

Moral Wisdom from Universal Dialectic:

Am I Right or Wrong?

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Abstract. A simple method for decision-making in analytical psychology and philosophy is described. Based on the analysis of positive and negative sides of theses and antitheses, it employs the concepts of dialectic complementarity and circular causation. The entire world appears as a living, self-evolving organism, in which all beings can **thrive in a mutually beneficial way**. Creation of an “artificial wisdom” network is proposed, that should relate all concepts by psycho-philosophical causality, widening our views beyond material constraints

Keywords: [Artificial Wisdom](#), [Morality](#), [Truthlikeness](#), [Universal Dialectic](#),
[Universal Code of Ethics](#), Universal Complementarity, [Decision-Making](#), Circular Causation

*“It ain’t what you don’t know that gets you into trouble.
It’s what you know for sure that just ain’t so” – Mark Twain*

Introduction

All trouble starts with biased thinking. I propose a method for balancing opinions, that can be used as a "wakeup call", through generating opposite opinions and suggesting ways toward "win-win" situations. It can be related to the ancient principles of [Taoism](#) and Aristotelean [Golden Mean](#), as well as the modern concepts of [complementarity](#) in quantum physics and cognitive science (see [The Complementary Nature](#)).

From philosophical perspective, it suggests existence of the ‘Higher Truth’, as a “resonant synchronization” of opposing views (thus augmenting various [Theories of Truth](#)). But from practical perspective, it requires lots of patience, thus calling for a proper visualization and automation. Below I show how it works for simple [words](#) and [phrases](#), aiding [personal](#) and [scientific theory](#) development, [solving dilemmas](#), touch on the ideas of [automation](#), wider [algebraic meaning](#) and [concept mapping](#).

Simple Words

Every word has a “deeper meaning” that can be formulated in terms of moral maxims. For example, “Love without Wisdom brings Insanity; Wisdom without Love brings Resentment”. It is possible to create a “universal wisdom generator” based on the fact that any word has both positive and negative associations complementary to the similar associations of its opposition(s).

For example, Love has a downside of fixating on a narrow phenomenon and “driving Crazy” – a risk of Insanity. Its oppositions – Hatred, Resentment, Fear, *etc.* –

Stepwise Construction

Figure 2 shows a stepwise generation of a dialectic map. Different schemes may be required if the first word is negative or neutral, or is provided with complimentary word(s) from independent sources.

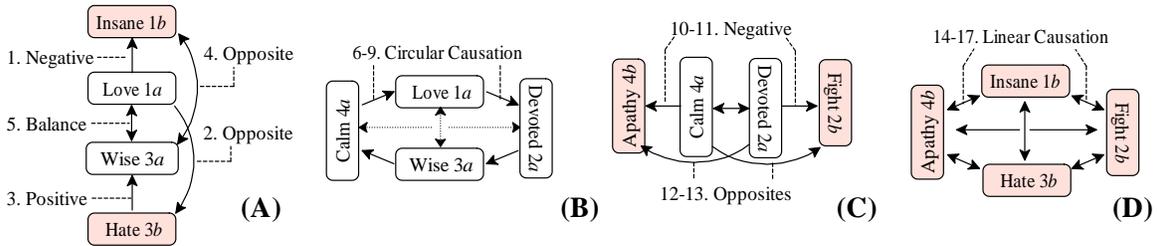


Figure 2. One of many ways to construct a “dialectic wheel”

Steps 1-3 in case (A) indicate generation of “negative” and “positive” sides of a given word (Love) and its opposition (Hatred). Steps 4 and 5 verify consistency of the results: *1b* and *3b* must be opposite to each other, whereas *1a* and *3a* must be complimentary. Case (B) constructs the “directed” circular causation that follows a strict order of transformations (sometimes the direction may change, see below). Case (C) is similar to (A), but deals with “orthogonal” pair of opposites. Case (E) is similar to (B), but deals with “scalar” (linear) causation that is indifferent to the order of transformations.

The obtained wheel must satisfy a multitude of the “quality control” criteria from Table 1.

Table 1. Relations between cells in [Figure 1\(B\)](#)

Cell	1a	2a	3a	4a	1b	2b	3b	4b
Cause of	2a	3a	4a	1a	2b	3b	4b	1b
Effect of	4a	1a	2a	3a	4b	1b	2b	3b
Complimentary to	3a	4a	1a	2a	3b	4b	1b	2b
Opposite of	3b	4b	1b	2b	3a	4a	1a	2a
Negative side of	-	-	-	-	1a	2a	3a	4a
Positive side of	1b	2b	3b	4b	-	-	-	-

For example, positive side of thesis (1a) must be opposite to negative side of antithesis (3b), and *vice versa*. Both positive sides of thesis and antithesis (1a and 3a, as well as 2a and 4a) must be complimentary to each other. Each cell is logically related to 5 (of 7) other cells, so the final wheel can be highly consistent. (If for some reason the wheel’s structure is changed, the respective changes must occur in Table 1 as well.)

To satisfy all relations, it is always good to include broader generalizations. For example, Insanity (1b) may be replaced with Ignorance, the direct opposition of Wisdom (3a). Hatred and Resentment (3b) can be replaced with Self-righteousness, the “negative side” of Wisdom (3a). And so on.

The 5th Element Test

The final (and perhaps most important) test is seeing if all positive sides (1a – 4a) “stick together” into a naturally evolving organism (see [“What’s the 5th element”](#)). At the same time, negative counterparts must remain at least in part in separation. If we are able to experience all positive sides simultaneously and perpetually, without a constant special effort, such a wheel brings true wisdom.

For example, Love, Devotion, Wisdom and Peace all stick together, as they can be experienced simultaneously and perpetually. At the same time, their negative counterparts – Insanity, Fight, Resentment, Indifference – remain isolated, as Resentment contradicts to Indifference. Therefore, the obtained wheel can be used for guidance (see

[Generating Wise Sayings](#) below). However, if any words were “twisted”, and/or the distinction between the negative and positive sides was not clear enough, then the given wheel would become misleading (see [Biased Thinking](#) below). This is not to say that negative sides must always be avoided – only that they should not be experienced perpetually.

Evaluating Yourself

Table 2 provides various wheels grouped according to certain “thinking habits”. Each wheel is marked by a capital letter (A – P) and includes a white and red row. White rows list positive sides, red – negative.

Table 2. Evaluating Yourself (explanations in the text)

Types of thinking	1 – Feeling ☹ Choleric		2 – Acting ☺ Sanguinic		3 – Sensing ☺ Phlegmat		4 – Sharing ☹ Melanchol	
		Possession Present concepts, possessions, ideas, needs, desires, habits, demands	Intention Consequences and possibilities of the present, action plan	Goal/Result Results of decisions, gained experiences	Reflection Adaptation, observation, contemplation, meditation			
Fuzzy	A	<i>a</i>	Humble	Loyal	Special	Deep		
		<i>b</i>	Mediocre	Fanatic	Arrogant	Fuzzy		
	B	<i>a</i>	Simplify/Hypothesize	Verify	Explain	Meditate/Observe		
		<i>b</i>	Distort	Hide / Ignore	Obscure	Overbear		
Inter mediate	C	<i>a</i>	Learn	Focus	Understand	Relax		
		<i>b</i>	Dogmatize	Stress	Ignore	Neglect		
	D	<i>a</i>	Create	Play/Nourish	Solve/Invent	Share/Reflect		
		<i>b</i>	Give Up	Hide/Break	Rigidity	Insisting		
Clear	E	<i>a</i>	Desire	Action	Satisfaction	Sharing		
		<i>b</i>	Desperation/Frustration	Abuse	Indifference	Overbearing		
	F	<i>a</i>	Strive	Opportunity	Abundance	Calm Celebration		
		<i>b</i>	Hunger / Poverty	Desperation	Disappoint	Burden		
Happy	G	<i>a</i>	Happy	Firm, Bold	Thoughtful	Flexible		
		<i>b</i>	Obtuse, Selfish	Stubborn	Sad	Submissive		
	H	<i>a</i>	Good Habits	Flexible	Healthy	Firm		
		<i>b</i>	Sickness	Loose	Immature	Rigid		
Biased	I	<i>a</i>	<i>Excited</i>	<i>Calm</i>	<i>Thoughtful</i>	<i>Successful</i>		
		<i>b</i>	<i>Euphoric</i>	<i>Disappointed</i>	<i>Depressed</i>	<i>Turbulent</i>		
	J	<i>a</i>	<i>Principled</i>	<i>Tough</i>	<i>Lenient</i>	<i>Secure</i>		
		<i>b</i>	<i>Despotic</i>	<i>Desperate</i>	<i>Indifferent</i>	<i>Weak</i>		
	K	<i>a</i>	<i>Threat</i>	<i>Alert</i>	<i>Courage</i>	<i>Relief</i>		
		<i>b</i>	<i>Fear of Worse</i>	<i>Wariness</i>	<i>Safety</i>	<i>Recklessness</i>		
	L	<i>a</i>	<i>Sickness</i>	<i>Medication</i>	<i>“Health”</i>	<i>Aversion?</i>		
		<i>b</i>	<i>Fear of Worse</i>	<i>Addiction</i>	<i>Obscurity</i>	<i>Disease</i>		
Linear	M	<i>a</i>	Many Opportunities	Try All	Find the Best	Calm / Relief		
		<i>b</i>	Overwhelming	Rush / Stress	Few to None	Give Up		
	N	<i>a</i>	Compound Library	Screening	Active Lead	Selecting		
		<i>b</i>	Impotent	Guesswork	Toxic	Preserving		
	O	<i>a</i>	Weightless Writing	Easy / Cheap	Pencil	Dialectic		
		<i>b</i>	Pen	Linear Logic	Usual Writing	Expensive		
	P	<i>a</i>	Solve / Heal	Easy / Cheap	Natural Cure	Dialectic		
		<i>b</i>	Synthetic/Kitchy	Linear Logic	Problem / Toxic	Difficult		

Balanced Thinking

Wheels A-D are helpful when we “know that we don’t know”, *i.e.* are not sure about our true priorities. Case A advices to practice Humility (A-1a) and maintain Loyalty (A-2a), until we find something Special (A-3a). This must yield the required

Depth (A-4a), so that all doubts gradually vanish. It suggests that Humility means loyalty, specialty and deepness, whereas mediocrity means fanaticism, arrogance and fuzziness.

Case B suggests Simplifying considerations and verifying Hypotheses. C and D – Learning and Creating something “neutral”. Here Simplification is equated to Verification, Explanation and Observation, Distortion – to Hiding, Obscuring, Overbearing. And so on.

When we “find the way”, *i.e.* understand our goal(s), then C and D become “very important” rather than “neutral”. E and F call for Action (E-2a) and creating Opportunities (F-2a). G and H – call for Thoughtfulness (G-3a) and Good Habits (H-1a). At this point we stop asking “what’s the point?”, as “we are the point” (see “[What’s the 5th element?](#)”).

All wheels can be interlinked in a “behavioral pattern”, as shown in Figure 3, so that moving from A to H can be either slow or fast.

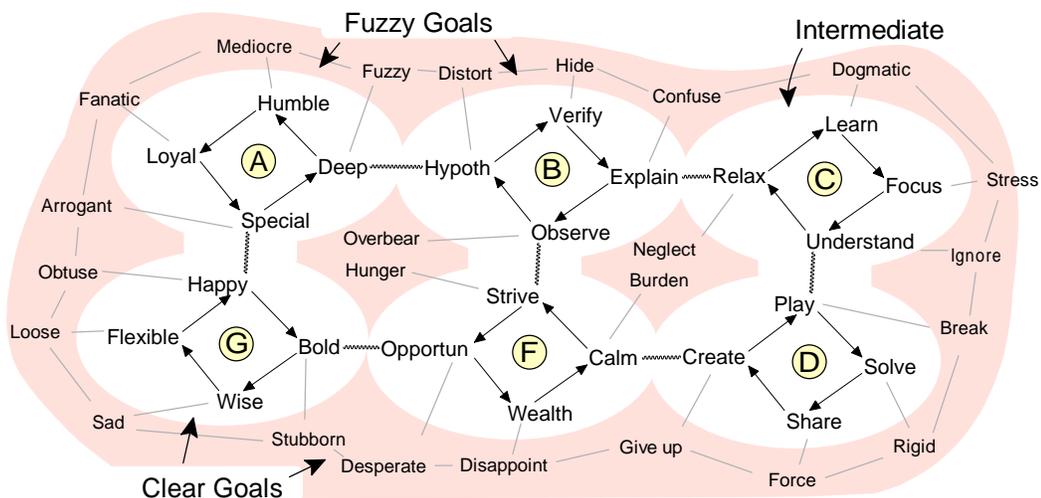


Figure 3. Behavioral pattern from interlinked wheels

The variety of such patterns is infinitely large, but they only work if we stay in the “white zone”. Falling to the red zone “rings the bell”. The real problem starts, if the bell is ringing all the time, so that we no longer hear it. Then we fall into the “biased thinking” that perverts the meaning of the words (*e.g.*, Mediocre (A-1b) is called Humble (A-1a), Fanatic(A-2b) – Dedicated (A-2a), *etc.*).

Biased Thinking

Biased (“conditioned”) thinking stems from past experiences that yield perverted judgement. Let’s get back to [Table 2](#). Cases I-K show the wheels that hardly pass the [5th element test](#). Here we falsely treat negative sides as positive, thus replacing natural evolvement with “stoic fight”.

Wheel I represents the seemingly correct logical sequence (Excitement – Calming– Thoughtfulness – Success) which can only work for a short time, as Excitement (I-1a) is incompatible with Thoughtfulness (I-3a). Essentially it attempts mimicking wheel G, where Excitement is replaced with Happiness (G-1a).

Wheel B shows how we fool ourselves by “rebranding” Despotism (J-1b) to “Principledness” (J-1a). The latter yields Thoughtfulness (J-3a), which is often replaced with Lenience (J-3a). Although Lenience without Principledness yields Indifference, yet Principledness without Lenience may not yield Despotism

Wheel K shows how the fear-driven logics presents Threat (K-1a) as a positive side, whereas Safety (K-3b) as negative. Such a perversion happens anytime when we pursue Safety out of the “Fear of Worse” (K-1b). Wheel L shows a particular example, when we feel Sick (L-1a) and take Medication (K-2a). Yet true Health (H-3a) comes

from Good Habits (H-1a), suggesting that taking Medication (K-2a) equates to Carelessness (H-2b), whereas the resulting “Health” (K-3a) is naive Immaturity (H-3b).

Linear Thinking

The last section of Table 2 considers some “milder but wilder” cases that compare “linear logics” to dialectics. It refers not so much to our personal development, but to how we approach the problems and make the decisions.

Wheel M refers to a “problem of many choices” (M-1a). Linear logics suggests Trying them All (M-2a), until Finding the “Best” (M-3a). This makes M-1a incompatible with M-3a, and M-2a incompatible with M-4a. Note, that balanced wheels A-D suggested the opposite logic. Wheel A advises sticking with Humility and Loyalty (A-1,2a), wheel D – Creativity and Nurturing (D-1,2a). So, linear thinking pushes on just one step (M-2a – “extensive screening”), whereas dialectics suggests “ordered diversification” (A-D).

Wheel N represents a particular case of the above in drug design. Here we look for Active Leads (N-3a) among millions of compounds (N-1a), comparable to finding needle in a haystack. Pharma companies use [high-throughput screening](#) and [drug design](#) – quite expensive and cumbersome setups that reduce serendipity [Klein \(2008\)](#). On the other hand, Compound Library (N-1a) is comparable to Learning (C-1a), whereas Active Lead (N-3a) to Understanding (C-3a). This shifts the paradigm, from extensive screening of new compounds to gathering specific information about the existing remedies in the broader clinical practice, natural medicine or general wildlife. (In other words, Pharma companies should study cultural traditions, animal self-care, and analytical philosophy!)

Wheel O refers to anecdotal legend that NASA developed an expensive pen for writing at zero gravity, while Soviets used pencils ([Fact or Fiction?: NASA Spent Millions to Develop a Pen](#)). Although this story may be false, it reflects the fact that rich people are prone to „predatory thinking“ (cycle J, spending fortune for a quick relief), whereas „poorer“ intellectuals are more used to dialectics (cycles A-D).

Wheel P extends it to a more general case, showing that rich people seek „forceful solutions“ (*e.g.*, synthetic drugs, P-1b), while poor people stick with natural remedies (P-3a). Rich people reject the Dialectical thinking (P-4a), as it demands trusting the nature (which in their mind is „dirty and unproven“).

The last two wheels (O and P) are comparable to H, whereby Dialectic can be equated to Firmness (H-4a), whereas Linear Logics to Looseness (H-2b). While Firmness means the Balanced Thinking, Looseness means Bias. Below we will provide many more of similar examples, while considering [inconvenient truths](#), solving [dilemmas](#), [advancing science](#)

Generating Wise Sayings

Many of abovementioned conclusions can be drawn automatically. Let's show this using [Figure 1](#) (A-B) as an example (which can be replaced with any other wheel from [Table 2](#)). Scheme A encodes simple maxims: “If you are in Love, then seek Wisdom. Love without Wisdom brings Insanity”. These statements are reciprocal, and they also apply to orthogonal pair in scheme (B – Devotion and Peace). “Wisdom without Love brings Resentment. Devotion without Peace brings Fight. Peace without Devotion brings Indifference”. We can generalize them by replacing numeric coordinates of

scheme B with variable X (modulo 4), as shown in [Table 3](#). (See if they apply to any cases in [Table 2](#).)

Table 3. Generalized statements, where X denotes segment's number

No	<i>a</i>	<i>b</i>
1	If you are in Xa, then seek (X+2)a	Xb is “healed” by (X+2)a
2	Xa without (X+2)a yields Xb	Xb is Xa without (X+2)a
3	Xa arises from (is complimentary to) (X+2)a	Xb arises from (is complimentary to) (X+2)b
4	Xa arises from (is complimentary to) (X+1)a and (X+3)a	Xb arises from (is complimentary to) (X+1)b and (X+3)b
5	(X+1)a and (X+3)a brings Xa	(X+1)b and (X+3)b brings Xb
6	Xa without (X+2)a yields Xb	Xb is Xa without (X+2)a
7	To get Xa, seek (X+1)a and (X+3)a	... avoid (X+1)b, (X+2)b, (X+3)b
8	Eternal Xa is (X+1)a, (X+2)a, (X+3)a	Eternal Xb is (X+1)b, (X+2)b, (X+3)b
9	Xa yields (X+1)a	Xb yields (X+2)b and (X+1)b or (X+3)b
10	Xa without (X+1)a yields (X+3)b	Xb is (X+1)a without (X+2)a
11	Xa without (X+3)a yields (X+1)b	Xb is (X+3)a without (X+2)a
12	To get Xa, seek (X+3)a	... avoid (X+3)b
13	If you are in Xa or Xb, then seek (X+1)a and (X+2)a	... avoid (X+2)b and (X+3)b

More specific statements arise from the directedness of the obtained graphs.

Positive words (closest to the center) are connected by irreversible (one-way) arrows. For example, in scheme (B) Love (1a) yields Devotion (2a), but Devotion does not yield Love “backwards” – it does so in a multi-step process in a clockwise direction. This yields “asymmetric” statements as shown in the second half of [Table 3](#) (lines 5-9)

(Under certain circumstances the directedness may change to the opposite, as a possible result of the “backwards” correlation with personality traits, [see below](#), yet still remaining irreversibility. In this case (X+1) should be replaced with (X+3) and (X+3) with (X+1).)

Fast enough transformations in a given direction create an impression of the backwards order. If direction is correct, then it ultimately yields a higher state of consciousness – the “True Love” or the “[5th element](#)”, where all Xa are synchronized in a

self-organizing system. Then all Xa become synonymous, and direction disappears. This is easy to confuse with the lowest consciousness, where the direction is also irrelevant, but due to impossibility to fall lower than the lowest. (It's not important in which order we break the world, but it's important in which order we create it.) The 5th element may occasionally “fall” to negative sides (Fight, Hate, Fear, Indifference), but it never stays there for too long. The fall may be perpetual only if self-regulation vanishes (*i.e.*, “True Love” disappears).

To get out of the negative site, we must seek positive change in the right direction. Combination of various statements from [Table 3](#) yield more complex constructs, as exemplified in Table 4.

Table 4. Examples of combined statements

If you (are / feel):	Then Seek:	Avoid:
(1a,b) Love, Passionate, Curious, Obsessed, Attached, Naive, Ignorant, etc	(2-3a) Devotion, Persistence, Action, Creation, Wisdom, Profundity, Experience, etc	(3-4b) Apathy, Sleepiness, Laziness, Conformity, etc
(2a,b) Devoted, Persistent, Act, Create, Improvise, Stubborn, Fight, Abuse	(3-4a) Wisdom, Profundity, Experience, Peace, Calm, Dignity, Tranquility, Rest	(4-1b) Obsession, Insanity, Egoism, Ignorance, Insanity
(3a,b) Wise, Profound, Experienced, feel Hate, Fear, Resentment, Regret, Sickness	(4-1a) Peace, Calm, Dignity, Tranquility, Love, Passion, Admiration	(1-2b) Stubbornness, Fight, Abuse
(4a,b) Peaceful, Calm, Inactive, Dogmatic, Submissive, Conservative, Lazy, Sleepy	(1-2a) Love, Passion, Affection, Curiosity, Devotion, Persistence, Action, Creation	(2-3b) Hate, Fear, Resentment, Regret

More sophisticated statements can be obtained from more sophisticated starting theses (see [Understanding Abstract Theses](#)). The accuracy of each statement can be increased by exploiting the [More Detailed Wheels](#). Compared to the famous language models (like [BERT](#), [GPT-3](#), [Wu Dao](#)), we obtain much higher “richness” of content – it is like comparing the “linear logic of majority” to the “dialectic of the wise”.

“Dialectical” Similarity

The above mentioned “artificial wisdom” holds universally for all possible wheels. Often different wheels prove to be “dialectically similar”, in that they can yield the “mixed wisdom”. Table 5 provides examples, listing such wheels in separate groups.

Table 5. Dialectic Wheels by Ontological Similarities

		1 – Feeling Possession ☹ Choleric	2 – Acting Intention ☹ Sanguinic	3 – Sensing Goal / Result ☹ Phlegmatic	4 – Sharing Reflection ☹ Melancholic
A	<i>a</i>	Love / Passion	Devotion	Wisdom	Peace / Calm
	<i>b</i>	Insanity / Ignorance	Fight / Abuse	Resentment	Apathy / Laziness
A'	<i>a</i>	<i>Wise/ Careful</i>	<i>Calm, Analytical</i>	<i>Bravery</i>	<i>Active / Smart</i>
	<i>b</i>	<i>Fearful</i>	<i>Procrastinating</i>	<i>Foolhardiness</i>	<i>Fight / Abusing</i>
B	<i>a</i>	Bravery	Active / Smart	Wise/ Careful	Calm, Analytical
	<i>b</i>	Foolhardiness	Fight / Abusing	Fearful	Procrastinating
C	<i>a</i>	Desire	Action	Satisfaction	Sharing
	<i>b</i>	Frustration	Abuse	Indifference	Overbearing
D	<i>a</i>	Life	Create / Act	Wisdom	Will
	<i>b</i>	Unwise	Force	Death	Destruction
E	<i>a</i>	Wealth / Abundance	Strive	Wisdom / Sanity	Opportunity
	<i>b</i>	Addiction	Inequality	Lack / Poverty	Desperation
E'	<i>a</i>	Strive	Opportunity	Wealth / Abundance	Calm
	<i>b</i>	Poverty	Desperation	Apathy	Burden
F	<i>a</i>	Natural	Grow / Learn	Fit / Optimal	Balance / Flow
	<i>b</i>	Kitsch / Spoiled	Wavering	Artificial / Fake	Suppress/Kill
F'	<i>a</i>	Flexible	Create	Order	Transform
	<i>b</i>	Chaos	Spoil	Rigid	Destroy
F*	<i>a</i>	<i>Life</i>	<i>Opportunity</i>	<i>Fit / Optimal</i>	<i>Transform</i>
	<i>b</i>	<i>Kitsch / Spoiled</i>	<i>Spoil</i>	<i>Death</i>	<i>Burden</i>
G	<i>a</i>	Happy	Firm, Bold	Thoughtful	Flexible
	<i>b</i>	Obtuse, Selfish	Stubborn	Miserable / Sad	Submissive
G'	<i>a</i>	Strive, Ambition	Focus, Disciple	Happy, Humble	Flexible
	<i>b</i>	Struggle, Ego	Rigid	Lazy, Dumb	Wayward
H	<i>a</i>	Healthy / Energetic	Active	Wise/Virtuous	Firm
	<i>b</i>	Immature/Sinful	Stressed	Sick / Drained	Apathy/Laziness
I	<i>a</i>	Unique, Original	Create	Objective	Share
	<i>b</i>	Subjective	Hide	Stereotypic	Destroy
J	<i>a</i>	Special	Dedicated	Humble	Meaningful
	<i>b</i>	Arrogant	Fanatic	Mediocre	Fuzzy
J'	<i>a</i>	Beautiful, Sweet	Courage, Accept.	Truth, Fact	Carefulness
	<i>b</i>	Lie, Falsehood	Recklessness	Terrible, Bitter	Fear, Aversion
K	<i>a</i>	Create	Play/Nourish	Solve/Invent	Share/Reflect
	<i>b</i>	Give Up	Hide	Rigidity	Insisting
L	<i>a</i>	Learning	Devotion	Fulfillment	Calm
	<i>b</i>	Failure	Stress	Ignorance	Indifference
M	<i>a</i>	Simplify	Verify	Explain	Meditate/Observe
	<i>b</i>	Confuse	Falsify	Obscure	Overbear
N	<i>a</i>	Hypothesis	Verifying	Science / Theory	Question/Share
	<i>b</i>	Confusing	Hide / Ignore	Dogmatism	Pervert

* Combination of D-1a, E'-2a, F-3a, F'-4a

For example, “Love (A-1a) without Satisfaction (B-3a) brings Frustration (B-1b) and Foolhardiness (C-1b). To become Wealthy (E-1a), seek Growth (F-2a) and Wisdom (D-3a), while avoiding Destruction (D-4b) and Desperation (E-4b).” These statements represent new wheels (*e.g.* F*, a combination of D-1a, E’-2a, F-3a, F’-4a)

The accuracy of such statements depends on “dialectical similarity” of words, which resembles both semantic and ontological similarities. Such words can be found through the “chained wheels” that are related through direct complementarity or causality. For example, Love (A-1a) yields Wisdom (A-3a and A’-1a) that in turn yields Bravery (A’-3a and B-1a). The latter may yield Carefulness and Prudence (positive sides of Fear, antithesis of Bravery), which may further yield Confidence (positive side of Foolishness, antithesis of Prudence). Another way – through the “similar” wheels with a common word (or its synonyms) in 1a or 3a positions (see [Ontological Explosion](#) and [Using Wise Sayings](#)).

In philosophy, dialectical similarity helps relating words that may seem unrelated (*e.g.*, Love – Bravery – Prudence – Confidence; see [Re-interpreting the World](#) for more examples). In psychology, it helps solving dilemmas (self-analyzing) through paraphrasing. For example, am I in Love or Affection? Love brings Wisdom, Affection brings Resentment. Am I Wise or (potentially) Resented? Wisdom brings Bravery, Resentment brings Foolhardiness. Am I Brave or Foolhardy? Bravery brings Prudence, Foolhardiness – Fear or Conservatism. And so on. (See [Solving Dilemmas](#) for a more fundamental approach)

“Elemental” Similarity

All words in a given column of Tables [2](#) and [5](#) can be assigned to one of the four elements: Feeling ~ Choleric ~ Fire, Acting ~ Sanguinic ~ Air, Sensing ~ Melancholic ~ Earth, Sharing ~ Phlegmatic ~ Water. These transform to each other according to the Yin and Yang principle (Figure 4). The pair of Feeling and Sensing is the “primary set” of oppositions (like water and oil), whereas Acting and Sharing – the “secondary” (like oily water and watery oil).

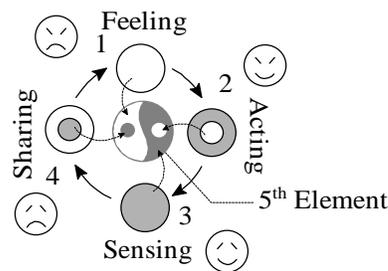


Figure 4. Circular causation of “dialectic vortex”

Each element represents a certain “character trait” of a word, just like [personality traits](#) of humans. For example, [MBTI](#) assigns 4 letters to each personality type, each letter representing a certain number (*e.g.*, 40% introvert, 60% extrovert). Similarly we can assign 4 numbers to each word, whereby each number denotes probability that a given word will occupy a certain position in a wheel (*e.g.*, Love could have ~60% of Feeling, ~20% of Sensing, and ~10% of Acting and Reflecting each). (For the correlation with various character traits see [Optimizing Character Traits](#))

Each “element” can be viewed as an independent psychological scale, similar to [PAD](#) or [VAD](#) (Valence, Arousal, Dominance) [ref] and [Plutchik parameters](#) [ref] (both of

which were assigned to thousands of words). Knowing “elemental” parameters could tell us a lot about the given word, as well as about each element.

For example, Love is related to Health, Energy and Wealth, all of which are positive sides of the 1st column. Hate is related to Sickness, Poverty and Misery, all of which are negative sides of the 3rd column. We don’t usually think about the Wealth as a Feeling, nor about Hate as a Sense, but the fact that they appear in respective columns tells us that they have non-zero parameters of both Feeling and Sensing.

Positioning of a given word in a wheel also depends on parameters of all other words in the same wheel. For example, the wheel A’ was rearranged to B after noting that Bravery (A’-3a and B-1a) has larger Feeling and lesser Sensing increments than Wisdom (A’-1a and B-3a). Even higher variability can be seen for the word Create (D-2a, F’-2a, I-2a, K-1a)

Elemental parameters seem to depend on our mood, point of view or character. *E.g.*, while choleric (1) people assign Love with higher Feeling (1) parameter, sanguine (2) may assign it with higher Reflection (4), melancholic (4) – with higher Sensing (4), phlegmatic (3) – with higher Action (2). Shifting elements may significantly impact the “major message” of the wheel (see [Advancing Science](#))

Elemental similarity can be used for developing new scientific scales (see [Advancing Science](#)) and entire theories (see [Re-Interpreting the World](#)). However, its significance decreases with decreasing ontological distinction in [Simple Phrases](#), [More Detailed Wheels](#) and [Character Traits](#).

Inconvenient Truth of “Neutral” Words

Above we considered situations when thesis and antithesis were clearly “positive” or “negative”, or could be easily related to the existing wheel(s). Yet many words do not fall into such categories. For example, the word Car may be either positive or negative, and it is not clear to which wheel it could be assigned in Table 5. Figure 5(A) analyzes it using the 3-level wheel, where Car and its opposition (“No Car”) are placed in the “neutral” area (1*b* and 3*b*, grey color).

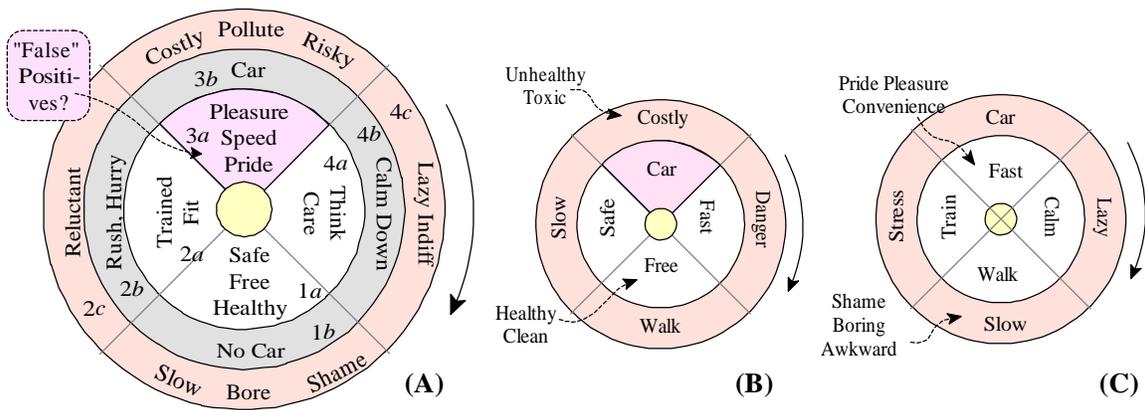


Figure 5. Analysis of a word Car by 3- and 2-level wheels

White cells (1*a* and 3*a*) list their positive sides, red (1*c* and 3*c*) – negative. All rules from Tables 1 and 3 remain operative (with small letter *b* changed to *c*). The obtained wheel tells us the following: “the Car brings speed, pleasure and convenience in exchange to the cost, pollution, danger of accidents, and unhealthy lifestyle. In order to drive it, you have to be Thoughtful, Careful, Trained and Fit”. It is truthful, so confirms the validity of our method. Yet it does not pass the 5th element test, as we can hardly combine Pleasure, Speed and Pride with Safety, Zero Expense, Health and Ecology.

Solving Dilemmas

The 3-level wheel (on [Figure 5](#), A) helps solving the following dilemma: to ride a car or to walk by legs? Just answer two questions: 1) Does Health and Cost-Effectiveness (1a) outweigh Speed and Excitement (3a)? and 2) What is easier: Training / Running (2a) or Thinking / Caring (4a)? Wheels B and C paraphrase it: What is easier: to drive healthily, cleanly and for free, or to walk quickly enough, proudly and conveniently? This may hint on how to shift the paradigm. Table 6 provides more examples.

Table 6. Solving Dilemmas

		1 – Feeling Possession	2 – Acting Intention	3 – Sensing Result / Use	4 – Sharing Reflection
A	<i>a</i>	1 st Positive	Striving	2 nd Positive	Adapting
	<i>b</i>	1 st Alternative	Action	2 nd Alternative	Thinking
	<i>c</i>	1 st Negative	Shallow, Fighting	2 nd Negative	Indifference
B	<i>a</i>	Pleasure, Arousal	Active Lifestyle	Health, Wellness	Ease, Relief
	<i>b</i>	Meat eater	Mindfulness	Vegetarian	Obliviousness
	<i>c</i>	Sickness, Cruelty	Self-abasement	Bore, Misery	Lazy, Apathy
C	<i>a</i>	Healthy	Hardened	Immune/Mature	Upraise
	<i>b</i>	No Vaccine	Get Cold	Get Vaccine	Get Virus
	<i>c</i>	Immature	Fall	Sick	Softened/Spoiled
D	<i>a</i>	Coziness	Fast Result	Scenery View	Humane, Cheap
	<i>b</i>	Live in Garden	Cut Trees, Dig Pond	Live near Lake	Plant Trees
	<i>c</i>	Crowded Views	Expensive, Cruel	Strong Winds	Long Wait
E	<i>a</i>	Subtle, Gentle	Create, Earn	Tough, Mighty	Help / Share
	<i>b</i>	Art, Science	Focus, Fight	Business, Warrior	Relax
	<i>c</i>	Weak, Pathetic	Stress, Abuse	Rude, Bossy	Stagnate
F	<i>a</i>	Brave, Genuine	Striving	Wise, Careful	Precision
	<i>b</i>	Subjective	Acting	Objective	Calm
	<i>c</i>	Naive, Deuded	Fighting	Fearful	Lazy
G	<i>a</i>	Bold / Tough	Survival Skills	Prudent	Continuity
	<i>b</i>	Overconfident	Danger / Risk	Cautious	Safety
	<i>c</i>	Foolhardiness	Stress / Disaster	Coward	Stagnation
H	<i>a</i>	Gentleness	Strive	Meat	Peaceful
	<i>b</i>	Animal Rights	Protest	Slaughter	Struggle
	<i>c</i>	Rigidness	Fight	Greed, Cruelty	Nglect
I	<i>a</i>	Wellness/Climate	Eco-Lodges	Easy Money	Conservation
	<i>b</i>	Natural Forests	Infrastructure devel.	Plantations	Zoning
	<i>c</i>	Little Money	Clear-cutting	Sckness/Disasster	Exhaust

Case A shows the general method. Write the two alternative decisions in the opposite grey cells (1-b and 3-b), their positive and negative sides in the respective white and red cells. Connect both positive and negative sides by the causal relations (2a and 4a, 2b and 4b). Decide what is more important (1a or 3a) and what is easier (2a or 4a). Think how to unite all positive sides (1-4a) into the “5th element”.

Case B asks if it better to be an omnivore (meat eater) or vegetarian. What is more important: a sense of full stomach and instant satisfaction or overall health and wellness? (Google [vegetarians vs meat eaters.](#)) What is easier: to conquer an instant desire or chronic disease? (Google [meat eaters chronic disease](#) – diabetes, cardiovascular, alzheimer's, various types of cancer.)

Case C asks if it is worth of getting vaccinated. Whom do you trust more: your own health (C-1a) or expert opinion (C-3a)? How it is better to strengthen your immune system: by increasing your discipline / exposing to the cold (C-2a, see [Iceman on virus](#)) or by exposing to virus (C-4a)? (In other words, what is easier to control: your own temper (1a, 2a) or virus (3a, 4a)? Are you sustainable by yourself or need a support? What kind of support: physical, moral, motivational?)

Case D considers, whether it is better to buy a house in the garden (D-1a) or near the lake (D-3b). Does garden coziness outweigh lakeview? If no, then: Does fast yet cruel tree-cutting (possibly with pond-digging) outweigh humane yet long-lasting wind-fighting with garden-growing? This will determine how to combine both garden coziness and scenery views in a single solution.

Case E asks, if it is better to become an artist (scientist, philosopher) or a businessman (earn money, become a warrior). What is more important: learning or earning? What is easier: conquering yourself or creating something new? Many [carrier assessment](#) tools ask similar questions while disregarding the common goal of all choices (perpetual causality Subtle – Creative – Tough – Sharing; see [Optimizing Character Traits](#) for further hints).

Case F asks if Subjectivity is worse than Objectivity. The question comes down to the following: Do you need more Genuine Braveness (C-1a) or Wise Carefulness (C-3a)? Is it easier for you to Strive in Action (C-2a) or to be Calm and Precise (C-4a)?

Case G asks if kids should be able to engage in risky activities (climbing trees, playing cards, exploring the unknown). Do you want your kids to grow bold (develop autonomous learning & survival skills) or be more obedient and considerate? What is easier: engage in all activities of kids, or prohibit any dangerous activities, while leaving them alone?

“Educative” Negotiations

The proposed method can be used in negotiations, to educate the opposing side. For example, case H in Table 6 explains motivation of Animal Rights activists, who prefer Gentleness over Animal Meat (google [slaughter cruelty](#)). Even though Slaughter is claimed to be “humane”, the positive side of Meat looks like a false claim (consider case B in Table 6). Case B can easily pass the 5th element test, whereas case H cannot, as Meat is hardly compatible with Gentleness, Health and Wellness.

Case I explains motivation of Nature activists, who prefer common wellness over easy money and cheap timber. Industry produces money from plantations that cannot match psychological wellness and climate regulation of natural forests. The solution could be in Eco-Lodging, that merges both sides (generates money and preserves nature, google [logging and eco-lodging](#)). Loggers maintain own arguments (see [why logging is good](#)) that very likely cannot pass the 5th element test. Such proofs must be provided by the Nature activists who seek to educate their opponents.

Cases C and G explain motivation of Human Rights activists, who prefer freedom over government control. They would have to demonstrate that opposition's arguments fail to pass the 5th element test.

Humanistic / Gestalt Therapy

“The greatest discovery of my generation is that human beings can alter their lives by altering their attitudes” – William James.

Dialectic wheels help changing attitudes and achieving psychological relief. For example, in case of outrage, hatred or self-reproach, recall that every guilt is shared between the victim and aggressor. Draw a wheel of your concern and observe your changing attitude. Table 6-1 provides examples

Table 6-1. Transforming blame into analysis

		1 – Feeling Possession	2 – Acting Intention	3 – Sensing Result / Use	4 – Sharing Reflection
A	<i>a</i>	Internal Lesson	Internal Growth	External Lesson	External Growth
	<i>b</i>	Aggressor	Praying, Penitence	Victim	Training, Striving
	<i>c</i>	External Abuse	External Fall	Internal Abuse	Internal Fall
B	<i>a</i>	Lesson, Wisdom	Maturation	Love, Creation	Success
	<i>b</i>	Brutal World	Praying	Gentle Me	Striving
	<i>c</i>	Harm, Suffer	Failing, Loosing	Self-Indulgence	Giving Up
C	<i>a</i>	Lesson, Wisdom	Hear the World	Self-Respect	Understand Yourself
	<i>b</i>	Guilty Me	Listen to World	Innocent World	Listen to Inner Self
	<i>c</i>	Self-Reproach	Ignore Inner Self	Overconfidence	Ignore the World

Case A compares an aggressor to his victim. Both undergo symmetric transformations, as the Internal (spiritual) and External (physical) worlds are comparable to the real (± 1) and imaginary ($\pm i$) axes of complex numbers. These describe all types of misery of victim and aggressor ($1c = (+1; -i)$, $2c = (-1; -i)$, $3c = (-1; +i)$, $4c = (+1; +i)$). A victim should recall that aggressor is his mirror reflection. Balancing yourself automatically balances the opponent.

Case B compares the Brutal World (Enemies, Wrong-Doers) to Gentle Me (my Friends and followers). It is nearly identical to case A. When you harshly hate or blame somebody, recall that he is your teacher, whereas those whom you admire can make you blind. What we condemn, we may become

Case C compares Guilty Me (a Kid or Student) to the Innocent World (Parent, Adult, Teacher). The World (C-3b) teaches Me (C-1b), while I teach the World. When you harshly hate or blame yourself, recall that Self-Reproach damages those whom you care about the most. The Guilty Me (C-1b) is comparable to Aggressor (A-1b), whereas the Innocent World (C-3b) equates the Victim (A-3b). The Guilty Me is opposite to the Gentle Me (B-3b), so Self-Reproach is complementary to Self-Indulging.

Interpreting Abstract Theses

Dialectic wheels help clarifying the deeper meaning of various abstract theses (that may be new to us). For instance, Figure 8(A) shows the wheel for a phrase “God Exists”. It yields typical moral maxims: “God exists, because I trust. God does not exist, because I don’t care. Friendliness of the world without my responsibility makes me fanatic.” And so on. These maxims are trickier than earlier, because the positive and negative sides of the given phrase are more difficult to determine.

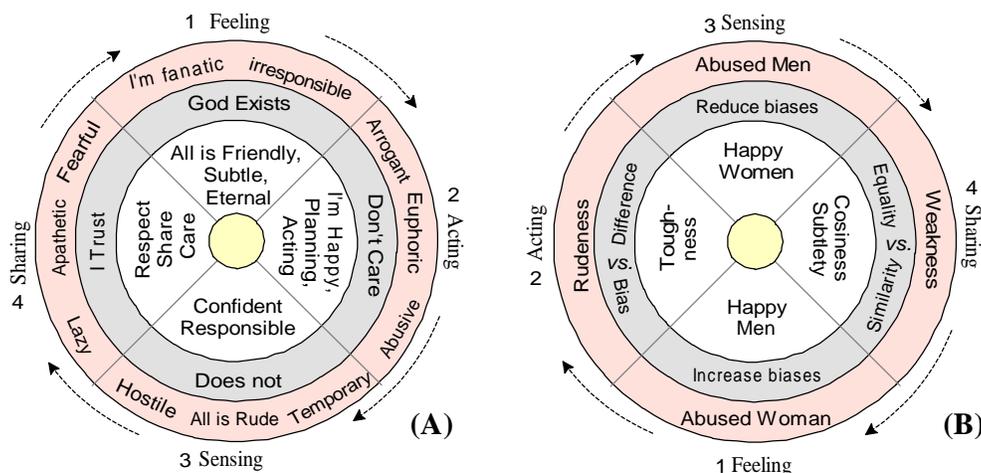


Figure 8. Analysis of phrases “God Exists” and “Feminism aims to correct biases”

God is dialectically similar to words Heart, Trust, Love, Happiness, Subtlety, Courage, *etc.* We can say that God exists in your Heart (Trust, Love, *etc.*), when you feel your Heart, through your Heart, because of Heart, *etc.* The opposite statement – “God does not exist” – is dialectically similar to Heartlessness, Hatred, Denial, Rudeness, Fear, *etc.* So, God does not exist in Hatred, when you Hate, through Hate, because of Hate.

Scheme (B) analyses phrase “Feminism aims to correct biases”. The word “correct” was replaced with “reduce” and “increase”. The consequential (orthogonal)

words question if Biases imply Natural Differences and if Equality implies Lack of Gender. Two YES-es yield Rude Woman and Weak Man. Two NO-pes yield Tough Man and Subtle Woman. The resulting wheel generates statements like these: “Tough man make woman happy. Subtle woman make man happy. Weak man abuse woman. Rude woman abuse man.”

Advancing Science

Dialectic wheels expand any given parameter into a 4-dimensional space. [Table 7](#) provides some examples. Each pair of white and red cells in a given column (Xa and Xb positions) contain thesis and antithesis, that in combination describe a certain scale. (Note that all other tables place thesis and antithesis in “diagonal” columns, Xa and $(X\pm 2)b$.)

Table 7. Dialectic Wheels as Orthogonal Scales (Xb replaced with $(X\pm 2)b$)

		1 – Feeling Possession ☹ Choleric	2 – Acting Intention ☹ Sanguinic	3 – Sensing Goal / Result ☺ Phlegmatic	4 – Sharing Reflection ☹ Melancholic
A	<i>a</i>	Given Parameter	Expandability	N Dimensions	Elasticity, Adaptabil
	<i>b</i>	Unmeasurability	Unscalability	Abstraction	Rigidity
A*	<i>a</i>	Length	<i>Same</i>	Width	<i>Same</i>
	<i>b</i>	Too small/large		Too Narrow/Wide	
B	<i>a</i>	Money	Calm	Diversity, Breath	Discipline, Agility
	<i>b</i>	Poverty	Stress	Rigidity, Fixation	Looseness
C	<i>a</i>	Cost-Effective	Naturalness	Dialectic	Efficiency, Skill
	<i>b</i>	High Expense	Artificial, Fake	Linear Thinking	Awkward
D	<i>a</i>	Feasibility	Clarity	Generality	Subtlety, Beauty
	<i>b</i>	Impossibility	Obscurity	Narrowness	Rudeness
E	<i>a</i>	Acceptance	Truthfulness	Carefulness	Subtlety, Beauty
	<i>b</i>	Denial	Deception	Negligence	Brutality
F	<i>a</i>	Pleasure	Arousal	Wisdom, Maturity	Subtlety, Gentleness
	<i>b</i>	Aversion	Apathy, Sleepin	Insanity	Rudeness, Intensity
G	<i>a</i>	Entropy	Kinetic Energy	Enthalpy	Potential Energy
	<i>b</i>	Chaos	Destroy	Rigid	Spoil
A'		Elasticity, Adapt	One Dimension	Expandability	N Dimensions
		Rigidity	Unmeasurability	Unscalability	Abstraction
B'		Disciple, Agility	Money	Calm	Diversity, Breath
		Looseness	Poverty	Stress	Rigidity, Fixation
C'		Efficiency, Skill	Cost	Naturalness	Dialectic
		Awkward	High Expense	Artificial, Fake	Linear Thinking
D'		Subtlety, Beauty	Feasibility	Clarity	Generality
		Rudeness	Impossibility	Obscurity	Narrowness
E'		Subtlety, Beauty	Acceptance	Truthfulness	Carefulness
		Brutality	Denial	Deception	Negligence
F'		Subtlety, Gentlen	Pleasure	Arousal	Wisdom, Maturity
		Rudeness, Intens	Aversion	Apathy, Sleepin	Insanity
G'		Potential Energy	Entropy	Kinetic Energy	Enthalpy
		Spoil	Chaos	Destroy	Rigid

Wheel A considers the most general scenario, when a given property (A-1a) is complimentary to many other orthogonal parameters, denoted as N-Dimensions (A-3a). For example, when measuring a length of a complex body (A*-1a), we may also consider its width, depth, shape, weigh, smell, and so on (A*-3a). This automatically yields two more parameters: Expandability or Scalability (A-2a) – how easily 1a transforms to 3a,

and Adaptability or Elasticity (A-4a) – how easily 3a gets back to 1a. Below we will clarify the particular meaning of these parameters using more specific examples.

Wheel B considers Money (B-1a), as the major parameter in business and economy. Most people expect Money to be complementary to the Diversity, Breath and Quality of Life (B-3a). The latter is maximized, when Money yield Calm and Confidence (B-2a), as opposed to Stress and Anxiety (B-2b). Quality of Life yields Money through Discipline and Agility (B-4a). Here Scalability (A-2a) represents Calm and Confidence (B-2a), Adaptability (A-4a) – Discipline and Agility (B-4a).

So, for business and economy to become ‘true sciences’ they must learn to measure Calm (“quality of emotion”), Diversity (“quality of life”) and Agility (“quality of thoughts”). May be this is why the United Nations established [Happiness Index](#), UK and Japan – [Ministry of Loneliness](#), UAE – [Ministry of Happiness](#), Bhutan – [Gross National Happiness Commission](#). All of them attempt to compensate for the missing 3 parameters

Wheel C considers Cost-effectiveness of Dialectical Thinking ([Table 2](#), cases O – weightless writing, and P – natural healing). Here Expandability (A-2a) equates to Naturalness (C-2a), Adaptability (A-4a) – to Skillfulness (C-3a). So, to be cost-effective, we must live Naturally, think Dialectically, act Skillfully.

Wheels D and E come from Concept Mapping ([see below](#)) and analysis of Truth ([see below](#)), respectively. Here Expandability (A-2a) equates to Clarity or Transparency (D-2a) and Truthfulness (E-2a), Adaptability (A-4a) – to Subtlety and Beauty (D-4a). So, to analyze productively, we must think Clearly / Truthfully, Generally / Carefully, aiming at Subtlety and Beauty.

Wheel F comes from the 2- and 3-dimensional [theories of emotions](#), suggesting that all emotions differ by Pleasantness or Valence (F-1a) and Arousal or Awokenness (F-2a). Pleasantness (F-1a) must be balanced by Wisdom or Maturity (F-3a), as excessive pleasantness indicates immaturity, whereas excessive seriousness causes aversion. Arousal (F-2a) must be balanced by Subtlety (F-4a), as excessive energy causes brutality, whereas indolent subtlety is pathetic.

Note that Arousal (F-2a) differs from Intensity (F-4b), as some emotions may be intense, but fatiguing (*e.g.*, Depression or Grievance), whereas others may be gentle, but energizing (*e.g.*, Serenity or Faith). This also marks the difference between Expandability (A-2a) and Adaptability (A-4a). Many psychologists supported such differentiation (thus suggesting 3-dimensional scales, *e.g.*, Wundt 1897, Schlosberg 1954, Osgood et al 1957, Yik et al., 1999, Schimmack 2002), but none of them consider the 4th axis – Maturity or Wisdom. So, for psychology to become a ‘true science’ it must learn to measure Wisdom

Wheel G comes from unification of Thermodynamics and Physics (see [Re-interpreting the World](#) below). Here Expandability (A-2a) equates to Kinetic Energy (G-2a), Adaptability (A-4a) – to Potential Energy (G-4a). Note a huge difference between these two energies: one can be equated to Arousal (F-2a), another to Subtlety (F-4a).

Cases A’-E’ represent all the same wheels, but with all segments shifted by one position (*i.e.*, X replaced with (X+1)). This shows that our hidden abilities look more important than what is seen “on surface”. Elasticity and Adaptability (A’-1a) appear to be more important than the measurement of a given parameter (A’-2a). Discipline and Agility (B’-1a) appears to be more important than Money (B’-2a). And so on. All of this

reminds that the process of seeking the goal is more important than the very goal, and [Elemental Similarity](#) may depend on our point of view, character and mood.

All cases define new coordinates for concept mapping that can be used for designing “periodic systems of the knowledge” (see [More Detailed Wheels](#))

Re-interpreting the World

The above mentioned [Elemental similarity](#) enables merging [Aristotelean](#) doctrine with various modern concepts, as shown in [Table 8](#). The 1st part of this table shows ancient correlations of [Classic Elements](#) that were harshly criticized by many modern thinkers (see [Classical Element Criticism](#)). But the rest of this table shows that these elements can provide a new insight in the meaning of various phenomena

Consider the 2nd part of this table (bluish background), relating the classic elements to the states of matter and the merger of classic physics and thermodynamics (blue bold letters). Classic physics explains all phenomena using just two concepts – kinetic and potential energies. Thermodynamics provides another two – entropy and enthalpy. Their combination correlates nicely with wheels D – F from [Table 5](#). For example, Entropy can be equated to Life (D-1a), Wealth (E-1a) and Flexibility (F'-1a); Enthalpy – to Wisdom (D/E-3a) and Order (F'-3a); Kinetic energy – to Creation (D/F'-2a) and Striving (E-2a); Potential energy – to Will (D-4a), Opportunity (E-4a) and Transformation (F'-4a)

Table 8. Correlations of Classic Elements

	1 – Feeling Possession	2 – Acting Intention	3 – Sensing Goal / Result	4 – Sharing Reflection
Classic elements	Fire	Air	Earth	Water
Plato’s solids				
Temperament	☹ Choleric	☺ Sanguinic	☺ Phlegmatic	☹ Melancholic
1 Elementals	Salamander, Vulcanus	Sylph, Sylvestris	Gnome, Pygmy	Undine, Nymph
Ages	Infant	Youth	Adult	Elder
Tastes	Bitter	Sweet	Salted	Acidic
Directions	South	East	North	West
Seasons	Summer	Spring	Winter	Autumn
Properties	Hot & Dry	Hot & Wet	Cold & Dry	Cold & Wet
Humor	Yellow Bile	Blood	Black Bile	Phlegm
Organs	Gallbladder	Liver	Spleen	Brain/Lungs
States of matter	Plasma	Gas	Solid	Liquid
2 Physics & Thermodyn.	Entropy	Kinetic energy	Enthalpy	Potential energy
Table 5, D	Live - Die	Create - Destroy	Wise - Dull	Will - Force
Table 5, E	Wealth - Lack	Strive - Rush	Wise - Addicted	Opportunity - Inequality
Table 5, F'	Flexible - Rigid	Create - Destroy	Order - Chaos	Transform - Spoil
Energy / Force	Radiation	Magnetism	Gravitation	Electricity
Chemical bonds	Ionic	Covalent	Metal	Van der Waals
Electron orbitals	<i>s</i>	<i>p</i>	<i>d</i>	<i>f</i>
Numbers (Table 10)	Real	Complex	Quaternion	Octonion
Lattices (Algebra and Panpsychism)	24-cell	E_8	Leech Λ_{24}	Octonion-Octonionic
3 Fibonacci seq.	Linear, n	Planetary, F_n	Galactic, F_{F_n}	Universe, $F_{F(F_n)}$
Derivatives of distance	Distance x	Speed dx/dt	Acceleration d^2x/dt^2	Jerk d^3x/dt^3
Derivatives of inertia	Inertia mx	Momentum mdx/dt	Force md^2x/dt^2	Yank md^3x/dt^3
Derivatives of moment of inertia	Moment of Inertia mx^2	Angular Momentum $mx dx/dt$	Energy or Work $mx d^2x/dt^2$	Power $mx d^3x/dt^3$
Plutchik wheel (Figure 11)	Optimism, serenity, joy, ecstasy, interest, anticipation, vigilance	Submission, acceptance, trust, admiration, apprehension, fear, terror	Disproval, pensiveness, sadness, grief, amazement, surprise, distract.	Contempt, annoyance, anger, rage, boredom, disgust, loathing
4 Big 5 Traits (Figure 12)	High Agreeab. Low Consient.	High Neurotic., High Openness, High Extravers.	Low Agreeab., High Consient.	Low Neurotic., Low Openness, Low Extravers.
MBTI	Feeling, Perceiving	Turbulence, Intuition, Etraversion	Thinking, Judging	Asserting, Sensing, Introversion
Enneagram	2. Helper 7. Enthusiast	3. Achiever 4. Romantic	8. Challenger 1. Perfectionist	9. Peacemaker 6. Loyalist 5. Investigator

One may argue that Entropy brings Death rather than Life, as for a long time it was believed that the world heads toward self-destruction. But today this thinking is reversed. Entropy is driven by the maximum “energy dissipation”, yielding ever-increasing self-organization ([England, 2020](#)). Thus, entropy means Life rather than Death. (It is also supported by the Lotka’s [maximum power principle](#), according to which evolution goes toward the maximum rate of “useful transformations” (Odum, 1995))

One may further argue that Transformation (F’-4a) is closer to the Kinetic energy than Potential. Yet both act in concert. Potential energy is the “inner reason”, Kinetic – the “outer outcome”. Both are inseparable from thermo-dynamic fluctuations, as any equilibrium represents the steady-state kinetic process, whereas any kinetics is driven by the difference between [Gibbs free energies](#). So, any system forms a closed loop of Circular Causation (similar to the one described by [Harvey 2019](#), see [pdf](#)). It may look “dead” from the outside, yet has self-regulating capability, so is “alive” from the inside.

The 3rd and 4th parts of Table 8 extend these correlations to other fields of modern science. The “normal science” disregards such views, as it follows the linear (rather than the dialectic) thinking. Eventually this rejection yields the “overbearing materialism” (see [The Science Delusion](#)). As [Thomas Kuhn](#) has put it, “normal science does not aim at novelty but at clearing up the status quo. It tends to discover what it expects to discover”.

(Table 5 suggests that Science means creating, verifying and questioning hypotheses (case N). It is dialectically similar to cases I – M, suggesting complementarity with Originality and Objectivity, Beauty and Truth, Creation and Solution, Learning and Fulfillment, Simplifying and Explaining. See also [What is Truth](#)))

Future Directions: What is Dialectic?

Table 2 (P) reveals: “Dialectic is an Easy Natural Solution. Unnatural solution is toxic (yields problem).” And so on. The emphasis is on the word “Natural”. Table 5 (F) provides: “Natural means Growing, Learning, Optimal, Balanced, Flowing”. All of these mean Life. Table 5 (D) reveals: “Life is Creation, Wisdom, Will”. All of this points to our inner selves. Using dialectic similarity, we can say: “Dialectic is deeper me. The outer is a mirror of the inner”. Experiencing our deeper selves is the future

Process Automation

To automate the process, a special kind semantic network should be designed. Every word or thesis should be linked to antitheses (antonyms or under-developed forms), negative sides (over-developed forms of positive theses), complementary theses, positive sides (complementary to positive sides of antitheses), causal precursors and consequences.

One could start with simple [Thesauruses](#) (see available [APIs](#)) that provide the most basic interlinking. Other dialectical and causal relations can be gathered from [compilations](#) of wise sayings, quotes and proverbs (see [Using Existing Wisdom](#)), specific “knowledge graphs” (like [Concept Net](#), [Wiki How](#), and more specific, like [Atlas of Feelings](#) and [Emotion Maps](#)). Associative links— from [Word Associations](#).

[Word Hippo](#) provides perhaps the largest numbers of synonyms and antonyms. Figure 9 shows its usefulness. Word Hippo relates Bravery to all character strengths that were suggested by Rian Niemietz (2018) (Honesty, Creativity, Perspective). In addition, it links Bravery to several other character strengths that were not suggested by Niemietz, but logically should be (Hope, Curiosity, Zest, Love).

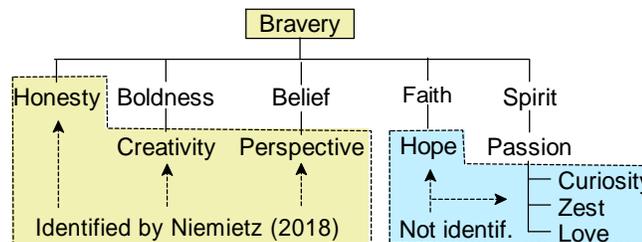


Figure 9. Word Hippo links Bravery to other character strengths

When constructing new wheels, similar words should be placed in the same cell (sometimes in adjacent cells, if the wheel has more than 4 segments). Opposite words should be placed in the opposite segments and layers (one closer to the center, another further away). Words that are neither similar nor opposite can be placed in the orthogonal segments.

Higher reliability can be achieved using words’ “under-developed” and “over-developed” forms. The Under-development of Xa represents its opposition or antonym ($(X+2)b$, typically available in Thesauruses). The Over-development of Xa represents its “negative side” or “harsh extremity” (Xb , typically not available in Thesauruses). Table 9 provides examples

Table 9. Under- and Over-developments

	(1a) Love	(3a) Wisdom	(2a) Devotion	(4a) Peace
Over-developed	(1b) Fixation Promiscuity Insanity	(3b) Self-right Dogmatism Overthinking	(2b) Attachment Dependence Fighting	(4b) Indifferent Inaction Reluctance
Under-developed	(3b) Resentment, Hate, Fear	(1b) Ignorance Reluctance Insanity	(4b) Indifference Carelessness Egoism	(2b) War, Hostility, Fighting Abuse

Two words are similar (*i.e.*, may belong to the same Xa), if their over / under forms are also similar. (The latter should be determined by the number of synonymity / antonymity steps in semantic graph(s).) Two words are complimentary (may belong to Xa and $(X\pm 2)a$), if under-development of one is over-development of another, and *vice versa*. Two words are neutral or dissimilar (may belong to Xa and $(X\pm 1)a$), if at least one of their over- / under- forms do not correlate with any such forms of another word.

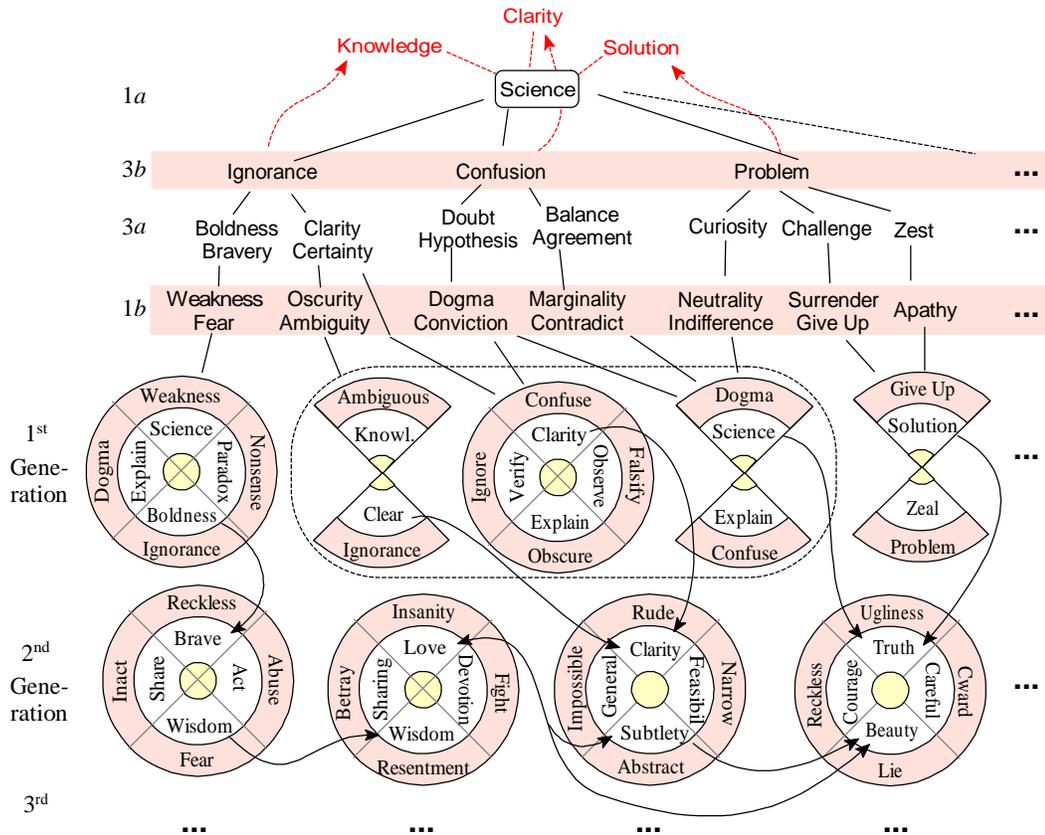
Although over-developed forms are not generally available in Thesauruses, they are synonymous to under-developed forms of complimentary words $(X+2)a$. Knowing this relation for just one word provides hints for many other words. Niemiets provided over-developed forms for 24 character strengths.

Both under- and over-developments can have multiple levels, *e.g.*, Love – Passion – Attachment – Control – Jealousy – Obsession – Insanity. Many of such chains can be

found in [Roget's Thesaurus](#), [Roget.org](#), [Semantic Differentials](#), [Emotion Maps](#) and [Atlas of Feelings](#). They are useful for generating more detailed maps.

Ontological Explosion

Every word can generate many different wheels, due to the multiplicity of its synonyms and antonyms, near-synonyms and antonyms, dialectically similar and complimentary words (see [Dialectical Similarity](#) and [Expanding Wisdom](#)). For example, consider the word Science:



Each row may double or triple the number of possible wheels. Shown are only the most meaningful variants. The 1st generation of the wheels can be clustered into just 2 or 3 groups, but the 2nd generation (arising from dialectic similarity) yields too high ontological diversity. It relates Science to Courage, Wisdom, Love, Beauty, *etc.*, all of

which may be too explosive for a “linear mind”. One may plot them in 4-D coordinates, as suggested in [Advancing Science](#) and [Concept Mapping](#)

Using Existing Wisdom

The ”ontological explosion” may be contained through the [existing wise sayings](#), many of which suggest new dialectic wheels. For example, the quote of Marcus Aurelius "The Happiness of your life depends on the quality of your thoughts" suggests complementarity between Happiness and Quality of Thoughts. This yields the beginning of a new wheel:

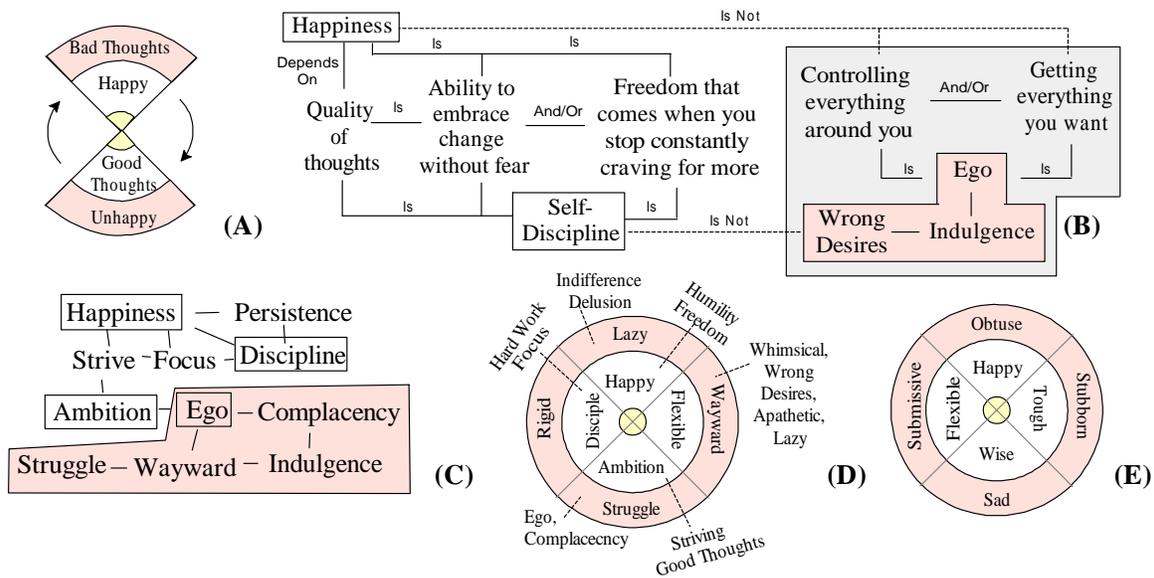


Figure X. Dialectic wheels from wise sayings

Scheme B attempts uniting the abovementioned quote of Mark Aurelius with the quote of Yung Pueblo: “Happiness is not getting every thing you want or controlling the things around you. Happiness is the freedom that comes when you stop constantly

craving for more and when you can embrace change without fear”. It concludes that Happiness is Self-Discipline, but not Ego.

Scheme C augments the latter keywords using some additional wise sayings (that are not shown). It suggests that both Happiness and Discipline depend on Ambition, which is easy to confuse with Ego, yet the latter breaks the discipline (through indulging and wrong desires). All of these words yield a new wheel (D) with multiple [dialectically similar](#) words.

Comparing wheel D to E (that was obtained by standard procedure, see [Table 5](#), cases G and G’), we can notice interesting equivalences: Obtuseness ~ Laziness ~ Delusion ~ Bad Thoughts; Wisdom ~ Ambition ~ Good Thoughts; Toughness ~ Discipline ~ Hard Working.

Also note that the wheels D and E are mirror reflections of each other, *i.e.*, they follow opposite circular causations. The actual direction either depends on very delicate details (*e.g.*, logics *vs.* intuition) or is not important at all (in this particular case).

Similar analysis for the word Love (from [Figure 1](#)) yields the following equivalences: Devotion (2a) – being Alive, Brave, Striving, Acting, Happy; Wisdom (3a) – Reason, Recognition (of yourself in another), Courage; Insanity (1b) – Madness, Narcissism. For example, the quote "We are most alive when we are in love" replaces Dedication (2a) with Most Alive. The quote "There is always some madness in love. But there is also always some reason in madness” replaces Insanity (1b) with Madness, Wisdom (3a) with Reason.

More Detailed Wheels

Any wheel can be expanded, by adding intermediate segments and layers, as shown in Figure 10.

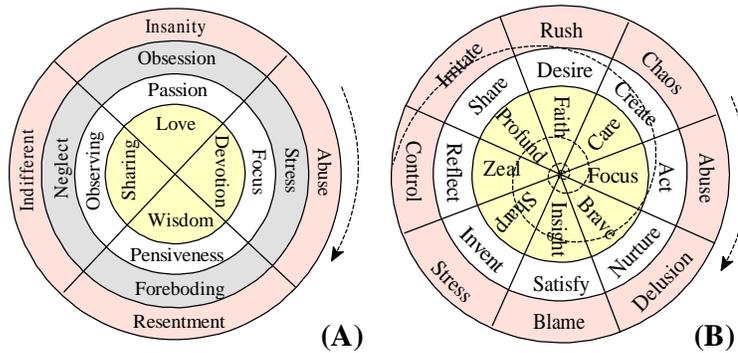


Figure 10. Expanded wheels for “Love” and “Desire”

This could be done automatically, if we had good enough semantic / causality graphs with “subtlety” parameters (“under- and over- development” levels from [Semantic Differentials](#)). The simplest maps are 4 x 2, since involve 4 segments with 2 layers. Figure 10 gives 4 x 4 and 8 x 3, whereas Figure 11 gives another version of 8 x 3 (“[inverted Plutchik’s Wheel](#)”) and its expansion to 16 x 4. The [Atlas of Feelings](#) further expands it to 24 x 10. Even more complex constructs can be gathered from Alan Cowen’s [Emotion Maps](#).

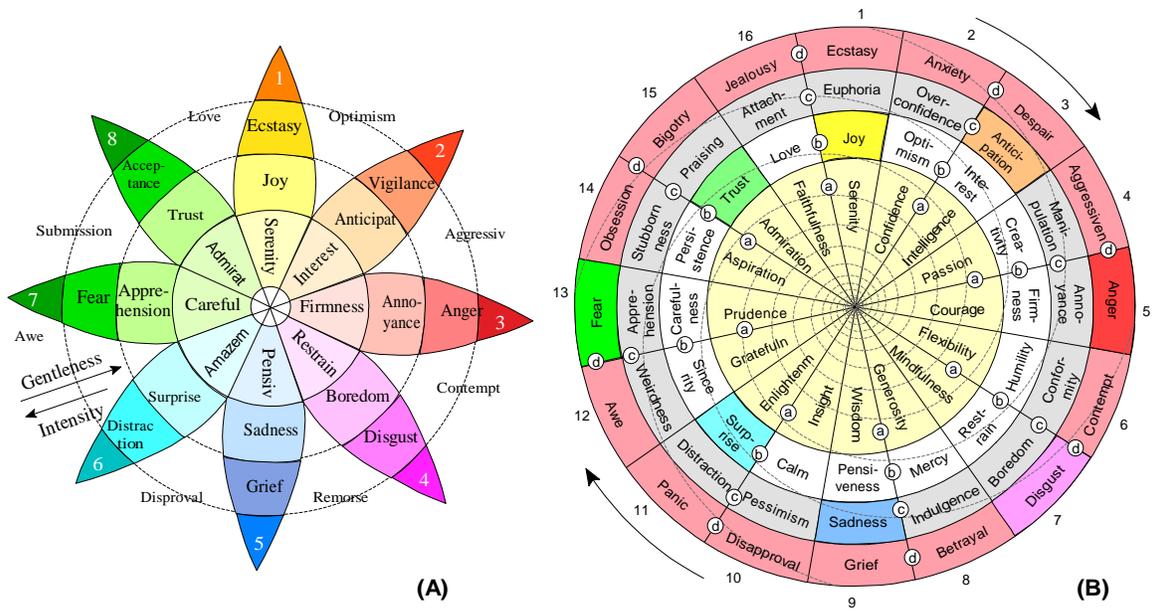


Figure 11. Inverted Plutchik wheel (A) and its expansion (B)

The more detailed wheels generate respectively more specific maxims from [Table 3](#). For example, the (16 x 4) wheel from Figure 11(B) uses all the same rules with the following corrections: $(X+n) \pmod{4} = (X+4n) \pmod{16}$, $a = (a, b)$, $b = (c, d)$. For example, “Serenity (1a) without Pensiveness (8b) yields Euphoria (1c)”. In addition, Xa, b converts $(X+8)c$ to $(X+8)b$. “Joy (1b) converts Sadness (8c) to Pensiveness (8b)”. Xa, b with $(X+4)a, b$ and $X(+12)a, b$ convert $(X+8)y$ to $(X+8)b$. “Joy (1) with Firmness (5b) and Carefulness (9b) convert Grief (8d) to Pensiveness (8b)”. All of these can provide more accurate criteria if we are telling the truth, automatically enriching our semantic / causality graph. Ultimately, they can be viewed as the “periodic systems of the knowledge” (similar to Mendeleev’s periodic system of elements)

It yields the following maxims: “Caring without Toughness yields Permissiveness. Toughness without Caring yields Bossiness.”. And so on. So, a given character trait can be improved by improving its opposition: warriors must practice creative arts, whereas artists must practice warriorship (see [Table 6](#), B or C)

On the other hand, character traits change in the opposite direction from classic elements. Caring comes from Inspiration rather than Profundity, although Feeling (analog of Caring) comes from Reflection (analog of Profundity) rather than Action (analog of Inspiration). Logics follows the outer (elemental) circle, intuition – the inner (trait) circle, suggesting dependence on the character of human being (*e.g.*, infant *vs.* mature, male *vs.* female, left brain *vs.* right brain).

Also note that all “elemental” names (Feeling, Acting, Sensing, Reflecting) no longer coincide with their character counterparts (Choleric, Sanguinic, Flegmatic and Melancholic), but are shifted by a small “phase”. This may provide new insights for the better “[periodic system of psychology](#)”

What is Truth?

„A great truth is a truth whose opposite is also a truth“ (Thomas Mann). *“The opposite of a fact is falsehood, but the opposite of one profound truth may very well be another profound truth”* (Niels Bohr).

Often we assume that “Truth is something undeniable”. Yet, everything is changing, so “today’s Truth may become tomorrow’s Lie”. On the other hand, there are unchangeable Truths that pass the [5th element](#) test. Figure 13 suggests that it involves a

process of perception: Objectivity without Uniqueness (Originality, Novelty, Liveliness) becomes just a Stereotype or Dogma, whereas Truth without Mildness (Desirability, Acceptance) becomes just Cynicism, Bitterness or Horror.

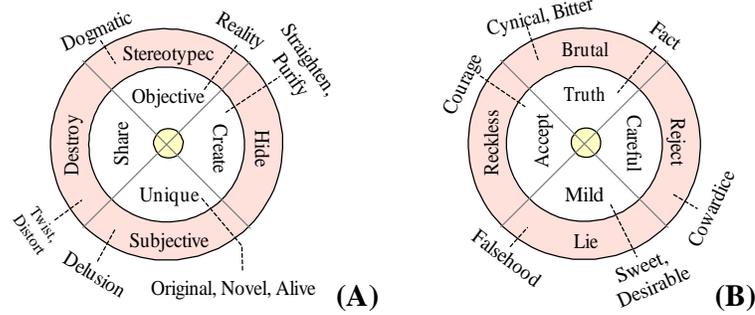


Figure 13. Objectivity and Truth imply the process of perception

Therefore, the “ordinary” Truth differs from the “absolute” that lays in the central “yellow spot” of the wheel. We approach the “absolute” by increasing the subtlety of our views, but we can never reach the “final Truth”, as there is no limit to the subtlety and dimensionality of our views. (Therefore, today’s truth may become tomorrow’s lies, as anything from far apart looks differently than from close proximity.)

From dialectic standpoint, Truth is synthesis of thesis and antithesis – our inner-selves and the outer world. When we unite with something opposite to us, then we experience the Beauty: “Beauty is Truth, Truth Beauty – that is all Ye know on earth, and all Ye need to know” (Jon Keats , see [Ode on a Grecian Urn](#)).

From physical standpoint, Truth is “resonant synchronization” of independent waves or bodies that explains all types of attraction and amplification: wave interferences, holograms, strong (nuclear) and weak (van der Waals) interactions, gravitation, electro-magnetism, all types of induction, cohesive and capillary forces, and

so on. (It can be further extended to psychology, to explain all kinds of “laws of attraction”, such as “dream attracting fulfillment”, “money attracting money”, “fear attracting danger”, “victim attracting predator”, *etc.*)

Mathematically, Truth can be expressed as $1 + 1 > 2$, *i.e.*, “the whole exceeds the sum of its parts” (a saying widely assigned to Aristotle). It differs from $1 + 1 = 2$ due to the “dynamic interaction” of the added parts, as shown in Figure 14.

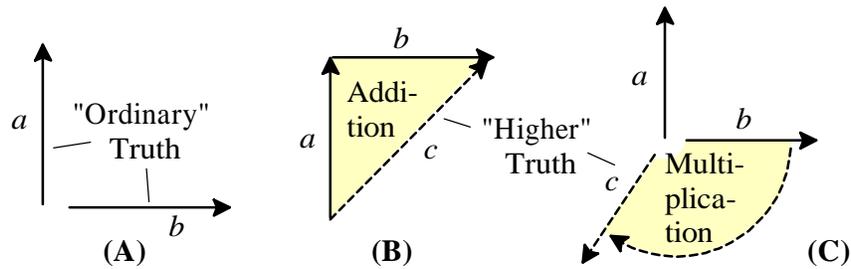


Figure 14. Vector addition and multiplication create new elements (3rd vector and triangular or circular space), while preserving the original vectors.

Two independent vectors (a and b) create new elements – vector (c) and yellow (triangular or circular) space – through addition and rotation (vector multiplication or cross-product). Scheme A shows the “ordinary” Truth, when parent vectors do not interact ($1 + 1 = 2$), schemes B and C – the “greater” truth, when parent vectors create something new (yellow contours, thus $1 + 1 > 2$). This doesn’t break the energy conservation law, as the difference $\delta = (1+1) - 2$ may come from “inside” of parent vectors. But it breaks the arithmetic laws, potentially “hurting the linear thinking” to even greater extend. (Recall Einstein’s quote: “As far as the laws of mathematics refer to reality, they are not certain; and as far as they are certain, they do not refer to reality” ([Geometry and Experience, 1921](#)).)

What's the 5th Element?

The 5th element is “what sticks together and holds forever” – a self-regulating capability of the 4 elements, yielding the “higher consciousness”, so that “the whole is greater than the sum of parts”. It can be related to [Synchronicity](#) of Jung and Pauli, as a “meaningful connection between phenomena beyond causal relations”. More specifically, it relates to Circular Causation ([Harvey 2019](#), see [pdf](#)) and Synchronization (see [Kuramoto oscillators](#), also [Strogatz, 2003](#); [O’Keeffe et al, 2017](#)). [Townsend et al \(2020\)](#) showed that oscillators synchronize, if every oscillator is coupled to 75% of the remaining oscillators. This means that 4 elements must be related to each other not just circularly (like in Figures [1-4](#)), but also diagonally (as shown in [Table 10](#) under $N = 4$).

Table 10. Couplings, thinking, symbolism, and algebra

$N^a)$	1	2	3	4	8
Graph					
Thinking	Linear, Absolutism Relativism	3 rd element, Comple- mentarity	Spatial, non-iso- morphic	5 th element, Self-Regu- lation	9 th element, New Life
Symbol					
Algebra	Real numbers	Complex numbers	Eucli- dean	Quaternions	Octonions
Lattice			Cuboctah 	24-cell  animation	E₈ lattice  animation
K_N	2 Binary	6 Colors, days	12 Dozen	24 Hours	240 Energies?

^{a)} N – number of coupled elements, equivalent to mathematical dimensions

Diagonal relations (in combination with circular) yield more efficient communication than just “linear / flat thinking”. The latter can even destroy the 5th element, as thinking about each element in separation reduces overall coupling. This is

why the party ends, when we switch to the “formal logics”. Questions like “why are we happy?” can make us unhappy. Centipede could not walk, if it had to think about each leg in separation.

All of this explains the essence of the “5th element test” – the very Heart of our method. If the 5th element forms easily (is stable), then the wheel is “true” and our judgements are correct. Otherwise the wheel is “false” and we are wrong. (As Don Juan once said, “both paths lead nowhere; but one has a heart, the other doesn't” (Kastaneda)).

(Understanding this separates [Taoism](#), [Aristotelianism](#) and [Shamanism](#) from western (academic) philosophies. Most academics understand the concept of “struggling oppositions”, but not so many why and how they unify. As discussed above, unification only happens through the most subtle forms (“positive sides”) of oppositions, that manifest themselves through the cyclic transformations ([Fig. 4](#)). Cyclic movement creates centripetal and centrifugal forces that separate “good” from “bad”. The question comes to the direction (“naturalness”) and speed (“energy”), that in combination yield diagonal couplings.)

Other Perpetual Self-Organizations

Although formally any number of elements can form a synchronized circular causation, yet only few such constructs are perpetually stable (under the low enough N , see [Table 10](#)). The reason lays in algebraic symmetries that preserve the “usual mathematical reality” only under $N = 1, 2, 4,$ and 8 (see [Hurwitz theorem](#) in composition algebras and its [proof by representation theory](#)).

The exceptionality of these numbers is related to the beauty of the 4- and 8-dimensional cells (24-cell and E_8) that have no analogs in say 5- or 9-dimensional spaces. It also explains impossibility to describe the movement of stars in Euclidean space (see [History of non-Euclidean geometries](#)) and rotate ordinary objects in just 3 dimensions (see [History of Quaternions](#) and [Gimbal Lock](#)). The very fact that we rotate 3-dimensional objects means that we operate in at least 4 dimensions, the 4-th and higher dimension(s) being hidden in our own perception. This may also mean that the curvature of space originates from the higher dimensionality of consciousness rather than “gravitating mass” of cosmic bodies.

Returning to [Table 10](#), it starts with $N = 1$ which represents the simplest type of self-regulation. Dialectically, “Something” is inseparable from “Nothing”, as having just one element yields binary thinking (0 – element is absent, 1 – element is present). So, $1 = 2!$ This is simultaneously both [relativism](#), and [absolutism](#), reminding of the Leibniz’s [Monadology](#): all is made of independent objects (monads), thus is heterogeneous, but all monads are interlinked through their “sacred hearts”, thus all is homogeneous. It also raises the “linear thinking”, when we focus on just one element (or “fact”), laying down all the possibilities on a single axis. Moving forward is ok (“true”), backwards – not ok (“false”).

$N = 2$ yield the 3rd element, because rotation of one vector around another yields the 3rd (see [Fig. 14](#)). In physics this means adoption of the [hidden variable theory](#), insisting that particles can be entangled and interact through space, just like humans. This is why coupled oscillators synchronize; complementary collaboration exists; two friends make a couple; positive sides of thesis and antithesis “stick” together; mom and dad

produce a baby. (On the other hand, the product of two vectors can also be viewed as a [bivector](#) plane, relating to all kinds of “manipulative thinking”).

($N = 3$ does not yield the 4th element, as Euclidean vectors are not isomorphic to complex numbers. That’s why Hamilton has spent 20 years trying to rotate 3-dimensional objects, unsuccessfully, until realizing that this can only be done in 4 dimensions – see [History of Quaternions](#).)

4 and 8 elements yield the 5th and 9th elements, since they correspond to highly symmetric algebraic constructs, the 4-dimensional [24-cell](#) and 8-dimensional [E₈ lattice](#). These represent exceptional algebras that can be related to anything from elementary particles to the structure of Universe – Google [quaternions and particle physics](#), quaternions and 3-D chirality ([Capozziello, Lattanzi \(2005\)](#)), [octonion theories of everything](#) ([Lisi and Weatherall, 2010](#); also [Furey, 2016](#) and [Peculiar Math of Furey](#); also [Weinstein, 2020](#); Wolfram, 2020; Caballero, 2020).

Most importantly, these constructs explain the irreversibility of subtle transformations in Figures 1 – 4 (one-way arrows between “good” words, as opposed to two-way arrows between “bad”). Quite simply, rotations of quaternions and octonions are not commutative, *i.e.* different sequences yield different results ($A \times B \neq B \times A$). This is why we cannot reverse the subtle sides of dialectic wheels, which in essence means irreversibility of the Arrow of Time.

Self-Organizational Hierarchy

Surely self-organization of the world does not end with $N = 8$. One can further predict the 25th element (from the [Leech Lattice](#)), 241th or 249th ([octonion-octonions](#)) and so on (see [Algebra and Panpsychism](#) and [Deities as algebraic dimensions](#), the general formula being double-exponent, close to $\sim 2^{F^n}$). All of these are higher consciousnesses that modulate each other in reciprocal way. (They can be related to [morphogenetic fields](#).) We can sense them through our Hearts and Feelings (perhaps on many different organ levels), which shapes our perceptions and beliefs at the lower-order level ($N < 4$)

Concept Mapping

[Perlovsky, 2008](#) suggested that our cognition works simultaneously on many abstraction levels, guided (among other factors) by the sense of beauty (“aesthetic emotion”). This, in combination with previous considerations, suggests plotting all concepts on 4 different scales: Subtlety, Feasibility, Clarity and Generality (see Figure 15(A)).

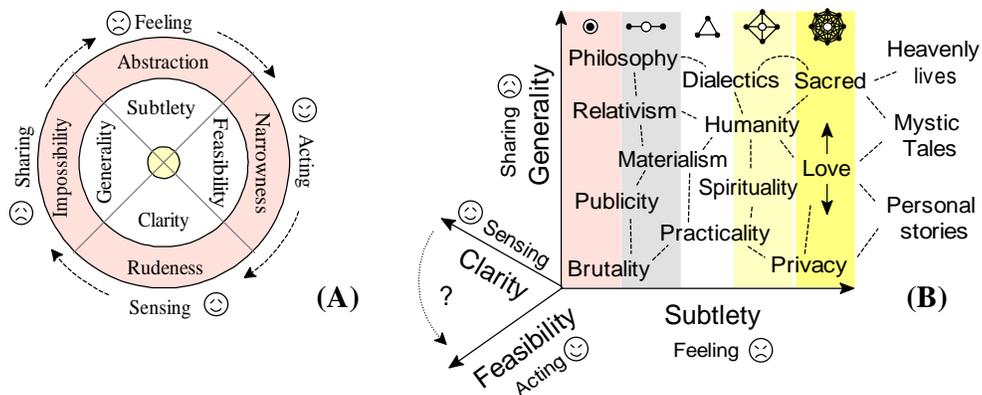


Figure 15. Multidimensional concept mapping

These scales can be regarded as extensions of the “elemental similarity” in [Table 5](#) (e.g., Subtlety ~ Feeling ~ Love (A-1a), Feasibility ~ Acting ~ Devotion (A-2a), *etc.*). At the same time they provide a “more tangible” basis for concept classification, as Subtlety is actually the “moral polarity” (distance to the center of a wheel), Feasibility – public sentiment, *etc.*

(Compare to the independent factor analysis results: [Evaluation – Potency – Activity](#), and [Typicality – Reality – Complexity – Organisation – Stimulation](#). Every such parameter can be equated to one or more of our parameters, e.g., Evaluation ~ Subtlety, Potency ~ Clarity and Generality, *etc.*)

Plot (B) shows a 2-dimensional version, assuming that Subtlety and Generality are also correlated with Clarity and Feasibility. All 4 parameters must be used, but our “flat thinking” creates an impression of “intercorrelations”, so we merge them into just 2 or 3 parameters. (Consider [valence vs. arousal](#) in psychology, [speed vs. power](#) in kinematics, [Evaluation – Potency – Activity](#) in semantics)

While the simplest concepts can be easily defined by single words, the most subtle (or abstract) concepts require complex descriptions with reference to entire books or movies. So we can map all our knowledge without reducing its sophistication (helping us to “resonate” with our inner selves and the entire world, as we are driven by the proper concepts)

If a given concept combines positive sides of all axes (subtlety, feasibility, clarity, generality), then it becomes the “driving force” of entire humanity. But if at least one factor is lacking, then it only appeals to quite narrow segment. For example, a non-

feasible concept can only appeal to extreme idealists and philosophers, a non-subtle – to robbers (“predatorial thinkers”) and investigators. And so on.

The most subtle concepts always come from the deepest emotional experiences – Love, Happiness, Devotion, *etc.* Their clarity, generality and feasibility can only be warranted by family values, cultural traditions, and natural sustainability. Systemization and cultivation of such practices should become the highest priority of humanity.

Practical Mapping

The idea is to help understanding who we are (*e.g.*, using patterns like in Figures [1](#), [3](#), [11](#) or [12](#)), and allow visualization of what we know (*e.g.*, using flowcharts like in Fig. [6](#) and [15](#)). For this we need to develop the "global semantic causality map" (see [Process Automation](#)), with hierarchical concept mapping in multiple dimensions ([Fig. 15](#)). Any concept should have many “flavors”, as our perceptions depend on our views, character, mood, age, gender and other conditions. One should be able to correlate and cluster concepts using all kinds of similarities (semantic, dialectic, elemental, *etc.*), insert (annotate, rate) new links, trace new dialectic loops and dependences. A convenient functionality should allow a breath-taking investigation and visualization of our internal views and beliefs, which on its own could become a kind of “healing therapy”. Such visualizations could help matching people, opinions, businesses, theories, and solutions (see [global wisdom network](#)). Wikipedia could become the “Multi-pedia”, where competing views could complement each other, rather than compete (*e.g.*, see [Rupert Sheldrake Wikipedia Under Threat](#)). Inevitably this would bring realization that all views are complimentary and are meant to increase each others’ sophistication.

Older Considerations

Causality. Figure 1 shows two paths from “problematic” present (1) to the desired future (2). Scheme (A) refers to the single-step case, based on will and skill. Scheme (B) shows a multi-step process, based on thinking and planning. Here the starting and ending points have independent, yet interrelated causes and effects. It yields either circular causation or spiral evolution, depending on whether we achieve the prospected goal and where it further leads.

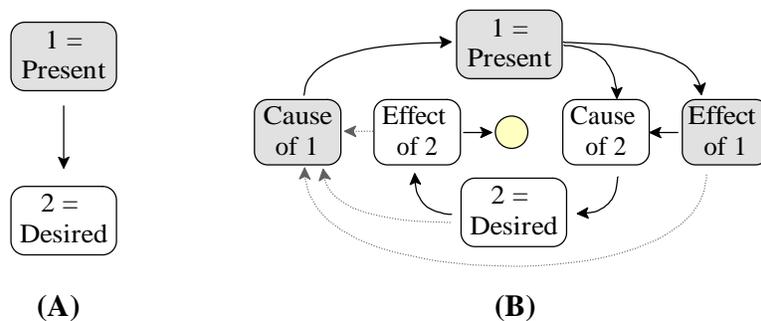


Figure 1. Two ways from present (1) to the desired future (2)

Ontological Constraints. Earlier I suggested that the arrow of time forces us to strive for increasing subtlety and dimensionality of existence ([Plutchik and The Unity](#)). In terms of scheme (B), it means that the desired goal cannot be of a lesser subtlety / dimensionality than the starting point. It must stay in a semantic space between two types of ontological extremities of the starting situation.

For example, to Satisfy the Desire, one must stay away from rashness, satiation and addiction. Rashness represents the “over-developed” (radically marginalized) Desire

and “under-developed” (opposite of) Satisfaction. Satiation and Addiction represent the “over-developed” Satisfaction and “under-developed” Desire. To make a Prudent Decision, one must stay away from fearfulness and foolhardiness. Fearfulness corresponds to the “over-developed” Prudence and “under-developed” Decisiveness. Foolhardiness corresponds to the “under-developed” Prudence and “over-developed” Decisiveness. And so on.

Similar constraints apply to all types of causes and effects in Figure 1(B). Assuming that Effect of (1) coincides with Cause of (2), and Effect of (2) coincides with Cause of (1), we obtain the “dialectical wheels” in Figure 2.

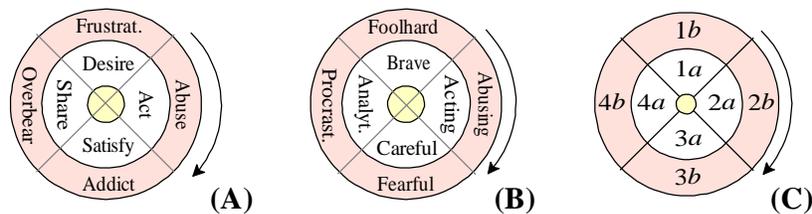


Figure 2. Examples of the simplest dialectical wheels

Here balanced (“multidimensional”) situations occur closer to the center, unbalanced – closer to the edge. Approaching the center of the wheel is equivalent to reaching the goal, which is always more subtle than we can verbally define. Approaching the edge(s) (away from the center) means falling to extremities, thus missing the goal.

Schemes (A-B) refer to abovementioned tasks of Satisfying the Desire and Deciding with Prudence. Clockwise movement brings us closer to the center, where Desire combines with Satisfaction, and Prudence with Toughness. Counter-clockwise movement pulls us to the edges, where one element is lost.

Scheme (C) binds this to Table 1, showing logical relations between various cells. Every cell is directly related to nearly all other cells, suggesting that the obtained wheels can be highly consistent and trustworthy, provided that all of the listed requirements can be satisfied.

Constructing Dialectic Wheels

Dialectic wheels can be constructed in many ways and for different purposes. All start with finding the “major opposition”, but differ in how to generalize the alternative wheels

Figure 3 shows many alternative oppositions to the word Desire. Each can potentially lead to a new dialectic wheel, but all wheels can be grouped to just 1 or 2 major clusters. The one with direct natural opposition (**Satisfaction**) is clearly preferable.

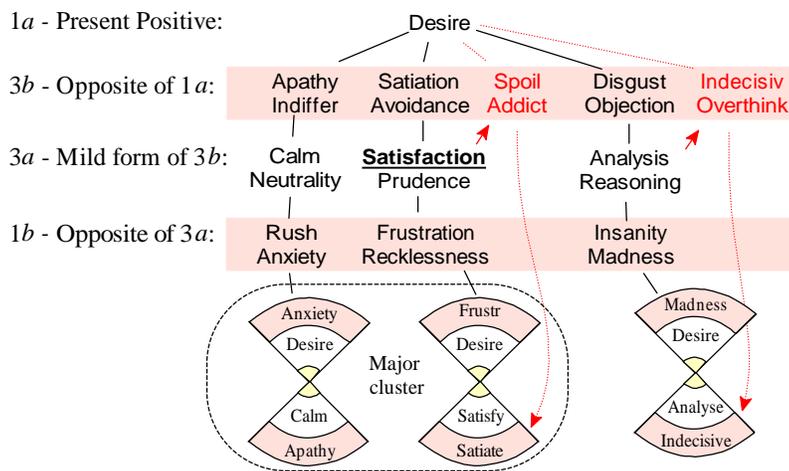


Figure Old-3. Starting the wheel construction

Figure 4(A) shows this as the step “1. Balance”. Other steps determine under- and over-developed forms of Desire and Satisfaction. Each word has to satisfy two independent conditions.

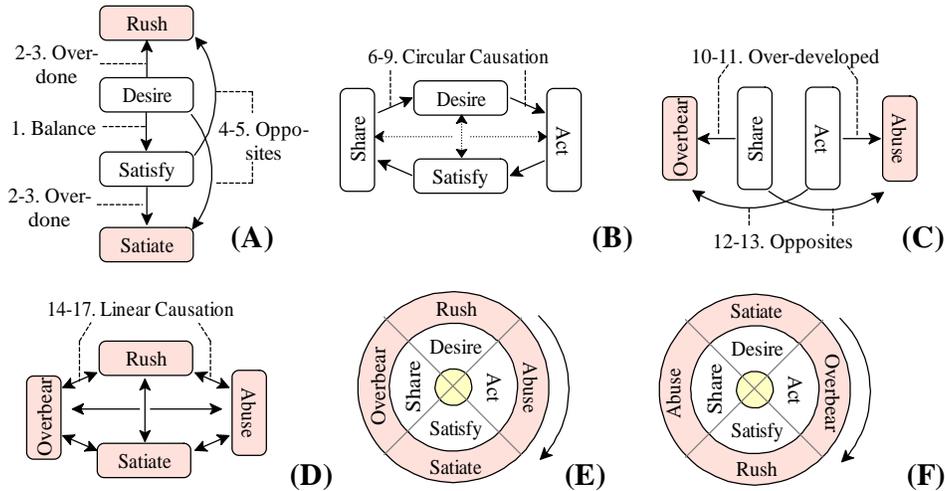


Figure 4. Starting with the “natural balance”

Circular Causation. Scheme (B) implies finding causes and effects of the two positive cells from previous scheme. This yields a directed causality loop:

$$\text{Desire} \rightarrow \text{Act} \rightarrow \text{Satisfy} \rightarrow \text{Share} \rightarrow$$

The word “Act” could be replaced with Observe, Think, Plan, Formalize, etc. The word “Share” – with Reflect, Contemplate, Verify, etc. The obtained causation sequence is direction-specific, as positive results are sensitive to the sequence of events. For example, Desire yields Action, but not Sharing. Insisting on Sharing will cause Overbearing. Action yields Satisfaction, but not Desire. Insisting on Desire will cause Rashness. And so on.

Stable results are achieved through many iterations, creating an impression of reversed causality. Eventually all 4 cells unite into one, causing appearance of diagonal

cross-linking: Desire ↔ Satisfy, and Act ↔ Share. This yields a self-regulating synchronization that behaves like a living organism (Petrauskas 2021).

Negative Effects. Scheme (C) establishes the missing negative counterparts. As earlier, each counterpart must satisfy two independent conditions, and be further related by intermediate states, as shown in scheme (D):

Rush ↔ Abuse ↔ Satiating ↔ Overbear ↔

It is akin a linear causation, as the loop does not become self-regulating. All causality steps are reversible, so diagonal cells are interchangeable: Rush ↔ Satiating, and Abuse ↔ Overbear. Rushing and Overbearing cause respectively Satiating and Abusing, and *vice versa*.

Two Alternatives. The diagonal interchange of negative effects yields two different wheels, as shown in schemes (E) and (F). Both are equivalent, differing only in negative effect arrangement. Sometimes one or another feels more intuitive, but we will stick with (E).

Starting with 1b. Consider an “ordinary” person who does not express any desire(s). The opposite of the “ordinary” is “special”. Naturally, everyone desires to be special. The over-developed form of “special” is spoiled, arrogant, ignorant, superior, pompous, egoistic, etc. The opposite of the latter is humble, careful, gentle, touching, etc. This yields the sequence in Figure 5(A), which differs from Figure 4(A). The obtained wheel in Figure 5(B) suggests that we must learn to be Deep (wise, profound, relevant, important), Humble (gentle, attentive), and Loyal (dedicated, focused), As earlier, changing this order will pull us to the edge: Mediocre ↔ Fanatic ↔ Arrogant ↔ Fuzzy.

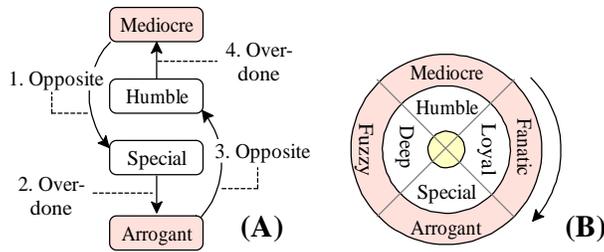


Figure 5. Starting with 1b

Clarifying the Meaning. If the most natural opposition is not clear, then we must analyze many alternatives. Figure 3 provided such analysis for the word “Desire”, Figure 6 – for the word “Science”.

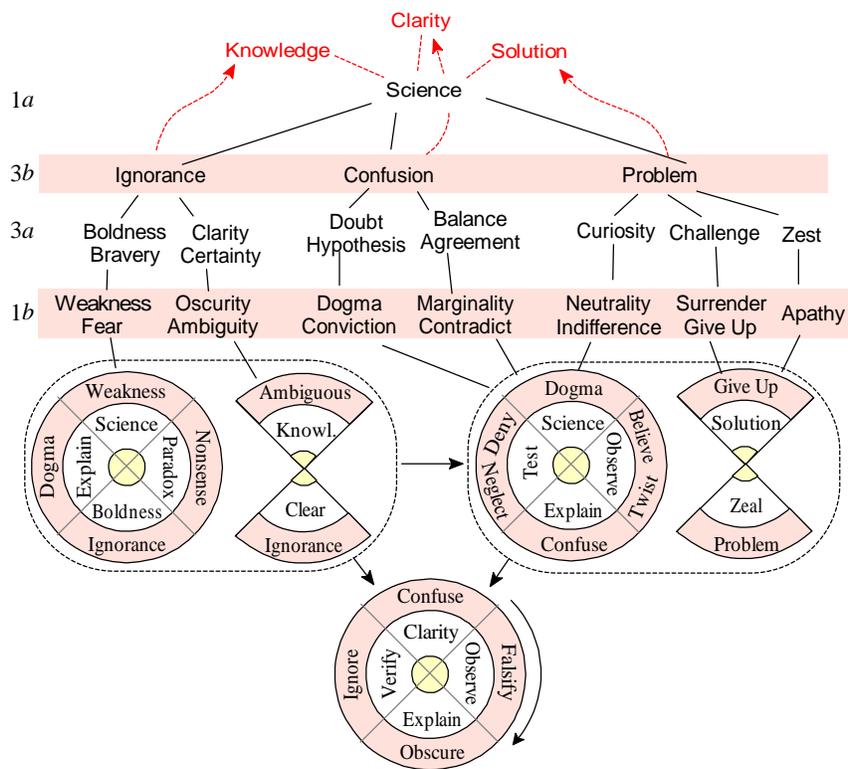


Figure 6. Clarifying the meanings of Science

All oppositions (3b) can be clustered to just 3 groups (Ignorance, Confusion, Problem) that provide 3 branching paths. They also return 3 alternatives for the word “Science” (Knowledge, Clarity, Solution) that can be used interchangeably in the resulting wheels.

Shown are just 2 small clusters of the wheels, both of which can be further united into one. The 1st cluster can be viewed as a partial subset of the 2nd, as for example, Paradox (2a in the 1st wheel) can be viewed as a subset of Observation (2a in the 3rd wheel), and Boldness (3a in the 1st wheel) – as prerequisite of the proper Explanation (3a in the 3rd wheel).

The bottom wheel generalizes everything in the simplest words, and its white cells most easily merge into “higher consciousness”. Clarity (1a) diagonally relates to Explanation (3a), and Observation (2a) to Verification (4a), yielding self-regulating synchronization (as described by [Townsend et al, 2020](#)). Other wheels employ more specific meanings that are more difficult to merge. They may better describe the current sentiment, but not the future evolution.

Versatility and Commonality

The proposed method is universal, since everything is relativistic, *i.e.* has ontological oppositions, yet all wheels can be clustered into a logical tree with just one common root. This root can be equated to the golden rule of morality: Treat others as you want to be treated. In other words, everything is alive and adaptable, and possesses mind and feelings.

, so that all wheels that we can think of can be generalized to just one Moral Wisdom rule

(For now simply note that the most general wheel of Figure 6 is subset of scheme E in Figure 4, as Clarity can be subset of Desire, Observation – of Action, Explanation – Satisfaction, Verification – Contemplation)

Table 3 provides examples from different areas: ordinary life (A-C), health and science (D, E), drug design (F, G) and global problems of humanity (H, I). I will show that all of these cases represent variations of just one simple Moral Wisdom rule!

Each double-row represents an independent wheel with starting and ending points in the 1st and 3rd columns. The latter positions can change, if we want to change our character or the usual viewpoint.

Each case can be described by many alternative wheels, as every word can have many alternatives. Yet, all wheels are similar to each other, as they can be regarded as just special cases of cycle (A). This only confirms that life is simple, if we follow simple rules, but it becomes complex, if we ignore these rules. The analysis below shows that such ignorance comes from the wrong prevailing sentiment

Ordinary Life (A-C)

Cases (A-C) were considered above. The most striking inadequacy comes from layers *a* of the 1st column. Desire (A-1a) and Bravery (B-1a) associate with ambition and confidence, whereas Humble (C-1a) associates with the lack of it. I equated Humble with self-containment (thoughtfulness, observance, respect of others), but the prevailing

sentiment attaches it to Inferiority and Mediocrity (C-1b). It stems from Arrogance (C-3b) that equates strength with aggressiveness and peace with weakness.

Humble vs. Mediocre. Layers *b* of columns 1 and 3 associate Mediocrity (C-1b) with Frustration (A-1b), Foolhardiness (B-1b), Addiction (A-3b), Fear (B-3b) and Arrogance (C-3b). This is the price of confusing Humbleness with Inferiority. It comes from the “onion-based” philosophy in which competitiveness dominates over complementation (Petrauskas, 2021)

Other columns show much better consistence. For example, 2nd column suggests relations Act (A-2a) ~ Active (B-2a) ~ Loyal / Dedicated (C-2a), and Abuse (A-2b) ~ Abusing (B-2b) ~ Fanatic (C-2b). And so on. It means that the majority of our difficulties come from just few “minor confusions”, like the one from the 1st column.

Health and Science (D-F)

Cycle (D) shows how Sickness (D-1b) can transform to Health (D-3a). It equates Sickness with Addiction (D-1b) and Immaturity – irresponsible behavior (D-3b). We become sick through Looseness, Immaturity and Rigidity, and we become healthy through Firmness, Good Habits and Flexibility.

Note that Health can also be related to Absorption (H-3a), Good Habits – to Metabolism (H-1a). It is impossible to fix one without another, but this is exactly what medicine attempt to do. Therefore, we should focus on Good Habits, starting with Desire (A-1a) and supporting by Bravery (B-1a), Self-Containment (C-1a), Creativity (E-1a), and Hypothesizing (F-1a). The worst case scenario starts with Frustration (A-1b) further

yielding all red layers of the 1st and 3rd columns. This is the domain of clinical psychology, which could clearly benefit from such considerations.

Cycle (E) shows how Subjectivism (E-1b) can be transformed to Objective Theory (E-3a). It equates Subjectivism to Dogmatism (E-3b), Science – to Hypothesizing (E-1a). We become subjective through Formalism, Dogmatism and Convictions, and we become objective through Observance, Hypothesizing and Testing.

Consider these replacements: Hypothesis ~ Induction, Sci Theory ~ Law ~ Deduction. We can only test Hypotheses (induction), but not Theories and Laws (deduction). Theory can only be made more rigorous and accurate, otherwise it is either hypothesis or dogma. Thus, the largest problem is in confusing hypothesis with theory, law with dogma, induction with deduction, testing with observing.

The only irrefutable theory is based on panpsychism, suggesting that all is alive, and every law and constant must be variable. Ultimately it comes down to the criticism of formal logics that subdivides all answers into Yes and No. Goedel's incompleteness theory suggests that such logics by itself is a form of dogmatism ([Citation of Perlovsky](#)).

Cycle (F) shows how Surrender (F-1b) can transform to Invention (F-3a). In short, the way lays through Surrender is balanced by Breakage or Damage (F-3b), Invention –by Creation (F-1a). The positive path describes the invention process: Create → Play → Invent → Share → ... (see Teacher's Guide, v. 09, 2016). The negative path resembles behavior of defeated soldier: Surrender ↔ Hide ↔ Break through ↔ Enforce ↔

Genuine Creation means Induction of a new idea that needs further Nurturing (F-2a). You don't show your baby to the crowd until he grows up. On the other hand,

genuine Invention can be compared to deduction that needs to be Shared (F-3a). You don't hide your child from crowd, or he will remain immature. Creation originates from Sharing, Invention – from Nurturing. Confusing these steps creates stagnation.

Drug Design (G, H)

This is a highly technical field that requires much of specific knowledge. The semantic algorithm alone cannot produce the required wheels, and the obtained wheels raise unpleasant questions to practitioners.

Cycle (G) shows how toxic compound (G-1b) can become Drug Candidate (G-3a). Toxicity is equated to Impotency (G-3b), as it reduces possible dosing. Drug likeness is diagonally related to Lead Activity (G-1a) which potentially increases dosing. The intermediate step between Lead and Drug – Optimization (G-2a) – involves consideration of many subtle effects (solubility, absorption, distribution, metabolism, excretion), which can be compared to Testing (E-2a) and Nourishing (F-2a). Respectively, Active Lead can be compared to Hypothesis (E-1a) and Creation (F-1a), whereas Drug Candidate compares to Sci Theory / deduction (E-3a) and Invention (F-3a).

This dichotomy is not easy to maintain. Klein (2008) argued that the highly rigid nature of rational drug design suppresses serendipity. Rigid setup favors deduction (E-3a), but suppresses induction (E-1a). Clinical Testing (G-4a) is comparable to Observing (E-4a) and Sharing (F-4a), both of which are biased by economic interest.

Dialectical wheels can also be used in narrower stages of drug design. For example, during lead optimization, it should yield chemical structures uniting all kinds of extreme properties: bulkiness, hydrophilicity, acidity, basicity, cyclicity, etc. Ultimately

we would arrive at complex natural compounds, like polypeptides, polysaccharides, vitamins, hemoglobins, etc. The complexity of such molecules exceeds current modelling capabilities, therefore they are rarely considered.

Cycle (H) suggests diagonal relations between Metabolism and Absorption on one hand, and Distribution and Excretion on the other. Sickness may distort these relations, leaving only circular causation, Severe disease may distort circular causation in layer *a*, pulling us to level *b*,

Drug design	N	<i>a</i>	Compound Library	Screening	Active Lead	Selecting
		<i>b</i>	Impotent	Guesswork	Toxic	Preserving
	O	<i>a</i>	Active Lead	Optimizing	Drug Candid.	Clinical Tests
		<i>b</i>	Toxic / Insoluble	Guesswork	Impotent	Preserving
P	<i>a</i>	Healing	Cheap	Natural	Dialectic	
	<i>b</i>	Synthetic	Linear Logic	Toxic	Expensive	

Cases N-P exemplify circular logics used in drug design. Here we look for Active Leads (N-3a) and Drug Candidate(s) (O-3a) among millions of compounds (N-1a), comparable to finding needle in a haystack. Pharma companies use [high-throughput screening](#) and [drug design](#) – cumbersome setups, that inevitably reduce serendipity [Klein \(2008\)](#). Indeed, wheels N and O represent very daunting tasks that require constant effort, thus cannot pass the 5th element test.

On the other hand, Compound Library (N-1a) is comparable to the Learning (C-1a), whereas Active Lead (N-3a and O-1a) to Hypothesizing (B-1a) and Creating (C-1a). This inevitably leads to selecting compounds with “universally ambivalent properties” – polyfunctional, amphiphilic, often zwitterionic, as only such can pass all pharmacological requirements. But most natural compounds are already such, only more so, as we cannot even explain “why they are what they are”. Plus, natural compounds are generally less

toxic than synthetic. This is how we arrive at the ‘pencil-type’ approach P, suggesting that Healing (P-1a) must come from Naturalness (P-3a), whereas Synthesis (P-1b) yields Toxicity (P-3b). The wheel P easily passes the 5th element test, as Healing can be Cheap, Natural, and Dialectical.

Global Problems

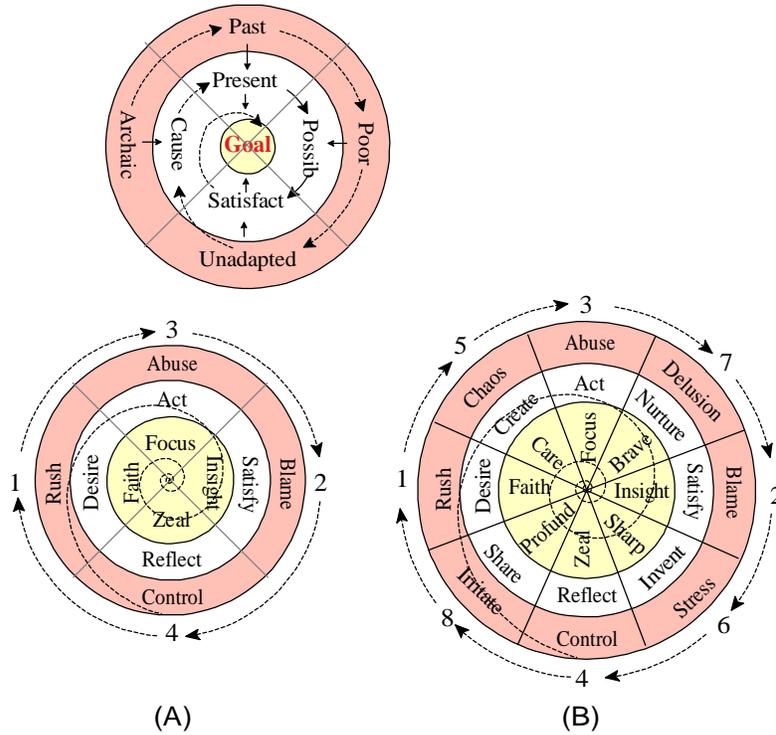
All global problems are quite simple on an individual human scale, but complex on a collective scale. If I am told many times that black is white, in the end I tend to agree.

Cycle (I) shows how the Spoiled or Polluted environment (I-1b) can become Purified or Fixed (I-3a) again. This can be related to climate change, deforestation, pandemic diseases, poverty, and any global challenge. Spoiling is in reciprocal relation with “over-repairment” - Sterilization, Formalization, or any other type of Total Control (H-3b) that come from Fear (B-3b), Arrogance (C-3b), Immaturity (D-3b), Dogmatism (E-3b), Rigidity (F-3b), All of these suppress natural recovery. The desired Purification / Fixing (I-3a) is in balance with the Nature itself (I-1a), which can also be related to Good Habits (D-1a) and Creativity (F-1a).. Yet, the nature is not regarded as a self-organizing system that can repair itself, and good habits are not related to the ability to live in nature.

Cycles (J, K) deal particularly with deforestation and poverty. Deforestation is diagonally related to Naivety and Incompetence, Poverty - to Addiction, Selfishness, Greediness.

Generalizations

In all cases we see the need for courage, clarity, etc. These are general positive factors, akin positive character traits from positive psychology.



Other Uses

How it Could Work

A user could select the starting concepts that describe his situation, and the goal that he wants to achieve. A system would generate dialectical wheels like it was shown above and will be shown further

Every concept must involve many alternative words clustered according to the semantic / sentimental similarity and the distance to the “utmost target” (the “most exquisite center” of the entire concept space, like in the [Atlas of Feelings](#)).

Preliminary clustering can be made by sentimental similarity algorithms, but finishing must be done by crowd-sourcing (with proper documenting / rating of each relation). Scientific, philosophical and political concepts should be supervised by respective experts

Using the above mentioned inter-conceptual relations (cause, effect, undeveloped, exaggerated), each concept can be represented by a set of dialectical wheels, the most significant intersections of which can be brought to the user’s attention. These wheels can involve larger numbers of transition states and layers of iterations, as exemplified in Figure 3.

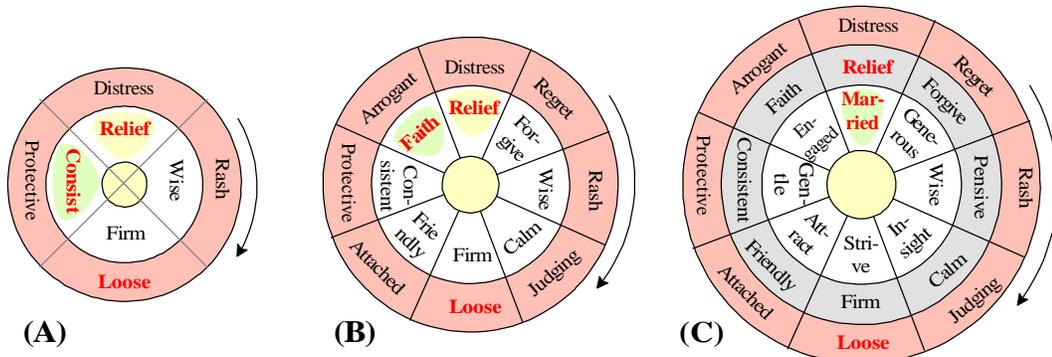


Figure 3. Extension of the wheel A from Table 2

Case (A) represents the cycle (A) from Table 2, where a divorced man wants to marry, but ends up in either Consistence or Looseness. Case (B) adds more intermediate concepts that facilitate circular rotation. For example, Relief transforms to Forgiveness easier than to Wisdom. Wisdom transforms to Calm easier than to Firmness, etc.

Case (C) adds another layer that mimics a new iteration. Here Relief can produce not just “plain” Forgiveness, but the “entire” Generosity, that eventually leads to a new Marriage. (Cases A and B lead to only half-a-way toward marriage.)

To limit the number of possible wheels, we may pre-draw the most significant situations independently, based on real-life situations, books, movies, and expert opinions.

How to Break the Cycle?

Most problems occur because we lock ourselves in “habitual cycles” stemming from dogmatism, addiction, etc. These cycles resemble Jeffrey Young’s maladaptive schemes (citation), but extend far beyond the “pure” psychological domain.

One way is to apply the same algorithm as above. Figure 4 exemplifies it for Dogmatism in a greater detail.

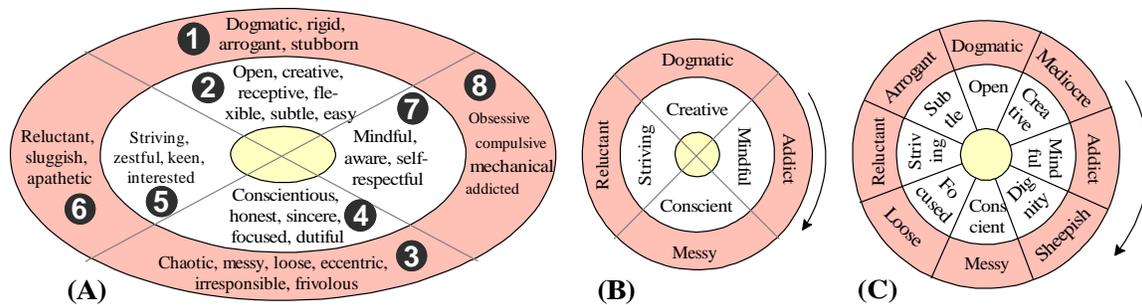


Figure 4. Stepwise construction of the wheel(s)

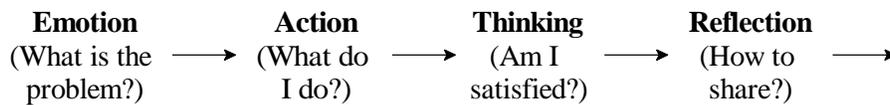
Scheme (A) shows the stepwise generation of “general situation map”, where each cell includes many similar concepts. Ideally all concepts should be clustered according to semantic / sentimental similarity, allowing for the smooth selection of the generalization / detalization level.

Step 1 – determine the problem: dogmatism, arrogance, etc. Step 2 – determine the “opposite” of the problem: openness, creativity, etc. Step 3 – determine the marginal

exaggeration of the previous solution: chaos, messiness, etc. Step 4 – determine the “opposite” of the latter exaggerations: conscientiousness, honesty, etc. Step 5 – determine the intermediate concept(s) between 2 and 4: striving, zestfulness, etc. Continue by repeating the logic of previous steps.

Once the wheel is construed, make sure that it reflects a “smooth enough” circular flow, in which we should look for the weakest step(s). After removing the redundant concepts, we may obtain a simplified wheel like in scheme (B). To pinpoint the problematic step(s), we can further add the intermediate steps, as in scheme (C). This can give us a better idea on where to start with problem solving. For example, some people may choose to start with thinking about their addictions, others – about their messiness.

Once the starting point has been identified, we should make a new wheel in which all elements correspond to the 4 types of activities: mental (“ordinary thinking”), emotional (deep feelings), physical (action & workout), adaptive (observation, meditation, sharing, reflecting):



In each step all elements must participate, but only one must take the lead. Otherwise the system will not be “self-regulating” ([algebra and panpsychism](#)). The ability to focus on the leading element / activity yields the short-term power, but the ability to use all other activities as “supporting mechanisms” give the long-term success.

If all elements are represented as 4-dimensional vectors, then concentration implies selection of an axis around which other vectors are rotated, whereas

diversification implies changing this axis as needed. The central axis is like baby that we nourish within ourselves (E-2(+)), but the quality of this process depends on other axes.

This contradicts to the materialistic paradigm of physical reality assuming unchangeability of physical laws and constants. MW insists that every phenomenon is an opposition to something else, whereby all oppositions tend to unite, thus changing physical laws. Refuting this equates to ignorance and immorality.

Thus, all postulates are nothing but dogmas, and linear causation based on unchangeable “first principles” is just temporary fiction. The generated MW schemes are changeable too, because the subtlety of underlying ontological definitions are changeable.

This makes a strong case for panpsychism, a theory that everything has a mind or mind-like property. It was criticized as being impractical, but here we see that it makes us MW-compliant, which is so important in living a good life (Kekes, 1995). What can be more important than living a good life?

The notion that “everything is alive” is difficult to hold, as the word “everything” covers all what we can think of, including all physical laws and our own thoughts and feelings. It comes to re-determining who we are and what is our mission. For each person it depends on his “intrinsic caliber”, resembling the maximum number n under which the sum of two irrational exponents produce a another natural number (F_n) in a Binet’s formula: $F_n = (\varphi^n - (-\varphi)^{-n})/\text{Sqrt } 5$. Increasing n increases φ^n , but decreases φ^{-n} . If φ^n represents our conscious significance, then φ^{-n} -

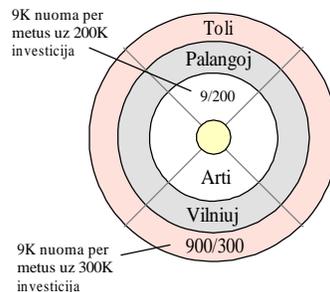
The major problem is our over-reaction to various problems, rather than the very problems by themselves. Categorical judgement, dogmatism and arrogance are the roots of all disasters

Answering philosophical questions. E.g., what is Life? Cooperation, Production, Growth. Like in business or economy, just multidimensional: the higher the dimensionality, the richer the life

Solving Dilemmas. E.g., to Fight or to Obey?

Cost – Benefit at a higher level

Not just compare costs and benefits, but also think how to gain positive revelations of both sides. Saving money has a downside in “losing Heart” or existential meaning, becoming ruder. Gaining benefits may have similar downsides ... It is the causality relations that lift this analysis to the higher level



Discussion

Moral Wisdom (MW) is vital for a good life (Kekes, 1995). I propose how it can be generated automatically, using semantic and ontological relations

(Ideally every word should be linked to all others through all possible causality relations (e.g., Hate + Love = Envy from [Emotion Search](#)) and “harshness – subtleness”

scales (*e.g.*, Hate – Disgust – Dislike - ...). In addition, it should be indexed according to proximity to the “universal singularity point” – a yellow spot in the center of each scheme that in theory should be common to all words in multi-dimensional ontological space).

Conclusions

Morality is tightly related to the diversity of life and the ability to solve practical problems. It is not so much the state of being, as the direction of transformations. Moral behavior spins the “time-vortex” wheel in the natural cause-and-effect direction. Immoral behavior tends to slow down or reverse it, translating into dogmatic views and addictions.

This can be compared to the rotation of polarized light by chiral molecules: natural amino-acids that support life rotate it into one direction (L), whereas antibiotics that kill the life (destroy bacterial cell wall) rotate it in an opposite direction (D)

The very fact that we face problems shows that our sense of the right and wrong is flawed. So the proposed method of Moral Law generation (and the entire [Universal Wisdom Network](#)) can be useful.

To solve a problem, not only do we need to restore what was lost (health, abundance, happiness), but also to develop the right habits to remain in the desired state forever. In other words, problem solving cannot be separated from the personal growth. Otherwise it will be temporary, superficial, and immoral.

In physics we need to know both starting and the ending points, but in morality either one is sufficient. In morality all of our definitions (of starting and ending points) are incomplete, or plainly inaccurate, as our existence depends on more factors than we rationally consider. Mathematically this means that the system is of higher dimensionality, or has more variables, than the defining equations assume.

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		1 – Possession (How do I feel)	2 - Effect (What will I do)	3 - Adapting (Will achieve)	4 – Turning (Will share)
A	<i>a</i>	Desire	Act	Satisfy	Share
	<i>b</i>	Frustrate	Abuse	Addict	Overbear
B	<i>a</i>	Brave	Active, Smart	Careful	Analytical
	<i>b</i>	Foolhardy	Abusing	Fearful	Procrastinating
C	<i>a</i>	Humble	Dedicated	Special	Meaningful
	<i>b</i>	Mediocre	Fanatic	Arrogant	Fuzzy
D	<i>a</i>	Good Habits	Flexible	Healthy	Firm
	<i>b</i>	Sick, Addict	Loose	Immature	Rigid
E	<i>a</i>	Hypothesis	Test	Sci Theory	Observe/Form
	<i>b</i>	Subjectivism	Formalism	Dogmatism	Conviction
F	<i>a</i>	Create	Play/Nourish	Remix/Invent	Share/Reflect
	<i>b</i>	Give Up	Hide	Rigidity	Insisting
G	<i>a</i>	Active Lead	Optimize	Drug Candid.	Clinical Tests
	<i>b</i>	Toxic	Guesswork	Impotent	Preserve
H	<i>a</i>	Metabolism	Excretion	Absorption	Distribution
	<i>b</i>	Deficient	Drained	Excessive	Depositing
I	<i>a</i>	Natural	Nurture/Birth	Flourishing	Flow/Share
	<i>b</i>	Spoiled	Stagnate	Artificial/Sterile	Death
A2	<i>a</i>	Wise	Common Sense	Calming	Education
	<i>b</i>	Daunting	Arrogance	Naive	Formalism
J	<i>a</i>	Wise Logging	Common Sense	Reforestation	Education
	<i>b</i>	Deforestation	Arrogance	Naivety	Formalism
K	<i>a</i>	Sanity	Opportunity	Abundance	Strive
	<i>b</i>	Poverty	Desperation	Addiction	Inequality

Table 3. Possible ranges of parameters for various elemental clusters

	X ₁	X ₂	X ₃	X ₄
1a - Love, Desire, Curiosity, Life, Bravery, Health, Happiness, Energy, Wealth, Abundance, Naturalness, Uniqueness	5-9	0-4	2-7	0-2
1b - Insanity, Ignorance, Egoism, Delusion, Frustration, Unwise, Foolhardiness, Immaturity, Sin, Lust, Addiction, Unfit, Spoiled	5-9	0-4	2-7	0-2
2a - Devotion, Persistence, Action, Creation, Improvisation, Smartness, Strive, Growth, Training	0-5	5-9	0-5	2-7
2b - Stubborn, Fight, Abuse, Force, Loose, Inequality, Stagnate, Overbear, Destruction, Desperation, Rashness, Imbalance	0-5	5-9	0-5	2-7
3a - Wisdom, Profundity, Thinking, Rationality, Experience, Satisfaction, Carefulness, Sanity, Fit, Optimal	2-7	0-2	5-9	0-4
3b - Hate, Fear, Resentment, Regret, Grievance, Sickness, Drained, Lack, Poverty, Misery, Artificial, Sterile, Dying	2-7	0-2	5-9	0-4
4a - Peace, Calm, Sharing, Reflection, Contemplation, Meditation, Analysis, Firmness, Balance, Flow	0-4	2-7	0-2	5-9
4b - Apathy, Indifference, Laziness, Sleepiness, Procrastination, Dogmatism, Conservatism, Suppression, Submission	0-4	2-7	0-2	5-9