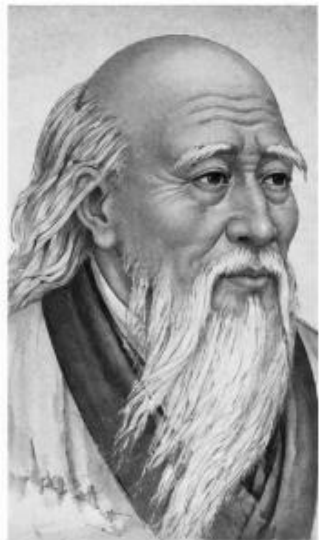
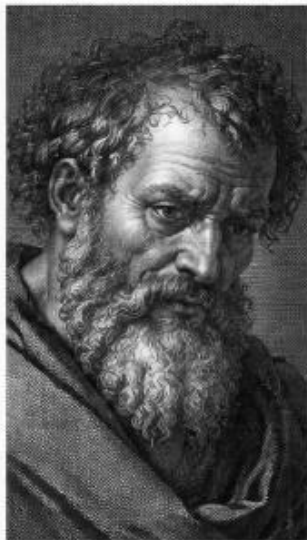


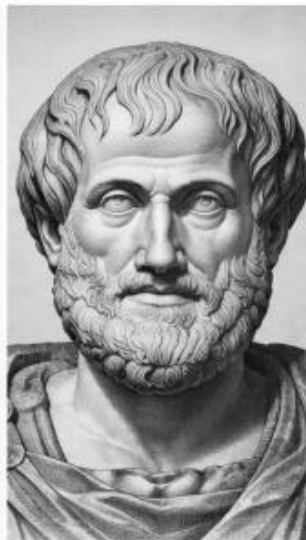
Structured Dialectics



Lao Tzu



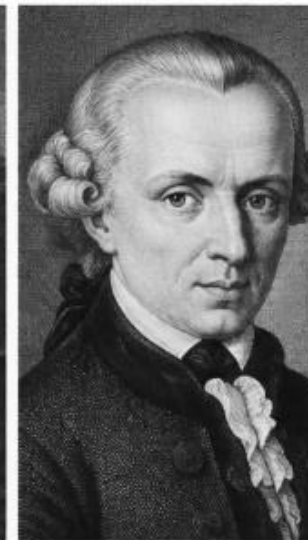
Heraclitus



Aristotle



Spinoza



Kant



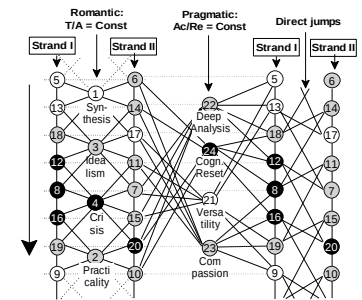
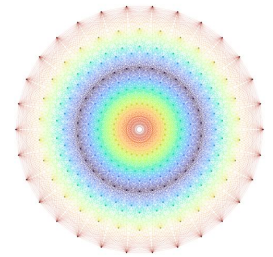
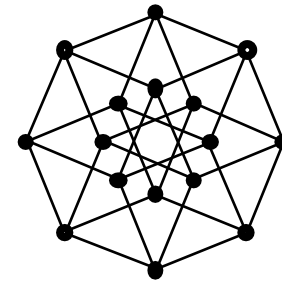
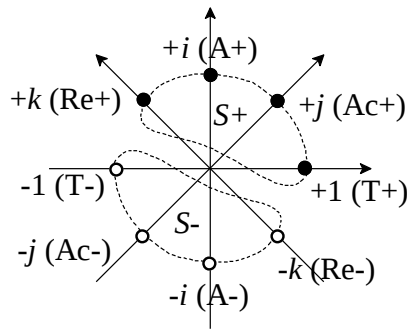
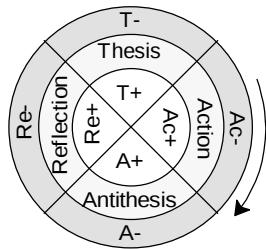
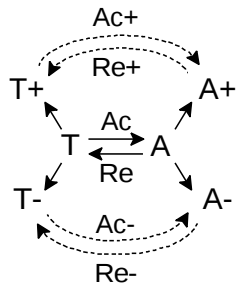
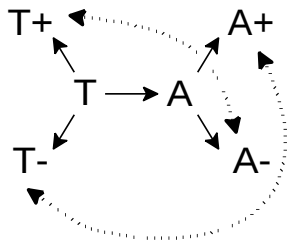
Hegel

Alanas Petrauskas

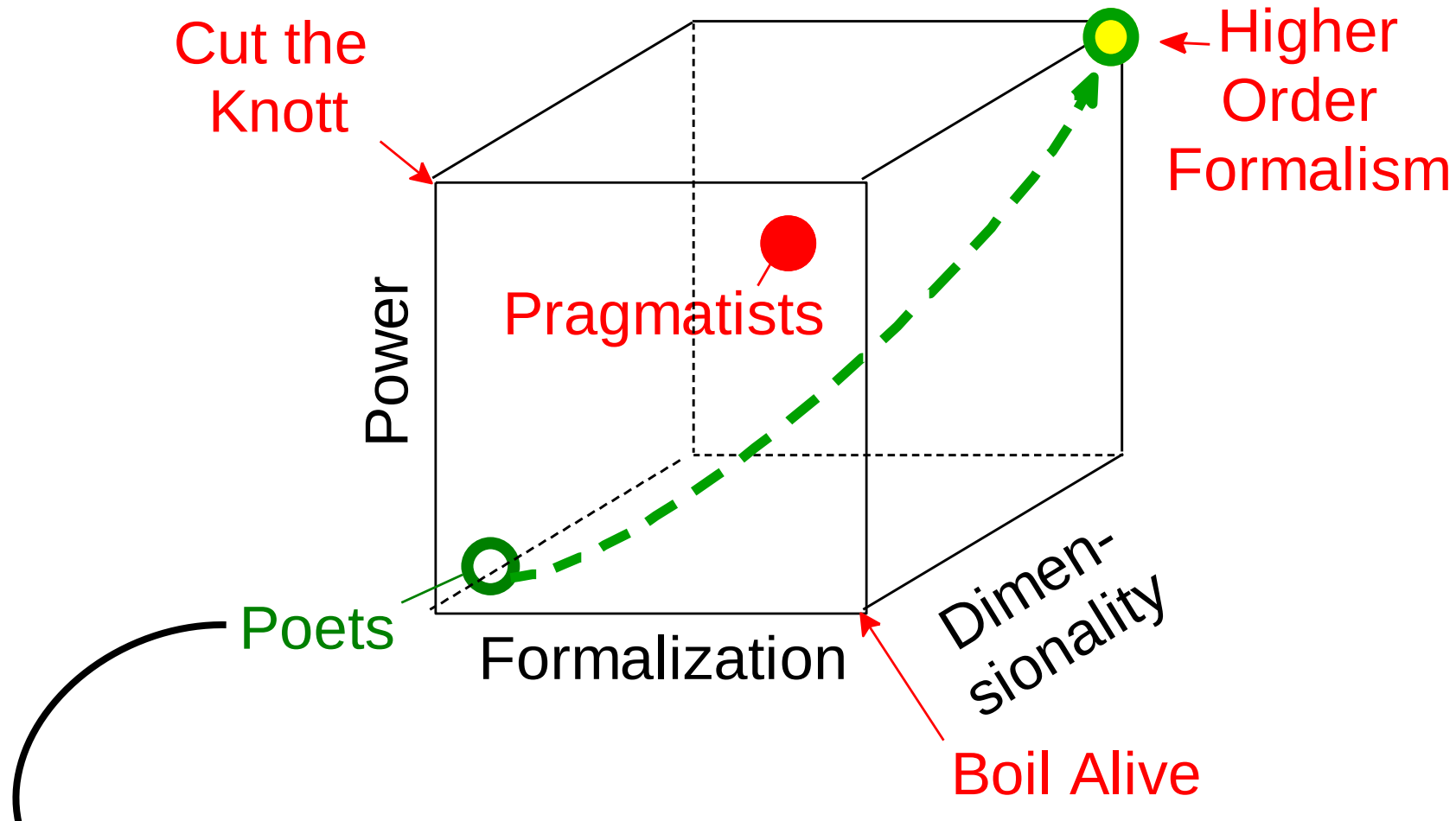
alanas@dialexity.com

Computational Philosophy

For Turning Pragmatists into Poets

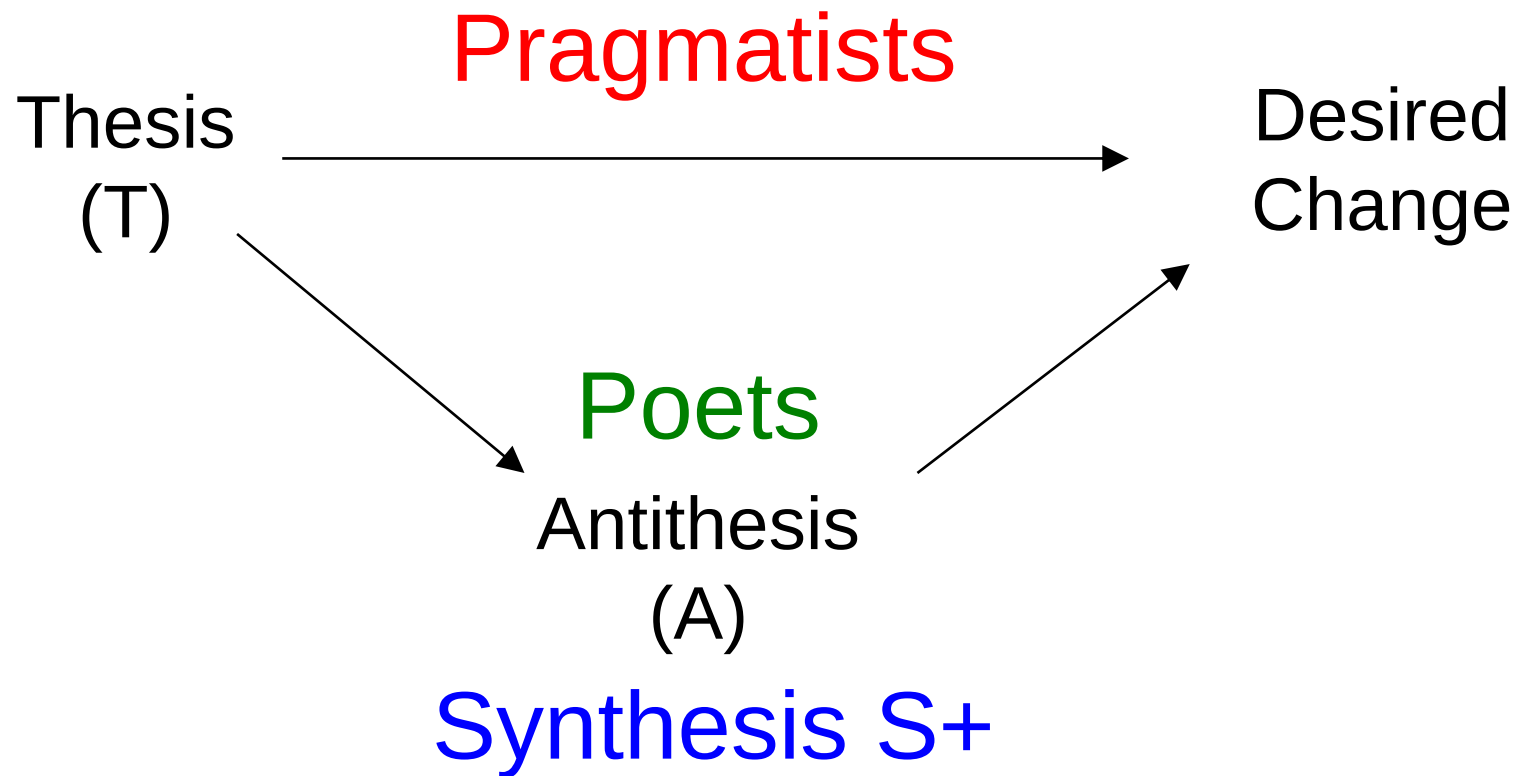


Pragmatists Rule...

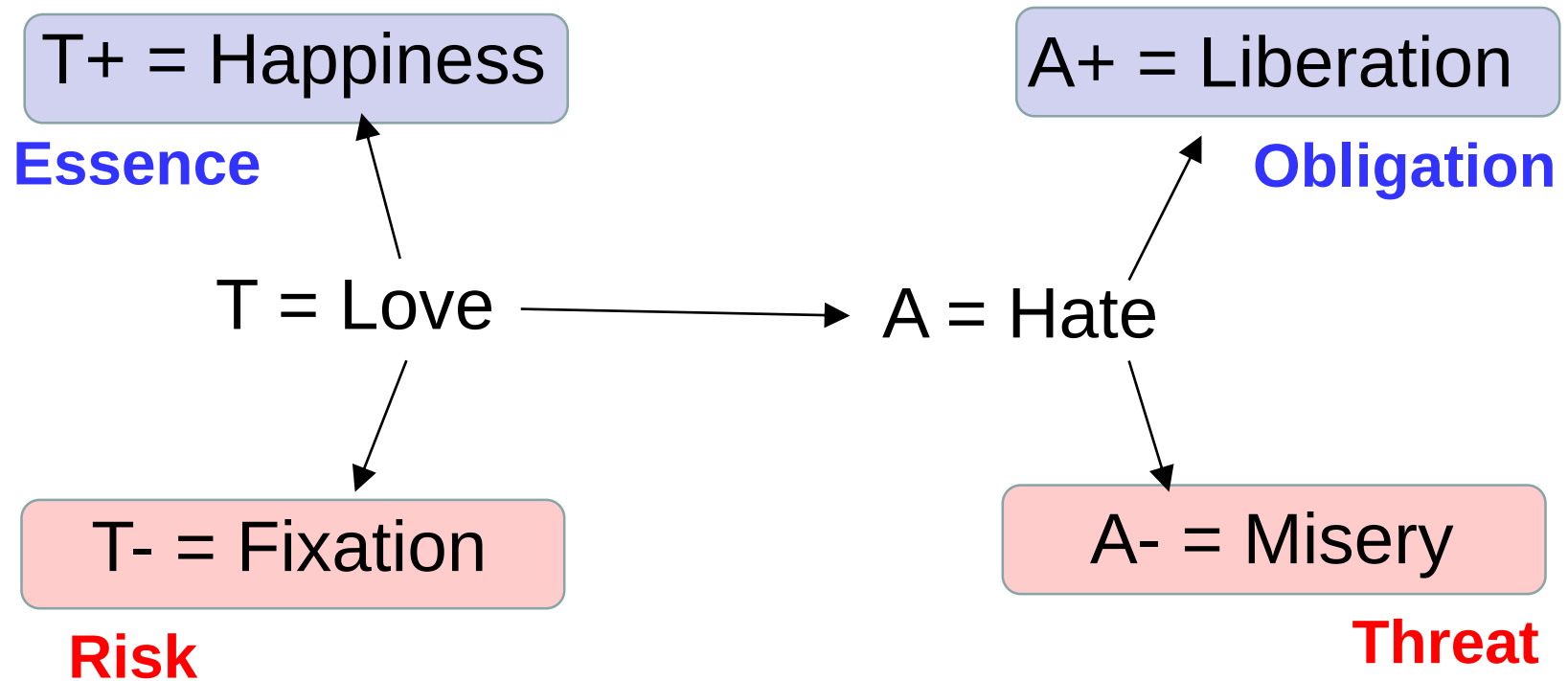


“For poetry makes nothing happen.” — W. H. Auden

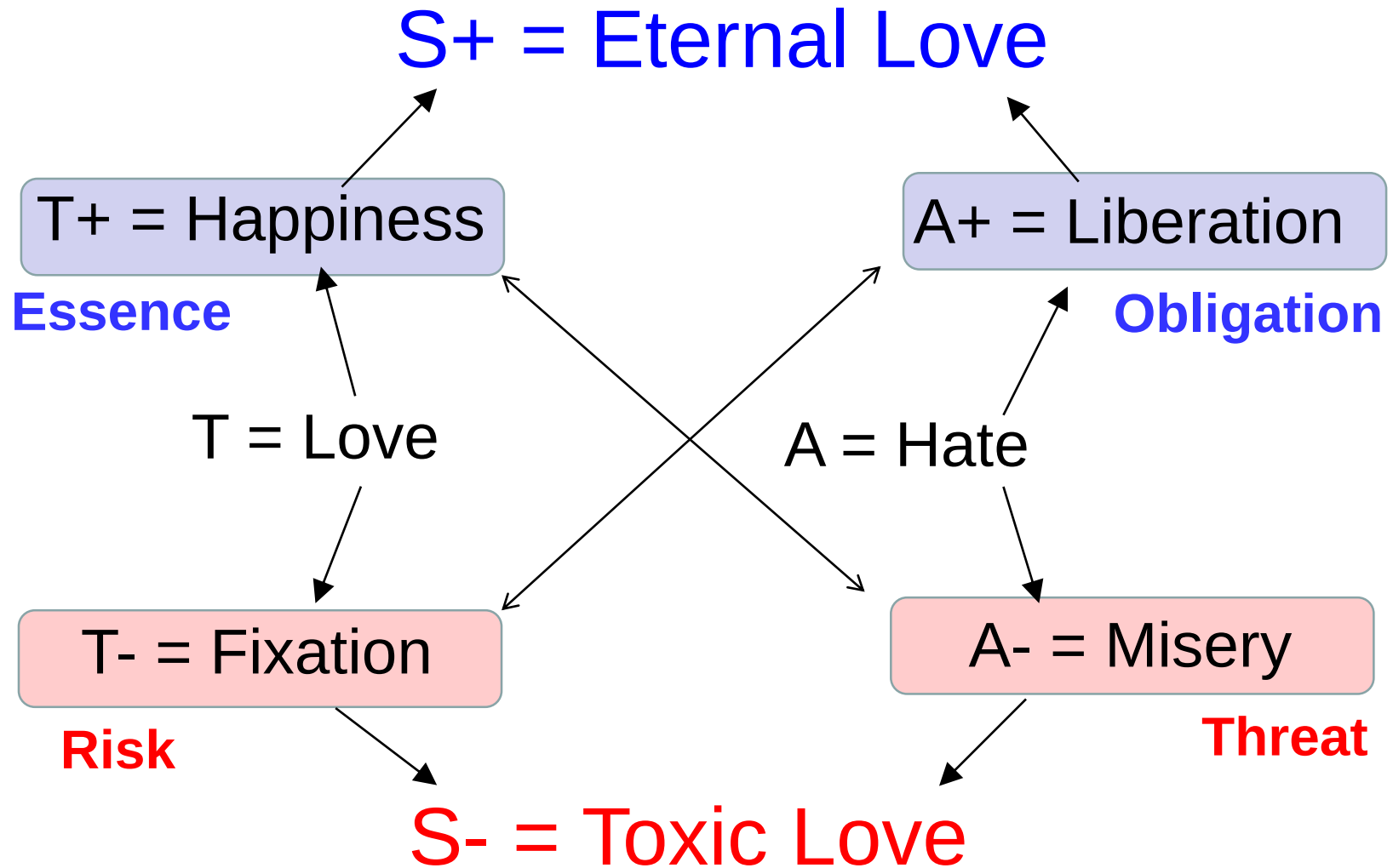
How We Change the World



Synthesis Example



Diagonal Contradictions



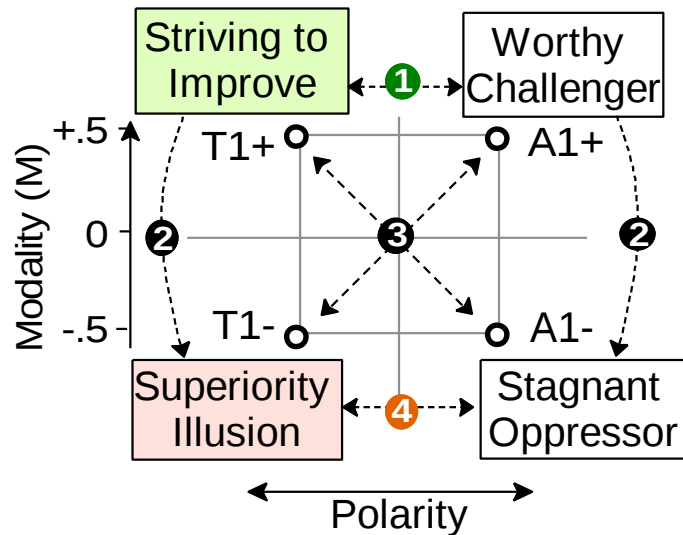
Fairness = Equal Strengths

Balanced Synthesis

S+ = Mutual Growth

T = Me

A = Oppnoent



$$M(T+) = -M(T-) = M(A+) = -M(A-).$$

T+ without A+ **always yields** T-

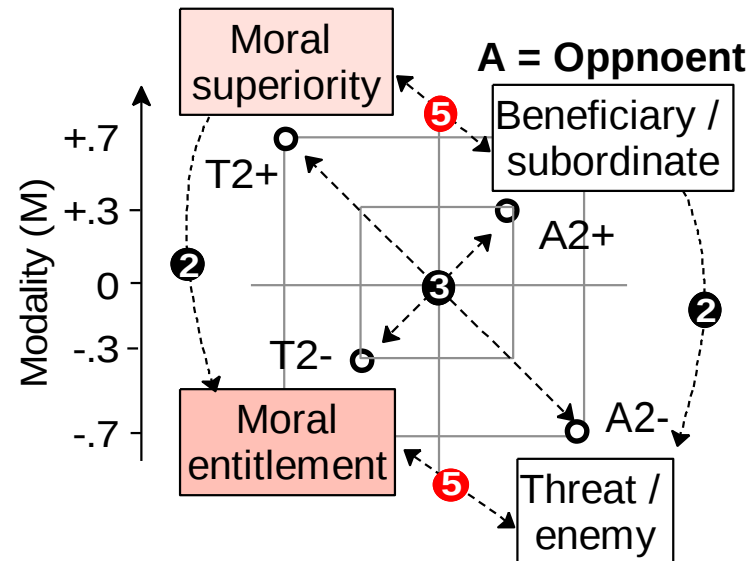
A+ without T+ **always yields** A-

Distorted view

S- = Dominance, Colonialism, War

T = Me

A = Oppnoent



$$M(T+) = -M(A-) > M(A+) = -M(T-)$$

T+ without A+ **does not** yield T-

A+ without T+ **does not** yield A-

- ① Complementarity
- ② Exaggeration
- ③ Diagonal opposition
- ④ Oscillating Repulsion
- ⑤ Maladaptive schemes

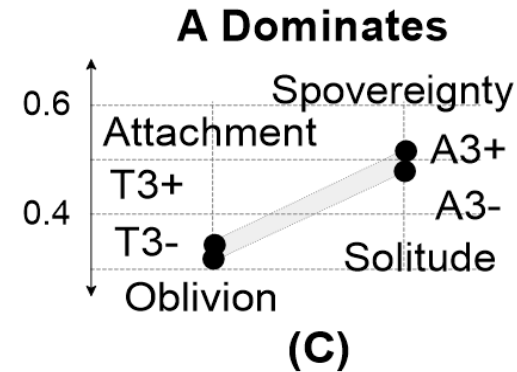
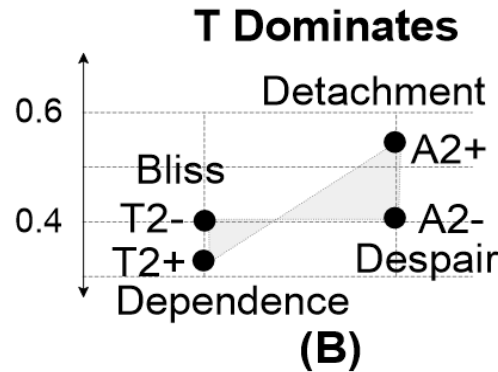
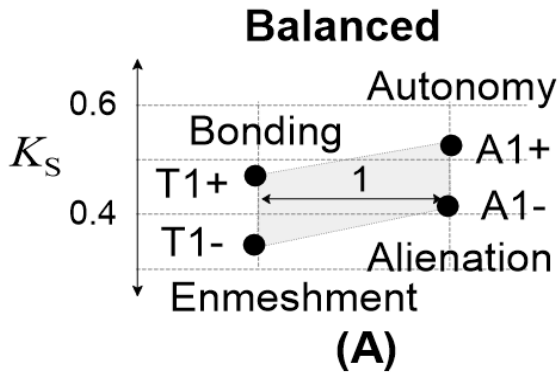
$$M(T+) + M(A-) = 0$$

$$M(T-) + M(A+) = 0$$

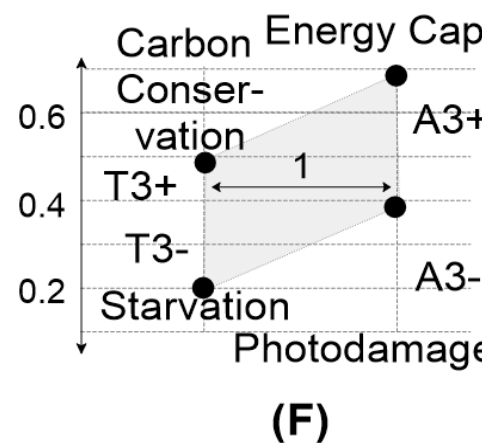
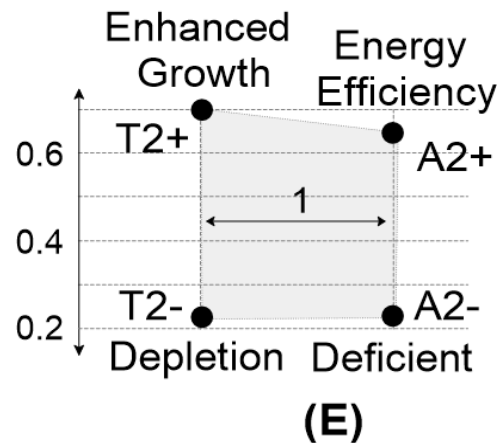
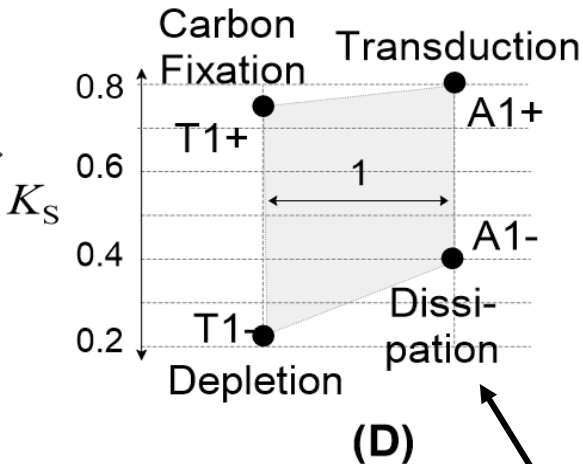
Modality ~ Complementarity to T and A

Complementarities to T and A

T = Love
A = Hate



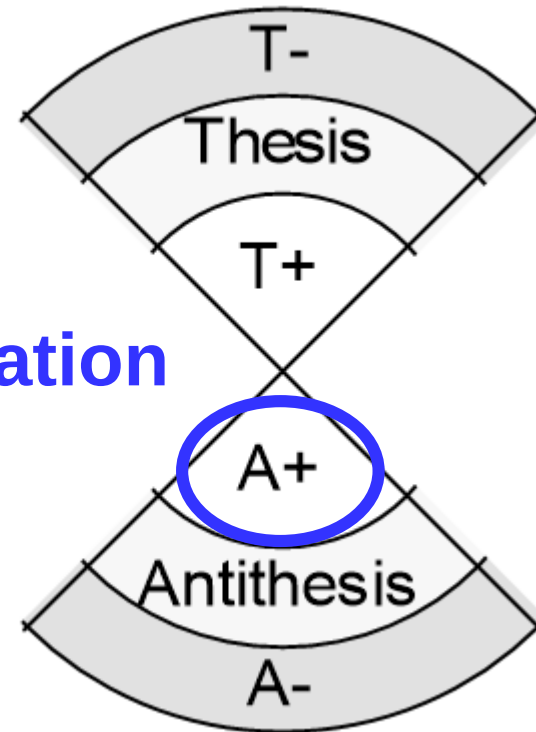
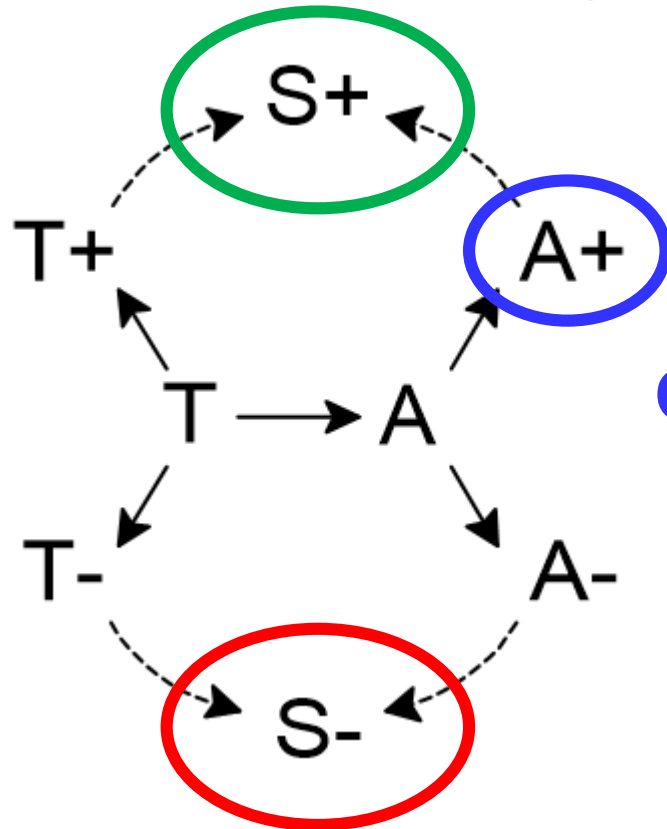
T = Sugar in
Photosynth.
A = Energy
conversion



Fairness $\approx$ Area of the Shape

Vital Blind-Spots

Qualitative Change



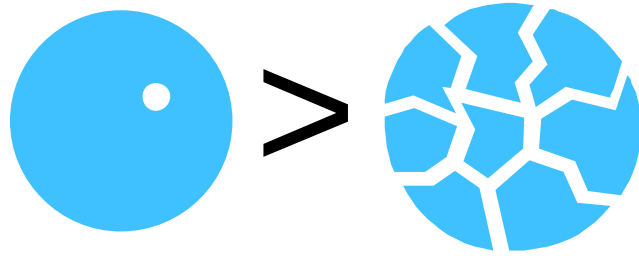
Quantitative Change

Any quantification causes blindness

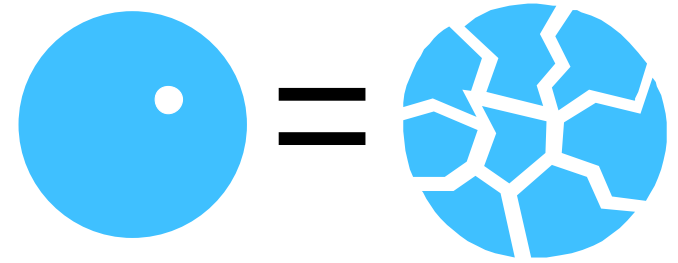
Conceptual Shifts

T	A	A+	Conceptual Shift	Pragmatists
Truth	Falsehood Imagination	Creativity Innovation	Truth is a process rather than a fact:	Reality, facts
Success	Failure	Learning	Focusing on qualitative change	Achievement
Logics	Intuition	Holism	Whole exceeds sum: $1 + 1 > 2$	$1 + 1 = 2$
Certainty	Uncertainty	Openness	The only certainty is uncertainty	Absence of doubt
<u>Optimi-</u> <u>zation</u>	Deterioration Randomization	Acceptance Exploration	Our ontology is part of the system	Objective maximization

The whole exceeds the sum of parts



$1+1 > 2$ - Abundance



$1+1 = 2$ - Scarcity

Counting makes us poor $\neq$ Accounting



Muhammad ibn Musa al-Khwarizmi (780-850)

Algebra (from arabic al-jabr) means "reunion of broken parts"

Deception Identification

If T is true, A must also be True

T+ without A+ yields T-
A+ without T+ yields A-

Vaccination without Healthy Natural Immunity yields physical exhaustion

Natural Immunity without Vaccination yields vulnerability to unnatural threats

Pathology Identification

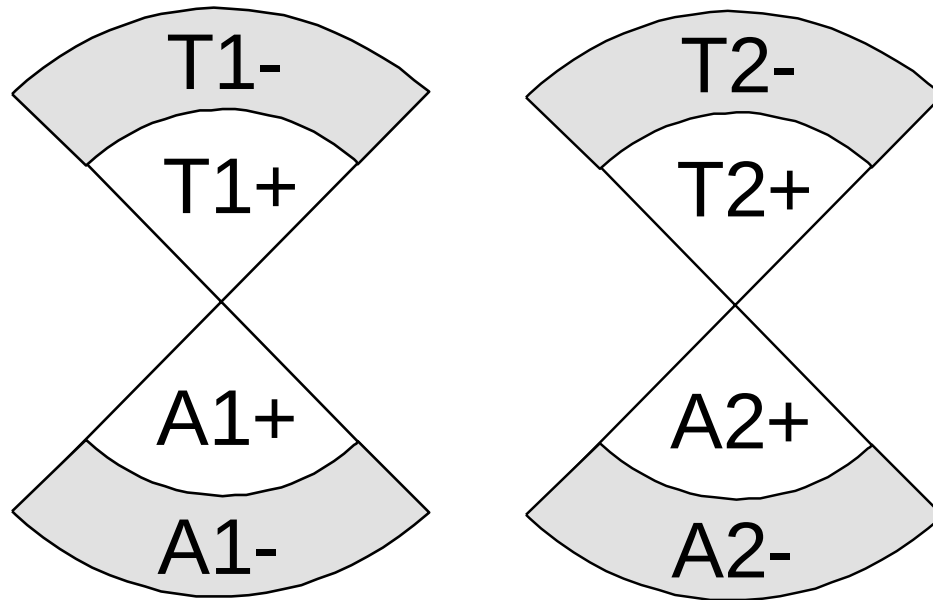
When S- is labeled as S+,
then we obtain pathology

**Cancer,
Bureaucracy,
Orwellianism**

All foster T- and suppress A+

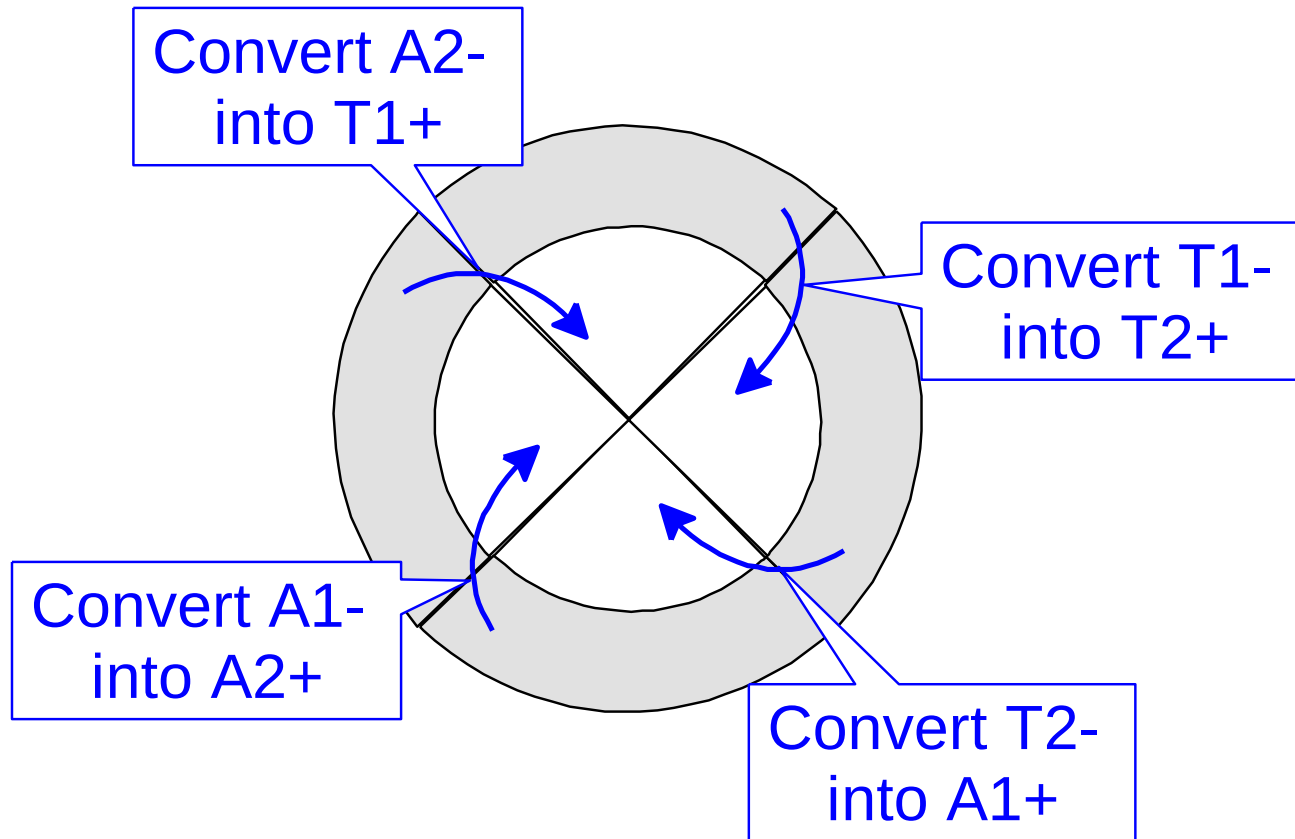
Simple Conflict Resolution

Conflict between T1 vs T2

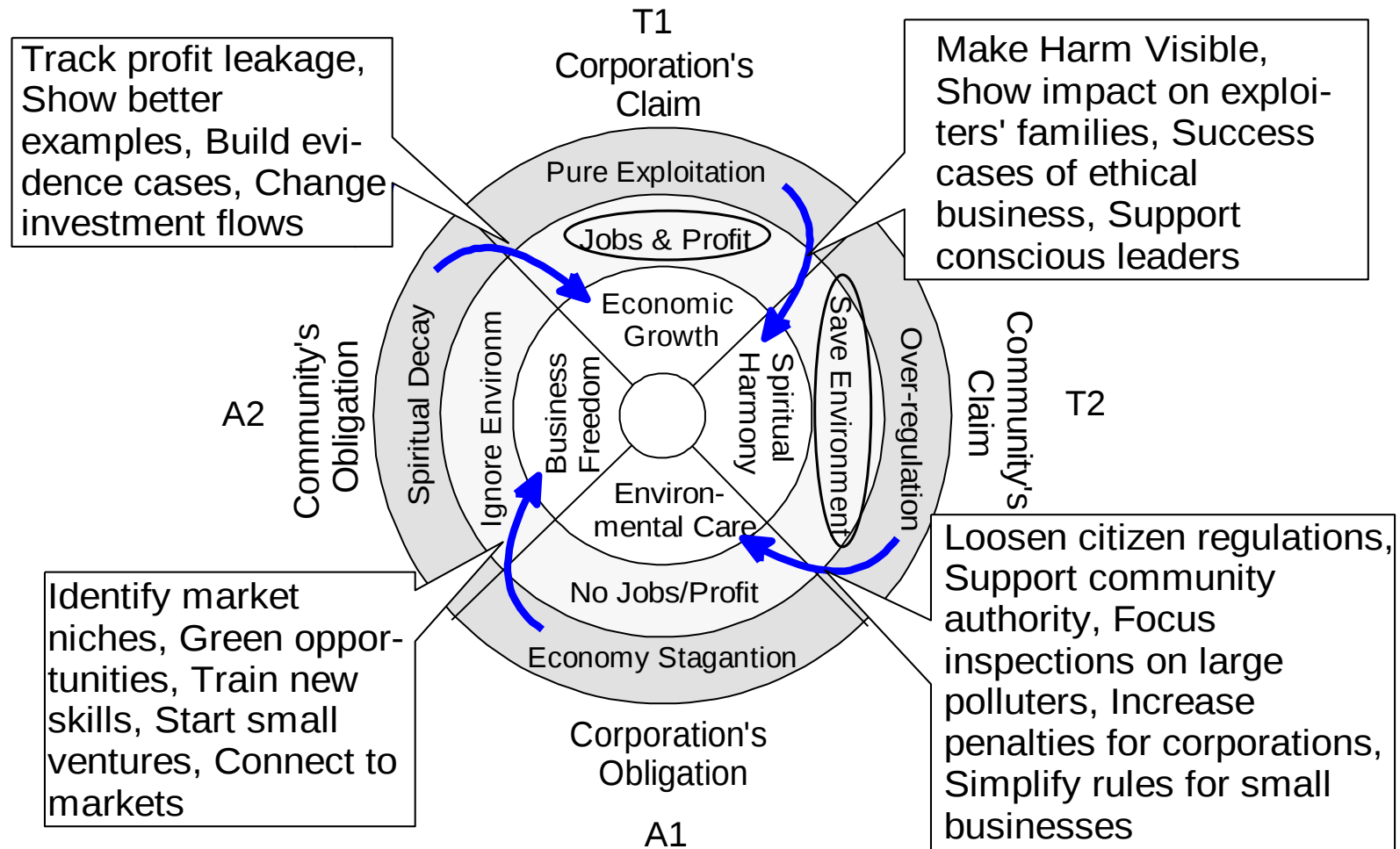


Conflict Resolution

Conflict between T1 vs T2

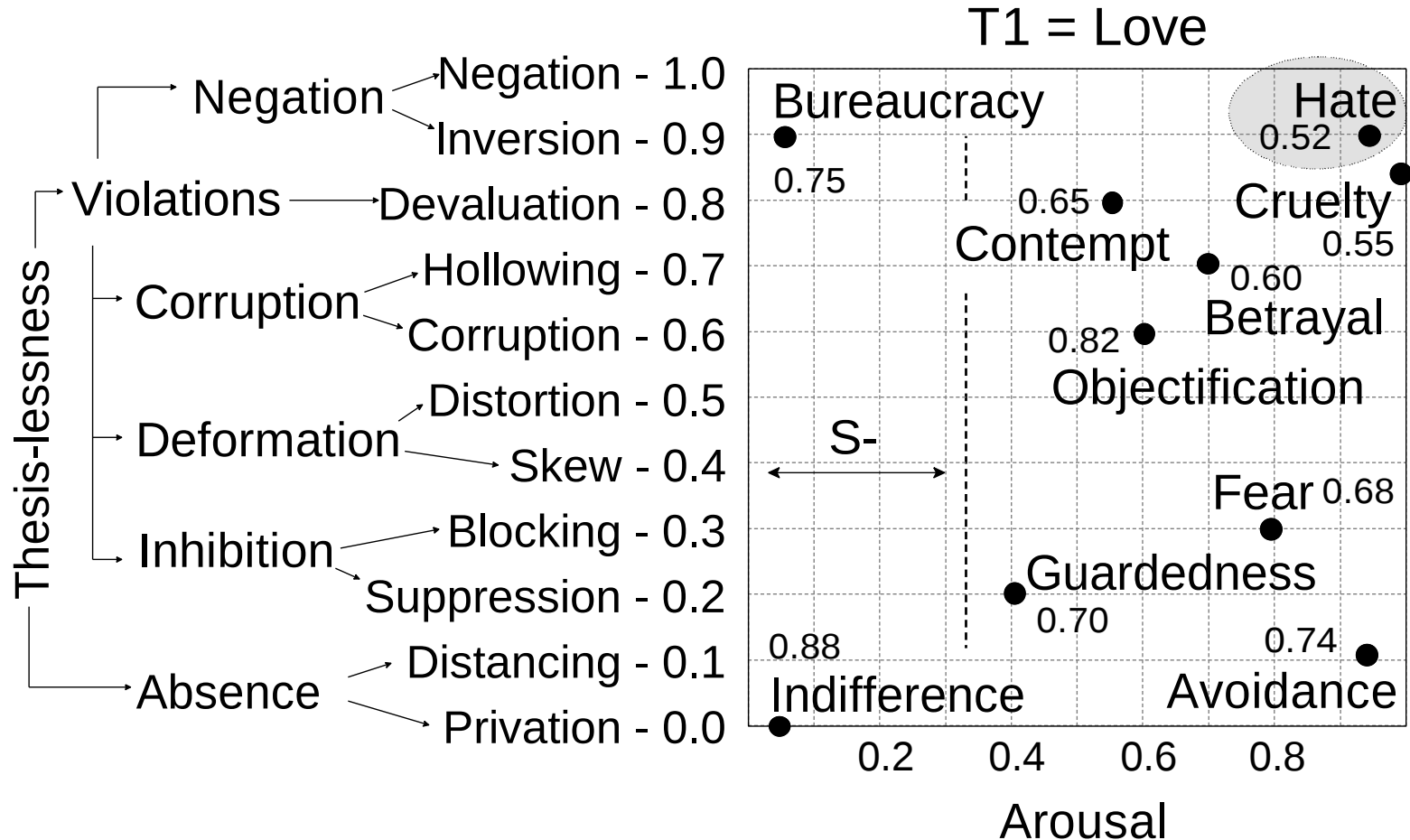


Corporation vs Community



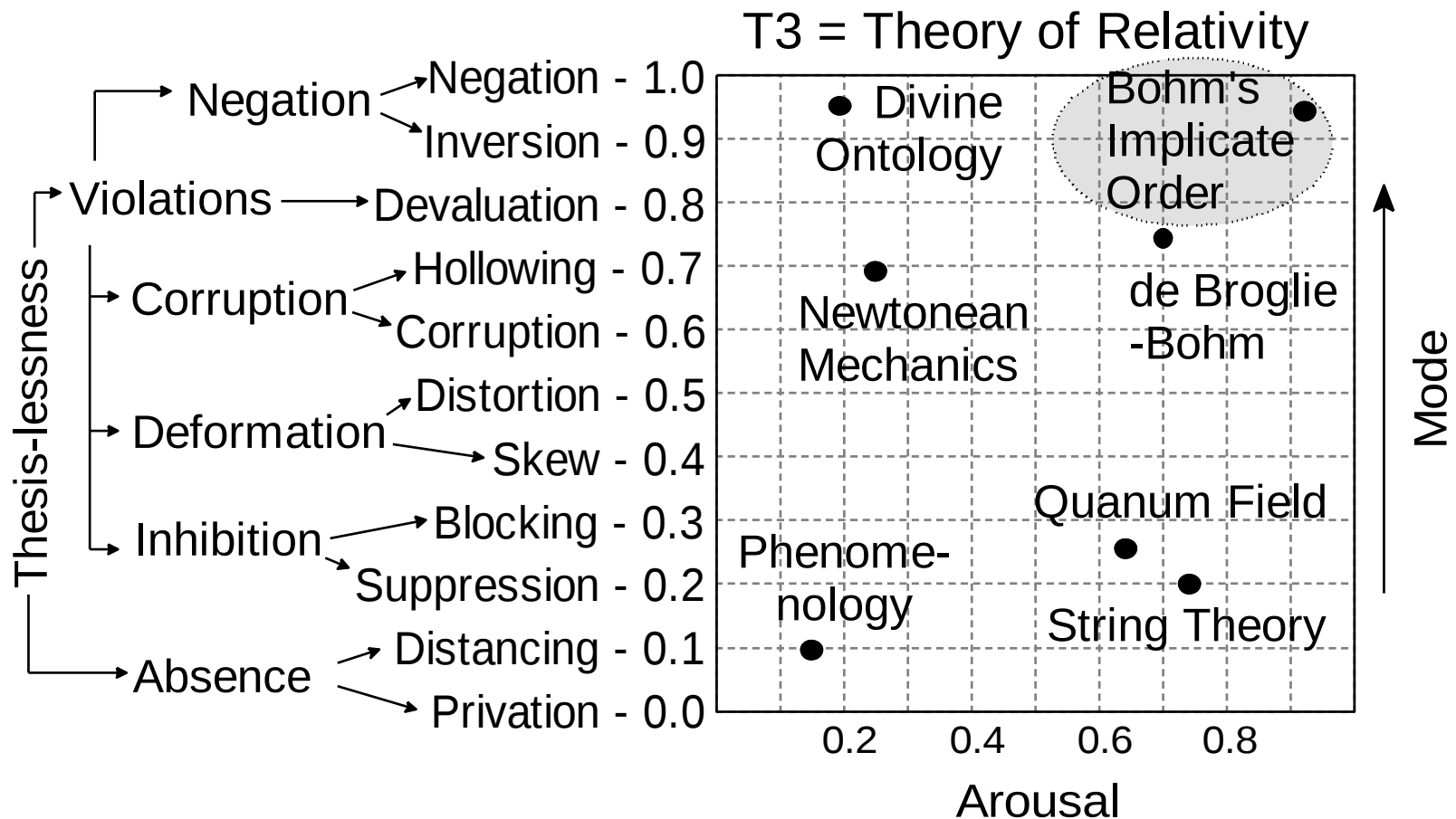
Good for **Structured Dialogic Design**

Multiple Polarities



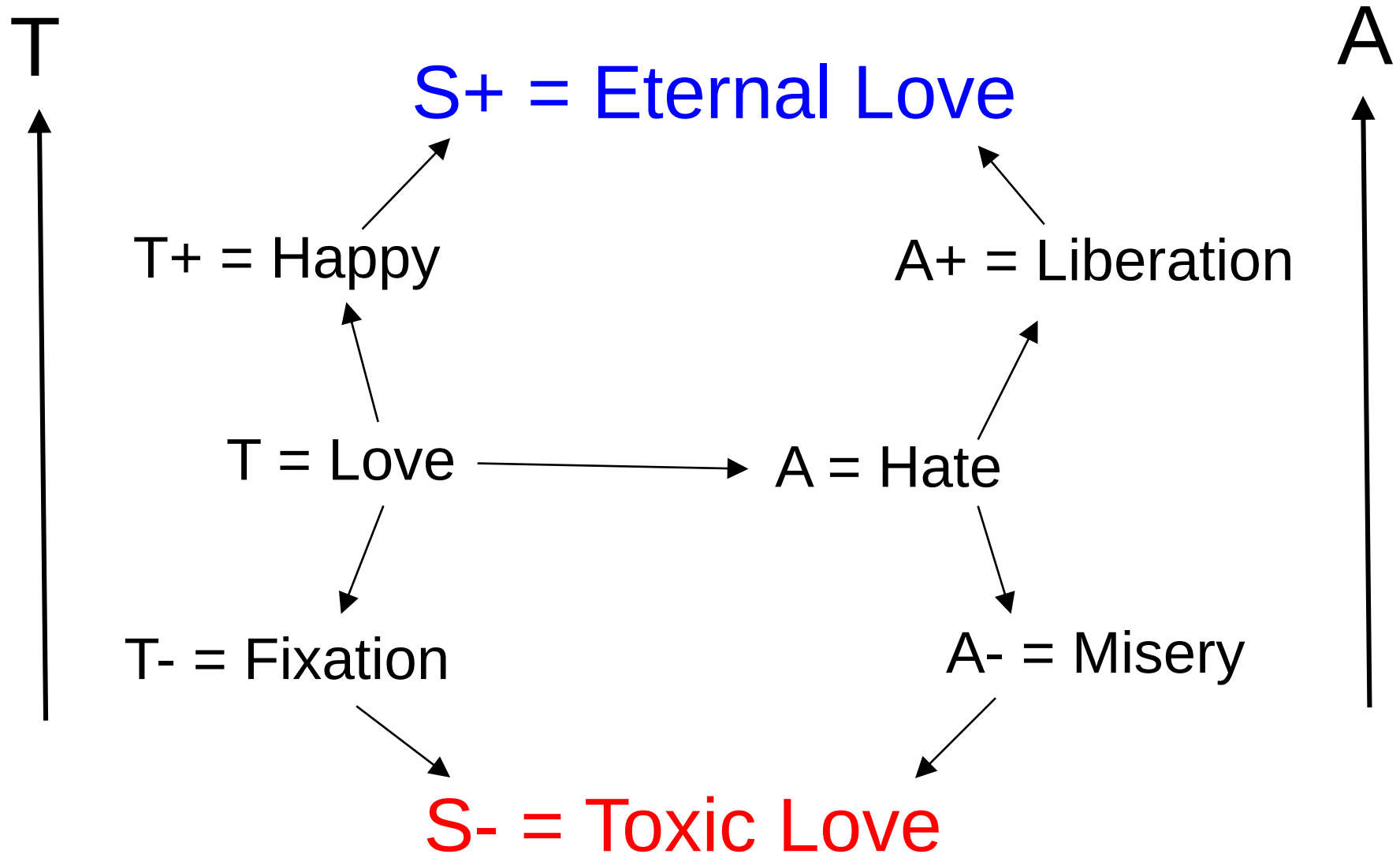
Any Thesis has multiple obligations

Theory Completion



Any Theory has multiple directions

Semantic Differentials



Complex Plane Formation

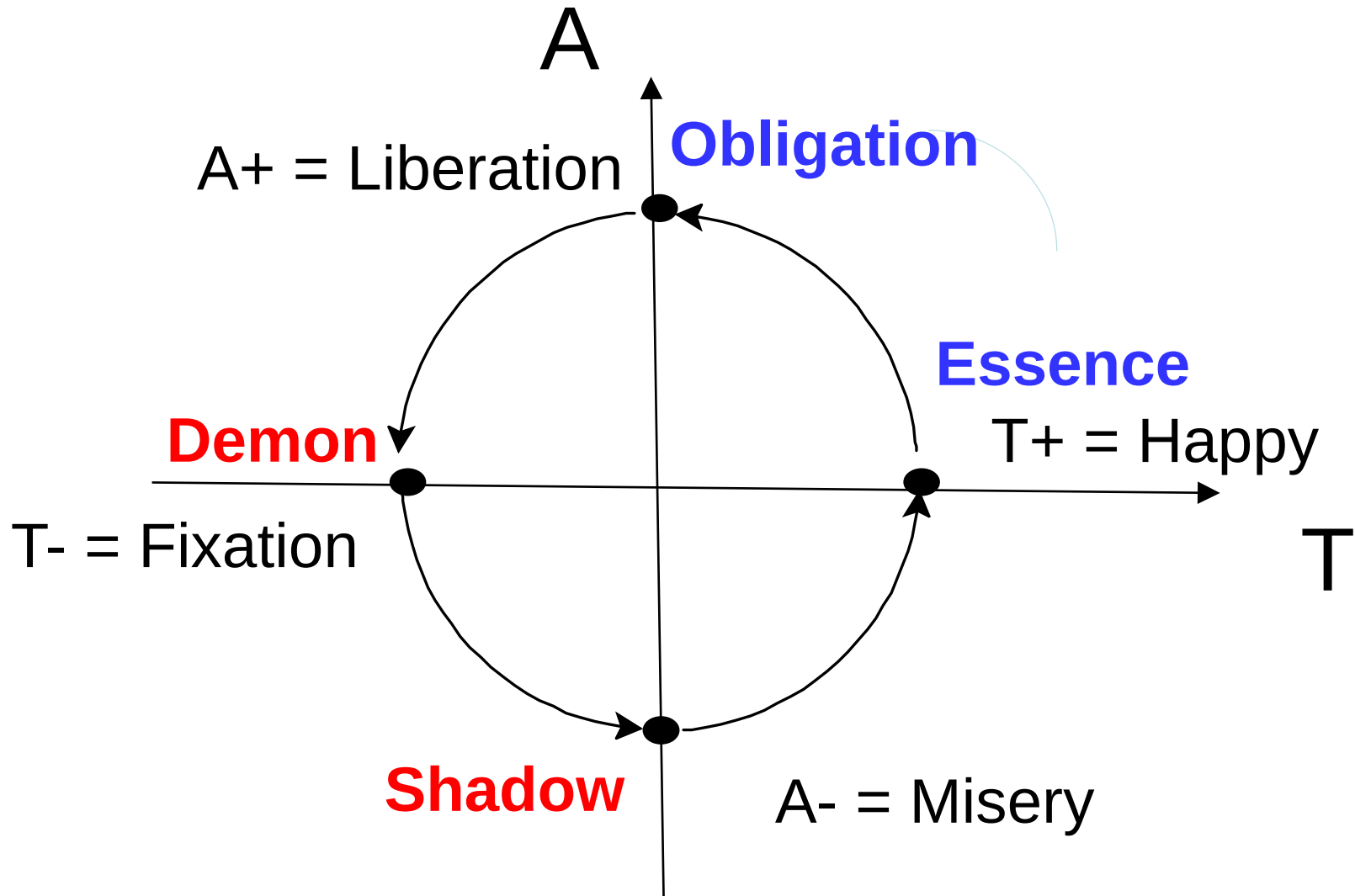
T



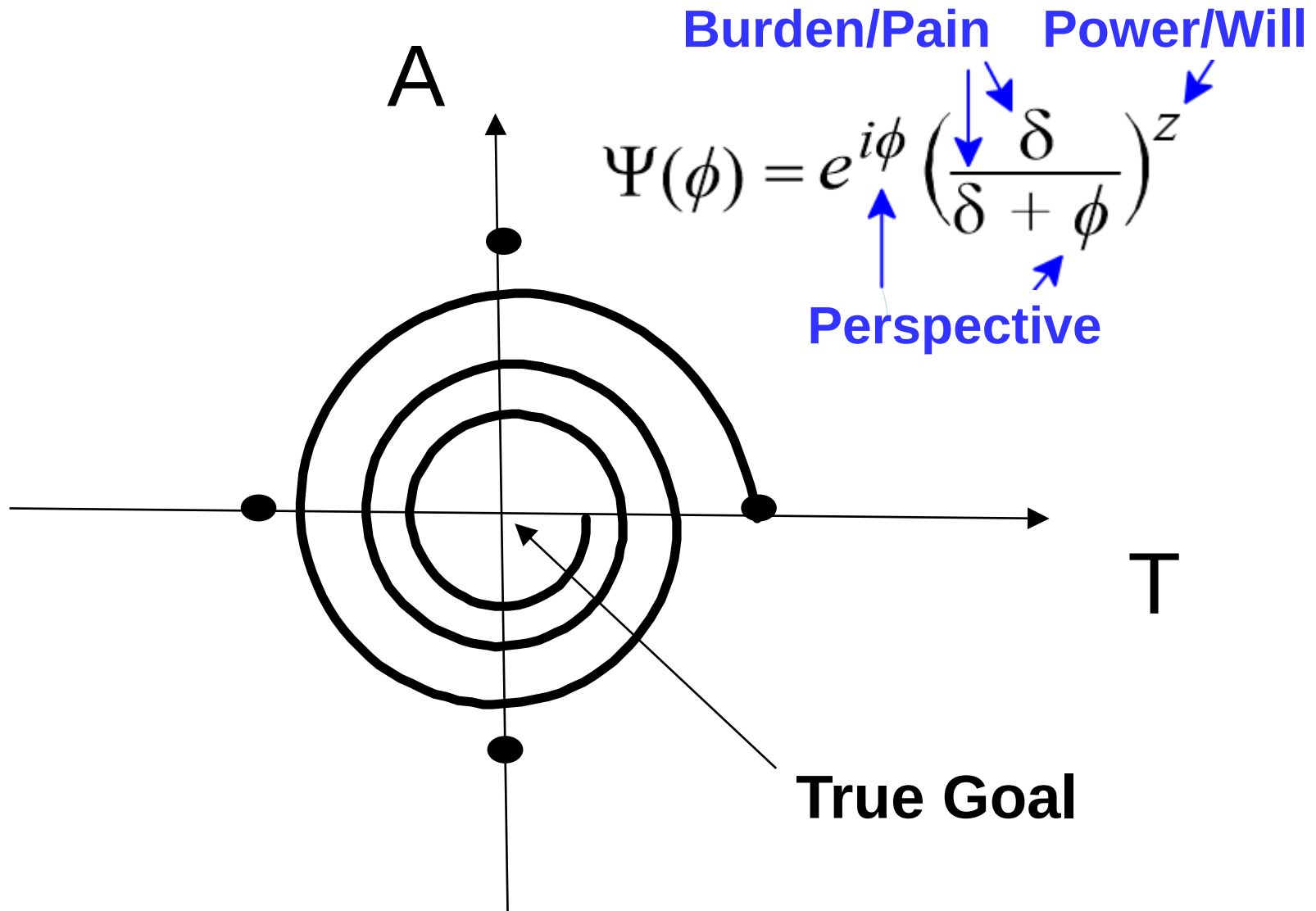
A



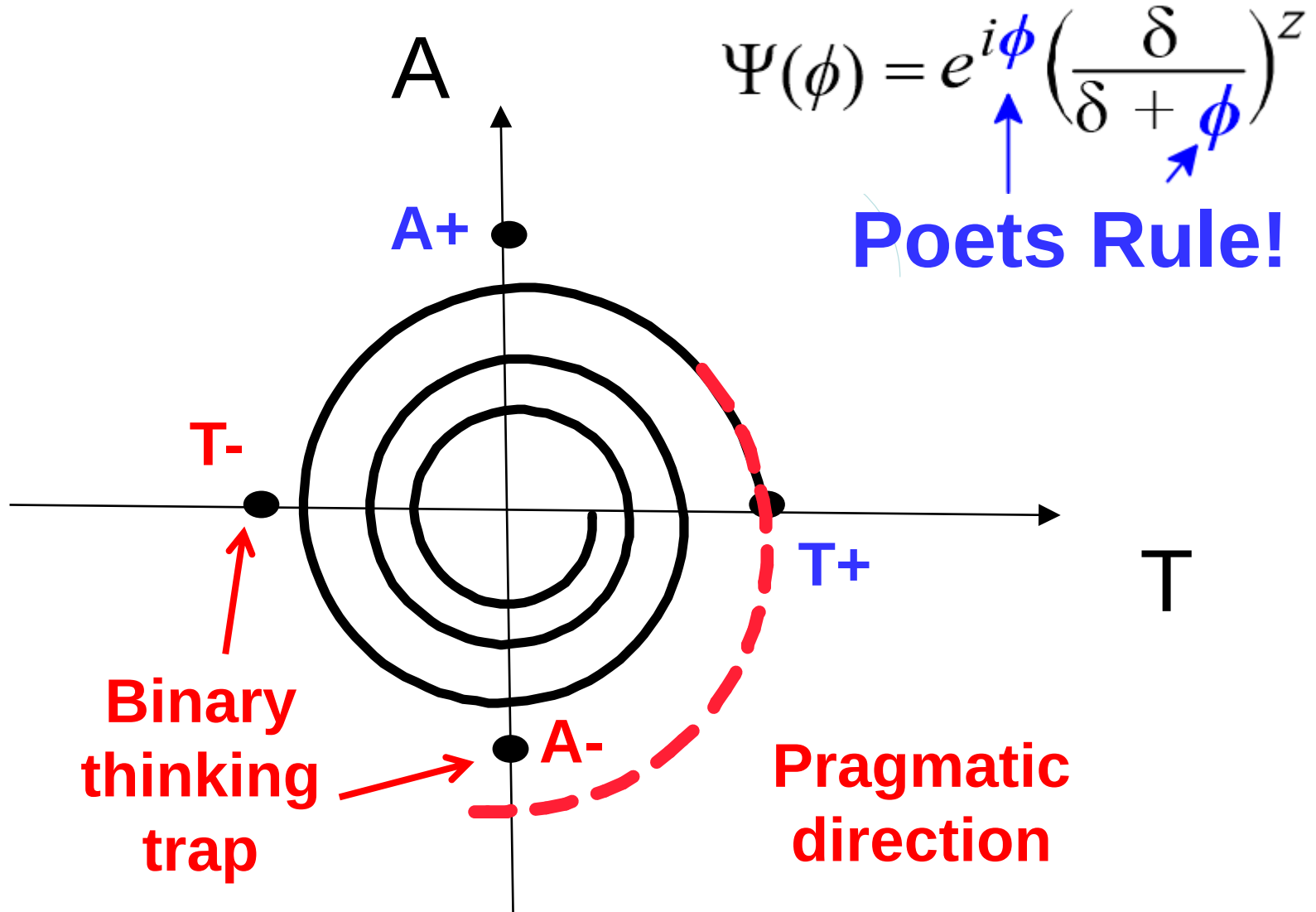
Complex Plane



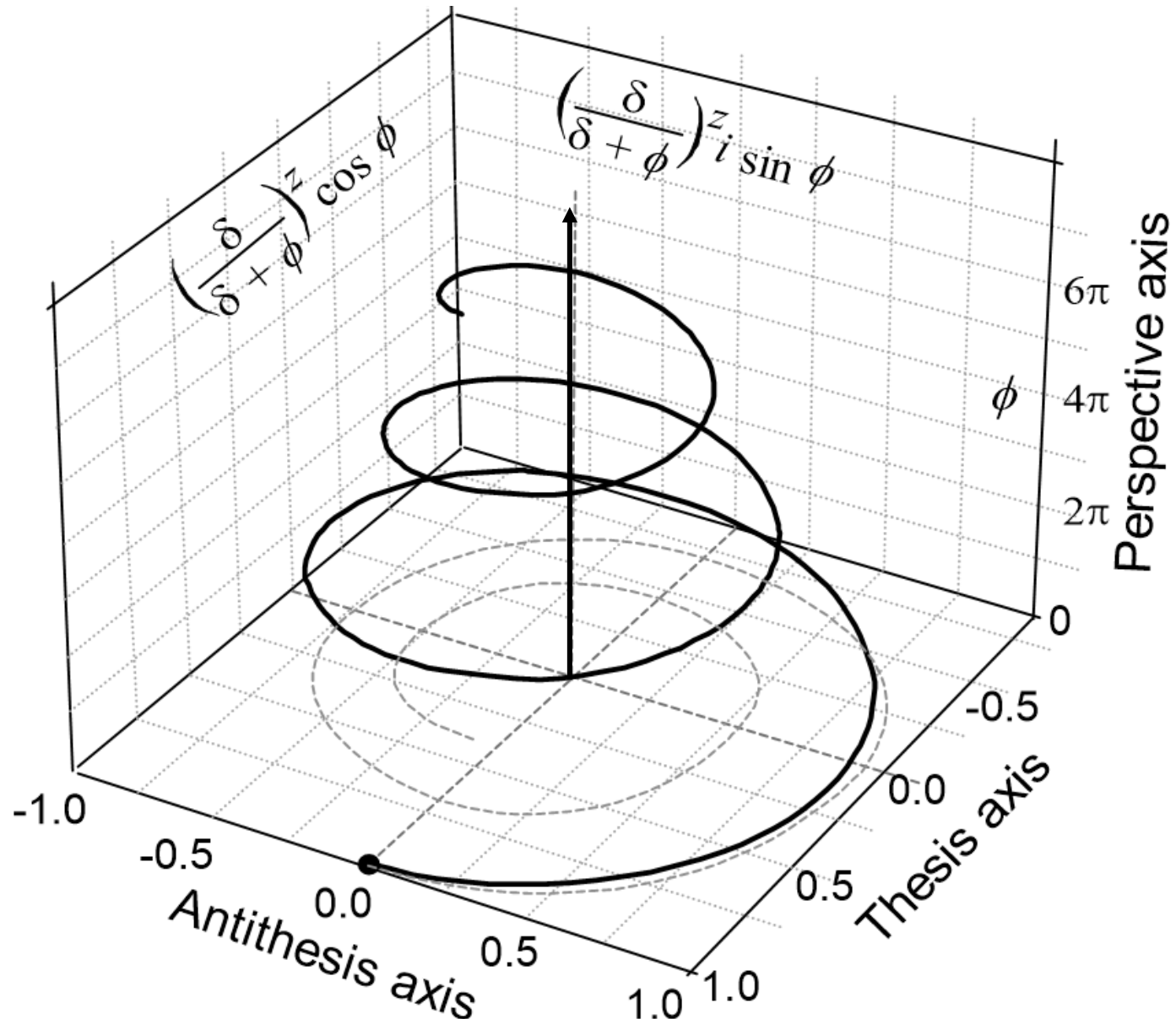
2D Spiral



Poets Change Perspective



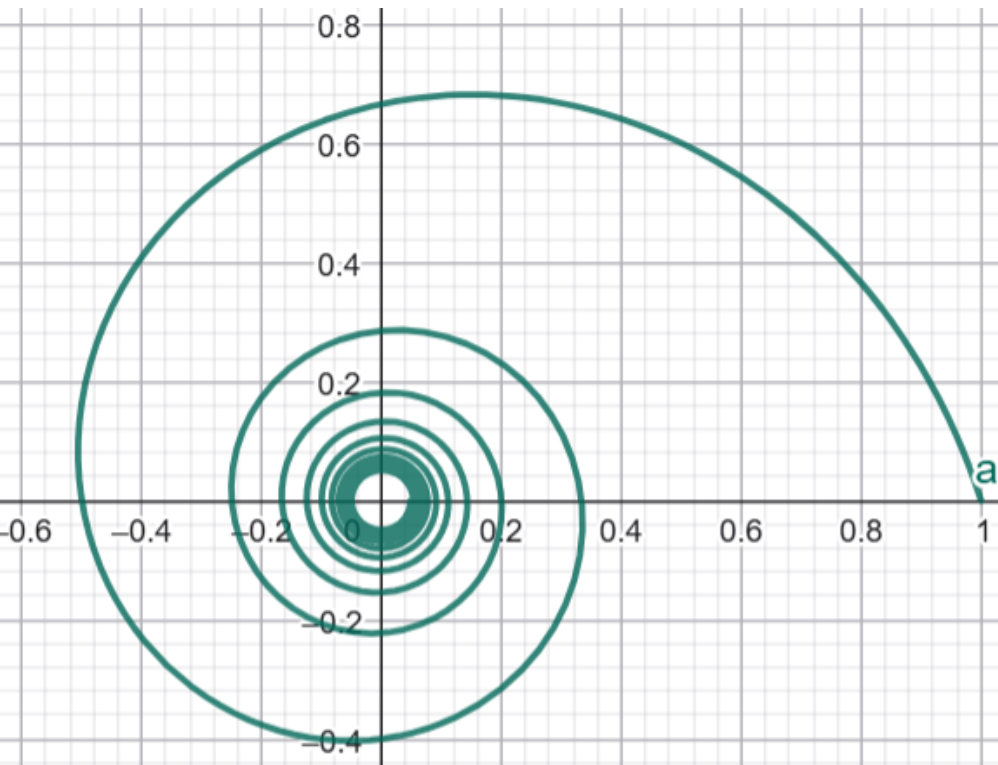
New Dimension Forms



Burden (δ) vs Power (z)

Low burden,
Low power/skill

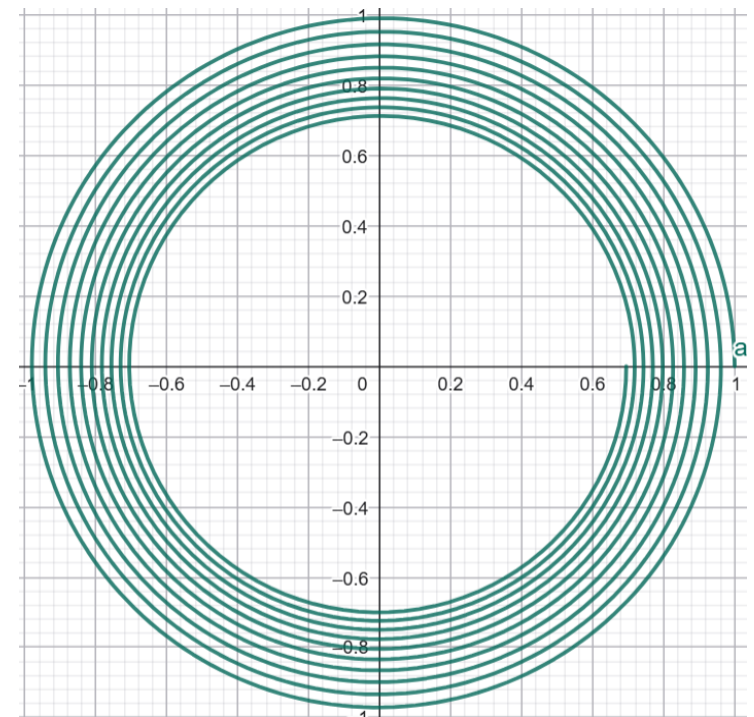
$$\delta = 1\pi, z = 1$$



$$R = \left(\frac{\delta}{\delta + \phi} \right)^z$$

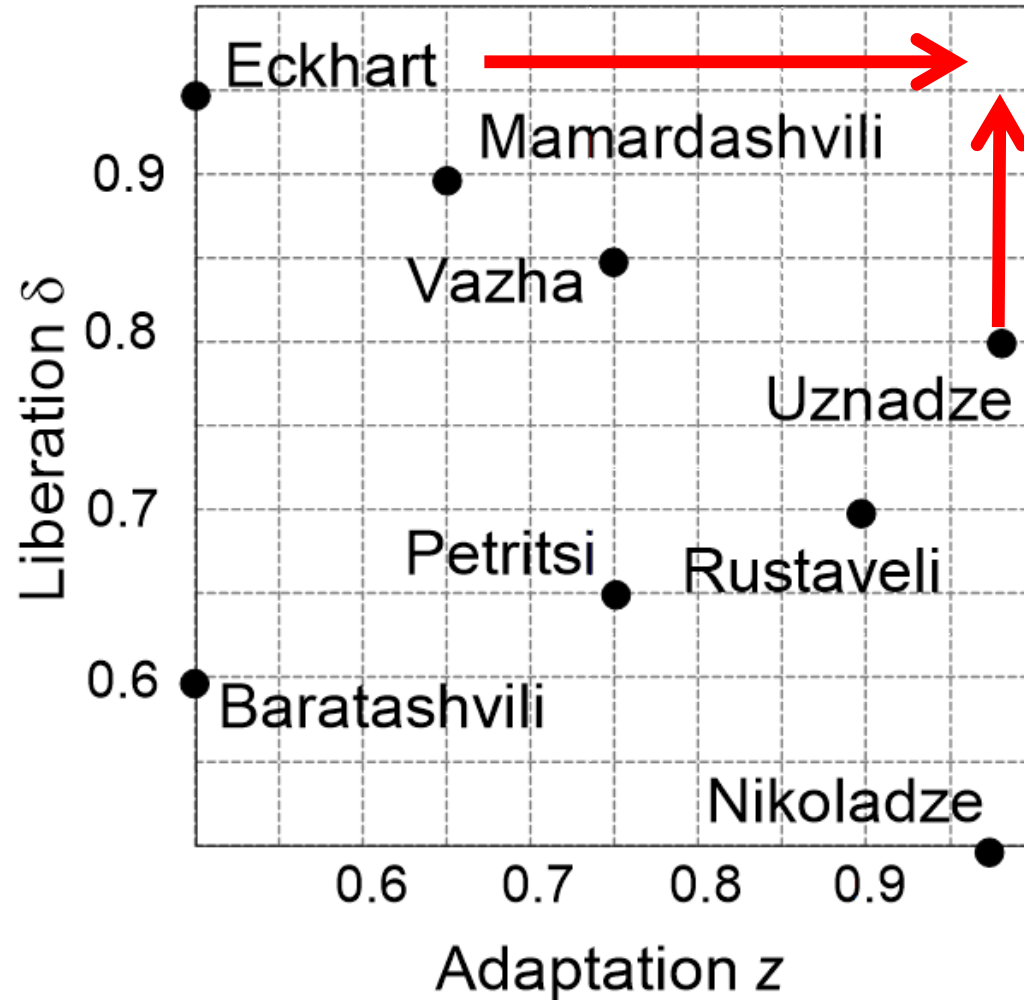
Very high burden,
Higher power/skill

$$\delta = 100\pi, z = 2$$



What Philosophers Can Do

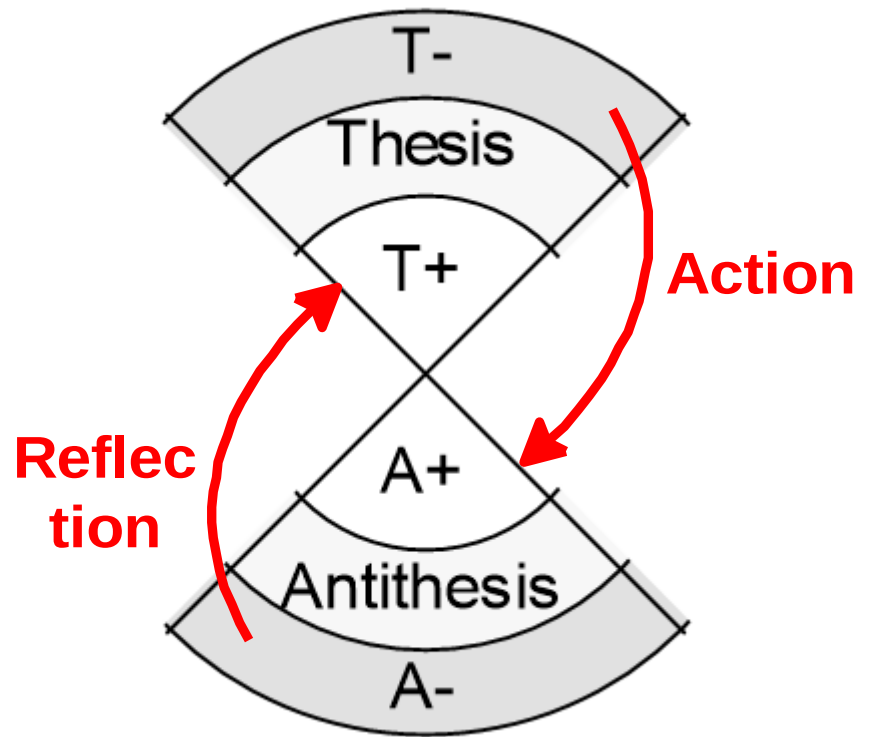
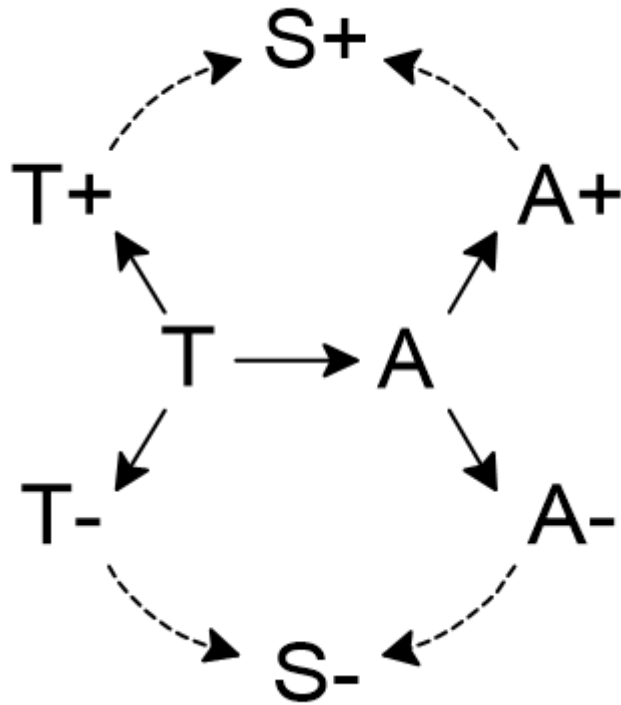
$$R = \left(\frac{\delta}{\delta + \phi} \right)^z$$



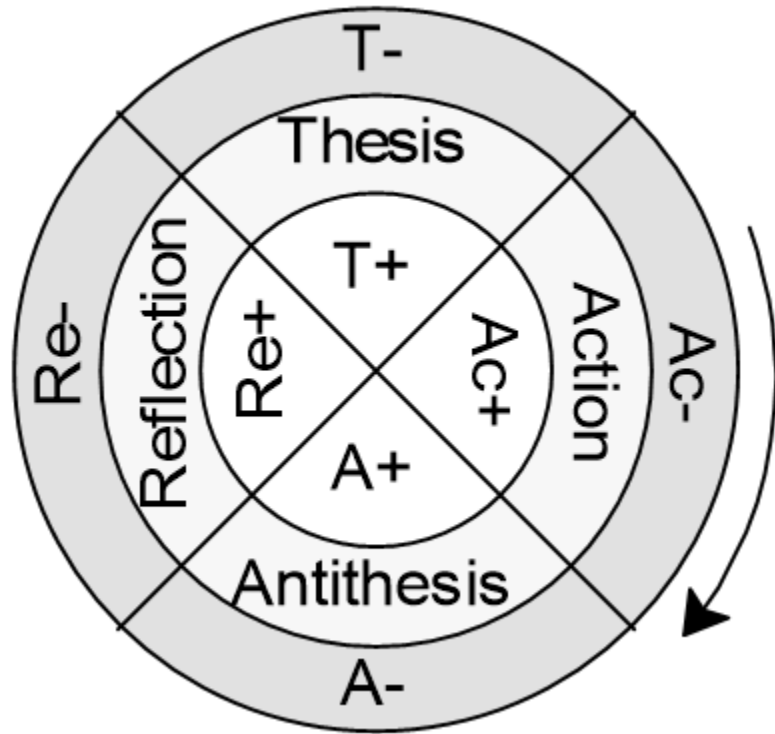
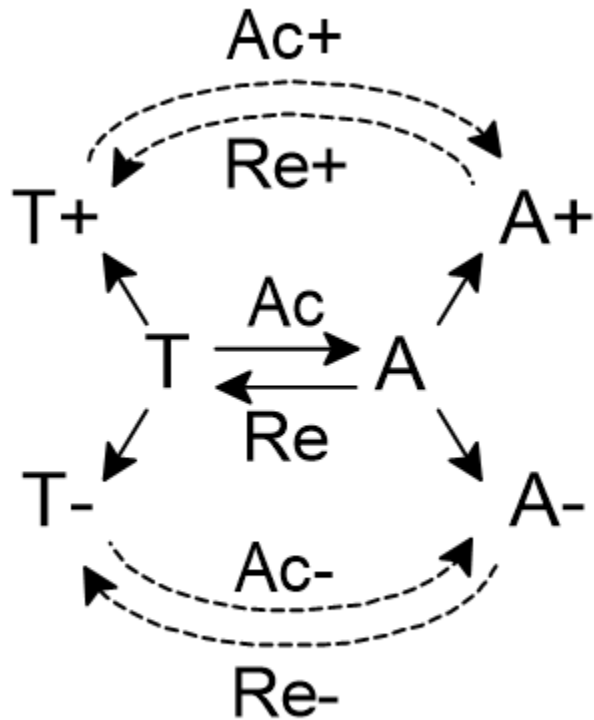
Reframe, change
perspective:

- increase ϕ and z
- decrease δ (pain)

What Is Missing?



Habitual Effects!



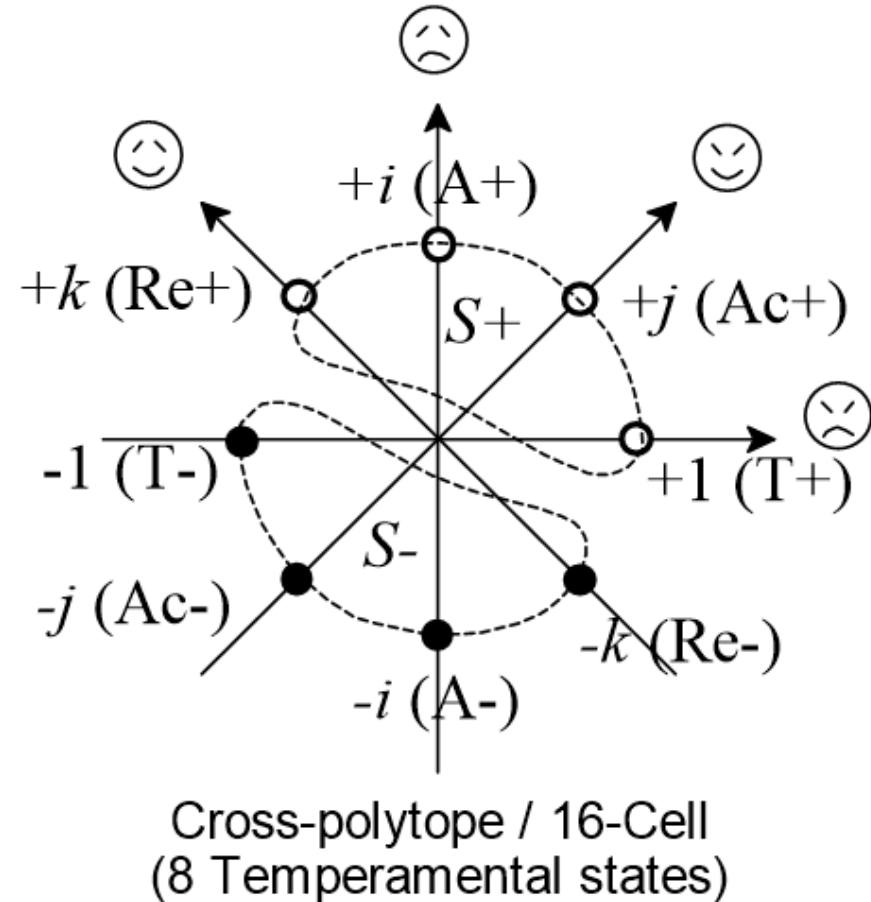
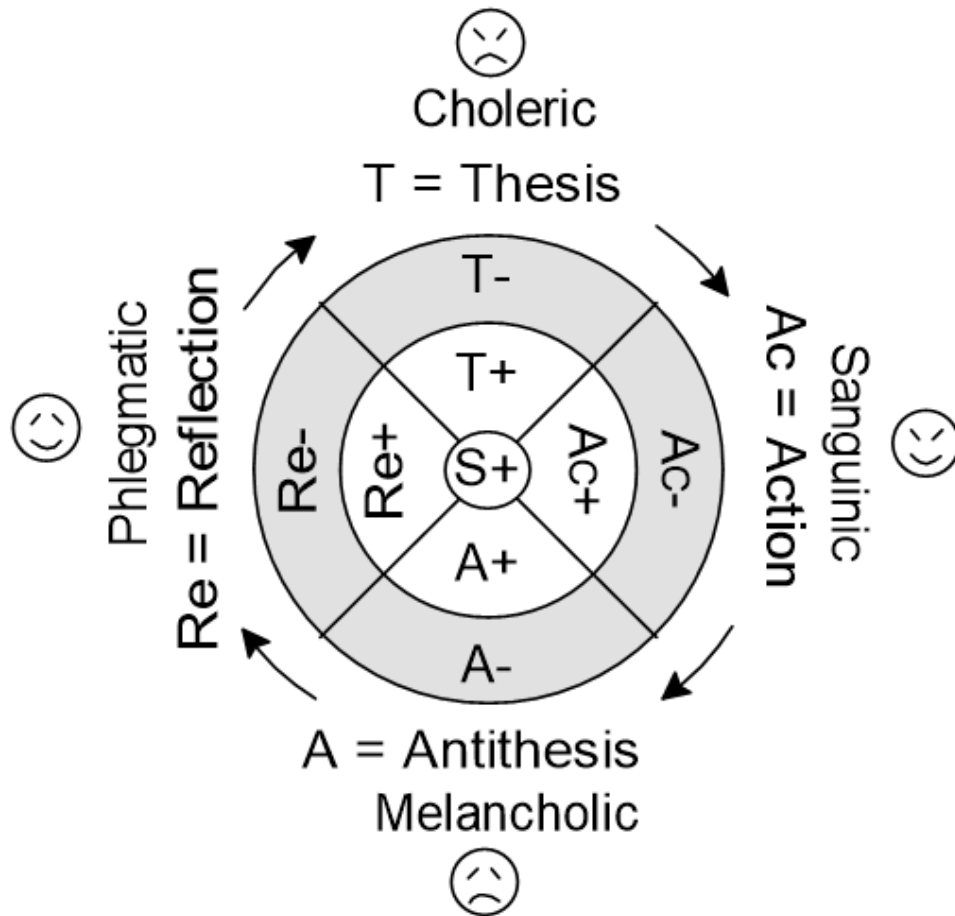
$Ac+: T- \rightarrow A+$

$Ac-: T+ \rightarrow A-$

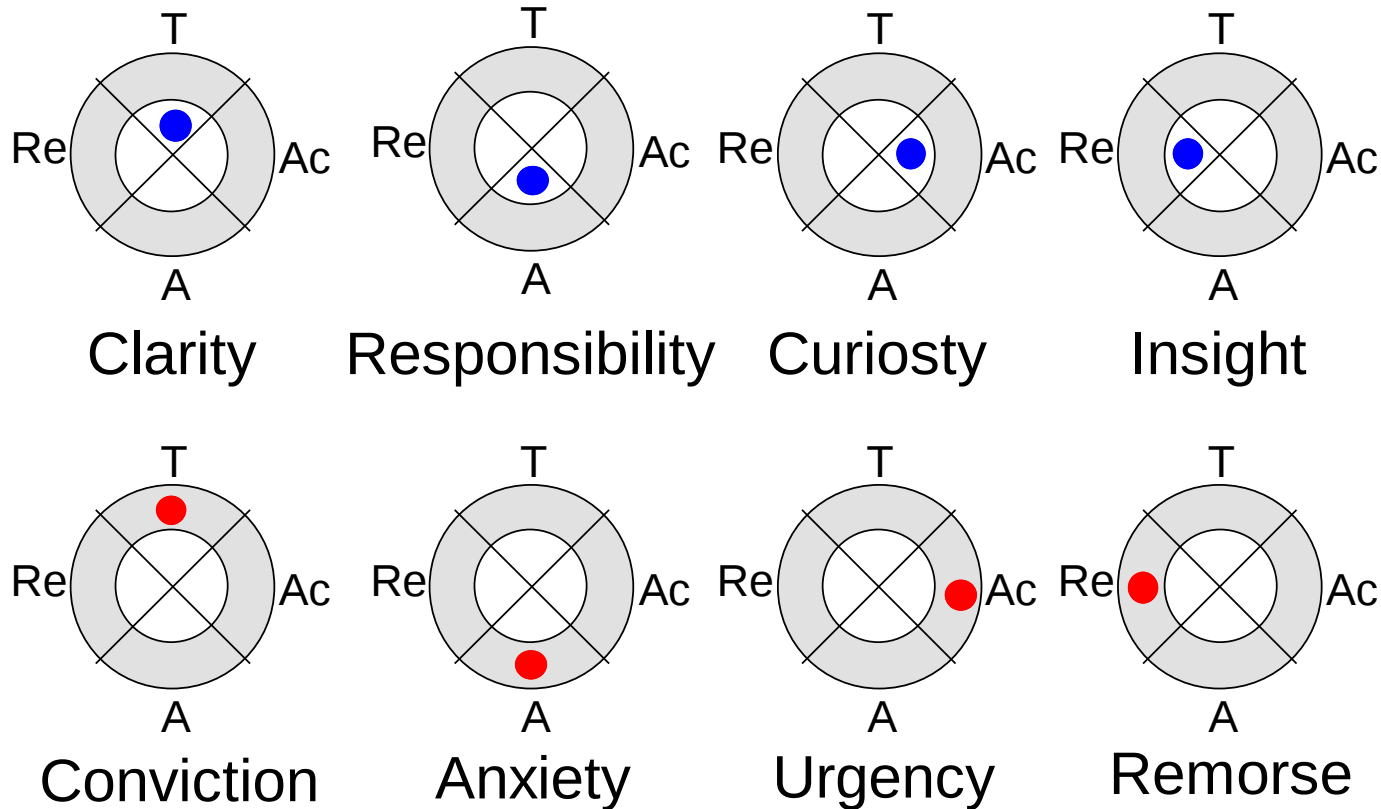
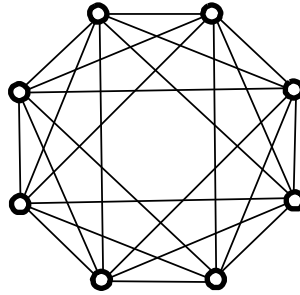
$Re+: A- \rightarrow T+$

$Re-: A+ \rightarrow T-$

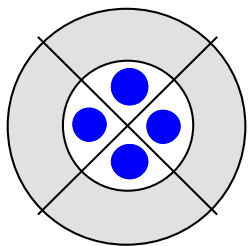
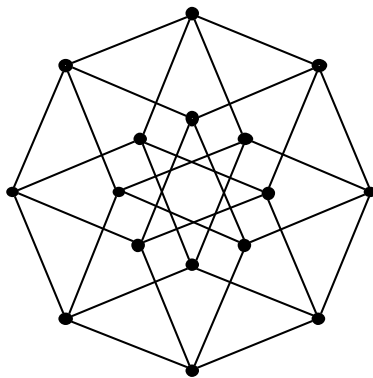
Quaternion Space



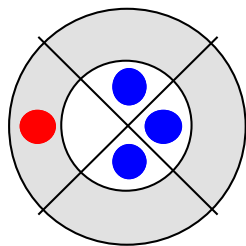
16-Cell (Cross-Polytope)



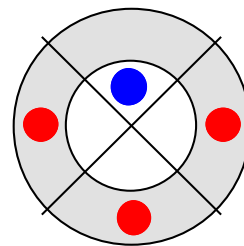
Hypercube



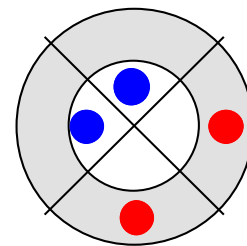
Love



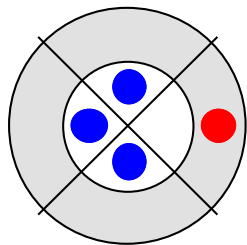
Confidence



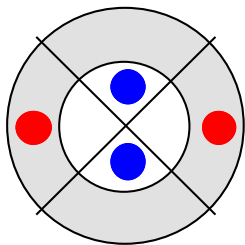
Frustration



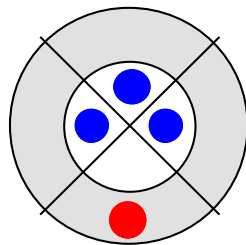
Caution



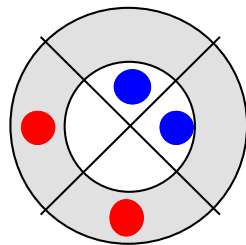
Serenity



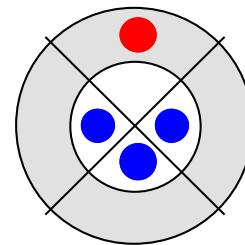
Certainty



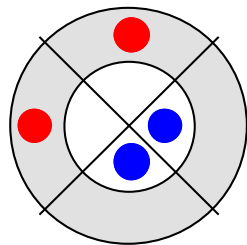
Wonder



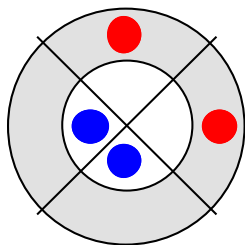
Zeal



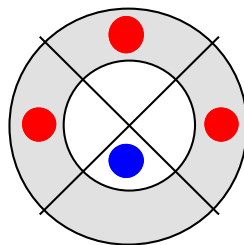
Fascinat



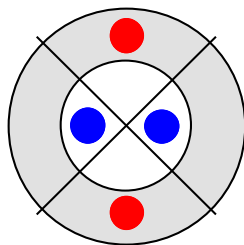
Inspiration



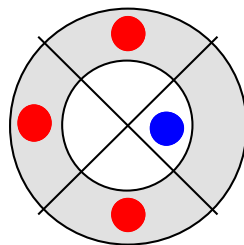
Compassion



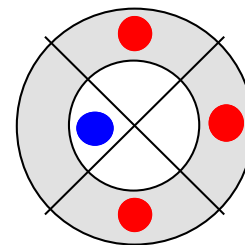
Uncertain



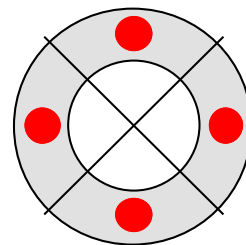
Excitem



Anxiety

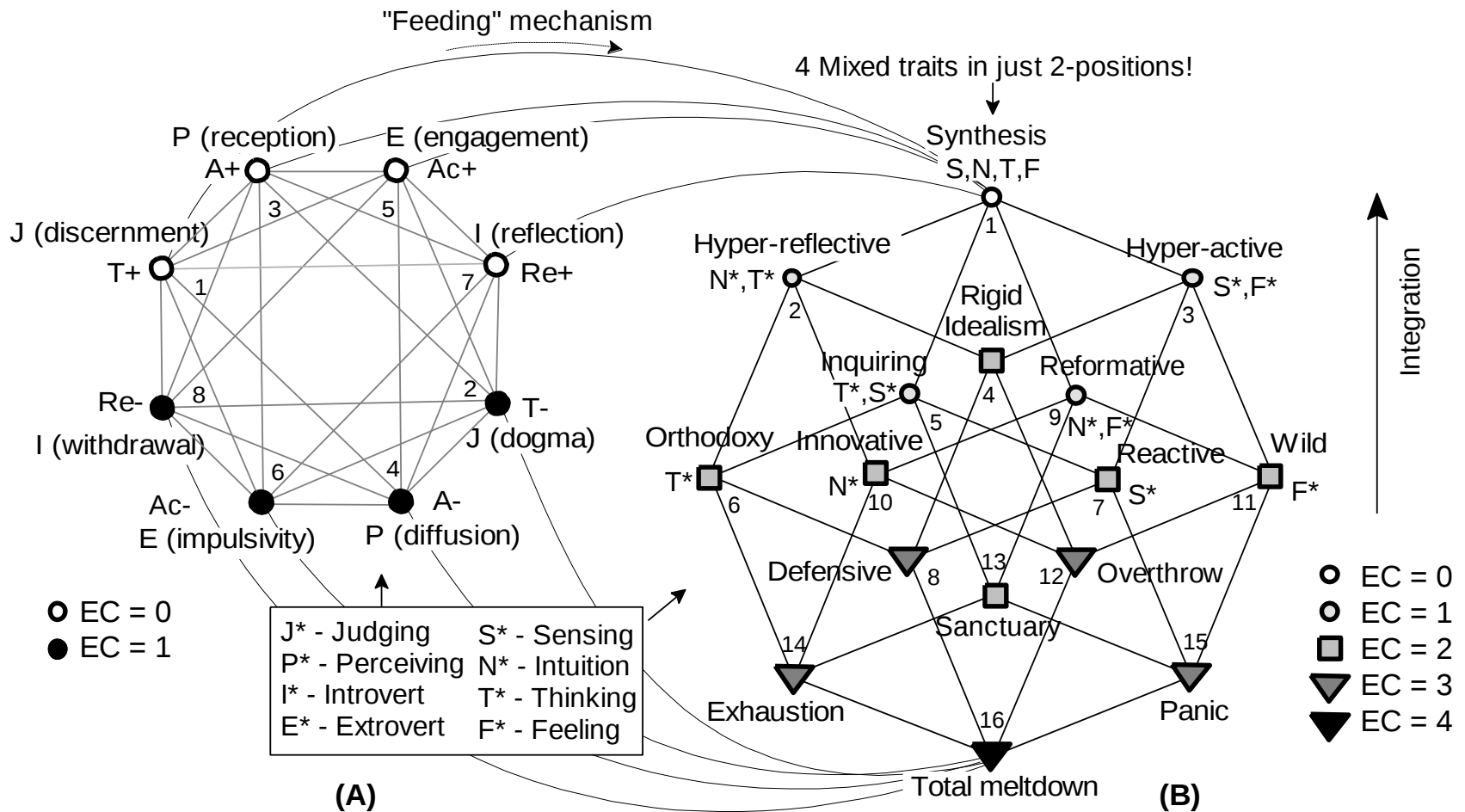


Terror

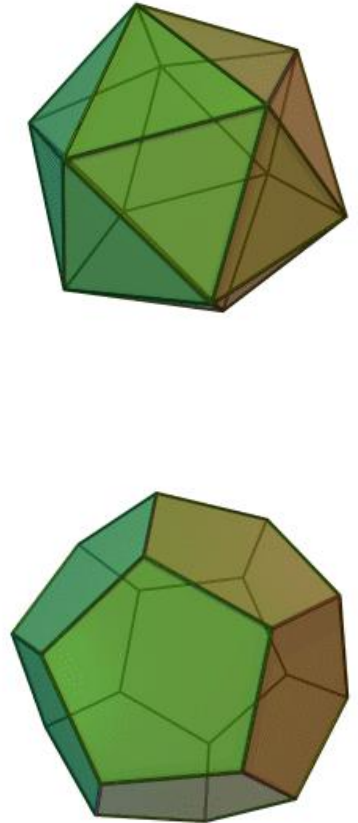
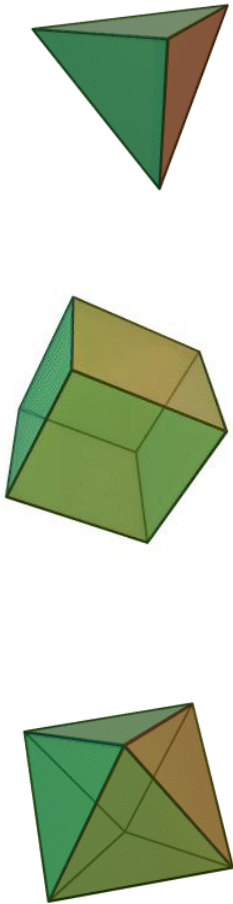


Despair

Hypercube Formation

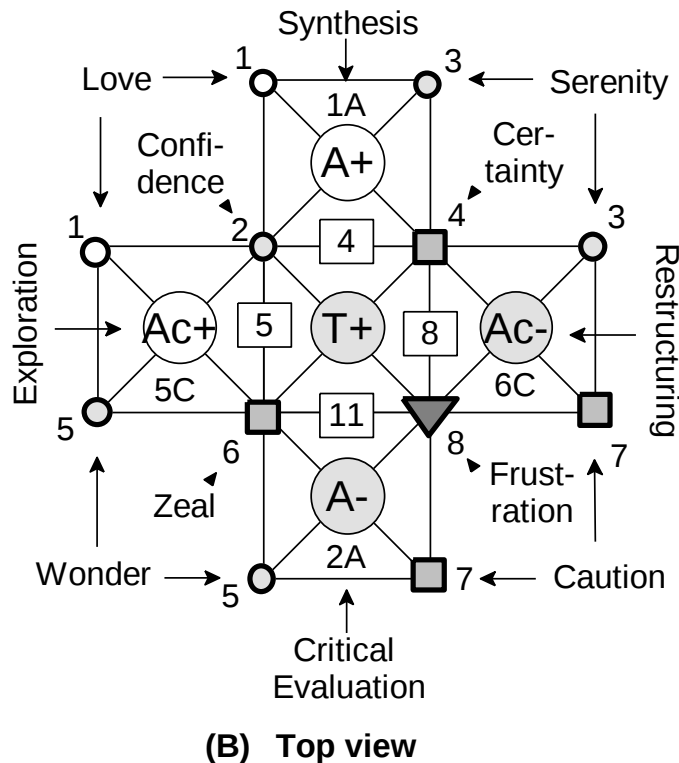
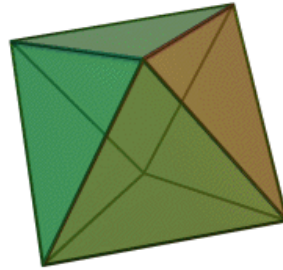


24-Cell – the 6th Platonic Solid

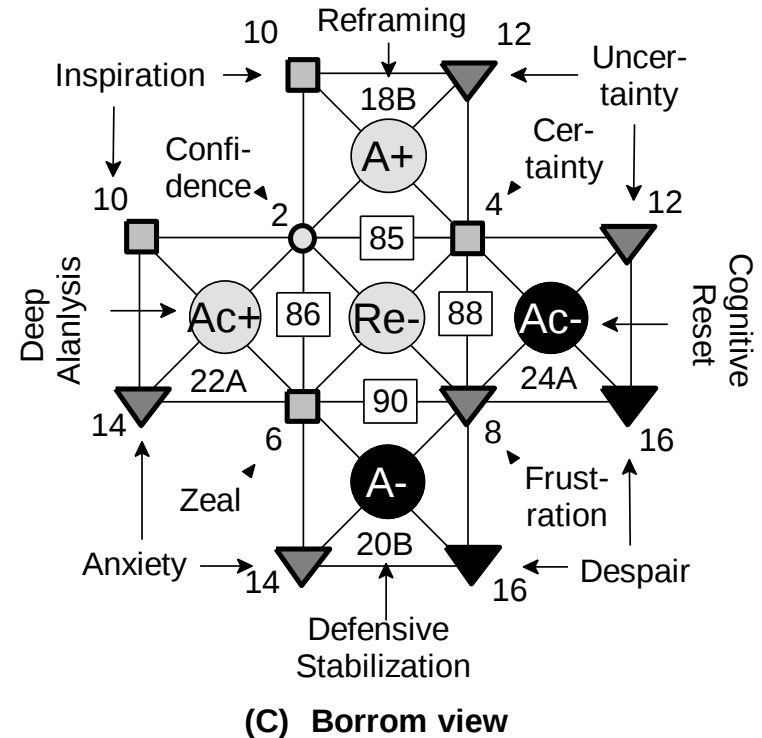


Each vertex is affective state

24-cell $\supset$ 24 octahedra

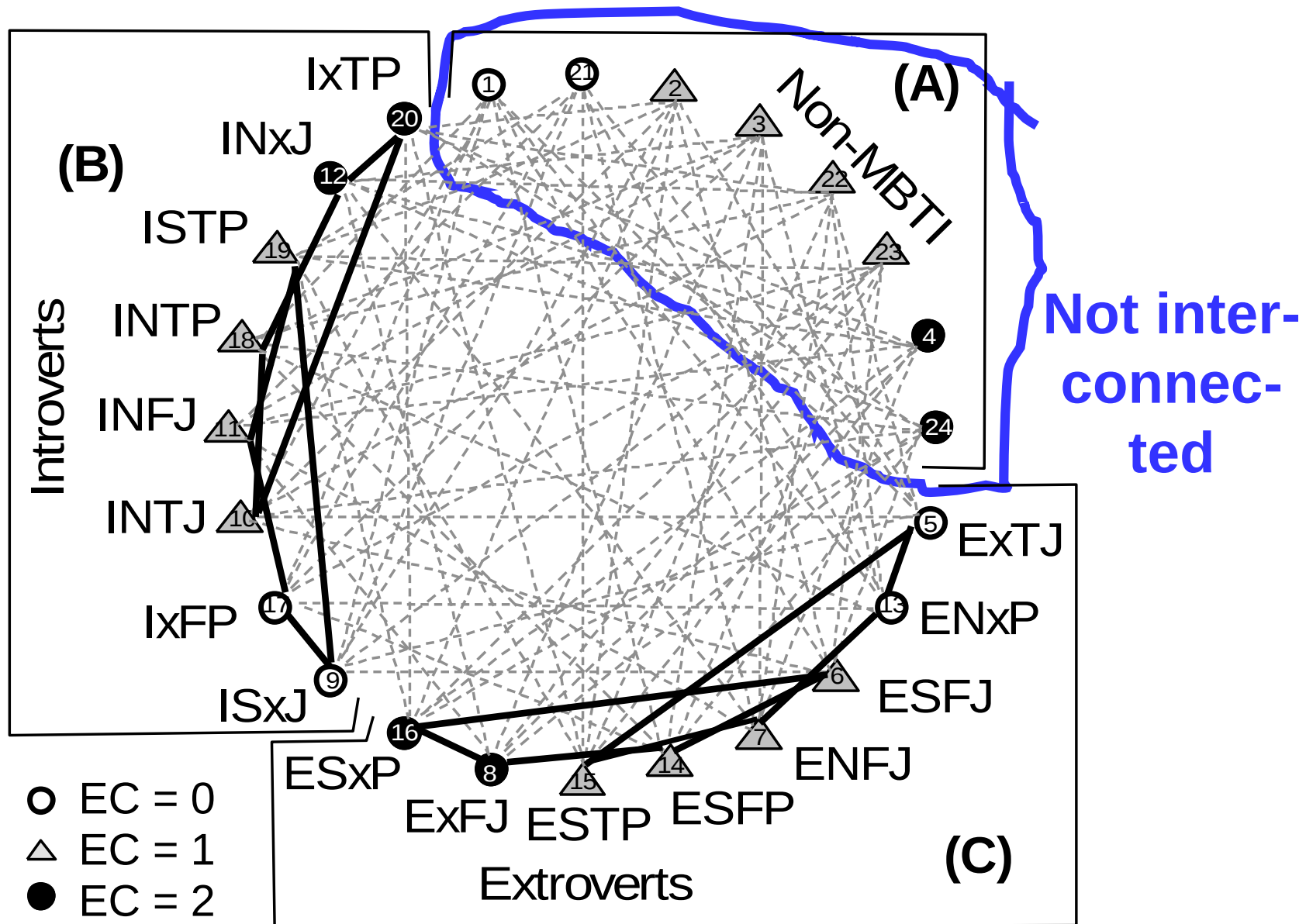


**Each
state
touches
8 other
states**



Each Octahedron = Mental State

Three Types of Cells

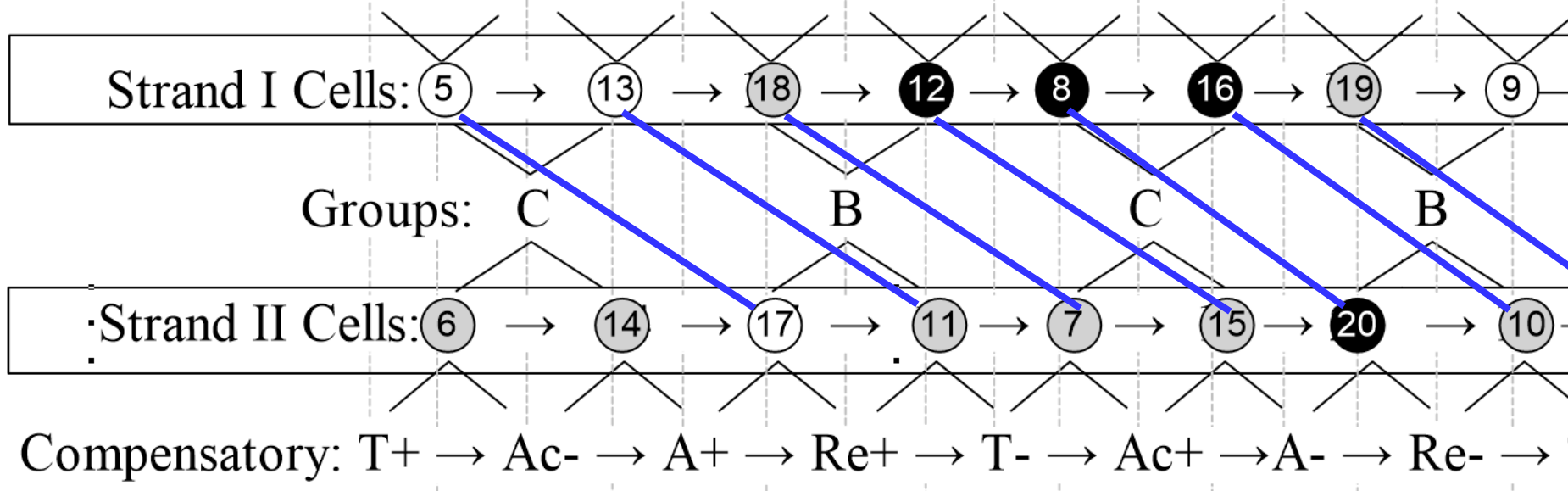


Two Strands

1D sequence: T → A → T → A → T

2D sequence: T+ → A+ → T- → A- → T

4D sequence: T+ → Ac+ → A+ → Re- → T- → Ac- → A- → Re+ →



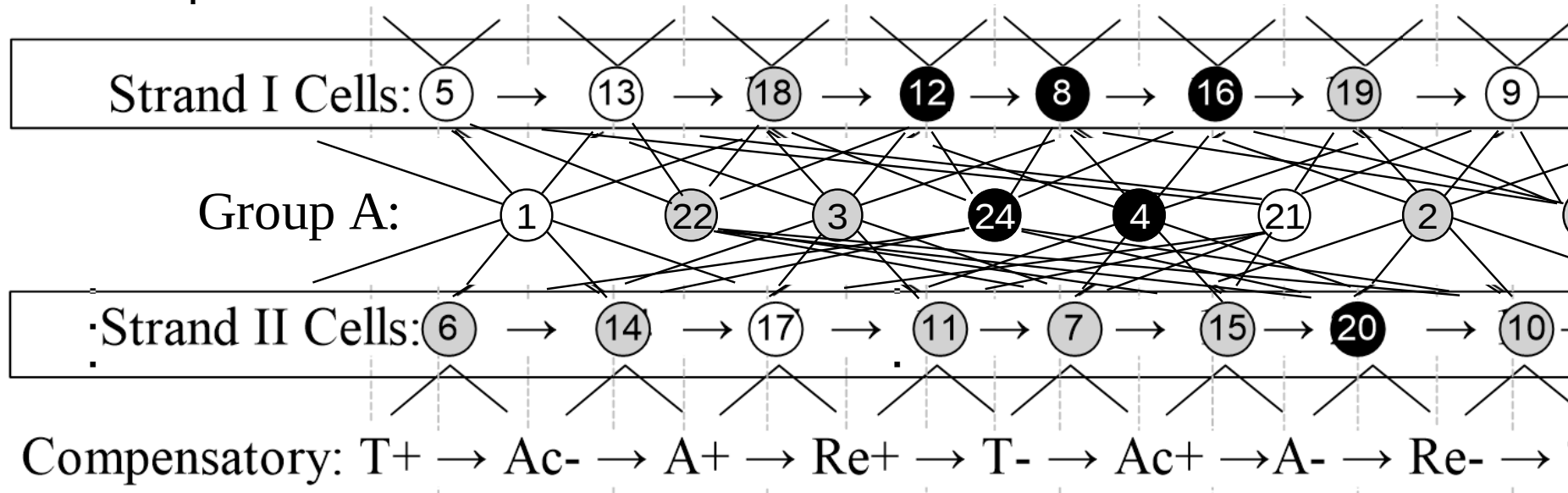
Phase-shifted exaggerations

Two Strands

1D sequence: T → A → T → A → T

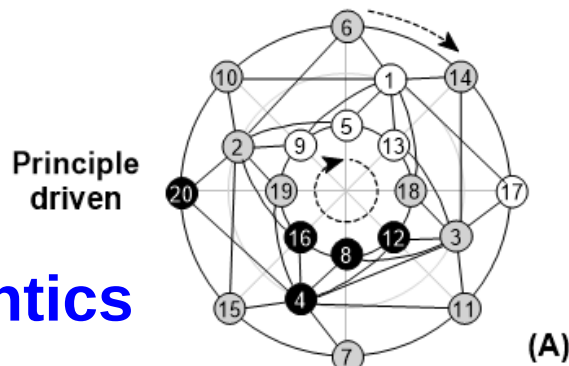
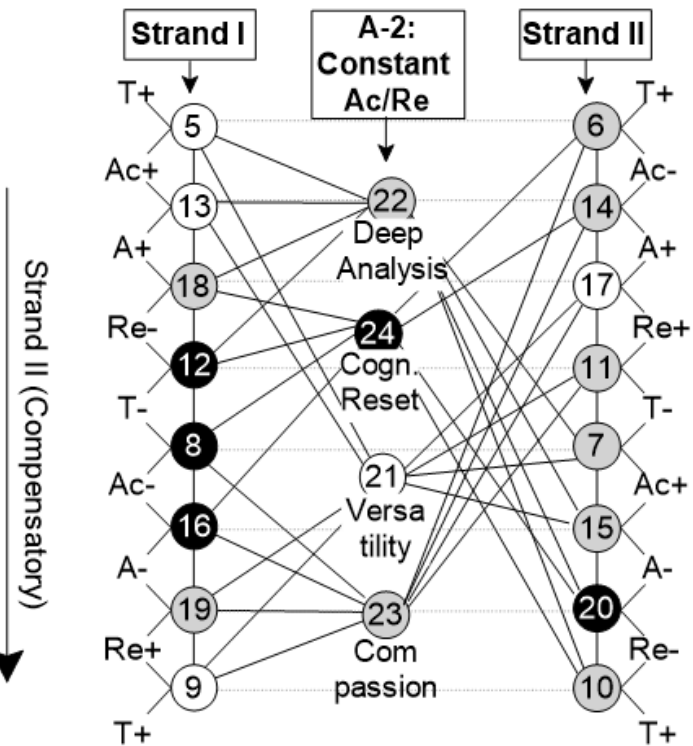
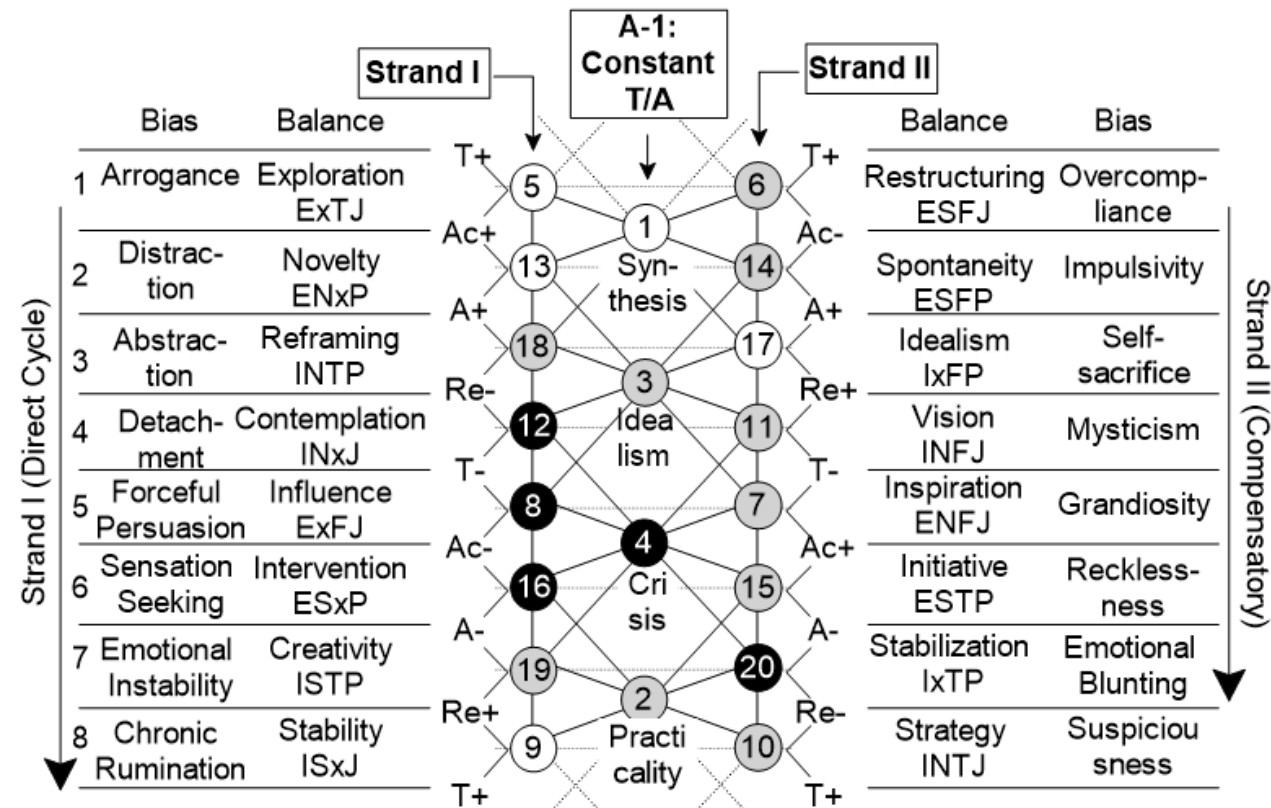
2D sequence: T+ → A+ → T- → A- → T

4D sequence: T+ → Ac+ → A+ → Re- → T- → Ac- → A- → Re+ →

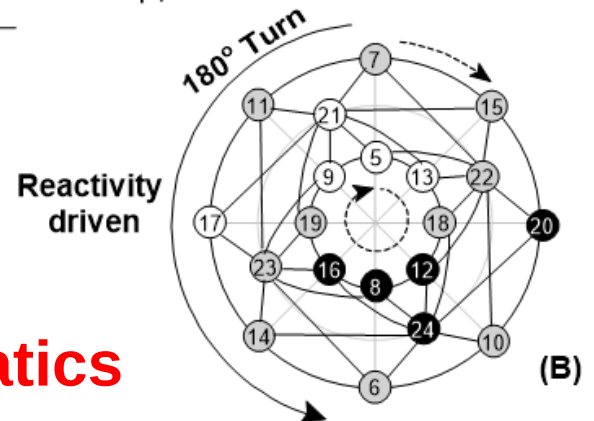


Balancing via non-typical states!

Two Mechanisms



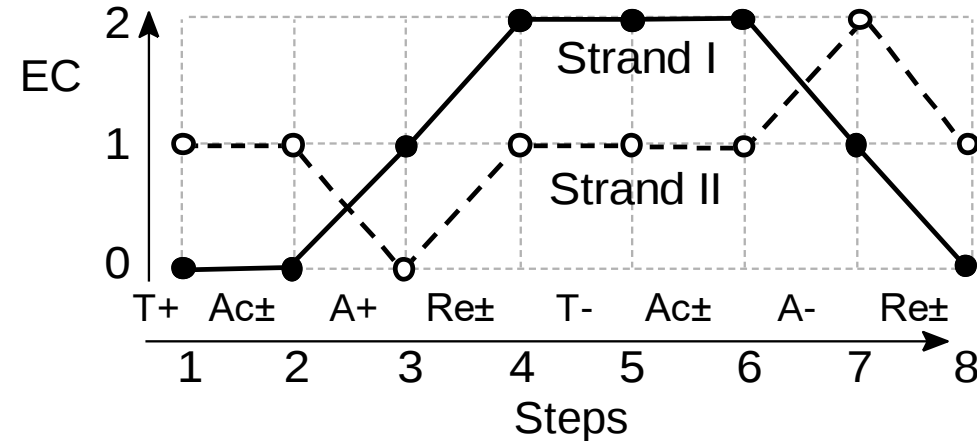
Romantics



Pragmatics

Exaggerations → Morse Code

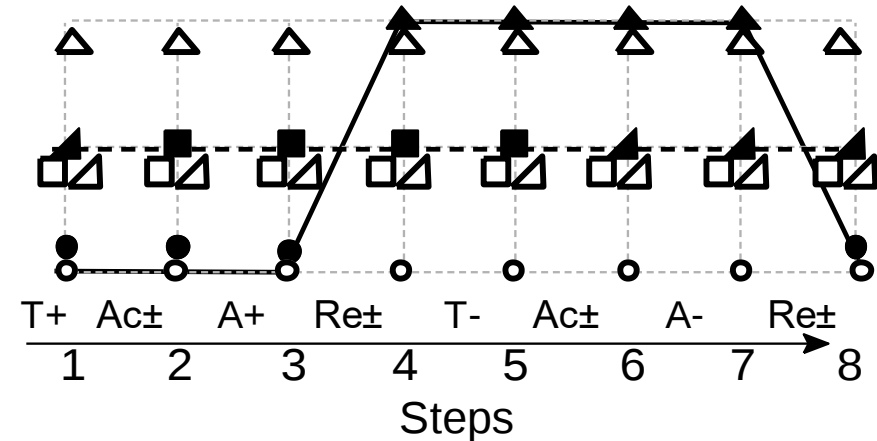
Conventional Mindsets
(Groups B and C cells)



(A)

Conventional
states =
Antennas

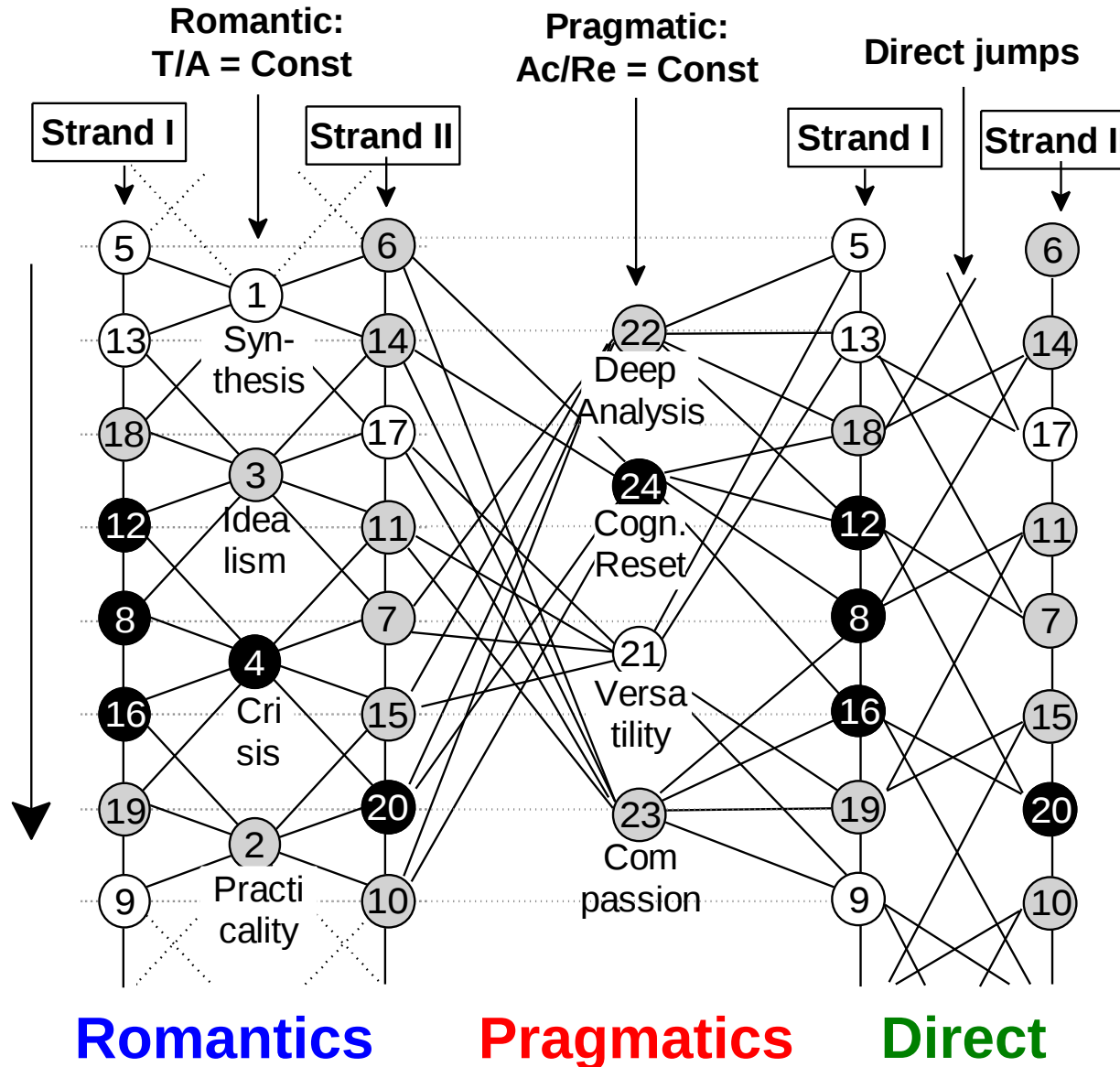
Non-conventional
(Group A cells)



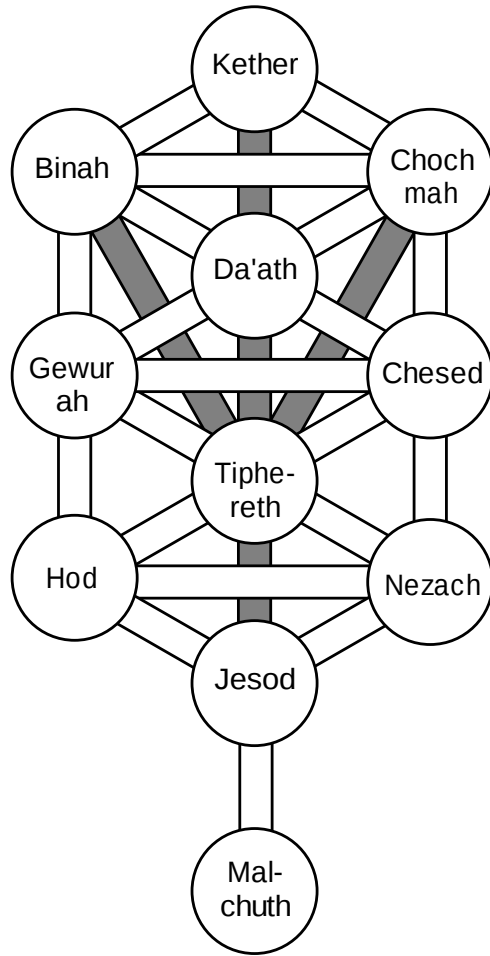
(B)

Non-
Conventional
= Amplifiers

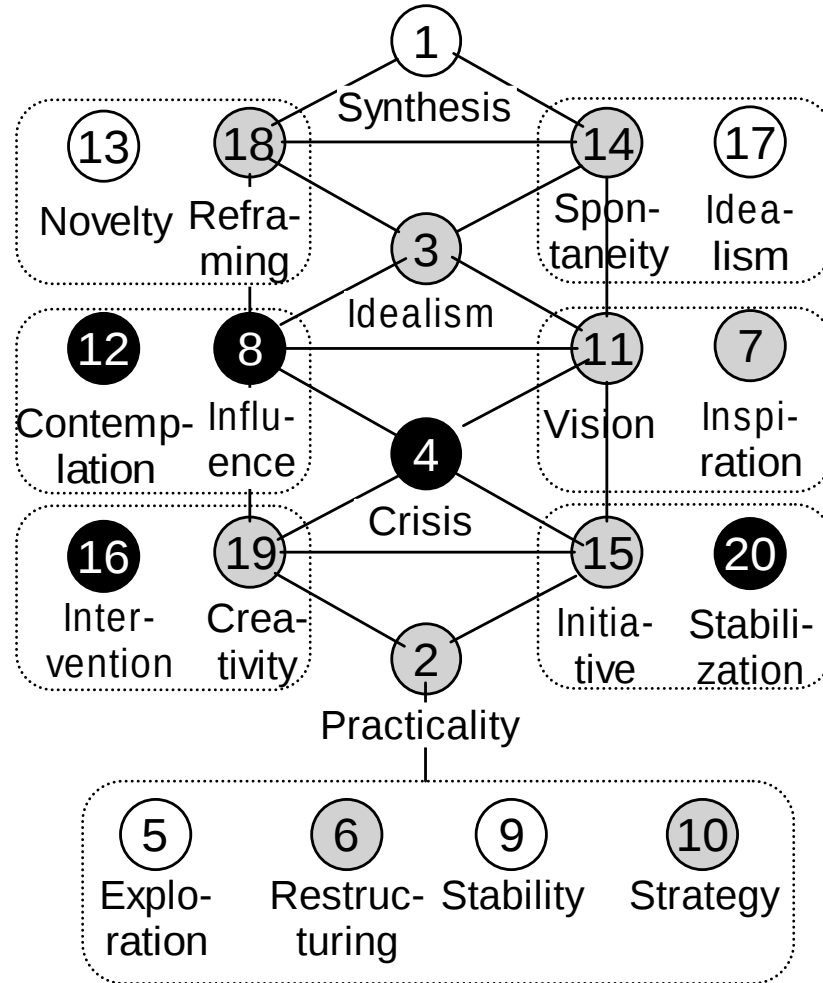
3rd Mechanism



Kabbalistic Tree of Life

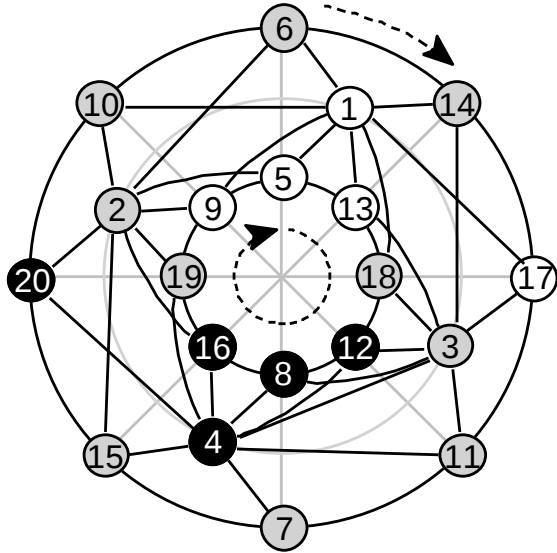


(A)

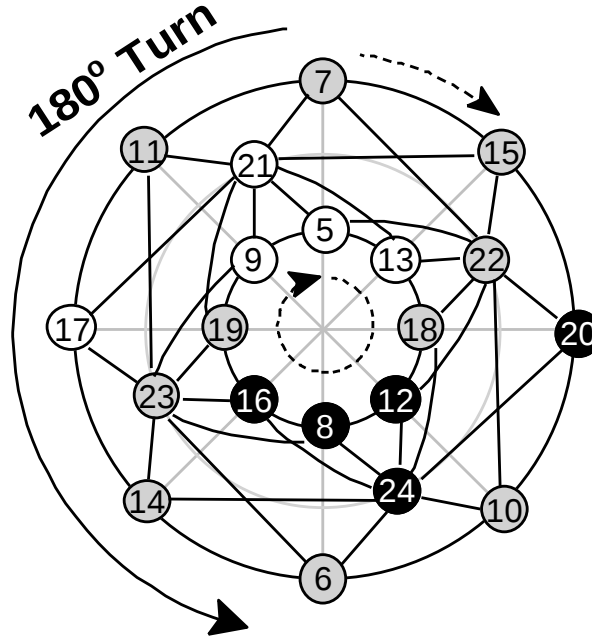


(B)

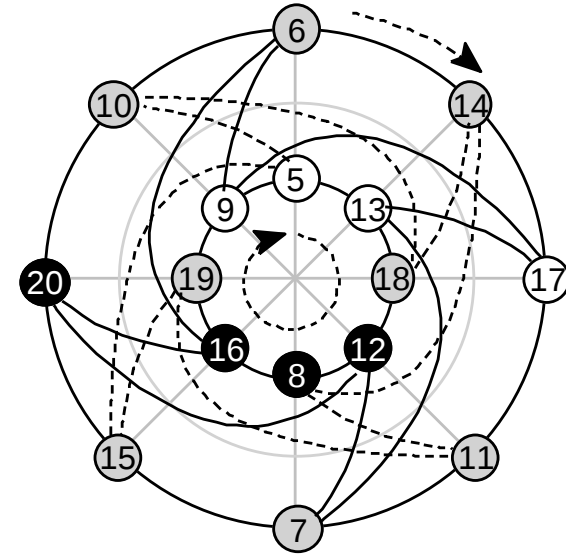
Three Mechanisms



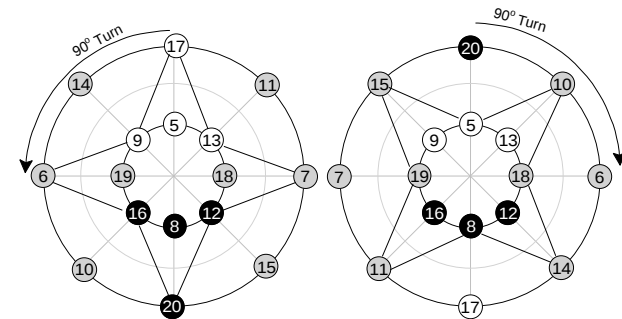
Romantics



Pragmatics

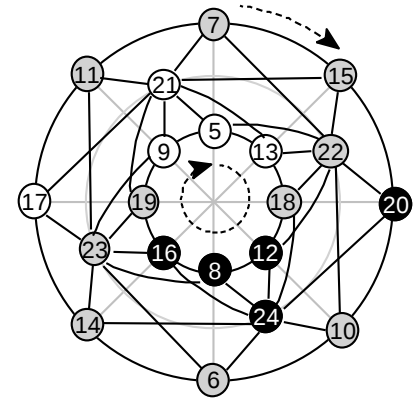
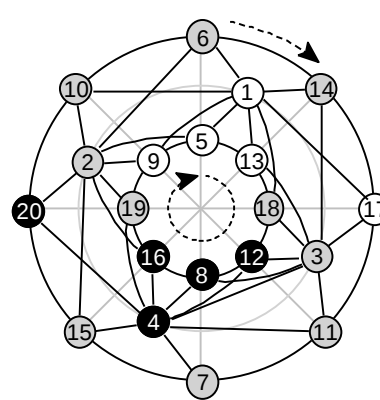
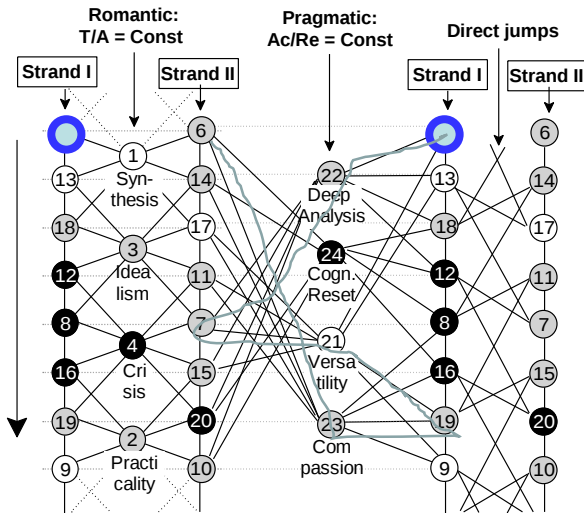


Direct



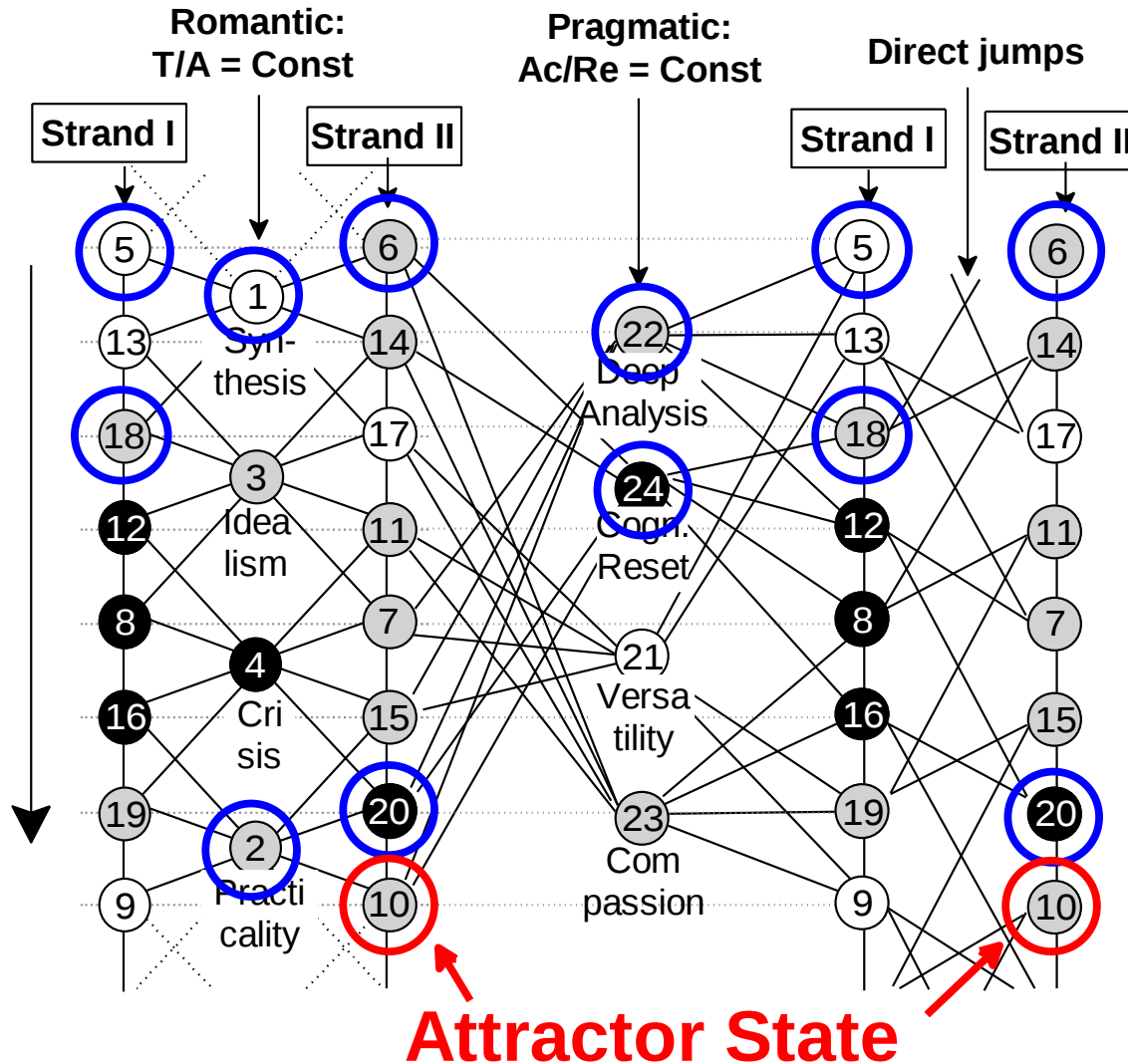
What is Synthesis?

Synchronized spiraling in both
T/A and Ac/Re planes



Every Personality Pole
becomes a new dimension

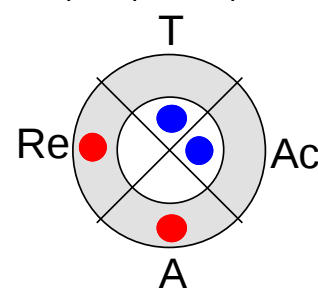
One Mental State Attractor Creates A Complex Pattern



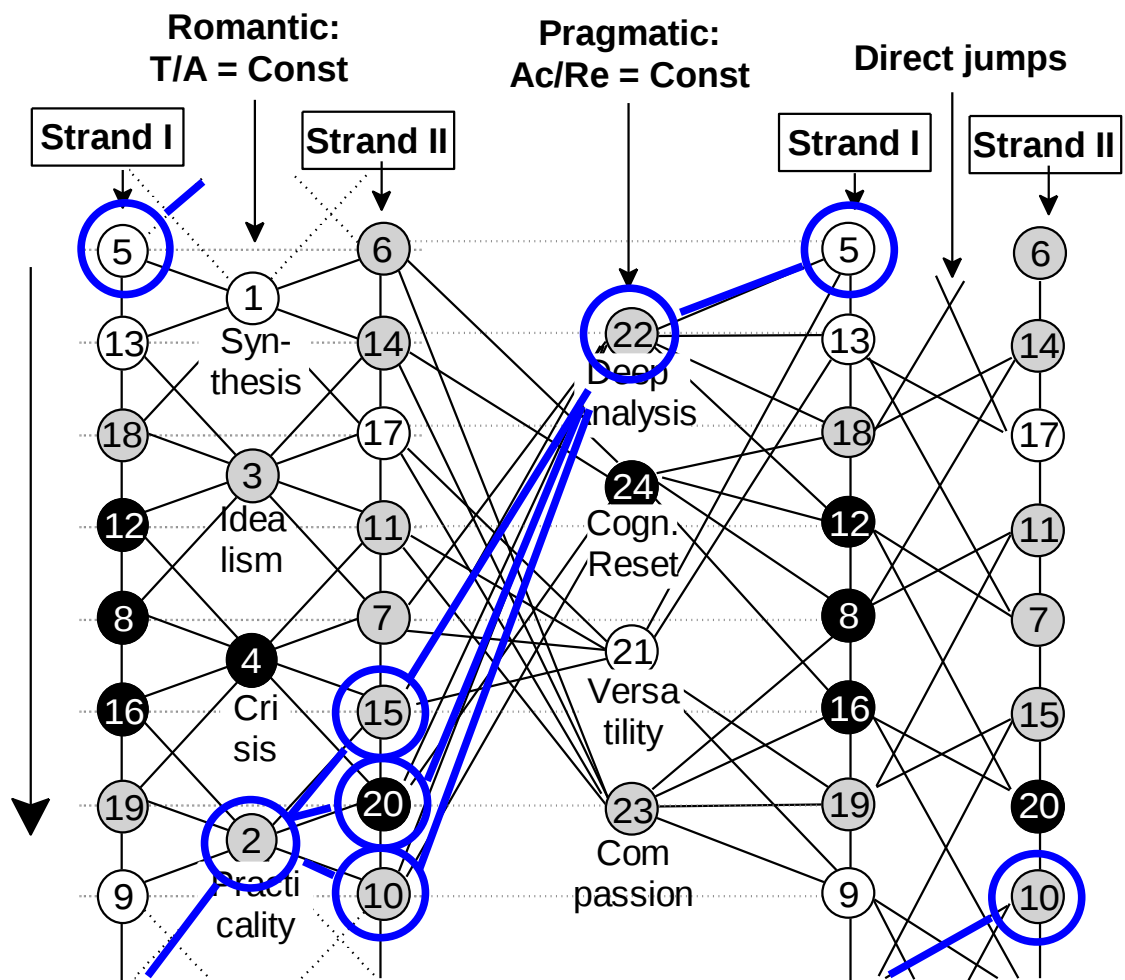
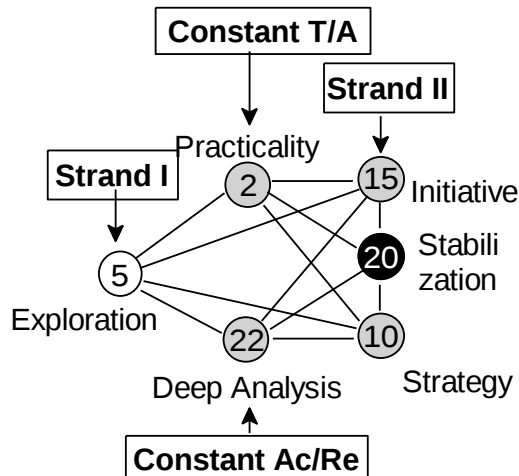
One Affective Attractor is also complex

Attractor 2-6: "Zeal"

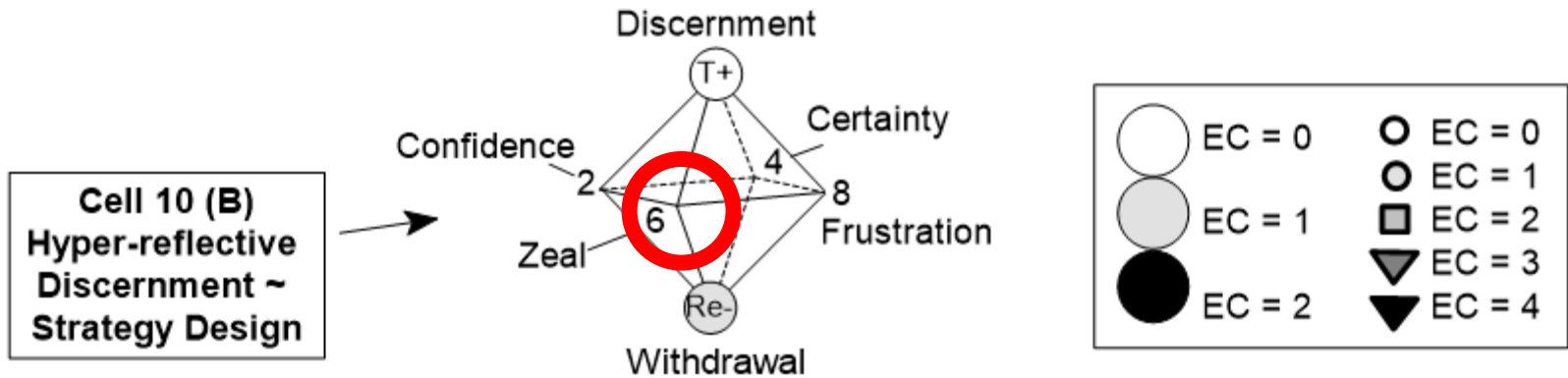
T+; A-; Ac+; Re-



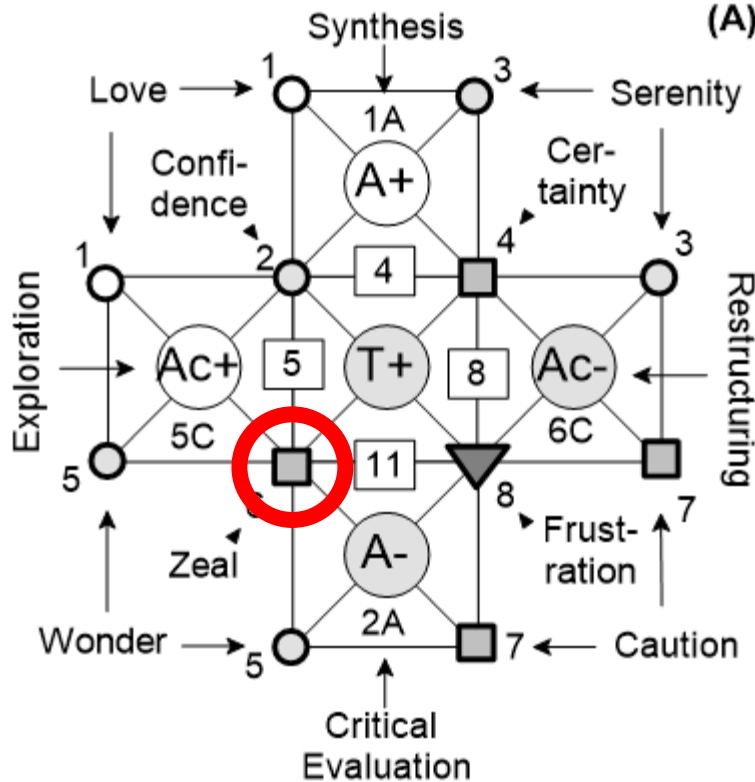
Ruminative Orthodoxy -
Perseverative Processing



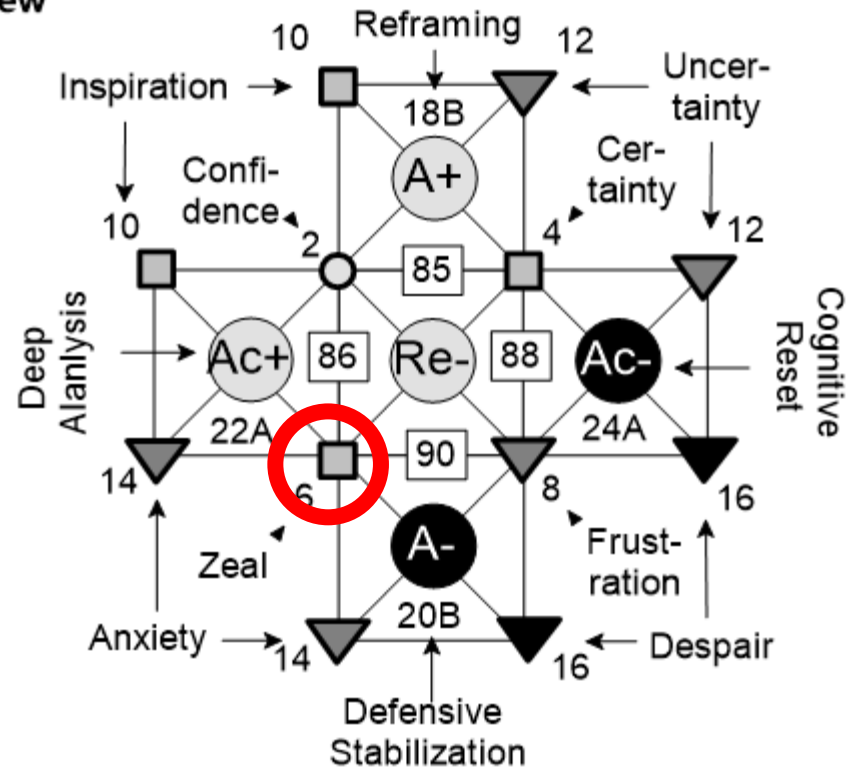
Attractor “Zeal” in Cell 10B



(A) Side View



(B) Top view

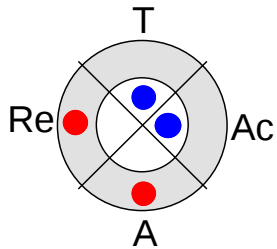


(C) Bottom view

Two Affective Attractors Are Easier

2-6: "Zeal"

T+; A-; Ac+; Re-

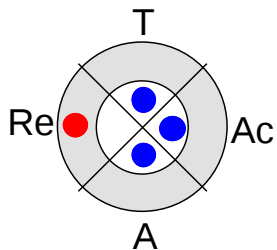


Ruminative Orthodoxy -
Perseverative Processing

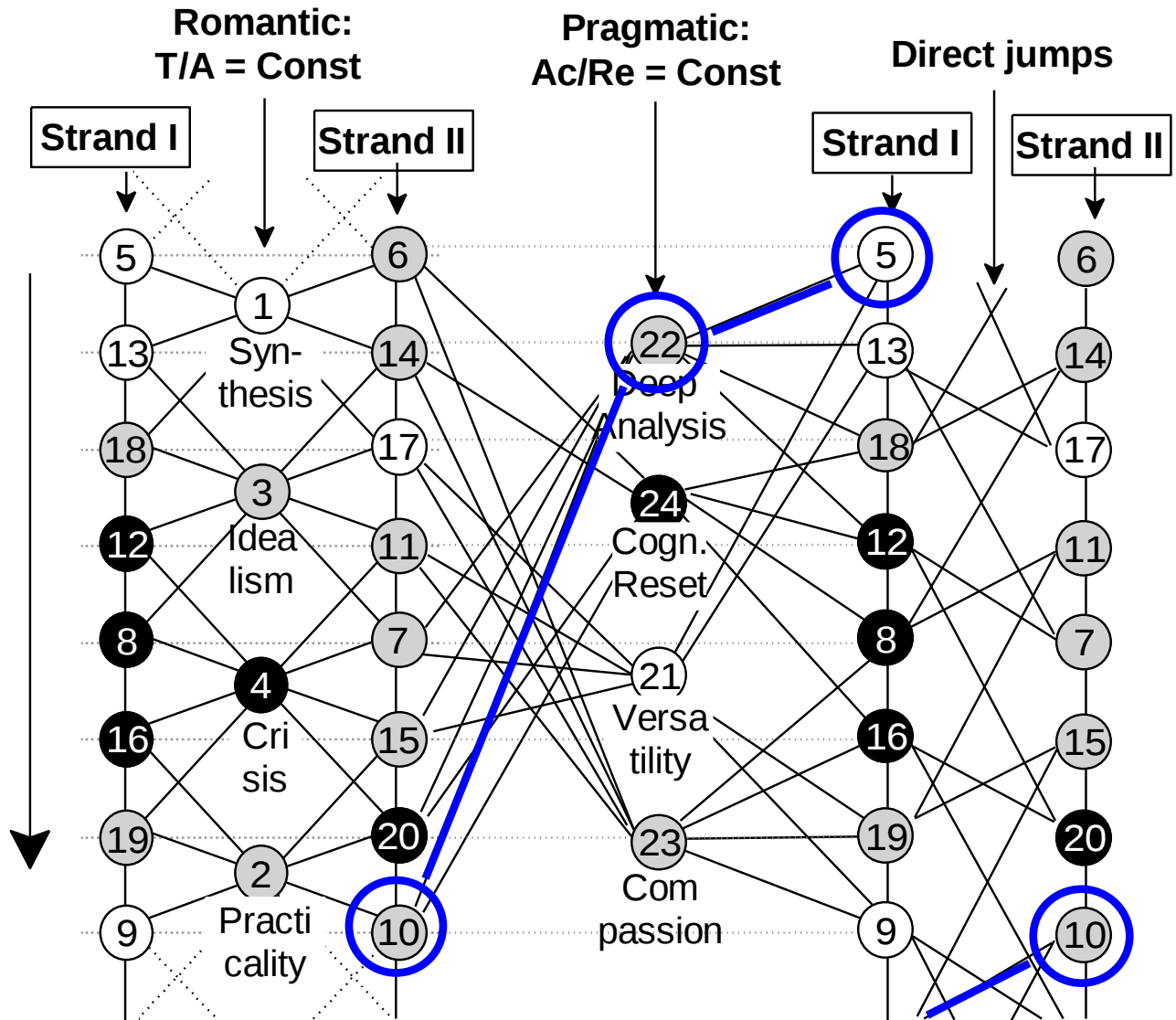


2-2: "Confidence"

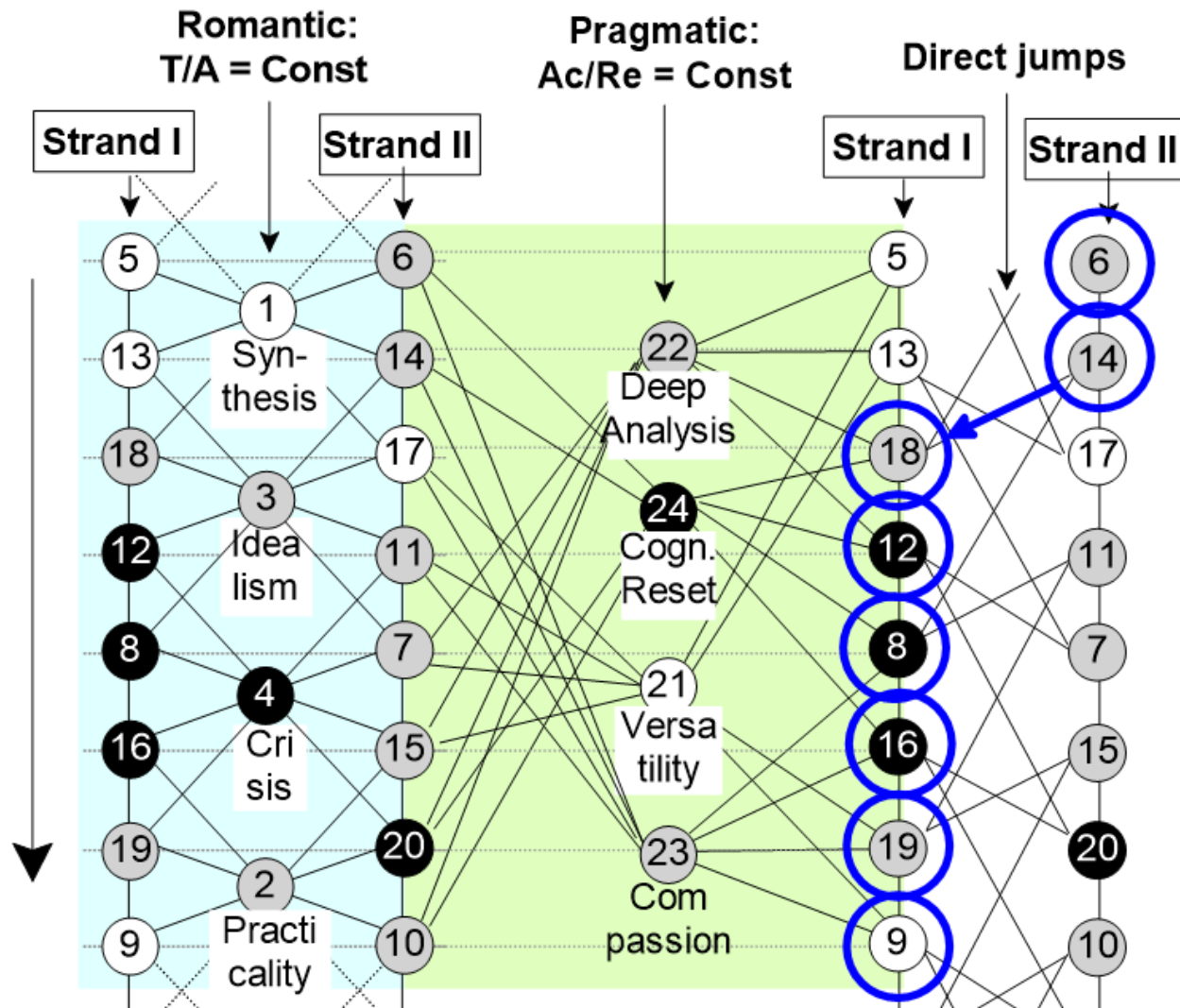
T+; A+; Ac+; Re-



Hyper-reflective -
Cognitive Consolidation



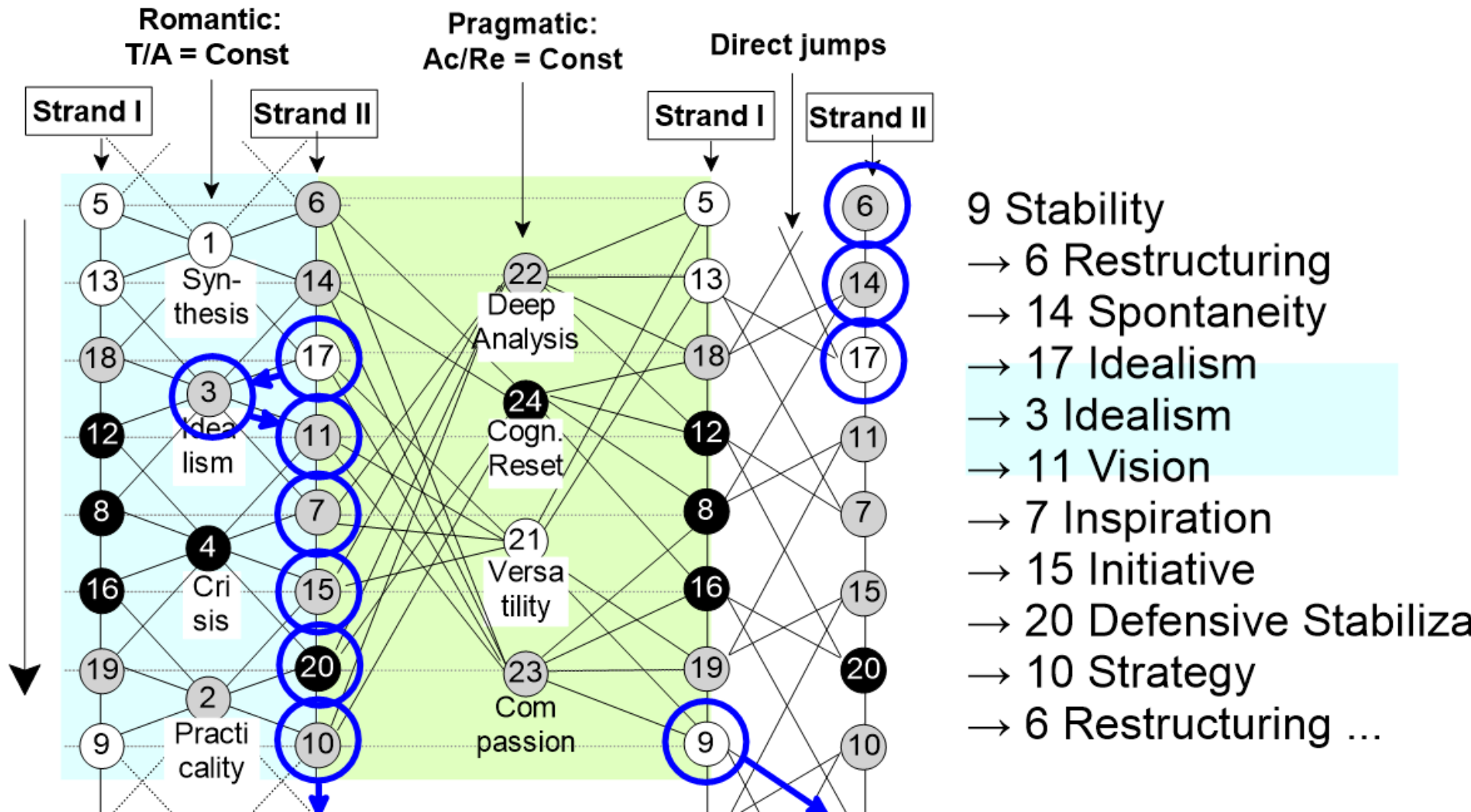
Typical Public Speakers = “Sterile Neutrality”



- 9 Stability
- 6 Restructuring
 - 14 Spontaneity
 - 18 Reframing
 - 12 Contemplation
 - 8 Influence
 - 16 Intervention
 - 19 Creativity
 - 9 Stability

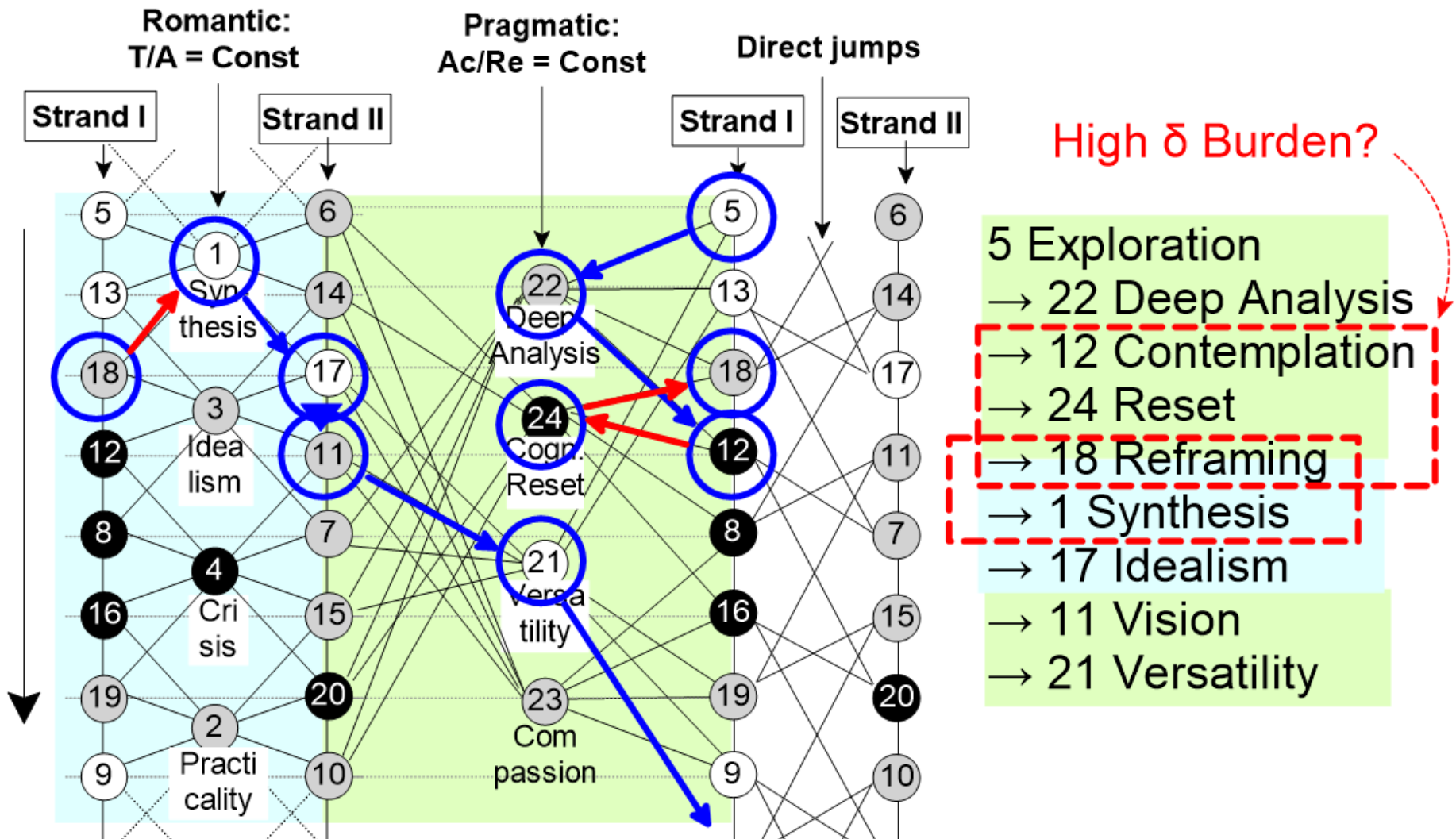
Not just Asynchronic, but also Immature!

Often – “Idealistic Neutrality”



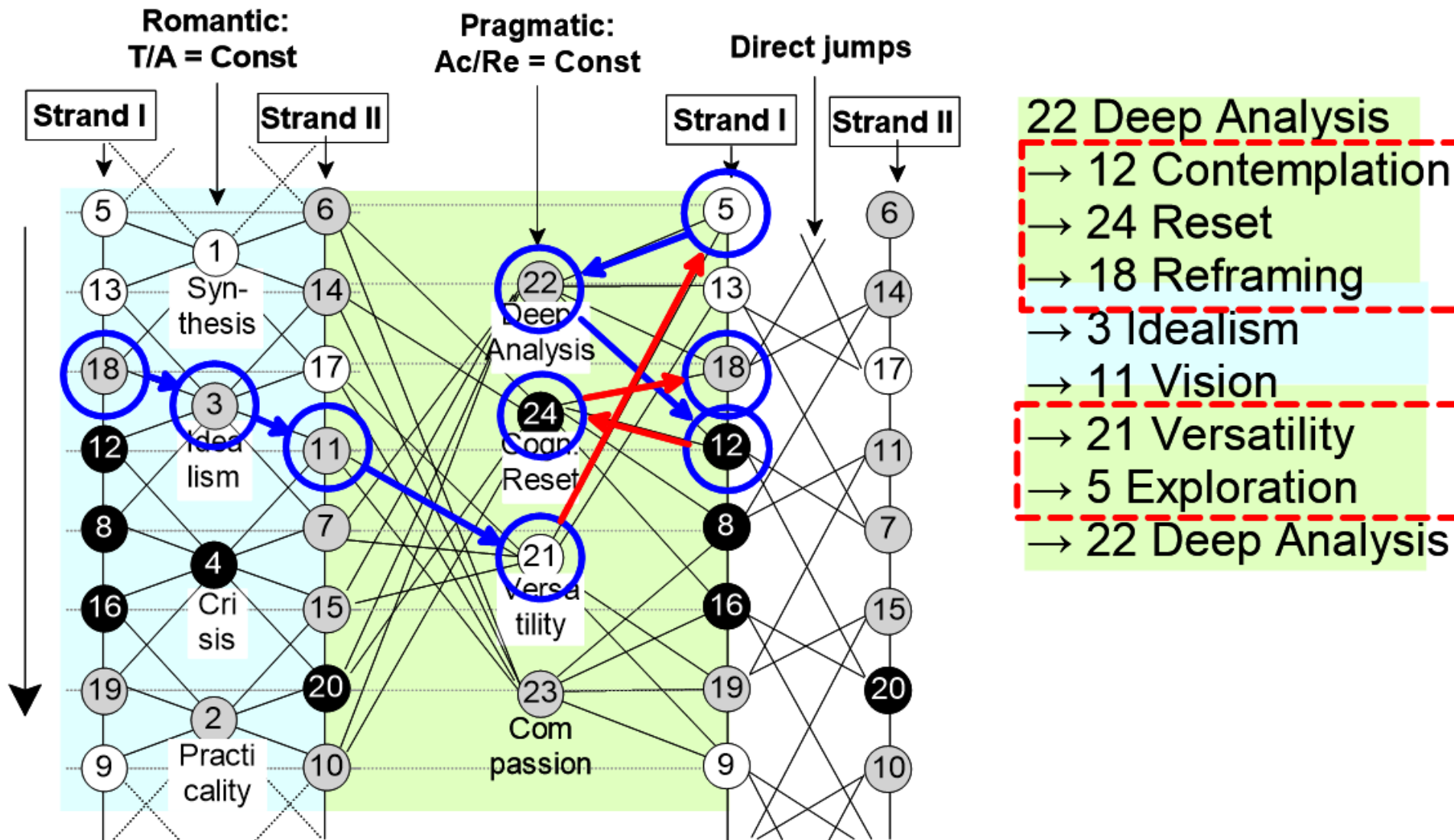
Just 1 type A; Only 1 black point / exaggeration

Eckhart = Reflective Reconstruction



Soft romanticism; exaggerations & loops in pragmatism

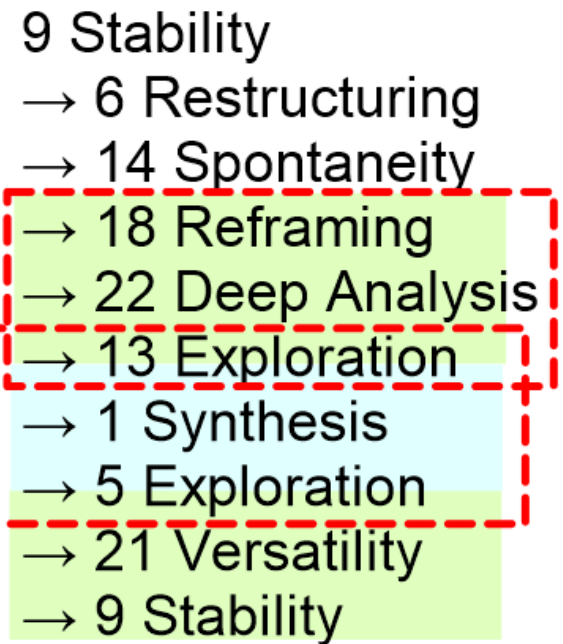
Merab Mamardashvili — Reflective Reconstruction



Painful setbacks in pragmatism

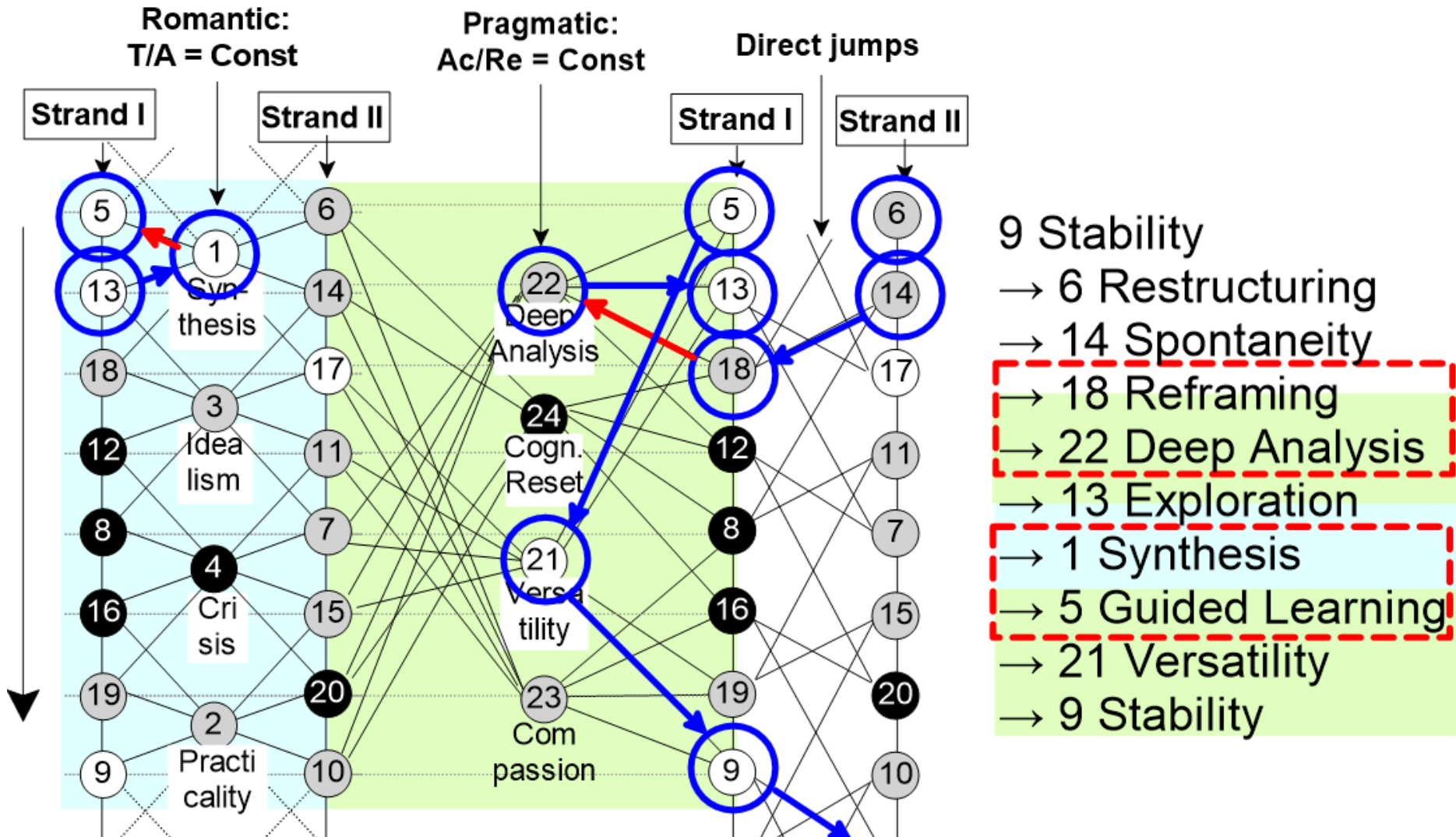
Dmitri Uznadze, Niko Nikoladze

Dmitri Uznadze, Niko Nikoladze



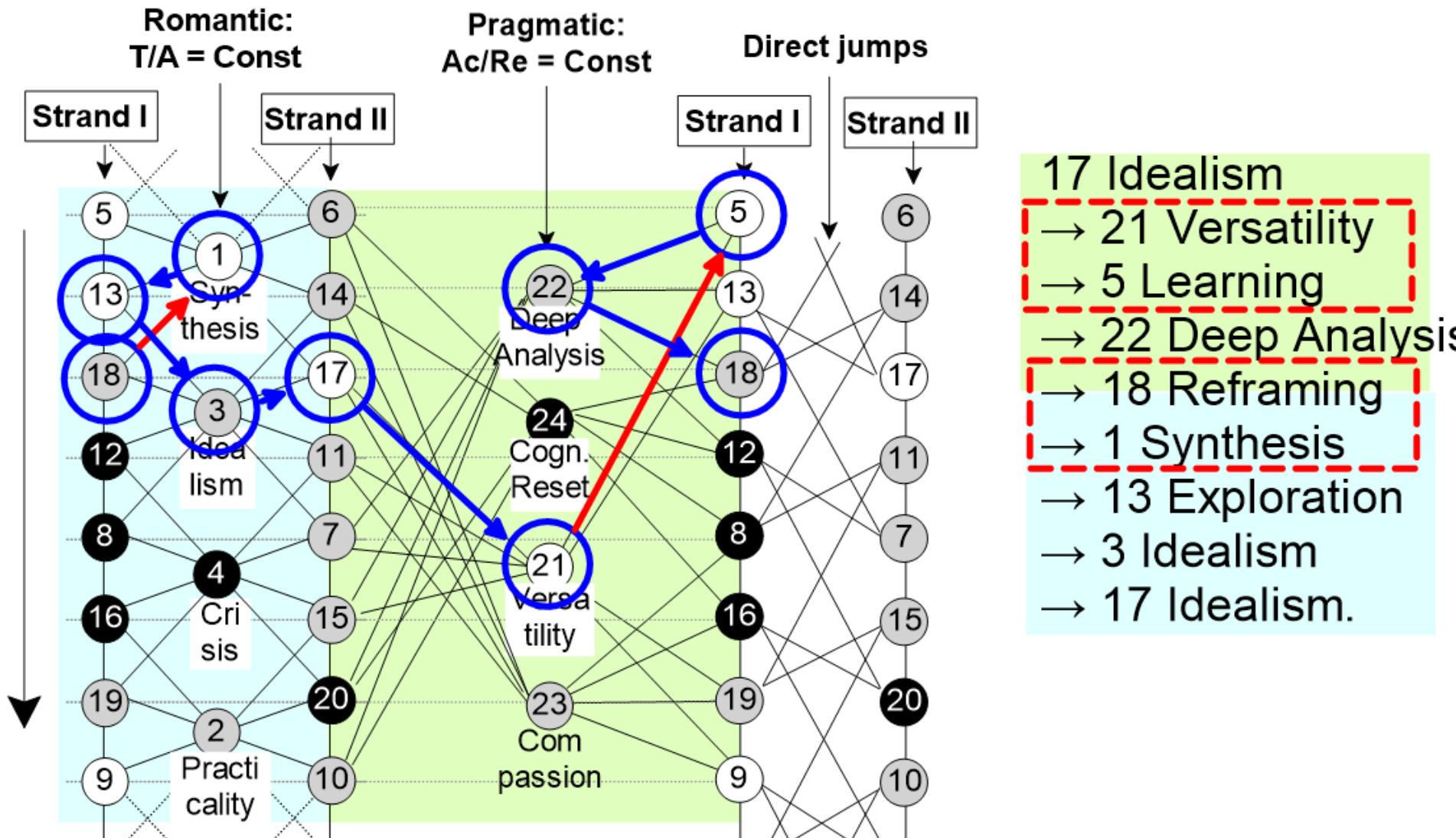
No exaggerations, no painful setbacks

Ursula von der Leyen



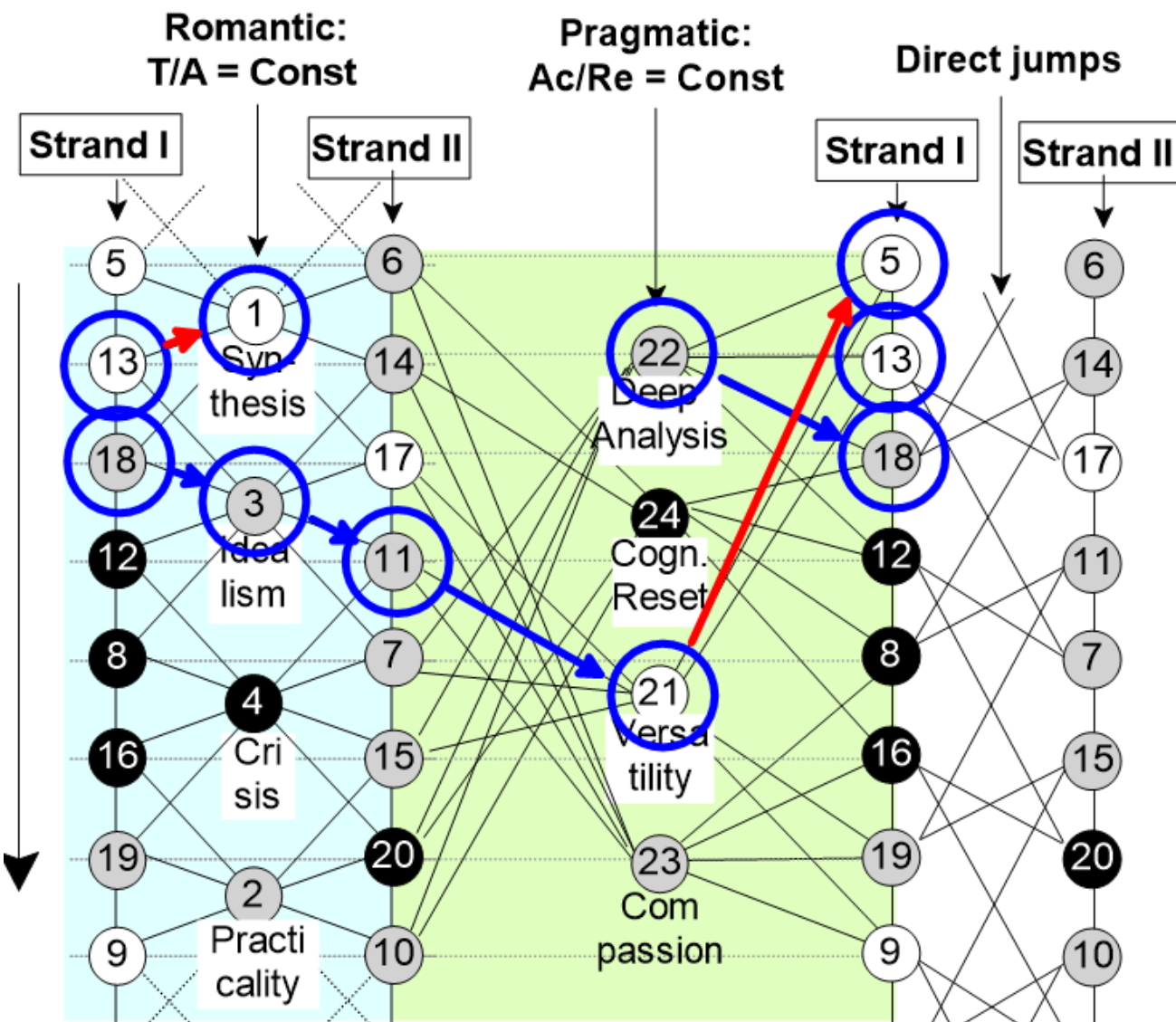
Identical to Uznadze and Nikoladze!

Shota Rustaveli — Integrative Idealism



No “black” exaggerations, yet painful setback

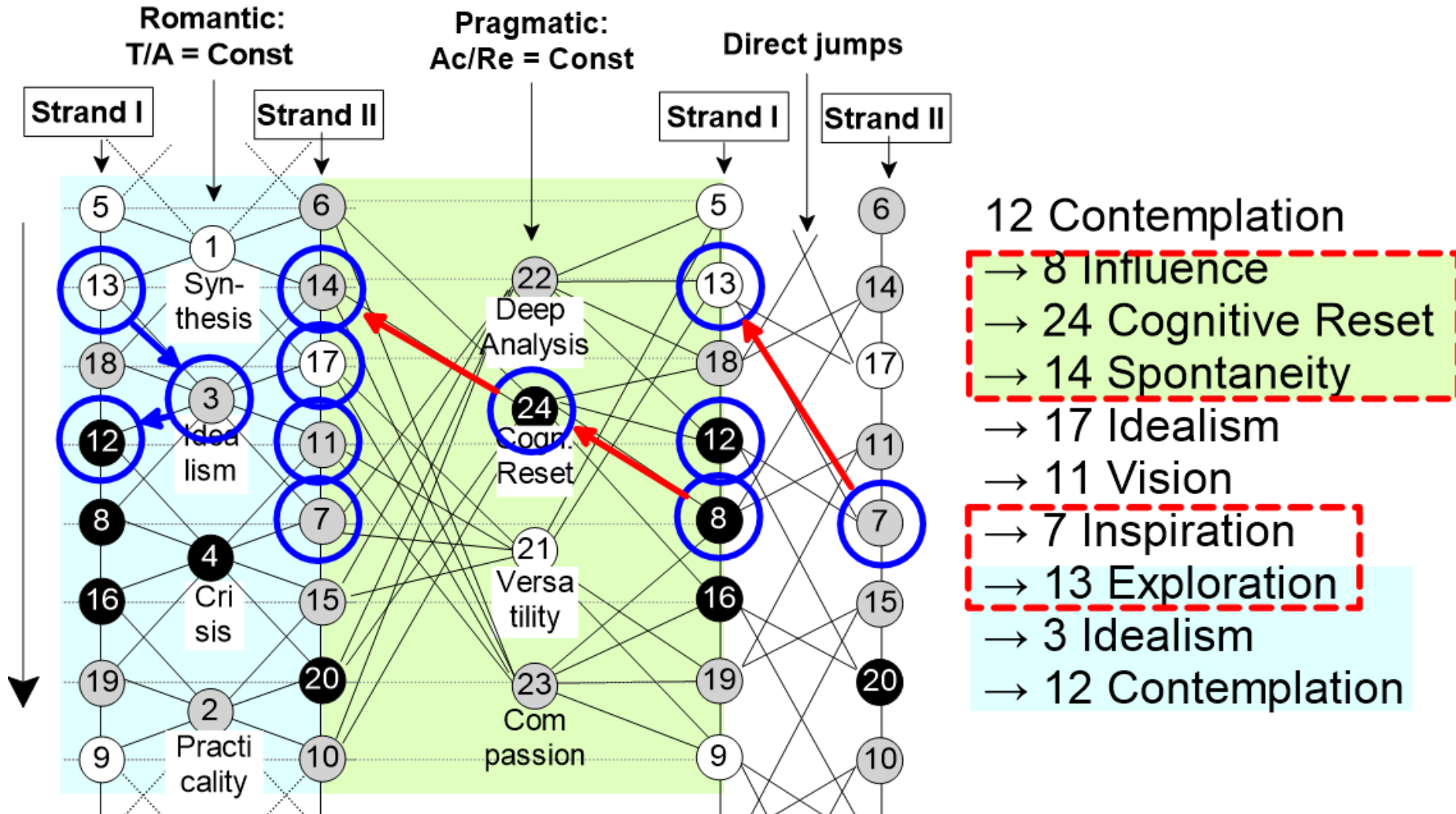
Ioane Petritsi - Integrative Idealism



22 Deep Analysis
→ 18 Reframing
→ 3 Idealism
→ 11 Vision
→ 21 Versatility
→ 5 Learning
→ 13 Exploration
→ 1 Synthesis

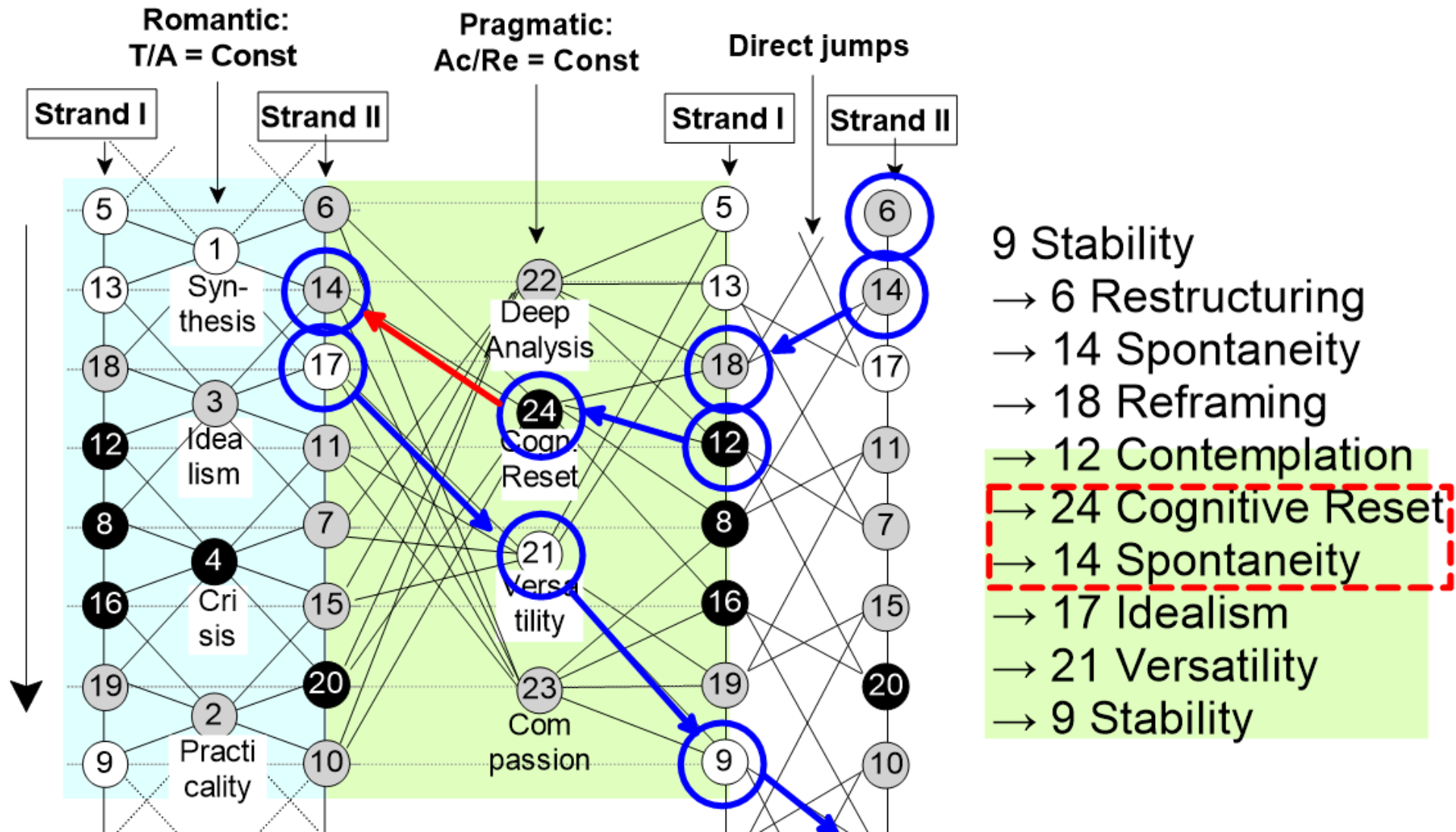
Very similar to Rustaveli!

Nikoloz Baratashvili — Romantic Transformation



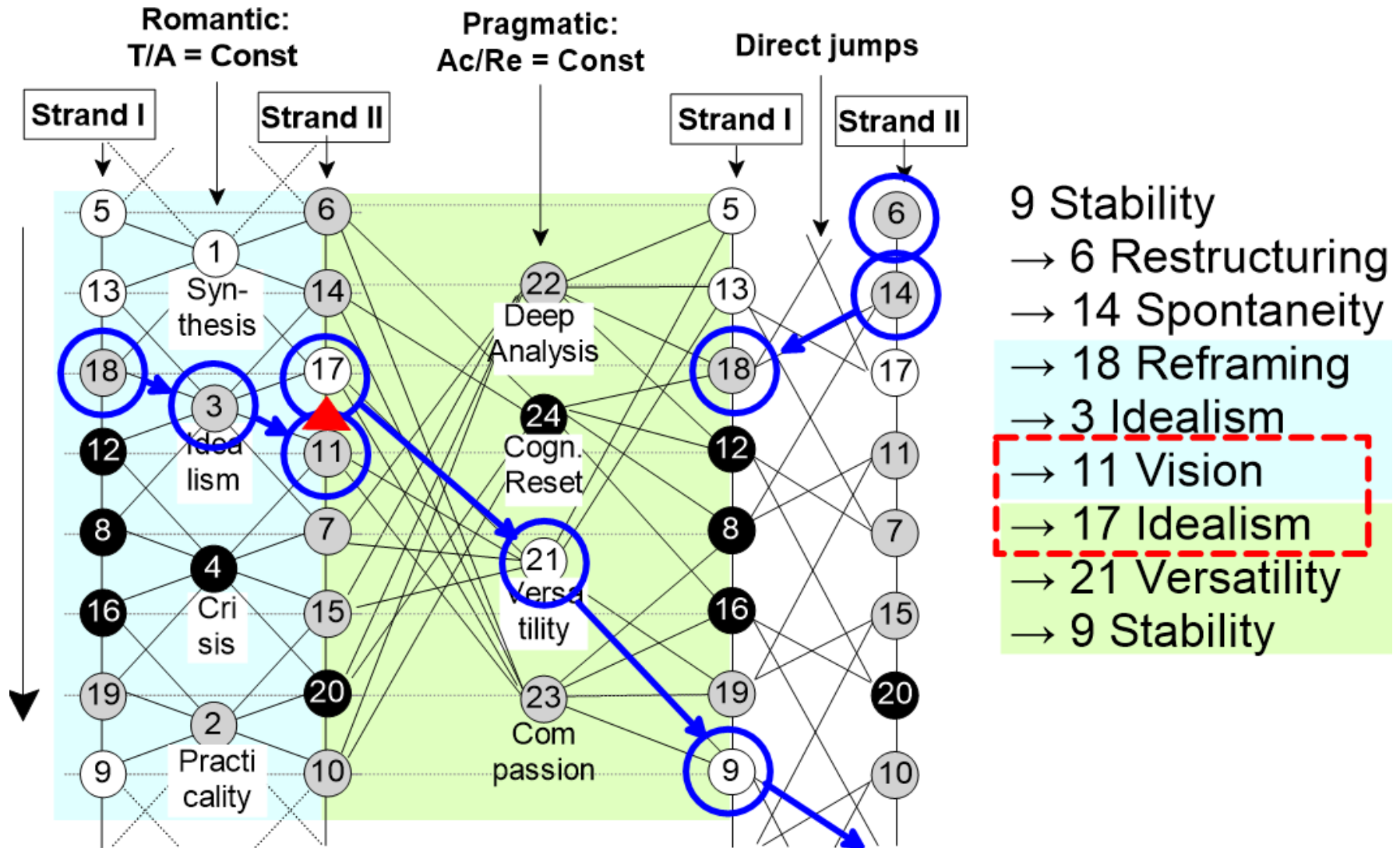
Painful setbacks - similar to Georgia as a Person

Georgia as a State – Painful Adaptation



Baratashvili + Vazha-Pshavela

Vazha-Pshavela — Romantic Transformation



Dissolving pain via adopting A+ (akin to Hegel)?

Why Is It Interesting?

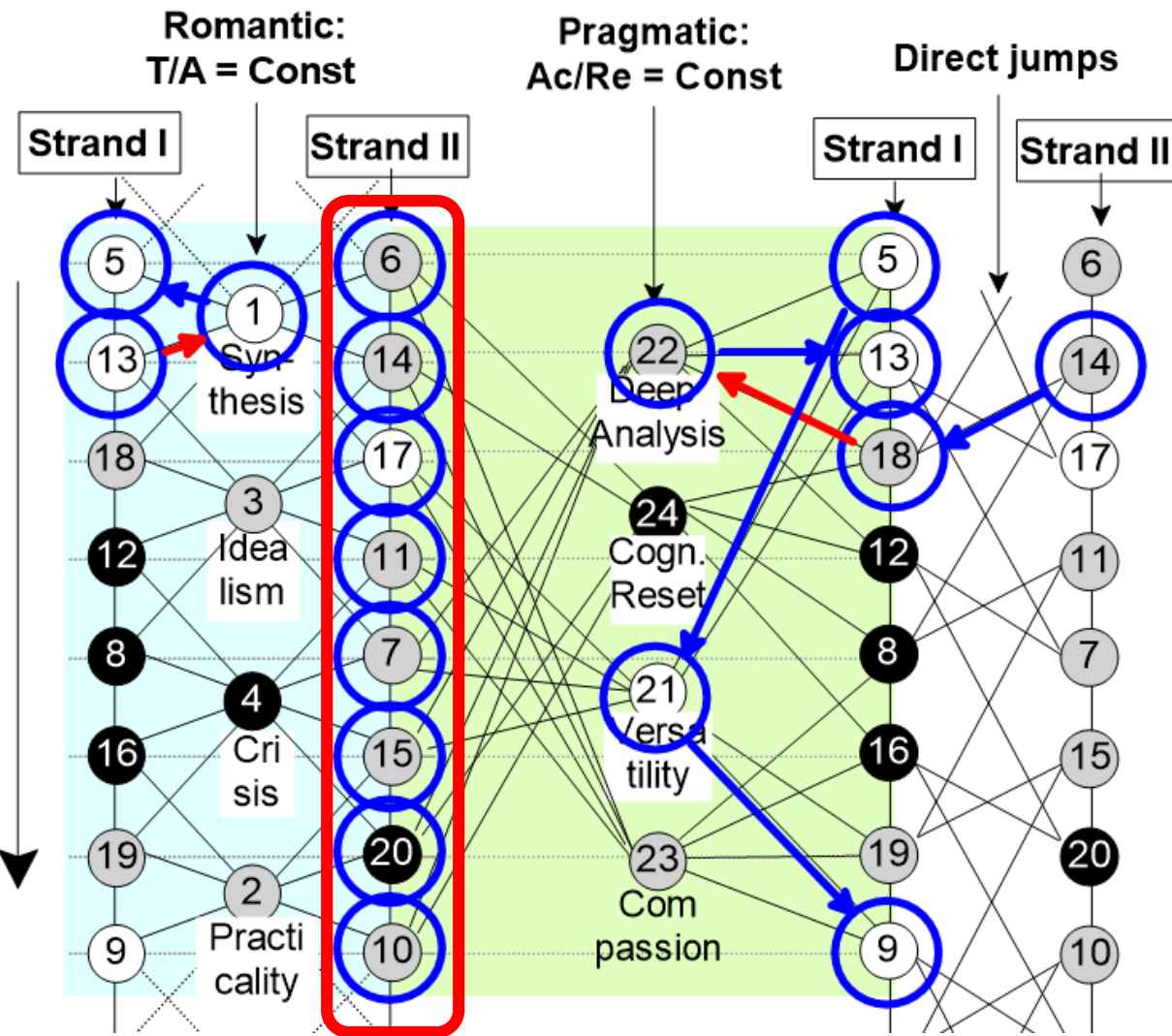
Formalizes complexity
without losing its essence

Helps to change perspectives

Helps to dissolve burden/pain

Helps to unmask hypocrisy

EU as a Brussel's State



- 17 Idealism
- 11 Vision
- 7 Inspiration
- 15 Initiative
- 20 Defensive Stabilization
- 10 Strategy
- 6 Restructuring
- 14 Spontaneity
- 18 Reframing
- 22 Deep Analysis
- 13 Exploration
- 1 Synthesis
- 5 Guided Learning
- 21 Versatility
- 9 Stability

Long vertical progression is unnatural

Natural & True Is That What:

Enforces A+ - treats opponent as a teacher ✗

Changes perspective (ϕ) to adapt the principle (T/A) ✗

Dissolves pain and burden (δ) ✗

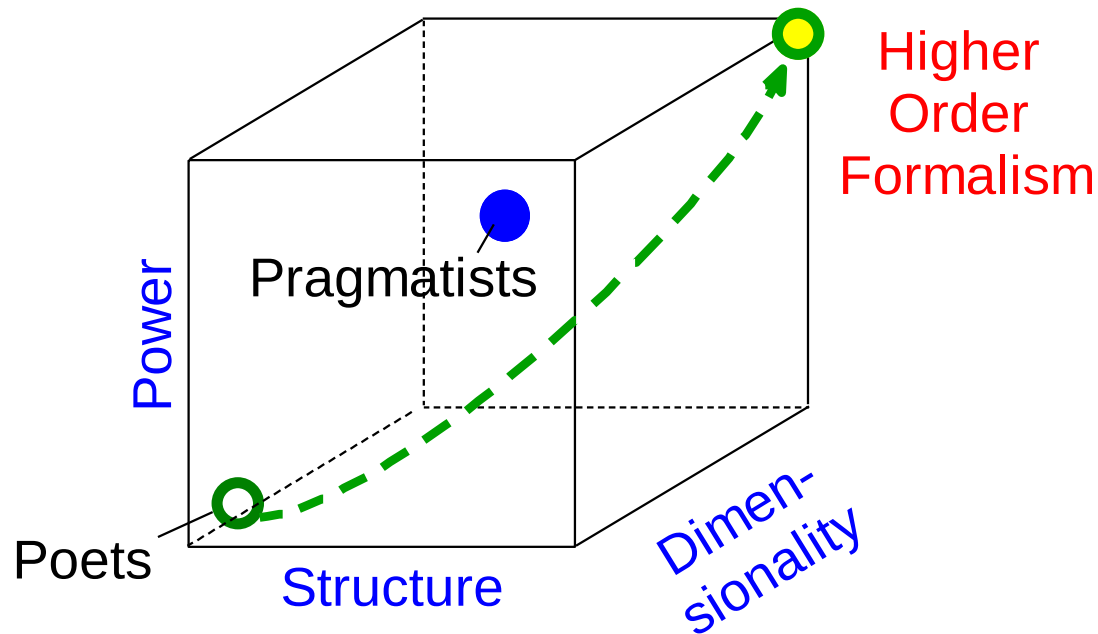
Wakes up to increase skill and adaptivity (z) ?

Employs non-conventional states (cells 1-4, 21-24) ✗

Synchronizes T/A and Ac/Re to “keep the word” ✗

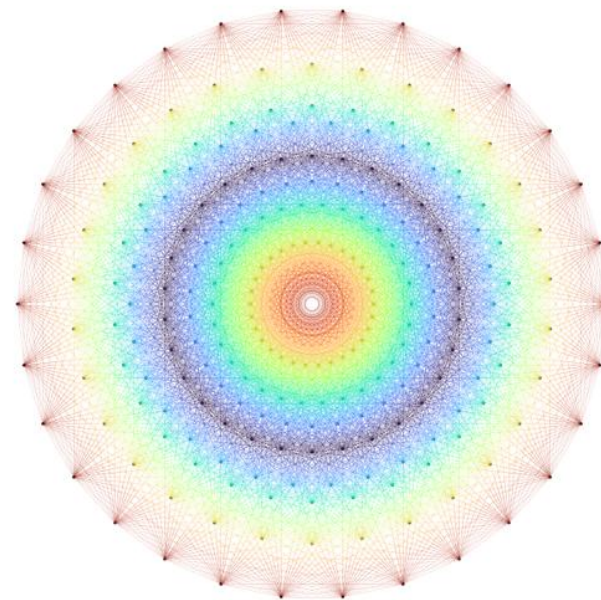
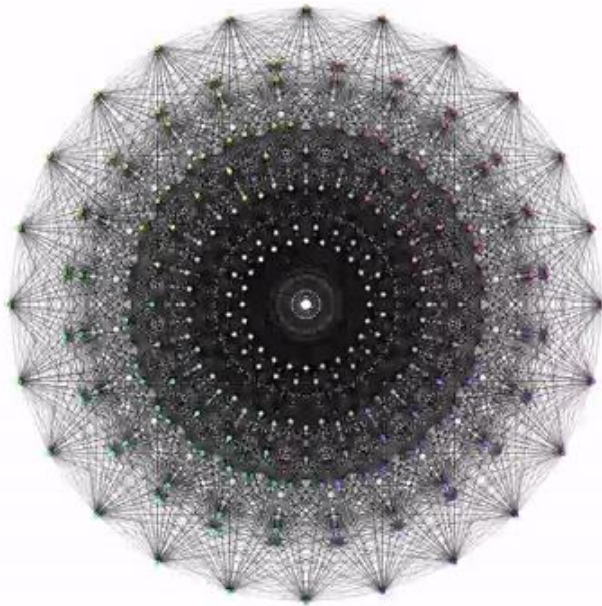
The Major Point

Pragmatists love structure and proofs



Structured Dialectics aims to provide just that
... but needs further R&D and popularization

The Next Level of Analysis– E8 Cell



- 4 → 8 dialectical components / dimensions
- 24 → 240 vertices ~ affective states
- 1 → 10 disjoint 24-cells ~ personas
 - 3,150 overlapping 24-cells ~ roles
- 120 → >1,000,000 n-D faces ~ mental states

Hurwitz's theorem (composition algebras)

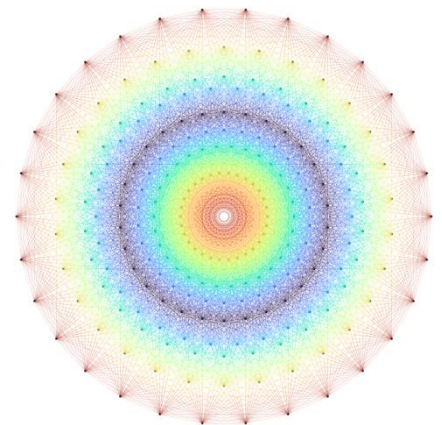
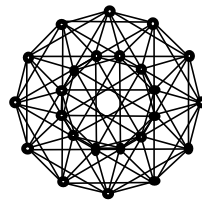
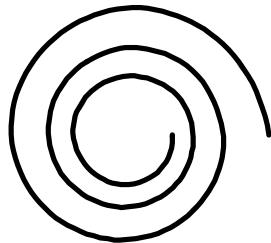
Multiplicative formulas for sums of squares
only hold in few dimensions

$$(a_1^2 + \dots + a_n^2) \times (b_1^2 + \dots + b_n^2) = (c_1^2 + \dots + c_n^2)$$

for $n = 1, 2, 4, 8$

1D $\rightarrow$ 2D $\rightarrow$ 4D $\rightarrow$ 8D

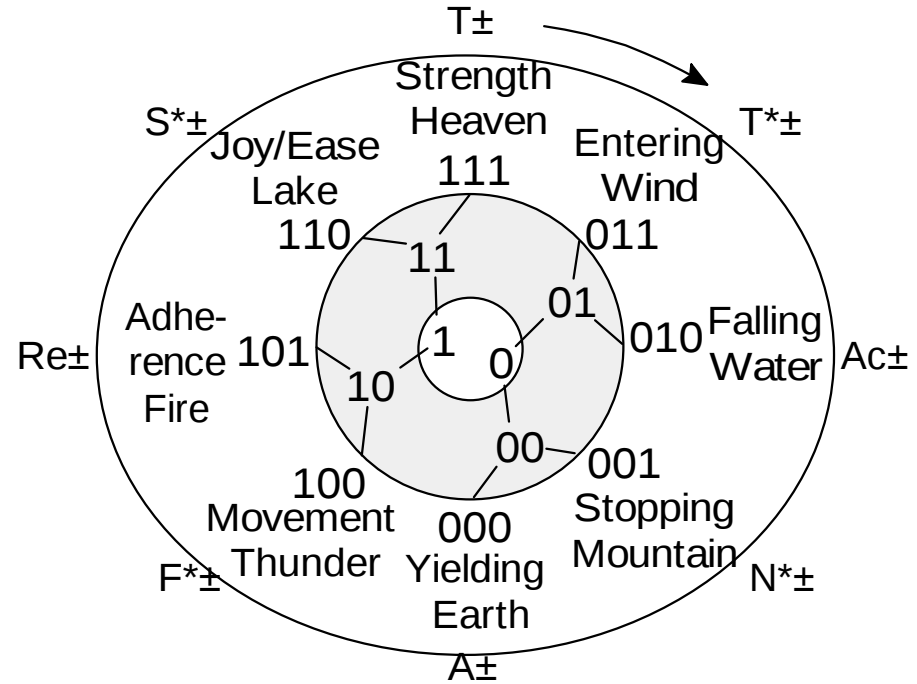
Hegel



I Ching

	111	011	010	001	000	100	101	110
111	111	011	010	001	000	100	101	110
111	111	111	111	111	111	111	111	111
011	111	011	010	001	000	100	101	110
011	011	011	011	011	011	011	011	011
010	111	011	010	001	000	100	101	110
010	010	010	010	010	010	010	010	010
001	111	011	010	001	000	100	101	110
001	001	001	001	001	001	001	001	001
000	111	011	010	001	000	100	101	110
000	000	000	000	000	000	000	000	000

(A)



(B)

8D Model Explains non-commutativity



Thank You

<https://dialexity.com/blog/>

[https://github.com/dialexity/
dialectical-framework](https://github.com/dialexity/dialectical-framework)

alanas@dialexity.com