

248 IN NATURE AND IN MAN – PART 2

from Harav Yitzchak Ginsburgh

248 and Matter

Let us begin by saying a word about the substance of particles. We know that in physics particles can be either matter particles (that have half spin) or force particles (that have whole spin), but, more abstractly everything is a form of some substance. This is true even though particles are not things. An electron is not a thing, as the famous physicist Dirac was fond of saying. Even matter particles are not what we are used to calling matter. Certainly, force particles, which are messenger particles, are also not “things,” in the usual sense. Virtual particles are even further removed from being what we consider substance. But, more generally, everything is some form of abstract matter—since they are clearly not nothing. In this sense, all particles are a form of substance.

One of the simplest and most straightforward *gematrias* of 248, which relates it with reality and the substance in reality, the substance of particles, is **חֶמֶר**, which means “substance,” or “matter,” in Hebrew. This is a very simple 3-letter word. In fact, it is the simplest word that equals 248. This suggests that there is something essential within matter relating it to this number: 248.

Grammatically, this word **חֶמֶר** is very unique. To understand its uniqueness we have to first know that Hebrew is a very structured language; probably the most structured of all languages.¹ It is based on three-letter roots out of which verbs and nouns are constructed. Since there are three letters in each root, there are six possible permutations, or in the language of the Book of Formation: “3 stones [letters] build 6 houses [roots].”² But, not all of the possible permutations are words or roots. There are only 7 examples of three letters where all the six permutations are actual roots or words in the Bible. The most important is **חֶמֶר**. Clearly then all six permutations relate to this basic abstract sense of matter or substance.

We are not going to look at all six permutations of **חֶמֶר**. Instead, will focus focus on one of these **רְחֵם**, which literally means “womb.” This permutation is also the root origin of the word **רַחֲמִים**, which means “compassion,” or “mercy.” Compassion is the inner property of the *sefirah* of beauty (*tiferet*, in Hebrew). In the *Zohar*,³ the *sefirah* of beauty is referred to as “the body of creation” (**תַּבְּאֵרֶת – גּוּפָא**) in the sense that beauty is the all



In our first article on the number 248, we talked in length about its connection with loving-kindness (חֶסֶד), an attribute of the heart that is very close and related to compassion. Actually, loving-kindness and compassion complement one another.

As we saw, loving-kindness is the attribute of our first patriarch, Abraham, whose name in Hebrew (אַבְרָהָם) equals 248. For each of the emotive *sefirot* from loving-kindness through kingdom there is a corresponding archetypal soul that embodied the qualities of that *sefirah*. The full correspondence is as follows (we have noted both the name of the *sefirah* and its inner experience or motivation):

might (גבורה)	loving-kindness (חסד)
awe (יראה)	love (אהבה)
Isaac	Abraham
	beauty (תפארת)
	compassion (רחמים)
	Jacob
acknowledgment (הוד)	victory (ניצח)
sincerity (תמימות)	confidence (בטחון)
Aaron	Moshe
	foundation (יסוד)
	fulfillment (אמת)
	Joseph
	kingdom (מלכות)
	lowliness (שפלות)
	David

As we can see, compassion is the special property our third patriarch, Jacob. The special connection between loving-kindness and beauty is described in the verse: “Jacob, who redeemed Abraham.”⁴ As explained in the *Tanya*, the meaning of this verse is that to arouse loving-kindness and love (the attribute of Abraham), especially when for some external reason it has been concealed and lost, one needs to convey compassion (the attribute of Jacob).

Practically speaking, if there is a soul who is lost in darkness, whether it be an inability to love God, love others, or even love itself, it is difficult to get through to it through acts of loving-kindness. Instead, compassion and mercy should be the focus. These will arouse the dormant love and loving-kindness in that soul. In other words, compassion (Jacob) redeems, that is, reveals love (Abraham). In any event, the two are very close in meaning and therefore related to one another.

So, we have an image of womb, which is the first stage of creation, from which all of creation originates. Through compassion, which is a means of expressing loving-kindness, all of our 248 components of primordial matter, **חֵמֶר**, are created.

Permutation Theory

Let us take another moment to more deeply understand how compassion is related to a womb. In Kabbalah, we have a topic known as the secrets of permutation,⁵ or permutation theory. The goal of Kabbalistic permutation theory is to correctly correspond any three elements, let us call them a, b, and c, with the six emotive *sefirot*, from loving-kindness to foundation.

Given 3 distinct elements, a, b, and c, clearly, there are six possible permutations: abc, acb, bac, bca, cab, cba. Using a very basic mathematical transformation rule,⁶ these six permutations correspond to the six attributes of the heart in the following manner:

might		loving-kindness
bca		abc
	beauty	
	cab	
acknowledgment		victory
bac		acb
	foundation	
	cba	

This is the bare-bones correspondence and is very straightforward. However, now let us note that the given any three terms, their identification as a, b, and c is not arbitrary. Rather, Kabbalistic permutation theory requires that the three terms correctly correspond to the three intellectual *sefirot*: wisdom (a), understanding (b), and knowledge (c).

Correctly identifying which of the three terms corresponds to which of the intellectual *sefirot* is the crux of the issue and requires that one have a great deal of experience with this topic (i.e., having studied how this is done for many 3-letter roots) and a great deal of Kabbalistic intuition (something that obviously cannot be taught).

Now, let us rewrite the above correspondence using more traditional Kabbalistic notation. For a, b, and c we use the three unique letters of God's essential Name,



Now, let us return to our 3-letter root, חמר. How do we go about permuting it correctly? In this particular case, the shortest method is by noting that we have already clearly identified the permutation רחם (meaning, “womb,” as above) with the inner experience of the *sefirah* of beauty.⁷ Given this identification, it is merely a technical exercise to reconstruct the full permutation model of the root חמר:



Accordingly, חמר, or “primordial matter” is the permutation that corresponds to loving-kindness. Now, we can see how each of the three root letters corresponds with the three intellectual sefirot: wisdom, understanding, and knowledge. As we shall see, in this particular case, all three intellectual sefirot will, in context, be the intellectual sefirot of the partzuf of wisdom.

The letter ח (chet), corresponds to the *sefirah* of wisdom. Indeed, ח is the first letter of חכמה, the Hebrew word for “wisdom.”

The letter מ (mem) literally means “water” in Hebrew. Whereas wisdom is likened to a flash of insight, like an almost impossible to catch lightning bolt, understanding is likened to waters—indicating that the sudden insight has jelled, as it were, into a perceptible substance—water.

Finally, the letter ר (reish) literally means “head.” In Hebrew, the word “head” also means a “mind-set” or “head-space.” After understanding jells wisdom into a useful form, knowledge takes the understanding and converts it into a mind-set, or element of our consciousness.

Now, this particular 3-letter root, חמר, is especially related to the sefirah of wisdom. First, because as mentioned earlier, the numerical value of Abraham’s name is the same as חמר, 248. Since Abraham is the archetypal soul of loving-kindness, wisdom, which is above loving-kindness, is also known as “the God of Abraham.”⁸

But, the link between wisdom and חמר, meaning “primordial matter” is even stronger because the entire creation of our universe begins with wisdom. As the verse notes: “You have created all with wisdom.”⁹ All of primordial matter emanates from God’s wisdom.

The essential quality of water is that it flows from a high place to a low place. This quality is why wisdom is compared to water, for wisdom too (particularly God’s wisdom—the Torah) descends from a high place to a low place and does not change in the process.

Finally, the letter ך, which we said means head is alluded to in the very first word of the Torah, בראשית (“In the beginning”), which literally means “with the head.” The various translations of the Torah into Aramaic translate this word as “With wisdom,” indicting that wisdom is indeed a “head.”

Interestingly, חמר is the root of the word for “donkey.” We know that the prophet pictures the Mashiach coming on a donkey. The way this was always explained even before the revelation of Kabbalah, is that the donkey symbolizes the matter in the universe. The image of the Mashiach riding a donkey symbolizes that the Mashiach has a complete understanding and control of all physical matter in the universe. In other words, the Mashiach will have to be a great physicist. What we are adding now, is that the image of the donkey itself alludes to the (possible) 248 particles in creation.

248 and the Letter Yud

In our previous article on 248, we explained a simple mathematical function how from 2 numbers, 2 and 10 we can derive 248

$$F[a,b] = a^2 + b^2 + (a + b)^2$$

Now we are going to introduce another function that will produce the number 248 in another manner. The function we will look at is:

$$F'[a,b,c] = a(b + c) + b(a + c) + c(a + b)$$

As we can see, this function F' takes three integers: a , b , and c . The numbers that we will substitute for a , b , and c all have to do with the process of creation, as described in Kabbalah. More specifically, they relate to what in Kabbalah is considered the initial or essential point of matter. Again, by “matter” we are referring to the very rawest material that is not yet actual physical matter, as we know it, and perhaps not even affecting what we call physical matter.

Of the 22 letters of the Hebrew alphabet, the letter that symbolizes the very beginning of everything is the letter *yud* (י) which is drawn like a point. It represents the seminal, initial point of something that is about to be born. The letter *yud* thus represents the beginning of all reality.¹⁰

Every letter in the Hebrew language has a name. In Kabbalah, when the name of the letter is spelled out, it is called that letter’s “filling.”¹¹ A full listing of the Hebrew letters and their fillings can be found in the glossary under “Hebrew Alphabet.”¹² Every such

filling comprises the root letter, called the mother letter; the additional letters that go into its name, or filling are, to extend the metaphor, considered born out of the mother. In other words, when the letter appears by itself, the additional letters of its name are described metaphorically as pregnant within it.

This is not the case with most other languages. In English, for example, the names of the letters A, B, C, etc., cannot be written out. Thus, the names do not really contain any additional letters. Instead, the names are just insignificant vowel sounds that are sometimes not even related to the sound associated with the letter (for example: H, which in English is called an “aich,” in French, an “ash,” etc.).

The name of the 10th Hebrew letter (י) is *yud*. When its name is written in Hebrew, it becomes: יוד, the letter *yud* (י) with an additional *vav* (ו) and *dalet* (ד). The word “*yud*” in Hebrew is very similar to the word for “hand” (“*yad*”). The letter *yud* is the first letter of God’s essential Name, *Havayah* (יהוה), wherein it indicates a seminal point of creation; for this reason, the *yud* in Kabbalah is symbolic of a primordial hand, like the hand with which God created the world. But, the word “*yud*” also has an additional *vav* in it, which can be likened to an extended arm, which is then attached to the palm of the hand. In Kabbalah, it is explained that the three letters of the name “*yud*” denote three stages of development.

In his commentary on *Sefer Yetzirah* (The Book of Formation), the Gaon of Vilna (the *Gra*) writes:

In every square solid [meaning, a cube] there are 6 planes, 12 pillars—the 12 diagonal borders—and 8 points between the pillars. These three aspects [of the solid] correspond to the three letters of the letter *yud* [when written out], יוד [meaning, that points are represented by the form of the letter י, pillars (i.e., lines) are represented by the form of the letter ו, and planes are represented by the form of the letter ד]. And the entire Name is based on these three letters [the first three letters of God’s essential Name, יהוה, *Havayah*, are based on the י, the ו, and the ד]. And the full value of the Name is 26. When we add the material of the solid itself, which contains them all and is represented by the fourth letter of *Havayah* [i.e., the final ה], then we have that the entire value becomes 27, like the number of letters in the alphabet [including final letters], and the value of the Name *Havayah* with an additional one for the tip of the *yud*, as explained in *Sefer Yetzirah*.

In other words, the form of the three letters *yud vav dalet* (יוד) that spell the name “*yud*,” correspond to the first three spatial dimensions: a point (the *yud*), a line (the *vav*), and a plane (the *dalet*). In Kabbalah,¹³ the point, line, and plane represent the most basic maturation and developmental process.¹⁴

So not only does the form of the letter *yud* (and its “mother” letter—i.e., the first letter in its name) denote the seminal point of the beginning of creation, but when the full name is written (i.e., the two letters pregnant within the *yud* are revealed), with its additional letters, the *yud* represents the evolution of multi-dimensionality.

Furthermore, the numerical value of the two additional letters *vav* and *dalet* (וּ), that are pregnant within the yud, is equal to the numerical value of yud (י); both are equal to 10. This means that a filled *yud* is like two *yud*'s.¹⁵

After this lengthy introduction about the significance of the letter *yud*, let us now take its three letters and plug them into the function introduced above:

$$F'[10,6,4] = 10(6 + 4) + 6(10 + 4) + 4(10 + 6) = 100 + 84 + 64 = 248$$

What this function is doing is multiplying each letter of *yud* with the sum of the two other letters. This function expresses a very high level of inter-inclusion within the letter *yud*. In the end, we see that from the initial point of all of reality, the letter *yud*, we get the number 248!

In the first article on 248, we took the three components that came out of our function F and used them to make a quadratic series.

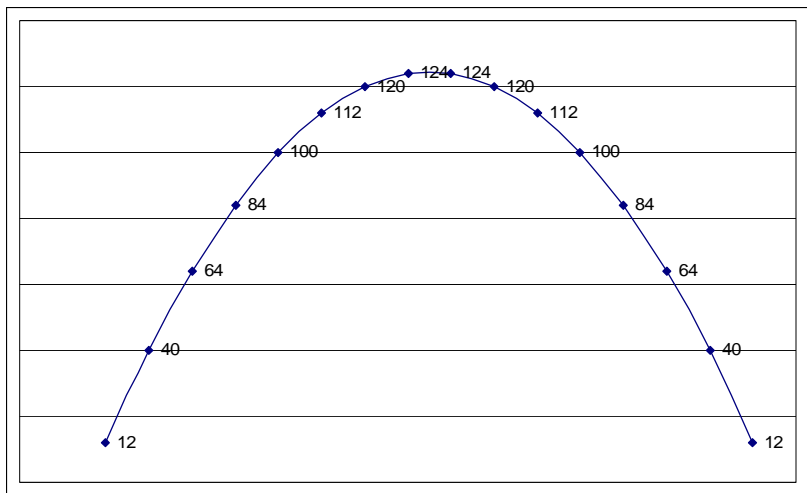
Now, let us do the same for the three components that come out of our new function (F'):

$$\begin{matrix} 64 & & 84 & & 100 \\ & 20 & & 16 & \\ & & -4 & & \end{matrix}$$

So the base of our new series is -4. Let us now extend this series backwards and forwards:

$$\begin{matrix} 12 & 40 & 64 & 84 & 100 & 112 & 120 & 124 & 124 & 120 & 112 & 100 & 84 & 64 & 40 & 12 \\ 28 & 24 & 20 & 16 & 12 & 8 & 4 & 0 & -4 & -8 & -12 & -16 & -20 & -24 & -28 \\ -4 & -4 & -4 & -4 & -4 & -4 & -4 & -4 & -4 & -4 & -4 & -4 & -4 & -4 & -4 \end{matrix}$$

What we have discovered is that this is a symmetric series, shaped like a parabola.



In Kabbalah, this type of symmetry—where there are two identical numbers around which the series repeats in both directions—is dubbed feminine symmetry. In this series, the pair of identical numbers that are at the zenith of the parabola are 124 and 124. There is no mathematical reason that forces this to be the case, but the sum of the symmetry pair—124 and 124—is itself 248, a beautiful example of mathematical self-reference.

In addition, the minimal positive value of the parabola is 12—the value of the word **כ**, which we used in our previous article to generate 248 using the function F .¹⁶ So this series summarizes much of the mathematical analysis we carried out in the first article.

Primordial Matter

The matter that we encounter in our everyday lives has form. We cannot really imagine what formless matter might look like (since it has no form). Still, the matter that the number 248 relates to is so primordial and abstract that it is exactly this type of formless matter.

Science too discusses formless matter today in the terminology of elementary particles, which are actually matter in a formless state. Among the many elementary particles, we find that there are both matter particles and virtual particles, indicating that indeed elementary particles are a precursor to the matter that we are familiar with in our lives.

In Hebrew, abstract matter (the first thing that was created from nothing) is called *chomer hiyuli* (חֶמֶר הַיּוּלִי), which literally means “ethereal matter.”¹⁷ The numerical value of the word *hiyuli* (הַיּוּלִי), which means ethereal, is 61, the same as the numerical value of the Hebrew word for “nothingness” (אִי). This further explicates that this initial matter is still in a totally formless state.

In Chassidut, the *hiyuli* matter is identified as existing in the World of Creation¹⁸—the first World (or state) in which there is the possibility of being.¹⁹ When Dirac said that an electron is not a thing, he meant that it is entirely without form; this is exactly what the sages are referring to when they speak of the *hiyuli* matter.

There is another term used to denote matter in a pristine state: *chomer gelem* (חֶמֶר גֶּלֶם), which literally means “raw material.”²⁰ As we will now see, *chomer gelem* is actually a context-based synonym for *hiyuli* matter. An example of raw material would be like clay, which the potter will take and soften by adding water and then be able to give it the form he likes by shaping it on his potter’s wheel. The sages use this metaphor to explain the formation of man.²¹

How is “raw material” different from the *hiyuli*? Chasidic teachings explain that difference is in context. First, the *hiyuli* is created in the World of Formation—where reality is still merely in potential²²—and therefore any potential reality that exists in the World of Creation will be made out of formless matter. Then, in the World of Formation—where reality is already actualized—the *hiyuli* is used as “raw material”—the precursor to matter as it exists in the World of Formation.

Let us now look at this word “raw” (גֶּלֶם), from a mathematical perspective. Its numerical value is 73, the same as that of “wisdom” (חֵכְמָה). The *yud* discussed in the previous section is often referred to as a *gelem* because it refers to the *sefirah* of wisdom. Another way to explain how the *yud* is related to the *gelem*, the raw material, is by imagining how a scribe writes with ink on parchment. First, he dips the quill in ink.²³ As he brings the quill to touch the parchment, the first point formed from the ink on his quill, is the point from which the letter will be formed. This point, or seminal drop, is always a *yud* and constitutes the “raw material” from which the letter is formed. Every time that the scribe starts writing a letter, he begins with a *yud* and of course, he ends with a *yud*. Similarly, when the two most essential Names of God, *Havayah* (יְהוָה) and *Adni* (אֲדֹנָי) are inter-woven, they form the complex name seen in any Kabbalistic or Sephardi *Sidur* whose first and last letters are *yud*. This is called “wisdom in the beginning, wisdom at the end.”²⁴

The image of the scribe is applicable to everything in reality. Everything in reality begins with a seminal point of raw material and in the end returns to a point of raw material. Numerically, when we multiply גֶּלֶם (meaning “raw”) by 2 we get 146, which is the value of “world,” or “reality” (עוֹלָם) indicating that indeed all of reality, as we experience it, is enclosed within two instances of raw material.

248, the Commandments, and Creation

No discussion of 248 is complete without looking at its relationship with 365, since the 613 commandments of the Torah divide into 248 prescriptive and 365 prohibitive commandments.

In the previous article on this subject, we explained that the most important Torah reference to 248 is the 248 positive or prescriptive commandments. As we noted, every commandment has two aspects to it: a motivational/intentional aspect and an active aspect (the performance of the commandment).²⁵ Multiplying 248 by 2, we get 496, which is the numerical value of “kingdom” (מְלֻכּוּת). 496 is also the triangle of 31, meaning the sum of integers from 1 to 31. The Torah also contains 365 prohibitive commandments. If we add the 365 prohibitive commandments to the 2 aspects of the positive commandment, we get altogether 861. 861 is also a triangular number: $861 = \Delta 41$. This means that 365 is the sum of integers from 32 to 41. 861 is also the numerical value of “the Holy Temple” (בֵּית הַמִּקְדָּשׁ), of “*Rosh Hashanah*” (רֹאשׁ הַשָּׁנָה), and more.

In Hebrew, the word for prescriptive (as in prescriptive commandments) is עֲשֵׂה. If we fill the letters of this word (like we did before for the letter *yud*), we will get: עֵין שֵׁן אֵה, whose numerical value is 496, or 2 times 248. This is a beautiful numerical restatement of the notion that every prescriptive commandment actually has two aspects to it. Furthermore, the word “prescriptive” stems from the word for “action” in Hebrew, the name of the lowest of the Four Worlds, the World of Action. Each of the Four Worlds

The number of prohibitive commandments, 365, is a product of the two prime numbers 5 and 73. 73, as we just saw is the value of “raw material” (גִּלְמִים) and the value of “wisdom” (חֵכְמָה). 73 is the 22nd prime number. This refers to the manner in which wisdom reflects the 22 letters of the Hebrew alphabet with which the world was created. In the Bible we find the verse: “You made everything with wisdom,”²⁶ while in Kabbalah we find that the world was created with the Hebrew letters.

When we break 248 into its prime factors, we find that $248 = 2 \cdot 2 \cdot 2 \cdot 31$.²⁷ There is an important mathematical tool in Kabbalah called finding the “foundation” or “base” (יסוד) of a number. The base of a number is defined as the sum of its prime factors.²⁸ So, the base of 248 is $2 + 2 + 2 + 31 = 37$ equal 37. Numerically, 37 is strongly related to 73 as 37 is the midpoint of 73, which we write in mathematical notation as:

$$37 \triangleleft 73$$

This also means that the product of 37 and 73 is the triangle of 73, or the triangle of “wisdom,” which is 2701. 2701 is the numerical value of the first verse of the Torah: בְּרֵאשִׁית בָּרָא אֱלֹהִים אֶת הַשָּׁמַיִם וְאֶת הָאָרֶץ.

In the second verse we read, “And the spirit of God was hovering above the waters” (וְרוּחַ אֱלֹהִים מְרַחֶפֶת עַל פְּנֵי הַמַּיִם). The numerical value of these words is 37².

The fourth verse of the Torah reads, “And God saw that the light was good; and God separated the light from the darkness” (וַיִּרְא אֱלֹהִים אֶת הָאוֹר כִּי טוֹב וַיַּבְדֵּל אֱלֹהִים בֵּין הָאוֹר (וּבֵין הַחֹשֶׁךְ)). Its numerical value is 1776, also a multiple of 37: $1776 = 37 \cdot 48$! There are a multitude of appearances of the number 37 in creation.

The prime factors of 365 are: 5 and 73, which means that its base is 78, or 3 times 26, the value of God’s essential Name, Havayah (יִהוּה).

Adding the bases of 248 and 365, we get $37 + 78 = 115$, or 5 times 23. 23 is the companion number of 37 in Kabbalah, a topic discussed in length elsewhere.²⁹

Torah, Faith, and Wisdom

How does 73 relate to 248? It is explained that unlike all of his righteous predecessors, Abraham began his service of God with simple faith, and it was from simple faith that he came to wisdom. In other words, whereas the righteous fathers of the world such as Adam, Noah, and Shem, the son of Noah, learnt the ways of God as Divine wisdom, Abraham began with an earnest and sincere faith in God.³⁰ His sincere faith was that God is truly here and that He can be found. Seeing his earnest faith in Him, the sages tell us that God gave Abraham wisdom that flowed out of his kidneys.³¹ From this we learn that the path of the Abraham’s descendants, the Jewish people, has always been to first believe earnestly in God (and follow His Torah) and then God opens the wellsprings of wisdom. The more a person searches for God, the more God reveals Himself to him.

Now, the numerical value of “faith” (אמונה) is 102. Then, his two kidneys were opened to him as wellsprings of wisdom. Adding one “wisdom” (חכמה), or 73, to “faith,” we get 175—Abraham’s lifespan. This denotes the first level of Divine wisdom that Abraham attained, which is referred to as the higher wisdom. Adding a second “wisdom,” meaning another 73, we get 248. The second level of wisdom refers to the lower wisdom, i.e., the wisdom of the natural world. That Abraham attained both means that he was able to reveal the Divine wisdom within natural wisdom, or, to use more modern terminology: to unite Torah with science.

So, we have that $248 = 102 + 2 \cdot 73$, or “faith” with 2 “wisdoms.” But, before we saw that 365 is equal to 5 times “wisdom.” What this means is that 613, the number of commandments in the Torah—the essence of God’s will—is equal to “faith” plus an additional 7 “wisdoms”:

$$613 = \text{אמונה} + 7 \cdot \text{חכמה}$$

The seven wisdoms that divide into 2 and 5 refer very clearly to the candles in the Temple *Menorah*. The order of lighting the 7 candles in the *Menorah* divides them into 5 and 2. The *Menorah* itself was made out of one chunk of pure gold. The word for “gold” in Hebrew is זהב, whose letters exhibit this same division of 7 into 5 and 2: the first letter, *zayin* (ז) is equal to 7, and the next two letters, *hei* (ה) and *bet* (ב) equal 5 and 2 respectively.

So, the essence of the Torah as the revelation of God’s will begins with “faith” to which are added seven wisdoms.

The ratio of 1 faith to 7 wisdoms is indicated in the word א, a very important word in the Torah. The first word of the Song of the Sea sung by Moses and the Jewish people is this word, from which we learn that it inspires the power of song in the soul. In fact, since the entire Torah is called a song,³² we see once more, from another perspective, that the Torah is inspired by this relation of 1 to 7.

The division of the 7 wisdoms into 2 and 5 and the ratio of 1 to 7 all in relation to faith are found together in a single verse that is part of the Song of Ha’azinu, the second great song of the Torah recited by Moses just before his passing. The verse reads: “God is a God of faith, he is righteous and he is straight”³³ (אֵל אֱמוּנָה וְאֵין עָלַי צְדִיק וְיֵשֶׁר הוּא). “Faith” (אמונה) is equal to 102. Beautifully, the adjective “righteous” (צדיק) is equal to 204, or 2 times 102 (“faith”) and the adjective “straight” (ישׁר) is equal to 510, or 5 times 102 (“faith”). So we have, 1 times 102, 2 times 102, and 5 times 102.

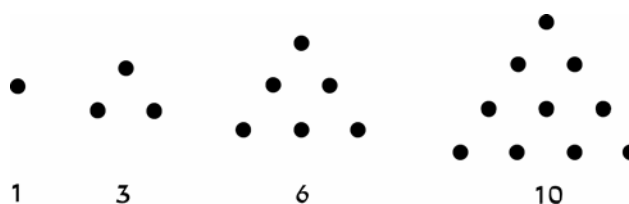
This was to give us a sense of how these two numbers, 248 and 365, relate to one another. In our analysis, we found that 365 is produced from 248. Nonetheless, it is important to know that in Kabbalah, it is usually the prohibitive commandments that are considered to correspond to the first two letters of God’s essential Name, *Havayah*, while the prescriptive commandments correspond to the final two letters—giving the impression that 365 is higher than 248. The explanation for this is that all of the Torah’s commandments represent God’s will and thus originate in the sefirah of crown. But, in

the crown itself, the prescriptive (positive) commandments originate in the pleasure aspect of the crown (the second head of the crown), while the prohibitive commandments originate in the will aspect of the crown (the third and lowest of the three heads). The corollary of this correspondence is that the pleasure caused by the positive commandments is greater than that of the prohibitive commandments. Actually, according to this analysis, the purpose of the prohibitive commandments is to clear a purified path and area through which and into which the positive commandments can draw down light. When a person transgresses one of the prohibitive commandments, a blockage is created inhibiting the drawing down of this light.

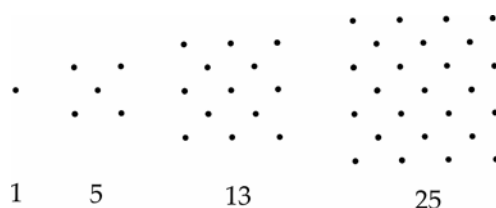
248 As a Figurate Number

Now, we are going to turn to another important mathematical property of 248, 365, and 613. There are various types of figurate numbers—numbers that can be represented by a collection of points arranged in some symmetric figure.

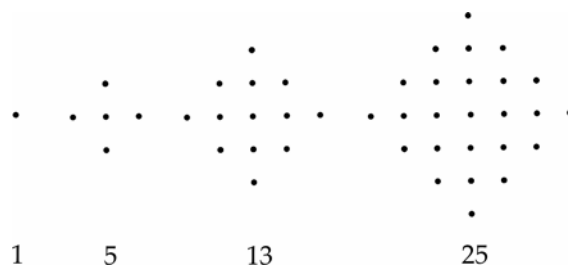
The three most basic types of figurate numbers are the triangle (which we have already met above), the square, and the inspirational. Let us draw the first few triangular numbers:



The squares are probably familiar to everyone, so we defer drawing them. The first few inspirational numbers look like this:



The inspirational numbers have a second isomorphic shape, which we will now draw as well:



The function that defines the series of inspirational numbers is $\square_n = n^2 + (n - 1)^2$, where \square_n denotes the n th inspirational number. It is clear from the function and from the figure of the inspirational numbers, that each is a sum of two consecutive squares.

In addition, it is easy to show that every square number is the sum of two consecutive triangular numbers, or:

$$n^2 = \triangle n + \triangle(n - 1)$$

Let us illustrate everything that we have seen to this point with a simple chart:

1	3	6	10	15	21	28	36	45	55	66	78	91	105	120	136	153	171	190
4	9	16	25	36	49	64	81	100	121	144	169	196	225	256	289	324	361	
13	25	41	61	85	113	145	181	221	265	313	365	421	481	545	613	685		

In the first row, we have written down the triangular numbers. In the second row, underneath each pair of triangular numbers, we have written its sum. Notice that as expected, the second row is the series of square numbers. In the third row, we did the same for the square numbers. Again, as expected, the third row is the series of inspirational numbers.

Now, note that both 613 and 365 are inspirational numbers. $\square_{19} = 19^2 + (19 - 1)^2 = 613$ and $\square_{14} = 14^2 + (14 - 1)^2 = 365$. But, 248 is not an inspirational number. In fact, it is easy to see that because the square numbers alternate from odd to even, and every inspirational number is a sum of squares, no inspirational number can be even.

But we will now see that it is related to inspirational numbers. Let, us write a fourth row following the same scheme we have been using, except now let us fill in the left end of each row with 0's in order to get the full series in each row:

0	0	0	0	1	3	6	10	15	21	28								
0	0	0	1	4	9	16	25	36	49									
0	0	1	5	13	25	41	61	85										
0	1	6	18	38	66	102	146											
1	7	24	56	104	168	248												

The fourth row, the sum of inspirational numbers is the series of 2nd order inspirational numbers. The fifth row is then the series of 3rd order inspirational numbers and the seventh of those is 248!

Not only that, but, beautifully, 248 is the sum of the two 2nd order inspirational numbers 102 and 146, which we have seen above equal "faith" (אֱמוּנָה) and "world," or "reality" (עוֹלָם)!

Altogether, in order to get to 248, we have used 35 non-zero triangular, square, inspirational, 2nd-order inspirational, and 3rd-order inspirational numbers. On Friday night, as the main part of the kidush, we recite the three verses from Genesis that describe the Shabbat. Between them, these three verses have exactly 35 words. Let us

order these three verses in a 5 by 7 array and correspond them with the 35 non-zero numbers in our above derivation:

וּכְלוּ	הַשָּׁמַיִם	וְהָאָרֶץ	וְכֹל	צְבָאָם	וְיָכַל	אֱלֹהִים
1	3	6	10	15	21	28
בַּיּוֹם	הַשְּׁבִיעִי	מִלְאֲכַתּוֹ	אֲשֶׁר	עָשָׂה	וַיִּשְׁבֹּת	בַּיּוֹם
1	4	9	16	25	36	49
הַשְּׁבִיעִי	מִכָּל	מִלְאֲכַתּוֹ	אֲשֶׁר	עָשָׂה	וַיְבָרֵךְ	אֱלֹהִים
1	5	13	25	41	61	85
אֶת	יוֹם	הַשְּׁבִיעִי	וַיְקַדֵּשׁ	אֹתוֹ	כִּי	בּוֹ
1	6	18	38	66	102	146
שַׁבָּת	מִכָּל	מִלְאֲכַתּוֹ	אֲשֶׁר	בְּרָא	אֱלֹהִים	לַעֲשׂוֹת
1	7	24	56	104	168	248

In a beautiful example of internal reference, the 35th number is 248 and the 35th word is “to do” (לַעֲשׂוֹת); recall that 248 is the number of prescriptive commandments, commandments that we are obliged “to do!” (עָשָׂה). We would not be amiss searching for other meaningful connections between the number and words in this joint array.

The sum of these 35 numbers is 1449, or 7 times 207, where 207 is the value of “light” (אֹר). Abraham, whose name equals 248, has a strong affinity to light. The the sages say that “Abraham began to shine forth light,”³⁴ that is, Divine consciousness, and he is the archetypal soul that corresponds to the *sefirah* of loving-kindness, the *sefirah* of the first day of creation on which light was created.

248: The Channel of Prophecy

In the previous article on 248, we concentrated on how 248 is the channel through which God created the world. From the Torah it is clear that God created the world through His Divine speech (“And God said...”). Altogether, the sages count 10 such measures of speech in the account of creation.³⁵

Though our physical reality bears witness to the Creator, it does not reveal His will or intent. To this end, God created man with the ability to prophecy, that is, to experience and relate the Divine speech that continually reverberates throughout reality.³⁶ Indeed, in the previous article we saw that the ability to hear God’s word is a result of man being made “in God’s image” (בְּצֶלֶם אֱלֹהִים), an idiom whose numerical value is also 248.

A related point is that one of the phrases that repeat many times (more than 70!) in the Torah is “And God spoke” (וַיְדַבֵּר יְהוָה). In the vast majority of cases, these two words appear when God is addressing Moses. The numerical value of these words, “And God spoke” (וַיְדַבֵּר יְהוָה) is 248. Moses is considered the “father of prophecy.”³⁷ When God

In our first article on the significance of the number 248, we saw that there are two distinct aspects to Abraham himself³⁸ and hence two aspects to the number 248. Earlier in this article, we explained that these two aspects of 248 correspond to the intentional and active dimensions of each of the 248 prescriptive (positive) commandments. Now we have seen another explanation for the duality inherent in 248. The first, and lower aspect of 248, is found in God's words that imbued man with the potential for prophecy during creation. The second, and higher aspect of 248, is found in the channel that God opens in order to deliver prophecy to Moses. Though Moses is considered the father of all prophecy, the first person to be described as a prophet in the Torah is Abraham.³⁹ As such, whenever God addresses Moses, He does so through the channel that corresponds to Abraham's higher soul-root—i.e., through Abraham's role as the archetypal soul of loving-kindness. Abraham's soul-root is the conduit through which God reveals His will, i.e., the Torah, to the world. In fact, the Torah is called "A Torah of loving-kindness."⁴⁰

Loving-kindness was the energy with which God created the world initially. The Zohar describes loving-kindness as, "The measure that flows through all six days of creation."⁴¹ And, loving-kindness is the energy with which the world is perfected through prophecy and the giving of the Torah, as the verse states, "The world will be built of loving-kindness."⁴² These two aspects of loving-kindness reflect Abraham's higher and lower soul-roots.

The Dualism of 248: Patriarch and Firstborn

But, the way in which they equal 248 is interesting in itself. The *gematria* of the first word "He spoke" (וַיִּדְבֹר) is 222, or $6 \cdot 37$. Recall that 37 was the base (i.e., the sum of the prime factors) of 248). Since 37 is the numerical value of "Abel" (הָבֶל), which has 3 letters in Hebrew, 6 times 37 is the sum of all six possible permutations of the 3 letters of "Abel," $הבל הלב בהל בלה להב לבה = 222$. The second word, God's essential Name, *Havayah*, of course equals 26.

But, more importantly, 222 is the value of "firstborn" (בְּכֹר).⁴³ Thus, Abraham (אַבְרָהָם), who is the archetypal embodiment of "God's image," is also "God's firstborn" (בְּכֹר יְיָהוּהוּ). Normally, we are accustomed to relating to Abraham as our first patriarch. What does it mean that he is God's firstborn? In Kabbalah, all Jewish souls are considered to come from a single common origin called a womb.^{44,45} The first soul to come out of that womb was Abraham—the first Jew. This is another beautiful way to understand Abraham's duality. On the one hand, he is our first patriarch; on the other hand, he is our eldest brother.⁴⁶

We see this duality exhibited in the Ten Commandments as well. The fifth of the Ten Commandments is to honor one's father and mother. The sages explain that this includes honoring one's elder siblings, especially the firstborn. According to Kabbalah, the reason for this is that all the siblings in a family are born through the conduit opened by the firstborn child. The firstborn is like a second father, which is why he gets a double portion of the inheritance.

In our first article on 248, we explained that the three-letter root of "matter," חמר is one of the 7 three-letter roots whose six possible permutations are actual roots. The three-letter root whose letters are the same as "firstborn," בכר is another of these 7 special roots. Alphabetically, it is also the first. In addition, its numerical value, 222, is very special as it is the sum of $2 \cdot 10^0$, $2 \cdot 10^1$, and $2 \cdot 10^2$, and each of its three letters, in order equals one of these: כ = $2 \cdot 10^0$; ב = $2 \cdot 10^1$; ח = $2 \cdot 10^2$.

The phrase "And God spoke" also alludes to primordial matter. This is because the first word "He spoke" (וַיִּדְבֹר) stems from the same root as the word for "thing" (דָּבָר). This can allude to formless matter, and thus the words "And God spoke," can be understood as referring to God's bringing forth matter through His speech. Furthermore, because the word for "thing" also means a "leader," specifically the king, like the Mashiach, this tells us that the leader of the generation is the one who truly understands how to manipulate and order matter.⁴⁷

248, Adam, and Eve

Let us look at how 248 figures into the creation of Adam and Eve. Had they not sinned by eating from the Tree of Knowledge, Eve would not have been called "Eve," but rather "Chayah" (חַיָּה), which literally means "alive." This word stems from the idiom, "a living soul" (נֶפֶשׁ חַיָּה), which is how the Torah describes the creation of man: "And God formed man, soil from the earth... and man was a living soul."⁴⁸ Thus, to be a living soul, Adam had to be attached to his wife. But, once she convinced him to sin, Adam decided that her name would be "Eve."

Mathematically, the sum of "Adam" (אָדָם) and "Eve" (חַוָּה) is $64 = 8^2$. In the mathematical analysis of the Torah, square numbers represent a state of consummate wholeness or completion. One of the reasons for this is that in Kabbalah, inter-inclusion always involves a square number. Inter-inclusion means that given two corresponding models—i.e., both have the same n number of elements—their inter-inclusion involves n^2 elements. One example of this is the Counting of the Omer, which lasts for $49 = 7^2$ days, because we are counting through the inter-inclusion of the seven lower *sefirot*, from loving-kindness to kingdom. There are many tens of thousands of examples of the occurrence of square numbers in the Torah text and in the various sayings of the sages.

What then was to have been the relationship between "Adam" and "Chayah." The *gematria* of "Adam" is 45, while that of "Chayah" (חַיָּה) is 23. 23 is the midpoint of 45. So, originally, the female was to have been the midpoint of the male. In Kabbalah, the

But, if we add “Adam” (45) and “Chayah” (23) we get 68, which is the *gematria* of “life” (חיים)!

But, astoundingly if we apply what is the equivalent of a “dot product”⁴⁹ (i.e., multiplying the first letter of one word by the first letter of the second, the second letter of the one with the second letter of the other, and so on) of the two names “Adam” (אָדָם) and “Chayah” (חַיָּה), we will get:

$$\begin{aligned} \text{א} \cdot \text{ח} + \text{ד} \cdot \text{י} + \text{מ} \cdot \text{ה} &= \\ 1 \cdot 8 + 4 \cdot 10 + 40 \cdot 5 &= \\ 8 + 40 + 200 &= 248! \end{aligned}$$

Notice that 8, 40, and 200, are the numerical values of the three letters ח, מ, and ר, in exactly the same order that they appear in the word “matter” (חֵמֶר). It is clear then that the union (symbolized by the “dot-product” operation on their names) of Adam and Eve, in their ideal state of being, gives us 248, the value of “in God’s image” (בְּצַלְמֵ אֱלֹהִים), as above.

Let us take this mediation on Adam and Eve another step further. In Kabbalah, the masculine is represented by direct light, but the feminine is represented by reflected light. This suggests that instead of applying the “dot-product” as we have above, we should first reflect (that is, reverse) the order of the letter of “Chayah” and then carry out the operation. Let us see what happens when we do this:

$$\begin{aligned} \text{א} \cdot \text{ח} + \text{ד} \cdot \text{י} + \text{מ} \cdot \text{ה} &= \\ 1 \cdot 5 + 4 \cdot 10 + 40 \cdot 8 &= \\ 5 + 40 + 320 &= 365! \end{aligned}$$

This is truly astounding result and one of the most beautiful mathematical analyses in the Torah that we are aware of. Multiplying “Adam” by “Chayah” (in reverse order) yields 365, the number of prohibitive commandments that we have discussed in great length above. This beautiful relationship tells us that the purpose of all the commandments is to help us return to the ideal Edenic state. In that state, our consciousness is in naturally tuned to the 248 components of the universe and to the 365 components of time, as mentioned in our first article.

248 and Resurrection

The number 248 is not only connected to the creation of the world and to the transmission of God’s will, it is seminal in the ushering in of the final stage of our reality, the resurrection of the dead.

The sages teach us that the resurrection of the dead is possible thanks to a mysterious bone that does not rot in the grave. That bone will serve as the seminal *yud*,

That the body will be reconstructed from this bone offers us another angle on the notion that 248 indeed expresses the essence of matter. Here it lies at the core of our biological life. Since Abraham's name also equals 248, we now know that it is Abraham's soul that is the seminal, or "luze bone," of the entire Jewish people. The sages liken our state of exile to the state of a deceased person lying in the grave. Coming out of the exile is like coming out of the grave.

The Talmud tells us that when we are dreaming we can see paradoxically impossible images, the likes of which we cannot see elsewhere. This is during dreaming, the mind exercises its inherent power to carry, or bear opposites. The sages tell us that the most amazing paradoxical image that is impossible to see even in a dream is that of "an elephant passing through the eye of a needle." Indeed, this is more than just an amazing image; it is also a "funny" (מִצְחִיק) image, as the value of "funny" in Hebrew is also 248.

The Aramaic words that they use for "eye of the needle" are קופא דמחטא. The Hebrew words for "eye of a needle" (קוֹף הַמְחָט) are very similar to the Aramaic and actually can also mean "the monkey of a needle." In any case, the Hebrew idiom for "eye of a needle" (קוֹף הַמְחָט) also equal 248. In this particular idiom, the first word "eye" (קוֹף) is equal to $3 \cdot 62$, while the second word "of the needle" (הַמְחָט) is equal to 62. So within the idiom we have a ration of 3:1.

What this implies is that the "luze bone" is "the eye of the needle" itself. The word "elephant" (פֶּיל) in Hebrew comes from the word for "wonder" (פֶּלֶא) and according to the sages, the elephant represents "wonders of wonders." Every creature sings a song to God, the elephant sings: "How great are Your actions God, Your thoughts are so deep."⁵⁰ This is probably what the elephant thinking as it passes through the eye of the needle, for this is truly the greatest wonder.

What does this strange and wondrous image symbolize? In Modern Physics, we would answer that the eye of the needle represents an infinitesimally small point through which elementary particles are created and subsequently annihilated (an idea that is the basis of quantum electrodynamics). But, this only takes care of the eye of the needle. What does the elephant represent. Like we said it represents a miracle or wonder. Thus, if something as large as an elephant were to be able to pass through such an infinitesimally small point, the wonder that would be revealed would be the resurrection of the body—like a human body being created and a soul entering it. These are all visualizations meant to help us meditate and understand the significance of 248.

The greatest wonder is the infinite power of God entering the infinitesimally small vacuum—the eye of the needle, which ultimately serves to sow (that is, connect) all of reality together.

248 and the Shema

The Torah commands us to say the Shema twice a day, once in the morning once in the evening. The Shema is the essential statement of our faith in one God: “Hear O’ Israel: GOD is our God, GOD is one”⁵¹ (שְׁמַע יִשְׂרָאֵל יְיָ הוּא אֱלֹהֵינוּ יְיָ הוּא אֶחָד), whose full value is 1118. This number is the lowest common multiple of God’s essential Name, *Havayah* (יְיָ), which equals 26 and *Elokim*, which equals 86, the two names that are equated in this verse.

In the *Shema*, the three words that have a middle letter are שְׁמַע יִשְׂרָאֵל אֶחָד, and the middle letters are: מ, ר, and ח, whose sum is of course 248! The three middle letters themselves are one of the six permutations of חמר. So this is a beautiful allusion to 248 in the declaration of our faith in one God.

Going back to what we saw earlier, this particular permutation corresponds to the sefirah of victory and its literal meaning is to spread or to smear. Victory is the soul-root of Moses, who is the one teaching us the Shema, because unlike the first four books of the Torah, the Book of Deuteronomy, where the Shema appears, was said by Moses, with the Divine Presence speaking out of his mouth. So, this particular permutation of חמר, gave Moses the power to spread out eternally, forever and ever. Our faith is firm and victorious when we say the Shema! And, it is Moses who brings us to this level of faith.

There is another pair of words that is related to Moses and whose numerical value is 248: “the fountain of wisdom” (מַעְיַן הַחֲכָמָה). Earlier, we saw that 248 is the *gematria* of “faith” and two “wisdoms” (אֱמוּנָה חֲכָמָה חֲכָמָה), where just “faith” and one “wisdom” is equal to 175, Abraham’s lifespan and then with another “wisdom” it equals his name. “The fountain of wisdom” is the name of one of the earliest works of Kabbalah attributed to Moses.

What does this add to our understanding? We can say that when a person merits to reveal how he has been created “in God’s image” (בְּצַלְם אֱלֹהִים), he becomes a “fountain of wisdom” (מַעְיַן הַחֲכָמָה). In the terminology of the Ba’al Shem Tov, such a person uncovers his infinite wellsprings, which can then proceed outwards and rectify even the farthest extremes of reality.

The sages tell us that a sage in the Land of Israel is always called a “Rabbi” (רַבִּי), as opposed to a sage living outside the Land of Israel who is called a “Rav” (רַב). The difference between the two titles is the letter yud (י), which represents the special infinite fountain of wisdom that can only be attained by being connected to the Land of Israel, whose “air makes one wise.” In practice, the fountain is the simple faith that the person has in the Almighty.

248 Particles and 92 Elements

In our first article on 248, we mentioned the relationship between the numbers 248 and 92. As we began, 248 has been proposed as the number of particles in nature—it is still a

hypothetical statement. But, science today recognizes that there are exactly 92 naturally occurring elements in nature.

In the Torah's account of creation, we find a beautiful connection between these two numbers. The 248th word in the account of creation is "the great"⁵² (הַגְּדֹלִים), whose numerical value is 92! This word appears in the account of the fifth day and describes the "great serpents" that God created. Even more amazingly, this is also the only word in the account in creation that equals 92!

This word already appeared once earlier in the account of creation. On the fourth day, it appears in reference to "the two great luminaries"⁵³ that God created—the sun and the moon. According to the *midrash*, before its luminescence was diminished, the moon illuminated space just as strongly as the sun. What happened to the moon parallels the primordial sin of Adam and Eve, which diminished their stature.

We bring this up because there is a well-known principle in Torah that "the whole follows its beginnings." In this case, we see that the state of "greatness" (הַגְּדֹלִים) within creation is (as yet) impermanent and unsustainable. Likewise, the sages reveal that the greatness of these "serpents," which are actually sea creatures, was also impermanent. They explain that there were two such sea serpents, a male and female.⁵⁴ Though God had willingly created both, He saw that if both would remain alive and allowed to produce offspring, no other form of life would be able to survive in the world. Therefore, God killed the female and salted her meat so that it could be eaten in the World to Come.

In the first account of creation, there is no word whose numerical value is 248. Instead, it is only through Abraham—who is described as the "greatest among great men"—that the final rectification of "greatness" can be attained.

Conclusion

Let us conclude this part of our study of the number 248 with a partial verse from Psalms whose numerical value is altogether 248: "God is known throughout Judah"⁵⁵ (נוֹדָע בִּיהוּדָה אֱלֹהִים). Since one of the words is God (Elokim), the same as the "God" in "in God's image," it follows that the two other words "Known throughout Judah" (נוֹדָע בִּיהוּדָה) equal the value of "in the image" (בְּצַלְמִם). Furthermore, the first and third letters of "in the image" (בֵּל) equal "throughout Judah" (בִּיהוּדָה), while the second and fourth letters (עִם) equal "known" (נוֹדָע). So, there is a lot of self-reference going on between these words.

What can we learn from the fact that this phrase equals 248? The idea here is that throughout Judah, that is throughout the Jewish people, there is shared the consciousness that the universe is divided into 248—first and foremost as it pertains to Torah, but also as it pertains to physics.

1. See our lecture on “Hebrew as the Ideal Programming Language” at http://www.inner.org/Nav_classes/class.php?class=E660219 (accessed: January 9, 2008).

2. Sefer Yetzirah 1:???

3. *Patach Eliyahu*, Introduction to the *Tikunei Zohar*.

4. Isaiah 29:22.

5. See our Hebrew volume *Sod Hashem Leyerei'av*, pp. ??? for a more in depth explanation of this topic.

6. It is left for the reader to find the rule for this transformation. Once the rule is found, notice that it parallels the left hand and right hand rules in vector algebra. More specifically, the transformation used for loving-kindness, might, and beauty corresponds to the left-hand rule, resulting in a negative z-axis vector, indicating that these 3 *sefirot* are pointed inwards. The transformation for victory, acknowledgment, and foundation corresponds to the right-hand rule, resulting in a positive z-axis vector and indicating that these 3 *sefirot* point outwards.

7. In passing, let us mention the Kabbalistic meaning of the permutation **רהם**, meaning “womb” corresponding with the *sefirah* of beauty. In Lurianic Kabbalah, there are various spiritual personas (or models), called *partzufim*, that enclothe one another. As we mentioned above, the *sefirah* of beauty is described as “the body.” In the case of the *partzuf* called *Ze'er Anpin* (literally, the small countenance), the Arizal describes that the womb of the *partzuf* called *Imma* (literally, the mother) extends until the body of *Ze'er Anpin* (??? Source).

8. As in the *Amidah*, whose opening words are: “Blessed are You our God, the God of Abraham [wisdom], the God of Isaac [understanding], and the God of Jacob [knowledge]....”

9. Psalms 104:24.

10. See for example *Torah Or* 13c, 50b, and elsewhere.

11. *Milui* (מילוי), in Hebrew.

12. For some letters, the filling can be written in a number of alternate forms. Each of these forms has particular significance in Kabbalah. See also *What You Need to Know About Kabbalah*, p. ???.

13. See the full discourse on this point in the *Shlah, Drush Or Chadash* (on *parashat Bereisheet*), *Torah Or*, s.v. “*Ve'ata shim'oo elai utechi nafshechem*.”

14. When we add to these three dimensions a fourth dimensions, that of the solid, we find that the numerical values of their names in Hebrew, **נקודה קו שטח גשם**, is equal to that of the three dimensions discussed in Sefer Yetzirah: space, time, and soul—**עולם שנה נפש**! For more on this teaching of the Gra, see our website, at: www.inner.org/parshah/numbers/naso/E68-0829.pdf.

¹⁵. This takes us back to our discussion of the word **בי** in our first article on 248, where we derived 248 from the two letters of this word. But, when we take the product of these two letters, we get $2 \cdot 10 = 20$, the value of the filling of *yud*.

This is the way that Rabbi Abraham Abulafia interpreted the Hebrew word for “heart” **לב**; the **ב** (whose value is 2) multiplies the letter **ל** by 2. When two **ל** are placed facing one another, they form the shape of a heart, a beautiful derivation from which we have produced a piece of jewelry known as the Jewish Heart.

16. 12 is also equal the value of the word **זה**, meaning “this.” The symmetric occurrence of the number 12 as the minimal positive value of the series alludes to the verse describing the

17. The Hebrew word *hiyuli* originally comes from the ancient Greek *hyle*, however its meaning in Jewish philosophy is markedly different. One of the most important early discussions in Jewish philosophy of the *hiyuli* matter appears in Nachmanides' commentary to the second verse of Genesis. Interestingly, today Hyle is the name of the International Journal for the Philosophy of Chemistry.

18. The order of the Worlds, or states of being or consciousness, in Kabbalah is:

World		letter of <i>Havayah</i>
Primordial Man	<i>Adam Kadmon</i>	tip of <i>yud</i>
Emanation	<i>Atzilut</i>	<i>yud</i> (י)
Creation	<i>Beri'ah</i>	<i>hei</i> (ה)
Formation	<i>Yetzirah</i>	<i>vav</i> (ו)
Action	<i>Asiyah</i>	<i>hei</i> (ה)

19. See Nachmanides Ibid. See also Alter Rebbe's *Likutei Torah, Shir Hashirim* 14c-d.

20. The word *gelem* is the root of the well-known word *Golem*. See also Psalms 139:16.

21. "And God formed the man, soil from the earth..." (Genesis 2:7).

22. This is called *אֶפְשָׁרִיּוּת הַמְצִיאוֹת*, in Hebrew.

23. In Hebrew, the word for "ink" (יִדִּי) is a permutation of the word *yud* (יוד).

24. *Zohar* I, 26b.

25. *Keter Shem Tov*, ???.

26. Psalms 104:24.

27. 31 is the numerical value of God's Name *אֵל* (pronounced, because of its sanctity: "Kel"), which corresponds to the *sefirah* of loving-kindness (See Psalms 52:3). Abraham (whose name equals 248) is considered the archetypal soul of loving-kindness. In Kabbalah, it is explained that this Name, *אֵל*, appears 8 times within the context of the partzuf of *Arich Anpin*, giving a total of 248; see Arizal's *Sha'ar Hapsukim, Lech Lecha*.

28. The product of the prime factors is the number itself. The sum of the prime factors is called the base of the number.

29. See our upcoming volume on the mathematics of the Book of Genesis, parashat *Lech Lecha* (ch. 9).

30. See *Avodat Hakodesh* 3:21. *Avodat Hakodesh* brings various sources citing that the righteous individuals that preceded Abraham relied not on their earnest faith in God but upon angels that revealed themselves to them and taught them Divine wisdom.

31. *Midrash Bereisheet Rabbah* 61:1.

32. Deuteronomy 31:19.

33. Ibid. 32:4.

34. *Midrash Shemot Rabbah* 15:26.

35. *Mishnah Avot* 5:1.

36. The Divine speech is what was heard between the *cherubim*, above the Ark of the Covenant in the Holy of Holies; see Numbers 7:89, *Sukah* 5a and *Ben Yehoyada ad. loc.* The Divine speech is the equivalent of the *Shechinah*; see *Tanya, Igeret Hakodesh* 25 in length (there are two aspects to Divine speech, the first is the encircling (*makif*) aspect, with which God created the world, the second is the inner (*primi*) aspect, which reveals God's will.

37. *Megilah* 13a.

38. When God's angel calls Abraham at the Binding of Isaac, he says, "Abraham, Abraham" (Genesis 22:11) alluding to these two distinct levels of Abraham's soul-root.

39. Genesis 20:7.

40. Proverbs 31:26.

41. See *Zohar* III, 103a-b and 191b. *Eitz Chayim* 25:2.

42. Psalms 89:3.

43. This is the spelling found in about half the instances that this word appears in the Pentateuch. Significantly, this is the spelling used when God tells Moses to come before Pharaoh and demand that he free: "My son, my firstborn, Israel" (Exodus 4:22).

44. See *Tanya*, chapter 2 for an example of the application of this metaphor to understanding the make-up of a single generation of souls.

45. Earlier we noted that in Kabbalah all matter is considered to have come out of a common womb. The womb out of which souls originate is a different one. Of this womb, the sages say, "The son of David [the Mashiach] will not come until all of the souls in the body have been exhausted [i.e., all have been embodied]" (*Avodah Zarah* 5a). In the terminology of the Ba'al Shem Tov, these two wombs are the sources of two different dimensions of reality: worlds and souls; for more, see the introduction to *The Hebrew Letters*.

46. There is a beautiful ruling that once boys have reached adulthood, their father should treat them as equals and address them as his "brothers." Of course, the children are still obligated to respect their father as such. Thus, we can say, that from Abraham's point of view, he is the firstborn among many Jewish souls, all of whom are his children. From our point of view, Abraham remains our first patriarch.

47. As above, the soul, whose origin is in the higher womb, is meant to control matter, whose origin is in the lower womb.

48. Genesis 2:7.

49. The Kabbalistic term for this type of operation is *הבאה פרטית*.

50. Psalms 92:6.

51. Deuteronomy 6:6.

52. Genesis 1:21.

53. *Ibid.* 1:16.

54. In Kabbalah, they sometimes symbolize the male and female aspects of the evil inclination

55. Psalms 76:2.