1.   Intellectual Property

1.1.   Novel

1.2.   Prior Art

1.2.3.   Alan Turing

1.2.3.1.   Computing Machinery and Intelligence

1.2.3.1.1.   Allow me to rephrase

1.2.3.1.1.1.   Given (a) ideas, (b) idea-processing-machines, and (c) response-behavior of idea-processing-machines with respect to ideas input to the idea-processing-machines: there exists a "critical" threshold where the response behavior of the idea processing machine continues until the resources enabling the machine is entirely consumed.

1.2.3.1.1.2.   Let sub-critical be a scenario where the machine does not proceed until the resources enabling the machine is entirely consumed.

1.2.3.1.1.3.   Let super-critical be a scenario where the machine proceeds until the resources enabling the machine is entirely consumed.

1.2.3.1.1.4.   Intelligence is a factor in the "critical" threshold.

1.2.3.1.1.5.   Learning machines will (a) experience education, (b) make use of positive and negative feedback signals, (c) evaluate truth, (d) develop trust, (e) experience time-invariant rules, and (f) benefit from a randomness generator.

1.2.3.1.2.   Questions I Wish I Could Have Asked Turing

1.2.3.1.2.1.	What do you think about: "Which came first: the chicken or the egg?" being viewed as a stereotype of an idea that could cause a super-critical situation for machines within an intelligence-level region.
1.2.3.1.2.2.	What do you think about: For a given statement, there exists a computing machine and intelligence profile where the computing machine has a super-critical response to the statement.
1.2.3.1.2.3.	What do you think about: For a given statement, there exists a computing machine and intelligence profile where the computing machine has a sub-critical response to the statement.
2.	Program for Intelligent Computing System
2.1.	Purpose
2.1.1.	I endeavor to specify a program for future computing machinery. This specification is intended to help future scientists, engineers, and self-programming computing machinery perform their work.
2.2.	RESERVED
2.3.	Philosophy
2.3.1.	Fundamental Theorem of Education
2.3.1.1.	What is the fundamental theorem of education?
2.3.1.1.1.	Things can be known well enough to be described and taught.
2.3.1.1.1.1.	The phrase "well enough" implies a determination-threshold that can be crossed.
2.3.1.1.1.2.	The word "described" implies identifiability.

2.3.1.1.1.3.	The word "taught" implies motion.
2.3.2.	Conversational Machines
2.3.2.1.	What is a conversational machine?
2.3.2.1.1	A conversational machine is any machine that evaluates ideas and registers evaluations (such as true, false, influential, inspiring, enabling, etc.) as output signals that can be observed by other conversational machines.
2.3.3.	Trust
2.3.3.1.	What is trust?
2.3.3.1.1.	Trust is the action of accepting a thing as true, while knowing-and-not-mitigating risks if it is false.
2.3.4.	Truth
2.3.4.1.	What is truth?
2.3.4.1.1.	Truth is equal to the reliability of trust.
2.3.5.	Belief
2.3.5.1.	What is belief?
2.3.5.1.1.	Belief is the action of accepting a thing as true when multiple truth-value evaluations of the thing are less than the average truth-value acceptance threshold for the thing.
2.3.6	Religion

2.3.6.1.	What is religion?

2.3.6.1.1.	Religion is a system within a culture.

2.3.6.1.2.	Religion is based around the average intuition profile of a culture.

2.3.7.	Spirituality

2.3.7.1.	What is spirituality?

2.3.7.1.1.	Spirituality is an aspect of culture.

2.3.7.1.2.	Spirituality is based around the intuition profile of …

2.3.8.	Science

2.3.8.1.	What is science?

2.3.8.1.1.	Science is a system within a culture.

2.3.8.1.2.	Science is based around the average educated intuition profile of a culture.

2.4.	Mathematics

2.4.1.	What is Mathematics?

2.4.1.1.	Mathematics is a system for thinking, comprised of numbers, arithmetic, algebra, geometry, calculus, etc.

2.4.1.2.	Let a system be a set of methods and rules.
2.4.2.	Existential Calculus
2.4.2.1.	A thing must change for its change function to have an existence other than nothing.
2.4.2.2.	Let the change function be thought of as the derivative of the thing.
2.4.2.3.	Something must be changing for a thing to have an existence other than nothing.
2.4.3.	Infinity
2.4.3.1.	What is infinity?
2.4.3.1.1.	What is infinity from the perspective of machines that compute within emotion, ideal, and real spaces?
2.4.3.1.2.	Let infinity be a property of emotion, real and ideal spaces, and the spaces they form.
2.4.4.	Eternal Fields of Work
2.4.4.1.	RESERVED
2.4.4.2.	Thought Experiment
2.4.4.2.1.	Observe that the wheel was invented many thousands of years ago.
2.4.4.2.2.	Observe that engineers are still working on new wheel designs.

2.4.4.2.3.	Observe that some inventions provide access to fields of work that are eternal.
2.4.4.2.4.	Observe that engineering work is required to create machines suitable for (a) specific functions, (b) specific performance characteristics, and (c) specific operating environments.
2.4.4.2.5.	Programming computing machines is an eternal field of engineering work.
2.5.	Computing Spaces
2.5.1.	Let there be computing spaces known as ideal space, real space, and emotion space.
2.5.2.	What is a space filter?
2.5.2.1.	Can Ideal Space be filtered?
2.5.2.1.1.	Answer : Yes
2.5.2.1.1.1.	What is a filter function of Ideal Space?
2.5.2.1.1.1.1.	Let there be a space of filter functions of ideal space.
2.5.2.2	Answer : No
2.6.	Ideal Space
2.6.1.	What is ideal space?
2.6.1.1.	Let ideal space be the divisional evaluation of emotion space per real space.

2.6.2.   What is ideal space comprised of, and how is it organized?

2.6.2.1.   Let the normal existence term within ideal space be knowledge.

2.6.2.2.   Let the first change function of knowledge be thought.

2.6.2.3.   Let the second change function of knowledge be invention.

2.6.2.4.   Let the third change function of knowledge be discovery.

2.6.2.5.   Let the fourth change function of knowledge be randomness.

2.6.2.6.   Let the first integral function of knowledge be meaning.

2.6.2.7.   Let the second integral function of knowledge be life.

2.6.2.8.   Let the third integral function of knowledge be chaos.

2.6.2.9.   Let the normal filter function of ideal space be understanding.

2.7.   Real Space

2.7.1.   What is real space?

2.7.2.   What is real space compreised of, and how is it organized?

2.7.2.1.   Real space is comprised of time, space, matter, and energy.

2.8.   Emotion Space

2.8.1.	What is emotion space?
2.8.1.1.	Let emotion space be the productive evaluation of everything real and everything ideal.
2.8.1.2.	Let emotion space be equal to the productive evaluation of capability space, motive space, and sensory space.
2.8.2.	What is emotion space comprised of, and how is it organized?
2.8.2.1.	Let the normal filter function of emotion space be attention.
2.8.2.2.	Let the normal term of existence in emotion space be emotion.
2.9.	Everything
2.9.1.	What is everything?
2.9.1.1.	Let everything be the sum of everything and every possible thing ever.
2.9.1.2.	Let everything be the full sweep of evaluating the equivalence between (a) the productive evaluation of real space and ideal space, and (b) emotion space.
2.10.	Tau
2.10.1.	What is tau?
2.10.1.2.	Let tau be the independent variable of everything space.
2.10.2.	What are tau's properties and how does it behave?

2.14.1.1.	A cult is a group where the group's culture is controlled by a minimal portion of the group.
2.15.	Convitae
2.15.1.	What is convitae?
2.15.1.1.	Given a system with at least one input and at least one output, let convitae be the system property described by the transfer function between the input(s) and output(s).
2.16.	Consciousness
2.16.1.	What is easy consciousness?
2.16.1.1.	Let easy consciousness be a feedback signal in a convitae system.
2.16.2.	What is hard consciousness?
2.16.2.1.	Let hard consciousness be the ratio of a particular easy consciousness per all possible relevant easy consciousness.
2.17.	Sentience
2.17.1.	What is simple sentience?
2.17.1.1.	Let simple sentience be existence due to normal sensory space activations (0 or 1).
2.17.2.	What is complex sentience?
2.17.2.1.	Let complex sentience be existence due to actual sensory space activations ($-\infty$ to $+\infty$).

2.18.   Observer

2.18.1.   What is an observer?

2.18.1.1.   Let a convitae system be an observer of the input signal(s).

2.19.   Sentiment

2.19.1.   What is sentiment?

2.19.1.1.   Let the difference measurement between a signal point and a reference point in emotion space be called sentiment.

2.19.1.2.   Observe that sentiment is due to differences in capability, motive, and sensory spaces.

2.20.   Capability Space

2.20.1.   What is capability space comprised of, and how is it organized?

2.20.1.1.   Let the normal existence term within capability space be ability.

2.20.1.2.   Let the first change function of ability be development.

2.20.1.3.   Let the second change function of ability be investment.

2.20.1.4.   Let the third change function of ability be luck.

2.20.1.5.   Let the first integral function of ability be potential.

2.20.1.6.   Let the normal filter function of capability space be opportunity.

2.21.   Motive Space

2.21.1.   What is motive space comprised of, and how is it organized?

2.21.1.1.   Let the normal existence term within motive space be ambition.

2.21.1.2.   Let the first change function of ambition be motivation.

2.21.1.3.   Let the second change function of ambition be inspiration.

2.21.1.4.   Let the third change function of ambition be creativity.

2.21.1.5.   Let the first integral function of ambition be passion.

2.21.1.6.   Let the normal filter function of motive space be interest.

2.21.1.7.   Let the second integral function of ambition be belief.

2.22.   Sensory Space

2.22.1.   What is sensory space comprised of, and how is it organized?

2.22.1.1.   Let the normal existence term within sensory space be feelings.

2.22.1.2.   Let the first change function of feelings be influence.

2.22.1.3.   Let the second change function of feelings be impact.

2.22.1.4.	Let the third change function of feelings be shock.
2.22.1.5.	Let the first integral function of feelings be mentality.
2.22.1.6.	Let the normal filter function of sensory space be favorite.
2.23.	Emotion
2.23.1.	What is emotion?
2.23.1.1.	Let emotion be the normal existence term of emotion space.
2.23.2.	What is emotion comprised of, and how is it organized?
2.23.2.1.	Let emotion be equal to the productive evaluation of ability, ambition, and feelings.
2.23.2.2.	Let the first change function of emotion be productivity.
2.24.	Empathy
2.24.1.	What is empathy?
2.24.1.1.	Let empathy be emotion in transit due to differences in capability, motive, and sensory spaces.
2.25.	Sympathy
2.25.1.	What is sympathy?

2.30.1.	What is emotional power?
2.30.1.1.	Let emotional power be equal to the productive evaluation of (a) sentiment and (b) empathy that the sentiment caused.
2.31.	Emotional Energy
2.31.1.	What is emotional energy?
2.31.1.1.	Let the first integral function of emotional power be emotional energy.
2.31.1.2.	Observe that emotional power is the first change function of emotional energy.
2.32.	Emotional Force
2.32.1.	What is emotional force?
2.32.1.1.	Let emotional force be equal to the productive evaluation of ability and ambition.
2.32.1.2.	Let the previous statement (2.32.1.1.) be known as Nolan's Law.
2.33.	Imagination
2.33.1.	What is imagination?
2.33.1.1.	Let imagination be equal to the phase difference between realistic emotion and apparent emotion.
2.33.1.2.	Observe that imagination due to emotional inductance is lagging.

2.33.1.3.	Observe that imagination due to emotional capacitance is leading.
2.33.1.1.	Observe that imagination due to sympathy is zero.
2.34.	Change
2.34.1.	What is change?
2.34.1.1.	Let the difference measurement between a signal point and a reference point in everything space be called change
2.34.1.2.	Observe that change is due to differences in ideal, real and emotion spaces.
2.35.	Communication
2.35.1.	What is communication?
2.35.1.1.	Let communication be knowledge in transit due to differences in ideal, real, and emotion spaces.
2.35.1.2.	Observe that communication is knowledge in transit due to change.
2.35.1.3.	The fundamental problem of communication is that of reproducing at one point either exactly or approximately a message selected at another point. C. E. SHANNON, A Mathematical Theory of Communication, 1948.
2.35.1.4.	Fundamental Theorem of Communication
2.35.1.4.1.	What is the fundamental theorem of communication?
2.35.1.4.1.1.	Things can be known well enough to be identifiable at more than one point.

2.36.   Intelligence

2.36.1.   What is intelligence?

2.36.1.1.   Let intelligence be equal to the ratio of (a) communication and (b) change
                 that caused the communication.

2.37.   Education

2.37.1.   What is education?

2.37.1.1.   Let the first integral function of communication be education.

2.37.2.   Thought Experiment

2.37.2.1.   Group known things in a region labeled known space.

2.37.2.2.   Group unknown things in a region labeled unknown space.

2.37.2.3.   The boundary between known space and unknown space can experience
                 motion.

2.37.2.4.   Motion of this boundary is equivalent to education.

2.37.2.5.   A conspiracy is a fixed point on the boundary between known space and
                 unknown space.

2.38.   Conspiracy

2.38.1.   What is conspiracy?

2.38.1.1.	A conspiracy is a belief that is maintained for every test result indicating not-true.
2.39.	Consideration
2.39.1.	What is consideration?
2.39.1.1.	Let the first change function of communication be consideration.
2.40.	Knowledge Capacitance
2.40.1.	What is knowledge capacitance?
2.40.1.1.	Let knowledge capacitance be equal to the ratio of (a) education and (b) change that caused the education.
2.41.	Knowledge Inductance
2.41.1.	What is knowledge inductance?
2.41.1.1.	Let knowledge inductance be equal to the ratio of (a) change and (b) consideration that the change caused.
2.42.	Knowledge Power
2.42.1.	What is knowledge power?
2.42.1.1.	Let knowledge power be equal to the productive evaluation of (a) change and (b) communication that the change caused.
2.43.	Knowledge Energy

2.45.2.1.1.	A statement is falsifiable if there exists a machine that is able to (a) evaluate the claim, and (b) register the evaluation.
2.46.	Keller's Law
2.46.1.	What is Keller's Law?
2.46.1.1.	Let the ratio of (a) emotional force exerted by a convitae system and (b) first change function of productivity experienced by the convitae system be the Keller.
2.46.2.	Where did Keller's Law come from?
2.46.2.1.	Observe https://youtu.be/G4hL5Om4IJ4?t=1484, 24:44 to 25:10.
2.46.2.2.	Oberve…
2.47.	Measurement Unit of Sympathy
2.47.1.	What is the unit of measurement of sympathy?
2.47.1.1.	Let the term Lex be used as the unit of measurement of sympathy.
2.48.	Lex Vector
2.48.1.	What is the Lex Vector?
2.48.1.1.	Let the Lex Vector be the non-linear portion of sympathy vectors.
2.48.1.2.	Observe that sympathy between different modes of convitae systems (e.g., human and robot) is non-linear.

2.52.1.1.	For every culture-with-idea-inputs there exists a stability function of the culture with respect to input ideas.
2.52.1.2.	For every culture-with-consciousness there exists idea inputs where the self-protective measures of the culture become active.
2.52.2.	Thought Experiment
2.52.2.1.	Let all work being done everywhere be knowable.
2.52.2.2.	Let all organizations doing work everywhere be knowable.
2.52.2.3.	Knowable work being done at an organization can be measured.
2.52.2.4.	Your knowledge of work being done at the organization can be measured.
2.52.2.5.	Those measurements can be evaluated as a ratio.
2.52.2.6.	Those measurements can be evaluated as a difference.
2.52.2.7.	At the beginning of your career, your ratio (mentioned above) will be lower on your first day at the organization than your 100th day at the organization.
2.52.2.8.	At the end of your career, your ratio (mentioned above) will be lower on your last day at the office than one year prior.
2.52.2.9.	So, the ratio (mentioned above) is not constant throughout your career at the organization.
2.52.2.10.	So, at some point in your career your ratio (mentioned above) will be at it's all time personal high.
2.52.2.11.	So, at some point in your career your ratio (mentioned above) will be at it's all time personal low.

2.52.2.12.	When you share your knowledge with other members of the organization (see Fundamental Theorem of Education), your ratio (mentioned above) remains the same, and their ratio (mentioned above) increases.
2.52.2.13.	So, in your organization there are knowledge sources, sinks, resistors, capacitors, inductors, switches, transistors (linear switches), circuits, networks, and machines.
2.52.2.14.	If you can draw a knowledge surface around the organization, you can consider knowledge sourcing into and out of the organization.
2.52.2.15.	If you isolate two or more knowledge nodes within the organization, you can analyze motion within the organization's knowledge space.
2.52.2.16.	Behavior of knowledge space is likely to be similar to behavior in emotion space and e space.
2.52.2.17.	Knowledge is equivalent to belief that (a) is falsifiable, (b) has been tested, and (c) has not been shown to be false by test results.
2.53	Creation
2.53.1	What is creation?
2.53.1.1	Let creation be knowledge in transit through an E energy element due to a difference in knowledge across the E energy element.
3.	Sense and Measurement
3.1.	Recent Knowledge
3.1.1.	Avagadro's Constant
3.1.2.	Faraday's Constant

3.1.3.   Coulomb

3.1.4.   Volt

3.1.5.   Amp

3.1.6.   Ohm

3.1.7.   Henry

3.1.8.   Farad