

# Historical Origin of the Fine Structure Constant Subtilis Structurae Constantis<sup>1</sup>

## Part I. St. Stephen's Crowning Achievement

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*Abstract: This paper deals with the historical origin of the primordial image of the fine structure constant (FSC) and the number 137 as the Self's own number archetype, which plays a central role in the poetic-hermeneutic system of the Holy Crown of Hungary. We intend to show that the allegorical and symbolical images which are observed as the manifestation of unconscious and interpreted and analyzed in the Pauli-Jung collaboration have a lengthy synchronistic relationship with the "archetypal model" of the FSC found in the marvellous enamel pictures of St. Stephen's Crown.*

*Keywords: fine structure constant, number archetypes, hermeneutical systems, creative background process*

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## 1 Introduction

It is well known that the collaboration between Wolfgang Pauli and Carl Gustav JUNG in physical, psychological and idea-historical topics has led many authors from the 60s onwards (starting with Heisenberg [6]) to discuss and analyze these issues. A special feature of these discussions is that they are directed, in addition to psychological and physical aspects, to Jung's interpretation of Pauli's dreams,

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<sup>1</sup> The special "decompositional" feature in the title would like to represent the double meaning of the expression "constans unit" (or "uni T" in Latin i.e. the famous Sign of Constantine) and the name "Constantinus".

with a manifest declaration of the crucial role of the Number archetypes and, at the same time, with a permanent hidden presence of the number 137, as well as the usually “allegorical concepts” of the (inverse) fine structure constant (FSC). [14, 17, 18]

In our earlier papers we dealt in detail with these interesting and potentially fruitful “results” of the Pauli-Jung “correspondence”, focusing mainly on the problem of the identification and interpretation of the FSC. [30, 34-37] Our early considerations mainly focused on the germs of a background control and system theory closely connected with the interpretation of the FSC and number archetype 137, strongly linked with the interpretation and possible identification of a so called unconscious creative background processes and their “cognition” by the so called (4+1) symbolic background languages introduced and discussed in the Pauli-Jung correspondence [14, 17]. (The concept was introduced by Pauli in his scientific cooperation with Jung, as he explained a possible collective unconscious background of scientific discoveries.)<sup>2</sup>

It was also discussed in our earlier papers that Pauli took the not-directly-measurable archetypical influences as regulating and ordering processes [17, 20]. Along with the manifestation of the unconscious in the consciousness in the form of images and ideas, he considered the whole “system” more or less as a control system, according to the general view of this concept prior to 1958. Therefore, the conceptualization of the background processes as input/output dynamic systems reinterprets Pauli’s view of regulating dynamic systems applied between the unconscious (input) and conscious (output) processes for the treatment of sophisticated cognitive problems (partly on the basis of the probabilistic concept of archetype introduced by Pauli and Jung [14]).

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<sup>2</sup> Pauli explains several times in his letters and essays that there are at least three different type of mediator “languages” of cognition corresponding to the usual (e.g. scientific discovery) and the unusual (e.g. active imagination, dreams) ways of “knowledge transformations”: theological/metaphysical language; the physical/symbolic language; and the language of the psyche, or analytical psychology. In addition to these, he postulates a fourth symbolic mediator language that is based on number archetypes, but he considers this language “unknown” so far. These four languages can be related to the four ontical layers of Jung and Pauli: spiritual, psychical, material, and transcendent. In addition to the competence and language of the three fields mentioned (mythological-theological, psychological and physical background theory), the fourth is, in our opinion, not a future “neutral” new language connected to the number archetype, but an artistic competence (and language) in the widest sense: the aesthetical category [30, 34]. The mentioned fourth neutral language appears in the focus as a fifth one, with the number archetype ‘137’, and maybe with the paradigm of the background system and control theory. This scheme corresponds to Jung’s famous four functions of the consciousness, where there is a (fifth) transcendent function unifying the other four. Pauli intuitively grasped the significance of this perspective. [17]

According to the geometric and arithmetic Self (*Selbst*) representation, i.e. the Mandala, using a circle with divisions of natural numbers, we introduced a concept of the joint geometric and arithmetic number archetype. It can be a simple function consisting of the basic geometric number archetype  $\pi$  and natural numbers. These approximating and meaningfully interpretable formulas of the FSC, together with the number 137, can be considered as a representation of the generative-receptive Number archetype of the Self (*Selbst*).<sup>3</sup> [30, 34]

The mysterious nature of the FSC<sup>4</sup> is also a well known subject of many varied discussions, and it has partly been discussed by us as well. However, here we intend to select some important meaningful details from this vast literature, ones which are closely related to the actual problems we discuss in this paper.

As is well known, in addition to the mystery of the origin of elementary particle masses, there is the mystery of the dimensionless fine structure constant ...  $1/137$ . In his book *Elementary Particles: Building Blocks of Matter*, Harald Fritzsch describes it as follows:

*“Let us emphasize that this number is the most prominent number in all of the natural sciences. Ever since its first introduction it has caused a lot of speculation. After all, FSC gives the strength of the electromagnetic interaction, which gives it fundamental importance for all the natural sciences and for all technology”.* [15]

Citing Fritzsch in his marvellous book, *The Power of Alpha*, MacGregor states:

*“The mystery about  $\alpha$  is actually a double mystery. The first mystery – the origin of its numerical  $\alpha$  value  $\alpha = 1/137$  – has been recognized and discussed for decades. The second mystery – the range of its domain – is generally unrecognized.”*

Furthermore, he writes that:

*“In the current paradigm of elementary particle physics the assumption is made that the masses are created from the Higgs downward. However, the phenomenology of  $\alpha$ -quantized lifetimes and masses suggests that the (FSC) coupling constant  $\alpha$  acting on the electron **creates** these masses from the bottom up” [15]*

<sup>3</sup> As is well known, synchronicity, according to Jung, is the para-psychological equivalent of the psychological manifestation of the Self (*Selbst*), i.e. the Mandala phenomena [24].

<sup>4</sup> It is worth mentioning MacGregor’s opinion: *“The puzzlement over the derivation of the “pure number” 137, or 1/137, has persisted for more than half a century. Eddington’s attempts to explain it are legendary. In the present studies we argue the case that, in addition to its numerical value, there is in fact a second mystery involved with the constant  $\alpha$ , which is the question: What is the extent of the domain in which  $\alpha$  (FSC), operates as a coupling constant?”* [15]

Thus, the “... experimental evidence is displayed to substantiate this “power of FSC” viewpoint.” Feynmann’s opinion is also frequently cited: “It’s one of the **greatest** damn mysteries of physics: a **magic number** that comes to us with no understanding by man”. [30]

Werner Heisenberg once proclaimed that all the quandaries of quantum mechanics would shrivel up when 137 was finally explained. [17] Pauli’s opinion is well known too: “The concept and interpretation of FSC leads us out from the physics.” [20]

And let us note MacGregor again:

*“Thus we have a mathematics that works, but we do not know just what it is calculating. This in a sense is pure mathology, with no interpretive underpinning. The various infinities, which are equally mysterious, are evidently being handled properly, but their origin is left up in the air. As we will see, elementary particle mathology may be able to provide some insight into these enigmas”... “If we really want a solution the mystery of elementary particle masses, it seems that this is the path we must follow. It is a path that is guided by The Power of FSC”. [15]*

Now let us consider some important but less known and rarely cited thoughts from Jung related to these kind of topics, concerning the enormous role of number archetypes in physics and psychology: One of the future problems for the human cognition is to explain,

*“...the connection of the psychology of the unconscious with the properties of whole numbers on the one hand and the properties of matter on the other.” ... “Here psychological reactions take place which the epistemologist has hardly considered until now, if at all. The reason for this is that he does not know of the existence of an unconscious psyche. If, therefore, my cognitive process comes to a stop at one point or another, this does not mean that the underlying psychological process (e.g. excited and controlled by an acausal background creative intelligence – author comment) has also stopped. Experience shows that it continues regardless. When the physicist, for instance, can form no picture of the structure of the atom from the data at hand, something suddenly fleshes into his mind – a model, perhaps the planetary model – as a product of unconscious associative activity. This flash or “hunch” must be considered a psychic statement, which is ordinarily called intuition and is a common product of the external data and psychological apperception. Wherever the inquiring mind comes up against a darkness, in which objects are only dimly discernible, it fills the gap with previous experiences or, if these are lacking, with imaginative, that is with archetypal or mythic, material. In the construction of physical theories you will therefore find the closest analogies with the psychology of the unconscious, since this too is up against the same difficulties. Our psychic foundations are shrouded in such great and inchoate darkness that, as you peer into it, it is instantly compensated by mythic forms. When these compensations become too obvious, we naturally try to obviate them and replace them by “logical” concepts. But this is justified only*

*when these concepts really do give adequate expression to what we have dimly discerned. Generally they don't. Hence the borderline concepts in both sciences are partly mythological. This would be a good reason for an epistemological-cum-psychological examination of their fundamental concepts". [12]*

Later in this letter he continues:

*"When we are confronted with this dark aspect of numbers, the unconscious gives an answer, that is, it compensates their darkness by statements which I call 'indispensable' or 'inescapable.'" ... "In this respect Number proves to be a fundamental element not only of physics but also of the objective psyche". (to F. Lerch 2. 09. 1956. [12])*

In the Pauli-Jung relationship, the particular curiosity of the number 137 is its manifestation as a crown symbol in various dreams and allegorical images. Thus, in Pauli's initial dream (from his famous dream series in Jung's *Psychology and Alchemy*), we see a simple start, as "the strange hat" in the dream is treated as a crown, while in later dreams the 8 system and 32 system division of the circle (of the hat as crown) leads to a 137-structured interpretation of a crown – or to what is the same, a wheel or wreath (see dreams 1, 22, 35, 39, 51, and 59 [18]). In Jung's 1927 dream, as we show later and in detail in another article, the symbolism of the mandala appears in a 137 system as well. For Pauli and Jung this crown symbolism and the number 137 which represents it are first of all interwoven in their imaginations and interpretations with Kabbalistic meaning and structures. The crown interpretation of the number 137, the number value of the Hebrew word *Kabbalah* (137 = קבלה), we introduced in an earlier work. [34] The best concise description is as follows (see Dan on the "Fragment of Eleazar" [3, 4]):

*"Yufiel (the angel priest, the number of his name 137 = יופיאל) is then identified with the Crown ('atarah, עטרה) on the head of the Creator, a crown which is comprised of the holy name of forty-two characters, and which was revealed to Ezekiel in the chariot (through the ofen, אופן =137). This Crown is the divine power which Moses could not see (Ex. 33, 23). Then the author continues this series of identification and states "where the crown is on the head of the Creator...it is the Crown Keter." [3]*

According to this concept, the number 137 means always the archetypal number representation of the Crown, and of the double masculine and feminine crown or crowns, as well<sup>5</sup>. Jung himself pointedly interpreted the Sephiroth structure, the

<sup>5</sup> In the original text „אופן גימטריא יופיאל אופן אלה וו פה נון גימטרייא שדי, [4]. This means that the God (Saddai) is in the wheel (ofen), i. e. in 137, and because the other name for Ofen is Galgal (גלגל) whose other meaning is incarnation or reincarnation as Gilgul (גלגול). Thus, this interpretation of 137 could be a "Biblical" basis for the structure and number of the incarnation of God. This "Fragment" (written in artificial old style with a quite new meaning) could have originated from the hypothetical Proto-Kabbalistic circle of St Stephen's court. [35]

essence of the Kabbalistic system, as a mandala-like dual masculine and feminine unified crown:

*“With the statements of the Cabala (137), which as we have seen found their way into alchemy, our interpretation of Adam attains a scope and a depth that can hardly be surpassed. This interpretation includes ... the feminine principle itself. She appears chiefly as the “lower,” as Malchuth (kingdom), Shekinah (the Indwelling of God), or as Atarah (Crown), the equivalent Below of Kether, the upper crown. She is also present in the „hermaphroditic” Sefiroth system, the right half of which is masculine and the left half feminine. Hence Adam Kadmon, as a personification of the whole “inverted tree,” is androgynous, but the system itself is a highly differentiated coniunctio symbol, and, as such, divided into three parts (three columns of three Sefiroth each)”. [9]*

Concerning these interpretations, it might be interesting to note some spontaneous crown symbolisms from MacGregor related to the FSC. Here the author speaks in a manner closely resembling that of the crown symbolism about the perpetual creative power of the (inverse) fine structure constant, that is, the number archetype 137:

*“We begin this sojourn into the mathology of the elementary particle with a brief discussion of the mathological aspects of QED (quantum electrodynamics), which is surely the “crown jewel” of all mathologies” ... “In the lifetime and mass studies..., the PS pseudoscalar mesons – the “PS octet” of quantum chromodynamics plus the “singlet” – exhibit the clearest and most accurate examples of (FSC)  $\alpha$ -quantization. They are the “crown jewels” – the best results we can offer”. Furthermore once again “(The FSC) ... acting on the electron creates these masses from the bottom up” “... experimental evidence is displayed to substantiate this “power of FSC” viewpoint.” [15]*

This symbolic concept of perpetual creation (*creatio continua*) and the perpetual incarnation (*incarnatio continua*) in connection with the number 137 can be connected with Pauli as well as with Jung. As Miller writes, the “doublet” lines are always linked with the fine structure constant; meanwhile, Pauli associates them with the concept of the perpetual incarnation. [17, 18] At the same time, both Jung and Pauli link the perpetual creation and perpetual incarnation with the concept of synchronicity<sup>6</sup>. Thus, based on the above, we can posit the hypothesis that the fine structure constant, in symbolic and allegorical form in background physics and other symbolic languages, closely connects via an Acausal Background Creative Intelligence with the crown symbolism and with the delicate ornamental construction of actual royal crowns. According to our hypothesis, under the “impetus” of earlier traditions, the algebraic and geometric

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<sup>6</sup> See Jung: “As *incarnatio continua*, it is synonymous with the *creatio continua* and actually means the materialization of a potentially available reality.” [17] See further Pauli’s view in footnote 9.

contemplation of the time (the middle ages), and the probable synchronicities, a few great minds, “pressured” by “Acausal Background Creative Intelligence” and with Jung-like intuitive mythical imagination, were able to recognise the universal significance of the ancient form of a much-later concept<sup>7</sup>. That is what we would like to demonstrate for the patient reader.

We would like to stress in advance that our approach is basically *empirical* and *heuristic*, and it is much more a question of discovery than of philosophical legitimacy.

## 2 The Problem and the Hypothesis

We will show that the historical origin of the concept and theory of the fine structure constant can with confidence be linked back to works of art designed and crafted in the court of King Saint Stephen of Hungary. Among these works of art, the image of Emperor Constantine on the Greek crown (*corona graeca*) of the Holy Crown of Hungary occupies an honoured place, where the special variable structure of the number 137 provides rich semantic variants to the attentive interpreter. Our narrower hermeneutic interpretation can be stated, in brief, that the name *Constantinus* carries within it the “*Constans*”, which truly presents us on a fine structure the number 137, or that is, the number 1/137. The enamel picture in Latin satisfies the Latin concept of “*structura subtilis*”; and thus from *Constantinus* it follows that the “*constans*”, together with the interpretation of the 1/137 visible on the image, can be referred to as *subtilis structurae constans*, which can be taken as an accurate Latin translation for the fine structure constant.<sup>8</sup> The structuring of the enamel pictures, with the various enamel colours and bits of gold separating them, is a fortunate symbolic expression of both the different outward forms of light and the spectrum lines. As we will see, on the Constantine enamel picture, we can define, or interpret, seven 137 structures, while on the entire Holy Crown, in addition to those on the Constantine image, we can find at least seven more 137 depictions. These connections definitively link the Holy Crown with the number 137. Furthermore, in the various strings of Judaic mysticism, as we have discussed, it has been well demonstrated that the wheel of

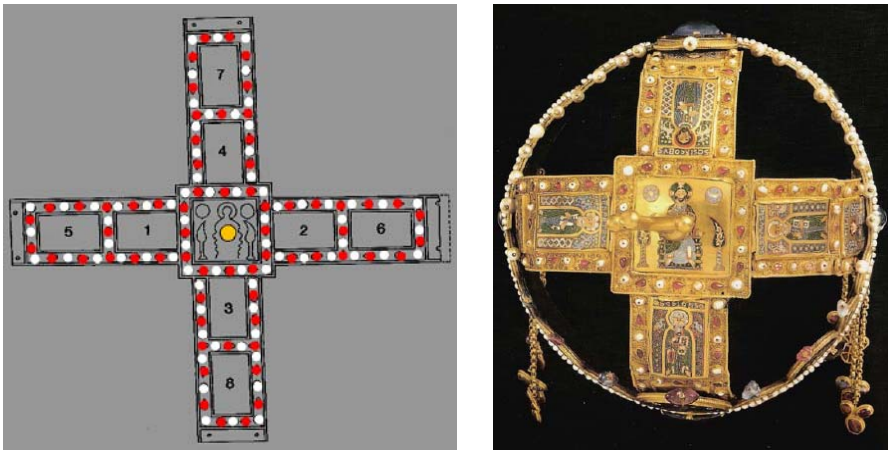
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<sup>7</sup> “As a consequence of the rationalistic attitude of scientists since the eighteenth century, the (creative) background processes that accompany the development of the natural sciences, although present, as always and of decisive effect, remained to a large extent unheeded, that is to say, confined to the unconscious. On the other hand, in the Middle Ages down to the beginning of modern times, we have no natural science in the present-day sense, but merely the pre-scientific stage, just mentioned, of a magical-symbolical description of nature.”[20]

<sup>8</sup> The dimension of the constant (FSC) is the “unit”. See “Constans unit” = “Constantinus”.

Ezekiel's vision, the *ofen* (*echod*), with its number-value of 137, is the archetypal concept and pattern for the Hebrew word for crown, the *atara*, whose Greek translation στεφανος (the Latin *Stephanus*) is the great Hungarian king's name. The depiction of the notion which we have so far expressed is well suited to the symbolic language of Pauli's Background Physics, a concept which Pauli himself introduced. In his physical symbolic background language, the "duplication" of the spectrum lines always refers to the fine structure constant (see e.g. [18]). As the physical background language conception of the duplication, he chooses the divine twins, whom he usually refers to as the Dioscuri, while elsewhere he calls them by their individual names, Castor and Pollux<sup>9</sup>.

Among the 7+7 occurrences of the 137 structure on the Holy Crown, several of them very clearly, and as the most important variational version in the 68+68+1 form, bear the number 137. The most important central number 137 on the Latin crown is composed of 72 white pearls and 64 gems, with the central leaning cross. The double hoop visible in Fig. 1 and Fig. 2 contains the number 2x68 in a 2x36+32 structure.



Figures 1-2

Illustration of the 137 structures of white pearls and red gems on the Latin crown [28]

The 36 and 32 as Lulav (in Hebrew לוֹלֵב, 36 32 = לולב) is the frond of the date palm, whose name in Hebrew is Tamar. (This taken together can also refer to the 36 true men on the 32 paths of wisdom). Because on the feast of Sukkot, *Lulav* is

<sup>9</sup> See Pauli: "...the Dioscuri myth on the one hand and doublet splitting of spectral lines and isotope separation on the other" and "Isotope separation is familiar to me as a symbol of the individuation process (doubling motifs, cf. the brothers Castor and Pollux, Christ is God and Man), which always appear when progress is being made in the development of consciousness and is connected with the incarnation of an archetype." [17]



the symbol of the Messiah king (while the *Etrog* symbolises the bride, Israel), the 2x36-32 clearly refers to Tamar's messianic twins, Pharez and Zerah. They "compose" the "sign" of the redeemer as 137, because Pharez is the forefather of David and Christ. Thus we get the symbolic composition, according to Pauli's physical background language, of the doubled spectrum lines, with the allegorical image of the messianic twins, where the twins give us the dominant denominator of the 137 fine structure constant.

In the great book of the proto-Kabbalah, the Book of Bahir, in passage 197, Pharez and Zerah are mystically treated, based on their names, as the Moon and "breaking through", and as the Sun and radiance. In other places, the treatment as the Sun and the Moon, as the morning and the evening, and as the day and the night exactly matches the traditional interpretation of the Olympos and the Hades, the daytime and night of Castor and Pollux (see [1]).

Thus, perhaps Saint Stephen (and his court), with a certain kind of pre-cognition *sensed* the concept of the fine structure constant some 900 year prior to its conceptual birth, while Pauli with retro-cognition perhaps discovered the constant's historical origin. This long-term synchronistic concord is perhaps most significantly demonstrated by this twin nature of Pharez and Zerah or by that of Castor and Pollux, with the number 137 connected with them.

Thus we could summarise the first part of our hypothesis as follows: that the number 137 on the Holy Crown and particularly on the image of Constantine, based on the physical background language of the Acausal Background Creative Intelligence (of the Pauli sort), gives with almost complete isomorphism the symbolic and mythical range of ideas and concepts of the connection between the fine structures, the light spectrum, the constant, the duplication of the spectrum lines and the fine structure constant.

### **3 The Base Structure of the 137 and the Kabbalistic Interpretation**

It is also significant to note that the white colour of the 72 white pearls on the Latin crown of the Holy Crown expresses the Hebrew word for mercy, *Chesed* (the numeric value of which is 72), while the red colour of the 64 gems symbolises the Hebrew word for severe judgement, the attribute of divine power, the *Din* (numeric value = 64). These two concepts appear as the personification of God's left and right arm, as the 4<sup>th</sup> and 5<sup>th</sup> Sephirah of the Kabbalah's Sephirot system. Although there are other name variations, Scholem indicates them in exactly this manner in his Sephirotic tree (*Chesed, Din*, (see in [25])). The representation on the Holy Crown precedes the later Kabbalah colour conception by at least 200 years. Thus, this reinforces the likelihood of the origin from partially Khazarian sources

of the Proto-Kabbalah in Saint Stephen's court. The number of the 72 white pearls refers to Tamar in the Book Bahir and to the Hebrew word for pearl, "Margalit", in which both the name "Tamar" and the word "revelation" can be found, and which also represents the 10<sup>th</sup> Sefhira, the Kingdom or the Crown (Atarah), in the Bahir as well (§ 72). The red gems are the messianic symbol for Judah's lion and the invincible Sun. The Hebrew word for stone is also an allusion to the messianic king. The conceptualisation of mercy and judgement as God's right and left arms played an important role in the Talmud and in the mystical Midrashim. In these allegorical depictions, King Solomon personifies the Lord, under the name *Melech Slomo*, the Talmudic interpretation of which is "the king to whom peace belongs". For example, in the *Shir Hashirim* (Song of Songs) *Midrash Rabbah*, the right arm is personified by the Archangel Michael, while the left arm is personified by the Archangel Gabriel. On the Greek part of the Holy Crown, this kind of the "Trinity" (Deesis) appears exactly in this manner, with a specific and shared epaulet edge system. Emperor Constantine is depicted here as King Solomon, with an angelic face, between Archangels Michael and Gabriel. (This is exactly the same manner of depiction as on the Pala d'oro. Figs. 3 and 4.)



Figures 3-4

(3) The archangels and the emperor with Solomon's angelic face on the Holy Crown [28]

(4) Solomon and the archangels on the Pala d'oro

This fact is very important to our hypothesis because on the right side of the Emperor, the number of white pearl decorations taken together with the Archangel Michael represent the number 72, while the same decorations on his left side taken

together with Archangel Gabriel shows 64 entities. The largest central white pearl is on the spiral on the Emperor's elbow, as on the mantle of King Solomon (the Hebrew name for Solomon also means mantle or cloak). Thus, the 72 white pearls of the *Chesed* and the 64 red gems of the *Din* of the Latin part of the Holy Crown is explained, according to Judaic mysticism, by the clear and unambiguous mantel decoration of the Emperor appearing as King Solomon with the two archangels. This structure completely matches the  $72+64+1$  construction of the pearls and gems. This connection, in addition to the likely origin of the Proto-Kabbalah, is important in the background language interpretation of the fine structure constant.

## 4 Some Historical Comments

Based on some of our former research, the image of Constantine was probably originally located on the front of the Holy Crown. Next to this image is Saint Stephen's father, with the name *Geobitzas* (*Γεωβιτζας*, with a potential pun of "*ζη Τωβιας*"), looking at the Emperor. Above them is the arch-shaped enamel picture of Christ. The picture of the Emperor has multiple symbolic meanings. On one hand it matches to King Solomon, as the equivalent image of King Solomon appears on the Venetian Pala d'Oro. On the other hand, given the appearance of Saint Stephen's father, Géza (usually Geysa or Geusa in the Latin texts), it refers to Constantine as being "the Purple-born." What is more, we have the situation of Saint Stephen's grandfather, Géza's father-in-law, Rex Iulus in Latin, as a Roman Patrician and Constantine's adopted son, adopting Byzantine Christianity and returning from the Byzantine Empire (cca. 950) to spread Christianity with his daughter and son-in-law. Taken as a whole, and with the angelic face – in the context of other works of art – this may depict the Emperor Constantine the Great with the "T"-letter labarum. Because the "Purple-born" Constantine, Constantine VII, was the seventh Constantine up to the time of Saint Stephen, here he may represent all seven of the emperors Constantine. The same can be said about the name *Geobitzas*, since István (Stephen) was the Christian name of Saint Stephen's grandfather, according to the old Church Slavic sources. It is generally accepted, and can be seen on ancient coins, that Géza's (St Stephen's father's) name was also Stephen, just like his son's name. So, symbolically speaking, the Byzantine and Pannonian concept of Rome is expressed in unity with the numbers three and seven, and we thus have the numbers 1, 3 and 7, an allusion to the number 137. Let us not forget that the Holy Roman Emperor Henry II, who was without a male heir, was the brother-in-law of Saint Stephen and thus the uncle of Stephen's son, Saint Emeric, who could therefore have been heir apparent to that (Holy Roman) throne. If we accept the potential, according to known historical resources, for a Byzantine wife for Emeric, then we could have witnessed at least the symbolic and genealogical union of the three Romes. And according to our hypothesis, the Holy Crown was prepared by St Stephen of Hungary for Emeric's coronation.

The unit 1 and this system (3+7) is also visible on the enamel picture of the Last Supper on the Pala d'Oro, where the special shape of the table takes on the symbolic shape of the Hagia Sophia, which was founded by Constantine. (see Fig. 5 [28])



Figure 5

The Emperor Κων (σταντίνος), that is Constantine with the reconstructed Holy Crown with the Emperor and the King (see the details in [33])

Because of the quotation from Proverbs 9.1 which appears at the same place on the image of Solomon on the Pala d'oro, we can interpret this to mean that Sophia is building her house, and for it seven columns. Above the 7 columns of the table image, on the sketched Hagia Sophia picture, there are 3 edges visible. The name for these architectural elements in Latin is usually *corona*, while in Greek it is of course *stephanos*. The word “constans”, or the name “Constantinus”, suits well to the idea of the stability of the columns. The number of the ornaments of the edge of the table is 137 (Fig. 6).

According to our theory, these enamel pictures on the Pala d'Oro were made at the court of Saint Stephen, and the Holy King may have sent them to Venice for the occasion of the restoration of the house of Orseolo, the Venetian dynasty (in 1029), whose crown prince and heir to the throne was Stephen's sister's son and later King of Hungary, Peter Orseolo. The unity (1), the 3 and the 7 can be a symbol for the “*On-ogur*” (*Ungarus*) – the Ungaria, at that time without the “H” – to which came the 10 tribes, in other words, to the unity (1) of the 3 Kabar and the 7 Magyar tribes. Also linked to the numbers 1, 3, and 7 is the well-known 3 + 7 division of the Sephiroth system, along with the postulation of its divine unity. The work is consciously alive with these numbers. Further, it is certain that the court of Saint Stephen was knowledgeable of Arabic numerals. After all, it was

Pope Sylvester II who “crowned” Stephen in 1000, and it was the same Sylvester who before becoming Pope, as Gerbert, a famous mathematician, was a teacher to members of the dynasty of Saint Stephen’s wife, Gizella, for example, to Otto III. It is well known that Sylvester was a vigorous propagator of Arabic numerals in Europe. [27] Thus, the 1, 3, and 7 numbers themselves, with respect to the decimal number system, refer to the number 137 automatically.



Figure 6

The “Last Supper” on the Pala d’oro and the reconstructed Holy Crown with the “Nikopoia”  
(The references on Pala d’oro’s pictures see in detail [29])

## 5 The Constantine Picture and the Leviathan

On the Constantine picture, along with the other pictures on the Pala d'Oro and the Holy Crown of Hungary, we can observe a special and decisively important interpretation of the number 137. This interpretation is able to resolve the conflicting accounts in the Gospels of Luke and Matthew of Jesus's genealogy and the virgin conception through the physical and spiritual deduction of ancestors up to Christ who brought about the incarnation. Thus, if we take together the first 20 ancestors from Adam to Abraham (which appear in Luke) with those from Matthew, we come to 62 forefathers (20 plus the original 42) who are transmitted to Mary by the Holy Spirit.

Based on the well-known tradition, Luke's genealogical tree in the Vulgate contains 76 names, from Adam to Christ through Mary. The ancestors from Adam (Abraham) to David are the same in both genealogies, while after David they diverge, coming through Solomon and through Nathan. Counting the only Christ, we get 137 out of the 138 entities<sup>10</sup>. Thus, via this interpretation, the incarnation of God is also indicated by the number 137. And in the age of Saint Stephen, on the occasion of their crowning and anointing, these priestly kings (*rex sacerdos*) spiritually received Christ (and so in effect the 137 incarnation. [5, 35] The Hebrew word for "receiving" is Kabbalah, whose number value is famously 137. Thus, the incarnation of God and the anointing and coronation of the Holy Roman king is given by the number 137. According to Jung, the equivalent of this receiving or incarnation in modern psychological terms is making conscious the self (*selbst*) in the process of individuation, and so in actuality, 137 is the *Selbst* archetype as well (see [30, 34]). As we shall see, this can be observed on the Constantine image, representing the fine structure constant in a "symbolic physical background language".<sup>11</sup>

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<sup>9</sup> We have the same (original [32]) "system" on the Pala d'oro with the central 2+2 prophets whose names (Moses, Solomon on right side + David, Isaiah on the left side) written in Greek (the names of the other prophets are in Latin). Here the number of the characters  $62+76=138$  including 2 crosses (a Latin and a Greek). This interpretation is supported by the fact that the number of the letters is also 137. The 62 items are on Solomon's side (with Lex of Moses!) and the 76 items are on the Virgin's side (!) with Isaiah's text, the famous "virgo concipiet et pariet filium", can be considered a perfect isomorphic structure of the double genealogical system of Christ above. (see [32])

<sup>11</sup> Perhaps, it is worth mentioning Jung's opinion of this tradition: "*I'm rather certain that the sefirot tree contains the whole symbolism of Jewish development parallel to the Christian idea (concerning the incarnation of God). The characteristic difference is that God's incarnation is understood to be a historical fact in the Christian belief, while in the Jewish Gnosis it is an entirely pleromatic process symbolized by the concentration of the Supreme triad of Kether, Hokhmah and Binah in the Figure of Tifereth. Being the equivalent of the son and the Holy Ghost, he is the Sponsus bringing about the great solution through his union with the Malkuth (Atarah). This*

On the other hand, the Constantine image, along with the other images on the Holy Crown and the Pala d'Oro, contain the idea of the capture of the Leviathan, based on the line of Christ's ancestors, or in our case, on the number 137. We can see the same image in the Leviathan picture from the Hortus Deliciarum, which can be found in the illustrations of the Pauli dream series in Jung's famous *Psychology and Alchemy*. The Leviathan is the symbol of this unreflecting primordial cosmos, and its capture, marked with the number 137, is the symbol of the cognition of the cosmos through the number 137, the fine structure constant. (This questions has been discussed in detail in [36]).

The documented historical premises of the above conception of the Leviathan go back to Origen of Alexandria's description in *Contra Celsum*. [8, 27] Here, according to a Jewish-Christian sect, the Leviathan is composed of 10 concentric circles, which form a unit of 3 + 7 components. Thus, we find the one, the three and the seven in the ten. So, in a synchronistic sense, in a decimal system, the numbers 1, 3 and 7 can signify the number 137. Of course, that is precisely the structure of the Kabbalah, which appears nearly 1000 years later. Considering Biblical tradition, it seems that the Leviathan contains within itself all possible animal species, and in this sense can be considered a universal all-encompassing "genus memory". At least that is how Maimonides in the 12<sup>th</sup> Century conceived of the Leviathan, almost as an abstract concept. On the other hand, in the mystical Christian interpretation, the Leviathan contains within it all potential human souls, and the souls of the dead return to within the Leviathan until the time of Christ's redemption; in this way, the Leviathan symbolises both death and the afterlife. With Christ's redemption and the conquering of death ("*Mors perit in morte*" [29]), the Leviathan releases the redeemed souls of the dead to the afterlife of Christ's kingdom.<sup>12</sup>

In the Christian depictions of the Leviathan, in addition to the fish and the snake motifs, there also exist those of the bird with wings and of the earthly being with strong legs. If we take the snake to be a fiery being (and the Christian allegories identify the red snake from the Book of Revelations with the Leviathan), with

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*union is equivalent to the Assumptio Beatae Virginis, but definitely more comprehensive than the letter as it seems to include even the extraneous world of the Kelipoth. X (almost surely Scholem, author's note) is certainly all wet when he thinks that the Jewish Gnosis contains nothing of the Christian Mystery. It contains practically whole of it but in its unrevealed pleromatic state."* [12]

<sup>12</sup> Here it is worth noting the Latin text on Hortus Deliciarum's illustration of the Leviathan. "*Postquam primus parens per lignum in pelagus hujus saeculi quasi in verticem naufragū corruit, atque avidus **Leviathan** seva morte totum genus humanum absorbit, placuit redemptori nostro vexillum sancte crucis erigere, et hamo carnis sue squamea hostis guttura constringere, ut cuspidе vitalis ligni perfossus evomeret quos per vetitum lignum improbus predo devorasset. Hec sancta crux est nobis lampas lucis eterne in hujus vite caligine, que suos sequaces ducit ad celestia, suis amatoribus confert gaudia angelica."* [26]

these various descriptions of the Leviathan, we can interpret all four elements of the world – water, earth, air and fire. Thus, the Leviathan here can be the material world's *prima materia*. The ten circles in the already mentioned 1, 3, 7 system, together with the material world circle, and thus symbolically with pi, refers to the Leviathan's geometric character. The alchemistic conception of the *prima materia*, with macrocosmic and microcosmic interpretations, could mean that the circle symbolises the atom as much as it symbolises the spatial position and motion of the stars. This latter is evidenced by the fact the Hebrew name for the Leviathan can mean (for the mystic interpreter – לוֹ יִתֵּן) that he will give the 36, the 36 decans, just men who rise over the ten days, one by one. The three faces of the 12 zodiac, the 12 months, the 360 days and the year itself, namely in astronomical sense the space-time construction, can be brought into close relationship with the Leviathan. Thus, the Leviathan doubly contains the four ontological layers, since it carries within itself the intellectual and spiritual essence of humanity, while also carrying those creatures with soul from the animal world. In addition to this, it can be referred to as the material world and the transcendent background of all three ontological layers. At the same time, as a soaring winged bird flying in the air, the Leviathan is also a spiritual being. As an aquatic and land creature, it carries within itself spiritual and material substance. As a snake, the Leviathan can be comprehended as the personification of the transcendent world, as the allegorical pre-figuring of the Christian alchemical Mercurius.

Thus, we return to the number 137. The Leviathan contains within the 10, as 1, 3, and 7, just as Christ's genealogy contains the number 137; and the capture of the Leviathan is the physical cosmos, and the knowing and know-ability of its most important number, 137. At the same time, this goes together with knowing and know-ability of the universal spiritual world, the number of which – as the number of Christ's incarnation – is also the number 137.

On the enamel picture of Constantine, the 36 (LV-לו) hearts, the 50 (N-נ) white pearls, and, on the epaulet's edge, the letter T (ת) of the Labarum along with its  $8+2=10$  (I-י) decorative elements give – if we interpret the numbers as Hebrew letters – the word Leviathan in Hebrew (LVITN - לוֹיִתָּן). The 50 white pearls on the ornamental edge show a drawing of an anchor in reverse view. The Latin word for hook, *uncus*, in literary style can also mean anchor. Thus the hook-anchor and the hidden name, Leviathan, together symbolically represent the capture of the Leviathan, the conquering of death and the redemption (Fig. 5). In relation to Constantine I the Great, this refers to the concept of Roma Libera, while in the case of Constantine VII Porphyrogenite “the Purple-born”, it can be identified as the conversion of the “Magyar” people to Christianity (with the concept of Pannonia-Roma-Libera).



## 6 A Detailed Description and Interpretation of the Constantine Picture

As we have already analysed, the picture of Constantine can be seen as the form of King Solomon with the face of an angel. He is at the same time the symbol of the Lord, to whom peace belongs. His church is, naturally, the Sophia, the heavenly elevated Virgin Mary, the house of Wisdom, as we can see on the Pala d'Oro, and as we can similarly see on the mosaic picture of the Sophia's apse in Kiev. On the picture, next to the hidden Hebrew name of the Leviathan (as has already been discussed), there is the anchor, and the cross can be seen together with the 36 heart-shaped ornaments of Constantine's mantle. Thus, because the church of Sophia is attached to Solomon, the cross, the anchor and the heart, and the three attributes of Sophia (faith, hope, love), represent a very clear allusion to the Saint Sophia Church of the Christian Rome, linked with Constantine the Great. The identity preserved in the tradition of Constantine the Great and Solomon is also shown by the fact that Emperor Justinian, after having completed the reconstruction of Hagia Sophia, exclaimed, "Solomon (and of course Constantine), I have surpassed you!". On the Holy Crown, the holy depiction of the four contemporary Diocletian martyrs makes reference to Constantine the Great. Thus, as we have seen, Constantine VII "the Purple-born", as the seventh, along with the three Stephens, contains the system of 1,3 and 7 in the ten. According to a reconstruction undertaken in one of our previous works, the 10 pictures on the Greek section of the Holy Crown consist of 3 sections devoted to victory:

- 1 Mary with the two archangels, symbolising the incarnation and birth of the God-child. The Greek name of this section, Nikopoia, also contains the word victory.
- 2 Christ with the Roman Constantine ruler and with the king of the people of "Roma Pannonia", who are switching to Christianity (Pannonia-Roma Libera), which together represent a natural, victorious ensemble.
- 3 Between these two sections mentioned above, there are the four holy martyrs from the age of Diocletian, bringing forth through their sacrifice the Roma Libera, which here represents Constantine the Great's victorious section. The 10 is the basic symbol of the victory in Kabbalah because (according to this mythologem) in the Red Sea at the moment of victory God revealed the Ten Sephiroth for the people of Israel. It is of course the pre-image of the Christian Easter which can be considered the greatest victory.

Another interesting structural feature on the Holy Crown can be obtained from the letters of the  $8 + 8 = 16$  "persons" of the Greek and Latin Crowns, respectively. This composition is probably related, at least partly, to the "fact" that the combination of pairs from 16 equals to **136** and the number of the sum  $1+2+\dots+16$ , naturally, also equals to **136**.

Since the eight Latin names composed of 72 letters, taken together with the 65 letters of the names on the Greek crown, give us the number 137<sup>13, 14</sup>.

Perhaps, it is worth noting that the 36 hearts by themselves symbolise the *Lulav*, the frond of the date palm tree, which explains the 2x36+32 system of the Latin section of the Holy Crown<sup>15</sup>.

## 7 The 137 Genealogical System on the Enamel Picture of the Two Archangels and the Emperor

As can be seen on Fig. 7, on the edges of the shoulders and arms of Archangel Michael, on the edge there are 33 white, round, pearl-like decorations. On the emperor's mantle, the similar white pearl-like decorations, together with the central spots counted on the right side of the mantle, give us a sum of 41 items. On the left, on the shoulder and arms of Archangel Gabriel, the same 28 ornaments obviously symbolise the 28 names which follow David's in Matthew's Gospel account of the lineage of Christ. The number of the remaining decorations on the left side of the emperor's mantle is 34, which represents the 34 forefathers from Adam to David, according to the Gospel of Luke. The single large pearl at the

<sup>13</sup> In the Holy Crown of Hungary there are 137 letters of the names: 8 Greek and 8 Latin names on the enamel pictures of the Crown: **ΟΑΡΧ ΜΙΧ ΟΑΡΧ ΓΑΒΡΙΗΛ Ο ΓΕΩΡΓΙΟΣ Ο ΔΗΜΗΤΡΙΟΣ Ο ΚΟΣΜΑΣ Ο ΔΑΜΙΑΝΟΣ ΚΩΝ ΓΕΩΒΙΤΖΑΣ (65 letters). SCS PETRVS SCS IOhS SCS PAVLVS SCS IACOBVS SCS ANDREAS ARTHOLO (sic!) SCS PHILIPVS SCS THOMAS (72 letters) i.e. 137 letters.**

<sup>14</sup> The separate texts on the emperor and king pictures contain 30+20 complete letters, to which are added the 4 letters each of the Lord and of the God-parent. The three hidden letters, the hypothetical letter “éta” of the word “Métér” (Μητηρ), the letter “nú” of the word “Porphyrogennétos” (Πορφυρογεννητος) and the letter “T” of the cross (both from the Constantine image) form a letter-triad, which in Greek equals to the number-statement of 358. This in Hebrew is the number value of the words Messiah and snake. Concealed within the letter “T” and the word “born” on the Constantine picture, as well as being contained within “mother of God”, 358 very clearly refers to the birth of the Messiah. So this 137, 58, +3 system precisely matches the depiction system of the seven-column ornamental elements of the Hagia Sophia on the Pala d'Oro. The ornament system of the cupola, with the three edges or the crown, also leads to the number 137. Either of the two versions, 71+66 or 72+65 (GLGL ADVNI or GLGLV ADNI – גלגל אדוני גלגול אדני – גלגל אדוני גלגול אדני), means the reincarnation of the Lord.

<sup>15</sup> The decoration system of the upper part of Constantine's mantle (on image of Fig. 7), precisely shows the name David in Hebrew, of which the central letter “vav” (which means 6) shows the diagram equivalent of David's star. This is surrounded by the 36 hearts; and the number value of the word “heart” (32) clearly refers to the 32 paths of wisdom.

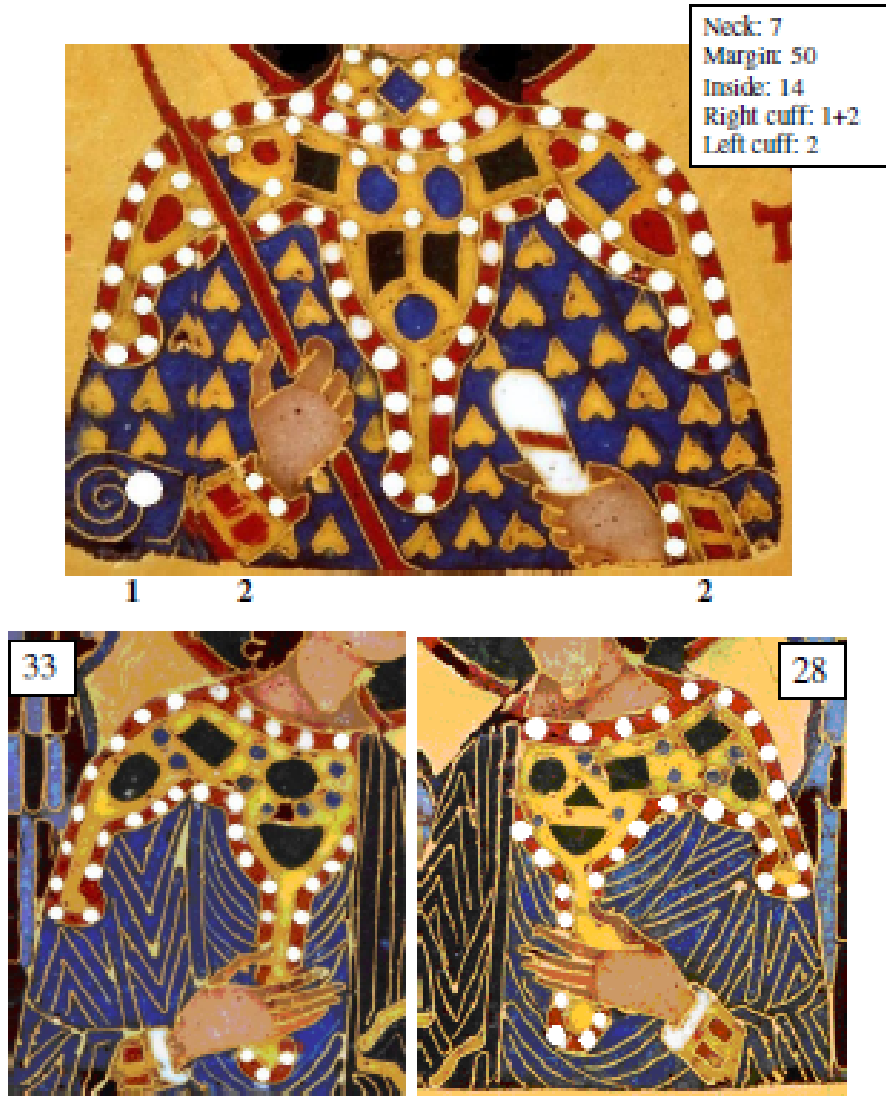
emperor's right spiral<sup>16</sup> elbow, which has already been mentioned, can also be linked to the 33 or 41 decorations – which is obviously based on conscious planning (see Fig. 7). Basically, we can see the same thing here. If we consider the pearl to be David and add to this the 33, then we can interpret the image in one way as representing the genealogy (34) from Adam to David. If, on the other hand, we take the white pearl as representing Christ, then in another interpretation, we have the white pearl plus 41, representing the 42 forefathers starting from Nathan after David and through Mary to Christ. Thus, in the ambivalent 137 or 138 system, on the right until Christ in a 34+42 division, we can interpret 76 people altogether in Christ's lineage. On the left, similarly in a 34+28 composition, counting Joseph and Christ represented in the Holy Spirit, we can identify 62 forefathers altogether. This system ends the conflict between the two accounts of the lineage of Christ, "realizing" or "satisfying" the dogma of the virgin birth of Christ from Mary. Thus the right side means (in mirror-symmetrical depiction) the corporeal and merciful side of the incarnation. And thus the corporeal, merciful and forgiving lineage forms a unit. This line from Adam to David may represent the bodily and merciful attributes of the ancestors. On the other side, the Holy Spirit, representing the spiritual aspects of the 62 forefathers, paired together with the Law, allows God to expand His impact through the Holy Spirit in pursuing His divine "plan of incarnation". In this sense, mercy prevails in the incarnation through the body of Mary, while the law is realised through the spirit of Joseph with the mediation of the Holy Spirit. So the merciful/corporeal process of incarnation and the spiritual law incarnation process from Adam to David divide into two after the messiah king, David. And from David, the incarnation comes through Solomon and through Nathan to Christ, which means the 137<sup>th</sup> number of the incarnation.

We would like to emphasise again that the multiple contradictions regarding the virgin birth conception and between the two genealogies are fully resolved in this interpretation; and this system leads to a consistent, complex receiving of the incarnation. And, as we have mentioned several times and as is well known, the number value of the Hebrew word, Kabbalah, the meaning of which is "receiving", is 137. Certainly, the same is true for the Hebrew word for "crucifixion" – *celibah* – that which ensured the redemption (CLIBH, 137=צליבה). We would like here to emphasise again that the system described above in all details matches that of the Hortus Deliciarum's capture of the Leviathan, with the help of the line of Christ's incarnation lineage. (see [36]) The same also applies to Constantine the Great, who with the symbolic capturing of the Leviathan, or in other words, the defeat of evil, set free the church. And the same returns as well on the 1000<sup>th</sup> anniversary of Christ's redemption (which is at the same time the "*Resurrectio Prima*" according to St. John's Revelations), at the coronation of the

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<sup>16</sup> It is an appropriate symbol here as the singular 137<sup>th</sup> for the snake Leviathan and the birth of the Messiah as well. (see Jung's comments on the dream 32 in [8])

new king, together with the capture of the Leviathan and the symbolic reincarnation of God.



$$7+50+14+5 = 76; 33+28 = 61; 76+61 = 137$$

Figure 7  
 Illustration for the 137 structures of the “white pearls” on the mantles of the archangels and the emperor

## 8 The 137 Structures on the Enamel Picture of Constantine and the two Archangels

### 8.1 A Short Summary of the Analysis to this Point

As we have seen, the 137 structure on the Holy Crown of the 72 white pearls and 64 red gems together with the leaning cross defines the base structure. Because this is located symmetrically on the two bands together with the centre, it can be denoted as a  $68+68+1$  structure. Looking in more detail,  $(36+32)+1+(36+32)=137$ . Adding the conjunctive unit (X) to the number 72 or the number 64, we get two variants:  $72+65=137$  or  $73+64=137$ . The former means the mercy of the Lord; that is, the Lord's 72-letter name, or the Lord's 72 structure. The latter, meanwhile, means the (Solomonic) judgement of wisdom ( $64+73 = 137 = \text{דין חכמה}$ ). (See Bahir § 64 [1].)

As we have already mentioned, the 72 Latin letters (of the eight apostles) and the 65 Greek letters (of the names of the 8 individuals on the Greek part of the crown) reinforce the base scheme  $72+65=137$ . The mentioned  $59+8+2+59+8$  system of ornamentation on the front upper part on the Greek crown, which separates the two parts of the centre, repeats the order of  $68+68 (+1) = 137$ .

If we look again at the edges of the shared system of mantles of Constantine and the archangels (priestly Ephod's edge-SNI - שני), the white pearls of the system, if we consider Constantine and the angels separately, also show the  $76+61=137$  system.

Let us consider the three pictures divided into left and right sides, with an even central ornament separation. In this case, we reach the  $72+64+1=137$  system, which matches the structure of the 72 white pearls and the 64 red gems of the Latin crown. The 72, the *Chesed* (חסד=72), the white colour of mercy, is here being replaced with the right side (with God's right arm), according to the well-known Midrashic tradition and the broad interpretation of the Kabbalah. The 64, the *Din* (דין=64), the red colour of strict judgement, is replaced with the left side (the left arm of God), according to the same tradition. At the single, individual white pearl at the emperor's elbow, as we mentioned, a spiral decoration can be found. If we count the pearls of the archangels (61) together with the neck items of the emperor's mantle (7) we may identify a  $68+1+68$  construction again. Counting Michael's  $32+1$  (individual) pearls separately from the "Emperor-Gabriel construction" we can identify a  $104 + 32 + 1 = 137$  structure, where the 104 is the number of the Hebrew word *kokavon* (כוכבון), which is the Asterisk (αστερισκος)! (A similar letter-number structure can be found in § 112 of Book Bahir.)

Let us consider for the sake of the completeness once again the left/right division of the white pearls of the "pontifical mantles" of Emperor Constantine and the

Archangels based on the dominance of the right side. In this case, we count the ornamental items in the centre as being on the right side. And in this case, therefore, we can count as being on the right side 75 white pearls, on the left 62. A more detailed partition, with the addition of the individual pearl, is 34+41 on the right side, 34+28 on the left side. This brings us to the two-pronged incarnation genealogy of Christ, one of which is the corporeal line up to Mary (34 from Adam to David, and 41 from David's son, Nathan, to Mary (Joseph). Adding the individual white pearl, we get either 34 from Adam to David or 42 after David's son Nathan to Jesus. On the left, with the addition up to Adam, we get the spiritual genealogy of 34 from Adam to David and 28 from David's son Solomon to Jesus Christ.

## 8.2 Additional 137 Structures

From this point forward, we will concentrate only on the complete system of decoration or ornamentation of the picture of Constantine. In addition to the white pearls, we will consider the pearl and "stone decoration" of the mantle, the labarum and the crown of the Emperor.

Here we focus separately on the decoration of the 36 golden hearts seen on the blue base of the mantle. As we have seen earlier, taking into consideration the double twin-like depiction order of the hearts, we interpret the 36 doubly, and in the same way we interpret the dual meaning of the Hebrew word for heart, which also means the value 32. By itself, then, this allows us a  $68+68 = (36+32) + (36+32)$  interpretation, which together with the imperial red-blue sign could lead to the 137 interpretation.

The additional decorations, aside from the 76-pearl decoration already mentioned, are complemented by the 31-white-pearl decoration of the crown of the Emperor together with the 8-white-pearl decoration of the labarum's letter *Tau* (T). Further, we find column-like gem decorations on the imperial mantle (14), on the cuffs ( $2+2=4$ ) on the crown ( $1+1=2$ ) and on the labarum (2). Thus, aside from the 76 white pearls, we can count together exactly another 61 ornamental items.

If we consider these separately, we get the  $76+61=137$  structure, in manner similar to the – already analysed – triple "archangel-emperor mantle-edge" system.

If we approach with a left-right division, with the central items paired equally with both sides, we also achieve the  $75+1+61=137$  construction. To be more precise, we can distinguish on the right side a  $34+42$  ( $34+41+1$ ) structure and on the left side a  $34+27$  structure, with right side dominance for the pearls of the mantle and a left side dominance for the remaining items (that is, with the central decorative elements counted on the right or on the left side). This structure is in mirror-symmetry with the triple system, that is, with the structural order which means God's incarnation.

If we consider the left-right division, mirror-symmetrically in accordance with the triple system, with left-side dominance (that is, with the central decorative elements counted on the left side), and with the distinction of the individual pearl at the imperial crown, then once again we achieve the  $72+1+64=137$  system. If we count the two individual pearls (at the elbow and the crown on the left side, we obtain the  $71+66=137$  construction which can be seen on the Pala d'oro (see above).

Thus, if we consider the mantle-system of the three pictures together or the decorative system of the Constantine picture alone, we can find  $3+3+1$  different versions of 137, a fact which in itself is reference to 7, or to Constantine VII, whose epithet was “Purple-born” independent of the original concept. From the analysis above, we can also establish a base case that, based on the three enamel pictures, we can find three 137 systems, the differentiation of which gives us seven variant interpretations.

On the pictures of the two archangels, the additional, as-of-yet unused decorative elements form a 32 system. This system is comprised of the central, red, circle-like ornament of the hair bands – looking from up to down – and the inner decorative elements of the mantles, which are supplemented by the decorative elements of the cuffs (two each) to equal 32. On Michael's mantle, we can see 8 blue circles and 4 column-like decorative elements. On Gabriel's mantle we can also identify 8 blue circles and 6 column-like elements. Thus, with Michael we get the  $8+2=10$  and the  $4+1=5$ , while with Gabriel we get the  $8+1=9$ . Synthesising these, with the numbers 9, 6, 2, 10 and 5 we get precisely the Hebrew name Tobias (טוביה), the numerical value of which is of course 32. If we consider that 137 is the number value of the Hebrew for wheel, *ofen*, which at the same time always means “crown”, as the wheel is the archetype for the crown, then we get a clear connection between the name Tobias and the crown. (The significance and various interpretations of this, along with the Biblical background and tradition, we have dealt with in detail in previous papers [32, 35].) It can explain the poetic, creatively deformed, name of St Stephen's father. Here the transformation of the usual written form of Geysa (in Latin) or Γειτζας (in Greek) into Γεωβιτζας is an anagrammatic allusion to the expression Ζη Τωβιας (where  $\eta = \epsilon + \gamma - 8=5+3$ ), i. e. “Live Tobias!” which is a sign of victory over death, i.e. capturing the great fish, the Leviathan. This name could be very important for the medieval author and interpreter because, beside being the hero who captures “Leviathan”, in Vulgate (Zach. 6, 10-14.) Tobias is a maker of the double – gold and silver (kingly and priestly) – crown as well (see still in [35]).

In addition to the decorative system containing 32 items discussed above, we can also consider as decorative items the 3 paired bands decorating the hair of the archangels, along with the circular red ornament in the middle band above the forehead. These bands, together with the red ornament, form a quite frequent (menorah-like)  $3+1+3=7$  decorative system. We can also take into consideration ripidon's (fan's) colour decorative item consisting of three elements (see Fig. 6).

Thus, in addition to the 32 Michael and Gabriel items discussed so far, we can also consider another 6+6+3+3 decorative elements. Since the number of the decorative elements of the imperial enamel painting is, as we have seen, 137+36 (36 gold hearts on the blue mantle background), or a total of 173, and since furthermore the decorative items of the two archangels is 61+32+18=111, then we can define a total of 284 decorative items altogether. The total number of 284 is definitely an allusion to the number value of the Hebrew word for crown, *atarah* (284=עטרה), which, as we have seen, always equals the number archetype 137 and the name Stephanus as well. Thus, the decorative system of the three enamel pictures refers to the royal crown. The Greek translation of the Hebrew word *atarah* is Στεφανος and the Latin translation is *Corona*.

To conclude this section, we point out that the construction of the system of symmetry of the decorative structure allows us to observe some isomorphic relationships. On the decorative edge of the *efod*-like shoulder epaulets of the emperor and the two archangels, we can count **111** white pearl decorations. (This in Hebrew is *Alef*, which can mean either “one” or “thousand”. In the Bahir, *Alef* is the Kether (כתר), i.e. the upper crown of the Creator, the first Sefhira. The number value of *Alef* -אלף is 111.) As we have seen, the number of the archangels’ total decorative elements is also 111. The number of decorative items of the edges of the *efod*/epaulets of just the archangels is altogether 61, while in the picture of the emperor, in addition to the 76 white pearl decorative elements on the mantle, we can find another 61 decorative elements. On the archangels’ mantles, not counting the elements on the edges, the number of decorative element is **26**. On the mantle of the emperor, again not counting the items on the edge, the number of decorative elements is also 26. Both of the previous **111** decorative systems take the 61+50 structure. The **111+26** (=137) i.e. *Alef* YHWH (137=אלף יהוה) could mean the Crown of the Lord and at the same time the Millennium of Lord, i.e. the Coronation in the year of “*Resurrectio Prima*”, thus 1032/33 according to the well-known medieval chronology based upon the Gospel of Luke. (See some further details concerning “111+26=137” in the Appendix, especially in the footnote 18.)

The 284 system, the 32 system which refers to Tobias and the 137 system are all similarly visible in the structure system of the chapter titles in the *Admonitions to Emeric* [35].

## 9 Comments on Methodology

The Pauli-type unconscious, creative background processes, together with the connected imaginative and synchronicity series, can be interpreted as Pauli’s Acausal Background Creative Intelligence, according to the approach of intelligence systems researchers. This intelligence entered the unconsciousness of



our “modern” age, according to Pauli, and the “undetached observer” can identify its “dynamics” only through the systematic hermeneutic interpretation of his dreams, visions, active imagination and synchronicity phenomena, applying the symbolical background languages. With the fine structure constant and in connection with its crown symbolism, this function of symbolic background languages, according to us, can be seen almost identically in the symbols and hermeneutical allegories of the Holy Crown of Hungary (discussed above) and in the events of the Jung-Pauli cooperation, as well as in their imaginative, reflective and psychic contents.

We judge as significant the 137 number archetype structural symbolism of the incarnation because, according to well-known Christian tradition, the incarnation is considered the second creation. (Jung often emphasizes the significance of this.) Similarly, Pauli, in the symbolic language of background physics, describes the duplication of the spectrum lines together with the number 137 belonging to them, while further describing the interpretation of the isotopes as a “process of incarnation” or a “process of creation”. As we saw in the introduction, MacGregor, together with other physicists, talks about the “physical” creative power of the alpha, that is the FSC. Thus, in the course of analysing the work of art, in this sense, the incarnation motifs also refer to the theological and physical symbolic background language, as we have shown in other studies, together with the psychological symbolic background language. The presence of the guiding and symbolic hermeneutical background language is obvious, both from the artwork’s aesthetic aspect and from its well-known governing (that is, guiding) aspect of the Holy Crown of Hungary as an allusion to the symbolic background control language.

Based on the above, we may suppose that these creative background processes can in part be identified on the basis of the partially observed output and the synchronistic processes. In the case of a system identification, in a broader sense, when searching for typical patterns and symmetrical structures in the dynamic structure of the background process, based on Jung’s concept of synchronicity, we can identify historically documentable events and works. Naturally, this latter hypothesis was also introduced by Jung.

In this case, the question arises whether the complex data lines appearing in the observer’s dreams and visions and their connected synchronistic series call to the observer’s mind the patterns and pictures of created works of art which had come into existence earlier in history, when these background processes were moving along the border of the conscious and the unconscious in their early, vigorous and unreflected or weakly reflected differentiation. Since the main observer and gauge for us is primarily Pauli, along with Jung, one of the main characters in the background processes leading to the fine structure constant is the concept of the incarnation. For Pauli, the incarnation is connected to the divine or messianic twins, and, at the same time, as we mentioned above, it “belongs to” the doubling

of the fine structure's lines and the isotope phenomenon. For Jung and Pauli, the *incarnatio continua* is always and at the same time the *creatio continua* too.

We consider now only two examples:

(1) In 1927 Jung knows nothing of the FSC or of Pauli, who was at this time in Hamburg as a professor of physics. However, his surely most famous and important Mandala (the "Window into Eternity") was composed in early 1927 on the basis of his also famous "Liverpool dream" related to the death of his "twin brother friend", Hermann Sigg (see in detail [37]). The structure of this mandala (see Fig. 8) is an ideal composition of the number archetype 137 and at the same time it is entirely isomorphic with the main structures of 137 on the Holy Crown of Hungary. It has a  $68+1+68$  and  $72+1+64$  structure, as well as 68, which can be composed by the sum of 36 and 32, etc. It is really a twin structure of 137 and a perfect manifestation of honour and memory for a loving twin brother relationship in the case of a suddenly deceased very close friend. Furthermore, this 137 mandala's structure corresponds to Eddington's later concept of " $128+8+1=137$ " as the "true expression" of the fine structure constant.

(2) Jung's mandala above can be compared with Pauli's "crowning dream image" visualized five years later. As we have shown in our papers in detail, Pauli's World Clock vision as a space-temporal mandala is a properly manifold complete representation of FSC and 137 as a number archetype of the Self. From the Pauli–Jung letters [17], it is clear that the Black Bird is supported by the female symbolic figure of *anima*, where the anima is adorned with the number '7'. In this way, the black bird (1), the rotating discs and ring (3), and the figure of the anima (7) altogether connect to the number '137'.

Furthermore, the temporal structure (rotation scale) itself is double 32, and the spatial structure is also evidently  $2 \times (32+4)$  (the four little men with pendulums – horizontal disc, and four cardinal positions of pointers – vertical disc), that altogether results in  $1+2 \times 32+2 \times 36=137$ .<sup>17</sup>

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<sup>17</sup> Pauli's dreams No. 39 and 51 from Jung's *Psychology and Alchemy*, naturally and evidently contained in the structure of the World Clock vision (four little men, four colours create an isomorphic map with the four eyes and four colours of the bear). Therefore, the three power-like rhythms with the four space-like quaternio (like a multiplicator) is naturally and evidently an isomorphic map of the  $4\pi^3 + \pi^2 + \pi = 137,036\dots$ . Consequently, the structure of the World Clock vision (together with dreams No. 39 and 51) is a perfect isomorphic structure of the above "abstract" formula of the fine-structure constant and its discussed isomorphic interpretations, if  $\pi \sim 4$  or  $\pi \sim 2$  (see the details in [8]).

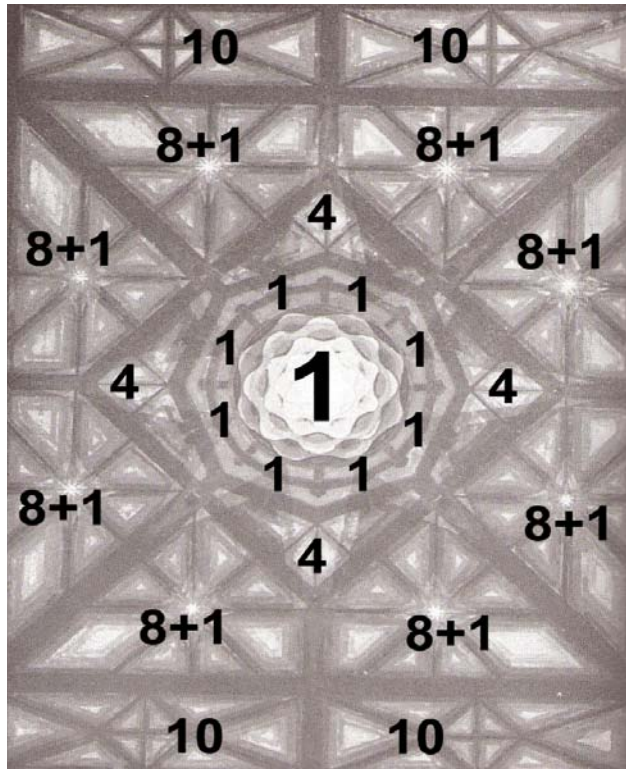


Figure 8

The „Liverpool Mandala of Jung from 1927 [10] illustrating the number of sections (quarters according to Jung)

Now, if we compare the structures of the “World Clock” and the Holy Crown as well as their number-systems we may recognize an almost complete isomorphy between them. The vertical two semicircles of the Latin crown can correspond to the vertical disc of the “Clock”. Similarly, the horizontal circle of the Greek crown can correspond to the horizontal disc and golden ring of the “World Clock”. The basic number structure is also the same, i.e.  $1+2\times 32+2\times 36=137$ .

Furthermore, the whole double system of the World Clock can be considered as a Crown of the Black Eagle, which is a symbol of the cosmic Anthropos and the King as well. In his book Jung interpreted and illustrated exactly this meaning of the “image” as a convincing synchronicity. (The fact that footnote number of this dream in the English edition is 137 is another synchronicity) Here, the twin Black Eagles as the temporal and eternal kings are bearing the double crown. So, both the first and the last dream image contain the archetypal twin crown linked strongly to the concept and number of FSC. The whole image of these symbols can be considered an almost perfect representation of the Holy Crown of Hungary

together with the hidden unconscious recognition of FSC in St Stephen's crowning achievement.



Figure 9

(a) The World Clock. An impression generated by W. Byer Brown based on accounts of Pauli's dream.

(b) The alchemical figure of the rising double or "twin" black eagle is hatched wearing the spiritual and temporal crowns as cosmic Anthropos and eternal King. Codex Palatinus Latinus (15<sup>th</sup> Cent.).

An illustration chosen by Jung for Pauli's "Great Vision" [8, 11]

MacGregor, bringing in the allegorical crown symbolism, connects the fine structure constant – along with other people – to the concept of *creatio continua* and *incarnatio continua*. Therefore, as regards the FSC's background processes, it is necessary to look for the living theurgical motif of the *incarnatio continua* and the *creatio secunda*, which truly existed in the royal theology and the concept of the ideal king in the 10<sup>th</sup> and 11<sup>th</sup> Centuries. [5, 35] Considering the perspective of synchronicity, it is worth noting as well the Latin expression for the fine structure, which through the words *subtilis* (*subtilitas*) and *structura* is strongly linked with medieval hermeneutics. Here it is valuable to consider a work with aesthetic characteristics that include equally the theological, philosophical, legal and artistic hermeneutics of that age.

In this case, the *Constans*, that is the *Constantinus*, of Saint Stephen's exceptionally fine-structured enamel pictures, standing in the centre of the culture of the number 137, together with the represented 137 structure-numbers, shows us the ancient concept of the fine structure constant hidden in the creative background processes. Here, the number 137 of the messianic incarnation connects, or rather appears, in an inseparable unit with the number 137 of the physical background's fine structure. What gives decisive momentum to this theory is the fact that the name of the person on the picture who represents the psychological, hermeneutical (*subtilitas*) and physical background of the symbolic theology is Constantine, who, as Christ's monarch, can be linked to the symbolic background language of systems and controls. The other side of the synchronicity is hidden in the proto-Kabbalistic meaning system of the picture, which is thus the

anticipation (pre-cognition, or *retro*-cognition according to our hypothesis above) of Sommerfeld's conceptualisation of FSC, which is, as is well-known, strongly affected by the Kabbalah.

It is also well-known that Jung identified psychological manifestations of the self (the *Selbst*) with the mandala, and para-psychological manifestations with synchronicity. In another of our articles, we demonstrate that the Jung-Pauli dreams and their own interpretations of these dreams represent an acausal background and control theory, or more universally, an Acausal Background Creative Intelligence, which is manifested in the mandala and in synchronicity [37]. Thus, instead of the para-psychological considerations, such as pre-cognition, retro-cognition, etc., we can also evaluate from a control theory aspect the series of manifested psychic contents and synchronicities. Based on the above, we were led to the conclusion that a hypothetical Acausal Background Creative Intelligence in the potential of the synchronicity series expresses itself as an acausal synchronistic control system together with its own 137 structure [54]. This at the same time matches the mandala dreams discussed as the psychological manifestations of the *Selbst* and the para-psychological and synchronistic manifestations of *Selbst* by the number 137, via its own (self) number archetype. According to our hypothesis and hopes, we can speak about some sort of similar "phenomenon" here, at least in the hermeneutical circle opened in our paper and now closed.

### **Conclusion**

In our discussions above, we have intended to show some crucial patterns of the archetypal concept of FSC and Number archetype constructions of 137-structures in the long-range synchronicities between the hermeneutical system of the Holy Crown of Hungary and the spontaneous dream images and their interpretations manifested from the unconscious in the course of the Pauli-Jung collaboration. Our entire endeavour focused on identifying some characteristic features of Pauli's creative Background Processes, reformulated as a hypothetical acausal background creative intelligence (ABC intelligence), which operates in the unconscious mind.

## Appendix 1

### The Schematic Enumeration and some Details of the 137 Structures on the Holy Crown

#### A1.1 The 7 Additional 137 Structures

- 1 The 72 white pearls and the 64 red gems with the slanting cross found on the Latin crown of the Holy Crown.
- 2 The 72 Latin letters of the names of 8 apostles on the Latin crown, together with the 65 letters of the names of the 8 people on the Greek crown.

**ΟΑΡΧ ΜΙΧ ΟΑΡΧ ΓΑΒΡΙΗΛ Ο ΓΕΩΡΓΙΟΣ Ο ΔΗΜΗΤΡΙΟΣ Ο ΚΟΣΜΑΣ  
ΔΑΜΙΑΝΟΣ ΚΩΝ ΓΕΩΒΙΤΖΑΣ (65 letters).**

**SCS PETRVS SCS IOH̄S SCS PAVLVS SCS IACOBVS SCS ANDREAS  
ARTHOLO SCS PHILIPVS SCS THOMAS (72 letters).**

- 3 The 59+59+8+8+2 decorative elements of the bands decoration, forming together with the cross a 137 structure.
- 4 The “leaning cross” equals the letter *Aleph*, containing God’s name (IVI=IHVH), thus representing both the number 26 and 111 (111+26=137). This representation and interpretation can be found in § 70 of Book Bahir on the basis of Micah 2, 13. Now let us see Kaplan’s comments on this part of Bahir which corresponds to Scholem’s interpretation of the “Alef equals to the Tetragrammaton YHVH”: “*As already discussed, Alef represents Keter-Crown (see 15, 17, 26, 117, 140)*” *The Alef also consists of a Yud on the upper right, a Yud on the lower left, and a diagonal line separating the two Yud’s (see Fig. 10)*



Figure 10

The name of God as YHVH (IVI) and Alef as well as the schema of X as old Hebrew Tav and Christ’s monogram (after Kaplan [1])

(The upper Yud represents the second and third Sefhira while the Yud on the lower left represents the Kingdom i.e. the tenth Sefhira.) *The line has the shape of a Vav, which represents the six intervening Sefirot. The two Yuds each have a numerical value of ten, while the Vav has a value of six. Therefore the two Yuds and the Vav have a total numerical value of twenty –six, which is also the numerical value of the Tetragrammaton YHVH. The verse (Micah 2, 13), “YHVH at their head (Alef),” is therefore introduced.” [1]*

As we have seen Alef+YHVH= 111+26=137. But the Aleph means as a word the number 1000 in Hebrew. This kind of Aleph equals to X which is at the same time the old Hebrew TAV, i.e. the sign of redemption. Naturally it can mean Christ's monogram and in Latin it may mean the number ten (which is valid for the kingdom and the Sephiroth as well) and in Greek the number thousand, respectively. Thus, together with the 32 decorative entities on the upper picture of Pantocrator, it is a strong allusion to the intended (coronation) year of 1032/33 (Resurrectio Prima) as well.<sup>18</sup>

- 5 The picture of the apostle James, on the right and left side, showing a naturally interpretable number system consisting of 68+68 decorative elements. The symbolism of the apostle looking upwards to the cross, together with the cross, indicates the 137 structure.

<sup>18</sup> The cited original Hebrew verse of Micah 2.13, in the hermeneutical context of Bahir, can afford a good opportunity for a mystical interpretation of the coronation of a King together with the symbolic “137” incarnation of the Lord into Him (according to idea found in [5]):

**עלה הפרץ לפניהם פרצו ויעברו שער ויצאו בו ויעבר מלכם לפניהם ויהיה בראשם**

Namely, the Hebrew noun and verb peretz (to break breaker – פרץ פרצו) naturally can be understood as the name of Pharez (פרץ), son of Tamar and Judah. From another point of view, the Hebrew word עבר in the verse has a connotation of a kind of reincarnation or overshadowing of the Righteous, as “ibbur” in the (later) Kabbalah. The יהיה בראשם (which, as we have seen, leads us to the conclusion of 137 = אלף יהיה) can be understood partly as a coronation by the Alef=Kether, partly as an incarnation of the Lord into the Head (i.e. the King) of his people (the Lord-YHVH- is in their King or in their Head). Furthermore, according to the § 70 in Bahir the Alef is not only the Kether but the Holy Palace (shrine) and number 1000 as well. The essence of the allegorical pattern is the personification of the denary Sephirotic system by the first ten princeps of the tribe of Judah. The first “sephira” is naturally Pharez (son of Judah) the “Breaker through”, the Pioneer, while the tenth is David completing the joint work of his (9) forefathers with the foundation of the “eternal” Kingdom. The transfer through the Gate may correspond to the entry into the (Sophia's) Apse of the Coronation. In this case the mystical interpretation of Micah 2.13 in the context of Bahir, is as follows: “Pharez (who breaks through) will go up before them, His (God's) Pharez and they pass the gate. Inside they satisfy their duty (the coronation ceremony – here we used another meaning of the verb יצא). He (Pharez) overshadows their King who is before them. The Lord is in their Head (=King) by the Crown of the Lord in the 1000<sup>th</sup> year of the Lord's redemption”. Naturally, it means the incarnation through 137. Prophet Micah has a distinguished place on St Stephen's Casula (or mantle) above the King himself as Sephanvs Rex.

- 6 The enamel picture of the apostle Peter also indicates a similar system, consisting of  $68+68$  decorative elements.
- 7 On the picture of the apostle Andrew, we can clearly identify a  $72+1+64=137$  structure.

### **A1.2 A Detailed Review of the 137 System of Decoration of the Bands of the Greek Crown as well as on the Pictures of James, Peter and Andrew of the Latin Crown**

1 **A detailed description of the decoration of the bands.** On the left and right sides of the front of the Greek crown, we can observe a symmetrical system of triangle and arch-shaped decorations, 4 each. The frames of the two triangles and two arched decorations, together with the gems found on their tops, we can consider as  $2 \times (4+4)$  elements. The frame of the picture of Christ in the middle with gems on its top we can also consider as  $1+1$  elements. The Lord, himself, or the letter X of his name means the centre. From the front, the outermost arched decoration on each side contains 14 elements. On the next 3 decorations on the bands, moving forward, we can count 7 elements. On the following, larger arch-shaped decoration we can count 23 decorative elements on both sides. The triangular decorations surrounding the Christ show 15 elements. Thus, the entire system gives  $(14+7+23+15+4+4+1) + XP(1) + (1+4+4+15+23+7+14) = 68+1+68 = 137$  decorative elements. We can see that inside the parenthesis we can apply the  $14+7+15=36$  synthesis, while the number of the remaining elements is  $23+4+4+1=32$ . Thus, the structural system can be described, according to the system of the white pearls and red gems on the Latin crown, by the  $72+1+64=137$  structure.

2 **The enamel picture of James.** On the enamel picture of James, we can find at the top 4 white quaternion decorations, on the right side 4 and on the left side 5. Thus, their total number is 16, or 20. The number of red decorative elements on the apostolic image is  $3 \times 6=18$ , on the right and left sides equally. The number of the white decorative dividing elements are 20 each. The number of the additional elements on the upper part on the right side is  $6+3$ , and on the left side  $4+3$ . On the right the “tree”, likely referring to James’s staff, contains 3 decorative elements. On the left side, we can find a decorative element in the middle, a rhombus-shaped decoration above and a circle-shaped one on the lower left part of the mantle. Thus, we get a system consisting of  $68+68$  elements in total.



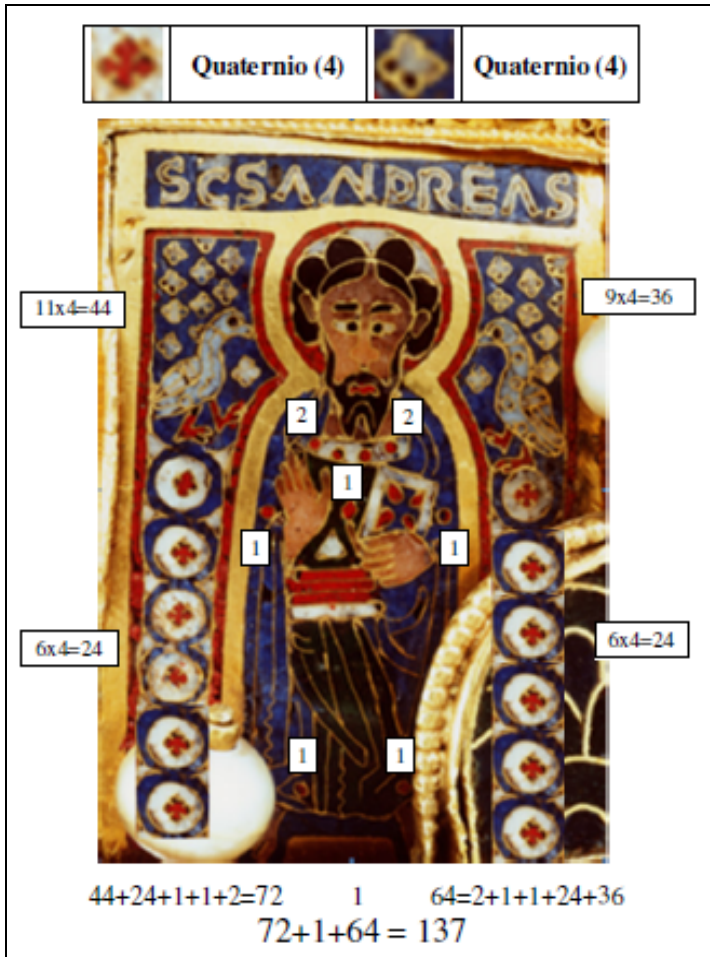


Figure 11

The illustration of the 137 structure on the reconstructed enamel picture of Andrew of the Latin crown

3 **The enamel picture of Peter.** Here uppermost we can find 12 quaternion decorations on the right side, while on the left we can find 11. Thus, the number of decorative elements is 48, or 44. The number of the square and circle-shaped red decorative elements is 12 each. The number of the decorative elements under the quaternions on the right side is 6, while on the left side it is 9. The number of elements on the body on the right side, counting the double centre on the right, is 2, while on the left side the number is 3) taking into consideration the flame of the candle). Thus, we can observe 68 elements each on the left and right sides.

4 **The enamel picture of Andrew** (see Fig. 11). Above we can find on the right side 11 white quaternions, on the left side 9. Thus, the number of all the elements

here considered is 44 or 36. On each of the right and left sides of the apostle there are 6 red quaternions. (The total sum of them is  $24+24$ ) On each of the right and left sides we can also find 4 red circle-shaped ornaments, two on each side of the neck, and one at each hand and foot. The same sort of gem-like ornament can be found in the centre, to which the index finger of the apostle's left hand is drifting. Thus, we can determine on the right side in total 72 elements, on the left side 64 ( $44+24+4=72$  and  $36+24+4=64$ ). And so we determine again a  $72+1+64=137$  system, according to decoration system of the white pearls and red gems on the Latin crown.<sup>19</sup>

**The picture of Emperor Constantine**, as we have demonstrated, on its own and together with the two archangels also includes in *seven* separate variants the several meaningful *137 structures*.

## Appendix 2

### The Structures of 137 on the Coronation Mantle (Casula) and the Royal Sceptre

#### A2.1 The Royal Priestly Casula (The Coronation Mantle)

- 1 The four mandorla showing the letter *Tau* from behind contain 137 letters in total in a  $72+65$  division.

EMICAT IN CELO SANCTAE GENITRICIS IMAGO / DAT SVMMO REGI  
FAMVLATVM CONCIO CELI (65) HOSTIBVS EN XPISTVS PROSTRATIS  
EMICAT ALT X / SESSIO REGNANTEM NOTAS ET XPM DOMINANTEM (72)

- 2 The circular inscription contains on the right side 72 characters, on the left 64, together with the central image of the cross (or the interpretation of the double ® giving the usual 137 structure.

®EGINA HOC CASVLA OPERATA ~ ET DATA ECCLESIAE SANCTAE  
MARIAE SITAE IN CIVITATE ALBA : (72 characters)

ANNO INCARNACIONIS XPI : M : XXXI : INDICIONE XIII : A STEPHANO  
REGE ET GISLA (64 characters) ®

<sup>19</sup> Taking into account the tradition that Saint Andrew was the chief priest and apostle of Scythia, the Latin-Greek symmetry is a hint to the union of the western and eastern Dardanian Royal Houses using the number archetype of 137 as “Coding Archetype.” (see [32, 35])

- 3 The Coronation Mantle, or to be more precise, the entire shape system of the conical *casula* displays 68 shapes each, apart from the centre. In the centre, the four phases of the Salvation story are visible (incarnation & birth, crucifixion & resurrection, Christ's triumph over his enemies, and the ruling Christ at his throne), which forms a unit in Christ. Thus, again we get to the  $68+1+68=137$  structure. (see Fig. 12)

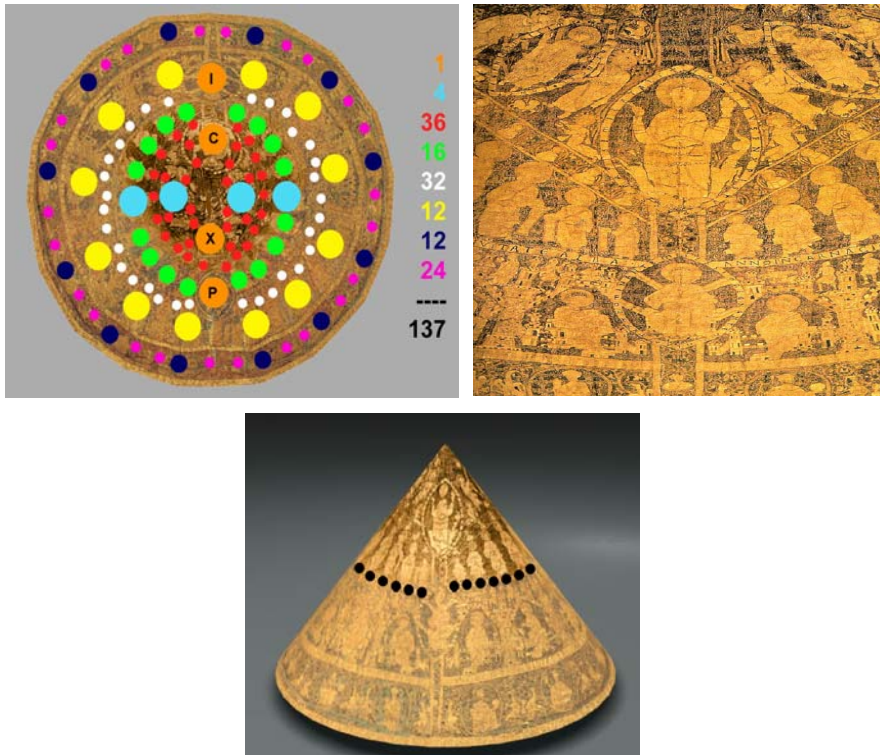


Figure 12

- (a) The illustration of the 137 structure of the Shapes on the reconstructed Casula of St. Stephen of Hungary (b) The four mandorlas with 137 letters (c) The place of the round inscription with the 137 characters on the reconstructed Casula

In the given mystical tradition, discussed above, these 137 structures can ensure the Incarnation of Christ in the Crown Prince by the theurgical procedure using the Holy Crown, the (Holy) Casula and the Royal Sceptre.<sup>20</sup>

<sup>20</sup> St. Stephen of Hungary, as can be traced in his reliquies (and according to his "Vita" in Latin) was a master of the languages, symmetries and symbolical mathematics similarly to Pauli and Jung.

## A2.2 The Royal Sceptre

According to § 4 of Appendix 1.1 in the **Royal Sceptre** (see Fig. 13 [28]) we can identify the same pattern of YVY=YHVH=Alef=Kether-Crown (יִי = אֵלֶף=יְהוָה = כֶּתֶר) which as we have seen above contains the number archetype **137** as well. Namely we can see two denary (10) structures which are connected a structure consisting of six (6) decorative entities (see Fig. 10). This structure as a unit embraces three Lion pictures which can represent the three attributes of Christ and David as the Lion of Judah.



Figure 13

The Royal Sceptre [28] with the structure of  $10+6+10$  ( $137=$  יִי אֵלֶף)

The whole symbolism through the “Alef YHVH” as Crown of the Lord represents the three crowns of the Messiah (royal, priestly and prophetic or Torah) according to the § 152 of the Book Bahir (ג כתרִים יִשְׂרָאֵל). In this case, the meaning of 137 is the incarnation of Christ and David in the Crown Prince through his three attributes or crowns reinforcing this act by the power of the (Holy) Royal Sceptre too.

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