

Realm Theory - A theory of everything

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Abstract

*Realm Theory is a meta-pattern. Three Realms (frames of reference) interconnect to show how everything has a Place (Realm One), is dual (Realm Two) and exists as an infinite web of possibility (Realm Three). The **purpose** is evolution, the **process** is quantum chaos and the **structure** is basic set theory. We describe the quantum chaotic pattern of these three Realms using eight phase spaces. The relationships and connections of these eight phase spaces create 'all the intricate order we see about us and the order we have yet to envision' (Goerner, 1995a, p17). Once the pattern is understood, the consequent paradigm shifts will spark a revolution of science.*

Introduction

Science is based on identifying “fundamental underlying organisational patterns” (Vandervert, 1995). Most scientists in physics, biology and chemistry accept the interdependence and non-linear nature of life (Stapp, 2007; Abraham & Gilgen, 1995; Robertson and Coombs, 1995; Gribbin, 2009; Bertuglia & Vaio, 2005; Devaney, 1992; Stockman 1999). Because everything is connected, there must be a pattern that connects everything. Any naturally occurring pattern must adhere to the scientific principles of chaos theory and quantum physics or as Stockman (1999) asserts ‘quantum chaos’. The scientifically established principles of quantum chaos include: interdependence, non-linear, self-organised, dynamic, fractal, infinite, complete, symmetrical, relational, anchored at zero (Goerner, 1995a, 1995b; Gribbin, 2009; Field & Golubitsky, 2009; Pribram & Meade, 1999); duality, probability, equilibrium (Gubser, 2010; Stockman, 1999). Violation of any principle results in isolation, fragmentation and eventually disintegration (Gribbin, 2009).

In scientific literature, chaotic systems are usually computer generated patterns not chaotic patterns of nature (Anishchenko et al, 2007). Mathematics, cannot process the ‘fuzzy’ nature of the natural world (Kauffman, 1975), where things can simultaneously be in more than one category, or fluctuate between existence and non-existence as in particle physics (Gubser, 2010). A natural chaotic pattern of everything is too complex for a mathematical formula at this stage (Anishchenko et al, 2007). A mathematical formula may be developed, but this is beyond the scope of this paper.

By understanding the nature, relationships and purpose of the system, we can understand how life works. This paper structures and organises a quantum chaotic pattern by using a framework called Realm Theory. In Realm Theory everything has three interdependent Realms made up of three interdependent Worlds that interact to form “all the intricate order we see about us and the order we have yet to envision” (Goerner, 1995, p 17).

There are infinite ways to subdivide the universe with infinite perspectives: a pattern that includes all of these subdivisions and all of these perspectives would be too complex. However, viewing the universe with just a single subdivision and from just a single perspective is far too simplistic. Neither of these models would be a reasonable pattern for everything. Thus, a reasonable pattern for everything must be a compromise of multiple divisions and multiple perspectives: simple, but not simplistic. Realm Theory outlined in this paper is one such reasonable pattern. This paper relies on set theory, which is fundamental to mathematics and science (Kauffman, 1975); it is based on laws of logic, which are argued to be laws of nature (Mittlestaedt & Weintgartner, 2005). Finally, in order for a pattern to be valid, it must also be true. Therefore, this paper also sets out a proof for Realm Theory. The proof itself is based on indisputable tautology and as such is somewhat insignificant but, the fact that it is necessarily true means that Realm Theory is also a valid model.

Thus Realm Theory is a reasonable and valid pattern of everything based on quantum chaos.

1. Valid Pattern

We will start by proving that Realm Theory is a valid pattern of everything. For now we will assume that all sets are crisp sets: special instances of fuzzy sets where membership is restricted to 1 or 0 (Kauffman, 1975). Set theory asserts that the Universal set is made up of any arbitrary set and its complement: $U = A \vee A'$. Let...

- ①_A be $E \wedge H$
 - ①_A is the intersection of the set E and the set H
- ②_A be $E \oplus H$
 - ②_A is the set of anything in the set E or the set H, but not in both
- ③_A be $E' \wedge H'$
 - ③_A is anything not in the set E and not in the set H

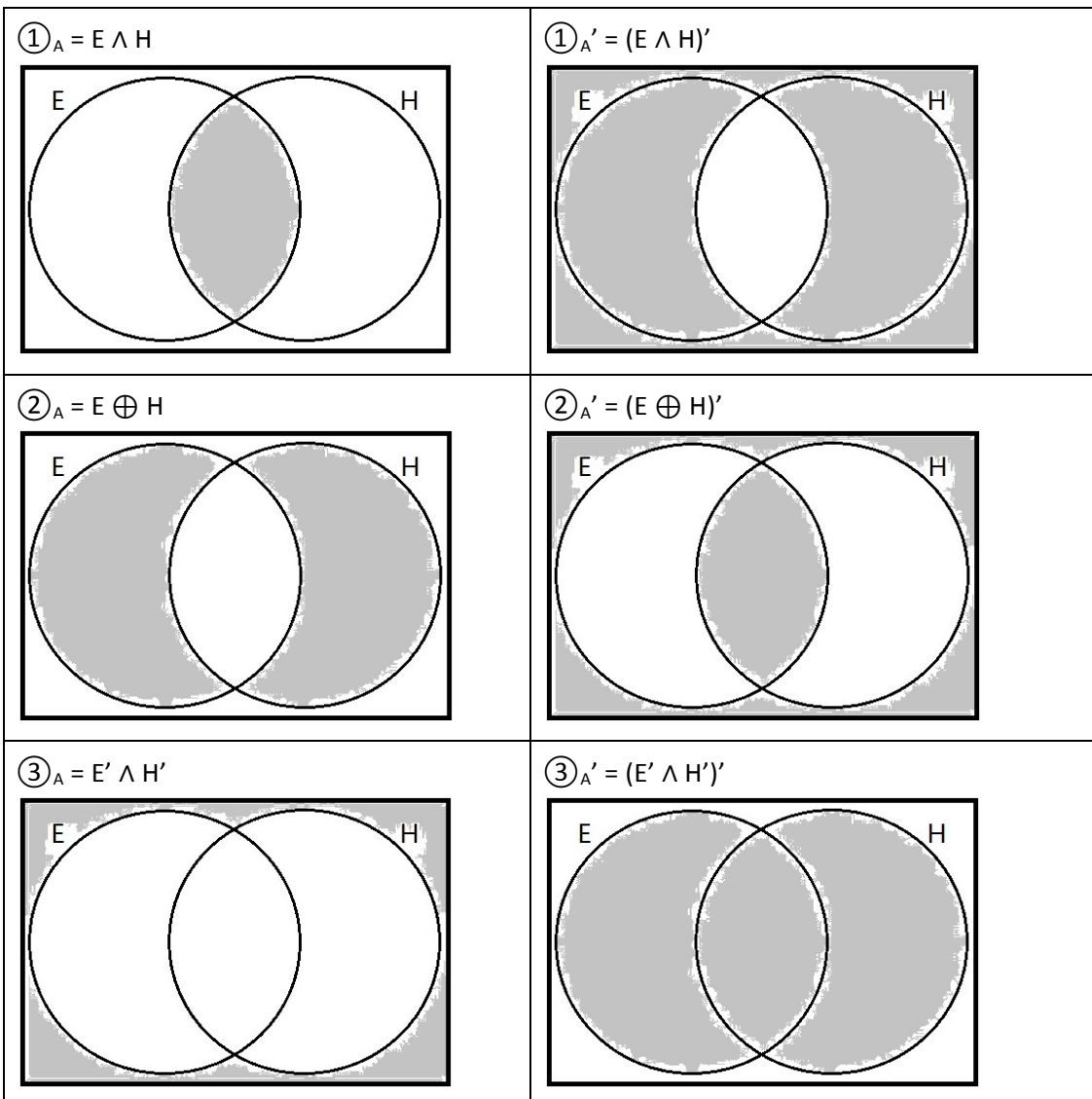
We will assign meaning to these sets later, but for now we are just using E and H so as to not obscure the logical proof with semantic meaning.

From the above definitions, the following are true:

- $U = ①_A \vee ①_{A'} = (E \wedge H) \vee (E \wedge H)'$
- $U = ②_A \vee ②_{A'} = (E \oplus H) \vee (E \oplus H)'$
- $U = ③_A \vee ③_{A'} = (E' \wedge H') \vee (E' \wedge H')$

These are illustrated in Figure 1.

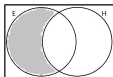
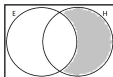
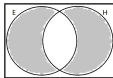
Figure 1. Valid pattern



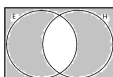


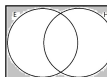
From Figure 1, we can see that:

- $\textcircled{1}_A = (\textcircled{2}_A \vee \textcircled{3}_A)'$

Now let...

- PE_A be the set $E \wedge H'$ 
- PH_A be the set $E' \wedge H$ 
- And $\textcircled{2}_A$ be $PE_A \vee PH_A$
 - $\textcircled{2}_A = (\textcircled{1}_A \vee \textcircled{3}_A)'$

Now let...

- O_A be the set $E' \vee H'$
 - $O_A = \textcircled{1}_A'$
- T_A be the set $E' \vee H$
 - $T_A = PE_A'$
- S_A be the set $E \vee H'$
 - $S_A = PH_A'$
- And $\textcircled{3}_A$ be $O_A \wedge (T_A \wedge S_A) = (E' \vee H') \wedge ((E' \vee H) \wedge (E \vee H')) = E' \wedge H'$
 - $\textcircled{3}_A = (\textcircled{1}_A \vee \textcircled{2}_A)'$

All sets defined so far have a subscript 'A'. Let's assume an alternate dimension with the subscript 'B'. The 'B' dimension divides the universe similar to the 'A' dimension, but all E and H values are negated, such that:

- $\textcircled{1}_B = E' \wedge H'$
 - $\textcircled{1}_B = (\textcircled{2}_B \vee \textcircled{3}_B)'$
- $\textcircled{2}_B = E' \oplus H'$
 - $PE_B = E' \wedge H$
 - $PH_B = E \wedge H'$
 - $\textcircled{2}_B = PE_B \vee PH_B$
 - $\textcircled{2}_B = (\textcircled{1}_B \vee \textcircled{3}_B)'$
- $\textcircled{3}_B = E \wedge H$
 - $O_B = E \vee H$
 - $T_B = E \vee H'$
 - $S_B = E' \vee H$
 - $\textcircled{3}_B = O_B \wedge (T_B \wedge S_B)$
 - $\textcircled{3}_B = (\textcircled{1}_B \vee \textcircled{2}_B)'$

Everything thus far is tautologically true and therefore a completely valid pattern. It is summarised in the table below, which also assigns names to the defined sets. Whilst these names begin to attribute meaning to the sets, detailed descriptions are reserved for the next section.

Table 1. Defined sets as described in valid pattern.

Realms	Universe/s	Core	Core – Above	Core – Below	Complement
Realm One ①	1-verse U=①v①'	Entities	Inner E∧H	Outer E'∧H'	Place
Realm Two ②=PEVPH	E-verse U=E	Energy	Pure Energy Above E∧H'	Pure Hule Below E∧H'	Channels E∧H
	H-verse U=E'	anti- Energy	Pure Hule Above E'∧H	Pure Energy Below E'∧H	Vessels E'∧H'
Realm Three ③=O∧(TAS)	O-verse U=OVO'	Omneity	Omneity Here E'∧H'	Omneity There EVH	Nowhy (Entities)
	T-verse U=TVT'	Time	Time Here E'∧H	Time There EVH'	Nowhen (Pure Energy)
	S-verse U=SVS'	Space	Space Here EVH'	Space There E'∧H	Nowhere (Pure Hule)

We will now demonstrate that Realm Theory is a reasonable pattern for everything, before discussing how it is also a chaotic pattern.

2. Reasonable Pattern

Realm Two: Energy and Hule, Above and Below

Realm two has an E-verse and an H-verse and is therefore dual. This Realm aligns with a quantum physics perspective. Quantum physics has established that everything is dual and that Energy has form without substance nor mass (Gubser, 2010). Physicists have also established a mass in the universe with no form: that is with no protons and no neutrons; described as substance with no form (Gubser, 2010). We are calling this substance without form *Hule*. Hule is a Greek word meaning *matter* that was also used by Aristotle over 2,000 years ago. McDonald (2003) uses the term Hule as well to describe a mass without any form that is within the mind. We are uniting these three semantically related senses from three different disciplines and calling them all Hule. Because Hule has no form, it doesn't take up any space and is at the moment immeasurable. The E-verse is the scope of quantum physics and the H-verse could be what Jung describes as the collective unconscious (Hergenhahn, 1984), which may account for the assertion that the further you go within the human mind the closer you get to quantum physics (Pribram, 2004).

Energy and Hule are opposites and therefore Pure Energy (Energy without Hule) and Pure Hule (Hule without Energy) are in a reciprocal relationship. We refer to the two sides of this reciprocity as Above and Below, but they could just as rightly be referred to using any term for other symmetrically reciprocal relationships, such as left and right. Pure Energy Above and Pure Hule Below is the core of the E-verse, while Pure Hule Above and Pure Energy Below are the core of the H-verse. Thus, Pure Energy and Pure Hule are actually part of both cores, but with reversed polarity.

Energy flows through *Channels*, which are the complement of the E-verse and anti-Energy flows through *Vessels*, which are the complement of the H-verse. Channels are made up of Realm One Above and Realm Three Below, whereas Vessels are made up of Realm Three Above and Realm One Below (Table 2).

Energy and Hule are never lost from the system. Energy and anti-Energy transform dynamically throughout the system, but Hule and anti-Hule do not transform because neither has form. The Energy and anti-Energy transformations create the dynamic nature of Realm Theory; this will be discussed next. The Hule types and Hule alignments create the chaotic nature of Realm Theory; this will be discussed later.

Table 2. E-verse, H-verse Above and Below

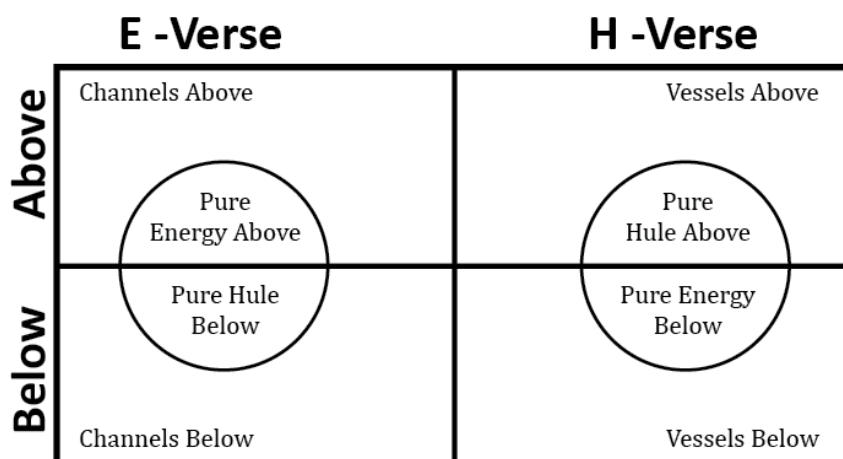
E-verse	Core	Complement (Channels)
Above	$E \wedge H'$ (Pure Energy)	$E \wedge H$ (Realm One)
Below	$E \wedge H'$ (Pure Hule)	$E \wedge H$ (Realm Three)

H-verse	Core	Complement (Vessels)
Above	$E' \wedge H$ (Pure Hule)	$E' \wedge H'$ (Realm Three)
Below	$E' \wedge H$ (Pure Energy)	$E' \wedge H'$ (Realm One)

Energy connections

Energy and anti-Energy flow through the system in three different ways. Figure 2 is divided into Above and Below; E-verse and H-verse; core (inside the circles) and complement (outside the circles).

Figure 2. Realm Two



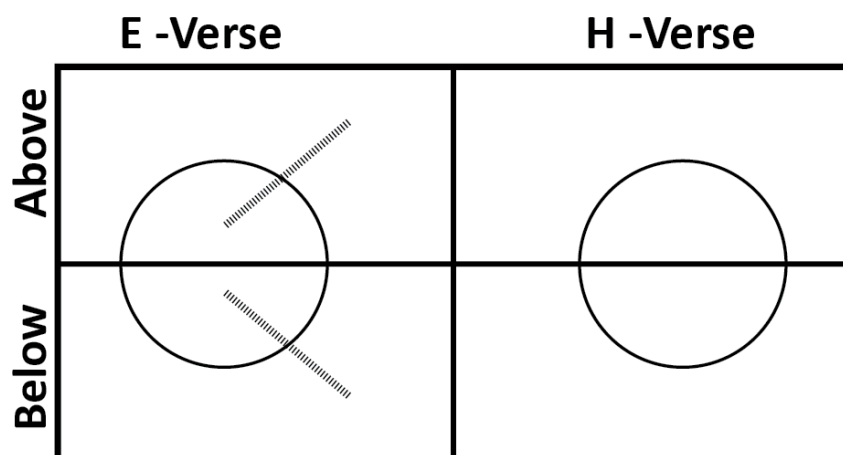
When Energy transforms from $E \wedge H$ (Energy with Hule) to $E \wedge H'$ (Energy with anti-Hule), we call this Energy *manifesting*. This happens both Above and Below in the E-verse. Energy manifests when it transforms from Channels Above ($E \wedge H$) into Pure Energy ($E \wedge H'$). An example of this is when potential energy (Energy in an Entity) becomes another form of Energy such as nuclear energy, kinetic energy, etc. (Pure Energy). Energy also manifests when it flows from Channels Below ($E \wedge H$) to Pure Hule Below ($E \wedge H'$).

When the Energy flows the opposite way, we say that Energy is *absorbing*. An example of Energy absorbing is kinetic energy becoming potential energy. Absorbing also happens Above and Below in the reverse direction of manifesting. Energy absorbs into Channels Above from Pure Energy Above and Energy Absorbs into Channels Below from Pure Hule Below.

Manifesting and Absorbing is all to do with Energy's relationship to Hule. When something has Energy and Hule ($E \wedge H$), then Energy and Hule's relationship is equal. When something has Energy and anti-Hule ($E \wedge H'$), then Energy is greater than Hule. Thus, Energy manifests when it remains constant, but it increases relative to Hule, whereas Energy absorbs when it remains constant, but it decreases relative to Hule.

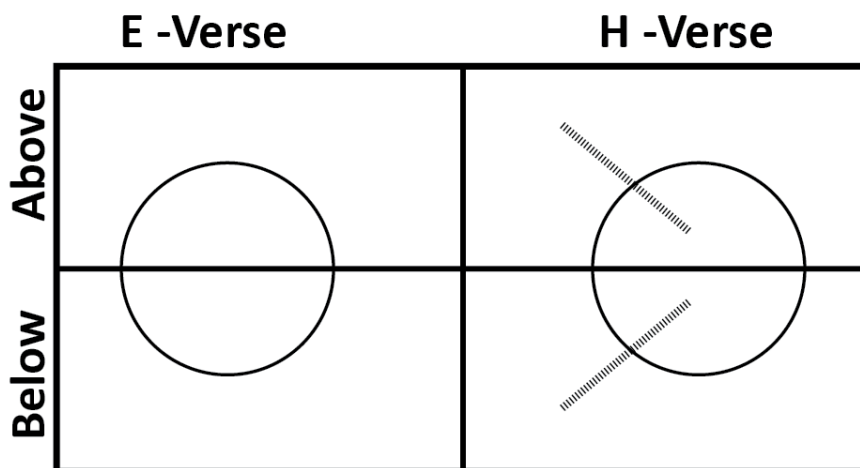
Manifesting and Absorbing form connections between Channels Above and Pure Energy Above and also between Channels Below and Pure Hule Below. These are shown in Figure 2.

Figure 2. Manifesting and absorbing Energy



Parallel connections happen in the H-verse involving anti-Energy. When anti-Energy transforms from $E' \wedge H$ to $E' \wedge H'$, the Energy remains constant, but it's relationship to Hule goes from 'less than' to 'equal to': Energy's relationship to Hule increases. Thus we also call this Energy manifesting. When anti-Energy transforms from $E' \wedge H'$ to $E' \wedge H$, Energy goes from 'equal to' to 'less than', which we call Energy absorbing. Again, Energy manifests and absorbs both Above and Below. Energy manifests from Pure Hule Above ($E' \wedge H$) to the Vessels Above ($E' \wedge H'$) and also from Pure Energy Below ($E' \wedge H$) to Vessels Below ($E' \wedge H'$). Energy absorbs in the opposite direction. These transformations form connections within the H-verse, (Figure 3).

Figure 3. Manifesting and absorbing anti-Energy



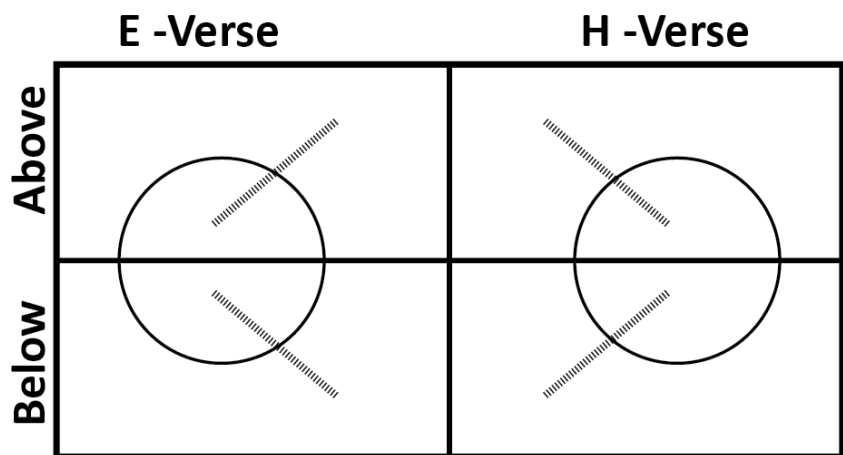
Note that we continue to say 'Energy absorbing/manifesting' when in the H-verse. This could also be thought of as anti-Energy manifesting when it goes from $E' \wedge H'$ to $E' \wedge H$ (which patterns well with Energy manifesting being $E \wedge H$ to $E \wedge H'$), but remember that when anti-Energy manifests, it is equivalent to Energy absorbing. Table 3 shows a summary of the four manifesting transformations and the four absorbing transformations.

Table 3. Summary of manifesting and absorbing Energy transformations

	From	To	E's Relationship to H	Transformation
Energy	E∧H (=) Entities Above	E∧H' (>) Pure Energy Above	Increases	Manifesting
Energy	E∧H (=) Infinites Below	E∧H' (>) Pure Hule Below	Increases	Manifesting
Energy	E∧H' (>) Pure Energy Above	E∧H (=) Entities Above	Decreases	Absorbing
Energy	E∧H' (>) Pure Hule Below	E∧H (=) Infinites Below	Decreases	Absorbing
anti-Energy	E'∧H (<) Pure Hule Above	E'∧H' (=) Infinites Above	Increases	Manifesting (E' Absorbing)
anti-Energy	E'∧H (<) Pure Energy Below	E'∧H' (=) Entities Below	Increases	Manifesting (E' Absorbing)
anti-Energy	E'∧H' (=) Infinites Above	E'∧H (<) Pure Hule Above	Decreases	Absorbing (E' Manifesting)
anti-Energy	E'∧H' (=) Entities Below	E'∧H (<) Pure Energy Below	Decreases	Absorbing (E' Manifesting)

In Figure 5, leftward movement is Energy manifesting (movement from complement to core in the E-verse and movement from core to complement in the H-verse) and rightward movement is absorbing. At this stage, only manifesting Energy and absorbing energy can be measured.

Figure 5. Manifesting and absorbing Energy transformations



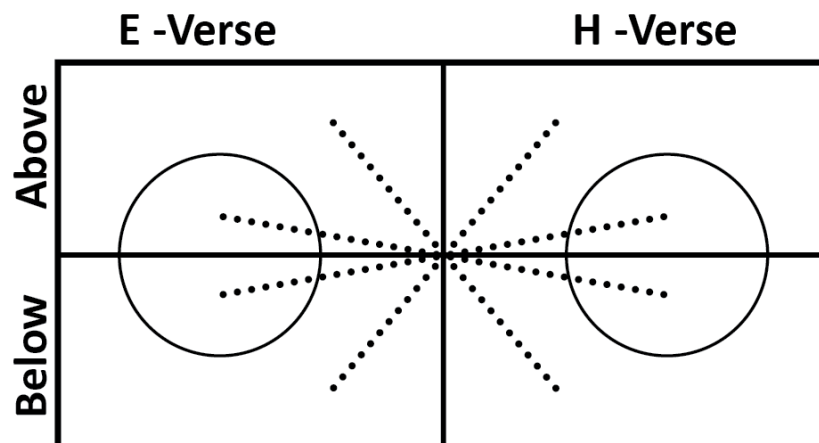
The second type of Energy transformation is between Energy and anti-Energy. When Energy transforms into anti-Energy, we call this Energy *contracting*. When anti-Energy transforms into Energy, we call this Energy *expanding*. These transformations occur between the two dimensions of Above and Below and between the two universes E-verse and H-verse. This is the opposite of manifesting and absorbing, which occur within dimensions (Above and Below) and within each universe (E-verse and H-verse). Thus:

- Energy contracts from:
 - Pure Energy Above ($E'\wedge H$) into Pure Energy Below ($E\wedge H'$)
 - Pure Hule Below ($E'\wedge H$) into Pure Hule Above ($E\wedge H'$)
 - Channels Above ($E\wedge H$) into Vessels Below ($E'\wedge H'$)
 - Channels Below ($E\wedge H$) into Vessels Above ($E'\wedge H'$)
- Energy expands from:
 - Pure Energy Below ($E'\wedge H$) into Pure Energy Above ($E\wedge H'$)
 - Pure Hule Above ($E'\wedge H$) into Pure Hule Below ($E\wedge H'$)
 - Vessels Below ($E'\wedge H'$) into Channels Above ($E\wedge H$)
 - Vessels Above ($E'\wedge H'$) into Channels Below ($E\wedge H$)

When Energy contracts and expands, its relationship with Hule either remains unequal (Pure Energy and Pure Hule) or it remains equal (Channels and Vessels). When Energy contracts from Channels Above to Vessels Below, the physical universe expands. When Energy expands in the opposite direction, the physical universe contracts.

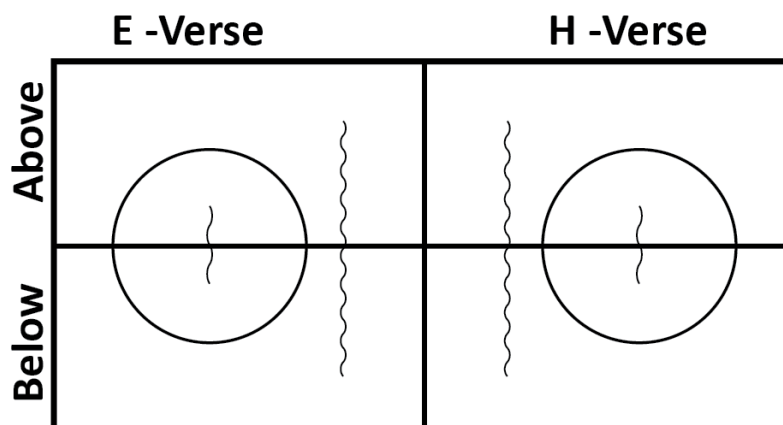
Similar to absorbing and manifesting, these transformations create paths for Energy to flow through as are demonstrated in Figure 6. In Figure 6 leftward movement is Energy expanding, rightward movement is Energy contracting. This form of Energy is not able to be measured directly at this stage.

Figure 6. Expanding and contracting Energy transformations



The final set of connections we call cross connections, shown in Figure 7. Cross connections, connect across dimensions (Above and Below) but within each universe (E-verse and H-verse).

Figure 7. Cross-connecting Energy flow



Energy flows in the E-verse from:

- Channels Above ($E\Lambda H$) to Channels Below ($E\Lambda H$), or vice versa
- Pure Energy Above ($E\Lambda H'$) to Pure Hule Below ($E\Lambda H'$), or vice versa

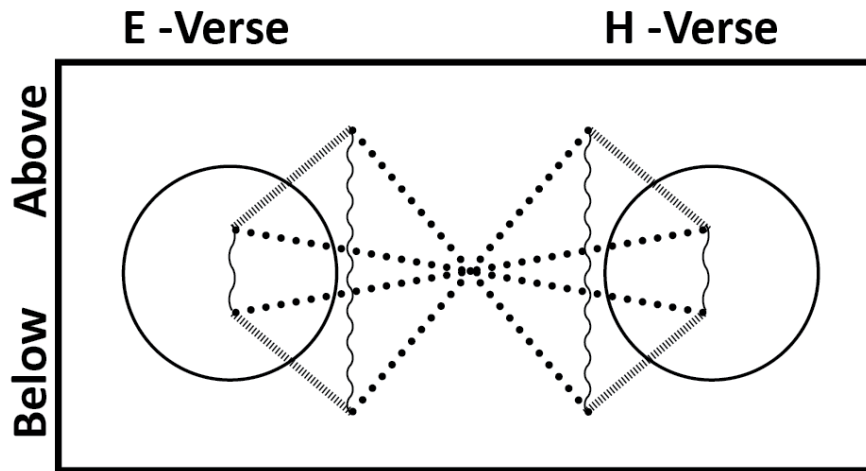
Anti-Energy flows in the H-verse from:

- Vessels Above ($E'\Lambda H'$) to Vessels Below ($E'\Lambda H'$), or vice versa
- Pure Hule Above ($E'\Lambda H$) to Pure Energy Below ($E'\Lambda H$), or vice versa

For these cross connections, Energy and anti-Energy flow across dimensions but do not transform.

These Energy (and anti-Energy) connections are between Here and There in the O-verse (discussed later) and are shown in Figure 8 (with the gridlines removed for clarity).

Figure 8. Summary of Energy and anti-Energy connections



Energy is able to transform because it has form. Energy is able to flow because it doesn't have substance. Hule is different. Hule has substance and no form and so it cannot flow, nor transform. We will discuss this later.

Realm One: Entities, Inner and Outer

Entities are things in the everyday reality of life. Some examples of Entities are;

- Cell
- Atom
- Person
- Group
- Community
- Classroom
- School
- Country
- Universe
- Process
- Procedure
- Language

Entities are not restricted to the current reality; Entities are anything from this time or another time and this space or another space. Entities are the core of the 1-verse. This core is divided into the two Worlds: Inner and Outer. For any single Entity, the Inner World is that Entity itself, whereas Outer refers to any Entity that is not a-part-of that Entity. The Inner world is Energy and Hule Above. The Outer world is anti-Energy and anti-Hule Below. Inner and Outer are relative terms. If the Entity is a person, then skin, bones, muscles, organs are all Inner, whereas any other person or thing in the Universe is Outer. If the Entity is a family, then each member of that family are Inner and every

other person or thing in the Universe is Outer. If the Entity is water, then Inner is every water molecule in the Universe, whereas Outer is anything that is not a water molecule in the Universe. If the Entity is our universe then everything within this universe is Inner and everything else in the Universe is Outer.

The Complement World of the 1-verse is Place. Place corresponds to the when, where, why and how every Entity exists. This World is of very little importance from a Realm One perspective. Most current scientific theories adopt a Realm One perspective. They use the simple present tense to indicate the theory is static. For example, the statement “ e equals mc squared” uses third person singular ‘ s ’ and doesn’t state the Place in which this theory is true.

Referring back to the set notation in the introduction, it is clear that the Inner world exists in the intersection of Energy and Hule Above ($\textcircled{1}_A = E \wedge H$) and the Outer world exists in the intersection of anti-Energy and anti-Hule Below ($\textcircled{1}_B = E' \wedge H'$). It is also worth noting that Entities exist in the intersection of Time and Space, which can be seen in the logical proof, but will be further discussed in the next section.

Now, consider a person. Everything inside that person is part of that person and therefore is Inner, an Entity Above and Here in Time and Space. Everything outside that person is Outer, an Entity Below and There in Time and Space. This is true for every person. Therefore a person is Inner to themselves, but Outer to everyone else. This means that every person is simultaneously Inner and Outer; Above and Below; Here and There.

Now consider a family. Every family member is part of that family and is therefore Inner and every person not in that family is Outer. Again, this is true of every family and therefore every family is simultaneously Inner and Outer; Above and Below; Here and There. By logical syllogism, every Entity is simultaneously Inner and Outer; Above and Below; Here and There. We call this the triple duality of life.

Realm Three: Omneity, Time and Space

Realm Three has three separate universal perspectives, as stated above as O-verse, T-verse and S-verse. Part of this Realm aligns with Einstein’s theory of relativity (T-verse and S-verse) and part of this Realm aligns with Cantor’s infinite mathematics (S-verse and O-verse) (Dauben, 1990). Realm Three exists as a web of relative possibilities and can be described as Infinities. Time, Space and Omneity are Infinities.

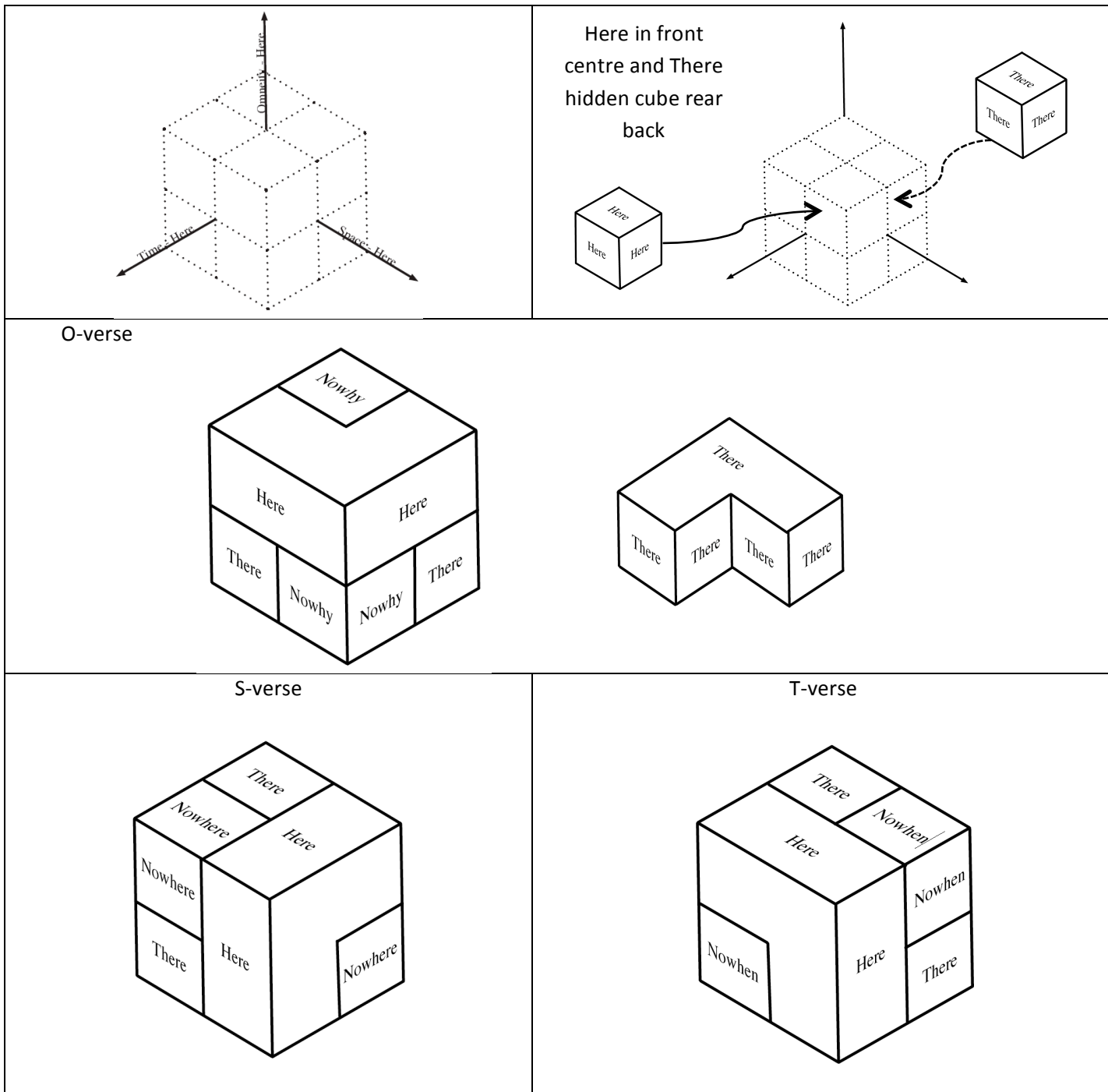
The Core of the T-verse is Time. Its complement is Nowhen. Nowhen corresponds to Pure Energy and Time is the reciprocal of Pure Energy. The core of the O-verse is Omneity. Its complement is Nowhy. Nowhy corresponds to Entities and Omneity is the reciprocal of Entities. The Core of the S-verse is Space. Its complement is Nowhere. Nowhere corresponds to Pure Hule and Space is the reciprocal of Pure Hule.

The three Cores - Omneity, Time and Space - are each divided into two worlds: Here and There. Here and There differ between the universes and are reciprocal between dimensions.

Here and There across the O-verse, T-verse and S-verse can be graphed in three dimensions such that each axis distinguishes between Here and There for each of the three universes, shown in Figure 9.

In each of these diagrams, the hidden eighth cube is There. Here in Time, Space and Omneity correspond in each image as does There in Time, Space and Omneity. Here and There anchor the system. The purpose of these cubes is to demonstrate the three-dimensional overlap between the three universes; O-verse, T-verse and S-verse and how they map onto the eight permutations of Omneity, Time and Space both Here and There.

Figure 9. Realm Three – O-verse, T-verse and S-verse



In the introduction, we gave a logical proof of Realm Theory. Now that we have given an overview of each of the three Realms, we would like to remind you of an important feature of the model;

$$\textcircled{1} = (\textcircled{2} \vee \textcircled{3})'$$

$$\textcircled{2} = (\textcircled{1} \vee \textcircled{3})'$$

$$\textcircled{3} = (\textcircled{1} \vee \textcircled{2})'$$

This means that;

- Entities (Realm One) are created from the negative space of the union of Pure Energy and Pure Hule (Realm Two), with the intersection of Time, Space and Omneity (Realm Three)
- Pure Energy and Pure Hule (Realm Two) are created from the negative space of the union of Entities (Realm One) with the intersection of Time, Space and Omneity (Realm Three)
- Time, Space and Omneity (Realm Three) are created from the negative space of the union of Entities (Realm One), with Pure Energy and Pure Hule (Realm Two)

It is possible that each of the three verses from a Realm Three perspective (O-verse, T-verse and S-verse) forms what quantum physicists have identified as closed two brane systems (Gubser, 2010). In all three universes, the four expanding and contracting Energy connections connect Here and There. So that Here forms the inside and There forms the outside or vice versa. When all three universes combine it is possible that these form a closed three brane system (Gubser, 2010), and that Here in Time, Space and Omneity and There in Time Space and Omneity are critical to understanding how these interconnect. The four Energy cross connections anchor these three universes. Further investigation is required.

3. Chaotic Pattern

Hule types, switches and alignments

As we defined earlier, Hule is substance without form. There are eight types of Hule. A Hule type is defined by the polarity of the Hule, the dimension and what type of Energy it attracts. These Hule types correspond to each of the eight segments of the Energy connection diagrams and also the eight permutations of Omneity/Time/Space both Here and There. For the Hule type we use a three-character code. The first character is either H (Hule) or A (anti-Hule); the second character is either A (Above) or B (Below) and; the third is either + (Hule that attracts Energy) or - (Hule that attracts anti-Energy). The eight types of Hule are:

1. HA+: Hule Above that attracts Energy
2. HB+: Hule Below that attracts Energy
3. AA+: anti-Hule Above that attracts Energy
4. AB+: anti-Hule Below that attracts Energy
5. AA-: anti-Hule Above that attracts anti-Energy
6. AB-: anti-Hule Below that attracts anti-Energy
7. HA-: Hule Above that attracts anti-Energy
8. HB-: Hule Below that attracts anti-Energy

These eight Hule types correspond to the eight segments on the Energy connection diagrams and also the eight cubes on the Realm Three cube diagrams. While they are essentially a different name for the same thing, they offer a different perspective, which is important for the chaotic patterning described in this section. For ease of comprehension, we have tabulated the different names in Table 4.

Table 4. Summary of names used in each Realm relative to Hule types

Realm Two		Realm Three			Realm One
Hule types	Energy segments	Time	Space	Omneity	Entities
HA+	Channels Above	Here	Here	Nowhy	Inner
HB+	Channels Below	Here	Here	Here	Place
AA+	Pure Energy Above	Nowhen	Here	Here	Place
AB+	Pure Hule Below	There	Nowhere	There	Place
AA-	Vessels Above	There	There	There	Place
AB-	Vessels Below	There	There	Nowhy	Outer
HA-	Pure Hule Above	Here	Nowhere	Here	Place
HB-	Pure Energy Below	Nowhen	There	There	Place

Out of the eight Hule types, there are two natural classes; all Energy connections happen between these two classes; no Energy connection happens within these two classes. One of these two classes includes AB- and everything that is Here in Omneity. The other class includes HA+ and everything that is There in Omneity. We will call the former *Yin* and the latter *Yang*.

Yin (only have Energy connections with Yang)

- HA-
- AB-
- AA+
- HB+

Yang (only have Energy connections with Yin)

- HA+
- AB+
- AA-
- HB-

The four Hule types of both Yin and Yang consist of:

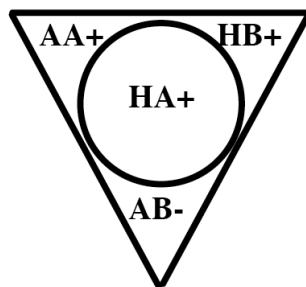
- 1:3 split between Entities and Place
- 2:2 split between Above and Below; E-verse and H-verse; core and complement
- 2:2 split between Hule and anti-Hule, Above and Below and Hule that attracts Energy/anti-Energy
- 3:1 split between O-verse and Nowhy; T-verse and Nowhen; S-verse and Nowhere

Each Yin has Energy connections with three Yang and each Yang has Energy connections with three Yin. The Yin and Yang that don't connect we call *Sister Hule types*. The Sister Hule Types are HA- and HA+, AB- and AB+, AA+ and AA-, and HB+ and HB-. Sister Hule types are three Energy connections away from one another.

These Hule types align in a chaotic pattern and Energy flows between these different Hule types. Energy is able to flow because it has no substance and it is able to transform because it has form. Hule by definition is substance without form, so it can neither flow nor transform. The alignment of the different Hule types is important. In order to show this, we need to build a new diagram where any segment is only adjacent to a segment that it shares an Energy connection with; the reason why Hule types that share an Energy connection must be adjacent is so that Energy continues to flow through the system.

We will start with HA+ in a circle and draw an equilateral triangle around it, such that the sides of the triangle are all tangent to the circle (Figure 10). Three segments are formed outside the circle, but inside the triangle. In these three segments we will write the three Hule types that form the three Energy connections with HA+ (AA+, HB+, AB-).

Figure 10. Inner triangle



These four Hule types are aligned such that adjacent Hule types share an Energy connection. Three different Hule types each have Energy connections with two of these outside three Hule types. The best way to illustrate this is by drawing another circle around the triangle. Finally, we will draw another triangle around the outside of this circle for the final connection with each of the outside Hule types, which are all HA- (Figure 11). HA- is the sister hule type to HA+ and requires three energy connections to connect. We can then map the Energy connections onto (Figure 12).

Figure 11. Example of alignment of Hule types

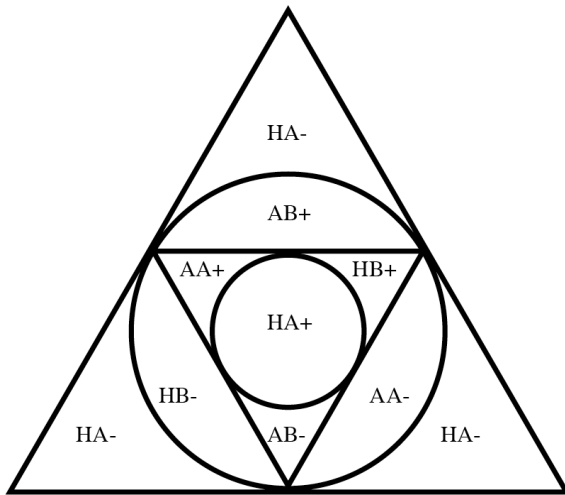
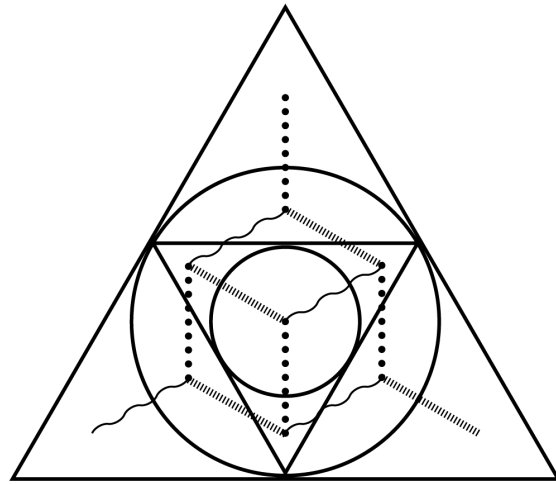
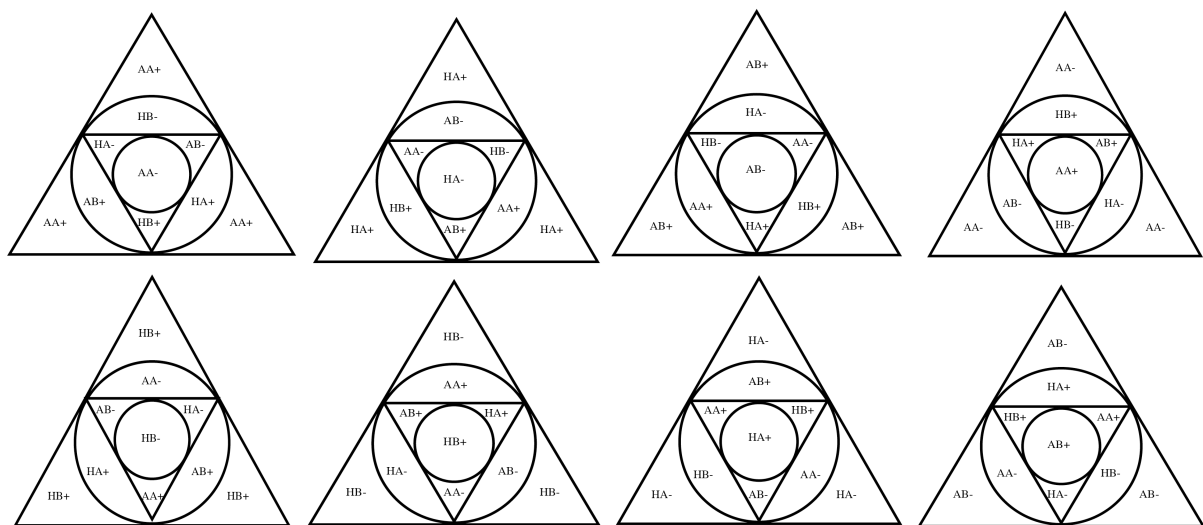


Figure 12. Energy flow through the alignment of Hule types



This is one alignment or pattern of Hule types. We can do a similar thing seven other ways, starting with each of the other seven Hule types at the centre. These all maintain the same Energy connections as above. All eight possible alignments are shown in Figure 13.

Figure 13. Eight possible alignments of Hule type that allow Energy to flow



Each triangle represents a phase space. A phase space is a space where all possible states of the system exist (Anishchenk et al, 2007). Phase spaces cannot be defined as what it is or what it is not: they can be described by their nature and relationships. By understanding the nature and relationship of these eight phase spaces we can understand how everything is connected and integrated. The phase spaces in the bottom row are an inside-out-reflection of the respective phase spaces in the top row. This is an important feature that will be discussed later.

The eight phase spaces all have the same eight Hule types, with the same 12 Energy connections between them, but the Hule types are arranged differently for each phase space; this Hule alignment is the important feature of these phase spaces, as it is what differentiates the phase spaces. Each phase space is a different representation of everything in the Universe.

Each of these phase spaces is also three-way symmetrical; each of the eight patterns can be oriented in three different ways. We will refer to the three vertices of the innermost triangle as three different *orientations* of the pattern. The orientations differ from their corresponding patterns in one of three different ways:

1. *Dimension*: The pattern and the orientation only differ by dimension;
 - The second character of the three-digit code (A/B) is different between the orientation and the pattern
2. *Polarity*: The pattern and the orientation only differ by polarity
 - The first character of the three-digit code (H/A) is different between the orientation and the pattern
3. *Mirror*: The pattern and the orientation differ in all three ways
 - All three characters of the three-digit code (H/A, A/B, +/-) are different between the orientation and the pattern

The alignment of a phase space’s pattern and orientation is the *core*. Because there are eight patterns each with three orientations, it follows that there are 24 different cores (Table 5).

Table 5. 24 possible phase space cores

	Pattern	Orientation		
		Dimension	Polarity	Mirror
Yin	HA-	HB-	AA-	AB+
	AB-	AA-	HB-	HA+
	AA+	AB+	HA+	HB-
	HB+	HA+	AB+	AA-
Yang	HA+	HB+	AA+	AB-
	AB+	AA+	HB+	HA-
	AA-	AB-	HA-	HB+
	HB-	HA-	AB-	AA+

From now on, when discussing phase space cores we will use the three-digit code for the pattern and a superscripted letter to represent its orientation (corresponding to the difference between the pattern and the orientation). For example, a core that consists of the pattern HA- with an AA- orientation will be written HA-^P. This represents a core that has a HA- pattern and polarity difference with its orientation.

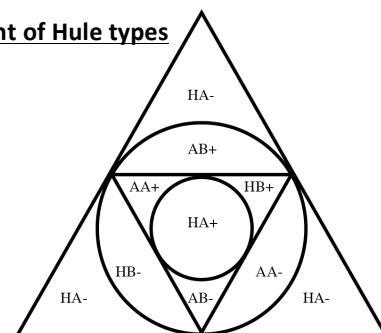
Due to the nature of the phase spaces and our definitions of pattern, orientation, Yin and Yang, it logically follows that every Yang core has a Yin orientation and every Yin core has a Yang orientation, as can be seen in the table above. There are 12 Yang cores and 12 Yin cores and each Yang core has a Yin counterpart with the same Hule types in the core (but necessarily opposite pattern and orientation). For example an HA-^D and a HB-^D have the same Hule types (HA- and HB-) in their core, the same type of orientation, but one is Yin and the other is Yang. These cores can be thought of as being Yin and Yang variants of the same core, which means that they will share some characteristics.

We will return to Figure 11 (with HA+ at the centre) as an example – but keep in mind that this works for each of the eight phase spaces see F.

Figure 11. Example of alignment of Hule types

For this phase space, the three possible cores are HA+^D, HA+^P and HA+^M. This phase space therefore represents the three cores that have HA+ as the pattern.

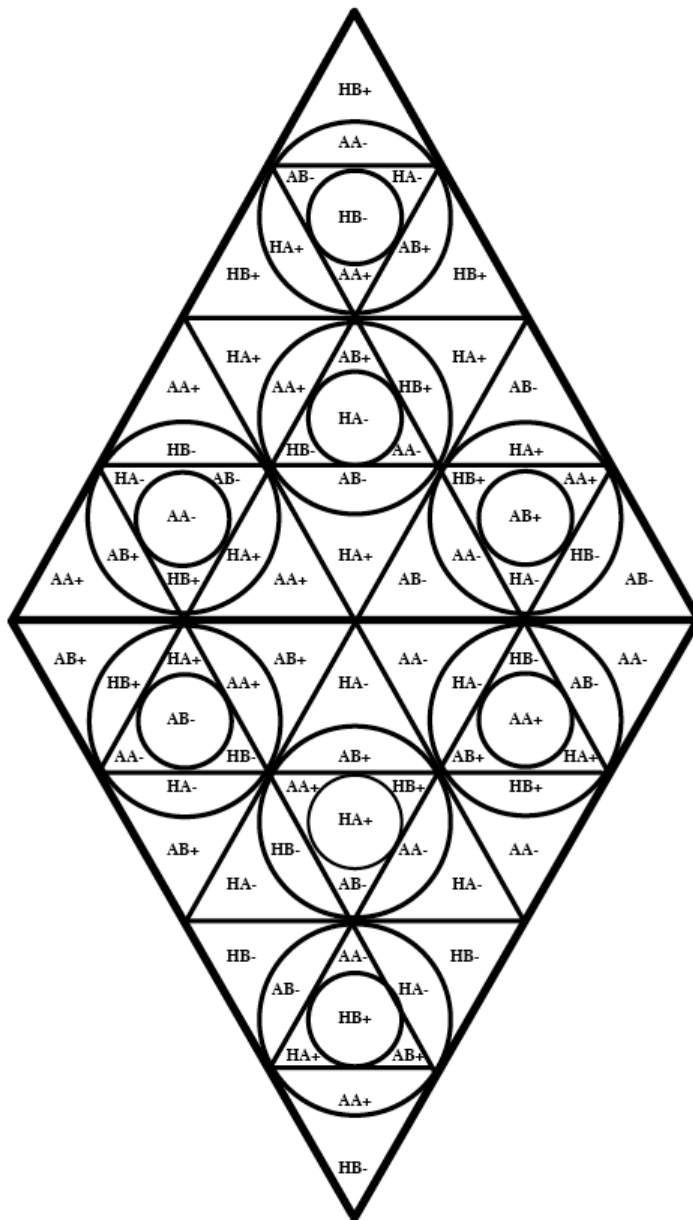
The Hule type in the central circle (HA+) is the sister of the Hule type around the outside (HA-). This phase space is a *sister pattern* to the phase space which is an inside-out reflection of this phase space (HA- on the inside and HA+ on the



outside). Any two phase spaces that have sister patterns with the same type of orientation are *sister cores*. The sister core of $HA+^D$ is HA^-^D , the sister core of $HA+^P$ is HA^-^P and the sister core of $HA+^M$ is HA^-^M .

The eight phase spaces can then be arranged so that adjacent phase spaces ensure Energy flow. In order to do this, all of the Yin phase space triangles are rotated 180° . We can then see a pattern of how all phase spaces are connected in Figure 14.

Figure 14. The diamond - alignment of eight phase spaces



This diamond is a visual representation of how the universe is connected. Yet each triangle is a different representation of the entire universe. Below are some important observations;

- This diamond tessellates, which means that the top-left also connects to the bottom-right and the top-right also connects to the bottom-left;
- Each adjacent Hule type shares an Energy connection;
- Each corresponding Hule type of every adjacent phase space also shares an Energy connection;
- If you draw lines from the vertex of any triangle to the opposite vertex of the adjacent triangle, each of those lines goes through all eight Hule types, thus adjacent phase spaces are aligned in the same way (each phase

space is aligned to each of the three adjacent phase spaces in a different way corresponding to the three types of orientation);

- Energy connections in the same direction between *different* segments of the *same* phase space are the same type of Energy connection;
- Energy connections in the same direction between the *same* segments of *different* phase spaces are the same type of Energy connection;
- Sister Hule types are as far apart as possible in each phase space (centre versus outside), and;
- Sister phase spaces are as far apart as possible (two other phase spaces separating them).

Every segment in each of these phase spaces is not actually simply a single Hule type, but representative of the core of another entire phase space. This can go on *ad infinitum* both inwards and outwards. Thus, this pattern tessellates, this pattern contains itself and this pattern is contained within itself; connecting infinitesimally small Entities to infinitely large Entities (nothing to everything).

Attractors, Trajectories and Moieties

A chaotic understanding (such as Realm Theory):

...means a whole new array of principles for how change occurs and how complexity grows. Scientifically, it means the connecting of the various disciplines that have come to seem quite disjointed but are, in fact, connected. And finally, in the human domain it means the coming together of science and spirituality because, above all, what the new understanding suggests is that everything is interconnected and everything evolves together. Suddenly "science" suggests that humankind is embedded in, and is part of, a vast interconnected process that created, and is still creating, all the intricate order we see about us and the order we have yet to envision. (Goerner, 1995a p 17).

When two phase spaces have a natural synergy, we call these two phase spaces *Attractors*. Attractors;

- Are able to connect in every way, and;
- Have the same type of orientation.

The diamond above illustrates which phase spaces are Attractors:

- Two phase spaces are Attractors if their patterns are in adjacent phase spaces and their orientations are aligned, for example; HA^{+D} and AA^{+D} are Attractors; HA^{+P} and AB^{-P} are Attractors and; HA^{+M} and HB^{+M} are Attractors.
- Each Yang pattern is an Attractor with three different Yin patterns (depending on the orientation). The other Yin pattern (the one that isn't an Attractor to a particular Yang Pattern) is the sister pattern.
- Each Yin pattern is an Attractor with three different Yang patterns (depending on the orientation). The other Yang pattern (the one that isn't an Attractor to a particular Yin Pattern) is the sister pattern.

The purpose of the Attractors is to connect and integrate the entire system. All the energy connections between two attractor phase spaces are the same. For example; HA^{+M} has HB^{+M} as an Attractor and all the Energy connections between the two phase spaces are cross connections (Figure 15). Whereas all the Energy connections between the two phase spaces with the cores HA^{+P} and the Attractor AB^{-P} are expanding and contracting (Figure 16).

Figure 15. Example of attractors phase spaces with cross connection energy flow

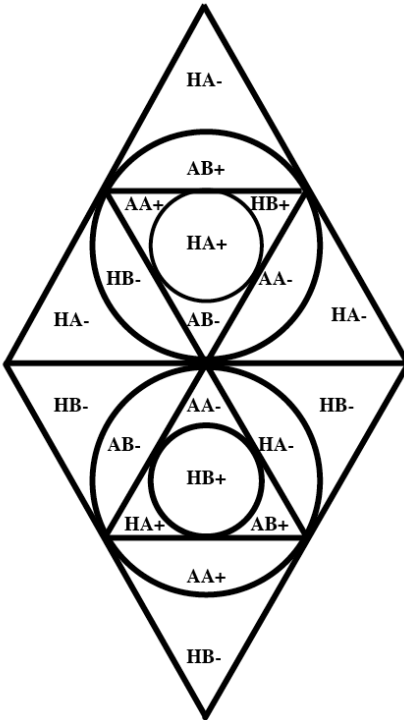
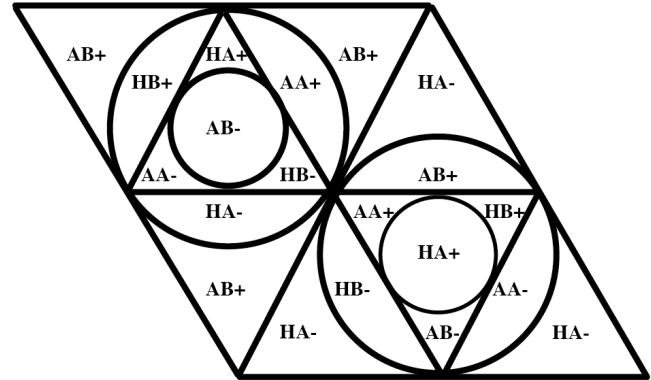


Figure 16. Example of attractor phase spaces with expanding and contracting Energy flow



Each phase space also has a Trajectory; the purpose of a Trajectory is to evolve the system; this creates the evolving nature of the chaotic system.

A phase space's trajectory is another phase space, which has:

- A pattern with a different Yin/Yang
- The same type of Yang in its core
- The next orientation type in the cycle of orientation types:
 - If the phase space's orientation is M its trajectory's orientation is P
 - If the phase space's orientation is P its trajectory's orientation is D
 - If the phase space's orientation is D its trajectory's orientation is M

This means that two phase spaces that are Attractors have Trajectories that are sister phase spaces. For example:

- $HA+^M$ and $HB+^M$ are Attractors;
- $HA+^M$'s Trajectory is $AA+^P$;
- $HB+^M$'s Trajectory is $AA-^P$;
- $AA+^P$ and $AA-^P$ are sister phase spaces.

The Yang Hule type being passed on from each phase space to its Trajectory creates four separate groups corresponding to the four Yang Hule types. We call these groups *Moieties*. Between generations each Moiety alternates between Yin and Yang and between the three different Hule type differences in the core. The four Moieties with Attractors in parentheses are shown in Table 6.

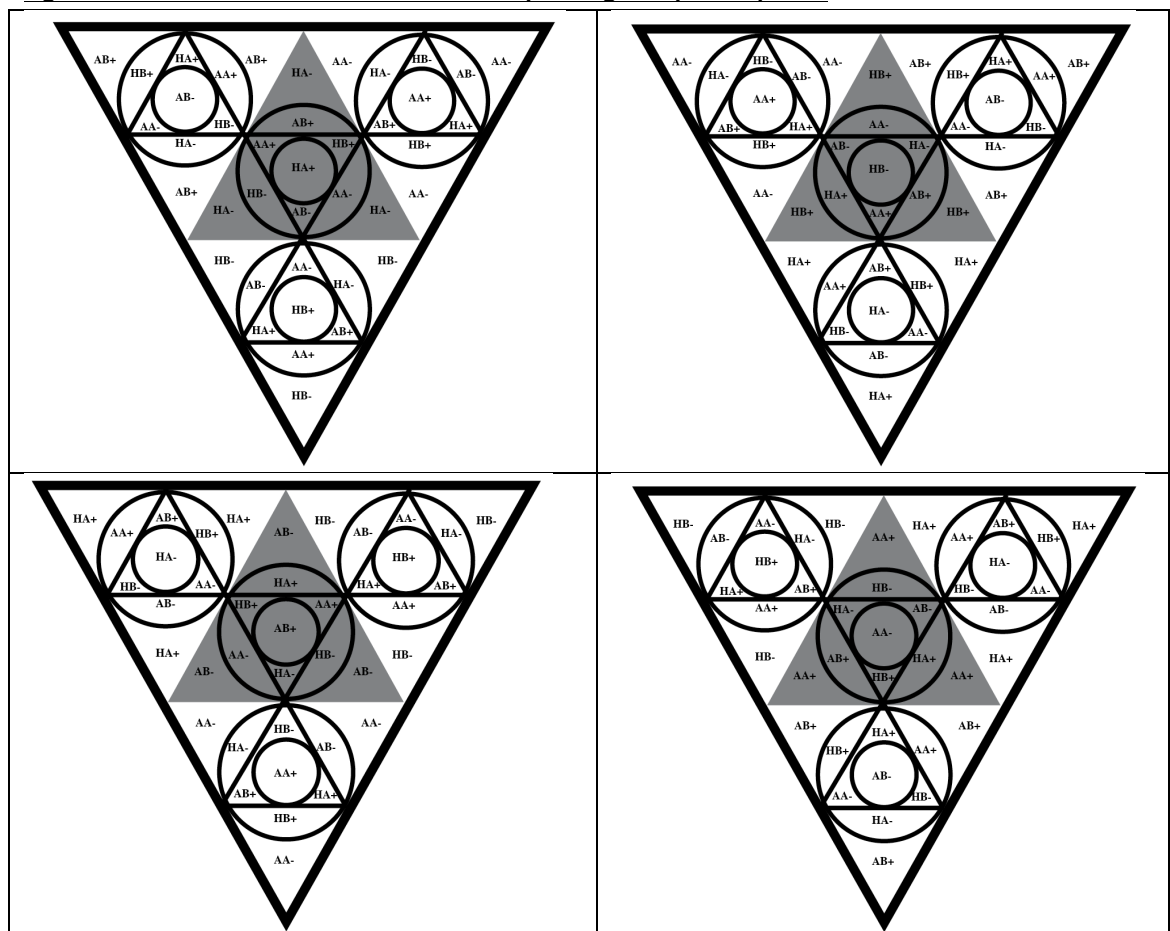
When the Trajectories are mapped onto the diamond, each Moiety contains all three orientations of the Yang pattern and a single orientation of the three adjacent Yin patterns. There is an anti-clockwise rotation of the Yin patterns and an anti-clockwise rotation of the Yang pattern's orientations. Across the four Moieties all 24 combinations of pattern and orientation are covered only once. This provides the greatest differentiation throughout the system whilst also maintaining distance between phase spaces with sister patterns.

Table 6. Moieties and Atractors

		Moieties			
		1	2	3	4
Mirror	Yin	$AB^{-M} (AA^{-M})$	$HA^{-M} (HB^{-M})$	$HB^{+M} (HA^{+M})$	$AA^{+M} (AB^{+M})$
Polarity	Yang	$HA^{+P} (AB^{-P})$	$AB^{+P} (HA^{-P})$	$AA^{-P} (HB^{+P})$	$HB^{-P} (AA^{+P})$
Dimension	Yin	$HB^{+D} (AB^{+D})$	$AA^{+D} (HA^{+D})$	$AB^{-D} (HB^{-D})$	$HA^{-D} (AA^{-D})$
Mirror	Yang	$HA^{+M} (HB^{+M})$	$AB^{+M} (AA^{+M})$	$AA^{-M} (AB^{-M})$	$HB^{-M} (HA^{-M})$
Polarity	Yin	$AA^{+P} (HB^{-P})$	$HB^{+P} (AA^{-P})$	$HA^{-P} (AB^{+P})$	$AB^{-P} (HA^{+P})$
Dimension	Yang	$HA^{+D} (AA^{+D})$	$AB^{+D} (HB^{+D})$	$AA^{-D} (HA^{-D})$	$HB^{-D} (AB^{-D})$

The four phase spaces that make up each Moiety are shown in Figure 17. Remember that each Moiety has one orientation of three different Yin patterns and 3 different orientations of one Yang pattern.

Figure 17. The four Moieties with their corresponding four phase spaces.



The pattern of rotation through the diamond of all Trajectories (black) in a given Moiety and their relative Atractors (grey) is shown in Figure 18. This diagram, while showing one Moiety actually represents each of the four Yang Moieties. There are only seven phase spaces in this diagram. The eighth non-represented phase space is the sister to the central Yang phase space.

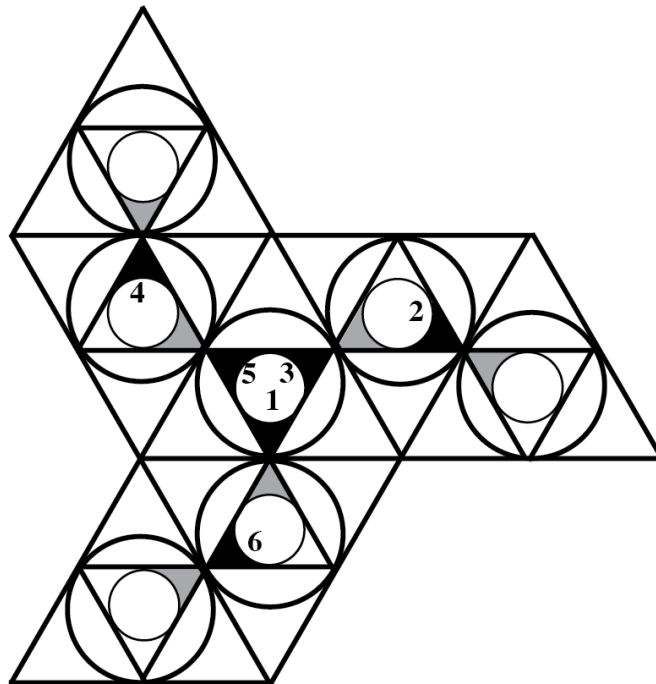
The Hule alignments expressed in the diamond as well as the relationships between phase spaces through Atractors and Trajectories follow a chaotic pattern. We can claim this to be a chaotic pattern as it follows all of the properties of chaotic patterns:

- Dual; symmetrical; relational and interdependent;
- Infinite; fractal; anchored at zero and non-linear;

- Dynamic; complete and self-organised.

(Goerner, 1995a; Gribbin, 2009; Field & Golubitsky, 2009; Pribram & Meade, 1999; Gubser, 2010).

Figure 18 Trajectories and Attractors of one Moiety



Hule Switches

Energy needs to continuously flow through the system. If Energy were to stop flowing, the connections would break and everything would fragment. In order for Energy to continue flowing each type of phase space needs to exist and also needs to connect. However, each of the eight types of phase space is different and influences the other phase spaces in different ways, causing Hule switches. These Hule switches are the foundations of evolution.

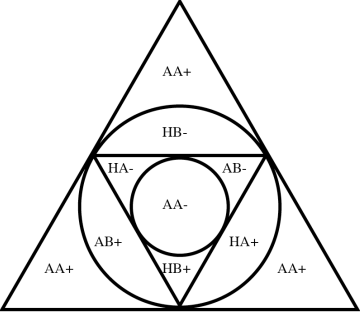
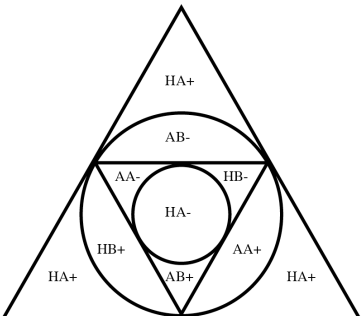
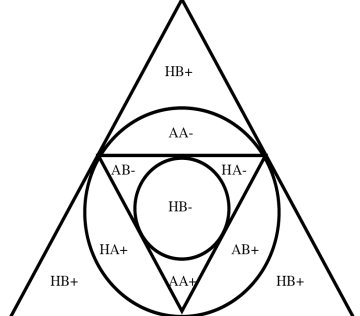
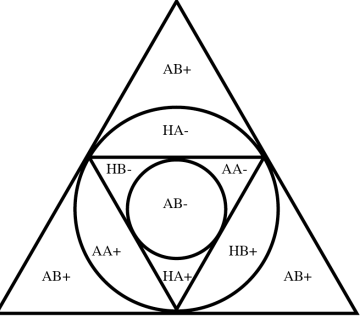
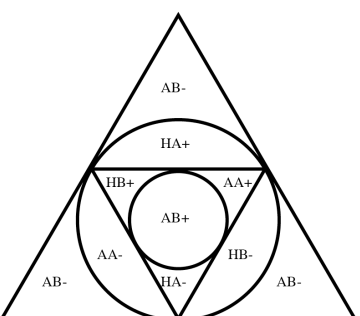
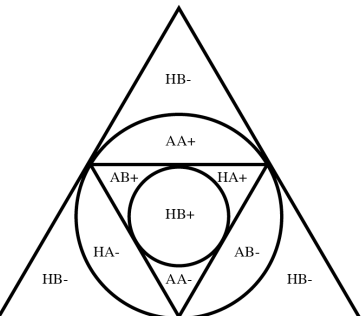
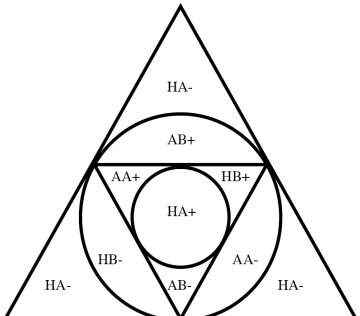
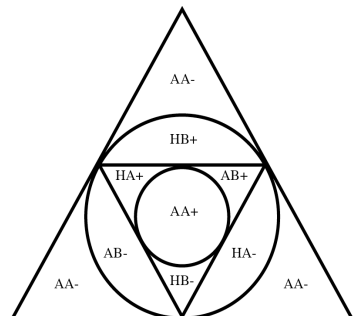
Throughout this paper we have claimed that Hule has substance but no form and so it cannot transform. But, its substance can change. When a Hule-type changes its substance, we call this a *Hule switch*. Hule switches occur when a Hule type switches to the Hule type of an adjacent segment in the phase space. As adjacent segments in phase spaces share Energy connections, it follows that Energy connections are maintained if all Hule types switch in the same manner simultaneously. It also follows that there are three different types of Hule switch corresponding to the three differences between adjacent Hule types, which in turn correspond to the three differences between patterns and orientations.

The three Hule switches are defined below:

1. *D-switch*: A Hule type switches dimension;
 - The second character of the three-digit code (A/B) switches
2. *P-switch*: A Hule type switches polarity
 - The first character of the three-digit code (H/A) switches
3. *M-switch*: A Hule type switches dimension, polarity and the type of Energy it attracts
 - All three characters of the three-digit code (H/A, A/B, +/-) switch

If all eight Hule types switch simultaneously, then the triangle will maintain Energy connections, maintain its alignment, maintain its type of orientation, but its pattern will be an illusion. Figure 19 shows which combination of Hule switches will derive which pattern illusions from the original pattern. Please note this occurs with all eight triangles.

Figure 19. Example of Hule switches for one phase space

Yang	Yin
<p>Switch: -</p>  <p>Core: Original; AA^{-P}</p>	<p>Switch: P</p>  <p>Core: Illusion; HA^{-P}</p>
<p>Switch: DP</p>  <p>Core: Illusion; HB^{-P}</p>	<p>Switch: D</p>  <p>Core: Illusion; AB^{-P}</p>
<p>Switch: PM</p>  <p>Core: Illusion; AB^{+P}</p>	<p>Switch: M</p>  <p>Core: Illusion; HB^{+P}</p>
<p>Switch: DM</p>  <p>Core: Illusion; HA^{+P}</p>	<p>Switch: DPM</p>  <p>Core: Illusion; AA^{+P}</p>

The illusions of this phase space will differ from the illusions of each of the other seven phase spaces in the same way that their illusions differ from these. The other seven phase spaces will each have relative differences between each of their own illusions also. For reasons of space, we will not show each of the 64 possibilities (eight phase spaces each with an original and seven illusion).

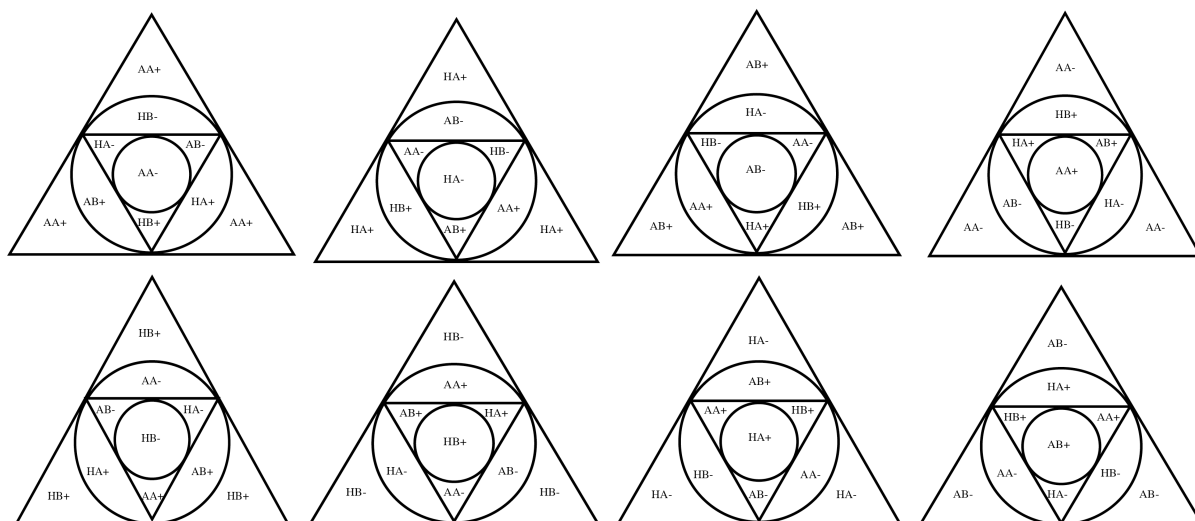
When Hule switches don't happen simultaneously, a violation occurs. Violations of a chaotic system result in isolation, fragmentation and eventually disintegration (Gribbin, 2009).

Entity types and Entity Alignments

As discussed previously, every Entity is simultaneously Inner and Outer, Here and There, Above and Below. This means that what an Entity is not is included within the definition of every Entity. It also means that every Entity is connected.

Given that an Entity is defined by everything that is a-part-of that Entity (the Inner world) as well as all Entities that are not a-part-of that Entity (the Outer world), as well as everything that isn't an Entity (the other 6 Hule types), it follows that the entire universe (or all universes) is fully included in the definition of any single Entity. And so, the triangles used above to represent the entire universal set, can also be used to represent any single Entity (Figure 20).

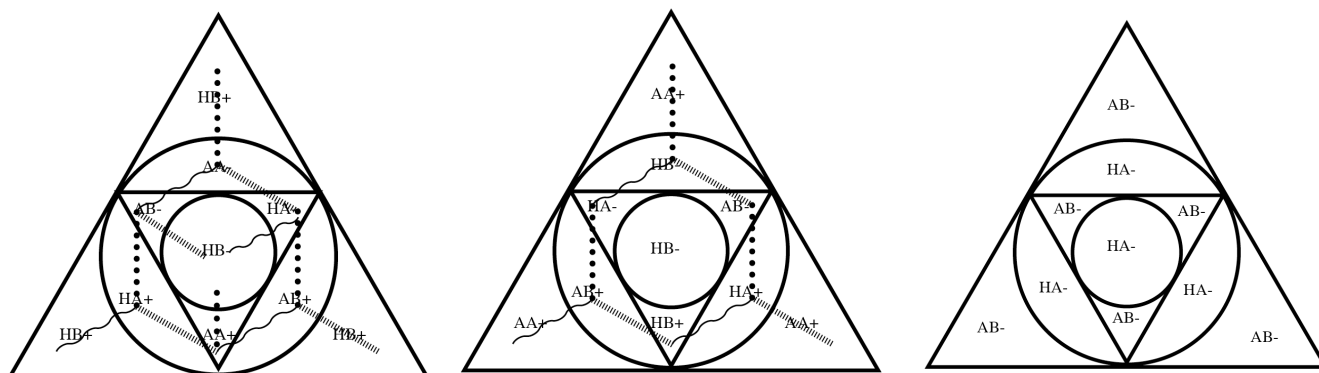
Figure 20. Eight triangles representing eight phase spaces as applied to Entities



Each Entity will have one of eight different patterns, which will give that Entity one of eight different perspectives. Remember, each pattern has three possible orientations and this forms a core, so that each Entity will have one of 24 possible cores. Half of these will be Yin Cores, and half will be Yang cores.

Entities are affected when Hule switches occur. Sometimes not all of the Hule types undergo a Hule switch (see Figure 21). This can maintain Energy connections, but it often doesn't. Due to the independent nature of Hule switches, sometimes Hule switches result in a triangle having an illusion of a Hule-type in more than one spot (and necessarily having the illusion of at least one Hule type missing). An extreme example of this is if each Hule type undergoes a different set of Hule switches resulting in an illusion of only one Hule-type. This will obviously severely disrupt the triangle's pattern, orientation, Energy connections, alignments, Attractors and Trajectories.

Figure 21. Example of Hule switches that disrupts Energy flow



Hule switches are natural, but they also disrupt the nature of Entities. Hule switches can be switched back and are less likely to occur (or more likely to switch back quickly) if an Entity has strong Energy flow, giving it a strong sense of self. Hule switches are also necessary for the evolution of an Entity; if enough Entities are pushing for change within a system, then that system will eventually switch; in some instances this will create a new Entity with a new core.

Existence, Life and Sentience

Inner represents any particular Entity and Outer represents all Entities that aren't that particular Entity and the other six Hule types represent everything else in the Universe (everything that is not an Entity). Let's compare a particular grain of sand and all elephants. The Inner world of a grain of sand is going to be vastly different from the Inner world of all elephants. But, the Outer world of a grain of sand and the Outer world of all elephants is going to be insignificantly different (every Entity in the Universe that is not a particular grain of sand is insignificantly different from every Entity that is not an elephant). There will be no difference between the other six worlds of the two Entities in question.

This means that the Energy connections between Omneity Here and There will be exactly the same for a grain of sand and all elephants. It also means that the Energy connections between the Outer world of a particular grain of sand and all elephants with Pure Energy Below and There are going to be insignificantly different. But, the three Energy connections with Inner will be very different between a grain of sand and all elephants. In sum, seven of the twelve Energy connections will be exactly the same, two will be insignificantly different (Outer with Pure Energy Below and Outer with There) and the remaining three (the three that connect to the Inner world) may be vastly different.

We must consider two aspects of the three Energy connections with the Inner world:

1. What connections are there?
2. How strong are those connections?

We will discuss the first aspect first for each of the three connections with Inner, then the combinations of connections, before discussing the strength of these connections.

When Energy flows from Here – which is Here in Omneity, Time and Space – into the Inner world (when Energy flows from Below to Above without transforming), this brings an Entity into existence. Contrariwise, when all Energy from an Entity flows back into Here, that Entity ceases to exist. A connection between Inner and Here means that Energy is continually flowing back and forth between Inner and Here; there are continuously parts of the Entity coming into existence and parts of the Entity going out of existence; the Entity has an active existence.

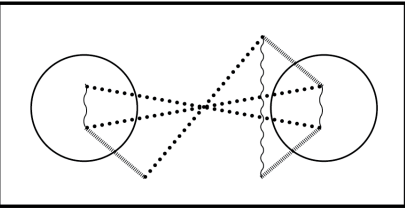
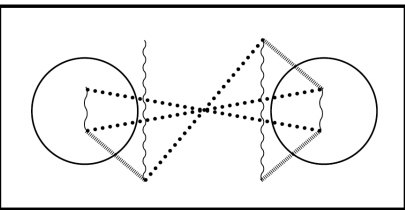
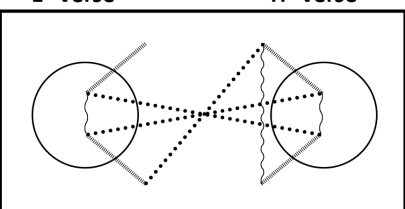
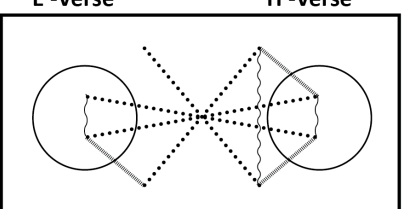
When Energy expands and contracts to and from an Entity from and to other Entities (an Entity that has a reciprocally affective relationship with its environment) then that Entity is alive. Thus, the connection between Inner and Outer (which is a connection between Nowhy Above and Nowhy Below) is life.

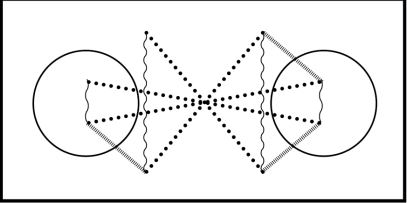
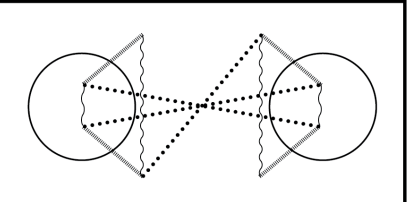
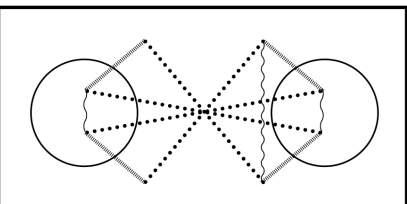
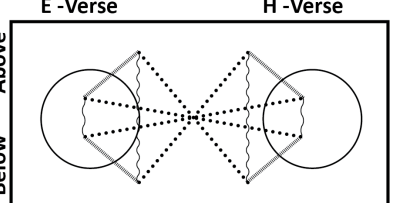
Thirdly, when an Entity absorbs Energy and also manifests Energy, that Entity has a connection with Pure Energy Above, which is Here in Space and Omneity but is timeless. This gives an Entity sentience. Sentience is the ability to think and make choices.

Returning to our example, a grain of sand has a constant but not active existence and it is neither sentient nor living, thus the Inner world of a grain of sand has no Energy connections. The species of elephants exists; is alive, and; is sentient. Thus, the species of elephants has all three of these Energy connections. Note, that this does not mean that every elephant has those three connections, because 'an elephant' is not the same Entity as 'all elephants'.

A grain of sand and all elephants provide an example of Inner having no connections or three connections, respectively, but there are six other logically possible permutations shown in Figure 22.

Figure 22. Eight possible Energy flows, their properties and examples

Connections	Properties	Examples
None E -Verse H -Verse 	Passive existence Non-living Non-sentient	A grain of sand, a table, hydrogen atoms
Here E -Verse H -Verse 	Active existence Non-living Non-sentient	Thrombolites
Pure Energy Above E -Verse H -Verse 	Passive existence Non-living Sentient	Artificial intelligence
Outer E -Verse H -Verse 	Passive existence Living Non-sentient	Fire, weather, water
Here and Outer	Active existence Living Non-sentient	A virus

		
<p>Here and Pure Energy Above</p> 	<p>Active existence Non-living Sentient</p>	<p>Natural wonders, spiritual places</p>
<p>Outer and Pure Energy Above</p> 	<p>Passive existence Living Sentient</p>	<p>The mind, languages, fictional characters</p>
<p>All three</p> 	<p>Active existence Living Sentient</p>	<p>Animals, human beings, plants</p>

Now, we will turn to the other question of how strong the connection is. Existence, life and sentience are all gradient properties; one Entity can have a stronger connection with existence than another; one Entity can be more alive than another, and; one Entity can be more sentient than another. It is the strength of these connections – how much Energy is transferred back and forth – that determines the extent of these properties. This can be different between two Entities that are both a-part-of the Inner world of another Entity; one human being could be more sentient than another, for example. The strength of these connections is also effected by the relationships between Entities; for example, if two plants are side-by-side and one has a strong connection with Outer but the other has a very weak connection with Outer, then the former may cause the latter to lose its connection with Outer (life), or the latter may strengthen its connection with Outer (life) in order to survive.

Entities are strongly influenced by the other Entities that they are a-part-of. Thus, any grain of sand almost certainly has no Energy connections, because the Entity all-grains-of-sand has no Energy connections. If a human being is born into a family that has a very weak Pure Energy connection (sentience) in a community that also has a very weak Pure Energy connection, then that human being is much more likely to also have a very weak Pure Energy connection. When Energy connections strengthen, an Entity increases its conscious awareness. Eventually Entities may become aware of the other Energy connections (which creates higher levels of consciousness) and aware of the different phase spaces. If an Entity has no connections, then it cannot become aware of any of the Energy connections and therefore cannot have any consciousness. Please note that when we say “no Energy connections” we are using it as shorthand for “infinitesimally weak Energy connections”.

When an Entity comes into existence it starts with an alignment of Hule-types; this alignment never changes. This alignment is shown in the triangles. From the perspective of any Entity, all Hule types are aligned around the core of the Entity. For most Entities, the Entity itself (Inner World with form and substance) is not part of the core. So Entities will have alternative perspectives of their Inner world.

Each of the eight categories of Inner Energy connections can be present for each of the eight Hule patterns. This gives a total of 64 different connections/pattern configurations (each with three possible orientations).

4. Revolution of Science

Kuhn (1996) – who has mapped a pattern from studying scientific revolutions – argues that each revolution of science has required a paradigm shift, or a different way of seeing. Once the paradigm shift occurs, all previous scientific research is reinterpreted and often long held controversies are immediately explained (Kuhn, 1996). Realm theory requires three paradigm shifts.

1. A single frame of reference to three simultaneous frames of reference;
2. Consideration of the negative space, and;
3. An objective point of view to an embedded experience.

Realm Theory invites each of these paradigm shifts and has the potential to revolutionise science. By understanding Realm Theory, new methodologies will be developed to study and understand the natural order of the universe.

The scientific method starts by defining something. A definition only describes something with form and substance and distinguishes between what it is (Inner) and what it is not (Outer). By using quantitative statistics (using Real Numbers), only linear relationships and interactions are shown and hypotheses are either supported or not. This methodology is only suitable for studying Entities that have a passive existence, are non-sentient and non-living, like in classical physics. New methodologies will need to be developed and different methodologies may need to be used depending on the properties of existence, sentience and life. Science generally accepts that life is non-linear. It follows that the scientific method has to be adapted to also be non-linear, perhaps requiring statistics using imaginary or infinite numbers.

The scientific method will never discover an underlying fundamental pattern, as it only studies the universe from a single frame of reference. Similarly, studying from only an Energy perspective, or a Time or Space perspective, does not consider the other two frames of reference. For example Quantum physics and the Theory of Relativity, are logically incompatible, as they consider alternate frames of reference. Quantum theory has a Realm 2 perspective where Pure Energy and Pure Hule matter. The Theory of Relativity has a partial Realm 3 perspective where only Time and Space matter. The current study of quantum physics is located in the negative space of the Theory of Relativity and vice versa.

The revolution of science begins with you. You first need to study your own connections of existence (Inner and Here), life (Inner and Outer) and sentience (Inner and Pure Energy Above). Presumably you exist, are alive and are sentient, but you must study the strength of these connections. The revolution of science continues by you identifying your Hule pattern and orientation (your core). Once your own core is identified you will then be aware of your Place within the system and you can move from an objective point of view into an embedded experience.

We have repeated Table 4 from above. Your field of study is its own Inner, but your Outer. Once you are viewing the universe as an embedded experience, you can identify the relationship between you and your field and then study your field not simply as your Outer (an objective point of view), but also from each other perspective across the rows and down the columns; you will study your field from three simultaneous frames of reference, including the negative space.

Table 4 Summary of names used in each Realm relative to Hule types

Hule types	Energy segments	Time	Space	Omneity	Realm One
HA+	Channels Above	Here	Here	Nowhy	Inner
HB+	Channels Below	Here	Here	Here	Place
AA+	Pure Energy Above	Nowhen	Here	Here	Place
AB+	Pure Hule Below	There	Nowhere	There	Place
AA-	Vessels Above	There	There	There	Place
AB-	Vessels Below	There	There	Nowhy	Outer
HA-	Pure Hule Above	Here	Nowhere	Here	Place
HB-	Pure Energy Below	Nowhen	There	There	Place

The Place of every Entity (including you and your field of study) is created through the interaction of Time, Space and Omneity and can be mapped as part of different phase spaces. Phase spaces can align through tessellations of the pattern, but they can also contain and be contained by other phase spaces. When Hule switches occur, a phase space becomes misaligned possibly resulting in an Entity isolating, fragmenting and eventually disintegrating to maintain the system. In order for this revolution of science to occur without entire fields of study disintegrating, the integration process must be bottom-up, which is why the revolution of your field must start with you.

The revolution has already begun in the field of psychology. Realm Theory has been used to treat chronic mental dysfunction for over 15 years (Jackson, 2007). It has been operationalised (Snyder, 1999; 2000a; 2000b; 2000c), reviewed (Clinton, 2000) and evaluated (Harries and Murphy, 2000; Jackson, 2007; Cotton, 2011). The phase space of a human mind is contained within the phase space of a human body, which in turn is contained within that of a family and then a community. If a Hule switch occurs at the community level, the system may isolate one of its parts through a process of self-organisation.

- When (a-part-of) a community isolates or fragments, this is experienced as a breakdown of society;
- When (a-part-of) a family isolates or fragments, this is experienced as family dysfunction;
- When (a-part-of) a human body isolates or fragments, this is experienced as physical illness, and;
- When (a-part-of) a human mind isolates or fragments, this is experienced as mental illness.

Violations of the scientific principles of quantum chaos result in isolation, fragmentation and disintegration. By understanding Realm Theory it is possible not only to treat mental illness it is possible to prevent it. This has been done by people finding their core and strengthening the three Energy connections of life, existence and sentience. In addition, it is possible to connect and integrate humanity so that we live as 'one of one' and then the possibility to expand our consciousness can begin.

Conclusion

Realm Theory is a theory. This may seem like a redundant and tautologous statement, but it is also telling. A theory is founded in science, based on nature, observation and fact, but a theory is meaningless without application to the real world.

We need to reintegrate systems from the bottom-up and the top-down to hinder epidemic dysfunction. This will involve recognition that every Entity is part of an integrated system of the universe. If we do not recognise this, then the Entity 'human-species' will fragment, isolate and eventually disintegrate in order to maintain the integrity of the entire system. Realm Theory is a pattern for a way forward.

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