

**Scene 1**

***The chapter is set out for a ceremony. There is a table and chairs behind the sojourners.***

***Parts***

***Narrator***

***Alec – newly exalted companion***

***John***

***Mark***

***Norman***

***David***

***Paul***

***Eddie***

***Len***

***Luke***

***Roger***

***David D***

NARRATOR:

**(As the same time that the narrator starts to speak John, Mark and Alec move the small table from near where they have been sitting to the West end of the Chapter pavement and sit down)**

**Court Bow:**

Good evening Sir. My name is ..... and your narrator for this presentation.

Our presentation is what Talking Heads might have been had it been written by Dan Brown.

Please imagine that you are in the anteroom of a Chapter meeting. There is no specific work to be done at the meeting and so everything is moving in a rather sedate manner. Even the DC isn't rushing tonight.

The Companions are mingling and talking, as we all do as we put on our regalia.

3 months earlier, at their last meeting the Chapter exalted a new companion, a very keen and thoughtful mason. He is the focus of a small group of Companions, who are sitting at a table chatting about the Royal Arch.

Just before they start can I ask you all to make sure you have your pamphlets in front of you as you will need them later.

I now hand over to John, Mark and Alec, sat at their table.

JOHN - Hi Alec, Congratulations on being exalted into Royal Arch Freemasonry. I hope you enjoy it, I know I have.

ALEC - Well it was really spectacular when the hoodwink came off.

MARK - Why did you decide to become a member of the chapter?

ALEC - Lots of reasons really. I suppose it was down the RADO. He made it sound fun, and of course the PGM recommended it in his letter. And a mate of mine who's in a different lodge said this was a good chapter, so that sort of stuff. Why did you join?

MARK - Bit like you really. My friends joined and said I would enjoy it and get a lot out of it.

ALEC - And have you?

MARK - Yes, we have a great social board, the Companions are good value, and learning some new ritual was up my street. But the longer I was in the Chapter the more I realised how much more there must be to Royal Arch masonry and how little I understood.

ALEC - Like what?

MARK - Well there was a lot of talk about it being the completion of Craft masonry and I didn't really understand what that meant. After all if Craft Freemasonry is a progression from birth through learning to a figurative death, what can come after that.....

ALEC (INTERUPTING) - Finding the genuine secrets of a Master Mason?

JOHN (JUMPING IN) - Well yes, but where exactly or perhaps I mean when. Finding the genuine secrets is part of it, actually a big bit to start with, but then I got to thinking about perfection and what came after death and suddenly it dawned on me this place of perfection must be the afterlife, and that just freaked me out. So then I started reading about it and asking around and, well the whole thing became more and more intriguing.

ALEC - What do you mean, intriguing?

MARK - Well I found it was getting you to think about how your life as a way of seeking perfection in everything you do, so that looking back on it you would never be disappointed.

JOHN - I see it all as an attempt to strive for perfection, aiming high and reaching your own goals whilst thinking of others. That can't be easy and so the Royal Arch has a whole series of symbols that help, guide and remind you, but only when you have understood how to decode the symbols.

Tell you what, Norman over there helped us to start to think about what being a Royal Arch Mason means. Why don't we talk it over with him?

MARK - A warning, he's a bit of a stickler and can be a bit gruff, but he's really a great guy. You can get on his good side, if at the social board you keep a bit of meat back and give it to him for his dog, he likes that.

Norman, could you come over here we need you're your help please?

Hi Norman, Alec here our newly exalted companion, wants to understand some of the spiritual and symbolic aspects of Royal Arch masonry. Can you help?

NORMAN - Well I can Alec, but it takes a long time to learn and understand it all and we only have a few minutes tonight, some of the older companions look as if they'd like their dinners. Where would you like me to start?

JOHN - Why don't you tell him about the Platonic bodies. I liked that story and after you told me about them I started to understand Royal Arch a bit better.

NORMAN - What a coincidence. This is extraordinary, nearly as unlikely as one of those stories of John Cavanagh's that he and that group of frustrated thespians of his, ELRAPT they're called, play out.

Anyway, I'm wandering. Some of the lads said they were so interested in the story I told them about Platonic bodies and some of the symbolism around them they were going to write a pamphlet about it. Course they haven't shown it to me yet, in fact since starting it they have been nearly as difficult to find as a Provincial Steward when your glass is empty, but I can see them looking a bit conspiratorial just over there. A good chance to find out where they've got to with their pamphlet.

Can you give them a shout Mark?

MARK - Hey guys, Norman wants you to tell the new lad something about the Platonic bodies.

EDDIE - Hello Norman. Sorry we've been a bit difficult to track down but we didn't want to turn up without something to show you, we were just discussing whether we had enough. As it happens we think we have, so we've brought this document which will be the start of our pamphlet.

NORMAN - It's really Alec who wants to know more, so why don't you try out your pamphlet on him.

DAVID - OK. Hi Alec, I'm Dave, this is Paul, Eddie, Len, Martin and another David. His surname begins with a D as well so we call him DD.

We've each taken a bit of the pamphlet to write and I got the beginning, so I'll start.

We're basing the pamphlet on the Guide for Newly Exalted Companions that Province produced.

Have you got one by the way?

ALEC - Yes its great. It was real help and to be honest it was the guide that set me thinking a bit more about Royal Arch and what it means to me as a person and a Mason.

DAVID - OK, our pamphlet starts by saying that when you get exalted you begin the last part of your masonic journey and its a journey based on trying to find the perfection in yourself through the ritual, symbolism and tennets of Freemasonry, extended beyond mortal life.

During your exaltation, you saw that even after the destruction of Solomon's Temple a part remained intact. It was the Holy of Holies, the most revered place in the Jewish religion.

Within it was an altar, made of two perfect Ashlars. Then you learnt the name of the True and Living God Most High, the most perfect name there is. And on and on the story went and at each turn of the tale you found a new piece of perfection symbolism. It culminated in your being shown the signs by which a perfected mason can be recognised.

I am sure you then sat in the Chapter overwhelmed by everything you saw. But I wonder if you noted on the black and white pavement a series of 3 Dimensional shapes.

These are the Platonic bodies and they are what our pamphlet is about.

Paul, could you take over here and describe the platonic bodies?

PAUL - I'm very happy to describe the bodies to you. I'm a little embarrassed by these. We should have had a set made of stone or wood, but when we asked Bill (whose an engineer) to make us some he'd just bought a book from the Grand Lodge of Japan, called origami for Masons, and well here they are.

That wouldn't have been too bad but he is going through one of those changes that affect men of a certain age and he made them pink!!

Anyway, there are 5 platonic bodies, they are: the Tetrahedron, this's like a triangular pyramid; the hexahedron, we usually call these shapes cubes, the Octahedron with 8 faces, the Dodecahedron with 12 faces and the Icosahedron with 20 faces.

To understand them you have to think in 3 dimensions. A platonic body represents perfection in space. Each body has a number of regular polygonal faces, meaning all the faces look the same and no matter how you look at a Platonic body the same number of faces meet at each edge. A way of thinking about this is to say that when you put down a Platonic Body, no matter how you put it down it always look the same.

Three of the bodies are made up of triangular faces, the Tetrahedron, the Octahedron, and the Icosahedron. The cube of course has 4 sides to each face and the Dodecahedron 5.

Eddie will now explain more about the shapes.

EDDIE –The five 'regular' platonic bodies are objects having sides of equal shape and dimension and although probably first described by Pythagoras and Theatetus, they got their name because they were used by Plato to illustrate what was otherwise invisible or intangible. His theory was that the universe was created from four elements – Earth, Air, Fire and Water, that there were 4 higher groups of animals – Man, Mammal, Fish and Reptile, four senses – sight, sound, smell and taste, and 4 cardinal colours – red yellow, green and blue.

So each of the 4 simplest Perfect bodies, is associated with an element, a species, a sense and a colour.

The objects placed on the floor of the Chapter in order (looking East and commencing from the North) are the Tetrahedron (representing Fire, man, sight and the colour red), the Octahedron (representing Air, bird, sound and the colour yellow), the Hexahedron (representing Earth, mammal, smell and the colour green), and the Icosahedron (representing Water, reptile, taste and the colour blue). To these were added the Dodecahedron, which he said was the symbol of the Universe (associated with ether, spirit, touch and the colour violet). In about 500BC they were thought to form of the Pythagorean mystical

explanation of the Universe and so not only are they perfect spatially, for more than 2,500 years they have represented the cardinal components of the earth and symbolise heaven.

Len can you tell us what you have discovered about the symbolism of the Platonic Bodies and the Royal Arch Jewel.

LEN - One thing about the platonic bodies is that you rarely see them out on the floors of chapter rooms nowadays. Does this mean they have been lost to Royal Arch Freemasonry? Far from it. Before explaining why, there are some further things we need to know about Platonic bodies.

The surface of each Platonic body is made up of series of polygons. Each polygon has a number of angles of an equal number of degrees.

When you add up the total number of degrees for all the faces for our 5 Platonic bodies you find that they are 720, 1440, 2160, 3600 and 5040 degrees as you go from tetrahedron to dodecahedron. All these numbers divide by 720. One of the huge advantages of the pamphlet is that you don't have to hold some things in your heads. So best I read to you about

***Reads very quickly:*** For maths geeks 720 is: the smallest number combining: being constructed as a factorial (6), a highly composite number, a Harshad number in every base from binary to decimal, expressible as the product of consecutive integers in two different ways, has 49 solutions to the equation  $\varphi(x) = 720$ , more than any integer below it, making 720 a highly totient number and, on top of all of that it is a 241-gonal number.

To all the rest of us we need to know that to mathematicians especially to Greek mathematicians it has powerful magical properties that make it a very special number.

Now look at the picture of the Royal Arch jewel and Luke will show you something magical.

LUKE – Before I do that can I just put the origins of the jewel into context. As we know the origins of Royal Arch Freemasonry were in the enlightenment of the 18th and early 19th century when there was a real interest in everything ancient Greek. I'm sure it would not have been lost on our forebears that Platonic philosophy reached its peak at the same time that King Solomon's

Temple was being rebuilt in about 500BC. So it is perhaps no surprise that the newly formed Grand and Royal Chapter of the Royal Arch of Jerusalem adopted these bodies to represent perfection in space. But what is quite remarkable is the decision they made that every RA Mason would carry the platonic bodies around with them disguised within the RA jewel and how they achieved that. After all the design of the Jewel was largely pre-ordained and essentially 2 dimensional.

The jewel has two parts, the large complex system of Triangles in the middle of a circle and the small Triple Tau within a circle below. It also has some words around the Triple Tau – Nil Nisi Clavis Deest – Nothing is wanting but the key.

Many people think that this refers to the spiritual messages broken into parts and written onto the triangles and circles.

This it may do, but the way it wraps around the circle containing the triple tau points to a different and more enigmatic solution.

Look carefully at the triple Tau. It looks like 3 letter T's joined by their bases.

It contains 8 right angles, see the red dots. Each right angle is 90 degrees and therefore the Triple Tau's internal angles total  $8 \times 90$  or 720 degrees. And this is the remarkable key that allows 3D platonic bodies to be represented on a 2D jewel.

So how does it work? The truth is that the Platonic bodies are not represented figuratively but in a code made up of angles and degrees represented by linked triangles!

This is a perfect triangle, an equilateral triangle, with equal sides and equal angles. Like all triangles the sum of the degrees of its three internal angles come to  $180^\circ$ , the same number of degrees as 2 right angles. 4 triangles would therefore have the same number of angular degrees as a triple tau. As all the Platonic bodies have a total number of face angles divisible by 720, each can be represented by an exact number of triple taus or 4 times as many triangles and triangles can be represented within a jewel itself consisting of triangles.

But that wasn't enough, the founders of our movement decided that they needed to have the perfect bodies represented by perfect triangles. Look at the image next to the coloured tetrahedron. It shows 4 nested equilateral



triangles that form a perfect shape. However you look at the shape it appears the same. So in representing the platonic bodies in the jewel as sets of 4 triangles they adopted this perfect shape.

So by relating the internal angles of platonic bodies, triple taus and triangles it has been possible to disguise the platonic bodies in the RA jewel. The secret of their existence can only be unlocked if you understand the code, and now you do.

I see Roger has just come in. He is our expert on complex shapes and will take you through the last two, and most important pages of the pamphlet.

Roger: Look at the triangles in the top part. They are based upon the seal of Solomon, but with added levels of complexity. The seal of Solomon in our jewel is in fact made up of 3 triangles, not 2. Not only that but they contain a whole series of 4 nested triangles, and you can see what I mean by looking at the triangles outlined in white near the bottom of the page.

If you flatten a Platonic body it tessellates (forms a flat symmetrical shape) and when you start to draw the full complexity of 4 nested triangles within the Royal Arch Jewel, you can create all the tessellated Platonic bodies but made up only of triangles. And you can see that in these diagrams. So the tetrahedron is 1 x 4 nested triangles, the octahedron 2, the cube 3, and the icosahedron 5.

But look at the dodecahedron, it has 7. It is beautiful. No wonder it was used to represent the pure perfection of heaven. What is even more mystical is that the simplified outline also has combined angles of 5040 degrees.

DD – This pamphlet links the symbolism of the badge and the platonic bodies, but there is much more to know about mathematics, geometry and the Royal Arch; the whole area of mysticism about the vault, germination and the afterlife; and the mystic symbolism linking the visions of Ezekiel and St John, the 4 angelic beasts of the heavens Man, Lion, Ox and Eagle, and the message of the Royal Arch to all companions.

There are lots more pamphlets we are thinking of writing.

Alec – Well I'd certainly encourage you, I'd love to know more.

NARRATOR:

I trust sir, that you and all the companions have enjoyed our presentation about the Platonic bodies and one of the areas of symbolism contained in our jewel.

John Cavanagh at the end of each ELRAPT presentation says: There are a million tales in the Royal Arch and this is just one. It is not possible to improve on those words, so I will not try.

Plato	Volume	Shape of Face	Faces	Edges	Corners	Degrees
"Heaven"	Dodecahedron	Pentagon	12	30	20	5040
Fire	Tetrahedron	Triangle	4	6	4	720
Air	Octahedron	Triangle	8	12	6	1440
Earth	Hexahedron	Square	6	12	8	2160
Water	Icosahedron	Triangle	20	30	12	3600

### **The magic of the number 720**

720 is: the smallest number combining:

- being constructed as a factorial (6),
- a highly composite number,
- a Harshad number in every base from binary to decimal,
- expressible as the product of consecutive integers in two different ways,
- has 49 solutions to the equation  $\phi(x) = 720$ , more than any integer below it,
- making 720 a highly totient number
- and, on top of all of that it is a 241-gonal number.

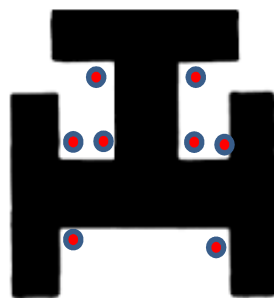


### The Royal Arch Jewel

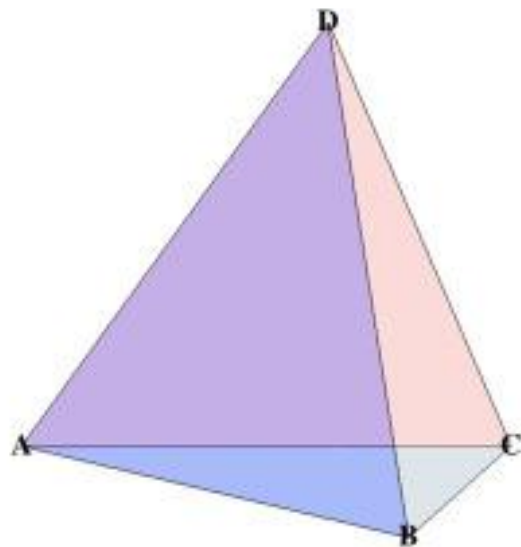
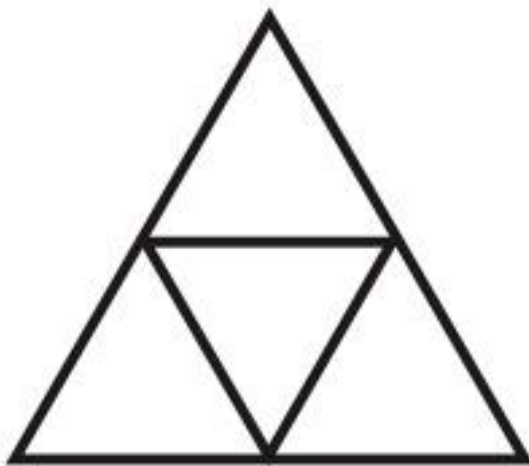
On the obverse around the triple tau is written: "Nil nisi clavis deest"

"Nothing is wanting but the key"

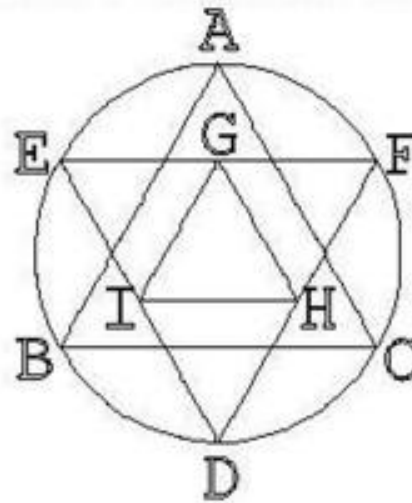
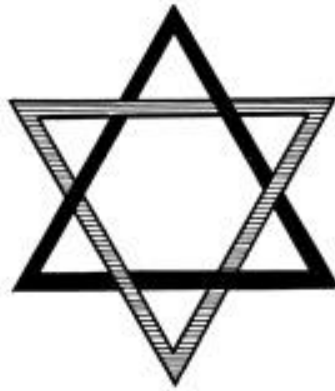
Triple Tau 8 x right angles (red dots)



Triangle =  $180^\circ$  or  
2x right angles



The perfection of 4  
nested triangles.  
Also a tessellated  
tetrahedron



**Tetrahedron. Four little triangles =  $4 \times 180^\circ$  which equals 8 right angles =  $720^\circ$**



**Octahedron  
2 different sets of 4 triangles =  
 $2 \times 8$  right angles. 16 right angles in total =  
 $1440^\circ$**



4



**Cube = 3 sets of 4 triangles.  $3 \times 4 \times 180^\circ$  which equals 24 right angles =  $2160^\circ$**



**Icosahedron =  $5 \times 4$  triangles =  $5 \times 8$  right angles = 40 right angles =  $40 \times 90^\circ = 3600^\circ$**



**Dodecahedron =  $7 \times 4$  triangles =  $7 \times 8$  right angles = 56 right angles =  $56 \times 90^\circ = 5040^\circ$ . Perfection in symmetry AND  $5040^\circ$  can also be formed by the external angles**

