

THE QUADRALITIC GRIDS: STRUCTURAL PARADIGM FOR DNA

An excerpt from



THE TOTALITY OF GOD
AND THE IZUNOME CROSS

Unlocking the Secret to the Riddle of the Ages

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Author's Note: The derivation of the Quadralitic Grids was presented following an extensive examination of the Rules of Quadrality, the mechanics whereby dualities combine to form quadralities – energetic states expressed as a range of four values. My inaugural exposition of the Rules themselves has been excerpted in a separate article. The process of deriving the Grids involved applying the Rules of Quadrality to evolve the duality of Parent and Child into eight quadralities that would then express the energetic range of the Universe. Those derivations immediately precede the graphic result, the Quadralitic Grids, the initial two energy systems that will then evolve into the final four of the Quadralitic Cube. Displayed in the main text as Figure 17C, it is herein reproduced on the next page. The derivations have been omitted from this excerpt since at least a basic familiarity with and study of the Rules is required to understand them. It is only necessary here to realize that the process provides an underlying energetic truth for the Grids thereby derived, which allows them to symbolically depict the fundamental energetic movements of vibration and rotation in Physics as well as their intrinsic connection. Figure 17C, arrived at through derivations that reflect cyclic principles, modeled the rotational movements; Figure 17L, derived in accord with linear principles, in the pages to come would exemplify the vibrational movements. For completeness, I have included it at the end of this excerpt. However, immediately following the derivation of Figure 17C, I chose to consider first how the Quadralitic Grids also modeled the foundation of all organic life – the structure of DNA. I feel that the presentation therein provided is reasonably self-explanatory, making it enjoyable out of context as a stand-alone article. All of the original footnotes have been retained either for clarity or to properly credit the original sources used (even though not all online sources are still available).

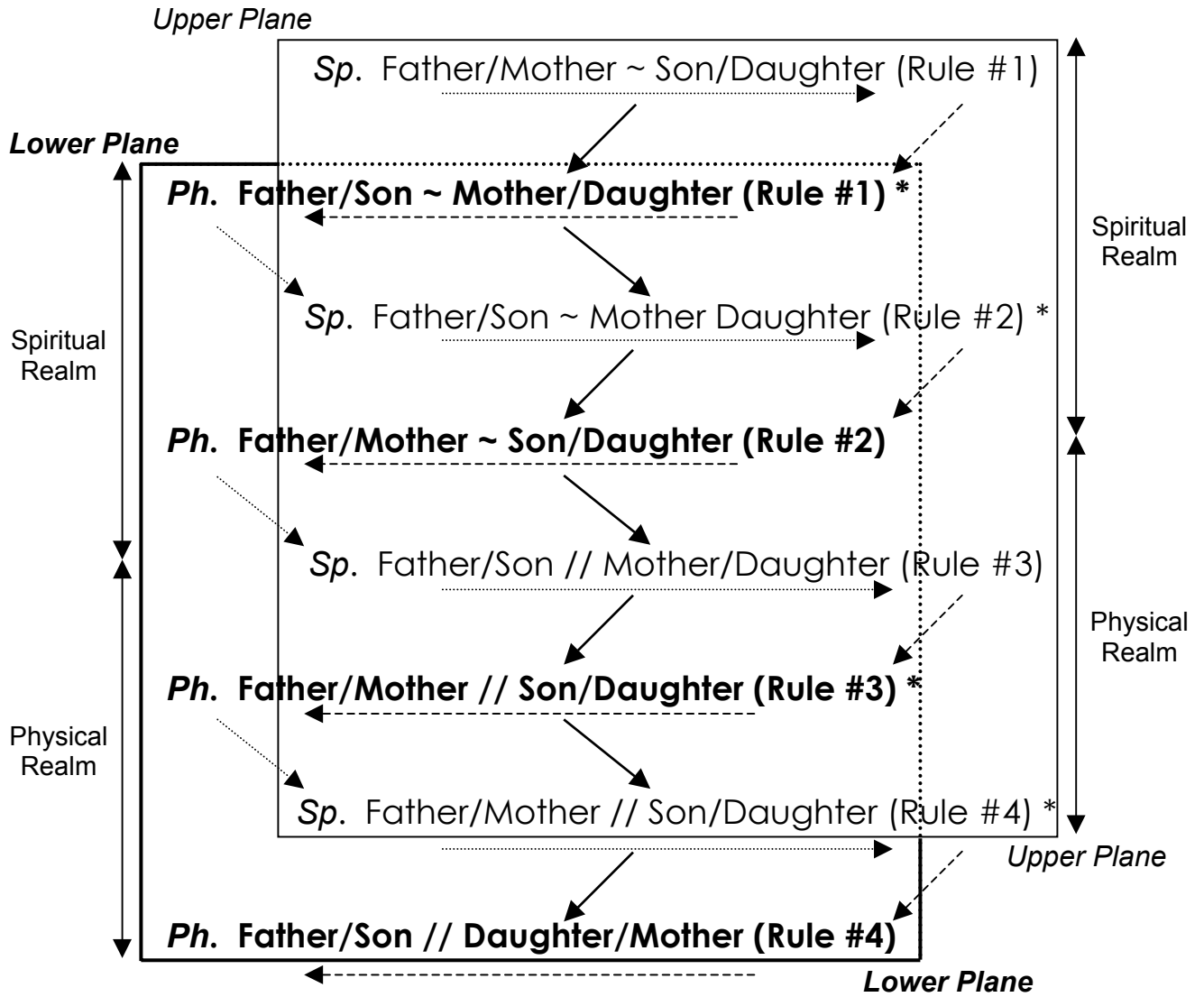


Figure 17C : The **4x4 Quadralitic Grids** with energy flow lines reflecting cyclic derivations.

All of these manifestations would be considered dynamic, since tangible motion is involved. However, spirals occur in a static state, more a function of structure than the movement of energy. Such circular lattices occur throughout nature, as well, from snail shells, to spider webs, to the double helix underlying all of organic life – DNA.

I have already made the case for analogies between the inherent characteristics of DNA and the principles discussed in this book. In *Footnotes 60* and *61*, pp. 190-192, I spoke in generalities, referencing symbolic similarities to Unity, Duality, Triunity and Quadrality. The most striking, perhaps, was the acknowledgement that the pairing of bases in the DNA spiral somehow reflected the balance of Spiritual and Physical, Positive and Negative, throughout the Universe. I mentioned that a more substantial parallel between the actual structure of DNA and the *Quadralitic Grids* would eventually be shown. That time has come. Although the physical spiral of DNA isn't evident in [Figure 17C](#) as drawn, we'll soon see that the energetic potential for it is there. Moreover, realize that the *Quadralitic Grids* are fundamentally illustrating the Universe's symbolic structure. Naturally, the energetic patterns within it are worthy of our consideration, and we will soon do that in depth. But as you will next discover, more importantly it is the words themselves composing the quadralities that offer the most powerful revelation of the intangible principles underlying genetic structure.

I'll begin by repeating the eight quadralities, but will now make **bold** those that occur on the *Ph. Grid*:

Father/Mother ~ Son/Daughter
Father/Son ~ Mother/Daughter
 Father/Son ~ Mother/Daughter
Father/Mother ~ Son/Daughter
 Father/Son // Mother/Daughter
Father/Mother // Son/Daughter
 Father/Mother // Son/Daughter
Father/Son // Daughter/Mother

Without even considering how this might reflect genetic structure, one thing in particular should immediately strike you – the incredible consistency in the word patterns. The first word in each is Father, and except for the last quadrality, the last word is Daughter. These *extremes* represent the polar opposites contained within each quadrality, be they Spiritual and Physical or Positive and Negative. Moreover, the center words, the *means*, are always the same (barring our exception), differing only in relative position and inherent energetic nature within the *Sp.* and *Ph. Grids*.

The science behind DNA is quite complex. However, we really only need to look at the basics for our present purposes. Therefore, I hope scientists will excuse me if I describe some of the details in a precursory fashion, and leave out even more. Let's focus on the center words first. You may recall from *Footnote 61* that each nucleotide in the DNA chain contains a sugar molecule, a phosphate group, and one of four bases. The phosphate group in each nucleotide is the same, as well as the sugar molecule – deoxyribose. Only the bases vary. However, the variations themselves are limited in that just two pairings are possible once the strands are linked together to form the double helix: adenine with thymine, and cytosine with guanine. (119) Aside from the bonds involved, these pairings occur in this way because, due to the structure of the bases, only they allow the rungs of the ladder to be the same length,

a requirement for the strands of the DNA molecule to connect. The bases can appear in either order. Thus, four base pairs are actually possible. What is truly amazing even to the casual observer, though, is that from this creating quadrality of base pairs comes the genetic sequences found in all of organic life. But, what is perhaps even more amazing to me is that this phenomenon is modeled in the *Quadralitic Grids*.

Examine the previous quadrality for yourself, beginning with those from the *Sp. Grid*. Only two words are involved in the base positions, which then appear in either order. These same two words occur in the *Ph. Grid*; but, though the same, they uphold different energies, being created from *Physical Model* dualities within a different energy system. That was the original reason for the **bold** designation. Thus, the two *Grids* together contain four possible term pairs, the symbolic gesture the Intangible Universe has made as precursor to all tangible life. And it is at this point in the evolution of the paradigm for energetic movement and structure in the Universe that these four term pairs are established. The two *Grids* span the Universe's entire energetic range, and as we'll soon see contain the minimum number of nucleotides required by DNA to accomplish its mission. When the *Grids* then expand to a *Cube*, that *Cube* can be understood as two sets of parallel *Grids*, or two parallel DNA chains.

This leaves us to explain how the two nucleotides – one from each strand – made of three units each, when energetically connected can be considered as being modeled by a quadrality of words. The answer is fairly simple, and can be found just two paragraphs ago. While one of four bases occurs in a given nucleotide, the sugar molecules and phosphate groups are the same in all. Thus, for our present structural study, we can collectively associate the pair in any nucleotide with the word Father or Daughter. You might question how this could be, saying that Father and Daughter are themselves different, and therefore, if all pairs are the same, this association couldn't be made. Again, the explanation lies on the previous page. In any given quadrality, Father and Daughter are polar opposites, and thus, energetically different. They are different words used to symbolize different, *extremes* energy states. But they are not structurally different. Grammatically, all words in the present quadrality are nouns! (120) Likewise, all realms, though energetically different, are structurally the same. That's what allows a 1st level quadrality to serve as model for the 100th, or the 1000th, ad infinitum. Therefore, a sugar and phosphate group can together be associated with

119 *(Thus, the bases are considered complementary. If you know the base on one side of a DNA chain, there is only one that can complement it on the other. In fact, "It is the property of complementarity between strands that insures that DNA can be replicated, i.e., that identical copies can be made in order to be transmitted to the next generation.")*
 ["Nucleic Acid," The Columbia Encyclopedia, Sixth Edition, © 2001 Columbia University Press.]

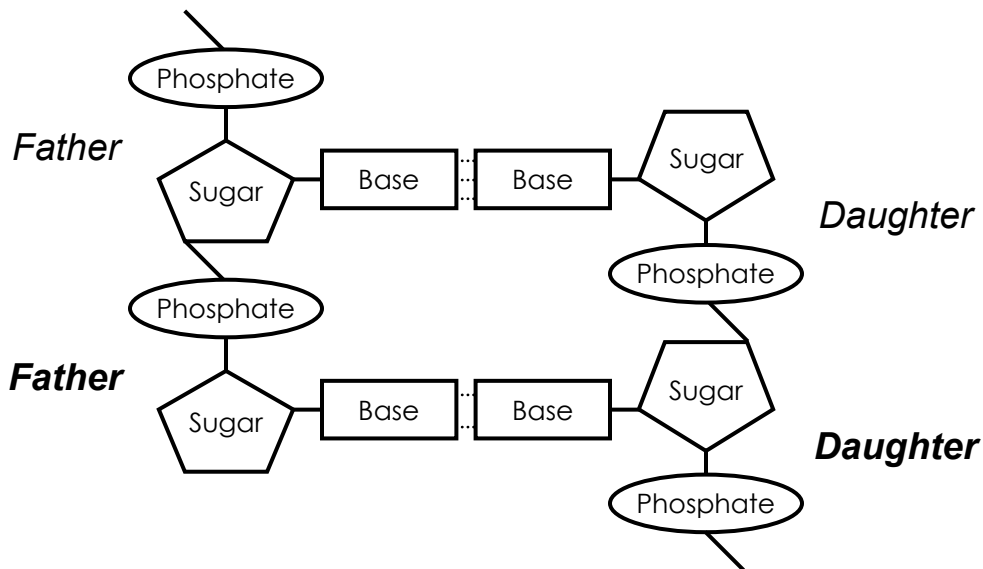
120 *(To be energetically balanced, the words in any duality must be grammatically the same. But that includes all forms, not just nouns. While almost all quadrality in this book were generated from two dualities of the same form, that doesn't mean combining different forms isn't common. In fact, it must be, to derive the myriad existential states. Yet, throughout them, structure is upheld in the balance of dualities like Rigid {R} Flexible and Similar (S) Differing. The Principle of Rigid, exemplified by Similar dualities, establishes the structure. That allows all Structure, like DNA, to exist as a Fixed frame of reference. Given that, the Principle of Flexible, as in Differing dualities, allows for Variable existence within that structure. This is so for the quadralitic realms or anything modeled in accordance with their Rules. No movement or change could occur otherwise.)*

either Father or Daughter. The fact that they need to be associated with *two* terms, not just one, reflects the understanding that the parallel strands of DNA are not actually parallel in the sense of being mirror images. They are what geneticists refer to as anti-parallel. They run in opposite directions. Nonetheless, this doesn't make them structurally different. All you have to do to see that is turn the diagram below upside down. However, being anti-parallel means their energetic functions *are* different. Thus, associating Father with the sugar molecules and phosphate groups on one side and Daughter with those on the other, is actually reflecting that difference in function. Consider this reply to a question on the ScienceNet web site:

Both DNA strands contain genes and both can be read to form mRNA and, ultimately, proteins. When DNA is read to produce mRNA, the DNA helix unwinds in small segments. Only one side of DNA is read at once and reading proceeds in the 5' to 3' direction of the strand being read.

The other strand can be read at a different time, in ITS 5' to 3' direction (which is opposite to that of the first strand). The overall effect can be compared with traffic flow on an 'A' road. Traffic on one side always flows in an opposite direction to traffic on the other side of the road. The two opposing strands of DNA have different genes and therefore produce different proteins. (121)

The numbers in the previous quote, 5' and 3', refer to the location of the bonds between sugar and phosphate molecules. These occur within a nucleotide, as well as between adjacent nucleotides, with the sugar molecule of one nucleotide connecting to the phosphate group of the next. (Upcoming *Footnote 122* will expand on this.) Since strands run in opposite directions, this order will be reversed on the other side. The following diagram should clarify this, as well as show the symbolic relationship between the units in the nucleotides and the end terms in a quadrality:



121 "Why is mRNA production only shown as happening on the left hand strand of the DNA helix?" @ BSS 1993-2001, <http://www.sciencenet.org.uk/database/Biology/Original/b00044d.html>.

In any given quadrality, Father and Daughter are polar opposites. In any given DNA chain, the strands run anti-parallel. Essentially, both conditions are symbolically reflecting the same thing – how oppositional forces in the Universe work together to create balance. Moreover, the polarity expressed by Father/Daughter differs depending on whether it occurs on the *Sp. Grid* or *Ph. Grid*. On the *Sp. Grid* it is more Spiritual/Physical, and on the *Ph. Grid* it is more Positive/Negative. Thus, although the structure of Father/Daughter is the same on both grids, there is an energetic difference. I feel this energetic difference is reflected in the nucleotides, as well. Even though the phosphate group and sugar molecule are always the same – and always in a given direction dependent on the strand – the mere fact that they connect to a particular base would seem to mandate a difference in the composite nucleotide reflected in its energetic nature and chemical function. This enables four nucleotides to manifest the diversity required for protein synthesis, or, a species identity.

As to which pair best symbolizes the *Ph. Grid*, I'd say it is adenine and thymine, since the RNA chains synthesized from DNA for protein synthesis contain the base uracil instead of thymine. It is a difference that would seem to reflect the greater variations in the Physical Realm we found as a result of behavioral reversal.

There is science to back up this rationale. The three units in a nucleotide are held together by strong covalent bonds. *Bookshelf* notes that these are chemical bonds formed by the sharing of one or more electrons, especially pairs of electrons, between atoms. However, weaker hydrogen bonds hold the two bases together from complementary nucleotides. Instead of sharing electrons, these chemical bonds involve the attraction of opposite charges between atoms. This allows for the separation of strands during DNA replication and RNA synthesis. Interestingly, between cytosine and guanine there are three hydrogen bonds, whereas, between adenine and thymine there are two. Thus, the pairs themselves, through the bonds formed, reflect a difference comparable to Spiritual Triunity vs. Physical Duality! I actually indicated this in the previous diagram. The strong covalent bonds are represented by the solid connecting lines. (122) The weak hydrogen bonds between adjacent bases are drawn with short dotted lines. You will note that in the upper pair of nucleotides, three dotted lines appear between the bases. These nucleotides have been associated with Father and Daughter from the *Sp. Grid*. The lower pair, instead, has its bases connected with two dotted lines. These nucleotides are being associated with the boldfaced **Father** and **Daughter** from the *Ph. Grid*.

122 *(Of the three shapes chosen for the nucleotide units, only that for sugar has real significance. A pentagon is often used since sugar molecules contain five carbon positions. It is at three of these points where the covalent bonds between adjacent phosphate groups and bases are formed. The base always attaches to the 1st carbon position, referred to as 1'. It is located at the right corner of the sugars in the left strand. The phosphate group of each sugar's nucleotide attaches to the fifth position, or 5'. It is located at the apex of the sugar. Adjacent nucleotides connect at the third position, 3', in the lower left corner. 5' and 3' are the positions referred to in the previous quotation. In the left strand, 5' to 3' reads top to bottom. In the right strand, 5' to 3' reads bottom to top. The solid lines connecting a sugar to the phosphate of the adjacent nucleotide have been drawn at an angle to reflect this connection. However, please realize that any such graphic depiction of a complex molecular structure like DNA isn't meant to be taken exactly. This approximated visual presentation has been given just to make it easier for you to get a sense of what is going on, and to illustrate the principles involved.)*

The diagram has been deliberately kept simple by excluding the actual names of the bases, as well as the inner two terms of the quadrality. Obviously, either base pairing can appear in either order, which would clutter up the diagram. Likewise, either *means* pair can appear in either order. As to which base would be symbolized by which *mean* term, that is perhaps more speculation than you may care to accept. Though, so you don't think I'm avoiding the issue, I'll offer this. I said the bases are paired according to their molecular structure. A fascinating web presentation entitled ***DNA: Prelude to the Symphony of Life***, notes:

Adenine and guanine are classified as **purines** since they are double-ringed molecules. Cytosine and thymine and **pyrimidines** due to the fact that they are single-ringed molecules.

A purine binds with a pyrimidine in DNA to form a basepair. Adenine and thymine bind together to form the A-T basepair. Likewise, guanine and cytosine come together to form the G-C basepair. The bases are joined together by weak hydrogen bonds, and it is this hydrogen bonding that produces DNA's familiar double helix shape. (123)

Given that pyrimidines seemingly reflecting Unity and purines reflecting Duality, I would associate them with Mother and Son respectively, with the hydrogen bonds determining their final *Sp.* vs. ***Ph.*** designations:

Mother = Cytosine
 Son = Guanine
Mother = Thymine
Son = Adenine

There are two types of nucleic acids found in living things. I have focused on DNA, since it contains the key to the mystery of the creation, maintenance, and evolution of all life. It is the master control program for the cell's central processing unit. However, its instructions are carried out by three forms of RNA – nucleic acids that many scientists believe predated DNA in cellular evolution. While their workings are too complex to delve into, and for the most part unnecessary for our study, I didn't intend to overlook RNA completely. One thing all three forms have in common, aside from the type of sugar involved – ribose (from whence it gets its name) – is a specific difference from DNA found in the bases. As I noted on the previous page, instead of thymine, RNA contains uracil, a very similarly structured single-ringed pyrimidine also capable of forming a hydrogen bond with adenine. Thus, with respect to our quadrality, in RNA it would be associated with **Mother**. It is also, I feel, a key to understanding the order of terms in the eighth quadrality. That is the one we qualified to be an exception to the rule.

We already realize that **Father/Son // Mother/Daughter** also exists through *Rule #4* as the positive balance to **Father/Son // Daughter/Mother**; and when the *Quadralitic Grids* expand into the *Quadralitic Cube*, the first of these quadralitys would be found in the *Grids* above the second, having evolved from it. Nonetheless,

the second quadrality, with **Mother** in the Ph-Ph Realm, represents in [Figure 17C](#) the completion of the *Grids*, or, you might say, where Tangibility ends.

This applies in a rather magical way to RNA. RNA is used in the cell to synthesize proteins, which are composed of 20 amino acids. DNA specifies the order of these amino acids, and mRNA (messenger RNA, one of the three forms) conveys that information to the area where the process occurs. Each amino acid is identified by a specific order of nucleotides. Once again, I'll refer to Louis Levine's article:

DNA carries the instructions for the production of proteins. A protein is composed of smaller molecules called amino acids, and the structure and function of the protein is determined by the sequence of its amino acids. The sequence of amino acids, in turn, is determined by the sequence of nucleotide bases in the DNA. A sequence of three nucleotide bases, called a triplet, is the genetic code word, or *codon*, that specifies a particular amino acid. (124)

To understand why three nucleotides are needed to specify a given codon, consider that any of the four different nucleotides can be used in each position of it. Two nucleotides would only provide 16 possible variations (4x4), which is insufficient to code 20 amino acids. Thus, three are needed, resulting in 64 variations (4x4x4), more than triple the number of corresponding aminos. But, as it happens, most amino acids can be specified by more than one codon. This actually helps to eliminate misinterpretations when the code is read, since "the code is also non-overlapping; i.e., a nucleotide in one codon is never part of either adjacent codon. The code seems to be universal in all living organisms." (125) In addition, certain codons contain the information that tells the RNA where to start and stop reading the strand. This is because, as the just-referenced article on nucleic acid points out, 97% of a DNA strand has little known purpose, which is often, perhaps inappropriately I might add, referred to as junk (a fascinating point that will soon come up again). I mention this because, of the 64 possibilities, 3 codons exist with the aforementioned stop function. And each of those begins with the base uracil! Honest, I didn't make this up!

I'd like to return your attention to the quotation from our friends at ThinkQuest. You'll recall my earlier point that while the grids of [Figure 17C](#) don't actually show it, the energetic potential for the DNA spiral is there. In other words, the spiral in DNA is structural, as opposed to the energy spirals in [17C](#). Nonetheless, as the ThinkQuest team points out, it is the location of the energetic bonds within the base molecules that causes the spiral. That is, the molecules have to twist into that shape in order to be able to connect. Once strands separate – for replication or protein synthesis – they can then unravel and flatten out, allowing for complementary nucleotides to connect.

And I must also mention that, though it is at times drawn incorrectly, the spiral in DNA conforms to what is known as a right-hand screw, i.e., clockwise, while the *Quadralitic Grids* follow the *Left-hand Rule* from Spiritual to Physical. I feel that these rotations are not in conflict. Rather, while left-hand DNA does exist (its structure is much less common and more complex), I see this as a manifestation of behavioral reversal, since the *Right-hand Rule* does uphold the return movement from Physical to Spiritual in the *Grids* according to our conventions. (See *Footnote 195*, p. 620.)

124 Louis Levine, "Deoxyribonucleic Acid."

125 "Nucleic Acid," *The Columbia Encyclopedia*, Sixth Edition.

If you happen to visit their site, you will find a peculiar difference in their depiction of the arrangement of units in a nucleotide from mine. I adapted the convention of paring the sugar and phosphate together – thus symbolizing either Father or Daughter – as the vertical supports of the ladder. This alignment was Mr. Levine’s convention, as well. However, the ThinkQuest team decided to align the sugar with the base. I feel that the two alignments acknowledge the *means* role sugar plays as the center position in the nucleotide. In *Footnote 61* I drew an analogy to the **Tree of Life**, allowing the phosphate to represent the Vertical Principle and the base to represent the Horizontal Principle. Both depictions in question uphold this. However, you may have wondered, then, about my decision to place in alignment with the vertical what should be a central position – the sugar. As you can see, some have chosen to align it with the horizontal. That in itself points to what the *Izunome Principle* mandates – the ability as needed to favor either side! You may then decide to draw a DNA stick figure with the sugar as a diagonal. And, if you were to look at the original 3-D model of DNA built by Watson and Crick, the Nobel Prize winners for the discovery, it almost appears that way. It’s really more a matter of perspective. Mine comes from an understanding of the energetic and structural nature of the Universe based on the *Quadralitic Grids*. But, what a thing represents is more important than its graphic placement, given there is no conflict in those truths. In fact, without allowing for that flexibility, I couldn’t adapt my horizontal quadralities to fit a model for a molecule that calls for incorporating a vertical frame of reference.

Before we move on, there are two final points I’d like to bring to your attention, the first, because it will come up later. In 17C, the overall flow of energy seems to direct itself in a diagonal from the upper left corner of the *Sp. Grid* to the lower right corner of the **Ph. Grid**. When you then examine the nucleotide diagram I presented on p. 334, although the form is structural, you will note the same diagonal pattern appears to be evident. Moreover, it represents a flow that can be viewed as moving in either direction, as we know occurs in the *Quadralitic Grids*. To see it, just go back to Figure 17C, insert the return arrows omitted for clarity, and turn it upside down!

The second point is, the perfection that exists throughout the Universe even exists in its imperfection. Remember that junk DNA I told you about earlier? In a perfect Universe, even junk has a purpose! As living things evolved throughout the eons, it was extremely important that as few mistakes be made as possible when DNA was replicated or read for protein synthesis. Thus, nature, as an instrument for the infinitely wise God that orchestrated it, placed all sorts of safeguards in the cell mechanisms that would perform those functions. After all, any variations, even of a seemingly insignificant magnitude, could have serious repercussions.

However, this meticulous care needs only to take place in the small portions of DNA actually read for those purposes. And if one were to try to examine in those small portions the differences between individuals, they would be extremely difficult to discern without a sufficiently large sample. On the other hand, nature seems to care much less about the changes that might occur in the junk. And geneticists are just starting to explore its significance. But, to a forensic scientist the junk is the thing that could put a violent criminal behind bars, or perhaps prove someone’s innocence. Every person’s junk is different. From a forensic perspective, it’s the junk that in the long run identifies who we are, since it’s much easier to compare and requires less DNA for an identification. Junk is actually a short pattern of nucleotides that repeats, over and over, until the next good section of DNA comes along. The two things that make a person’s junk unique are: what’s in the pattern and how often it repeats.

The appearance – and importance – of junk actually points to an understanding of the balance in the Universe as reflected by Order and Chaos, one of the earliest manifestations of the Positive/Negative root duality. Chaos, like Evil, isn't all bad, since both can have a purpose. For that matter, as we'll later see, the Universe began as an act of Chaos, out of which came its final Order. And in the context of the "Chaos" of junk, "Order" still exists. To a cell, junk may be meaningless information; but it, too, has its structure. Moreover, it is a structure that is much simpler than the part of DNA that is supposedly meaningful. The repetitive patterns in junk can be simple because the cell knows enough not to read anything between a given stop codon and the next start codon. So, as long as junk doesn't contain one of those – which it can't or it wouldn't be junk – there is nothing for the cell's seemingly miraculous mechanisms of self-regeneration to get confused about.

That realization helps us to understand how something as complex as the string of readable codons in one's DNA can be modeled by something as elementary as the *Quadralitic Grids*. The patterns created from Mother/Son and **Mother/Son** appear rather simple. Thus, you may question how intricately complex DNA molecules can come from them. First, realize that the *Quadralitic Cube* once complete models the initial structure of the Universe in its quadralitically balanced intangible spiritual form, a form that preexisted even the Big Bang. And while the initial four base components are fixed, we can think of the patterns required for DNA structure evolving much as do the *further levels* of the *Cube*. Nonetheless, even at the *level* described by the eight quadralities in the two *Grids*, consider for yourself the genetic possibilities. Decipher the nucleotides modeled by the quadralities and construct codons along each strand. Any quadrality has the potential to represent the first nucleotide in a codon. The right strand represents the mRNA that would be formed from the left half of the DNA. Using the conversions on p. 336, and substituting uracil for thymine, we get:

G-U-C
 U-C-A
 C-A-C
 A-C-A
 C-A-G

In that strand, **Son-Son-Daughter** does not translate as a codon, since **Daughter** isn't one of the bases and the needed triplet is incomplete. Thus, in a symbolic way, the appearance of **Daughter** in place of **Mother** would represent junk.

To translate the RNA assembled from the right half of the DNA, begin at the bottom of the left strand, since strands translate in opposite directions. Thus, from bottom to top you arrive at:

A-C-U
 C-U-G
 U-G-U
 G-U-G
 U-G-A
 G-A-C

So, just by examining the eight quadralties of the *Quadralitic Grids* as cyclically derived, we have discovered the structural potential for 11 of the 64 possible codons (one of which, U-G-A, is a stop codon), and junk. Moreover, these quadralties can be read as linearly derived, down either horizontal plane to return along the other. Other readings could be done, as long as an energetically correct path is followed; such as circularly within each Root Realm, or in a figure-eight across the Balancing Center. Remember, the *Grids* are meant as symbolic tools to depict how *general* evolves to *specific*. Now, while I feel the case I've made is convincing, the science in it is admittedly open for conjecture. Still, the *Quadralitic Grids*, and the *Cube* into which they will evolve, have given *21st century possibility* a totally new realm to explore.

And that possibility begins with simple repetitive patterns that, when examined in the context of tangible phenomena like DNA, have the ability to establish unique individual identities. In a short while, we'll be examining the other types of energy patterns that can be found in the *Quadralitic Grids* – the motion of waves that underlie Light and Sound. Those waves also begin as simple repetitive patterns, and they too have the ability to make unique individual distinctions. Before genetic identification became such an important and compelling aspect of forensic evidence, voice patterns had been used to establish a criminal's identity when such evidence was available. Each pattern is uniquely different, something even the best vocal impressionist can't duplicate. Interestingly, the basic constituents of matter provide their own parallel. Since the middle of the 19th century, scientists have known that when an element was heated it gave off distinct wavelengths of light. These were referred to as emission spectra and provided scientists with the unique fingerprint of an element. When they then compared these to the light coming from distant stars, the absorption spectra of these stars, already known for decades as Fraunhofer lines, exactly matched the emission spectra of the elements in their surrounding gasses. Such patterns became significant tools to study the origin and nature of these powerful celestial bodies throughout the vast reaches of our Universe, and during all stages of its existence.

Earlier I spoke of the debate between Evolutionists and Creationists for the bragging rights to the secret of life. My contention then was, and it still is, that no matter how persuasive DNA research may be in pointing to the roll of Evolution in this process, there is still a spiritual aspect that must be left to the Master of the Unexplainable. Whether one considers Soul in a theological sense, or as another way of describing Mind, all must agree there is something in that of Mankind separating it from any earthly life form preceding it. And whatever difference may be found in DNA would only be its physical reflection – a difference that is surprisingly non-dramatic.

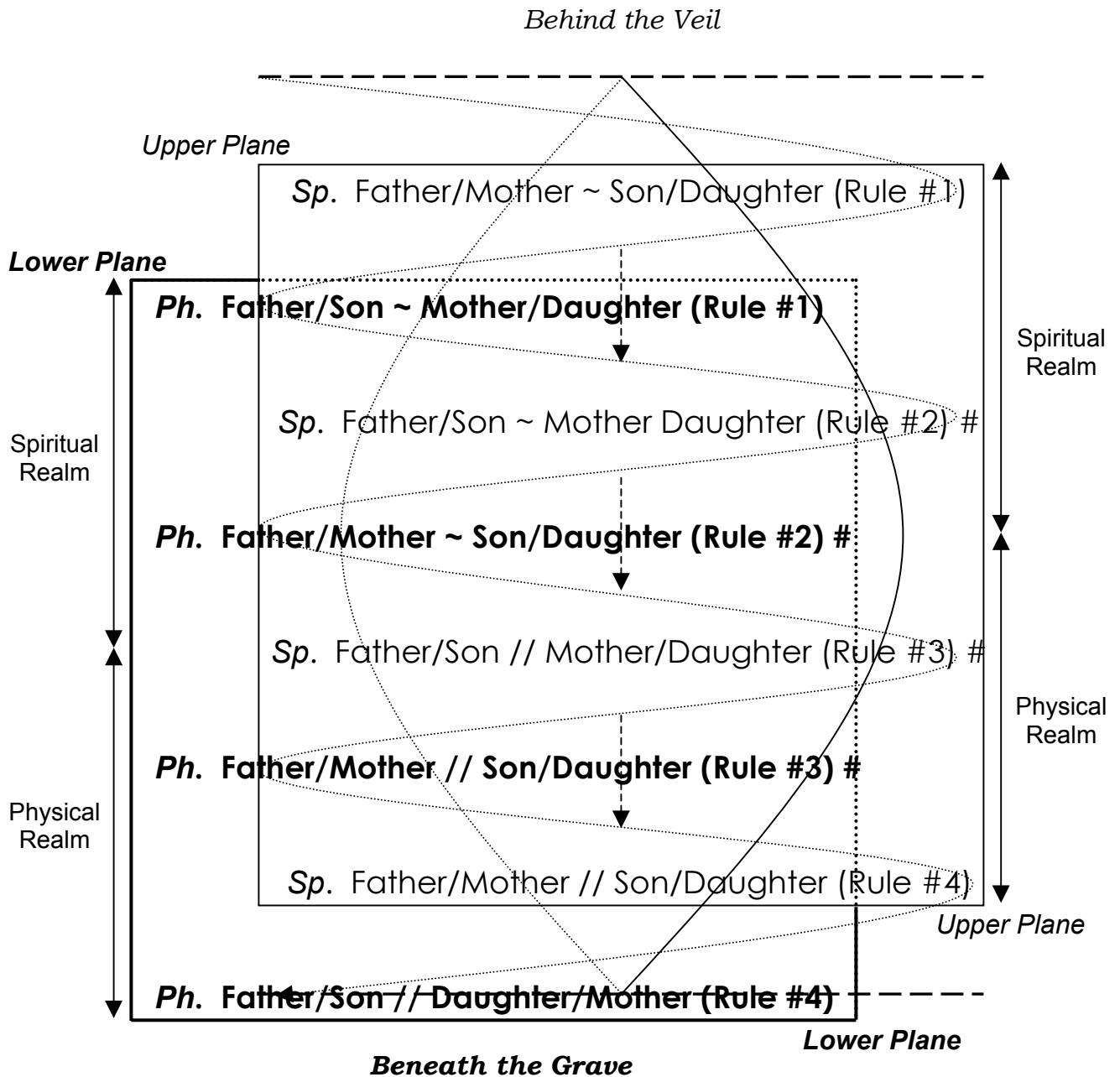


Figure 17L : **4x4 Quadralitic Grids**
with energy flow lines reflecting
linear derivations.