Digital Answers for an Analog World
(Solutions: The How & Why to Enjoy Life)

Introduction: This book is my compilation of answers to various perplexing questions. My qualification to write this book is a successful life. In this case, success means achieving happiness through a great marriage with a wonderful wife. Although I started with a lack of material possessions or inherited money, we have achieved financial independence, so that we can enjoy the remainder of our life. Since at the age of 47, I found out I have some neuromuscular disorder, later (2004) determined to be IBMPFD (a rare genetic disorder for which in my life there is no cure, no treatment, no hope, the mutation was actually identified when I was 56), we decided to do as much as we can in the few years left of mobility. Therefore, this tome was started while traveling; thus, no immediate access to my normal resources in my library. Specific references will be added as time goes by. The idea is to try to explain how the great complexities of life can be simplified into generalizations that are useful in everyday living. Essentially, most of my professional career was a VP of Quality & Reliability, in practical terms my function was to translate the analog output of a manufacturing and testing process into a digital decision to ship or not to ship (either to a customer or the next stage in manufacturing, assembly, test, or finish). A friend of mine once said “no generalization is worth a damn, including this one”, except generalizations can be useful to clarify and focus one’s view of the many interacting mysteries of life. Life, in general not any given individual or species, has the instinct (from DNA) to grow (e.g., oppose entropy) and the human individual can contribute to improve life or not. The following contains ideas one can use to clarify one’s outlook on life and actions one can take to improve one’s life and the surrounding environment.

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Background: Philosophy, science, and history have always been interests of mine. Some of my most delightful memories are discussions in high school with various people about the wonders of imagination opened by Socrates and Plato. Already having a background by then in C.S. Forrester, H.G. Wells, and Jules Verne certainly helped. The reading of Will Durant, Mark Twain, Rudyard Kipling, Isaac Asimov, Arthur Clarke, Robert Heinlein, Gordon Dickson, AE Van Vogt, Theodore Sturgeon, William Tenn, Kurt Vonnegut and the other science fiction writers whose stories and ideas shaped my explorations into learning. Learning is a never-ending process and recent authors like

John Casti provide new insights. Therefore, this book will not be academic or have footnotes. My best teacher, Sy Hakim, dubbed my writing and thought processes the "shotgun effect", so bear with me as we wander through a variety of questions and answers. When in high school in 1965, someone asked for a concise reason that I read so much history, my answer: "to make the future the present by way of the past". We must study and learn from the past in order to develop systems and processes to repeat making the same mistakes. George Santanya was absolutely correct in stating "those that do not remember the past are condemned to repeat it".

Purpose: I am taking the time and effort to put these thoughts to paper as part of an effort to try to help others, to guide some thought processes, and provide some ideas for those that have an interest. I have always had a talent for solving nebulous problems (thus, my success in business and management of people). The thought processes, assumptions, and facts herein provide guidelines on how others can be successful (happy), as well as work on major problems facing humanity. These ideas should create discussion, contention, arguments, and other worthwhile activities for thinking people. In this case, I have a consciously clearly defined purpose for writing; however, purpose does not have to be conscious or premeditated, e.g., the purpose of life is not a function of some premeditated conscious thought by the entity of life.

What is different now, e.g., later than ~ 2010, is that the totality of human knowledge has reached a critical mass. Now there is no longer any rationality in postulating unnatural causes for any event. While the natural reason may still be unknown for many processes and events in nature, there is the high probability that a natural reason will eventually be discovered. Thus, there are now boundaries for the scope of explanations. 500 years ago, postulating the unnatural would have been rational for describing the universe and human activities, 50 years ago the boundaries were still reasonably wide, now there is no rational reason to impose any unnatural explanations within the boundaries (or limits) of possible reasons for explaining the universe or humanity.

Beliefs and Opinions:

Thinking is the rational use of knowledge, whether emotions, facts, beliefs, or opinions to logically derive new thoughts; noting thinking can be conscious or unconscious. Intuition is a rational process, we just do not know yet all the bio-chemical-electrical resources the unconscious mind is using. Beliefs are ideas that are based on faith (usually from early environmental effects, e.g., parental activities and teachings), and cannot be fully demonstrated or proved, and often have strong emotional links. Opinions are deductions based on facts, assumptions, and logic. Beliefs are primary thought assumptions. Beliefs cannot be debated, although they can be changed. Opinions can be debated, because arguments can challenge assumptions and the logical path used to arrive at the conclusion/deductions.

Adding to the confusion is the unknown and the unknowable. Much of the unknown may be discovered, invented, or described; however, there will always be the unknowable. Past events may often be unknowable, e.g., which cave man first used fire or the exact

distribution of matter after the Big Bang. Just because items are unknowable, does not mean they are irrational. Just because items are unknown, does not mean there are unnatural explanations.

Beliefs become truths when they are consistent with the observed world. They are still beliefs, in that there is only circumstantial evidence; never the less, these beliefs are extremely powerful forces that guide human inquiry, learning, and actions. Many "truths" that are held to be "self-evident" are essentially beliefs that have been derived from education and experience; they may not necessarily be correct, but they can be changed with sufficient evidence and a willingness to accept change.

The 21st century is one of the major inflection points in the time line of progress (and possibly survival) for the human species. About 1/16 of all the people that have ever lived are currently alive (albeit with extreme over-population most are not contributing to the progress or survival of the species). Human knowledge and the growth of human knowledge (and our knowledge of possible boundaries) is expanding at an exponential rate (e.g., an order of magnitude every decade, compared to the doubling of all knowledge before 1600 between 1600 and 1900). So humanity has now reached a "critical mass" of knowledge, such that we can rationally start to control the future of life on and eventually off, Earth. Thus, the human species has reached a level of accumulated knowledge, where the unnatural (or supernatural) is no longer necessary to explain the unknowable or the unknown. We now know enough to accept the limits of our knowledge, without resorting to the fallacy of the unnatural to explain and accept those limitations.

The macroscopic world is generally analog, i.e., a continuous distribution of possibilities. Whether truly continuous, or discrete with very small interval, is not important for our discussion. Human decisions are digital, generally binary (yes/no, go/no-go), but can have a defined and limited range of possibilities. Converting the virtually infinite number of analog possibilities to a small finite list of digital possibilities is what some people can do better than others. This book is an attempt to convert some of the analog possibilities that interest me the most into digital decisions.

Overview:

I believe the following descriptions of reality (truths) to be self-evident:

A. Rational, consistent, and knowable laws of nature govern the universe. By "laws of nature" I am referring to combinations of various models of how reality operates as determined by science, i.e., physics, chemistry, biology, mathematics, not just a simple physical law such as the law of gravity (which is really not so simple).
B. The laws of nature will generate complexities, including life (by random permutations of chance events even though the central tendency is towards chaos).

C. The laws of nature will attempt to reduce all complexities to simpler (lower energy) forms.
D. The laws of nature have a central tendency and some amount of variability; thus, events tend to oscillate about the central tendency, often at extremes.
E. Life is capable of using the laws of nature constructively to prevent the natural decay to chaos.

The following sections will discuss implications and ramifications of these truths. Various actions are proposed for humanity to implement truth D.

Note, “self-evident” may well be synonymous with “faith”. In either case, these are truths that should be obvious to a rational observer of the universe and life. However, these truths cannot always be “proven” by mathematical, scientific, or engineering experiments. “Cogni ergo sum” is another self-evident truth; Descartes literally reduced the varied landscape of philosophical musings on the nature of reality to a simple statement. One could argue, if more people would just think, efforts such as this writing would be superfluous.

Chapter 1: What Is Life All About?

To get to how one should live, one must have concepts of why and what: Why are we here? Why do we die? Why is there life? What am I? What difference does anything make? Then one can determine what to do to achieve a successful life.

In the beginning, there was??? (the question marks really signify I do not know). The mind always grapples with infinities, either in the past or the future. Our universe came to be about 13.7 billion years ago. What else there was before or what else was or is around I cannot conceive of and I do not mind I do not know the answer to that question. One model suggests that space-time evolved after the Big Bang; prior to that the universe was essentially a “singularity” in which time (as we understand the movement of matter) had no meaning or quantification. Since quantum mechanics posits that particles “pop” into and out of the universe, just due to chance, the universe transitioned from a “static” groups of something, to the beginnings of what we now know as the universe. There may be additional dimensions from which particles “pop” in and out of that has a time-line more consistent with the last 12-13 billion years (and maybe for an infinite amount of “time” before that), but the answers to those theories are still unknown. We still need more knowledge to know if the answers are unknowable.

History is important to provide knowledge and lessons of how to make the future the present by way of the past. What was before this universe does not provide relevant data for this discussion (the data could be relevant if any existed, but since the data is not knowable, the data is not relevant). The universe has been in constant conflict since then, between the forces of entropy (chaos) and organization (life). If anthropologization of these conflicting forces is appropriate, then these two basic tendencies are the bad and good of nature. The side of nature that is good is life; that tendency to organize matter

and energy to reproduce and increase life. The side of nature that is evil is chaos; that tendency to destroy or break life apart.

Thus, man is an artifact of nature attempting to reduce chaos in the universe. Nature keeps trying (experimenting) with various life forms to find one or more that can survive the chaotic forces of nature. Although the dinosaurs were around many more millions of years than humans, the dinosaurs were not a successful life form, because they could not survive the destruction caused by the meteor and other earth geological changes. Nature then evolved intelligence, humans on Earth have yet to prove that intelligence is a successful adaptation. Note, evolution is the combination of random mutations and natural selection to generate a life form more able to survive the attempts of nature to return life to chaos.

One of the reasons for this book is that I believe humanity can only prove to be a successful life form during the 21st century or soon thereafter. Success will come when humanity can survive any catastrophe on Earth (up to and including when the Sun goes nova) and still exist. This means humanity must achieve inter-stellar flight and must have outposts of humanity on other planets in other solar systems. The 100-year limit is constrained by the availability of energy and materials to achieve space colonization; self-sustaining colonies at other locations within our solar system. Unless the over population of the Earth by humans stops within this timeframe, there will be insufficient energy and other resources to achieve space flight.

Another purpose of this book is to clearly state that all the current problems facing humanity could be adequately resolved if the overpopulation problem was faced. Historically (at least during parts of the 20th century), only mainland China made any real effort, that level of effort should be applied in every country (note, China's emerging economic success is directly correlated, both in time and results, with the Chinese emphasis to limiting population growth). If mankind does not use our intelligence to voluntarily reduce the population, nature will find a means to return the population to a rational level; unfortunately natural means always involve a great deal of pain and suffering. One could argue that most, if not all, problems throughout history have been caused by over population (for the resources at that time); thus, painful activities (e.g., wars, disease, starvation) were required to rectify the situation. Prevention is always less painful than correction, but requires the will to invest for the future (noting investment often means a minor sacrifice in the present, to enable a better future; most people are too lazy or selfish to invest).

So why are we here? Humans are an experiment of nature (like all other life forms) to reduce chaos in the universe (this is a natural experiment, not a scientific design of experiments with a specific purpose and method, just a random or possibly chaotic combination of variables to generate a large number of possible outcomes, some of which are successful). Humanity, just like the universe, is the result of natural (stochastic or chaotic) processes, ever since the Big Bang. Mankind must advance (see Will Durant's definition of progress) in order to prevent natural catastrophic and painful events that either correct imbalances (e.g., over-population) or are evolutionary (mutations) to

further develop life forms that can overcome chaos. Mankind is to find and perform those activities to protect and expand the human life form throughout the universe. Note, this is mankind, not a single human being. Nature works with the species, not the individual. Although life is important to each of us for ourselves, we all must face reality that a 1,000 or million years from now, what is important is anything we can contribute to assuring humanity will be around at that time. The least valuable means of contributing today is reproduction (obviously at other times in history, e.g., after the Black Plague, larger families were more valuable).

Volition implies determinism (consistent actions towards some goal, but often inconsistency or variation). Does nature have volition because some natural laws are deterministic? No, but since natural events can be deterministic, stochastic, or chaotic, the seeming capriciousness implies the volition of a conscious entity. Although this is not true, assigning volition to nature sometimes helps some understand the course of natural events. For example, the population of any creature has some natural upper and lower bound, based on the environment and the amount of DNA needed for successful propagation. Nature allows the population to vary as conditions change, but nature is always seeking (evolving) ways to test the viability of the species. Thus, once a species over-populates (as humanity currently has done), nature will find increasingly more devastating ways (e.g., famine, plague) to reduce the actual population to the natural level. This looks like volition, but is only an ongoing evolution of natural experiments, based on natural laws.

Humanity faces 3 major classes of problems:

1. Self-destruction from internal forces, e.g., plague, famine, war, all of which can be addressed by reducing the population.
2. Destruction from natural forces, e.g., asteroid, volcano, supernova (all which can be mitigated with science and engineering).
3. Destruction from external life forms, e.g., aliens (which again needs science and engineering plus luck)

Any activity that does not directly or indirectly support actions to prevent the destruction of mankind is superfluous. In world of the 21st century, that is all fundamentalism religion, multi-culturalism, socialistic policies, and any actions that are not actively reducing the population in all areas of the earth.

Topics for this book:

1. Morals vs. Ethics: Quote Sturgeon exactly. Morals are relative to the specific needs of a given culture or civilization, while ethics should be derived from first principles (as above). Morals are rules of behavior for the benefit on an organization. Ethics are rules of behavior for the benefit of humanity. Morals are developed in authoritarian hierarchies, based on the perceived needs of the organization enforcing the rules. Ethics are derived using scientific principles that are universally applicable and are developed by individuals based on nature and natural laws. Morals are always relative to the needs of the organization within the existing social structure. Some ethical rules of

behavior may be relative to the status of humanity, e.g., population density, while many ethical rules are absolute, e.g., genocide is wrong.

a. Dictionary definitions are:
    i. Ethics: professionally right or befitting, conforming to professional standards of conduct; the science of duty; character, essential quality.
    ii. Moral: pertains to character, conduct, intention, social relations; pertaining to the conscience or moral sense or the general principles or right conduct; depending upon or resulting from probability; raising a belief or conviction in the mind independent of strict or logical proof; conforming to the rules of right conduct.
b. My definitions are:
    i. Ethics: Rules of behavior to aid the progress of humanity.
    ii. Morals: An organization's rules of behavior in order maintain that organization.
c. Rules or Laws vs. Guidelines for proper behavior. Asimov's 4 Laws of Robotics are applicable guidelines for ethical behavior. The laws were developed assuming deterministic behavior for robots, which with the advent of "fuzzy logic" is no longer strictly applicable. Since human actions will never be deterministic, then the ethical laws for deterministic robots should be guidelines for behavior most of the time. The Laws are:
    i. Look up a A Robot May not Harm Humanity.
    ii. A Robot May Not Injure a Human Being, or, Through Inaction, Allow a Human Being to Come to Harm.
    iii. A Robot Must Obey the Orders Given It by Human Beings Except Where Such Orders Would Conflict with the First Law.
    iv. A Robot Must Protect Its Own Existence As Long As Such Protection Does Not Conflict with the First or Second Law.
d. A similar set of Laws was developed to account for some variability in robots (Roger MacBride Allen in Isaac Asimov's Caliban):
    i. A robot may not injure a human being.
    ii. A robot must cooperate with human beings except where such cooperation would conflict with the First Law.
    iii. A robot must protect its own existence, as long as such protection does not conflict with the First Law.
    iv. A robot may do anything it likes except where such action would violate the First, Second, or Third Law.
e. One can then formulate ethical guidelines for human behavior based on the concepts of the Robot Laws, for example:
    i. Personal behavior and self-accountability. A healthy individual is always responsible for their actions and the ramifications of their actions. There is a small fraction of people who are born with genetic mutations, e.g., Down's syndrome, that prevent complete accountability. Laws must be established and enforced that acknowledge individual accountability; the social environment is not a factor other than providing for those with genetic mutations

who cannot properly take care of themselves. Anyone who travels must learn and respect the laws of the area in which they are traveling, even if those laws do not agree with the traveler's home base.

ii. Relative rules vs. species need. One must always consider the situation in history before morally judging the actions of a group. Some activities are ethically wrong and do not promote the advancement of humanity, e.g., Hitler. Other activities are distasteful and may not be in keeping with today's morals, but were appropriate for the times and are not immoral even if unethical, e.g., America's Indian wars.

2. Critical mass of desired or undesired traits in a population affecting direction of that society. Need to reduce incidence of traits that are counter-productive to the advancement of the society or humanity. The productive traits will vary as a function of the society's attainment of humanity's goals, e.g., certain types of aggressiveness are desirable at different times within a society's lifetime. Large cities (now with multiple millions, not what was large in earlier times of tens to hundreds of thousands) do not advance humanity's interests, because cities are concentrating points for undesirable traits. Cities provided useful functions in times when communications (of any type) were difficult and took long times. With easy transportation of goods, there is no need for large population centers to support manufacturing or distribution or consumption. An ideal range of city population can be determined based on energy consumption and other available resources within any given geographic area, based on how much area an individual needs to not encroach on the ecology. There can be trade-offs to concentrate some amount of population with wide open spaces for other life forms.
3. Rules for success, personal and species. Prevention instead of correction. Only a fool learns by experience, the wise man learns from the experience of others. From what we know of nature and human characteristics, we can formulate actions that cause the advancement of man, yet do not cause conflicts with our own genetic instincts and pre-dispositions. Historically man did not know enough of either nature (including human nature) and of social structures to adequately prevent non-advancing behavior of individuals, tribes, nations, etc.
4. Family vs. social actions/requirements. The family is the basic unit of social organization and is required for human advancement. Properly raising a child or children is the significant duty of being parents. This is primarily the function of the mother, i.e., homemaker, is a "job" that should not have any interference, i.e., with other "careers". The father must provide support (e.g., economic) and help raise the child, but recognize the balance between work and family. Having a "2-income" family just to acquire more material wealth (and in today's world, as almost always in history) is not a good use of the mother's resources. While children are in school after age of 5, then during the school hours, the mother could do other activities other than homemaking, if there is sufficient time. Parents must install discipline at early age, e.g., about time start to talk, so that self-discipline will be available later. Mother

must be available until child is in school for this to occur. Parents must set and consistently enforce rules in the house, also to help for when schooling starts. In some fraction of families there may be role reversal, i.e., the father is the homemaker, the critical factor is that one parent is always available to properly raise the child.

5. Value/purpose of government. Rule of law, not prerogative. Results of transgression will vary as function of social needs, e.g., death penalty vs. organ donor vs. exile to the colonies. Laws are based on logical needs of humans to train and clarify results of transgressions. No need for any "religious" base for any law or rule. Government is to provide services and activities that the individual, family, or community (including businesses) either cannot do (e.g., national defense) or cannot afford to do (e.g., transportation systems) or cannot risk to do (e.g., early stages of exploration, now meaning space).
6. Need to grow past use of religion, especially "fundamentalist" sects. Anyone who believes that a self-aware entity consciously designed the universe or causes unnatural events to occur is simply irrational. To believe that same self-aware entity is in any way affected by human actions or thoughts is even more irrational. Note, as a devout agnostic, I cannot state such beliefs are wrong, i.e., a god could exist, just that there is no rational reason to have such a view of nature or reality. Mankind has reached a critical level of knowledge, where beliefs in the unnatural are no longer rational explanations of nature. Although the exact theory completely describing the formation of the universe may not be known, there is enough scientific knowledge to demonstrate that a natural explanation is the most rational. Ockham's Razor indicates that a natural scientific explanation is more reasonable than any belief in unnatural theology, e.g., a god, having anything to do with the development or operation of the universe. While some parts of organized religions can provide some benefits (for those who cannot or will not think), the fundamentalist creeds are evil (i.e., propagate chaos) and must be eliminated. Organized religions are autocratic structures whose power is derived from an irrational belief in the unnatural. This power is used to modify or enforce the behavior of those ensnared. Theology is a mostly logically consistent set of beliefs, derived from the prime belief in the unnatural, which is used to explain various philosophical quandaries. That was probably necessary when the vast majority of man was under-nourished, under-educated, and main value human social organizations were physical labor. Those conditions no longer exist in most of the world ("civilized" or not). Religion arguably served a purpose when education was unavailable to the majority of the population and the total amount of knowledge was small, especially while the majority of the population was involved in day-to-day survival. Rules for behavior to insure survival and well as future improvement could be taken "on faith", with the absence of time and resources to properly educate. However, there is no need in an educated society for people not to use their own brains to ponder the "mysteries of the universe". Churches should be taxed out of existence. All evangelical or missionary work must be banned, again using taxes or

ostracism. There is a great deal of difficulty in discussing religion with those that believe, because first the believers are irrational (so rational discussions have no meaning); and second, the unnatural by definition cannot be demonstrated in the natural (real) universe. Similar to the problems with religion are belief-based actions. People should act based on intelligence, or worst case, the use of intelligence that has become memory. For many people, especially as we age, thinking becomes or is hard work. Life is much easier when based on memory. Belief is a form of memory, where actions occur, not because we think about what we should or could do, or what the ramifications are, but because we believe we should act in some manner. When memory is used, then the memories should be the result of active intelligence in the past or the use of rational acceptance of some other's intelligence, not based on belief or faith.

7. Family raising vs. salaried work. Raising the child (or children if the world population ever again justifies allowing more than one per family) is the function of marriage and the family. Genetics provide that the mother primarily performs this function. There are fewer activities that are more difficult or important than raising a child. Working somewhere else for a salary is not a good use of a mother's time during child raising years. If a couple desires large material gains or 2-career satisfaction, that is fine, but they should not have children. Taxation rules should both allow 1 child only, i.e., no additional penalty for having a child, unless both parents are salaried. There must be income tax penalties for more than one child. Maybe a tax break for no children (especially if dual income), and severe penalties as the number of children increase (independent of number of liaisons). One child is understandable, two children are irresponsible, and three children are criminal.
8. KAD principles. Knowledge, Ability, Desire. The three principles have a genetic (DNA) and environmental component.
    a. Knowledge is gained from education and experience, but depends on a good memory (which has a strong DNA factor, but training can help). Education is both formal (i.e., schooling) and informal (i.e., reading).
    b. Ability comes from training and practice, but depends on talent, which is a function of your DNA.
    c. Desire comes from leadership and motivation, but depends on will. The major components of desire are that are a function of will are:
        i. Focus; the identification and prioritization of necessary activities.
        ii. Self-discipline; the control to perform necessary activities in a timely manner.
        iii. Concentration; the intensive application of mental effort to achieve necessary activities.
9. Great man theories vs. need of the events. Leaders are born, not made; however, those with inherent leadership abilities can have them improved by education and training. In most cases, events will cull the candidates until a suitable leader is found to take the appropriate direction. In some cases, when one is already a leader, one can influence the course of events. That occurs when that one is a leader and not just someone who has achieved power. True

leadership is readily apparent in times of stress (note, stress is when death is involved, either of oneself or someone one cares about), while others can have power (e.g., through political or financial manipulations) without exerting leadership. J.P. Morgan is an example of someone who exerted leadership, even though the source of power was financial. Leadership is primarily the ability to have others willingly perform actions or activities they would not have otherwise done; and secondarily, the ability to make good decisions when needed. Power is the ability to change the behavior of others. A "ship's captain" has power; he may or may not have leadership. Having authority is not the same as being a leader, although often the concepts are improperly used interchangeably. Leadership can lead to power, but power does not imply or require leadership.

10. Powers of focus/concentration vs. genius. Conscious vs. subconscious thinking, intuition. The subconscious does rational thought, but using other data and inputs. Intuition, a sudden insight (solution) that can later be completed with a logical thought process (go from A to F, and eventually figure out B, C, D, and E). Gut reactions are another form of subconscious thought or intuition, one is just not conscious of all the inputs that are being used. Emotional reactions as based on genetic need to make quick decisions for survival; thus, why stereotyping or other general categorization of inputs. This is why actions, activities, or other behavior is classified as good or bad (useful or not useful; supportive or threatening). Man must be judgmental in order to rapidly classify threats or opportunities, using the emotional or subconscious part of the mind.
11. Liberal vs. conservative. Modern liberalism is actually socialism. Great liberals, (see Rushmore heads) were not socialists. Today's socialism is more akin to communism, fascism, or other forms of totalitarianism. Whether conservative, liberal, or socialist depends on your view of human nature and individual capabilities. A liberal believes each man is fully capable of self-determination, a conservative somewhat so, and a socialist not at all. A conservative believes in a full meritocracy, while a liberal believes government involvement is necessary to "level the field", while a socialist believes the government should dictate to all what they should do and what they should get (i.e., the government decides from each according to ability and to each according to need). The conservative believes in the least amount of government interference with all interactive activities, while the liberal believes the government should actively engage in some activities that are not easily borne by the smaller social units, e.g., family, tribe. Both conservatives and liberals believe in equal opportunity for all, while the socialist believes in universal mediocrity. Conservatives believe that the profit motive through competition will achieve the best results, while liberals want to subsidize some of those that do not compete well enough. Of course, socialists want to eliminate both profit and competition. In extreme form, modern liberalism is an attempt to change everything, despite any consequences or existing validity; while conservatism wants to change nothing, despite possible improvements or existing inadequacy. Socialism is an attempt to restrain the

gifted or determined (KAD principles) to the same mediocrity of those unable or unwilling to improve.

12. Progress, how defined? (again see Durant) Advancing humanity to survive any event. Activities that contribute to man's understanding of nature and the ability to survive natural cataclysms (to a continent, planet, or solar system) are those activities that define progress. Some activities can at one point in history aid advancement, e.g., religion in pre-historic times, or curtail advancement, e.g., religion in historic times. Growth is just more consumers (by either increasing number or increasing number of those with greater disposable income); progress is improvement at all levels, that does not require growth. Back to simple economics, wealth (and distribution of wealth) depends on amassing capital from value-added activities, e.g., farming, mining, industry (not "services" or "government"). At some point in time an individual or society will have excess wealth over that needed for sustenance, i.e., a disposable income to be used for entertainment, etc. The amount of disposable income is usually (and should be) a function of the value of the individual or organization to the society. The amount of total wealth to share is a fixed (albeit increasable) sum asset. Wealth is not just money, but renewable and non-renewable resources available, e.g., energy, food, land (both used by humans and the rest of nature). To increase the overall wealth of the society (and thus everyone in it, even if the distribution of relative wealth changes, the absolute wealth increases), wealth producing activities must occur. This means investment in those activities and performance of those activities, i.e., a service based society is doomed to extinction, because there is no value-added to the world at large. Similarly, poverty is more a state of mind than an actual accumulation of material possessions. Our parents and certainly our grandparents and earlier were "poor" in material possessions compared to virtually any citizen in the USA today, but few of them thought of themselves as poor. Poverty reflects in impoverishment of attitude of better oneself or descendants, not an income level or concentration of goods.

13. Human nature characteristics and distributions. The human mind works similarly for all humans; however, no two humans or societies will necessarily arrive at the same answer for the same factual inputs. Although humans are rational and the logic of the rationality is the same, there are other factors that affect the outcome of any thought process. There are the environmental factors of education, training, upbringing, and social needs. There are the genetic factors of memory, intelligence, and talents. The same facts will have different priorities or importance to different people. The desired outcomes can be different, both for the individual and how the individual values the outcome for society or humanity. One major difference between individuals is how they view events. A large number of people see events as unique discrete activities, while the rest see patterns. The ability to see patterns (distributions) is critical in formulating ideas for future activities and actions. Seeing and understanding that nature is stochastic or chaotic, not unique or deterministic is critical in formulating successful actions. Similarly people differ in how

they view events in time; length of horizon, planning, multi-tasking. These views determine actions and responses.

14. Deterministic, stochastic, chaotic distributions: statistical thinking applies to all aspects of living; similarly quantum mechanics can apply to macro events, including uncertainty and risk-reward. Statistical thinking means thinking in terms of distributions of possible outcomes, not just binominal (yes/no, go/no-go, also call Aristotelian). Some of the difficulties people have had in relating to quantum mechanics (statistical physics) include: a range of outcomes is possible, something can be both a wave and a particle, and one cannot simultaneously determine mass and position. A major issue in understanding the operation of the universe is that natural laws are stochastic or chaotic at the molecular (or smaller) level, yet mostly deterministic at the human interaction level. Life creation or reproduction (the initial forming of DNA, reproducing DNA, or mutating DNA) is a molecular level action (i.e., non-deterministic), yet eventually we end up with organisms (or other complexities like stars or planets) that follow natural laws, which at the macro scale are often deterministic, e.g., gravity. Conceptually we have great difficulty is transitioning from traditional deterministic thinking to statistical thinking, and applying the appropriate rules to the respective areas. Stochastic processes will lead to complexities that through reproduction and evolution can address the deterministic issue of entropy. Many natural laws appear to be deterministic, but are actually stochastic. Often for deterministic functions, we normally include the error function. The error function accounts for the unknown variables (or those not sufficiently quantized) and for stochastic variables, i.e., those whose value is not fixed. Essentially, that means that some natural laws that we consider deterministic, still contain significant stochastic elements.
15. Stereotyping, generalizations vs. specific actions. People stereotype in order to classify and categorize humans (or animals) in simple classifications so there can be simple rules for behavior (i.e., how to treat or react in most circumstances). Similarly, many scientists (especially “social scientists”) try to overly simplify human actions and activities based on a few prime causes. In reality, human nature within a population or an individual is a broad conglomeration of many competing factors; thus, many causes or descriptions of human nature or activities are overly simplistic (like stereotyping) and miss crucial actions or activities. This also explains why detailed explanations of social or human science are not referenced herein, because they are too specialized. The human mind is only capable of grasping or visualizing certain number ranges, i.e., 30 or less ≈ the family; 300 or less ≈ the tribe; > 300 everyone else ≈ aliens.
16. Disadvantages of searching for perfection. Although goals for industrial processes should include zero defects, there must be realization of the limitations of natural laws, e.g., quantum mechanics for some physical processes, physical wear of mechanical components, variance in assembled products. Statistical thinking of distributions is critical when addressing the physical world, statistical thinking is imperative when observing and

subsequent judging of human behavior. Each of us may strive for perfection in some actions or activities; we will be limited to rare achievements. This does not lessen the value of the goal, but increases the need for recognition of the possibilities. I detest the old saw and excuse "that to err is human". Only humans have the ability to strive for error free actions, because humans can adapt to different situations, i.e., there is no fixed or permanent operating system. However, just like machines, when humans act by routine (or algorithm) and do not think about their actions, there will be errors. Of course, thinking about everything is a ridiculous waste of time and energy, so there will be errors. We must work on making our daily routines to minimize errors.

17. Social unit priorities: family vs. friends, tribes, clans. Man's priorities for survival are tribe (or other highest social unit), family, then self. A man will die for his country (or cause) or family, before considering self. Although survival of self and family are obvious genetic needs for species survival, why does man put such a high priority on country or cause (as neither are directly related to species survival)??? An individual will think that survival of his country or cause are necessary for species survival, then training and comradeship will allow the individual to face the risks of battle.
18. Biographies of admired men: John Browning (gunsmith), Moony Warther (carver), Von Humboldt (scientist, explorer); German General Staff; Lee's Lieutenants; Lincoln; Robber Barons; Einstein, scientists
19. Culture: some cultures are "better" in an ethical sense than others, i.e., the cultures that aid human progress. No one should be relegated to living in a repressive situation, e.g., what Congress does to the American Indian; nor should stone-age cultures be preserved by living people. Religious fundamentalism is ethically wrong and should be eliminated, i.e., those cultures that support religious fundamentalism should be provided the support and services, e.g., education, democracy, capitalism, such that the ignorance of the many believers and the evil of the leaders, will die out over a few generations.
20. Human thought processes, rational use of priorities, environment, goals, knowledge, assumptions, inferences
21. time lines of actions to protect vs. improve tribe, family, self, i.e., narrow mindedness and short term thinking
22. Public service between high school and college. A requirement for the right to vote is to have spent at least 3 years in the military or 6 years of non-military public service. If performed as part of public service after high school, then most of salary is to be set aside for tuition.
23. responsibility and accountability
24. Emotions vs. reason: Omar Khayyam poem. How to balance the conflicts of emotions, sex, self-discipline, courage, focus, working hard, duty.
25. List of influential books (series)
    a. Asimov Foundation Series and Robot series; 4 Laws of Robotics
    b. Heinlein: Stranger in a Strange Land and short stories
    c. Gordon Dickson: Dorsai Series
    d. Sturgeon: More Than Human

e. Van Vogt: Slan, Null-A series
f. Pournelle: There Will Be War; and others
g. Mark Twain: Letters to the Earth;
h. Herbert: Dune Series
i. Will Durant: Story of Philosophy, History of Civilization
j. Many history books, especially WWII; ACW;

26. Life & death, why death? Evolution needs death so that mutations in new creatures can come to fruition. Life needs to be long enough to reproduce and properly raise and educate the young. After that, room needs to be made for the young. Since there are finite resources in any planet or solar system, in order to reasonably lengthen life (or human life), humans must expand throughout the universe, so there will be enough room to allow for longer lives. The ego or self-awareness is a function of the bio-chemical and electrical properties of the brain; some minimum level of junctions, cells, and interconnections are required. Self-awareness probably goes away once the brain is biologically dead, but maybe the self-awareness passes into another dimension. Certainly communication between the living, existing in however many dimensions are appropriate, and the dead, existing in some other dimension, does not seem feasible.
27. War and violence to accomplish goals. Man, by nature (i.e., evolution, genetics) resorts to or uses violence to accomplish goals. Can only have peace when there is strength and an outlet for resolving conflict. Also, need an outlet for the small pool of genetically pre-dispositioned to excessive violence, i.e., explorers, soldiers.
28. Necessity for good education and continuous learning: emphasis on physics, math, history, and communication.
29. Optimum size for a city: why need to be smaller with increased communication, food distribution, and manufacturing. Not proper environment to raise a human child. A child should be in the country (or similar rural setting) to appreciate nature and life. Population density (ratio of urban/rural dwellers) needs to be defined in terms of available resources, e.g., power, water, food, ecology. If a human needs 1KWH capacity, then industry needs 3KWH per human, so can determine max humans or min capacity. Similar for water. Need some amount of space for rest of ecology to flourish untainted by humans.
30. Davidisms: list various sayings or short opinions that concisely transfer an idea:
    a. Normal jobs have no stress; there is only stress if doing the jobs incurs risk to your life or someone you care about.
    b. 3 rules of pool: make the target ball, leave yourself a good shot, and failing the first do not leave the opponent a good shot.
    c. Make the future the present by way of the past.
    d. In the modern world, no city should be larger than 50,000 people maybe less.
    e. Only a fool learns by experience, a wise man learns from the experience of others, especially as recorded in books.

f. Although common sense is exceedingly uncommon, logical approaches to problems will result in rational, but not necessarily optimal responses.
g. Power is the ability to change the behavior of others. Power can come from many sources, e.g., authorative (military), financial, social, but the final result is the measure of power.
h. The pope (and any leader not advocating population control) should be tried for crimes against humanity).

31. Use of quality philosophy in everyday life. The essence of the quality philosophy is based on three premises: minimum energy to achieve conformance to the spec; prevention of potential problems; and continuous improvement. Minimizing the energy almost implies the other two, but then need to clarify that the minimum energy over the life of the process. This also implies the minimization of variation.
32. Why is youth thought to be wasted on the young. Because youth does not recognize or accept their own mortality; therefore, there is always time to devote to items other than self-fulfillment. That is necessary until a person in 12 or so years old (i.e., shortly before puberty), because that is the genetically programmed age where survival learning can be completed and contributions can start.
33. Items that are symptomatic of poor balance in today's world:
    a. Nothing is wrong with youth being rebellious, ignorant, and willful. That is human nature and has been documented since Socrates.
    b. Lack of recognition of all the facets of over population, including:
        i. Environmental destruction.
        ii. Loss of ecological balance.
        iii. Global warming.
    c. Concentrations of cities and all undesirable influences on nature and inhabitants.
    d. Until the 20^{th} century, life was harsh for almost all, i.e., high stress situations where activities prevented starvation or threats from the environment. Life was very much more complicated. Life is only complicated to those today who would have been culled in previous generations (via the 4 Horsemen).
34. Science provides predictability for actions. Knowledge of physics (and the other derivative hard sciences) and mathematics allows one to understand what will happen when one performs some action. Knowledge of life's purpose (to overcome the chaos of the heat-death of the universe) allows one to understand whether one should (is the action helping or hurting the growth of life and mankind) perform the action.
35. Relationship of population, growth, progress, consumption. Historically needed large masses of people, both for labor and a tax base. Taxes are an effective way to separate money from those who cannot properly use the money, which is why the poor should be taxed more than the rich (on earnings not inheritance) because the poor are poor because they do not know how to properly use money, e.g., savings, investments, etc. Cities were required to concentrate the population to facilitate communication, transportation,

distribution, availability of infrastructure, labor, raw materials, and interdependency of industries. Modern world does not require large families for agriculture or large centralized populations as a labor source. Machines or robots should replace most labor-intensive activities. With better education of fewer people, then the remainder would better invest and save their income, so would not need so many taxes to separate the fools and their money, so can be used for more useful purposes. Cultural and entertainment activities do not demand large concentrations, they just take advantage of what is available. The issue is setting up industry to rely on supporting a knowledgeable customer base, not just constant expansion of new consumers. Need constant improvement, not just growth. Most people serve little purpose other than to pay taxes and be part of the gene pool reservoir. Even eugenics does not guarantee individual improvement, since geniuses etc. appear to be minor mutations that are not reproduced in succeeding generations.

36. When reducing the population, must have economic incentives. Not just higher taxation for more children, but how to change economic models to be based on progress, not growth. Must model both how the economy will work with a stable population and consumption, as well as the model of how to transition to the smaller population, without causing undo economic hardships on companies or people. Economic models are based on historical ratios of very few thinking men to a large number of non-thinking (at least non-creative in science or engineering) manual laborers. Progress in the new economic model must rely on satisfying the needs of a largely thinking majority of workers.
37. Natural laws are probability distributions, very few are actually deterministic, most are stochastic. Show how affects societies, e.g., those items that distinguish “culture” of different groups of people, e.g., class, political system, business models, economic systems, work ethic and goals.
38. All communities of people will segregate themselves into various groups or classes. Historically this has been based on birth or other inherited attributes. No matter what is legislated, natural abilities (KAD) will cause some to acquire more wealth, power, or other property that will cause grouping or classification. The government should set up classes based on cumulative income tax paid; there is some title, recognition, and perquisite based on total federal income tax paid. Some rights, e.g., like voting, cannot be earned until so much tax is paid. Recognition that (at least in the USA) most wealth is earned (not inherited), based on KAD of the person. That opportunity must be spread to all (that is USA culture, meritocracy with economic reward in a capitalistic market-driven economy) and the mass of people return to respect of those that earn, rather than lumping as a unobtainable class of privileged one (“Defense of Elitism”). This also implies that eventually humans may be bred for better characteristics (or genetically engineered). Good breeding, nobility, upper classes were all attempts to improve the genetic material in the resulting offspring. With the historical lack of consistency, these programs have all failed (e.g., look at any monarchy based on inheritance).

39. Most people are rational, i.e., use their mind logically (mathematically reproducible), to achieve decisions or ideas. The input varies from actual data, to perceptions, to assumptions, which are all modified by priorities, importance, desires. The goal of education is to provide adequate data and logical training so that most people most of the time will arrive at the correct conclusion. Again, there are distributions involved, not pure Aristotelian 2 alternatives. The correct decision is that which is aiding the advance of humanity; if that is irrelevant then increasing individual happiness without harming others.
40. Need to describe ideal form of government, monarchy or dictatorship, aristocracy or oligarchy, republic or democracy (i.e., in terms of their extremes) while the ideal will compose the best properties of all systems. This means only the educated citizens are participants/law makers/executives. Only can become citizens by a combination of public service and enlightened contribution to the community, i.e., taxes, property ownership.
41. Capital punishment is required for economic reasons, especially when over-populated and minimum need for any manual or intellectual work they could perform. Restitution not retribution should be the essence of the penalty portion of justice. There is no restitution for major crimes that deserve death, e.g., murder, rape, treason; however, most other crimes should no require incarceration, unless there will be clear evidence of behavior modification, while paying for the cost of the incarceration. For crimes not deserving of the death penalty, but for those that cannot (or will not) be rehabilitated, there must be value-producing labor to partially offset the prison cost. Another option is to “volunteer” for human experiments, to advance medical knowledge. The only civilized approach is not to lock up a person who provides no benefit to society, but to remove that burden from the limited economic system. There is the added benefit of no repeat offenders. There is little or no benefit from fear of execution when caught, as few criminals believe they will be caught. Anyone convicted of two crimes must be sterilized, as all juvenile delinquents.
42. Entitlements are the anathema of a republic. Society has an obligation to support those that are mentally or physically unable to properly support themselves, due to either genetic problems (should be aborted, if possible) or injury. There should always be public work for those that are laid off during some economic crisis, until new private work or re-training is available. Anyone that chooses not to work and does not have other means of support, e.g., pension, investment, must be sterilized. In the USA, public charities and some state and local level support should occur during times of economic hardship, but the federal government should not be involved.