holds the orb, marked 'A', which is divided across the centre representing than dominion over the earth.

The orb is the same as the sign for cinnabar, the most important ore in alchemy consisting of mercury and sulphur. Pliny called it 'dragon's blood' and in the middle ages it was linked with the uroboros dragon, a snake which consumes itself, symbol of death and knowledge, of perfection and power, and consumes itself only to be reborn. Hence it has much in common with the labyrinth.

The orb has an upper and a lower part. They form a duality which is central to the idea of the dorjé, and like the $H u$ to be discussed later. Jakob Bohme, the sixteenth century mystic, reformed these two parts in his "Questions concerning the Soul" to look just like the Zeus dumbbell, marked 'J'. Bohme is transcribing an ancient tradition in which the dorjé+dumbbell+orb represents the marriage of body and soul as "the symbol for the creative union of opposites, a uniting symbol in the literal sense". ${ }^{7}$

In the east the dorjé is unthinkable without the enlightened one who has achieved what it stands for. Man and his state are inseparable. In mediaeval alchemy the lapis is found with the homo altus, the Perfect Man, which they naturally equated with Christ. The essential resemblance to eastern ideas remains.

Thus the circle of the labyrinth stands for much the same idea as the dorjé, the lapis and the Essence which is the union of opposites. Lapis is stone, as in pietra, or Pierre. As Christ said to Peter "On thee shall I build my church", on a rock which is the foundation, a place called Jerusalem. Surely it is not unimportant in the history of ideas that before Constantine the main threat to Christianity came from followers of Mithras whose god came out of a rock, in the way that Christ disappeared into one at the end.

In psychoanalysis Jung found that his patients were beginning to be cured when their drawings had certain elements in common, even though they knew nothing of these ancient myths and symbols. This convalescent or emerging stage would often be expressed as a snake arranged in a clockwise spiral moving towards a square at the centre. The snake represents the unconscious, the square the diamond+lapis which indicates the new self. Jung's interpretation was that these symbols represented the movement of the personality towards a new state of being, and therefore to a rebirth - the image of the labyrinth.

This brings us back to the beginning - Holy Wisdom and the snake, Mary as the "Throne of the Almighty" and patron of learning, the Gnostic idea that through her (or through knowledge if you prefer) you may be saved, or reborn. Hence the feminine aspects, and Ariadne with her thread. A common fund of symbolic language, repeated in so many ways, shows that our path to God is essentially the same in all cultures.

## The importance of number

The labyrinth therefore represents the knowledge necessary to arrive at the 'centre'. The Chartres path passes through eleven circles. Eleven is not a Christian number, though Christ lived for 33 years (being eleven times the Trinity). We could argue that ten is the most perfect number and that one is the All, so eleven is the perfection of God.

There is a procedure for combining words and numbers called Gematria through giving each letter a number. A would be 1, B would be 2, and so on. The sum of the letters is therefore the number of the word. Certain numbers gradually became more significant than others, and some words were re-spelt, or phrases reworded so they would coincide with the most relevant numbers. ${ }^{8}$

In classical times Plato and Macrobius arranged the universe into ten circles - the five planets plus the sun and moon, the fixed stars, the Primum Mobile which give the stars their motion, and the Empyreum or Rose of Paradise which is the abode of God and his saints. Dante probably represented the mediaeval version when he separated God from his saints - which would have given eleven zones - but then he also added a twelfth, a ring of fire.

If the eleven rings are Plato's ten plus one for God what is at the centre? If we apply Plato's cosmic levels to the labyrinth, or even Dante's with God at the centre, why do we enter into Jupiter and exit from the sun? This makes no sense. Crichlow would place the earth at the centre, putting the entry into Saturn which is astrologically more meaningful; but why should the pilgrim finish his journey at the beginning? ${ }^{9}$ Lasterie quotes a fourth century labyrinth with the inscription 'Sancta Ecclesia' whose number would be 110. Christ had only eleven true apostles. None of these seem meaningful enough to have fostered the repetition of the elevenringed design in so many places.

The only satisfactory reason I can find for the use of eleven circles comes from outside Christian areas. In early Hindu numerology the most important shrines had eleven roofs, as in Bali today. The Koran lists the 99 most beautiful names for $\operatorname{God}\left(3^{2} \mathrm{x} 11\right)$. The highest of these is un-namable, called the 'State of Blindness'. It is the Creative Principle itself, in which God is undifferentiated, pure and formless: where he is the One=1. The next highest state is the Hu. It is the first exhalation, the primordial outflow of the breath of the One when He first sees Himself as both object and subject. It is the first division into aspects before He continues to the definition of archetypes, then of matter, and so on until the whole of creation has become manifest.

This state is as high as man can reach in his quest. He cannot become God, but can approach the Rose thus far. Hu is the most intimate name for God in Moslem prayers, and in mantras is repeated eleven times. The Hu is the unity of God divided for the first time, and as the first duality is usually drawn as two strokes one behind the other so it is still seen as one, but from askance is one+one, or eleven. Another dorjé. The Sufis say that the Hu can only come to life through knowledge, and that God "loves to be known".

Here is the link between the Moslem Sufi teaching, the alchemists, and the Gnostic Christians - all believed that to find the Way we need wisdom. There was considerable personal contact between Moslem and Christian thinkers, for example St. Francis' poetry showed he knew Sufi writing; a number of scholars from Chartres are known to have studied Arabic texts, and at least one worked for a while in Cordover. In Compostella near Moslem Spain the side arches to the Portio della Gloria have eleven figures carved in rows: one has eight crowned men plus Adam, Eve and Christ, while the other has eleven patriarchs seated behind a massive rope
suggestive of Ariadne's thread. An undocumented tradition states that this arch represents the Jewish concept of life as it flourished before Christ from the book of Enoch.

Enoch and Elija were both raised to Heaven without death - the only two to be so. They are the two 'witnesses' in Revelation, and the two extra figures on the Chartres western central lintel. They represent the first duality, and Islamic tradition places both in the sphere of the sun in the same way as Dante places the twins Gemini at the entrance to Heaven. By locating the entry in the constellation of the Twins, Dante repeats the idea of the Hu and the dorjé: that the way into Paradise lies through the twins+gateway+duality, which is the centre between the opposites. The path of the labyrinth is therefore the eleven circles leading to the eleventh state, that of the Hu , the closest man may come to the sight of the Glory that is only a glance away, just as the two strokes of eleven if seen sideways makes one.

The eleven rings in the labyrinth plus the centre make twelve, and twelve is the number of completeness: the totality of the year, the full extent of Israel, and so on. Paths plus centre therefore represent all that is, in heaven and on earth. The cross within it reinforces this, being the four directions that encompass the earth, the four Gospels which contain the whole of Christ's message, and the four rivers of Paradise which symbolise the labyrinth's aim.

Twelve has been the number of completeness at least since Sumerian times, for they created the calendar of twelve months for the full cycle of the year, and the twelve signs that encompass the whole of human experience. It is closed and perfect in itself. But for the purposes of the labyrinth this perfection must be opened to allow the traveller to enter. Through Christ we gain entry into Paradise, hitherto reserved as an exclusive club, for no human joined the gods on Mount Olympus. Through Christ and Mary we may gain entry into Paradise and to the charmed Rose itself.

## The pathway and the zodiac

What was it about this particular arrangement that made it canonic? Admittedly its symmetry is very beautiful and would have been appreciated for that alone. But cleverness is not enough. Thinkers like Thierry of Chartres and John of Salisbury would have looked for meaning too.

In Piacenza the labyrinth is set into a mosaic floor, and most of the space is taken up with the signs of the Zodiac. In Chartres the zodiac is represented more often than any other subject except the essential scenes of Christ's nativity and death. In the zodiac of today was there was there would be no reason for the Church to have used it so often.

However, there is an esoteric interpretation, with the closest Christian equivalent to the teachings of the Koran about the Creation and the Redemption of Man. This interpretation follows the classic pattern of evolution to involution, with five stages for God's creation of the universe followed by seven in which man finds his way back to Him. The essentials are that Aries to Leo covers the Creation of life and matter, Virgo is the creation of Man, and Libra is man in essence, his potential and his powers, including ego.

Scorpio is man's notion of himself, his attachment to matter and self. It is the point of choice where the right decision will bring spiritual rebirth. The last four signs depict the way back to God through understanding and spiritual consciousness, ending in Pisces whose sign is not unlike the dorjé+labrus itself.

Aries is set a little apart from the others as the unformed flux of primal energy, preceding even the first breath of God, the Hu. Aries represents the ultimate whole. By placing Aries in the centre of the labyrinth the order of the paths has meaning. The innermost ring is therefore Taurus and the outermost is Pisces.


Hence the meaning of the labyrinth would be this: pilgrim enters into Scorpio where he makes a first 'decision for Christ', as the modern evangelists will have it. He then passes through Libra on the left which is his ego/essence and which he must understand to some extent before he can appreciate the rest. The inner series of five is Taurus to Leo, being the study of the fullness of the created universe in the Seven Liberal Arts, and knowledge of the genesis of our world. Honorius Augustudunensis described the world being formed in these same five stages. ${ }^{10}$ Pilgrim traverses the inner rings three times, once on the left as a learning process followed by the reverse order in the east where, facing the altar, he sees the Creation with the help of Christ. Lastly, he returns from Taurus to Leo on the right restudying the past with new eyes and thus understanding.

The first pass on the left is like the message in the north doors of the cathedral, while the second pass facing east is influenced by the theological fundamentals illustrated in the western doors, and the third culminates in the understanding this knowledge gives of God's purpose, as set out in the south door. ${ }^{11}$ The message is that knowledge with guidance gives understanding.

After these five, for the second time pilgrim enters Libra, passing the full half circle on the eastern side. He now reappraises himself in relation to Christ and the Church, and just as this path lies symmetrically across the axis of the cathedral, so pilgrim has now balanced the ego.

From this firm position he follows through the five circles which lead back to God through the same three-fold manner as before. At the end he returns from Pisces-as-sainthood to the right-hand quarter of Libra for the last time, throwing off all ego. In innocence he enters Virgo which is both God's concept of man and the Virgin Mother herself, who intercedes for man. Pilgrim passes through her into Paradise. The last step lies alongside the entry path, showing that man had it in him from the beginning, only he turned to the left instead of the right. ${ }^{12}$

The Way culminates in Aries at the centre, being the Creative Principle surrounded by a six-petalled rose, and containing the message of Ariadne+Mary giving pilgrim+Theseus the thread + knowledge to conquer his desires and attachments, the Minotaur.Essentially the arrangement works like a mnemonic, with signposts to mark the Way. It is a beautiful primal image of re-entering the womb to be purified and reborn. The spiral of death culminates in the resurrection ; a fecund symbol encompassing the entire medieval world view with the deepest ambit of the devout.

## The numbers in the labyrinth

Geometry and number were so important to God's creation that the two sculptures for these arts were placed at the top of the arch on the west doors. For the twelfth century numbers provided the clues to God's intentions in the way the microscope does for us. Saint Augustine wrote that God created the earth in "measure, number and weight", and the Bishop of Auxerre, who had been a student at Chartres just before the labyrinth was built, wrote that
number binds all things . . . rules the world, orders the globe, moving the stars, tying together
the elements and marrying souls to bodies, earth to heaven, the celestial to the transitory. ${ }^{13}$
This is intimately bound into the design of the labyrinth. The geometry of the centre has six petals that reflect the perfect six-sided figure and the first Perfect number, ${ }^{18}$ set in the form of the Rose of Paradise whose calyx contains the Godhead. But unlike the perfect figure which is normally closed with no point of entry, the centre of the labyrinth has been eased open to let us in.

The length of the path from the entry to the Rose measures 261.55 metres. This is exactly 740 Pes Manualis, which is the measure of the master mason who designed the labyrinth. ${ }^{15}$ The length of each quarter spells "Santa Maria Assunta" - which is precisely the dedication of the cathedral. The pilgrim truly passes along Ariadne's thread to reach Paradise.

Half of 740 plus one (an allowable addition in numerology as it represents the All) spells "Pater, Filius et Sanctus Spiritus". It is twenty times 37, reminiscent of the western rose window that was designed by the same master that has 37 openings, and was surrounded by 74 large acanthus leaves. ${ }^{16}$

The cogs around the outside of the labyrinth have puzzled many, for there are 112 of them, plus two for the two halves at the entry. The circumference of the circle drawn through the centres of the cogs measures 114 Pes Manualis, which is the number of cogs. The eighth century Arab alchemist Jabir ibn Hayyan divided the four elementary qualities (earth, air, fire and water) into four degrees with seven subdivisions giving a total of 112 positions which between them explained all materials, liquids and gasses found in manifest creation. 112 is also the number of years the moon takes to repeat its Metonic cycle six times, and this is the cycle which determines the western date for Easter.

Continuing, the entry being to the left of centre, there are 55 cogs on the one side and 57 on the other, spelling "Ecclesia" on the left and "Domine" on the right, while the whole including the two halves which add
one, spell "Christus" and "Maria Mater Dei". To confirm that you cannot make any number fit some phrase or other, using their spelling it works in only about eight percent of key words.


## The geometry

At the centre the diameter of the petals including the bands around them is the same as the distance from their centres to the middle of the labyrinth, [above left]. But we all know that were we to draw a circle, and around that draw another six of the same size, they would all touch one another without an opening for the entry.

Yet there is an opening. The clue lies in the dimensions. The six surrounding circles were moved around the circumference of the central one without encroaching on it, but by allowing them to overlap one another by 70.7 mm - one fifth of the Pes Manualis - leaving a gap at the entry precisely the width of the Way itself.

The Rose has been opened by five of those fifths, or one Pes, in a process that may represent Christ easing aside the perfection of Paradise to let us in. Christ is often given the number five as the Perfect Man. Further the width of each of the eleven circles measures precisely three times the radius of the core, while the radius of the circles forming the petals is just one third of that, producing a pattern of threes and sixes [above, middle].

In sacred structures it is considered axiomatic that every step in the design will have specific meanings, and if the number of meanings can be enriched with others that overlap, all the better. The first step in setting out the work sets the tone for what is to follow. The first steps seem to have been those that established the encircling frame of the labyrinth.

There are three circles that locate the elements of the perimeter [above, right], each stemming from an important source, and each adding its meaning to the whole. By using three different circles to 'complicate' the perimeter, a great richness has been added to the whole.

The outermost circle A is invisible, for it passes through the centres of the cogs. It measures 36 Pes Manualis, which spells 'BVM' plus one, the Blessed Virgin Mary, and the diameter of each cog measures $3 / 4$ of this foot. Thus, the diameter of circle A is 48 of these units, while the overall circle that encases the cogs measures 49 of these units, which is $7^{2}$.

The second circle $C$ marks the outer circumference which cuts through the 114 outer circles turning them into cogs. Its diameter is one tenth of the internal length of the cathedral from the western doors to the eastern chapel. Thus, the labyrinth is not only a symbol for the Way, but also a tenth-scale model of the cathedral that represents Jerusalem on earth, and both are there to guide us along the journey.

The last circle D is derived from the crossing at the centre of the cathedral. In the first plan the crossing had measured $56^{\prime} \times 48^{\prime}$, spelling the titulars for Jesus and Mary, the simplest expression for the Church's position. The diagonal in mediaeval geometric parlance represents the union of the sides, and restates the sculpture of the west portal of Christ enthroned on his Mother's lap.

To calculate circle D he took this diagonal [next page, left]], and on it drew a circle within which he drew the triangle of the Trinity, the Godhead within the whole, and the side of that gave circle D . This last circle D was the one mentioned earlier that was divided into twelve parts, signifying that it was the totality of things. At the centre are the six circles of perfection around the one (the One) at the centre [next page, right].


Lastly consider the position of the labyrinth in the nave of the cathedral. The word nave has the same root as navel and naval, and like the Ark conjures up images of support midst the terrors of the deep - the support of reason when the powers of the unconscious loom before us. In The Contractors I showed that the initial diamond shape used to set out the cathedral has one point on the altar and the other on the centre of the labyrinth, each representing a pole of the church. ${ }^{17}$

Further, the cross-axis from north to south through the transepts is that of Mary and the Wisdom she brings, while the long axis is man's understanding and consciousness as he proceeds with this knowledge from the temporal, the west, to the sanctuary in the east. The labyrinth lies at the beginning of this axis to show the Way, while the aim lies at the other in man's contact with God in the Eucharist. In one sense, the labyrinth is man's path while the altar in the east is God's. The Way is properly placed at the beginning of the traveller's approach to the sanctuary.

When we consider the host of meanings contained within this one device, is it any wonder that the labyrinth became one of the most important symbols used in mediaeval churches, and that today it is still recognised as telling a message? Its language is as valid for our emotions as it was for theirs: the only difference is that through the purity of their knowledge, their understanding may have been richer than ours.

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9 Keith Crichlow, Jane Carrol and Llewylyn Vaughn Lee, "Chartres Maze: a model of the universe?", AAQ, 1973
10 Honorius Augustudunensis, Patrologiae Latina, clxxii, 121 et seq.
11 Katzenellenbogen, Chartres cathedral.
12 There are many adornments to this interpretation in patterns of Cardinal and Mutable signs, in the relationship between earthly signs in the first series and water in the second, and so on which may have given mediaeval scholars and alchemists great delight, but which make tedious reading.
13 Alain de Lille, Anti-Claudian, Philadelphia, 1935.
14 A Perfect number is one whose factors add up to the number itself. These are 1, 6, 28 and then 496 . The first three add up to 35 .
15 James, Contractors, and "Canopy of paradise".
16 "Western rose".
17 "First geometric layout"

