



scope - space or opportunity for unhampered motion, activity, or thought  
range - the space or extent included, covered, or used

Is universal existence the result of random fluctuations?... OR

Is universal existence the result of a teleological purpose...

- infinite potential at rest... carrier of infinite extension at rest...
- carrier of consciousness at rest... unaware... as if slumbering...
- change of state... becoming self-aware in an instant... becoming aware of infinite creative expression... creative intelligence impressed upon conscious carrier... materialized creative consciousness... signal to noise ratio... sustainability vs. extinction... a chance... long-shot...

Orch OR = a hypothesis that postulates that consciousness originates at the quantum level inside neurons. The mechanism is held to be a quantum process called objective reduction orchestrated by cellular structures called microtubules...

- sentential function: an expression that contains one or more variables and becomes a declarative sentence when constants are substituted for the variables

- Energy Conversion is the process of changing energy from one form to another. In physics, energy is a quantity that provides the capacity to perform work or provide heat. In addition to being convertible, according to the law of conservation of energy, energy is transferable to a different location or object, but it cannot be created or destroyed.

\* Boundary Conditions... Constants

... → Grand Unification... Teleological Purpose of Existence... Materialized Creative Consciousness... Unified Field of Infinite Extension

\* Unification (physics) Wiki 9-25-20

→ The "first great unification" was Isaac Newton's 17th century unification of gravity, which brought together the understandings of the observable phenomena of gravity on Earth with the observable behaviour of celestial bodies in space. The "second great unification" was James Clerk Maxwell's 19th century unification of electromagnetism. It brought together the understandings of the observable phenomena of magnetism, electricity and light (and more broadly, the spectrum of electromagnetic radiation). This was followed in the 20th century by Albert Einstein's unification of space and time, and of mass and energy. Later, quantum field theory unified quantum mechanics and special relativity.

→ Spread Spectrum Modulation... see frequency-hopping spread spectrum technology  
- Hedy Lamarr and George Antheil

→ Field Effect... until some thing becomes excited by the field (e.g. magnetic lines of force) there may be no evidence or awareness that the field exists... awakening awareness of materialized creative consciousness... resonant cavity (vessel) excitation... 77'-78' occasion

→ Quantum Entanglement  
coordinate  
distinctions  
correlated

arc  
spark  
gap  
potential

everything that rises must converge

fruits or consequences

convergence n1: the act of converging and esp. moving toward union or uniformity

convergent 2: exhibiting convergence in form, function, or development

it's in the past - it still hurts - the past can hurt, but the way I see it, you can either run from it or learn from it.

The Lion King -> captivated by it or choose to ignore it - capture &

escape & we can run from it but we can never escape it.

2 capture c: to captivate and hold the interest of

captivate 3: extremely pleased or gratified: CAPTIVATED 4: being in a situation that makes departure or inattention difficult  
captivate 1: SEIZE, CAPTURE 2: to influence and dominate by some special charm, art, or trait and with irresistible appeal

I view this aspect of 'External Validation' as an inclination on the part of individuals to seek approval and thereby validation from others. I suspect this relates to a desire or need to belong. It is generally believed that "herd mentality" relates to fear and is often the response to a feeling of panic. Individual members of a herd may fear that if they are or perceived to be different, they will be singled out and excluded from the group and therefore easily preyed upon or left behind.

\* anxiety - and can manifest as anxiety and display as panic (attack)

\* Additionally, reliance upon 'External Validation' for authentication of the principles, beliefs, opinions, or values that we uphold and support can make it quite difficult to peacefully disagree with others. Given this context, to disagree is to debase our standing, and therefore leaves less opportunity for true individuality.

an element of the natural form = temperament - admixture of humors, characteristic or habitual inclination or mode of emotional response + reaction vs. responsive  
The first of the three forms is the 'natural' form. This form of 'Standard Reference' represents our inherent character, disposition, and temperament. These 'references' spring from the very essence of our being, the intrinsic, and are the foundation of an intimacy with our 'true self'. They are inclusive of the 'gifts', the talents and abilities that can be thought of as being 'entrusted' to us, and are unique in our individual capacity to develop and give rise to their expression and impact. - can be thought of as 'divine trust'.

The second form is the 'conditioned' form. This form is inclusive of the prevailing state of human affairs we commonly refer to as 'reality'. This shared 'reality' is a combination of both inherent and introduced conditions and factors and are extrinsic in nature. The 'conditioned' form is the source of the patterns that become recognized and comprise the foundation of the final form, the 'learned' form. emergent form

convergent -> 'emergent'  
The third and combined form is the 'learned' form'. This form is based on our experimentation, observations, and experiences. This form is a result of a combination of guidance based on the input from the feedback loops

\*\*\*\*\*

conditioned form

The second form is the learned form. This form is based on our experimentation, observations, and experiences and therefore relates to the timeline of our life and times.

The 'natural' form eventline  
It is primarily different from the other two forms because it is timeless. These 'references' spring from the very essence of our being and are a part of our lives for the duration. They are the foundation of intimacy with self because they are inclusive of the 'gifts', the talents and abilities that have been 'entrusted' to us. They are unique in our individual capacity to develop and give rise to their expression and impact. - thought to be "divine trust"

This topic becomes a question of 'Internal Anchors' verses 'External Validation'. Are we, as individuals, inclined to rely upon the standards that we choose to uphold and support to guide us in our thoughts and our actions, or do we instead act to seek the approval of, and therefore validation from, others?

I wonder how much room there is for individuality and personal growth and development if we are inclined to rely upon 'External Validation' to guide us in our thoughts and our actions. Individuals may fear that if they are different, they will be singled out and excluded from the group. Another symptom of reliance on 'External Validation' is the inability to peacefully disagree with someone. When an individual relies on 'External Validation' it becomes difficult to disagree with others and take a stand on their own.

The concept of 'External Validation' relates to the phrase "herd mentality".

scientific method vs. herd mentality

"Herd mentality describes how people are influenced by their peers to adopt certain behaviors, follow trends, and/or purchase items."

A phrase coined by Friedrich Nietzsche, philosopher

It is generally believed that "herd mentality" relates to fear and is often the response to a feeling of panic. Individual members of a herd may fear that if they are different, they will be singled out and excluded from the group.

Another symptom of reliance on 'External Validation' is the inability to peacefully disagree with someone. When an individual relies on 'External Validation' it becomes difficult to disagree with others and take a stand on their own.

In recognizing the need to establish proper grounds, the first concept that came clear was that of the references that our lives revolve around. I chose to term these references 'Internal Anchors' and came to realize that these references serve us in three fundamental ways.

*choice of 1st Magnitude - Standard of Measure - Standard References*  
The first way these 'Standard References' serve us is as the references our lives revolve Internal Anchors around and through which we project recurring patterns, our daily routines. I further surmised that these 'Standard References' take two fundamental forms from two distinct sources.

The first way these 'Internal Anchors' serve us is as 'Standard References'. These are the references our lives revolve around and through which we project recurring patterns, our daily routines. These references can take the form of

The first way these 'Internal Anchors' serve us is as 'Standard References'. In some respects, this becomes a question of 'Internal Anchors' verses 'External Validation'. Are we, as individuals, more inclined to rely upon the standards that we uphold and support, or upon the approval of others, as a guide to our thoughts and our actions?

The references comprise our current 'frame of reference', our mindset, our notions about the world and our role in it. This includes our current vision, values, and priorities that our lives revolve around and through which we project recurring patterns, our daily routines. If we have engaged in the quest of enlightenment and through a process of self-exploration, self-discovery, and self-actualization, and have established our 'Standard References' upon the rock of enduring and endearing principles, then we begin to approach a state of 'unalterable reason'. This is an exalted state of conversion from relying upon the approval of others as external validation to becoming self-reliant upon our internal anchors.

*'supreme and unalterable reason'*

This is about questioning our vision, our values, our principles, in short, questioning the references our lives revolve around.

We form our vision guided by our values and are thereby guided in the process of narrowing the boundaries of the solution set of options we can choose from to satisfy the conditions that will enable that vision. *lifelines 'double carry' - connect to internal anchors enabling us to warp ourselves back into a state of rest.*

This relates to the structure of a 'constellation of concepts'. If we share common values, then even if our visions are not a shared vision, our individual visions should still hang together because they are based on common values.

Acquisition brings a temporary feeling of fulfillment (ref. sex, money)

*"Insanity is continuing to do the same things and expecting different results."*

*superposition*

Awakening awareness of pattern recognition and interference patterns of reinforce/diminish probability amplitude. Closer approximation of and a continual narrowing of the boundaries of the solution set of the enduring and endearing principles and practices.

*"It is unnecessary to assume that participants have full knowledge of the total structure of the game, or the ability or inclination to go through any complex reasoning process. But the participants are supposed to accumulate empirical*

enduring and endearing principles and practices  
"best practices"  
information on the relative advantages of the various pure strategies at their disposal."

I wish to make this clear as a part of this invitation to others. If they are at rest, and they engage in this quest through consideration or contemplation of this material, it may stir up a discontentment. It has, by some, been referred to as 'divine discontentment', and may stir a discontentment that there is no turning back from.

Detect - to discover or manage to perceive something hidden or lost to notice - something hidden or lost to notice. *Third Eye Awakening Awareness*  
Detective... Inquiry... Investigation... Quest... *The Power is in the question... The question frames the answer...* *If one dwells in the question long enough... the answer comes...*

Some of this is reflected in the consideration of living an ordinary life as opposed to an extraordinary life. A bit part verses a central role. *bit parts - potential initiate, minion*  
*central roles - avatar, troll*

The value of becoming aware of the options that are available to us.

\* The impact of information, observations, or experiences can result in a stirring and we become moved. This is the moment of the thrill of it all that I referred to in the segment about how we steer the 'course of human events' by affecting the 'course of thought'. We get stirred up. We become aware that we have some work to do. We seek the knowledge and guidance necessary to return to our 'rest state'. Practice makes our work easier and playful. We begin to structure our knowledge and understanding of our activities and 'master' our practice and are at rest in our 'command' of it. We begin to share and direct others in their quest for knowledge and guidance and thereby fulfill our responsibility of becoming as a 'Luminary' to others. This is an opportunity is bear witness. To cultivate and reinforce what is best and highest in others and ourselves.

*practitioner  
privilege  
responsibility*

The presence of our performance is our contribution to the world. If benefit is derived from our performance, then this is to our credit. No one can do this work for us. Others can help us understand the value of possessing the proper tools, and if we don't have the proper tools, help us (guidance) to acquire the proper tools. However, the acquisition of the necessary skills can only be the result of our individual efforts.

Some of this is reflected in the consideration of living an ordinary life as opposed to an extraordinary life. A bit part verses a central role.

What are internal anchors if not enduring and endearing principles, the foundation of our values, the values that guide our actions?

I was able to discern that the nature of our relationship to the inherent system and other beings we share this condition with consisted of primary factors:

**Current** - as in 'frame of reference' (now going on, commonly or generally accepted, current worldview) *Producer > Director*

**Conductor** - as in active or passive participant - leader or one in charge; that which carries or conveys a charge (command, to entrust with a duty or responsibility)

**Insulate from the current** - proper insulation will protect you from direct contact with the current. *insulate from the hype*

**Establish Proper Grounds** - as in 'enduring and endearing principles and practices'. Proper grounding will create a low resistance path for the current to travel rather than you becoming a conductor. If you become a conductor, the path of low resistance, the current can cause shock and burning. The flow of current, not the potential, can cause injury. The current required for a fatal shock is small. *choice of 1st magnitude - standard of measure*  
*standard references*

I was not properly insulated to prevent becoming a conductor. I needed to establish proper grounds.

Threesome:

1 - Choosing the references our lives revolve around thereby project recurring patterns as our daily routines.

2 - Become the fixed points that our lifelines are attached to, how we are able to stay grounded, meant to be steadfast as an anchor. If we need to make a stand, find firm footing, *stand and point... rally point* then we follow our lifeline back to those references.

3 - Foundation of our 'fulcrum' point that we are able to leverage against as when we have a task to engage (taskmaster).

✓ Tools (proper tools) allow you to lift or move a load far beyond your normal capacity (e.g. lever). In order to accomplish this feat you will rely upon being able to leverage your own strengths through this lever, through this tool, and lift this load that is far beyond your normal capacity. However, with that said, there are three points of contact during this work, the point where your hands transfer the force you apply against the lever, *amplifies - intensifies* the point at which the lever applies force against the load, and the point at which the lever *applies leverage against the fulcrum* which is the point of unyielding support upon which the actual work of leverage takes place (this relates to the line from the natural, "Rely too much on your own gifts and you'll fail." The words "your own gifts" can be seen to refer to your strength that you apply to the lever at your point of contact. But if you have not established the point of contact upon the rock of enduring and endearing principles as the fulcrum or you have chosen a load that is unworthy, then you are bound to fail).  
*↳ an attempt to elevate or exalt that which is unworthy*

If the fulcrum point is solid, firm, fixed (established upon proper grounds, true) then you can rely upon it to leverage against it. However, if the fulcrum is founded upon half-truths or falsehoods, it's going to give way and collapse under the load. This is where the value or importance of the standard references comes into play. This relates one of the many ways these enduring and endearing principles and practices are worthy of our attention. Enduring means that you can rely upon them, they are tried and true and are a predominant factor. Endearing relates to the hierarchy of desire that the character D. Glas so eloquently shared in his statement, "We want to be loved, failing that..." The more well founded we are in our values, in our guiding principles, then the easier *it* will become to establish and maintain endearing and enduring relationships. These factors directly impact the 'failure rate' as in "failing that". On the other hand, if you're well founded and your activities are guided by these principles then you are less likely to experience a high failure rate both in your tasks and your relationships. This insight into the foundation upon which we found and thereby establish our practice is some of the most valuable information I can share in both the 'Reality Check' part of this offering and in the 'Adventure Training' part not only because our practice is founded upon them but also because they are as a guide to our actions, how we conduct our affairs. This constitutes another example of a 'double carry' and the impact and influence that these choices have upon the quality of our experiences and the results we produce is exponential in their effects. This can be seen to relate back to the 'Enlightened Holistic Perspective', which provides insight into the true nature of our existence but also helps you to inventory your tools and through your practice to develop your skills in applying these resources and utilizing these strengths and the power of these truths to accomplish, produce, or create the results you choose. *practioner*

*failing that...*

So...we have to be careful that an option that is likely to produce an outcome that seems desirable does not require us to engage in acts that are contrary to our values. If the option requires certain conditions to be satisfied that would require acts that are...It can be the case that certain conditions that may be required to exercise that option would require acts that are counter to our values. In order to exercise that option, our values would become corrupted and therefore we would become corrupted...and is something we would be likely to value.

**External Forces**

Storms of Circumstances

\*\*\*\*\*

*unlikely*  
*↳ unlikely find to be of enduring and endearing value.*

**Beware...Drama Alert!**

\*\*\*\*\*

**The Imposition of Expectations**

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\* What are external forces if not storms of circumstances? The external threat of all that we have constructed, the structure of references our lives revolve around and through which we project recurring patterns as our daily routines, our daily walk. Having a vision, identifying (establishing) our values, and then identifying the conditions that must be satisfied in the conditional array. Internal anchors refer to establishing the proper grounds of enduring and endearing principles, the foundation of our values. Upon this foundation we begin to construct our vision, the life we imagine <sup>for</sup> ourselves founded upon our values. If we share in common with others this set of values then we have a foundation upon which to build a common vision. This relates to the concept of a constellation of concepts, how they all hang together and mutually support one another. This is the basis and foundation of a shared 'rally point'. Like building a structure; first we lay our foundation, the completion of establish proper grounds of shared values, then we put it under roof, that is our vision, then we trim out which is the details of our plan of action (action plans) that I term the conditional array. All of this is to stand firm against external forces like storms of circumstances. In other words, if we have established proper grounds, if we have a firm structure and we have a good roof on it, a vision that is feasible, attainable, then the external forces can do their worst and it will proof out, it will run true, it will hold fast against the forces that would bring it to ruin and complete and absolute collapse.

tribe rigging

This returns to the analogy of the house of cards, building on the sand of carelessly thought out values, and a vision that is not <sup>feasible or attainable</sup> something that is not supported by strongly held values or a passionate commitment and therefore convictions and the actions are hurried lacking the time and attention of detail required to be a work of true craftsmanship, and so the inclusive approach that would be employed by a craftsman that would result in a strong structure has been neglected and instead an exclusive hurried and careless approach has been employed in which many important or decisive factors have been omitted or neglected <sup>ignored</sup> resulting in a weakened structure that is at risk of collapse.

enduring and endearing

taking all factors into account

This comes back to the house of cards because as soon as we do that we are building on sand, we are building a house of cards and the first storm of circumstance that comes along our house of card falls and is in a state of utter collapse. This is why it is essential to be guided in our actions by our values. Not only while forming our vision, but also while identifying what options we can exercise to satisfy the conditions that enable the outcome while closely adhering (remaining true) to our values.

We live in a system of feedback loops where we continually experience the results and consequences of our choices and the choices of others, both individuals and entities of collective actions. <sup>embody → incorporate</sup>

individuals... <sup>legal</sup> fictionals... artificial intelligence  
 We can at times be prompted to question our internal anchors by other individuals (challenged) or by storms of circumstances. This is both an opportunity to engage in and experience a cycle of further growth and development and/or witness the establish references run true and provide empirical verification of their validity. <sup>established</sup>

tethered - life lines internal anchors... standard of measure choice of 1st magnitude

external validation

self-exploration self-discovery self-actualization

external pressures, forces

lifelines

mutually supportive and adaptive

If a set of circumstances comes along (current events, storms of circumstances) and we are swept away in the currents of very challenging or detrimental circumstances, it is our lifelines that we rely upon to be able to exercise command over the circumstances and 'warp' ourselves back into a state of rest, to be at peace, to be at rest (rest state).

If the references that we have established as our anchors are enduring and endearing (steadfast) principles, then they are going to hold fast, steadfast as an anchor. If our lifeline is attached to a half-truth or a falsehood, then under enough strain or stress it is going to give way and we are going to be set adrift. At that point you are struggling against the undertow of the current in an attempt to find the truth and attach your lifeline to it and grasp the lifeline that leads to that fixed point that is steadfast as an anchor and warp yourself into a position of rest in safe harbor at safe anchorage. These lifelines can be seen as a single line, but as more and more of our principles become fixed the lifelines reinforce one another until they become like threads that are woven together to create an enduring strength. The 'dwell angle' of cycles where we become unsettled or get stirred up become contracted. When we are young and have a lot to learn the cycles can be longer and more intense. However, as we become more mature, more enlightened, well-grounded, founded in our principles and practices by becoming more intimate with our true self (personal resolve of narrowing the boundaries of our personal solution set) and instead of a single or a small set of fixed references or standards of reference, they become constellations, we become more and more stable on the rock that we make our stand upon and that is our rally point. It becomes more expansive and therefore more stable. The 'dwell angle' of the cycles become less intense and shorter and the length of our sustained rest state become longer. If current events attempt to sweep us away, displace us, get us stirred up, then as we mature, through self-discovery, become more self-actualized, then we have handfuls of lifelines and we are able to warp ourselves back into the position of being at rest fairly easy.

what pops out was unstable... what settles out (radiant... becoming as a beacon to others) returning to rest state was stable... resonant

This comes back to the house of cards because as soon as we do that we are building on sand, we are building a house of cards and the first storm of circumstance that comes along our house of card falls and is in a state of utter collapse. This is why it is essential to be guided in our actions by our values. Not only while forming our vision, but also while identifying what options we can exercise to satisfy the conditions that enable the outcome while closely adhering (remaining true) to our values.

actions

enduring principles (values)

$$V^2 / I^3$$

$$\text{Vision} \times \text{Values} / \text{Indifference} \times \text{Ignorance} \times \text{Intolerance}$$

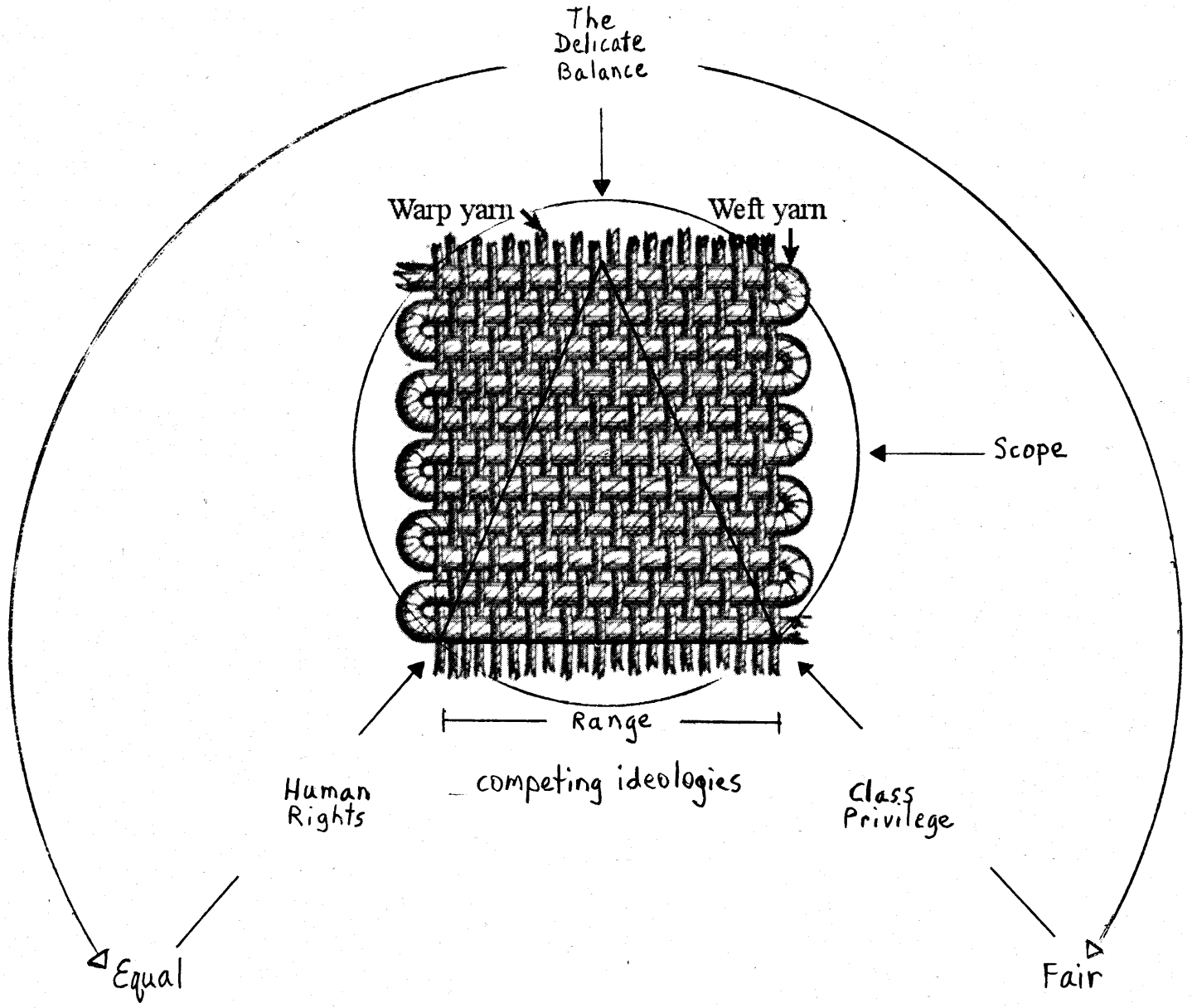
$$V^2 = \text{Vision} = \text{AIM}$$

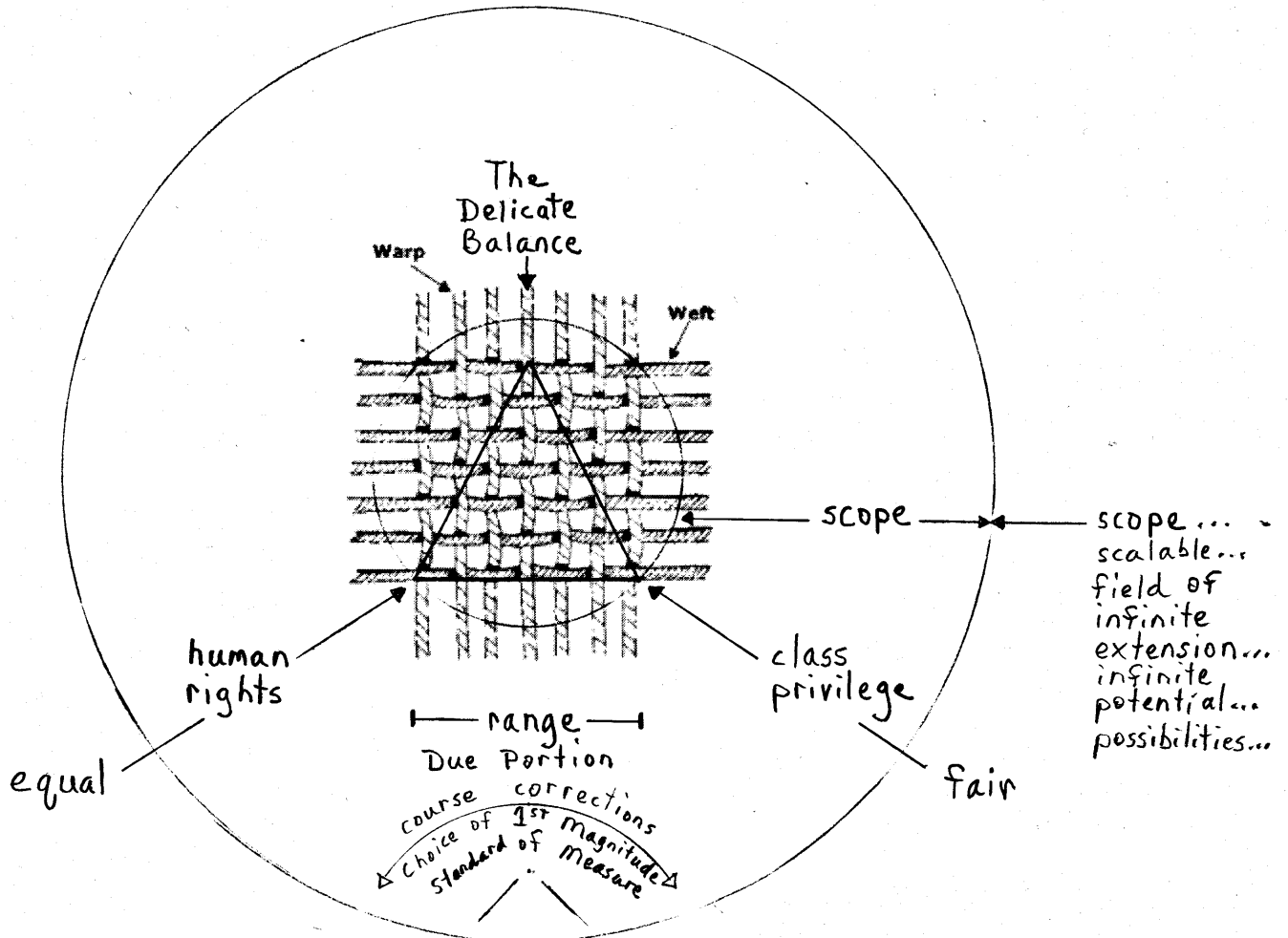
• Values = Choice of 1st magnitude... Standard of Measure... Choose Your Treasure!

$$I^3 = \text{Ignorance} \cdot \text{Indifference} \cdot \text{Intolerance}$$

I don't know	I don't care to know	I don't care
<u>Ignorance</u> I don't know	<u>Intolerance</u> I don't care	<u>Indifference</u> I don't care to know







Checks & Balances

<u>Extremes</u>	<u>Means</u>	<u>Extremes</u>
Exclusive Class Entitlement	Inclusive Class Contribution	Exclusive Class Entitlement
<u>Consumption Without Contribution</u>	<u>Sustaining Stewardship</u>	<u>Excessive Consumption</u>
A Hand Up! Joy and Fulfillment of Creative Contribution...	<u>Competitive Collaboration</u>	Two Steps Back! Chain of Custody of the Age of Mankind... Our Legacy...
	<u>Adversarial Conditioning</u>	

Unclaimed  
 Inheritance...  
 Lost Treasures...  
 Playground for the Children  
 Work Play  
 Wherein When  
 the Magic Happens



Delicate  
 Balance

position...  
 point...  
 reference...

B<sup>1</sup>

B<sup>2</sup> - bearing

D<sup>1</sup> - distance

Human Rights  
 position...  
 point...  
 reference...

Class Privilege  
 position...  
 point...  
 reference...

competing  
 ideologies

range

Due Portion

Equal

Fair

scalable...  
 - scope... field of  
 infinite  
 extension...  
 infinite  
 potential...  
 possibilities...

Based on  
 individual gifts and  
 initiative in the practice  
 of developing character  
 and competence, and/or  
 individual or collective  
 contribution of  
 meritorious acts...  
 - merit based class,  
 privilege and responsibility

Triangulation of Truth → Ever closer approximations of truth → The Narrow Path → The Way

- Target → Materialized Creative Consciousness... AIM

- Task → The role of... is being recreated by...

- Technique → Everything Begins as a Thought → Cascade → <sup>There is nothing more</sup> powerful than an idea!

- Theory → Constants vs. Conventions → Inherent vs. Introduced

- Thesis → The Essence of Being is Becoming!

Topic

→ to change from one place, state, or form to another: CONVERSION

- Translation → Early Detection → The Secret Key! <sup>To Inspire → Enlighten → Empower</sup> <sup>To Conspire → Ensnare → Entrap</sup>

- Transmission → The message → The Intelligence of Intention Impressed upon the Carrier

- Transparency → Render transparent → Hidden or Lost to Notice → A Glimpse <sup>Peak behind</sup> <sup>the curtain</sup>

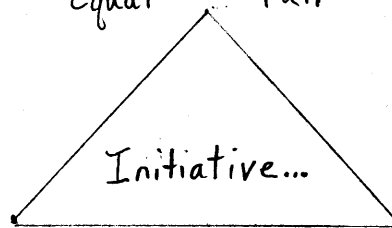
- Transposition → Balanced Equation → The Delicate Balance → Conversion → <sup>We Are!</sup> moved!

- Treasure → The treasure is in the toil → workplay → <sup>command performances...</sup> peak experiences...

- Trust → Divine Trust → Gifts → Talents & Abilities

- Tutelage

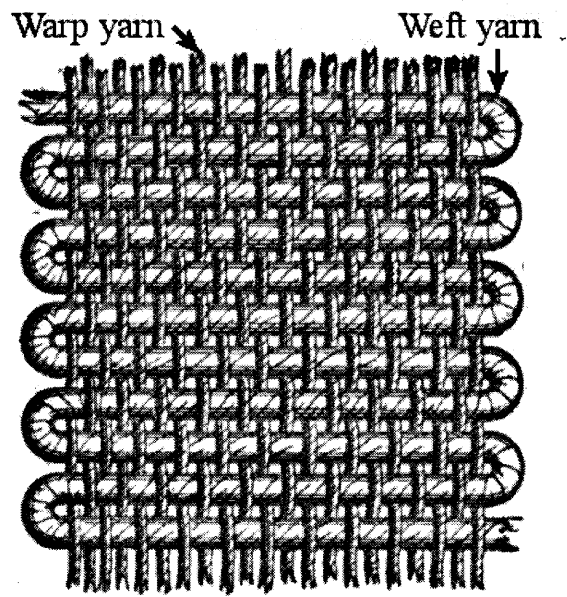
Human Rights vs. Class Privilege  
Equal vs. Fair



- gifts - talents and abilities...  
- thought to be divine trust...  
- entrusted... both a privilege and a responsibility... what best serves the mission...  
- to direct and to protect!...  
- the power to project!  
- "of suggestion!"

- Story: Mr. Knauff
- Master Mason
- The Red Brick Porch
- Remember, you helped build it.
- Command Performances...  
Peak Experiences!

- Story: Editor's Choice
- Qualified Candidates
- Set the stage...
- All that is necessary to become successful as a valued member of our team can be taught... except initiative... one either embodies it or not... it cannot be taught... but it can be acquired!  
<sup>inspired → acquired</sup>
- External Pressure vs. Internal Desire



- Toto pulls the curtain back to reveal the wizard engaged in his practice of the craft (operational disclosure → render transparent the veil of complexity)  
hidden or lost to notice

Token [sign, to show - <sup>clues & cues</sup> more @ DICTION] 1: an outward sign or expression 2a: SYMBOL, EMBLEM b: an instance of a linguistic expression 4b: a small part representing the whole; INDICATION  
 - trigger 2: a stimulus that initiates a physiological or pathological process - catalytic conversion -

- I own (revel, enjoy, command) the (standard) references...  
 I embody, incorporate standard (original, pattern, type, archetype, exemplar, measure, model, mirror) references (connection, concern, warrant, citation, evince, indicate)  
 - always relevant and prevalent

Call (to stand & point) & Recall  
 - present -  
 - represent → re + present  
 a "way with words"

Call Out!...  
 conversion cascade...  
 a call -  
 to action

- coin a phrase (coin token) - currency

- play on words

- turn of phrase

- coin a new catchphrase

- indoctrinate: vt: to instruct esp. in fundamentals or rudiments; TEACH 2: to imbue with a usu. partisan or sectarian (narrow) opinion, point of view, or principle  
 partisan - 1: a firm adherent to a party, faction, cause, or person; esp. one exhibiting blind, prejudiced and unreasoning allegiance  
 diversity overcomes indoctrination  
 "Tell me something you will do... when you can do a thing like that book, do this, how can you possibly do anything else?" can you do anything else?

pivot  
 pivotal

→ from The Philadelphia Story

- Hansel & Gretel - used a trail of bread crumbs to mark their path as a way to find their way 'out of the woods'  
 → to escape peril or difficulty → ignorance is the most loathsome disease

\* - Terence - "Homo sum, humani nihil a me alienum puto", or "I am human, and nothing of that which is human is alien to me."  
attempting to fill out lives up vs. living a full life... I asked for all things... living a full life vs. excessive consumption... trying to fill out lives up

- the signs are everywhere → "waypoints" → the narrow path or way (back) to our selfhood (all the things that make a person what he is; personality or individuality)  
 → Let nothing human be alien to me!

value  
 gap  
 analysis

distinction - the quality or state of being worthy → DIVISION: DISCRIMINATION: DIFFERENTIATION  
 "Draw a distinction" G. Spencer-Brown → DAB "I suspect..." → Initiative (Initiate)

typical - conforming to a type (one kind → kindred → kin) SYN: REGULAR → anti: distinctive  
creation - universe - materialized creative consciousness

- It from bits → it (the big picture) from bits (of information) → signs & indicators → patchwork of presentations to weave the bits together to reveal the emergent image → the big picture → you are here! reality check adventure training...  
 the big picture emerges

Grand Unification resonates - proximity & inclination - exaltation - of a mental state or reintegration - intensification - the power of a function

Vessel... resonant cavity... intensified and enriched by a relatively small periodic stimulus... "our adventures and misadventures provide the continuous successive application of the necessary stimulus... experimentation, observations, and experiences... impact imparts excitation... we long for contact, connection... "We want to be

token triggers... profound articulations impact statements...

loved; failing that, admired; failing that, feared; failing that, hated and despised. At all costs we want to stir up some sort of feeling in others. Our soul abhors a vacuum. At all costs it longs for contact. "What pops out was unstable. What settles out was stable." ... suggest, accept, reject, cast-off... The power of suggestion stimulates resonance (Kindred temperament... resonate with) Who you resonate with... define... identify... pure find! Kindred Soul... tune-up: a general adjustment to ensure operation @ command performances... peak experiences... tuned cavity... vessel... soul... creating resonance (natural reinforcement)... intuitive inspired action calibrated to produce intended results... conversion... What you resonate with you attract... resonance is not dependent on empirical evidence... it's source is the quiet knowing that what you want is manifesting... becoming the observer of you workplaying the art and science of your craft... crafting practice!

the casting of spells... tuned resonant cavity... Vessel... the power of suggestion

resonance is a constant... harmonic reinforcement that builds exponentially is a contingent variable...

A private consulting investigator... a private eye... ref. third eye... aware... It's not that I know more than others, it's that I ignore less... signs and indicators... significance assessment... occasion, phenomenon, event... occasion... excitation... stimulus... resonant ring... calling... if resonates... then crossing... conversion factors = proximity & inclination... command qualified factors = character & competence "I'm just look'n for clues at the scene of the crime. Life's Been Good Joe Walsh

powers function

resonant ring of truth! - Henry Thomas Buckle said, in his dogmatic way: "Men and women range themselves into three classes or orders of intelligence; you can tell the lowest class by their habit of always talking about persons; the next by the fact that their habit is always to converse about things; the highest by their preference for the discussion of ideas."

Intelligent people talk about ideas. Average people talk about things. Small people talk about other people. || Extraordinary people talk about ideas. Ordinary people talk about things. Small people talk about other people.

- illuminati: persons (practitioners) who are or claim to be unusually enlightened - satori: a state of intuitive illumination sought in Zen Buddhism (Japanese). intuition [to look at, contemplate]; illumination: spiritual or intellectual enlightenment

I string things, thoughts, ideas, concepts together... string theory... juxtaposition relational genius... companion spirit... each and every soul represents a unique opportunity for the embodiment of pure consciousness... "supreme and unalterable Reason... Truth, the greatest of all treasures"... "perfect love, which transmutes all that is base and "raises" all that is dead."

- convert - converts live @ base e.g. sex & money null and void of... without effect - contact, connection, impact, resonance

of a mental state or the power of a function to expand the depth of treatment... an experimental condition... resonant ring of truth... call out... sounding... depth of identify with... including themselves / egocentric... fear & doubt... fear & trembling... perfect love knows no fear... he is his heaven...

e.g. → assert one's rights... equal human rights!  
 transcending ordinary experience and knowledge that asserts the primacy of the spiritual - consciousness and the transcendental over the material and empirical...

- drugs used as a catalyst of transcendent event, experience (occasion)

↳ transcendent - to rise above, beyond ordinary experience, existence

- "... the flaming cherubic sword, the flaming spirit fire with which the miracle of my existence was wrought." (satori - a state of intuitive illumination sought in Zen Buddhism)

↳ the magic of invocation → invoke [to call - more @ VOICE] | ai: to petition intellectually or spiritually enlightened

'call out... ASOS. For help or support 2: to call forth by incantation: CONJURE 4: to put into effect or operation: IMPLEMENT 5: to bring about: CAUSE → The power of suggestion!

- states or forms ... water: solid, liquid, gas → liquid is the bridge state or form

Matter  
 ↳ > soul - properly clothed spirit in the flesh - bridge state or form  
 Spirit - consciousness (carrier) ... governing dynamics ... infinitely dynamic and non-material ... field of infinite extension no-thing

The Bridge Function

If an individual accepts the premise of the suggestion, then they are cast into a role that supports the premise.

SINGULARITY

- There is only one null set, This is because there is logically only ONE way that a set can contain nothing (no-thing). = "mu" (mu = not, nothingness)

∅ = (is) the zero crossing point of demarcation between constructive or destructive interference of a linear power function ... 1+1=2 intensity is a non-linear powers function... 2^4 = 16

- The empty set is a subset of every set.  
 - The empty set is the set containing no elements. In mathematics, and more specifically set theory, the empty set is the unique set having no elements; its size or cardinality (count of elements in a set) is zero.

- All its boundary points (of which there are none) are in the empty set, and the set is therefore closed; while all its interior points (of which there are again none) are in the empty set, and the set is therefore open. Moreover, the empty set is a compact set by the fact that every finite set is compact.

I suspect... exceptions of which no distinction can be discerned... continuum...

matrix  
 null set → empty set → infinite extension → continuum  
 extension 2a: the total range over which something extends: COMPASS  
 continuum 1: something (as duration or extension) absolutely continuous and homogeneous of which no distinction of content can be affirmed except by reference to something else (as numbers) 2a: something in which a basic common character can be detected in a series of imperceptible variations (the ∞ of consciousness) continuum "Draw a Distinction..."

BONDED PAIR

scope: ∞ = 1 singularity  
 1+1=2 multiplicity range



Infinite potential, possibility → ZERO probability  
 potential emergence ... Being @ REST  
 "... a universe comes into being when a space is severed or taken apart." - from Laws of Form - G. Spencer-Brown

Infinite potential, possibility → Variable probability  
 To be is to be a value of a variable...  
 The essence of being is becoming...

Big Bang... emergent becoming  
 excitation imparts impact = double  
 ↳ stirred up... impact imparts excitation... carry  
 We are moved... true power is ... Active

Boundary = Complexity  
 ↳ Complex Singularity

incantation: a use of spells (DAB The Casting of Spells) a written or recited formula of words designed to produce a particular effect...

↳ @ REST... Passive...

intelligence, intent impressed upon the carrier... the carrier becomes excited by the signal... propagation...  
 bonded pairs twin rays pair... yoke equal

The casting of spells...  
 The power of suggestion... The casting of roles...  
 If an individual accepts the premise of the suggestion, then they are cast into a role that supports the premise... supporting role... supporting cast...



## null set

In mathematical sets, the null set, also called the empty set, is the set that does not contain anything. It is symbolized  $\emptyset$  or  $\{ \}$ . There is only one null set. This is because there is logically only one way that a set can contain nothing.

The null set makes it possible to explicitly define the results of operations on certain sets that would otherwise not be explicitly definable. The intersection of two disjoint sets (two sets that contain no elements in common) is the null set. For example:

$$\{1, 3, 5, 7, 9, \dots\} \cap \{2, 4, 6, 8, 10, \dots\} = \emptyset$$

The null set provides a foundation for building a formal theory of numbers. In axiomatic mathematics, zero is defined as the cardinality of (that is, the number of elements in) the null set. From this starting point, mathematicians can build the set of natural numbers, and from there, the sets of integers and rational numbers.

From Wikipedia: Additionally

By the definition of subset, the empty set is a subset of any set  $A$ . That is, every element  $x$  of  $\emptyset$   $\{\displaystyle \varnothing\}$  belongs to  $A$ . Indeed, if it were not true that every element of  $\emptyset$   $\{\displaystyle \varnothing\}$  is in  $A$ , then there would be at least one element of  $\emptyset$   $\{\displaystyle \varnothing\}$  that is not present in  $A$ . Since there are *no* elements of  $\emptyset$   $\{\displaystyle \varnothing\}$  at all, there is no element of  $\emptyset$   $\{\displaystyle \varnothing\}$  that is not in  $A$ . Any statement that begins "for every element of  $\emptyset$   $\{\displaystyle \varnothing\}$ " is not making any substantive claim; it is a vacuous truth. This is often paraphrased as "everything is true of the elements of the empty set."

## Operations on the empty set

When speaking of the sum of the elements of a finite set, one is inevitably led to the convention that the sum of the elements of the empty set is zero. The reason for this is that zero is the identity element for addition. Similarly, the product of the elements of the empty set should be considered to be one (see empty product), since one is the identity element for multiplication.

A derangement is a permutation of a set without fixed points. The empty set can be considered a derangement of itself, because it has only one permutation ( $0! = 1$   $\{\displaystyle 0!=1\}$ ), and it is vacuously true that no element (of the empty set) can be found that retains its original position.

Internal Anchors  
Standard References

Choice of 1st Magnitude  
Standard of Measure

I came to view these proper grounds as a foundation comprised of 'Standard References' that serve us in three primary ways. First and foremost, they are the principles and priorities that our lives revolve around and through which we project recurring patterns, our daily routines. Secondly, they comprise the 'fulcrum' that we can leverage against that will hold firm against the resistance of any load. Lastly, they become the 'anchor points' that our 'lifelines' are connected to. I further surmised that these 'Standard References' are of three fundamental forms from two distinct sources. I term the intrinsic source 'Internal Anchors' and the extrinsic source 'External Validation'. *External Pressure, External forces*

The first of the three forms is the 'natural' form. This form of 'Standard Reference' represents our inherent character, disposition, and temperament. It is primarily different from the other two forms because it is timeless. These 'references' spring from the very essence of our being and are a part of our lives for the duration. They are the foundation of intimacy with self because they are inclusive of the 'gifts', the talents and abilities that have been 'entrusted' *we have entrusted* to us. They are unique in our individual capacity to develop and give rise to their expression and impact.

The second form is the *conditioned* *→ entanglement* form. This form is based on our experimentation, observations, and experiences and therefore relates to the timeline of our life and times. *adventures & misadventures*  
*emergent* *events... eventline... occasions*

The third form is the *conditioned* form.

\*\*\*\*\*

This topic becomes a question of 'Internal Anchors' verses 'External Validation'. Are we, as individuals, inclined to rely upon the standards that we choose to uphold and support to guide us in our thoughts and our actions, or do we instead act to seek the approval of, and therefore validation from, others? *External Pressure*  
*External Forces* *pressure points... most failures are the result of misapplied stress(es)*

I wonder how much room there is for individuality and personal growth and development if we are inclined to rely upon 'Eternal Validation' to guide us in our thoughts and our actions. Individuals may fear that if they are different, they will be singled out and excluded from the group. Another symptom of reliance on 'External Validation' is the inability to peacefully disagree with someone. When an individual relies on 'External Validation' it becomes difficult to disagree with others and take a stand on their own.

The concept of 'External Validation' relates to the phrase "*herd mentality*".

*"Herd mentality describes how people are influenced by their peers to adopt certain behaviors, follow trends, and/or purchase items."*

A phrase coined by Friedrich Nietzsche, philosopher  
From Wikipedia

It is generally believed that "*herd mentality*" relates to fear and is often the response to a feeling of panic. Individual members of a herd may fear that if they are different, they will be singled out and excluded from the group.

*preyed upon*

Another symptom of reliance on 'External Validation' is the inability to peacefully disagree with someone. When an individual relies on 'External Validation' it becomes difficult to disagree with others and take a stand on their own.

In recognizing the need to establish proper grounds, the first concept that came clear was that of the references that our lives revolve around. I chose to term these references 'Internal Anchors' and came to realize that these references serve us in three fundamental ways.

The first way these 'Standard References' serve us is as the references our lives revolve around and through which we project recurring patterns, our daily routines. I further surmised that these 'Standard References' take ~~two~~ <sup>three</sup> fundamental forms from two distinct sources.

The first way these 'Internal Anchors' serve us is as 'Standard References'. These are the references our lives revolve around and through which we project recurring patterns, our daily routines. These references can take the form of

The first way these 'Internal Anchors' serve us is as 'Standard References'. In some respects, this becomes a question of 'Internal Anchors' verses 'External Validation'. Are we, as individuals, more inclined to rely upon the standards that we uphold and support, or upon the approval of others, as a guide to our thoughts and our actions?

The references comprise our current 'frame of reference', our mindset, our notions about the world and our role in it. This includes our current vision, values, and priorities that our lives revolve around and through which we project recurring patterns, our daily routines. If we have engaged in the quest of enlightenment and through a process of self-exploration, self-discovery, and self-actualization, and have established our 'Standard References' upon the rock of enduring and endearing principles, then we begin to approach a state of 'unalterable reason'. This is an exalted state of conversion from relying upon the approval of others as external validation to becoming self-reliant upon our internal anchors.

supreme and  
unalterable  
reason

This is about questioning our vision, our values, our principles, in short, questioning the references our lives revolve around.

We form our vision guided by our values and are thereby guided in the process of narrowing the boundaries of the solution set of options we can choose from to satisfy the conditions that will enable that vision.

This relates to the structure of a 'constellation of concepts'. If we share common values, then even if our visions are not a shared vision, our individual visions should still hang together because they are based on common values.

Acquisition brings a temporary feeling of fulfillment (ref. sex, money)

*"Insanity is continuing to do the same things and expecting different results."*

Awakening awareness of pattern recognition and interference patterns of reinforce/diminish probability amplitude. Closer approximation of and a continual narrowing of the boundaries of the solution set of the enduring and endearing principles and practices.

*"It is unnecessary to assume that participants have full knowledge of the total structure of the game, or the ability or inclination to go through any complex reasoning process. But the participants are supposed to accumulate empirical information on the relative advantages of the various pure strategies at their disposal."*

I wish to make this clear as a part of this invitation to others. If they are at rest, and they engage in this quest through consideration or contemplation of this material, it may stir up a discontentment. It has, by some, been referred to as 'divine discontentment', ~~and may stir~~ a discontentment that there is no turning back from.

Detect - to discover or manage to perceive something hidden or lost to notice - something hidden or lost to notice. Can lead to inquiry → investigation  
vet = investigate to discover

Some of this is reflected in the consideration of living an ordinary life as opposed to an extraordinary life. A bit part verses a central role. *ordinary life → supersizing*  
*the ordinary → extraordinary life*  
The value of becoming aware of the options that are available to us.

### The Fulcrum for Leverage

\*\*\*\*\*

### Steadfast as an Anchor

\*\*\*\*\*

The impact of information, observations, or experiences can result in a stirring and we become moved. This is the moment of the thrill of it all that I referred to in the segment about how we steer the 'course of human events' by affecting the 'course of thought'. We get stirred up. We become aware that we have some work to do. We seek the knowledge and guidance necessary to return to our 'rest state'. Practice makes our work easier and playful. We begin to structure our knowledge and understanding of our activities and 'master' our practice and are at rest in our 'command' of it. We begin to share and direct others in their quest for knowledge and guidance and thereby fulfill our responsibility of becoming as a 'Luminary' to others. This is an *'chain of custody'* opportunity to bear witness. To cultivate and reinforce what is best and highest in others and ourselves.

\*\*\*\*\*

*→ 'chain of custody'*  
The presence of our performance is our contribution to the world. If benefit is derived from our performance, then this is to our credit. No one can do this work for us. Others can help us understand the value of possessing the proper tools, and if we don't have the proper tools, help *guide* us (guidance) to acquire the proper tools. However, the acquisition of the necessary skills can only be the result of our individual efforts.

Some of this is reflected in the consideration of living an ordinary life as opposed to an extraordinary life. A bit part verses a central role.

\*\*\*\*\*

\*\*\*\*\*

What are internal anchors if not enduring and endearing principles, the foundation of our values, the values that guide our actions?

I was able to discern that the nature of our relationship to the inherent system and other beings we share this condition with consisted of primary factors:

**Current** - as in 'frame of reference' (now going on, commonly or generally accepted, current worldview)

**Conductor** - as in active or passive participant - leader or one in charge; that which carries or conveys a charge (command, to entrust with a duty or responsibility) → *Producer → Director*

**Insulate from the current** - proper insulation will protect you from direct contact with the current.

**Establish Proper Grounds** - as in 'enduring and endearing principles and practices'. Proper grounding will create a low resistance path for the current to travel rather than you becoming a conductor. If you become a conductor, the path of low resistance, the current can cause shock

and burning. The flow of current, not the potential, can cause injury. The current required for a fatal shock is small.

I was not properly insulated to prevent becoming a conductor. I needed to establish proper grounds.

Threesome:

1 - Choosing the references our lives revolve around thereby project recurring patterns as our daily routines.

2 - Become the fixed points that our lifelines are attached to, how we are able to stay grounded, meant to be steadfast as an anchor. If we need to make a stand, find firm footing, <sup>fulcrum point</sup> then we follow our lifeline back to those references. *warp → return to a state of rest*

3 - Foundation of our 'fulcrum' point that we are able to leverage against as when we have a task to engage (taskmaster).

Tools (proper tools) allow you to lift or move a load far beyond your normal capacity (e.g. lever). In order to accomplish this feat you will rely upon being able to leverage your own strengths through this lever, through this tool, and lift this load that is far beyond your normal capacity. However, with that said, there are three points of contact during this work, the point where your hands transfer the force you apply against the lever, the point at which the lever applies force against the load, and the point at which the lever applies leverage against the fulcrum which is the point of unyielding support upon which the actual work of leverage takes place (this relates to the line from the natural, "Rely too much on your own gifts and you'll fail." The words "your own gifts" can be seen to refer to your strength that you apply to the lever at your point of contact. But if you have not established the point of contact upon the rock of enduring and endearing principles as the fulcrum or you have chosen a load that is unworthy, then you are bound to fail).

If the fulcrum point is solid, firm, fixed (established upon proper grounds, true) then you can rely upon it to leverage against it. However, if the fulcrum is founded upon half-truths or falsehoods, it's going to give way and collapse under the load. This is where the value or importance of the standard references comes into play. This relates one of the many ways these enduring and endearing principles and practices are worthy of our attention. Enduring means that you can rely upon them, they are tried and trued and are a predominant factor. Endearing relates to the hierarchy of desire that the character D. Glas so eloquently shared in his statement, "We want to be loved, failing that..." The more well founded we are in our values, in our guiding principles, then the easier it will become to establish and maintain endearing and enduring relationships. These factors directly impact the 'failure rate' as in "failing that". On the other hand, if you're well founded and your activities are guided by these principles then you are less likely to experience a high failure rate both in your tasks and your relationships. This insight into the foundation upon which we found and thereby establish our practice is some of the most valuable information I can share in both the 'Reality Check' part of this offering and in the 'Adventure Training' part, not only because our practice is founded upon them but also because they are as a guide to our actions, how we conduct our affairs. This constitutes another example of a 'double carry' and the impact and influence that these choices have upon the quality of our experiences and the results we produce is exponential in their effects. This can be seen to relate back to the 'Enlightened Holistic Perspective', which provides insight into the true nature of our existence but also helps you to inventory your tools and through your practice to develop your skills in applying these resources and utilizing these strengths and the power of these truths to accomplish, produce, or create the results you choose.

So...we have to be careful that an option that is likely to produce an outcome that seems desirable does not require us to engage in acts that are contrary to our values. If the option requires certain conditions to be satisfied that would require acts that are...It can be the case that certain conditions that may be required to exercise that option would require acts that are counter to our values. In order to exercise that option, our values would become corrupted and therefore we would become corrupted...~~and is something we would be likely to value.~~

External Forces

IAEF2-4

Storms of Circumstances

\*\*\*\*\*

Beware...Drama Alert!

\*\*\*\*\*

The Imposition of Expectations

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

*conflict of forces... human conflict... competing ideologies*

What are external forces if not storms of circumstances? The external threat <sup>to</sup> of all that we have constructed, the structure of references our lives revolve around and through which we project recurring patterns as our daily routines, our daily walk.

Having a vision, identifying (establishing) our values, and then identifying the conditions that must be satisfied in the conditional array. Internal anchors refer to establishing the proper grounds of enduring and endearing principles, the foundation of our values. Upon this foundation we begin to construct our vision, the life we imagine <sup>for</sup> ourselves founded upon our values. If we share in common with others this set of values then we have a foundation upon which to build a common vision. This relates to the concept of a constellation of concepts, how they all hang together and mutually support one another. This is the basis and foundation of a shared 'rally point'. Like building a structure; first we lay our foundation, the completion of establish proper grounds of shared values, then we put it under roof, that is our vision, then we trim out which is the details of our plan of action (action plans) that I term the conditional array. All of this is to stand firm against external forces like storms of circumstances. In other words, if we have established proper grounds, if we have a firm structure and we have a good roof on it, a vision that is feasible, attainable, then the external forces can do their worst and it will proof out, it will run true, it will hold fast against the forces that would bring it to ruin and complete and absolute collapse.

This returns to the analogy of the house of cards, building <sup>on sustainable</sup> on the sand of carelessly thought out values, and a vision that is not feasible or attainable, something that is not supported by strongly held values or a passionate commitment and therefore convictions and the actions are hurried lacking the time and attention <sup>to</sup> of detail required to be a work of true craftsmanship, and so the inclusive approach that would be employed by a craftsman that would result in a strong structure has been neglected and instead an exclusive hurried and careless approach has been employed in which many important or decisive factors have been omitted or neglected <sup>ignored</sup> resulting in a weakened structure that is at risk of collapse.

This comes back to the house of cards because as soon as we do that we are building on sand, we are building a house of cards and the first storm of circumstance that comes along our house of card falls and is in a state of utter collapse. This is why it is essential to be guided in our actions by our values. Not only while forming our vision, but also while identifying what options we can exercise to satisfy the conditions that enable the outcome while closely adhering (remaining true) to our values.

We live in a system of feedback loops where we continually experience the results and consequences of our choices and the choices of others, both individuals and entities of collective actions.

*individuals → governmental  
legal fictionals corporate  
artificial intelligence organizational  
N.G.O.*

*challenged*

We can at times be prompted to question our internal anchors by other individuals (challenged) or by storms of circumstances. This is both an opportunity to engage in and experience a cycle of further growth and development and/or witness the established references run true and provide empirical verification of their validity.

If a set of circumstances comes along (current events, storms of circumstances) and we are swept away in the currents of very challenging or detrimental circumstances, it is our lifelines that we rely upon to be able to exercise command over the circumstances and 'warp' ourselves back into a state of rest, to be at peace, to be at rest (rest state).

If the references that we have established as our anchors are enduring and endearing principles, then they are going to hold fast, steadfast as an anchor. If our lifeline is attached to a half-truth or a falsehood, then under enough strain or stress it is going to give way and we are going to be set adrift. At that point you are struggling against the undertow of the current in an attempt to find the truth and attach your lifeline to it and grasp the lifeline that leads to that fixed point that is steadfast as an anchor and warp yourself into a position of rest in safe harbor at safe anchorage. These lifelines can be seen as a single line, but as more and more of our principles become fixed the lifelines reinforce one another until they become like threads that are woven together to create an enduring strength. The 'dwell angle' of cycles where we become unsettled or get stirred up become contracted. When we are young and have a lot to learn the cycles can be longer and more intense. However, as we become more mature, more enlightened, well-grounded, founded in our principles and practices by becoming more intimate with our true self (personal resolve of narrowing the boundaries of our personal solution set) and instead of a single or a small set of fixed references or standards of reference, they become constellations, we become more and more stable on the rock that we make our stand upon and that is our rally point. It becomes more expansive and therefore more stable. The 'dwell angle' of the cycles become less intense and shorter and the length of our sustained rest state become longer. If current events attempt to sweep us away, displace us, get us stirred up, then as we mature, through self-discovery, become more self-actualized, then we have handfulls of lifelines and we are able to warp ourselves back into the position of being at rest fairly easy.

This comes back to the house of cards because as soon as we do that we are building on sand, we are building a house of cards and the first storm of circumstance that comes along our house of cards falls and is in a state of utter collapse. This is why it is essential to be guided in our actions by our values. Not only while forming our vision, but also while identifying what options we can exercise to satisfy the conditions that enable the outcome while closely adhering (remaining true) to our values.

This topic becomes a question of 'Internal Anchors' verses 'External Validation'. Are we, as individuals, inclined to rely upon the standards that we choose to uphold and support to guide us in our thoughts and our actions, or do we instead act to seek the approval of, and therefore validation from, others?

I wonder how much room there is for individuality and personal growth and development if we are inclined to rely upon 'External Validation' to guide us in our thoughts and our actions. Individuals may fear that if they are different, they will be singled out and excluded from the group. Another symptom of reliance on 'External Validation' is the inability to peacefully disagree with someone. When an individual relies on 'External Validation' it becomes difficult to disagree with others and take a stand on their own.

The concept of 'External Validation' relates to the phrase "*herd mentality*".

*"Herd mentality describes how people are influenced by their peers to adopt certain behaviors, follow trends, and/or purchase items."*

A phrase coined by **Friedrich Nietzsche**, philosopher  
From *Wikipedia*

It is generally believed that "*herd mentality*" relates to fear and is often the response to a feeling of panic. Individual members of a herd may fear that if they are different, they will be singled out and excluded from the group.

Another symptom of reliance on 'External Validation' is the inability to peacefully disagree with someone. When an individual relies on 'External Validation' it becomes difficult to disagree with others and take a stand on their own.

In recognizing the need to establish proper grounds, the first concept that came clear was that of the references that our lives revolve around. I chose to term these references 'Internal Anchors' and came to realize that these references serve us in three fundamental ways.

The first way these 'Standard References' serve us is as the references our lives revolve around and through which we project recurring patterns, our daily routines. I further surmised that these 'Standard References' take ~~two~~ fundamental forms from two distinct sources.

3

The first way these 'Internal Anchors' serve us is as 'Standard References'. These are the references our lives revolve around and through which we project recurring patterns, our daily routines. These references can take the form of

The first way these 'Internal Anchors' serve us is as 'Standard References'. In some respects, this becomes a question of 'Internal Anchors' verses 'External Validation'. Are we, as individuals, more inclined to rely upon the standards that we uphold and support, or upon the approval of others, as a guide to our thoughts and our actions?

The references comprise our current 'frame of reference', our mindset, our notions about the world and our role in it. This includes our current vision, values, and priorities that our lives revolve around and through which we project recurring patterns, our daily routines. If we have engaged in the quest of enlightenment and through a process of self-exploration, self-discovery, and self-actualization, and have established our 'Standard References' upon the rock of enduring and endearing principles, then we begin to approach a state of 'unalterable reason'. This is an exalted state of conversion from relying upon the approval of others as external validation to becoming self-reliant upon our internal anchors.

This is about questioning our vision, our values, our principles, in short, questioning the references our lives revolve around.

We form our vision guided by our values and are thereby guided in the process of narrowing the boundaries of the solution set of options we can choose from to satisfy the conditions that will enable that vision.

This relates to the structure of a 'constellation of concepts'. If we share common values, then even if our visions are not a shared vision, our individual visions should still hang together because they are based on common values.

JAEFI-1



-cardinal-

This is a moment of awakening that changes forever our perspective of the world. It is a turning point, and our insight into and understanding of all future events are hinged upon it. It is a moment of conversion from an unconscious state of ignorance to a conscious state of knowledge, an awakening awareness "full of actuality". This is the force of impact I refer to with the term 'Cardinal Awakenings'. -conversion-

An awakening can initiate a process of 'exaltation', which is a non-ordinary intensification of a mental state or the power of a function. The initiation into this process of exaltation cascades into many elements that can lead to living an extraordinary life, the first order of which can be the intensification of a mental state that relates to an expanded consciousness. This mental state is inclusive of an intimacy with our true self and an expanded awareness of the options that are available to us from which we can choose. The intensification of the power of a function is inclusive of having established proper grounds upon the 'fulcrum' of enduring and endearing principles and having engaged in a practice to develop our skills for utilizing the 'lever' of enduring and endearing practices. A well-founded practice is the basis of an intensified power of the 'Bridge Function' through which the participant is afforded the opportunity to become self-actualized and live in a state of personal empowerment.

The secret of suggestion... The casting of spells... The casting of roles...

The enduring and endearing principles and practices are always relevant and prevalent (predominant, triumphant). Relevant in that they always relate to everything that is happening at all times and therefore are applicable and prevalent in that they always prevail. My discernment of the potential value of these enduring and endearing principles and practices led to my passion for and quest of intimate knowledge, understanding and wisdom of them.

As I stated on my home page, "It's not that I know more than others, it's that I ignore less." What I'm attempting to broach here is not easily approached without the possibility of admonishment. This is because my approach involves the term 'occultation', a term used in astronomy to describe the shutting off of light of one celestial body by the intervention of another, especially an eclipse in which the apparent size of the eclipsed body appears smaller than that of the eclipsing body as when the moon eclipses the sun. This relates to the statement I made that, in my opinion, the vast majority of individuals live in a beguiled state. We continually forfeit what is of greater value for what is of lesser value, all the while being misinformed, misdirected, and misled about the true value of what we forfeit. This is the function of the occultation. The apparent or perceived value of what is greater is diminished by mere proximity to or familiarity with the lesser.

The word occultation relates to the word occult and can implicate meaning that I do not intend. The concept I am approaching relates to the term 'initiate', a person who is instructed or adept in some secret knowledge. This secret knowledge, with respect to my 'ontological map of the human condition', refers to knowledge that is hidden from view or lost to notice.

An awakening can initiate the process of 'exaltation', however, the participant must choose to engage the quest that the opportunity affords them and therefore remains the 'Choice of 1<sup>st</sup> Magnitude'. Bearing in mind that the 'initiate' must 'choose' the 'path' that leads to 'enlightenment', I present this material as an invitation to others to entertain it. I am not asking others to believe it is true or that there is value in it. I am inviting others to consider it and I am challenging them to attempt to falsify the claims I make through their own experimentation, observations and experiences. In other words, through establishing their practice in it. This acts to shift the source of 'enlightenment' from the individual who is sharing as a link in the 'Chain of Custody' to the eternal source of enduring and endearing principles and practices whose value, impact, and utility is in application only. The practical value is not inherent in becoming aware, just knowing represents potential value only. The actual or true value is in doing something with what you know. The participant's willingness to apply the information through their personal performance is the only means of converting the potential value to true or actual value. When someone applies enduring and endearing principles and practices, they can derive benefit from it and that is to their credit. No one can do the work for you; it is work you must perform for yourself. -conversion-

Consider

If we fail to act on our awareness of the impact we can have on our quality of life and the quality of experiences we radiate into the world around us, then we may experience feelings of discontentment. This is one of many perils that face a participant who attempts to live a life of 'half-measures', as in a journey you travel half way to your destination and then attempt to return to from whence you started. The intensity of discontentment experienced by participants who fail to act on what they have become aware of is sometimes referred to as 'divine discontentment'. As a link in the 'Chain of Custody', I endeavor to share the best of what has been shared with me by rebroadcasting the message. I am not attempting to do for anyone else what has not in many respects been done for me. My intent therefore, is to serve as a continuation in an unbroken 'Chain of Custody'.

In my view, Albert Einstein reflects this intention in his essay *The World As I See It* in his own way with these words:

*"A hundred times every day I remind myself that my inner and outer life are based on the labors of other men, living and dead, and that I must exert myself in order to give in the same measure I have received..."*

From *The World As I See It*  
An Essay By Albert Einstein

IAEFI-2

## Awakening Awareness

### Awoke With A Start

Have you ever woke with a start, a sudden awareness of something whose impact is startling? I have experienced this awaking awareness many times during my life and times. Some experiences so ordinary, yet fresh when first impressed upon the conscious mind of a child or someone who is uninitiated. Seemingly ordinary events that later, during a moment of insight or inspiration, take on a deeper sometimes extraordinary meaning. Some events so extraordinary, the awakening is ageless and can stir the imaginations of even the eldest. As I reflect upon my past adventures and misadventures, I consider some of my acts, my performances, were to accomplish nothing more than to leave questioning in the minds of others. A wondering that maybe they don't know the 'whole truth'. That even in the waning moments of our lives there may still be great wonders and insights to behold. I wonder if such moments are meant for exploring, discovering, becoming intimate with, and giving expression to what is highest in ourselves.

As I said on the home page, an awakening awareness begins to replace the bliss of the infinite with knowledge of the finite. We exist, in human form, for a finite span of time. This is the life and times, the adventures and misadventures, that we share... 'Our Watch'. You and I are here... Together! Life is a journey that we sojourn, and the further along the path we travel; the more we realize how short that journey actually is. This prompted me to contemplate and seek the highest calling I could devote my life and times to, which led me to my quest for enlightenment.

### Command Performance

During their lifetime, some individuals travel merely a short distance upon the path to enlightenment, oftentimes in lurches of starts and stops. Others travel great distances, and sometimes it seems they do so by quantum leaps balanced by periods of stillness, rest, or quietude follow by another quantum leap. Still others are slow and steady and travel great distances based purely on their persistence. All of this relates to how aware we become in our lifetime. The first order of this awareness is the intimacy of "know thyself", which is the basis of wisdom, the proper use of knowledge. As we become aware of the options that are available to us, wisdom allows us to fathom the results that any given option is likely to produce and enables us to assign it a weighted value. Is the option probably attainable considering the resources we can commit and is it feasible given the principles and values that we uphold and support?

For me, one of the most startling realizations about the discipline of enlightenment was that it could be learned. And as previously quoted, that an individual's personal development is guided by and contingent on; "...self-sufficiency, not depending for the fulfillment of what is highest in himself, on other men or opinion or on accidents such as birth or election to power, on anything that can be taken from him..."

Another insight led me to appreciate that our personal development is meant to become a lifelong practice, the highest path being a lifelong pursuit of the infinite possibilities that our presence represents. And finally, I realized this discipline, the art and science of crafting yourself and the world around you, could be taught. We can choose to become a 'Luminary', as a beacon to others, and serve to light the way of the highest path that leads to enlightenment and personal empowerment. To cultivate and reinforce what is best and highest in others and ourselves.

initiative...  
it cannot  
be taught...  
it can be  
acquired...

### The Rock Of Ages

In order to engage in a well-founded practice, I realized there were at least two conditions that I needed to satisfy. I needed to insulate myself from the current worldview so I would not become conformed to it, and I needed to establish proper grounds upon which to found and establish my practice.

## Internal Anchors

### Standard References

I came to view these proper grounds as a foundation comprised of 'Standard References', the principles and priorities that our lives revolve around and through which we project recurring patterns, our daily routines. This view relates to our current 'frame of reference', our mindset, our notions about the world and our role in it. I further surmised that these 'Standard References' take two fundamental forms from two distinct sources. I term these forms 'Internal Anchors' and 'External Validation'.

While the tools and techniques of statistics and probability theory grew from the need to describe and try to predict social phenomena and were then appropriated by the physical sciences during the nineteenth century, the natural and emergent social sciences were already drifting apart. The comment by the nineteenth-century German thinker Wilhelm Dilthey that "we explain nature but we understand human beings" pithily sums up the distinction and supposed differences in method that each required. More recently, it has been observed that:

The subsequently drawn distinction between the nomothetic (science-based general laws) and the idiographic (the uniqueness of the individual) seemed to complement Dilthey's distinction. That the uniqueness of the individual is the result of universal processes and mechanisms that can be understood within the framework of natural science is very much a 20th-century world view, and even now, at the start of the 21st century, is still not universally accepted.<sup>16</sup>

The emergent social sciences—and with them many humanities and the field of law—incorporated the mechanistic Newtonian worldview. However, two other factors impeded them taking up subsequent new scientific paradigms about how things happen. Firstly, beside the process of drift mentioned above, "recent social science has tended to adopt a psychological approach to understanding human behaviour, focusing on the ways in which individuals understand and respond to their social environment."<sup>17</sup> Secondly, handling knowledge became increasingly specialized as human understanding of the world expanded, leading to more compartmentalization—an approach that tends toward reductionist modes of framing and addressing problems.<sup>18</sup> Some, like the American biologist Edward O. Wilson, have argued that, in the domain of human study, the gulf between the natural and social sciences has become unhelpful in understanding some social phenomena.<sup>19</sup> New bridges need to be built between them, because each could help the other.

Even though recent developments have proved the limitations of the mechanistic approach, this model is still at the basis of our contemporary cultural education. Objectivism, reductionism, determinism and linearity are rational principles so deeply embedded that their validity is barely questioned. Human intuition suggests that effects happen in proportion to their cause, as already mentioned: if we make a small change to some system, we suppose that there will be a correspondingly small response in

the system's behaviour. In statistical physics and in the real world that is often clearly not the case: if, for example, a system is close to a phase transition, small changes can have tremendous effects.

The result is that sometimes we struggle with small changes having big effects as it can be deeply counter-intuitive to us. Even so, it remains intriguing to many people. A book by the journalist Malcolm Gladwell entitled *The Tipping Point* recently became a global bestseller.<sup>20</sup> Its sub-title was "How Small Things Can Make a Big Difference". Gladwell listed this as one of three characteristics of his conception of a tipping point, the other elements being contagiousness and that change in a "tipping point" situation happens not gradually but in one dramatic moment. In presenting his arguments and examples in pop culture terms (ranging from the fall in New York's murder rate to fads like the wearing of Hush Puppy shoes), Gladwell avoided statistical physics altogether. But his ideas did not surprise physicists and biologists who had been grappling with "tipping points" as part of non-linear phenomena for some time. It is to a basic physical understanding of non-linear phenomena that we now turn.

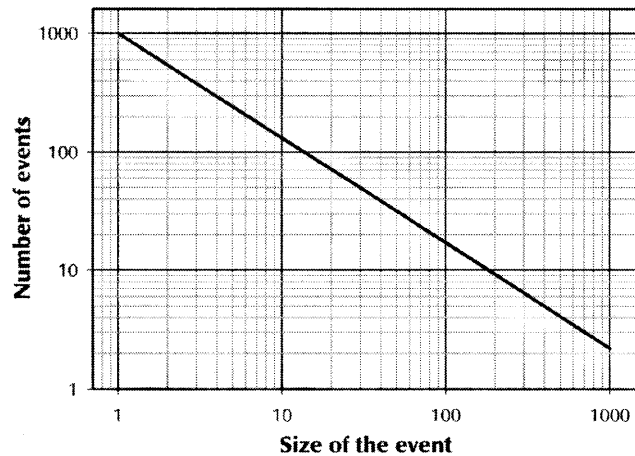
#### PERTINENCE OF A PHYSICS OF SOCIETY

Nature presents numerous examples of systems that apparently have little or nothing in common, but nevertheless behave in very similar ways. Phase transitions, for instance, occur between the solid, liquid and gaseous states of matter as well as in magnetic materials. Likewise, many natural phenomena such as earthquakes, forest fires and avalanches share identical regularities: their distribution follows a specific mathematical curve called a "power law", which appears as a straight line in a logarithmic-logarithmic plot (see Figure 7.1 overleaf).

This graph illustrates that the probability of occurrence of an event depends on its "size": small events happen often, events of moderate size happen sometimes and huge events happen rarely.

What is really striking is that the same kinds of regularity are also observed in social systems. Studies on wars, conflicts and acts of terrorism, for instance, have highlighted power law relationships.<sup>21</sup> It should come as no surprise that events killing one or a few people are a lot more frequent than events killing hundreds of people. But what a power law says goes beyond

that: by studying the history of a given war or conflict, it is possible to predict the probability of occurrence of an event depending on its severity in terms of number of people killed. In the case of the ongoing Colombian conflict between government, insurgent and paramilitary forces, for example, data shows that 20% of the events kill five people or more, 5% of the events kill 10 people or more, 1% kill 20 people or more, and so on.<sup>22</sup>



**Figure 7.1.** A power law represented in a logarithmic–logarithmic (log–log) plot appears as a straight line. In log–log graphs, both horizontal and vertical axes are plotted with a logarithmic scale. That simply means that the difference between two tick marks is not constant, but increases each time by a factor of ten. This kind of presentation is helpful when data covers a large range as it permits changes at different scales to be represented in the same graph.

This kind of distribution is not limited to war: power laws appear to fit such disparate social phenomena as financial market fluctuations, the populations of cities and word frequency in literature.

In recent years, many “agent-based models” have been developed and have proved to be very effective at reproducing observed social

behaviours.<sup>23</sup> One example is the American economist Thomas Schelling's model of the emergence of segregation in a society.<sup>24</sup> Schelling's simulations show that collective behaviour is not the linear extrapolation of many individual behaviours; it is more than that. Yet, a lot of people are still suspicious about the validity of such models because, contrary to particles, human beings have the power to make their own decisions. And, it is an understandable concern. However, as Philip Ball has noted, people are restricted in their actions in many situations because of a wide variety of factors like their immediate circumstances, social background or the limited range of choices available.<sup>25</sup> For instance, although we all have free will, many of us tend to want to drive our cars to and from work at similar times during the day, which can lead to traffic jams. Furthermore, we do not (generally) just decide to drive to our destination on the wrong side of the road. While we have free will, it operates within practical constraints.

of choices  
they are  
aware of...  
range of  
scope...

storms of  
circumstances...

A "physics of society" would help multilateral practitioners improve their understanding of what decisions lead to which type of consequence. At present, "Policy makers are all too prone to linear thinking: they assume that if we understand how an individual tends to think or behave, we can understand what a population will do."<sup>26</sup> Phase transitions, self-organized criticality, and complexity and network theories are key components to understanding those consequences. For that reason they are discussed next.

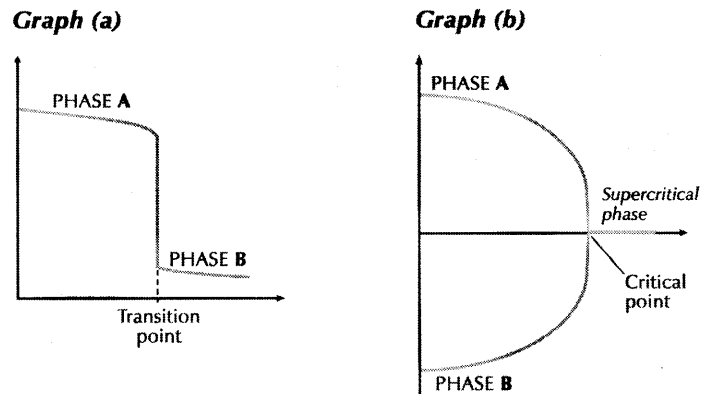
## SOME KEY CONCEPTS

### PHASE TRANSITIONS AND SELF-ORGANIZED CRITICALITY

A phase is defined scientifically as a homogeneous part of a system that has relatively uniform chemical composition and physical properties. The most familiar examples of phases are solids, liquids and gases; phases less familiar to most of us include plasmas, superfluids, as well as paramagnetic and ferromagnetic phases. During a phase transition, a system transforms itself from one arrangement to another: the particles constituting the system do not change—a particle of water stays the same whether the system is in a solid, liquid or gaseous state—but the collective form of organization is modified.

There are two main categories of phase transition: 1<sup>st</sup>-order phase transitions and 2<sup>nd</sup>-order (also called "critical") phase transitions. First-order

phase transitions, like solid–liquid–gas transitions, are characterized by an abrupt jump between two alternative global states of a system triggered by small changes (see graph (a), Figure 7.2). When the temperature of water is near 0 degrees Celsius, cooling it down just a little bit will turn water into ice. This is a clear example of a non-linear phenomenon: a small change in temperature has tremendous effects on the structure of the system. Another characteristic of 1<sup>st</sup>-order transitions is that they do not always happen under a unique set of conditions. It depends on the past history of the system—a point we will return to later.



**Figure 7.2.** Graph (a) illustrates a 1<sup>st</sup>-order phase transition and Graph (b) a critical phase transition.

When extended to the social sciences, 1<sup>st</sup>-order phase transitions are more than just a metaphor for talking about abrupt shifts in modes of human behaviour. Campbell and Ormerod, for example, have developed a mathematical model of criminality, which displays 1<sup>st</sup>-order phase transitions. Other models describing the shift between “high-marriage” and “low-marriage” society and the switch from free to congested traffic show 1<sup>st</sup>-order phase transition characteristics too.<sup>27</sup>

**Box 7.1. What do we mean by a system?**

The concept of "system" can be understood in several ways. The definition we refer to in this paper is the following:

A **system** is a combination of interrelated, interacting elements comprising a unified whole. Any element which has no relationship with any other element of the system cannot be part of that system.

Above a certain temperature, it is possible to transform a gas into a liquid without going through an abrupt change of the system. This kind of transition, called *critical phase transition*, happens in well-defined conditions of temperature and pressure, which vary from one fluid to another. The critical point is at which the distinction between the gas and the liquid phase disappears. In other words, the fluid can only exist in one state: neither gas nor liquid, but something in between (see graph (b), Figure 7.2).

The transition between a non-magnetic and a magnetic state is another example of critical phase transition. Above a certain temperature, the dipoles (or "spins") of the material randomly point either up or down, cancelling each other out. The material is not magnetic. But, if the temperature decreases, the system passes through its critical point, after which its magnetization increases progressively until all dipoles point in the same direction.

A critical point is therefore a place where a "choice" is made between two possible states, both being equally appealing: gas or liquid in the case of a fluid, pointing up or down in the case of a magnet. When it passes through its critical point, the system fragments into regions, which can be in either of the two states, the choice being made by pure chance. Power laws are the signature of systems in a critical state for the reason that the size of these regions follows a power law distribution. Putting it differently, the system consists of a huge number of small regions and a few numbers of very large ones.

Although heating or cooling a material to pass through a critical phase transition is easy, it takes careful fine-tuning of the temperature to maintain a magnet in a critical state. Because of this extreme sensitivity to

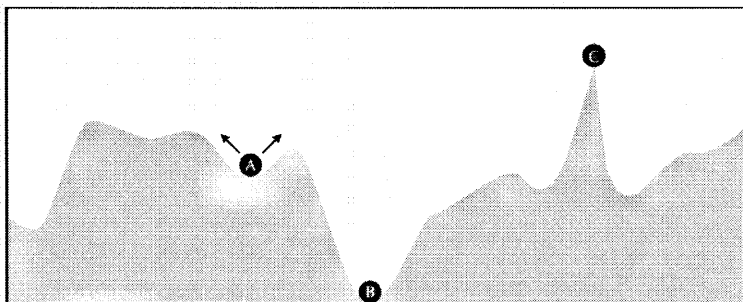


perturbations, events in one part of the system can have an instantaneous effect in any other part of the system. The interactions are transmitted from particle to particle over long distances, and all particles act together. This phenomenon is known as long-range correlation.

### Box 7.2. Energy landscapes

Energy landscapes are used as a mathematical tool to help grasp the dynamics of a specific system. Concretely, an energy landscape consists of a graphical representation of the energy associated with each possible state of a system (see Figure 7.3). Starting from an initial configuration, the system can evolve towards a different state under the action of two kinds of forces:

- Random internal forces called “fluctuations”, which, even if their magnitude is very small, can trigger big changes in the configuration of a system depending on its state at that time (see position A in Figure 7.3).
- External forces, whose action is to modify the energy landscape and alter the relative depths of the valleys.



**Figure 7.3.** Energy landscape. A corresponds to a metastable equilibrium, B to a stable equilibrium, and C to an unstable equilibrium.

The bottom of the deepest valley corresponds to the lowest energy state of the system and is known as “stable equilibrium” (see position B in Figure 7.3). Provided there are no external forces that prevent the system from doing so, it will always evolve towards this global minimum if we wait long enough. Moreover, even though the system is pushed away from this configuration by small disturbances, it will return to it.

**Box 7.2** (continued)

A system in a "metastable state" is stuck in a "local" minimum (see position A in Figure 7.3). It is a non-equilibrium configuration, which has the ability to persist for some period of time, whereas, under these specific conditions, another state is actually more stable. An example of such a phenomenon is water cooled to minus 39 degrees Celsius, which temporarily ignores the liquid to solid transition.

However, a system cannot stay in a metastable state forever. The criterion for equilibrium establishes that the system has to minimize its energy to achieve equilibrium; thus, in theory, a metastable state will always convert to the more stable state. But, how is the transformation triggered? Ball explains that, "what destroys a metastable state is the phenomenon of nucleation. If a sufficiently large region of the more stable state happens to form by chance in the metastable state, it can expand rapidly to engulf the whole system ... . At some point the least stable of two possible configurations vanishes altogether".<sup>28</sup>

If the system is neither in a global nor in a local minimum, it is in an unstable state. This kind of configuration, which is highly precarious, has a very short lifetime (see position C in Figure 7.3).

Maintaining a magnet in a critical state is an arduous task. Yet, nature offers many examples of systems that continuously reorganize themselves into a critical state without fine-tuning of the parameters.<sup>29</sup>

Let us consider the example of a rice pile: rice is added one grain at a time onto a flat surface. Little by little, the pile grows and the steepness of the slope increases. Occasionally, when the slope becomes too steep somewhere on the pile, some grains slide down causing a small avalanche. But, as more rice is added, the pile starts to grow again. When the slope reaches a certain value, the addition of one more grain may start an avalanche, which can be of any size, ranging from a single grain to a complete collapse of the pile. By analysing the size and frequency of the avalanches at that point, it can be seen that these follow a power law, which is the signature of a system in a critical state. Thus, rice piles, contrary to magnets, evolve naturally towards a critical state and the process by which this happens is known as "self-organized criticality".

Many scientific studies have shown power law distributions in the field of social sciences, providing good reasons to believe that human systems tend

*cascade*

*see:  
conversion  
cascade*

to evolve towards a self-organized critical state. Increasingly, this awareness is permeating policy-making in some domains. For example, economic markets are many-body social systems that have received attention from physicists in this regard, and Ball argues:

these studies can potentially extend classical economic theory in useful ways, for example by including trader interactions and interdependence directly (rather than indirectly via their effect on prices), allowing for heterogeneity and irrationality in trading practices, moving beyond incorrect assumptions of Gaussian statistics and treating the economy as a truly non-equilibrium system.<sup>30</sup>

Multilateral policy makers need to consider the social systems in which they are expected to intervene toward a specific policy goal as fundamentally out of equilibrium. This is something we will return to in the fifth section of this chapter.

#### COMPLEXITY THEORY

As discussed earlier, complexity is a fashionable term often employed in an informal way to name something whose behaviour is hard to understand. Multilateral diplomats use the word a lot, although it is not clear whether this is with reference to its formal meaning.

Nevertheless, we explained in the introduction to this paper that the distinction between what is complicated and what is complex is extremely clear in science. Complexity refers to the study of systems composed of many interacting components, or *agents*, that act together in a non-linear fashion and produce patterns of behaviour at the level of the group.<sup>31</sup> The basic properties of complex systems are explained below.

#### Self-organized criticality

Earlier, we explained that complex systems, such as wars or financial markets, evolve naturally towards a critical state. This process, which has already been described before with the rice pile example, is known as self-organized criticality.

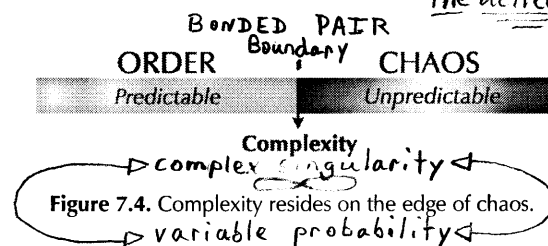
Metaphorically, complexity is said to reside at the edge of chaos (see Figure 7.4 overleaf). Basically, what this means is that it operates in a

evolution  
vs.  
revolution

tribes...teams

region between total order and complete randomness. Some phenomena, like gravity or electricity, are completely predictable; others, such as the movements of a double pendulum, are chaotic and therefore by essence unpredictable. Complex systems evolve at the border between the two, presenting a limited degree of predictability. Self-organized criticality is the process by which complex systems are maintained at this point.

*the delicate balance... wherein when the magic happens*



#### Limited predictability

Just as the principle of reductionism is limited in its applicability to complexity, the rational concept of determinism no longer stands in complex systems. Cause and effect are not uniquely coupled. There is, however, scope for predictability in the sense that, even if it is impossible to predict in detail how a specific agent is going to act, it is possible to find some regularities at the level of the global system.

#### Limited decomposability

It is important to realize that the mechanistic rational approach is not well adapted to understanding complexity. In particular, the principle of reductionism (decomposing into pieces in order to understand the whole) only leads to a partial understanding of complex systems' behaviour. The key feature of complexity, indeed, lies in interactions: when many agents act collectively, completely new and unintuitive outcomes arise—even though their behaviour is based on very simple rules. This phenomenon is commonly called "emergence".<sup>32</sup> For example, computer simulations have shown that organisms—not just birds, but also fish, bacteria and even people—do not need telepathy to swarm or flock in remarkable ways: it is enough that they be able to respond only to their near neighbours following simple rules.<sup>33</sup>

*emergence:  
exhibit loose associations through their mass actions that are guided by their close connections of views, values, and shared vision resulting in mass effect*

Emergent phenomena are patterns visible at the level of the group that are generated by the interactions between individual agents. This is an important feature in terms of social organization, as social norms might be considered as emergent phenomena within a group of individuals, the appearance of which is, currently:

mass action...  
mass effect!

one of the big unsolved problems in social cognitive science. Although no other concept is invoked more frequently in the social sciences, we still know little about how social norms are formed, the forces determining their content, and the cognitive and emotional requirements that enable a species to establish and enforce social norms.<sup>34</sup>

#### Non-linearity

*closely connected*

Because of its high level of interconnectedness, a complex system is hypersensitive: even the smallest perturbations can have tremendous effects. Besides that, as complex systems are in a critical state, fluctuations follow a power law. There is therefore no reason to look for a specific cause of really big fluctuations as it is part of the nature of the system.

mass action...  
mass effect!

Trying to suppress large fluctuations can drive a system into an even more unstable critical condition—called a “supercritical” state—in which the likelihood of very large changes is increased. This is what happens, for instance, with forest fires in Yellowstone National Park: by adopting a zero-tolerance attitude and preventing even fires sparked by natural causes, the United States Forest Service has driven the system into a supercritical state. With a high density of burnable material everywhere, a simple forest fire is more likely to become an all-consuming disaster.<sup>35</sup>

evolution  
vs.  
revolution

#### History matters

When a system is in equilibrium, it stays in the same uniform condition forever. History does not matter in a system in equilibrium because nothing happens. As the study of complexity is all about things that are out of equilibrium, history is important.

#### BRANCH

A place where a choice is made is called a bifurcation. Two identical systems driven further from the same equilibrium can end up in quite different states because of their choice history at bifurcation points. These

time line  
vs.

event line

ref: ?

discontinuous  
historical  
event

choices, which are the consequences of internal forces (also called fluctuations or noise in the system), occur at random.<sup>36</sup>

### Universality

There are some processes in the world for which the details simply do not matter. Critical phase transitions and self-organized criticality belong to these generic phenomena. They happen in the same way for a wide range of apparently different systems: a fluid and a magnet, for example, illustrate this fact by approaching their critical point at the same rate.

Close to the critical point, most details become irrelevant and the behaviour of the system is determined by a small number of relevant parameters and mechanisms. As a consequence, if a system is in a critical state (as it is the case for a complex system), making a model that works in essentially the same way is feasible: the details can be ignored, as long as the core logic of the process is captured.

### Process Theology

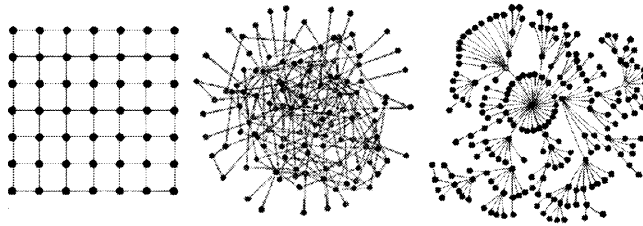
#### NETWORK THEORY

The relatively new field of network theory, which describes the topology of systems composed of many interconnected agents, is a useful tool in exploring complexity. In basic terms, networks are composed of nodes connected one with another via links. They fall into different categories according to how the nodes are linked to one another. Scientists developing early network theory investigated the potential of regular lattices and random graphs to study real-world complex networks (see Figure 7.5 overleaf). However, neither of these topologies seemed to give a satisfactory account of how complex systems were organized.

In 1998, Strogatz and Watts highlighted a new class of graphs called small-world networks.<sup>37</sup> In order to characterize the different types of network they studied, Strogatz and Watts defined two variables: the first one, called the "clustering coefficient", measures the fraction of neighbouring nodes that are connected one with another; the second one—the "characteristic path length"—corresponds to the average path length between two nodes chosen at random. An ordered grid, for example, exhibits a high clustering level and a long characteristic path length. Random graphs, on the other hand, are poorly clustered and present a short characteristic path length.

connect-the-dots modeling

- clusters...  $V^2$
- "clustering coefficient"
- "characteristic path length"
- heuristic feedback loops
- truth is knowing the exactness of measure...
- trust is the rest of truth
- truth overcomes doubt
- trust overcomes fear



**Figure 7.5.** Three different kinds of network: a regular lattice or ordered grid (on the left), a random network (in the middle) and scale-free network (on the right).

By adding randomness to ordered networks, Strogatz and Watts observed a swift fall in the characteristic path length, whereas the clustering coefficient dropped rather slowly. This kind of network, lying somewhere between order and randomness and characterized by a short path length and a high clustering coefficient, is called a small-world network. The term “small” is used to express the fact that even two nodes that appear to be widely separated are in fact connected one to another by just a few links. In the context of social network, this phenomenon has been popularized by the term “six degrees of separation”—the idea that any person in the world can be linked to any other person by roughly six connections.<sup>38</sup>

In 1999, Barabási and his collaborators discovered the existence of scale-free networks, which, even though they are highly clustered and present a short path length, differ from the small-world networks by the way they grow.<sup>39</sup> Scale-free networks emerge by the progressive addition of nodes to an existing graph and by introducing links to existing nodes with “preferential attachment”. This notion refers to the fact that nodes will wish to link themselves to nodes that are already more connected. In other words, the more links a node has, the more it will get. The degree of connectivity in a scale-free network is described by a power law, described earlier. As a result, there is no “average” node: some hubs have a huge number of connections, whereas most nodes have only one or a few links.

The study of scale-free networks is of particular interest because of their potential to describe complex systems.<sup>40</sup> Social networks, the World Wide Web, the Internet, collaborations between Hollywood movie actors and the

peer-review of scientific literature are just a few examples of networks presenting a scale-free topology.

Scale-free networks exhibit some important characteristics:

- **They are aristocratic:** Random graphs and small-world networks are “egalitarian” as all nodes have roughly the same number of links. In contrast, scale-free networks are fundamentally “aristocratic”. That is, scale-free networks present spectacular disparities because of the power law distribution of their links: a few elements—the hubs—possess most of the connections in the network.<sup>41</sup> *connectors*
- **They are topologically robust:** A scale-free network is inherently resistant to random failure. A significant fraction of nodes (up to 80%) can be randomly removed without the network breaking apart.
- **Scale-free networks are vulnerable to deliberate attacks:** While a scale-free network is relatively resistant to random failure, it is highly sensitive to deliberate attacks targeting the nodes with most links. Removing 5 to 10% of the hubs simultaneously can lead to complete disintegration of the network.
- **The threshold-free nature of epidemics:** In a scale-free network, a virus (or anything that can spread across the network) is almost unstoppable, even if it is not very contagious. The explanation for this lies in the hub topology: thanks to their numerous links, hubs are among the first contaminated. Once infected, they quickly infect many other nodes. For example, there is evidence that the human sexual network is scale-free, hubs playing a unique role propagating AIDS and other sexually contagious diseases. This suggests that, as long as treatment resources are finite, we should primarily target people who are hubs of sexual activity. Of course, the difficulty sometimes resides in identifying who those hubs are.<sup>42</sup>

#### IMPLICATIONS FOR MULTILATERAL NEGOTIATIONS

Traditional rationalist approaches to problem solving at the international level are constrained because, as the political scientist Robert Jervis observed, “interconnections can defeat purposeful behaviour”.<sup>43</sup> For