**On ‘Will’ How to Think About ‘Will’ in Complex Environments**

**Book Glossary**

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**Glossary**

1. **Act** - anything done, exerting energy to accomplish a goal.
2. **Action** - anything done, exerting energy to accomplish a goal.
3. **Adage** – a short expression of thought expressing a claim of truth.
4. **Adaptation** - to make suitable to requirements or conditions of a rapidly changing and turbulent operational context and to adjust to rapidly changing and often turbulent conditions.
5. **Aggregate** - for purposes of this work involves one complex adaptive system (CAS), kluging with at least one other CAS, and staying together via glue (which is that which holds both similar and dissimilar aggregates together); when more than one aggregate conjoins together, one finds an aggregation. Aggregates and aggregations can subsume and actually assume these features: Velocity – the time rate of change of position of a body in a specified direction.
6. **Aggregation** - **–** the gathering of aggregates (comprised of complex adaptive systems or CAS) into a larger whole. This whole is collective and responsive to accepting more like and disparate elements into its whole. An aggregation enfolds smaller aggregates and unfolds into larger aggregations. An aggregation can move and achieve a constantly building velocity. Often the strongest and most impermeable glues holding an aggregation together, as a whole, happens to be emotion, ideology, and religious beliefs.
7. **Alternative** - flexibility or the availability of a selection from which to choose.
8. **Analysis** - separating of any material or abstract entity into its constituent elements and thereby setting conditions for gaining understanding or meaning and turning data into information.
9. **Anticipation** - to feel or realize beforehand the condition setting activities of an action or a strategy as it comes into being; foresee; to be before (another) in doing, thinking, and achieving with the goal setting one’s own conditions for preemption.
10. **Apperception** - mental perception; especially: the process of understanding something perceived in terms of previous experience. The mind's perception of itself as the subject or actor in its own states; perception that reflects upon itself; sometimes, intensified or energetic perception. – Leibnitz [*Webster's Revised Unabridged Dictionary. Retrieved June 30, 2008, from Dictionary.com website: http://dictionary.reference.com/browse/apperception*] Sum total of a person’s experience.
11. **Assess** - to judge success of a planned or unplanned outcome of an action coming from a decision; appraise outcomes coming forth from an action – appraise quality of action via outcome of action and appraise how well the action occurred.
12. **Belief** - *trust, faith, and confidence* Wikipedia; belief can also mean an internal feeling that guides and governs behavior.”
13. **Center of gravity** - the hub of all power and movement, on which everything depends. That is the point against which all our energies should be directed (Clausewitz, On War, 595-596).
14. **Chance** - The unknown and unpredictable element in happenings that seems to have no assignable cause *[for an effect or outcome]*.[[1]](#footnote-1)
15. **Claim** - assertion of something as fact; in our advanced thinking, one may label the claim as a hypothesis or an assertion of verity but the logic train of claim, evidence, truth, and fact remains valid.
16. **Coevolution** - evolution of two or more species or organisms (natural or man-made) that interact closely with one another, with each adapting to changes in the other(s). Note, if one can think about and find how the adversary CAS co-evolves, e.g., assess, collect, evaluate, learn, adapt – it is possible to manipulate the data and images the adversary relies upon to adapt faster than his competitor.
17. **Cohesion** - coherence of parts; parts are solidly conjoined; the act or state of sticking together tightly; especially the conjoining of elements and other divisions of organizations, people, equipment, caring for animals (in Clausewitz’s day).
18. **Complex Adaptive System** (CAS) - A CAS is a complex, self-similar collection of interacting adaptive agents. The study of CAS focuses on complex, emergent and macroscopic properties of the system. A Complex Adaptive System (CAS) is a dynamic network of many agents (which may represent cells, species, individuals, firms, nations) acting in parallel, constantly acting and reacting to what the other agents are doing. The control of a CAS tends to be highly dispersed and decentralized. If there is to be any coherent behavior in the system, it has to arise from competition and cooperation among the agents themselves. The overall behavior of the system is the result of a huge number of decisions made every moment by many individual agents.[[2]](#footnote-2)
19. **Complexity theory** - The study of complex and chaotic systems and how order, pattern, and structure can arise from them. complexity theory. Dictionary.com. *Dictionary.com Unabridged*. Random House, Inc. http://www.dictionary.com/browse/complexity-theory (accessed: April 18, 2017).
20. **Comprehend** - totally grasp, make sense of, fathom the meaning, visualize the connectedness, and state of coherence in the object, person, their organization, their aim, goals, objectives, strategies, and tactics falling within our study, appearance, and function of a whole. A person comprehending a phenomenon apprehends its meaning, its parts, and its potential. Comprehend, in an intellectually assertion, is most assuredly a long and firm step beyond the term -- understand.
21. **Conclusion** - The last division of a decision-making effort to provide information or knowledge to a decision-maker for making or not making a decision. Or, a conclusion could be private; however, either purpose – decision-maker support or private conclusion – involves the same process, the same quest for quality, the same need to introspectively examine the value of thinking subsumed in the conclusion, and a recommendation for action or no action. Keep in mind, a conclusion contains a summing up of the points, a statement of opinion or decisions reached, and one or more recommendations. Much more intellectual effort goes into achieving a high quality conclusion, but what you see above provides a bare bone explanation.
22. **Connectedness** - joined together into a viable and thereby operable whole; linked to one another in a purposeful agreement; parts, pieces, people, organizations, infrastructures linked with one another to build coherence in the parts, pieces, objects, sub-systems, micro-aggregations, macro-aggregations comprising a relevant ‘whole.’
23. **Context** -- The set [*a set is an assortment of entities, each considered as an entity in its own right and as a larger whole*] of circumstances, meanings, actions, potentialities, that surround, permeate, and influence people and a particular event, action, operation, situation, action, or aggregations acting in a concerted way to accomplish an aim, goal, objective, strategy, or tactic. The context holds variables and also contains the meanings, thereby exposing the secrets as to why variables become sensitive and thus able to reach a level of volatility and excitability in sufficient force to becomes sensitive and thus able to cause an igniter to light a propellant that causes the aggregation to move in varying patterns or aperiodicity and speeds – asynchronous or synchronous.
24. **Conventional wisdom** - the ideas, opinions, or understanding that are considered to be generally accepted by the public.[[3]](#footnote-3)
25. **Core** - the focus, central, or most important aspect of a challenge, problem, problem set, outcome, conflict; it is usually a small aggregation of elements, aspects, or pressure points of a problem. The core of a problem or issue or challenge is so important it must have one’s attention – if one ignores the friendly core and the adversary view of this core – they do so at their witting peril.
26. **Coup d’oeil** - refers not alone to the physical but, more commonly, to the inward eye …the concept merely refers to the quick recognition of a `truth that the mind would ordinarily miss or would perceive only after long study and reflection.
27. **Creativity** - a takeoff from imagination in *developing original ideas*, especially solving difficult problem via new ideas or ‘creations.’ Creativity requires one’s mind to think and imagine holistically and to synthesize well – synthesizing like and seemingly disparate things into new and better and sometimes larger combinations, aggregations, or wholes. Creativity comes with thinking about ‘what could be’ and not just thinking about ‘what is;’ creativity is about stretching one’s mind to answer questions such as: what does it mean, what could it mean, and what are the implications?
28. **Critical thinking** - an intellectual process that “… examines assumptions, discerns hidden values, evaluates evidence, and assesses conclusions.”[[4]](#footnote-4) The skillful and active deployment of those cognitive processes and procedures, which are most conducive to accuracy and truth in judgment (Tim van Gelder).
29. **Cultural analysis** - Knowing a particular culture, its people, and their patterns of behavior deriving from traditional, culturally induced attitudes, behaviors, social norms, and conditions.
30. **Culture** - the behaviors and beliefs characteristic of a particular social, ethnic, or age group.[[5]](#footnote-5)
31. **Data** - Numerical or other information represented in a form suitable for processing by computer; individual facts, statistics, or items of information.[[6]](#footnote-6) Numbers, characters, or images, or other methods of recording in a form which can be accessed by a human or input into a computer, stored and processed there, or transmitted in some digital channel.[[7]](#footnote-7)
32. **Decay** – the dissipation of strength, power, odor, appearance, or function.
33. **Decide** - to solve or conclude (a question, controversy, or struggle) by giving victory to one side; to determine or settle (something in dispute or doubt) to decide an argument.
34. **Decisive** **point** - A geographic place, specific key event, critical factor, or function that, when acted upon, allows commanders to gain a marked advantage over an adversary or contribute materially to achieving success (US Joint Publication 3-0).
35. **Deep think** – taking the time and expending the mental effort to think about a problem deeply and critically.
36. **Determination** - *resolve, resoluteness, firmness of one’s fixation on purpose*. Determination is a state of mind, which drives one’s physical and mental being; it tries with utmost desire and energy to perform a task; it is a ‘fuel’ of sorts propelling perseverance; it is the *invisible impetus that continuously pushes perseverance* to not only occur but also to succeed; it involves possessing a *state of mind* or *state of emotion* from which the individual fixates, while attempting to accomplish a goal or objective; it is an act of coming to a decision or of accepting/selecting a purpose and then possessing the resolve to fulfill the purpose.
37. **Disambiguation** - to make visible that, which through ambiguity, appears invisible; to remove the ambiguity from; make unambiguous.’[[8]](#footnote-8)
38. **Disdain** - connotes disparagement, scorn, or contempt. In our context, disdain for an alternative means the person doing the disdaining holds one or more alternatives in low regard, hence they possess a condition of being in which they lack fear.
39. **Duality** - the state of being in which one thinks in two connected opposites, in motion all the time, and emitting noise and energy as one side interacts with the other. Duality, while difficult to understand and to remember, considers two parts – friendly and adversary (and could increase the numbers in complicated contexts and conditions). As a thinker considers a problem, such as imposing his\her ‘will’ against a resisting adversary they consider how this adversary could see imposition actions coming and how he might do the following: 1) attempt to parry and resist my imposition, and 2). attempt to impose my ‘will,’ as the original imposer has to deal with his earliest resistance; with this notion of duality, one always considers opposing points of view (with respect to the adversary and with respect to one’s coalition partners and even people who resist you in the friendly realm of decision-making). When one works within the mental construct of duality, they extensively consider the opponent, opposition, adversary, or competitor and his\her thinking and view relative to the collision of his\her and your: aims, goals, objectives, resources, constraints, strategies, tactics, context, with one’s adversary, and so forth, again not only from our perspective, but also from their perspective and world view.
40. **Ego** - The ego is the organized part of the personality structure that includes defensive, perceptual, intellectual-cognitive, and executive functions.
41. **Entanglement** - a physical and psychological phenomenon occurring when dyads, triads, or groups of people and/or organizations connect with one another and form aggregates and aggregations and interact in ways such that the psychological or physical state of each CAS or CAS + CAS = aggregate, and aggregate + aggregate = aggregation cannot be described independently — instead, their state of being can only be described and comprehended, as part of or supporting the aggregation as a whole.
42. **Entropy** - slowing and deteriorating into a state of confusion and disarray.
43. **Evaluation** - assessing and placing value on a purchase, an action, presentation, paper, book, estimate, decision.
44. **Evidence** - that which tends to prove or disprove something and is the basis for belief; evidence contributes to proof of the claim. Facts determine the veracity of the claim. Truth validates facts as facts. The proof – evidence, facts, truth must be sufficient to establish a claim (proposition) as true.
45. **Existentialism** - Existentialists are people who believe and act out this philosophy. They believe existence (being alive; a thinking, feeling, connected human being) precedes essence (what many people in life believe, which are often preconceived notions of another person, status or strata of social hierarchies, possessions and trappings of life). Existentialism suggests to an existentialist the most important aspect of being human is their marvelous individuality —their ‘volition,’ responsibility for their thoughts and actions (see Dostoevsky’s *Crime and Punishment*) and being conscious beings.
46. **Exteroceptive** *-* Relating to stimuli that are external to an organism.[[9]](#footnote-9)
47. **Fact** - a truth known by actual experience or observation; something known to be true.
48. **Fad** - is a temporary line of clothing, an ephemeral fashion, a short-lived notion, a mimicked manner of conduct, etc., especially one followed enthusiastically by a group.
49. **Fear** - a disturbing or threatening emotion arising as a premonition of lurking danger, trepidation of an impending experience, a foreboding state of mind coming from one’s mental and emotional statuses.
50. **Friction** - tremendous friction, which cannot, as in mechanics, be reduced to a few points, is everywhere in contact with chance and brings about effects that cannot be measured, just because they are largely due to chance.[[10]](#footnote-10) In my interpretation and my words, friction means – *unexpected chance events* – this interpretation derives from *On War* by Clausewitz.
51. **Glue** - that which holds both similar and dissimilar aggregates together – usually an ideology, emotion, extant condition, religion, racial superiority, and so forth.
52. **Goal** - an adversary’s desires always starts with ideas about what, in an overall sense, he wants to accomplish. His desired outcome results in his utterance of one or more broad goals. The broad goals provide himself if operating alone, or his subordinates if operating with many, a *direction* or in other terms, a *vector* with an end or a desired outcome as to what he seeks.
53. **Hatred** - An intense loathing for one person or group of people or nation state or terrorist group … hatred occurs when rancor dominates the perceptions and feelings that one or more people feel for another person or group of people, or nation state whom they consider to be the cause of their resentment – who is their opponent or most likely their enemy.
54. **Holism** - theory that the parts of any whole cannot exist and cannot be understood except in their relation to the extant whole or wholes coming into existence via aggregate and aggregation theory; "holistic doctrine maintains as in characteristics of nonlinearity one must consider - wholes are greater than the sum of its parts.
55. **How to Think** - deep thinking along with intuitive thinking. It means using cognitive elements, theoretical and historical aids, and creativity to perceive, think, plan, and anticipate any adversary in any domain. In an additive way, ‘how to think’ implies using one’s mental prowess to solve complicated problems, resolve issues, assess outcomes of actions, and adapt faster than any adversary.
56. **Igniter** - that which arouses the passions of sensitive variables or excites. The igniter ignites the propellant.
57. **Imagination** - the faculty of drifting in one’s mind, in and out of our consciousness, all the while allowing one’s subconscious to sense, feel, smell, perceive, hear of not only their immediate surroundings but also far away surroundings they have experienced in some way, and interacting with real or imaginary people; imagination comes with visions of what we want a future to be, for example. Imagination involves forming mental images or concepts of what is not actually present to the senses.[[11]](#footnote-11)
58. **Information** - A collection of facts or data.[[12]](#footnote-12) A conveyance of meaning or facts told, read, or communicated that may be unorganized or even unrelated.
59. **Interoceptive** - Relating to stimuli produced within an organism, especially in the gut and other internal organs.[[13]](#footnote-13)
60. **Knowledge war** - has two aims: attacking the knowledge that the adversary uses to make decisions, and protecting our knowledge workers and information systems from assault. We must be able to attack our adversary’s perceptions, his knowledge workers’ way of thinking, and the information systems and infrastructure comprising the machinery that supports his decision-making processes and his ability to turn data into information and information into knowledge.”
61. **Learn** - to acquire knowledge of or skill in by study, instruction, or experience. One also learns through experience – personal and those of other people, heuristics, and, of course, through the act of personal thinking or observing how other people think and learn.
62. **Life-force** - *Élan vital[[14]](#footnote-14)* – the vital impetus, the creative force within an organism responsible for growth, change, and necessary for desirable adaptations; it is a force vital to human growth, improvement, goal accomplishment, and change; life-force is the energy flowing through human beings, pushing them to achieve, excel, sometimes to merely exist; in some people, this turns into the foundational *force that compels them to take what another person possesses but does not want to surrender*.
63. **Mass** – aggregate, whole.
64. **Mass media** - a diversified collection of media technologies that reach a large audience via mass communications (Wikipedia).
65. **Maxim** – a rule of acting or behaving.
66. **Meme** - an idea or aspect of social behavior passed among people or even via generations in a culture.
67. **Mental combat** - the constant multi-domain, multi-level, multi-spectrum cognitive conflict or competition in which people and entities, with conflicting interests, attempt to impose their ‘will’ on opposing side(s) by possessing and employing superior mental functioning while resisting the opposing side’s efforts to impose their ‘will’ on the friendly side.
68. **Metacognition** – thinking about thinking.
69. **Mind’s eye** - the inner sanctum of thought where one imagines and visualizes that which one’s rational mind provides and comingles with the data fragments and shards streaming into this sanctum via one’s senses, through the body’s portals into the quiet, inner refuge of one’s private thoughts. The mind’s eye, after all, provides the entrée into one’s undermind where the fragments, shreds, and shards of data conjoin with rational thought and imagination. But, before entrée of data, the guardian of this inner sanctum – one’s mind’s eye – filters and shunts most of this data into one’s undermind, and allows only parcels into the overmind. If this guardian allows said data to enter the inner sanctum of thought from one’s undermind or from outside data streams, then it is with thinking skills such as, critically think, know ‘how to think,’ engage in ‘deep think,’ and employ the doctrine that is ‘holism’ all coming into play and enabling this person to weave both thoughts and data into meaningful tapestries of connections and meaning. The output is, of course a synthesis of knowledge, understanding, and comprehension.
70. **Model** - A style, design, plan, implementer of an action or a series of actions that cause behavior; a simplified representation of a system or phenomenon, as in a model of how the enemy thinks and perceives.
71. **Momentum** - property or tendency of a moving object to continue moving. For an object moving in a line, the momentum is the mass of the object multiplied by its velocity (linear momentum).[[15]](#footnote-15) The formula for momentum is M = V (velocity) x M(mass).
72. **Mythos** - an underpinning system of beliefs, especially those dealing with supernatural forces, characteristic of a particular cultural group. In our work, I have expanded the definition to include the forces and vagaries of life after death, in an attempt to understand the suicide bomber and vehicle borne explosive device phenomena and the evolvement and interplay of religion on such drastic measures in which are alien to the western world.
73. **Nonlinearity** - the study of situations where, in a general sense, cause and effect are not proportional to each other;[[16]](#footnote-16) in other words, if the portion of what is considered to be the cause is doubled, the magnitude of its effect isn’t just doubled; … this lack of proportionality in some of the basic laws of physics often leads to unexpected complications, if not to outright contradictions.[[17]](#footnote-17)
74. **Nub** - a crux of a matter, the essence of, most important issue, or kernel of a problem - the epicenter of a problem or most demanding challenge. It must be attacked, if belonging to a foe; it must be defended against adversary assaults.
75. **Objective** – 1) not influenced by personal feelings, interpretations, or prejudice; based on facts; unbiased: an objective opinion;[[18]](#footnote-18) 2) A deliberate action that consumes mental and physical energy, effort, desire, perseverance, etc., to accomplish or satisfy a personal, organizational, or national aim, goal, strategy, or outcome. As further explanation involves an objective involves a purposefully sought outcome*,* which all of the actor’s energy, capabilities, perseverance, and determination focus upon to create desired aftermaths for the side in question. Note – each side in a conflict will have their idea of the most valuable objective. So, the struggle over dominance of one side’s objectives and the thwarting and subjugation of the opponent’s objectives involves the duality factor of this important definition.
76. **Operation** - an organized and concerted activity involving a number of people, especially members of the armed forces or law enforcement or competing people/organization.
77. **Overmind** – the conscious mind.
78. **Passion** - a strong craving with control questionable and on the edge of rational relinquished; passion is not rational thinking most of the time – it is emotional state of being whereby the affective domain dominates the rational/thinking domain.
79. **Perceive** - to become aware of, know, or identify by means of the senses.[[19]](#footnote-19)
80. **Perseverance** - indomitable continuation, lasting power, resolute finishing of a task, deed, action, imposition of ‘will,’ or dogged, continued defense against another’s imposition of their ‘will.’
81. **Phantasm** - illusion or apparition. But, it also implies imagination; therefore, a phantasm’s antithesis or antipode can be – no imagination.
82. **Phenomenon** - awareness of an appearance or immediate focus of one’s awareness of action or interaction with other beings, human, organizational, and machine, in experience; extraordinary event or appearance that becomes conscious in ones’ mind.
83. **Phenomenology** - in its simplest explanation, pertains to thinking about experience, or consciousness of an experience that has affected our minds and feelings. Phenomenology involves thinking about phenomena (things), as they appear in our experience (or through the eyes, minds, experience of others). Phenomenology involves thinking about experience *from a subjective or first person point of view*.
84. **Plan** - A plan is: 1) A scheme or method of anticipating, acting, and proceeding to accomplish an aim, goal, objective, and wisely using resources even with constraints, and enact preparatory activities; 2) during development, a plan identifies conditions or stages of action in advance of execution, these condition setting steps always occur before action starts; 3) a plan evolves with thought and exchanges of ideas – from this framework comes processes, procedures, and activities the planner believes will foster development and promulgation of a formulated method specifically designed for accomplishing an aim, goal, objective, strategy, or tactical outcome, or all of these elements; 4) a plan is method of thinking about and wargaming acts and purposes and adversary’s attempts to forestall the plan’s actions beforehand and then act upon the plan’s elements.
85. **Policy** - broad guidance to influence plans of action adopted or pursued by an individual, government, party, and business. It comes from ‘vision’ though entangled with strategic aim (and sometimes vision), goals, objectives, and serves as the ‘invisible hand’ that constrains or unleashes actions and boundaries of action execution to accomplish aim, goals, and objectives.
86. **Position** – an intellectual stance; where a person or party or organization happens to be in a physical, intellectual, or emotional sense, e.g., the adversary held a domineering position relative to the friendly force.
87. **Possibility** – potentiality unbound by constraint.
88. **Precognition** - knowing an event in the future and/or changes in a pertinent operational context before it happens.
89. **Predestination** - one’s life is already planned out and humans act out what has been preordained.
90. **Preemption** - action of forestalling or altering an operation, action, or activity by acting first and thereby grasping the initiative.
91. **Pressure point** - a sensitive, critical point, weakness, or dispute against which pressure of many persuasions is directed. Such actions against pressure points always have a distinct purpose in mind and the dispenser of said action will certainly have a dedicated effort to see if the tactics of action against them is working or not and if not, to find what could work or convince the mind of the side working against the point to abandon the effort. A pressure point always has a logical connection with the situation at hand in the related hierarchy of: 1) pressure point(s) – important, 2) decisive point(s) – very important, and 3) center(s) of gravity – vital. One can find advantages buried within the pressure points and they should protect theirs while finding and attempting to influence the adversary’s.
92. **Probability** - the likelihood something is plausible and doable and also the viability of the possibility of occurrence of an action or event. I made probabilities into similes and gave them human-like life-force, albeit limited. In my thinking and, of course, imagination, I see probabilities as multiple pods of energy floating around any situation waiting for choice to snatch them and to turn them into energy and action.
93. **Propellant** - that which provides velocity and motion to aggregates and aggregations.
94. **Proprioception** - relating to stimuli that are produced and perceived within an organism, especially those connected with the position and movement of the body.[[20]](#footnote-20)
95. **Quality** - - the degree of excellence in a product, thought, play, book, briefing, problem solution, and the like; identifying and attempting to reach a pre-determined and defined standard or set of standards derived from the essence of an outcome, acknowledging the purpose of an effort and satisfying the purpose, recognizing the central idea, nub, core that is the cause of the effect – the output of an endeavor, an action, a product, a finish place in a track meet, recognizing a good wine, enjoying a good book, or those predetermined criteria with which one judges its degree of goodness. Quality is often a judgment that is non-quantifiable; however, at times, one will be able to use quantifiable methods to judge it, particularly in manufacturing, mathematics, certain Newtonian physics, or such things as lowering of traffic tickets that can be traced to how well people learned a safe-driving course police presented.
96. **Random** - proceeding, made, or occurring without definite aim, reason, or pattern.[[21]](#footnote-21)
97. **Rational** - of, pertaining to, or constituting reasoning powers; being in or characterized by full possession of one’s reason; sane; lucid; agreeable to reason.[[22]](#footnote-22)
98. **Reason** - the power and capability of one’s mind to think, understand, evaluate evidence, assess outcomes of actions, judge right from wrong, discern hidden values and relationships in transactions, comprehend variables in a situational context, anticipate subsequent moves from ongoing actions or anticipate those about to occur.
99. **Recomposition** - human- and machine-driven recompilation of collected data into information, thereby setting conditions for developing knowledge, understanding, and comprehension.
100. **Red team** - people, either trained/educated or otherwise who perform the function of providing alternatives, critiquing plans as objectively as possible, playing the adversary in wargames, and providing innovative or creative thinking to help overcome conventional wisdom, blinding biases, poor assumptions, and personal logic errors.
101. **Reductionism** - the practice of simplifying a complex idea, issue, condition, or the like, esp. to the point of minimizing, obscuring, or distorting it.
102. **Reflection** – contemplation, rumination, and deep thinking about a particular action, concept, requirement, findings, and the like.
103. **Resilient** -- returning to the original or roughly similar form or position or capability after being assaulted, attacked, dispersed, bent, compressed, or stretched.
104. **Resolve**– commitment, steadfastness, resolution to ‘win,’ end a competition or conflict favorably
105. **Revenge** - the action of inflicting hurt or harm on someone for an injury or wrong suffered at their hands.
106. **Retribution** -- pay-back or vengeance for an act, an injustice, a crime, a murder, a take-over of land, or a dishonorable act.
107. **Robust** -- strong and healthy; hardy; vigorous; able to withstand pressure, the winds of change, assaults against one’s being.
108. **Rule** - A principle or structure of behavioral guidance that governs, binds, influences, and leads the models that shape and direct complex adaptive system (CAS), aggregate, and aggregation actions that, in turn impose one agent’s ‘will’ on another ‘agent’ who resists said imposition.
109. **Sacrifice** – To surrender or give up, or permit injury, or to surrender a relational disadvantage to an adversary; a readiness to endure loss and physical and emotional pain and stress for the sake of hatred, retribution, leader exhortations, accomplishing an aim, goal, objective accomplishment, or execution of a strategy or even continuation of loss and pain even in the face of certain defeat far after the initial brokering of a readiness to accept loss and pain for the overall goal or objective.
110. **Self-esteem** – a force with varying strength present in all human beings; each human has their perceptions of self-worth, self-image.
111. **Sensitive variable** - a variable easily excited and highly influential because of its direct access into the ‘glue’ holding the whole together, such as ideology, and moves at various rates of speed owing to propellant, which is often emotions. Emotions, however, can be the glue of an aggregation, as well as the propellant.
112. **Speed** – rapidity in moving, going, traveling, proceeding or performing
113. **Strategy** - a prudent idea or set of ideas (high- or low-level) for employing one’s capabilities in a synchronized and integrated way to achieve an aim, goal/objective, policy with available resources, adversary, operational context, and constraints in mind.
114. **Strength of Motive** – First strength, then motive. Strength – provides relevance for motive; a state of being strong; ability to cope with difficult situations; maintenance of an emotional, moral, or intellectual position (stance); and possession of a quality of mind and spirit to persevere against disadvantageous odds or potential cost/loss. Motive – the force or energy of other provocative phenomena, which causes a people: to act in a certain way; do a certain thing; endure deprivations; operate; or act/behave, or perform, usually relative to goal accomplishment, which could be good or evil – motive is dependent upon its strength for its relevance in any competitive situation.
115. **Subjective** – belonging to the thinking person; the emotional, feeling, sensing aspect part of rumination; it pertains to a person’s emotions, experiences, and thought processes, or ruminations deriving from individual’s emotions and thereby biased and thereby skewed thought processes – Wikipedia.
116. **Sufficient reason** - The philosophical principle that nothing happens by chance and that an explanation must be available for everything; everything must have a reason or a cause.” Wikipedia
117. **Synthesis** - the human cognitive activity that combines elements of contexts, substances, events, electrons, activities, energy, and the like, to create a new, coherent and better whole.
118. **Synthetic** - relating to or connecting to the thought process that is synthesis (the human cognitive activity that combines elements of contexts, substances, events, electrons, activities, energy, and the like, to create a new, coherent and better whole).
119. **System of thought** - A disciplined, rigorous assemblage of propositions, elements, principles, and axioms, promulgated through: 1) thought models, 2) mental processes, 3) explanations, and 4) definitions. The advanced analysis and advanced collections systems of thought explains mental efforts people exert to ‘think about thinking’ sufficient to: reason, think deeply, make decisions, solve problems, develop high-quality conclusions and recommendations, provide wherewithal to seize the initiative and the other six advantages (tempo, momentum, knowledge, decision, position, and freedom of movement), and win bouts of mental combat. These bouts primarily occur in all domains and levels of conflict and operational contexts where one finds nonlinear systems not only present, but wreaking havoc with human planning, acting, assessing those actions, and adapting faster than their adversaries and the constant presence and energies emanating from adversaries who co-evolve and adapt to both context and their competitors’ activities via receipt of data and paging the context for change, respectively.
120. **Tacit knowledge** -is knowledge in the minds of individuals who know many things and who store knowledge in their minds with the shortfall that they often don’t know they possess the knowledge and even if they did, tacit knowledge is always difficult to extract and difficult to explain to other people by either writing or orally. Wikipedia
121. **Tactics** - the employment and ordered arrangement of forces in relation to each other.[[23]](#footnote-23)
122. **Teleology** - doctrine that phenomena [plural of phenomenon, which means - an appearance or immediate object [focus] of awareness of action or interaction with other beings, human, organizational, and machine, in experience.] are guided not only by mechanical forces but also move toward goals of self-realization, self-accomplishment, and self-actualization.
123. **Tendency** - A natural or prevailing disposition to move, proceed, or act in some direction or toward some point, end, or result.
124. **Tendency analysis** - Discerning meaning through thought and study of the general proclivities of people, the behavioral and action inclinations of organizations, mental snapshots of current environment or contextual situations, events, activities, behaviors, the emanation dispersal of energy emissions, and what the interaction and enmeshing of all could portend for the future.
125. **Think** – To exercise the power of reason, as by conceiving ideas, drawing inferences, and using judgment;[[24]](#footnote-24) a way of reasoning; judgment.[[25]](#footnote-25)
126. **Thought denizen** - quite literally, a citizen who thinks deeply and creatively and therefore employs ‘how to think’ logic. In our vernacular, a thought denizen is either an *Über-thinker* or a *thought pilgrim.*
127. **Thought link**- a broad or general description of direction or thrust for action or future intent of actions; high-level decision guidance; a concept or vision with intimation of necessary actions or possible plans of action.
128. **Thought leader** - 1) A leader who understands the difference between ‘what to think’ training and ‘how to think’ education. This leader purposefully learns something new every day and in doing so engages in series of self-directed learning programs to push their mind to the edge of its capabilities; 2) A leader who helps their subordinates learn and improve ‘how to think’ via purposeful cognitive development programs, and via guided forays into the entangled, unknown, and dark caves containing the secrets of critical thinking and critical reading. In addition, the thought leader directs learning activities and remains heavily involved with all learning activities;’3) A leader who constantly and purposefully helps his\her seniors, peers, and other people to learn ‘how to think’ better than today. The thought leader also helps his\her organization become a creative and agile learning organization (see Peter Senger’s book *The Fifth Discipline*); 4) A person who understands mental combat and the imperative to outthink their adversaries in all dimensions and levels of conflict and to continuously learn and thereby stay ahead of adaptive adversaries or competitors threatening America and its friends.
129. **Thought pilgrim** - A thought pilgrim is a person preparing themselves for ‘deep thinking’ engagements by traveling to their personal ‘high country,’ which is conducive to their deep thinking. Thought pilgrims journey to their personal high country of thought, along poor roads and trails chock full of pitfalls, bramble bushes, wild roses, human traps, bureaucratic tendencies, and associated obstacles to creative thinking, and unexpected mudslides. Yet, with determination, a thought pilgrim proceeds along this road, regardless of personal or bureaucratic obstacles, and reaches their particular high country. It is their particular ‘high country,’ where they can perform deep thinking sufficient for enabling their ‘*how to think’* cognition to kick in and occur.
130. **Truth** - consistent with agreed upon facts; genuine, conforming to the beliefs and standards of a group of people; an act or behavior or opinion or thought that conforms to rules, regulations, measurements, standards, or patterns. The Free Dictionary, American Heritage Dictionary of the English Language, Fifth edition. Copyright 2016 by Houghton Mifflin Harcourt Publishing Company.
131. **Über-thinker** - an *Über-thinker* is literally, a great, or better than anybody type of thinker. This kind of thinker transcends all other thinkers and is trained and educated to engage in *mental combat* and to win against any foe, in any domain, at any level of conflict, day or night. Developing an *Über-thinker* involves finding the right people, helping them learn ‘how to think,’ mentor them, as they will be akin to a young horse itching to excel on the race track. It has become apparent to me over these 46 years, the national defense institution and the Services should earmark people to be *Über-thinkers* and bring them through the best ‘how to think’ venues, in the national defense community schooling as well as in civilian graduate schools. Any military officer or senior civilian preparing to attend or actually attending a service college should be either earmarked or already prepared for the rigorous mental challenges one only finds as an *Über-thinker.*
132. **Undermind** - The undermind is a layer of activity within the human psyche that is richer and subtler than consciousness. It can register and respond to events which, for one reason or another, do not become conscious. We have at our disposal a shimmering database full of pre-conceptual information, much of which is turned down by consciousness as being too contentious or unreliable. Conscious awareness decides what it will accept as valid – thereby misses dissonant patterns and subtler nuances …consciousness tends to present to us a world that is somewhat cautious and conventional. Sometimes this is appropriate, but if we get stuck there and lose the key to the twilight world that subserves it, we mothball valuable ways of knowing which can find sense and weave meaning out of a collection of the faintest threads and scraps.[[26]](#footnote-26)
133. **Understand** - to be thoroughly familiar with; clearly grasp the character, nature, relationships, nuances, or subtleties of a foe, their organization, a given populace and the culture in which they live and the relationships connecting them.
134. **Unity of opposites** - a situation or several situations or conditions in which the appearance, existence, or identity of a commodity, article, belief, understanding, comprehension (or situation) depends on the co-existence of at least two entities or conditions opposite to each other, but still dependent on one another and of course then realizing and working with the presence and patterned interaction of an opposite, within a field or plane being, or contrived or natural context. The ancient Greek philosopher Heraclites first developed this concept ~ 2500 years ago.
135. **Value** - moral principle and belief or accepted standard of behavior of a person or social group; worthiness of a goal or objective, such as obtaining a degree that will result in increased wages; something that has worth and is sought after and even worthy enough for people to compete over; something that is significant and deemed useful by all sides in a competitive situation.
136. **Veil of Maya** - illusion of normalcy involving an imaginary veil or mesh covering or deluding ones understanding of connections and interactions and how an adversary would/could be thinking; illusion of reality involving thinking like the other side is thinking about roles and missions, how the opponent thinks, the operational context and the pluses and minuses it presents to opposing sides in a conflict or competitive event.
137. **Velocity** – the time rate of change of position of a body in a specified direction.
138. ***Weltanschauung*** - a comprehensive conception or image of the universe and of humanity's relation to it.
139. **Will *-*** Competition for supremacy or advantage is a recurring phenomenon in human life. People compete for supremacy or advantage over a wide variety of things and situations such as position, presence, action, appearance, dominance, influence, power, wealth, positions, promotions, bonuses, land, resources, and so on.

Thus, at least for the purpose of this book, “Will” is: *the desire, presence, or appearance of a demanding volition, and its derivative force to accomplish or satisfy an aim, goal, objective, or to win in other competitive situations in which one’s actions encounter a resisting entity, causing a struggle for dominance to ensue*.

As the most important inference one should draw from this definition of “will,” *viz*. an explanatory and working interpretation of this phenomenon, “will” involves the degree of resolve individuals apply to accomplish an aim, goal, or objective. In my book, “will” has 14 interconnected, essential elements. These oscillating elements adapt to the aim, goals, objectives and operational context of a given situation, but the elements can and do, commingle and link among various essential elements of “will”—1) life-force; 2) purpose; 3) strength of motive; 4) capabilities; 5) determination; 6) perseverance; 7) sacrifice; 8) passion; 9) advantages; 10) disadvantages; 11) imposition; 12) action; 13) assessment; and, 14) adaptation.

1. Dictionary.com Unabridged. Retrieved June 25, 2010, from Dictionary.com website: http://dictionary.reference.com/browse/chance [↑](#footnote-ref-1)
2. The definition is a compendium of thoughts and descriptions entering my mind and synthesizing into meaning from the work of John Holland, as cited in M. Mitchell Waldrop, *Complexity*, (New York: A Touchstone Book, 1992), 11-12, 176-177, 169, 251-262, from Holland himself in, John Holland, *Hidden Order*, (New York: Basic Books, 1995), 4-12, and from Wikipedia, which cites this above written definition of complex adaptive systems or CAS at https://en.wikiquote.org/wiki/Complex\_adaptive\_systems. [↑](#footnote-ref-2)
3. Dictionary.com's 21st Century Lexicon. Retrieved July 20, 2010, from Dictionary.com website: [http://dictionary.reference.com/browse/conventional wisdom](http://dictionary.reference.com/browse/conventional%20wisdom) [↑](#footnote-ref-3)
4. David G. Myers, *Exploring Psychology*, 5th ed., (New York: Worth, 2003), xv. [↑](#footnote-ref-4)
5. Dictionary.com Unabridged (v 1.1). Retrieved December 20, 2008, from Dictionary.com website: http://dictionary.reference.com/browse/culture [↑](#footnote-ref-5)
6. Dictionary.com Unabridged. Retrieved February 01, 2010, from Dictionary.com website: http://dictionary.reference.com/browse/data [↑](#footnote-ref-6)
7. The Free On-line Dictionary of Computing. Retrieved February 01, 2010, from Dictionary.com website: http://dictionary.reference.com/browse/data [↑](#footnote-ref-7)
8. Dictionary.com Unabridged (v 1.1). Retrieved March 06, 2008, from Dictionary.com website: http://dictionary.reference.com/browse/disambiguate [↑](#footnote-ref-8)
9. https://en.oxforddictionaries.com/definition/exteroceptive [↑](#footnote-ref-9)
10. Clausewitz, 119-120. [↑](#footnote-ref-10)
11. Dictionary.com Unabridged. Retrieved June 25, 2010, from Dictionary.com website: http://dictionary.reference.com/browse/imagination [↑](#footnote-ref-11)
12. The American Heritage® Dictionary of the English Language, Fourth Edition. Retrieved February 01, 2010, from Dictionary.com website: http://dictionary.reference.com/browse/information [↑](#footnote-ref-12)
13. https://en.oxforddictionaries.com/definition/interoceptive [↑](#footnote-ref-13)
14. "Élan vital" - first coined by French philosopher Henri Bergson in his 1907 book *Creative Evolution*, in which he addresses the question of self-organization and spontaneous morphogenesis of things in an increasingly complex manner. *Definitions.net.* STANDS4 LLC, 2016. Web. 22 Sep. 2016. http://www.definitions.net/definition/Élan vital. [↑](#footnote-ref-14)
15. The American Heritage® New Dictionary of Cultural Literacy, Third Edition. Retrieved November 23, 2009, from Dictionary.com website: http://dictionary.reference.com/browse/momentum. [↑](#footnote-ref-15)
16. Nonlinear – this definition comes from Wikipedia, 23 February 2017, text is available under the Creative Commons Attribution-ShareAlike License. [↑](#footnote-ref-16)
17. McGraw-Hill Science & Technology Encyclopedia, 2005. [↑](#footnote-ref-17)
18. Dictionary.com Unabridged. Retrieved January 29, 2012, from Dictionary.com website: http://dictionary.reference.com/browse/objective [↑](#footnote-ref-18)
19. Dictionary.com Unabridged. Retrieved February 01, 2010, from Dictionary.com website: http://dictionary.reference.com/browse/perceive. [↑](#footnote-ref-19)
20. https://en.oxforddictionaries.com/definition/proprioceptive [↑](#footnote-ref-20)
21. Dictionary.com Unabridged. Retrieved March 31, 2016 from Dictionary.com website http://www.dictionary.com/browse/randomness [↑](#footnote-ref-21)
22. Dictionary.com Unabridged. Retrieved December 16, 2010, from Dictionary.com website: http://dictionary.reference.com/browse/rational [↑](#footnote-ref-22)
23. CJCSM 5120.01 [↑](#footnote-ref-23)
24. The American Heritage® Stedman's Medical Dictionary. Retrieved March 13, 2010, from Dictionary.com website: http://dictionary.reference.com/browse/think [↑](#footnote-ref-24)
25. The American Heritage® Dictionary of the English Language, Fourth Edition copyright ©2000 by Houghton Mifflin Company. Updated in 2009. Published by Houghton Mifflin Company. All rights reserved. [↑](#footnote-ref-25)
26. Guy Claxton, *Hair Brain Tortoise Mind*, (New York: The Ecco Press, 1997), 116. [↑](#footnote-ref-26)