

# E8 for Psychological Types and Physics

By John C. Gonsowski

## Abstract

James Reynierse says: "You have it exactly right when you refer to the symmetry of type beginning with the Pair interactions. My colleague and fellow researcher John Harker and I have frequently discussed these relationships in terms of the natural symmetry of type... showing a circumplex structure for the MBTI is interesting and instructive...". E8 and its subalgebras are mapped to MBTI types and Enneagram numbers. In the process, analogies with the use of E8 symmetry in physics are explored. Down at D3, a Process Circumplex is constructed from MBTI type pair interactions and an analogy is shown between Enneagram Triads and conformal gravity. The Enneagram's Law of 7 provides hexagonal structure for the Circumplex while the Law of 3 provides triangular structure. At D4, additional Enneagram Triads relate to the positive - negative (color - anticolor) charges for weak bosons and gluons. For the F4 8-dim vector, an analogy is constructed between the Circumplex's inward and outward two-fold quaternities and the internal and external dimensions of spacetime. For the F4 spinors, the analogy constructed is between two additional sets of two-fold quaternities and orbifolded matter/antimatter dual tetrahedrons. F4 with its Spacetime-Matter-Antimatter Triality is related to Enneagram triple octaves and to the Sri Yantra footprint with interpenetrating triangles. E8 superimposes 8 vertices at each two-fold quaternity location which for the physics analogy adds for quantization, 8 momentum operators for spacetime and 8 anticommutator operators for matter/antimatter. This E8 quantization may underlie quantum consciousness.

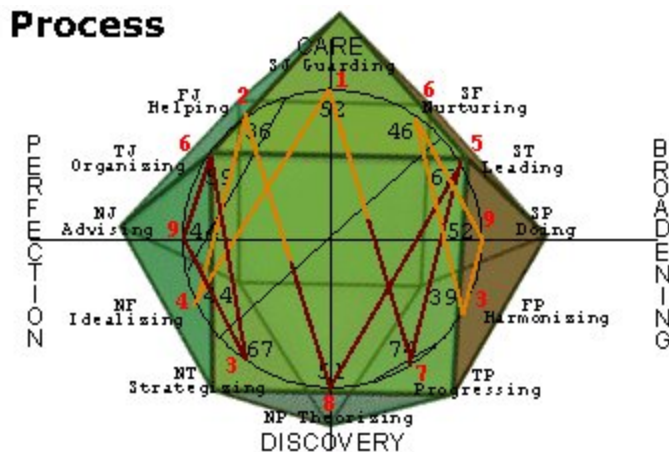
## Introduction

[James Reynierse](#) [1] says: "You have it exactly right when you refer to the symmetry of type beginning with the Pair interactions. My colleague and fellow researcher John Harker and I have frequently discussed these relationships in terms of the natural symmetry of type... showing a circumplex structure for the MBTI is interesting and instructive...". [E8 and its subalgebras](#) [2] are mapped to [MBTI](#) [3] types and [Enneagram numbers](#) [4]. In the process, analogies with the use of E8 symmetry in physics are explored. Down at [D3](#) [5], a Process Circumplex is constructed from MBTI type pair interactions and an analogy is shown between [Enneagram Triads](#) [6] and [conformal gravity](#) [7]. The Enneagram's [Law of 7](#) provides hexagonal structure for the Circumplex while the [Law of 3](#) provides triangular structure [8]. At [D4](#) [9], additional Enneagram Triads relate to the positive - negative (color - anticolor) charges for [weak bosons and](#)

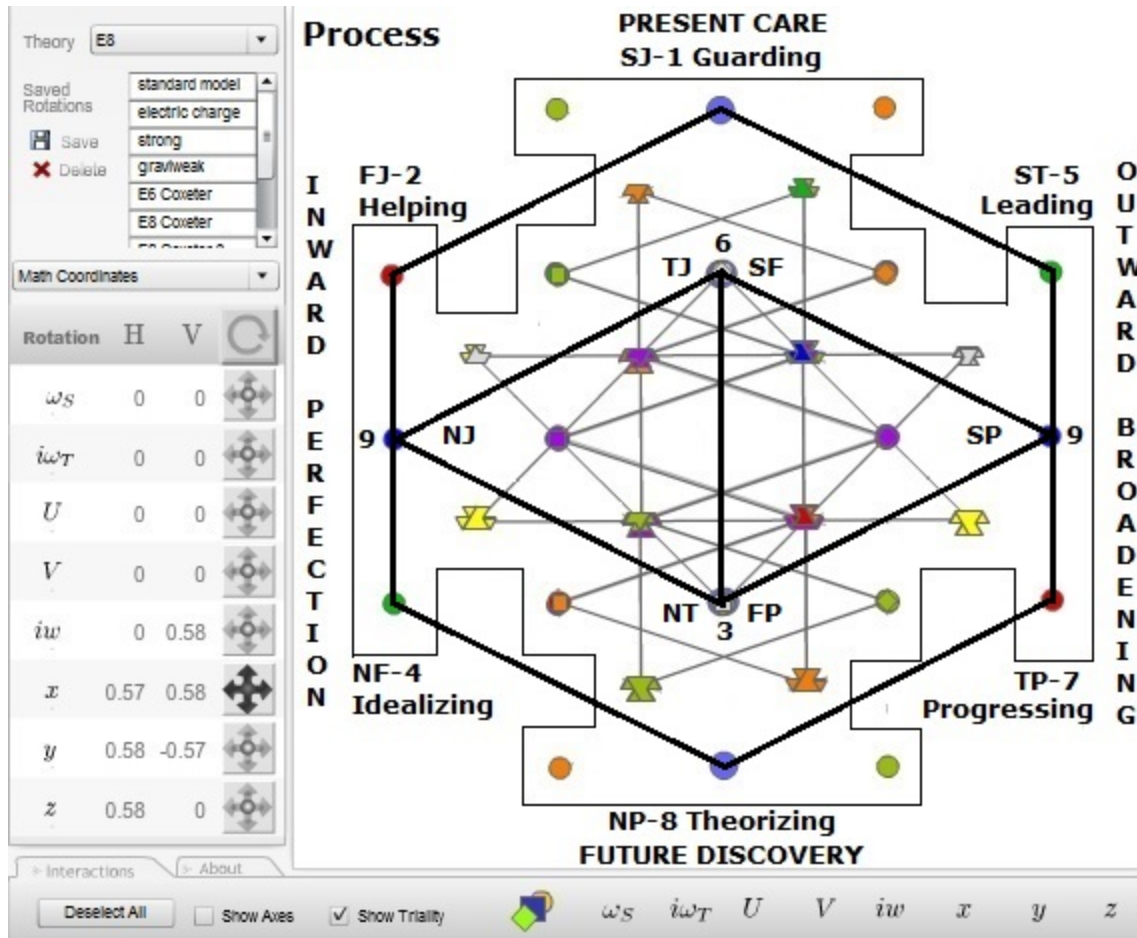
[gluons](#) [10]. For the [F4 8-dim vector](#) [11], an analogy is constructed between the Circumplex's inward and outward [two-fold quaternities](#) [12] and the internal and external dimensions of [spacetime](#) [13]. For the [F4 spinors](#) [11], the analogy constructed is between two additional sets of two-fold quaternities and [orbifolded](#) matter/antimatter dual tetrahedra [14]. F4 with its Spacetime-Matter-Antimatter [Triality](#) [11] is related to Enneagram [triple octaves](#) [15] and to the [Sri Yantra](#) [16] footprint with interpenetrating triangles. [E8](#) [11] superimposes 8 vertices at each F4 two-fold quaternity location which for the physics analogy adds for [quantization](#), 8 momentum operators for spacetime and 8 annihilation operators for matter/antimatter [17]. This E8 quantization may underlie [quantum consciousness](#) [18].

### D3

[Data and theories](#) [4] relating the MBTI to the Enneagram were examined and twelve MBTI pairs were plotted on to a cuboctahedron, the root vector polytope for [D3](#) [5]. Enneagram numbers, fitting with the data and theories, were assigned for the [Law of 7](#) [8] (1-4-2-8-5-7) such that these points were on a hexagon. The order of the points around the hexagon is 1-2-4-8-7-5. This [ordering](#) [19] is for the powers of two (1, 2, 4, 8, 16, 32) turned via  $16 = 1+6 = 7$ ,  $32 = 3+2 = 5$ , etc. into a repeating pattern (1, 2, 4, 8, 7, 5). This pattern is related to the commonly known pattern where multiples of 3 have the sum of their digits divisible by 3. The remaining points form two [Law of 3](#) [8] (3-6-9) patterns on two equilateral triangles.



The perfection and broadening quadrants for this Circumplex relate to the inward and outward quadrants of the [Capability Snapshot](#) [20]. The Capability Snapshot's present and future quadrants relate to the care and discovery quadrants on this Circumplex. Using Garrett Lisi's [Elementary Particle Explorer](#) [21], the following projection of the Circumplex shows the law of 7 hexagon and two law of 3 triangles more easily:



The points of the Circumplex can be arranged into a 3x3 matrix:

5-6-7 (ST-TJ-TP with MBTI Thinking) [Thinking Triad](#) [6]

2-3-4 (FJ-FP-NF with MBTI Feeling) [Feeling Triad](#) [6]

8-9-1 (NP-SP-SJ MBTI Thinking/Feeling Neutral) [Instinctive Triad](#) [6]

Since there are two Law of 3 triads, an extra point can be added to each triad to create quads:

ST-TJ-TP-NT Thinking Quad

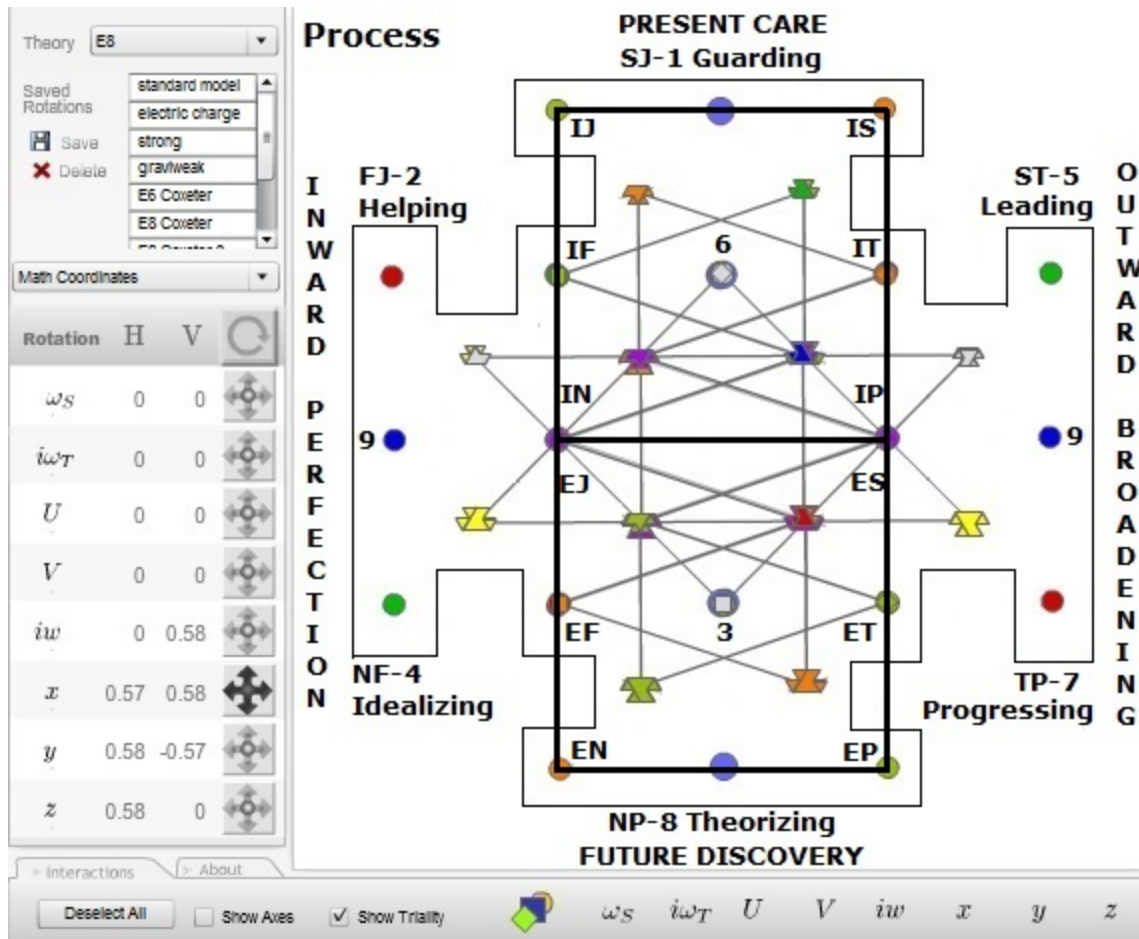
FJ-FP-NF-SF Feeling Quad

NP-SP-SJ-NJ Instinctive Quad

These quads relate to the use of D3 in physics for [conformal gravity](#) [7]. The Thinking Quad would be related to the special conformal transformations of [unimodular relativity](#) [22]. The Feeling Quad would be related to [translations for Einstein's metric](#) [23]. The S-J-P-N of the Instinctive Quad relates to the X-Y-Z-T [spacetime basis vectors for rotations and boosts](#) [23].

## D4

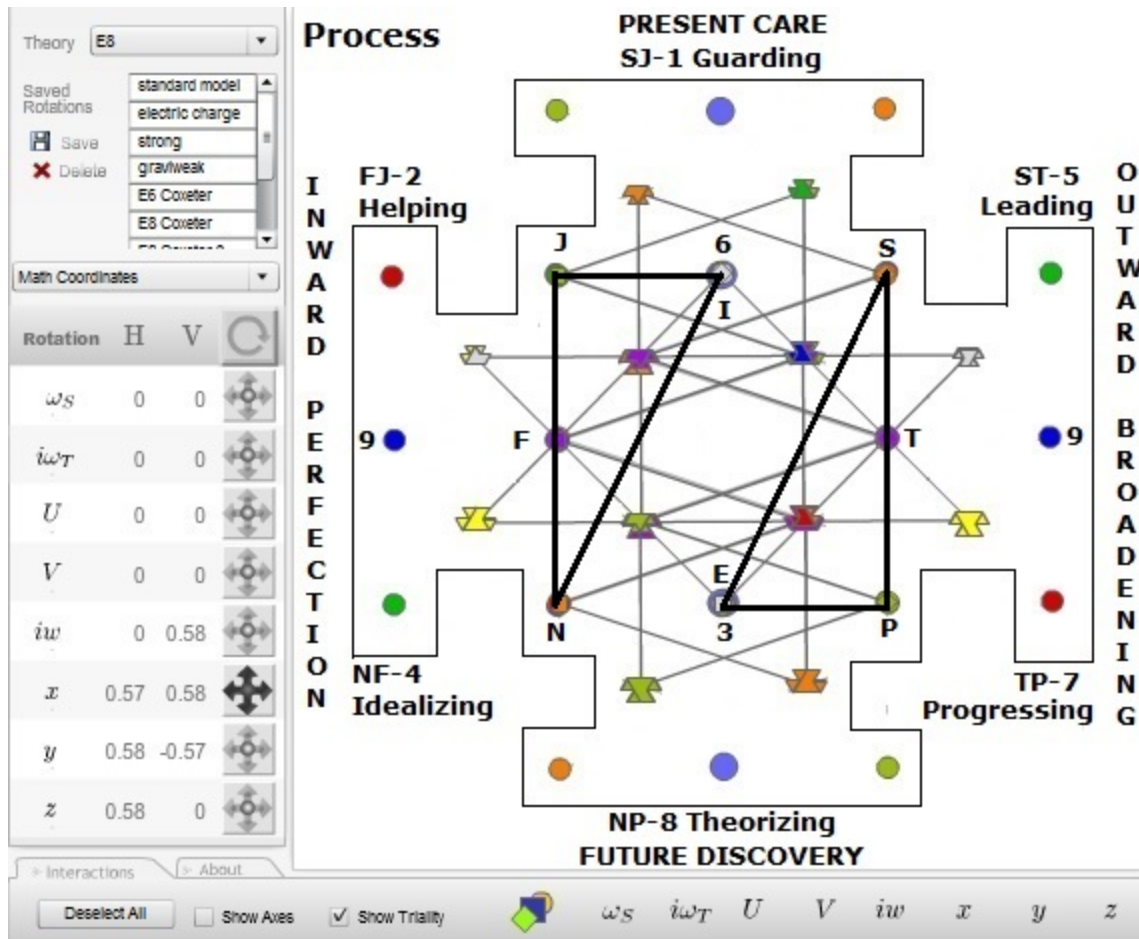
D4 [7] assigns the MBTI's Introversion (I) to the 1-2-6 [Compliant Triad](#) [6] and assigns Extraversion (E) to the 3-7-8 [Assertive Triad](#) [6]. The 4-5-9 [Withdrawn Triad](#) is neutral with respect to Introversion/Extraversion [6].



The physics analogy for this Introversion-Extraversion division is the division between [positive and negative electric charges for weak bosons](#) and [color-anticolor for gluons](#) [9].

## F4 Vector

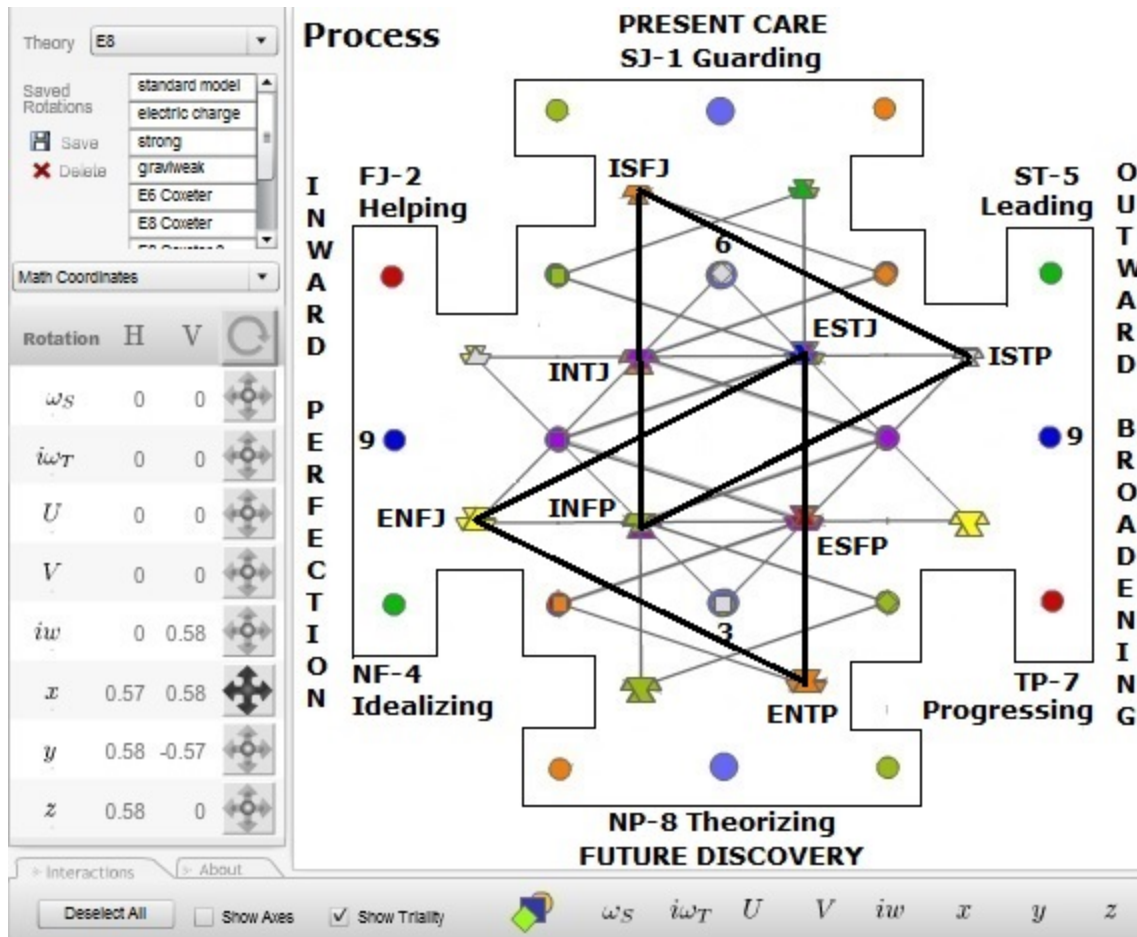
The first eight points of the Enneagram are “depicted as a [two-fold quaternity](#), or 'double-mandala', made of two mandalas drawn respectively on two planes that are at right angles to each other” [12]. These two quaternities represent an 8-dim vector that plots on to the [F4](#) polytope [11].



The analogy in physics for two-fold quaternities at right angles to each other is the idea of spacetime having four [internal symmetry space dimensions](#) in addition to the four large physical external dimensions [13]. The idea of “right angles” relates to [Einstein’s 1938 Kaluza Klein work](#) where a small internal spacetime dimension transforms a large spacetime dimension into a cylinder with a small circumference [24]. This Circumplex’s inward and outward Capability Snapshot quadrants match to the internal and external dimensions of spacetime. The I and E vertices match to the time-like part of spacetime and line up along the Capability Snapshot’s Present - Future axis.

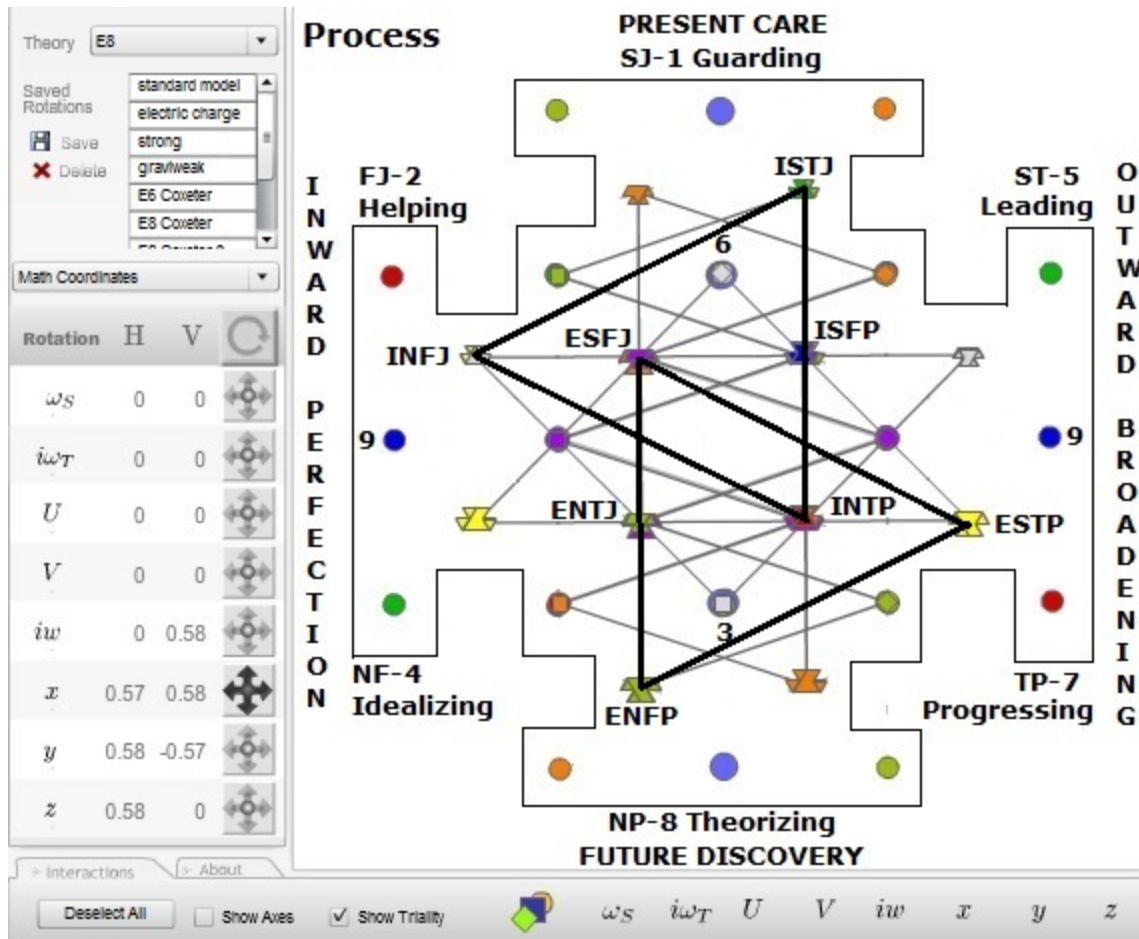
## F4 Spinors

Additional two-fold quaternality patterns are added using [F4](#) [11].



The physics analogy for each of these two-fold quaternities is the [orbifolding](#) with two tetrahedra on a cube representing three down (anti)quarks plus positron/electron and three up (anti)quarks plus (anti)neutrino [14]. E relates to the negative electromagnetic charge of the [three down quarks, electron, three up antiquarks, and vanishing antineutrino charge](#) and I relates to the positive charge of the three up quarks, positron, three down antiquarks, and vanishing neutrino charge. NFJ implies full charge and STP vanishing charge. Two of the NFJ factors (one of the STP) give the 2/3rds up (anti)quark charge and one of the NFJ factors (two of the STP) gives the 1/3rd charge of the down (anti)quarks [25].

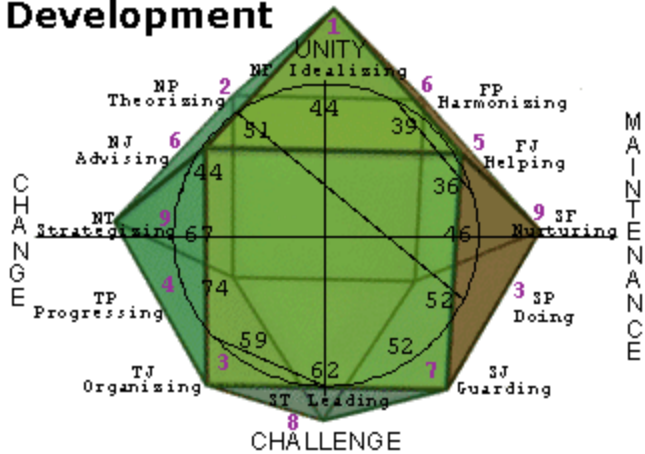
The F4 spinor two-fold quaternary Circumplex above relates to matter and this second F4 spinor two-fold quaternary Circumplex relates to antimatter.



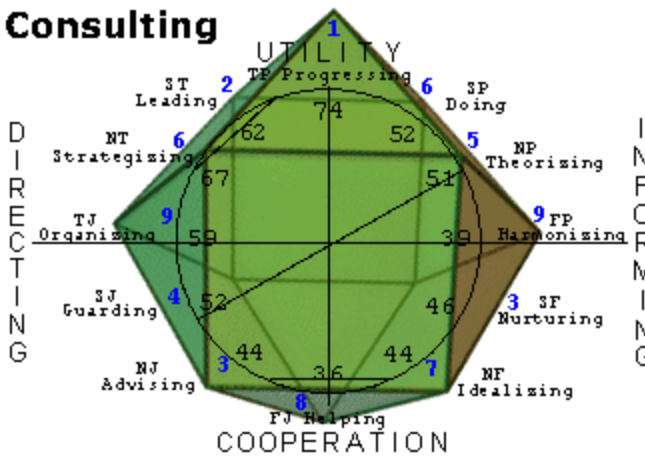
## Triality

Combining the F4 vector and spinors forms a [Triality](#) [11] of spacetime, matter and antimatter. This Triality is related to P.D. Ouspensky's construction of the Enneagram as [three octaves](#) via 120 degree rotations [15] and to the [Sri Yantra](#) [16] footprint with interpenetrating triangles. The lighter interpenetrating triangles above depict the Triality by connecting one spacetime, one matter, and one antimatter vertex. Triality can be seen in [non-linear form](#) [26] down at the D3 level. This non-linear Triality creates two additional D3 cuboctahedra via mappings to "interchange 3 elements of the triangular faces" of the D3 cuboctahedron's law of 3 patterns. The additional D3 cuboctahedra form a Development Circumplex and a Consulting Circumplex.

## Development



## Consulting



The Maintenance, change, unity, and challenge descriptors relate to the dependent, achievement, affiliation and power quadrants of the [OCI](#) [27]. Directing, informing, utility and cooperation are [descriptors](#) used by David Keirsey [28]. These descriptors relate to the data, ideas, things and people quadrants of the [RIASEC](#) [29].

## E8

[E8](#) [11] superimposes 8 vertices at each F4 two-fold quaternary location which for the physics analogy adds for [quantization](#), 8 momentum operators for spacetime and 8 annihilation operators for matter/antimatter [17]. This E8 quantization may underlie [quantum consciousness](#) [18].



## References

1. <http://tap3x.net/EMBTI/j6dialogues.html>
2. <http://www.valdostamuseum.com/hamsmith/Weyl.html>
3. <http://tap3x.net/ENSEMBLE/typeframe.html>
4. <http://tap3x.net/EMBTI/charts.html#CHART1>
5. <http://www.valdostamuseum.com/hamsmith/Weyl.html#D3cartan>
6. <http://www.tap3x.net/EMBTI/j2geldart.html>
7. <http://www.valdostamuseum.com/hamsmith/SegalConf.html>
8. <http://tap3x.net/EMBTI/j4selfbbb.html>
9. <http://www.valdostamuseum.com/hamsmith/Weyl.html#D4cartan>
10. <http://www.valdostamuseum.com/hamsmith/Sets2Quarks4a.html#12remaining>
11. <http://www.valdostamuseum.com/hamsmith/FTsquare.html#jbaez>
12. <http://tap3x.net/EMBTI/j4selfbb.html>
13. <http://valdostamuseum.com/hamsmith/cdomain.html#hyperspace>
14. <http://www.valdostamuseum.com/hamsmith/orbifoldingE6st.html>
15. [http://en.wikipedia.org/wiki/Fourth\\_Way\\_Enneagram](http://en.wikipedia.org/wiki/Fourth_Way_Enneagram)
16. <http://www.valdostamuseum.com/hamsmith/PDS3.html#sriyantra>
17. <http://vixra.org/pdf/1310.0182v4.pdf>
18. <http://www.valdostamuseum.com/hamsmith/QuanCon.html>
19. <http://www.valdostamuseum.com/hamsmith/SegalConf2.html#MarkoRodin>
20. [http://www.capsnap.com/diagnostics/csi/csi\\_main.asp](http://www.capsnap.com/diagnostics/csi/csi_main.asp)
21. <http://differentialgeometry.org/epe>
22. <http://www.valdostamuseum.com/hamsmith/topolophys.html#HyperVolume>

23. <http://www.valdostamuseum.com/hamsmith/cnfGrHg.html#CnfMMgr>
24. <http://cds.cern.ch/record/466266/files/0009087.pdf>
25. <http://www.valdostamuseum.com/hamsmith/Sets2Quarks4.html>
26. <http://www.valdostamuseum.com/hamsmith/why8.html#one>
27. <http://www.humansynergistics.com/OurApproach/TheCircumplex>
28. [http://psychology.wikia.com/wiki/Interaction\\_Styles](http://psychology.wikia.com/wiki/Interaction_Styles)
29. <http://www.scribd.com/doc/35818255/RIASEC-Personalities>

<sup>a</sup> MBTI and Myers-Briggs Type Indicator are trademarks or registered trademarks of the Myers-Briggs Type Indicator Trust in the United States and other countries