

Protagonists of Your Purpose in Life

Not Cogs in a Pointless Universe

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Chapter 1

Not Cogs in a Pointless Universe but Mindful Human Beings

Capable of having Cherished Values, Purpose-Filled Life Visions, and the Capacity to Achieve them.

The Problem:

Although outdated and now supplanted by more precise empirical data and hence no longer a valid scientific hypothesis, the old classical hypothesis that we are *cogs in a giant machine* is still believed as a scientific truth by many people today. Unfortunately, this erroneous, pseudo science—now an irrational belief, a religion to itself—erodes the concept of personal responsibility. This no longer tenable hypothesis asserts that each of us is but a mechanical extension of what existed prior to our birth and subsequent victims of our pre-determined families of origin and our equally, deterministic social context.

Consequently, no one bears any responsibility for their current propensities. While this might be true to some extent, that outdated, deterministic hypothesis maintains that a person is not even able to evaluate their current propensities and to decide either to opt to change path or to continue as they find themselves. This empirically false, deterministic assertion goes on to claim that even if a person could evaluate their current propensities, their efforts to opt one way or another way would be an illusion. It would be an illusion because the person has been pre-programmed and pre-determined and what they might perceive as a “choice” is a mere illusion as they will choose to act as they have been predetermined to act from prior conditioning. Consequently, since no one has control over their prior state, they emerge from that prior state, pre-programmed and pre-ordained, and hence, bear no responsibility for their actions or the thoughts that guide them.

This unscientific concept of the human person not only undermines the foundation of personal responsibility but also strips you of having any vision of yourself as a protagonist of values, hopes, and dreams. It thus thwarts your (A1) reasoning abilities and (B1) your will power, to (A2) plan and to (B2) engage yourself in self-change, personal growth and societal betterment. Do not underestimate how much you might unwittingly be influenced by this cog-in-a-wheel concept of yourself. Are there not times you believe you cannot do x, y, and z because you have come to believe that your family of origin conditioned you to act in a certain way or that person made you do that? Do you not sometimes believe that you cannot master yourself and achieve even the most modest goals that you have set before yourself because you are fatalistically driven by urges and compulsions beyond your control?

Even if you personally do not accept the doctrine that human beings are pre-programmed predestined, purely material cogs in a blind and meaningless universe, this outdated theory continues to influence too many people and probably too many aspect of your own life in significant ways. It still guides many decisions of governments, universities, schools, courts and medical institutions. It can also continue to influence your life to the extent that people in

leadership are not keenly aware of the pervasiveness of this cogs-in-a-wheel doctrine in their own thinking. Yes, even people who should be the proponents of personal responsibility, accountability, and higher standards of ethical and moral norms continue to make excuses for unacceptable behavior. To make matters worse, is the fact that even though modern science has proven determinism to be totally false with regards to the general daily phenomenon of the human person, there are still many highly educated specialists who continue to propound deterministic fatalism as a scientific truth.

The Solution

Step 1: Debunk the Equation that “Person” = “Cog-in-a-Wheel”!

During the twentieth century this deterministic, value corrosive, mechanical conception of human nature has been scientifically proven to be wrong beyond any shadow of a doubt. This concept of the human person has been proven wrong not simply in some minor detail but in its essential assertion in describing human nature. This does not mean that classical physics is without usefulness; it has multiple uses in the manipulation of large structures of matter for practical goals such as building a bridge or launching a communications satellite and in the manipulation of minute matter for functional objectives such as combining of chemicals to create useful products. Even though classical physics is useful, it is scientifically wrong in its definition of the human person and in defining human nature. The atomic physicists Werner Heisenberg, Niels Bohr, Wolfgang Pauli and their colleagues in the 1920-30s, recognized this error. From their work a vastly different, scientific framework for understanding the human person and even matter itself was established on solid empirical grounds.¹

These world-renowned scientists did not want to but were forced to develop a complete revision of classical physics regarding human nature and even nature itself. They did not want to because they too had been trained as scientists within the classical Newtonian conceptual framework. However, the new empirical data emerging from the study of sub atomic particles slowly led them to recognize that scientifically speaking the human person was not and could not be considered a cog in the wheel as had been thought for some 300 years by many leading scientists.

Unfortunately, this new, breakthrough, scientific understanding that, empirically speaking, the human person is a protagonist able to choose among options and responsible for their choices had very little practical effect on the culture of their time. This situation has only partially changed in our contemporary culture. For this reason, the notion that we are *cogs in a wheel* and *basically pre-determined beings* still dominates the general milieu more than three quarters of a century after it has been proven completely false and not in conformity to hard empirical data.²

Fortunately a vast amount of new data has come to light in the last twenty years. In fact, in the last decade, quantum scientists have been able to demonstrate scientifically that by *changing a person's perception of the kind of world they live in, they change not only their perception of*

¹ Henry Stapp, *Mindful Universe, Quantum Mechanics and the Participating Observer*, Springer, NY, 2007, p. 5

² *Ibid.*, pp i-ii.

possibilities but also the bio-electro-chemical processes in their brain-body.³ In other words, how a person views his/herself powerfully influences their response to life. A person's interpretative thoughts can increase or decrease *their energy to do*. Their interpretative thoughts can open or close a person's ability to see new possibilities of learning, self-change and growth. In other words, quantum theory converts the classical scientific (Newtonian) picture of ourselves from that of a "*helpless, deterministic being*" to that of a "*mindful human person*," responsible for their choices and emotional states.⁴ Just consider the following: (1) *First, think of yourself as a deterministic, fatalistic being*. Why do anything? It is useless to set goals and pursue them. (2) *Second, think of yourself as a protagonist, capable of setting and achieving goals*: You will set goals and strive to achieve them.

Step 2: Known Social Thinkers Have Challenged this Deterministic Religion

There have always been attentive thinkers who, based on their own experience and empirical observations, have challenged this deterministic concept of the human person. Yet, few have done it successfully not only because of the inertia of institutions but also because of the powerful propaganda of the doctrinaire pundits of determinism. These pundits have worked to indoctrinate as much of society as possible to accept their religious belief that the human person is but a cog in a machine. This ideology has directly and indirectly created the "science" undergirding the over-prescribed, money-incentivized, pain management, pill industry that has also created and sustained the opioid crisis. Those pills will make the "human" cog function better, like giving oil to a rusty gear.

Nevertheless, many perceptive thinkers—although they were educated within the deterministic framework of thinking—were able to escape its gravitational pull. One influential voice among these social thinkers who helped society break through this indoctrination is Edwin Friedman⁵. He concluded—based purely on his observations of the human reality around him and in his practice—that the primary cause of our chronically anxious society and its production of irresponsible people is due, in large part, to the still dominant, classical physical conception of the human person as a cog in the wheel.

Friedman states that the classical concept of reality unfortunately *focuses our attention on classification such as the psychological diagnosis of individuals or their personality profiles and on their social or anthropological niches (culture, class, gender, race, age, creed, etc.)* rather than on our emotional processes, our responsibility to regulate them and to make value-based choices and accept the full consequences of our words and deeds.⁶

³ Henry Stapp, *Mind, Matter and Quantum Mechanics*, Springer, New York, 1993, 2004, p. 223. [For those less familiar with quantum physics, these concepts are explained in more accessible terms in Stapp's more recent book, *Mindful Universe*, Springer, New York, 2007.]

⁴ Ibid, pp. 237-238.

⁵ Friedman was himself influenced by Murray Bowen and his work in family systems and his development of categories of analysis: Differentiation of Self (the most important concept); Nuclear Family Emotional System; Triangles; Family Projection Process; Multigenerational Transmission Process; Emotional Cutoff; Sibling Position; Societal Emotional Process.

⁶ Edwin Friedman, *A Failure of Nerve, Leadership in the Age of the Quick Fix*, the Edwin Friedman Estate/Trust, Bethesda, Maryland, 1999, p. 2, p. 7.

Friedman maintains that these classical categories of Newtonian Physics put people in pre-determined boxes and thwart people from taking full personal responsibility for their words and for their actions. In addition, Friedman argues that these pre-determined boxes also inhibit people from becoming aware of the universality of the emotional processes⁷ and from dialoguing and bonding with others regardless of opinion, race, creed, gender, or age. This ultimately inhibits the development of our potential to learn, to be self-controlled and to grow together. It also stifles our creativity in finding solutions. It causes us to be stuck!

Moreover, even if Friedman was unable to provide the hard scientific data and the scientific framework that quantum mechanics and neurobiological research now provide, he did develop a procedural, mental framework to help people mature. Friedman learned from his clinical practice that people who took up responsibility for their words and actions lived far healthier and happier lives. This was true irrespective of their family of origin, culture, ethnicity or creed and even irrespective of their current life situation.⁸

Friedman's procedural mental framework, which he found to help all his clients and hurt no one, can be summarized: *Each person is to hold themselves and others responsible for all their words and actions. In this manner, each person is more prone to create appropriate boundaries and hence live far more peaceful, respectful, and productive lives.*⁹

Therefore, even if one does not fully understand the implications of quantum physics and the details of neurobiology, they can be assured that by taking responsibility for their words and their actions, they will produce ever healthier and satisfying relationships with others and with themselves.¹⁰

Step 3: Accept the Fact that You are Responsible for the Thoughts You Focus Upon.

Quantum physicists, such as Henry Stapp, would add that each person is also responsible for their thoughts; that is, for the thoughts they choose to focus upon as well as the values they choose to make their own. This clearly implies that a person is responsible to have a critical awareness of their thoughts, values, and beliefs and not just of their words and actions. Indeed, Stapp would go so far as to say, that *it is the shallowness of the conception of the human person as put forth in the name of science that is the cause today of the growing economic, ecological and moral problems that block the full flowering of man's creative capacities.*

How is it possible that *the shallowness of the conception of the human person*, which is ultimately a value call, an idea about what it means to be human, can be the cause of such massive problems? His answer is that today we can demonstrate scientifically that *our beliefs about ourselves in relation to the world around us are the roots of our values, and our values, determine not only our immediate actions, but also, over the course of time, the form of society.*

⁷ *The Nature of Emotions, Fundamental Question*, Ed. Paul Ekman and Richard J. Davidson, Oxford Press, New York, 1994; pp. 144-176. *What the Face Reveals, Basic and Applied Studies of Spontaneous Expression Using the Facial Action Coding System*, Ed. Paul Ekman and Erika Rosenberg, Oxford Press, New York, 1997, pp. 300-320.

⁸ Most professionals who have been mentored by Friedman speak of being calmer, less anxious, more centered and hopeful as to the future. Edwin Friedman, videotaped conference, *Family Process and Process Theology*.

⁹ Edwin Friedman, 124th minute, videotaped conference, *Family Process and Process Theology*.

¹⁰ This is true whether one is a Christian, Jew, Muslim, Buddhist, Hindu, Atheist, or Agnostic.

Step 4: Know that Focused Thought Can Rewire the Brain

Quantum physicists and neuroscientists, working together, have not only proven that people are responsible for their thoughts and values but they have even demonstrated that a person has the ability through their mental choices to *reprogram* their brain's neural connections in significant ways. For example, people with Obsessive Compulsive Disorder (OCD) have been fully cured through learning to reinterpret their brain stimuli and by the power of mental focus to impose a new interpretation. The result of this mental effort is that they no longer have overheated, misfiring, neural pathways and associated OCD behavioral patterns.

This result was accomplished by having those afflicted with OCD become aware of their current interpretation when they felt the stimuli, reinterpret the meaning of the stimuli (counter their current interpretation), and continue the new interpretation again and again and again until it becomes the habitual (automated) interpretation.¹¹ These *mind exercises* gradually brought about a healthier rewiring of the brain's neural pathways.¹² This allowed for a calmer, more peaceful and thoughtful response to life's internal and external stimuli. Slowly, more peaceful and healthier behavioral responses become the quasi-automatic, *habits of the mind*, displacing the obsessive, compulsive behavioral responses.¹³

This was achieved without the use of any assisting prescription or test drugs (artificial chemicals). The program took about ten weeks and has affinities to physical therapy in the use of repetitive exercises. This capacity of the brain to be re-mapped by the mind-will of a person (at almost any age of reflective cognition¹⁴ and under normal physiological conditions¹⁵) is referred to as the *neuroplasticity of the brain*. *Re-mapping* of the brain refers to the actual changes in the firing pathways of the brain. This re-mapping is brought about by *the power of mental force*.¹⁶

¹¹ Jeffery M. Schwartz, *The Mind and The Brain, Neuroplasticity and the Power of Mental Force*, Regan Books, New York, 2002, pp. 72-75, 77-90.

¹² This was verified with pre and post PET Scans QUOTE SCHWARTZ.

¹³ Stosny used similar methodologies in his breakthrough work with men who abuse their spouses. The success rate of his ten week program is over 80% . Over 80% of the men who have undertaken his program no longer abuse their spouse physically and 74% have ceased verbally abusing them as well.

¹⁴ Studies have shown how parents can assist this process of healthy wiring from infancy.

¹⁵ Numerous physiological conditions in the brain do exist that are not caused by our interpretation of internal or external stimuli or events. Among the many is epilepsy. Thus, one must exercise care and prudence in interpreting the above statement.

¹⁶ Of course, depending on the correctness of our *Interpretive Thought*, we will create either healthier habits of the mind or unhealthier ones. Remapping can also be brought about by external conditions that require a constant rethinking of prior behavioral responses. For example, if you were ship wrecked on an island, you would probably have to begin to think differently about daily life in order to survive. As you keep acting in accordance with your new *Interpretive Thought* of the requirements of island reality, you would begin to rewire your neural pathways. Eventually, they would become the quasi-automatic habits of the mind, your new interpretive field of your new reality. If you were totally resistant to adapt, your probability of becoming extinct would grow.

Step 5: Know the Scientific Proof that Mindfulness and Will Power Exist

Today¹⁷, quantum physics and neurobiology can demonstrate how the content of each *Interpretive Thought*—whether one is fully conscious of it or not—can also be described in *physiological* terms related to the electro-bio-chemical¹⁸ processes¹⁹ that the Interpretive Thought(s) creates in our brain and body.²⁰ While an *Interpretive Thought* and the *electro-bio-chemical processes* happen quasi simultaneously, there is a measurable time lapse, usually within milliseconds, in which the *Interpretive Thought* precedes the physiological occurrences in our brain and body.²¹ In other words, it can be scientifically demonstrated that *our Interpretive Thoughts* precede (create) the *physiological occurrences* in our physical brain-body.

While it is now an empirical scientific fact that both our micro and macro *Interpretive Thoughts* create *physiological sensations* and not the other way around, it must also be recognized as an empirical fact that a *physiological sensation* can trigger an *Interpretive Thought* as to the meaning of that *physiological sensation*. For example, a person becomes aware of the onset of pain in their head. Based on their past experience, they know that if they do not pay attention to the pain and take care of it immediately, they could end up with a full blown migraine headache. Based on this *Interpretive Thought* of that *physiological sensation* in the body/head, the person decides—makes another Interpretive Thought—to take their medication without delay.

In whatever context, it is always our task to get to the root of the processes and understand our *Interpretive Thought(s)* that created the physiological experience and, if necessary, reengineer our *Interpretive Thoughts* so that they maximize the possibility of our living according to our own Core Values and (2) of achieving our Life Vision. If we do not reengineer our *Interpretive Thoughts*, we will become the victim of our *physiological sensations*—often referred to as “feelings”—and not be the protagonist of our most cherished values and the hopes, dreams, and purpose(s) we want to give to our lives. To make one’s daily choices based on one’s current feeling is like driving a car without a steering wheel.

Consciously seeking to understand one’s *Interpretive Thought* that causes the *physiological sensation*²² and then making a choice regarding that *Interpretive Thought* is the most honest,

¹⁷ Moreover, tomorrow, there might, and probably will, emerge another scientific framework—theory—that will enable us to better integrate all the emerging scientific data in a more coherent manner when attempting to understand the complexity of the human phenomenon.

¹⁸ The current technical scientific instruments cannot instantaneously capture the exact measurement of the electrical impulse generated by an Interpretive nor the exact measurement of chemical release by the interpretive thought nor the exact intricate biological impact of the *Interpretive Thoughts*. Yet enough data is known that their effect on the brain and body is significant.

¹⁹ I would suggest that an *Interpretive Thought* also creates congruent facial expressions, implying that the electro-bio-chemical created by an *Interpretive Thought* triggers the facial muscles.

²⁰ Henry P. Stapp, *Mind, Matter and Quantum Mechanics*, Springer, New York, pp. 256.

²¹ In common everyday life, we are rarely, if ever, aware of this time lapse.

²² An *Interpretive Thought* can include pre-conceived notions—whether they are well thought out or culturally induced or grounded in a personal critical analysis of one’s own experiences or culturally learned *Interpretive Thoughts*—that are automatically applied to events or to other thoughts as they become present to one’s awareness. “All people are created equal” is an *Interpretive Thought* that is not shared by all people and peoples. All political ideologies, religions, philosophies are filled with and presuppose a great number of *Interpretive Thoughts* about the meaning and purpose of life and communal living and few of them are universally agreed upon. An *Interpretive Thought* can also be, for example, when one smells peanuts and immediately interprets the smell as danger to their health as they are extremely allergic to peanuts.

fully human and productive stance possible in life. It is also a most self-empowering way to process one's reality, to understand one's self more deeply and to determine the one's values and life vision. This is a path to a continual growth in self-awareness, self-understanding, and personal development, and among the best path for those who want to live according to their Core Values and strive to achieve their Life Vision. To make one's daily choices based on one's Core Values and Life Vision is like driving a car not only with a steering wheel and powerful engine but also with a GPS system.

LTH's Definition of "an Emotion" Creates Clarity Toward Meaningful Conversation

The togetherness of the *cause* (the *Interpretive Thought*) and the *by-product* (the *physiological sensation*) is the most accurate empirical description of an emotion of LTH. Moreover, this togetherness is empirically verifiable without any known exception in any control group under normal circumstances. That is why we have chosen to use the togetherness of the *Interpretive Thought* and the resulting *physiological sensation*—feeling—as our definition of what an emotion is.

Looked at more empirically, our *Interpretive Thoughts* create neural firings—produce electro-bio-chemical reactions—which in turn produce physiologically occurrences in the brain and body, a number of which reach the threshold of awareness—a perceived *physiological sensation* or feeling. We can refer to these as sensations in the body. However, the bodily (physiological) sensations when they become a felt phenomenon are not an emotion; they are simply, a resulting *physiological sensation*—a feeling.²³ Since it is the togetherness of the *Interpretive Thought* (perception) and the *physiological sensation* taken together that create “an emotion,” and since it is the *Interpretive Thought* that first produces the feeling, we must look to the *Interpretive Thought* (perception) and not to the feeling to find the cause or causes of what we are feeling.

Moreover, this universally verifiable definition of an *emotion* is fundamental and crucial for productive conversations about events and issues among people because the word “emotion” is so often equated with the resulting *physiological sensation*—the feeling—that mutual understanding of causes and possible solutions is impossible.

Furthermore, the ambiguity and the pure reduction of yourself to a *physiological sensation* is very detrimental to your own self-understanding, your mastery of your own *Interpretive Thoughts* and your sharing of yourself to others. For example, limiting yourself to just saying that “I feel angry”, “I feel anxious”, “I feel sad”, or “I feel irritated”, not only undermines your human agency in general but specifically robs you of your ability (1) to discover and better understand the underlying cause(s)—the *Interpretive Thought(s)*—and, then, based on that discovery (2) to self-engineer your *Interpretive Thoughts* so that they align with your own Core Values and Life Vision.

²³ Of course, one can decide that their feelings will be the arbiter of what truth is for them. If it feels good, it is truth and goodness and is to be valued. However, even in this case, the *Interpretive Thought* has preceded the feelings. The person decided to give their physical feelings the power to determine what is good and valuable—what it means to be human. That person has chosen to follow whatever feelings they create without realizing that they have both created the *physiological sensation*—feeling—and have decided to be subservient to a by-product—the feeling—rather than to seek the cause and decide if that—the *Interpretive Thought*—aligns with their core values and life vision.

Consequently, since it has been proven that a person can decide to focus on a particular *Interpretive Thought* rather than another *Interpretive Thought*, we not only create *physiological sensations*—feelings—by our *Interpretive Thoughts*, but we can, under normal circumstances, regulate them and harness them by focused attention²⁴ and, thereby, live by our own Core Values and Life Vision and not be misled, blind victims of our *physiological sensations*—feelings.

Let me give an example. Two people are outside; it is a mild 72 degrees. The temperature drops suddenly and it starts to snow.

Scenario 1: Person “A” loves the cold and loves to ski; the person’s *Interpretive Thought* is “great”; that is, they have interpreted the event as a positive. This positive *Interpretive Thought* creates a whole series of new electro-bio-chemical reactions in their body, which, in this case creates an energy surge and a pleasant physiological experience. Person A starts—via a series of positive, action-oriented, *Interpretive Thoughts* to plan a weekend ski trip, which planning increases their *physiological sensation* of well-being.

Scenario 2: Person “B” hates snow and cold but loves warm beaches. Person “B” interprets the event negatively. Moreover, “B’s” first *Interpretive Thought* is subsequently reinforced by a second, negative *Interpretive Thought*, “I see no way out of this cold and snow.” “This is horrible!” These *Interpretive Thoughts* create electro-bio-chemical processes in the body that causes a loss of physiological energy and a gloomy set of *Interpretive Thoughts* about the near future. However, after remaining in this loss of energy and gloomy state of mind—during which the pre-frontal cortex is less active and cannot project a hope-filled future—“B” re-centers and changes his/her *Interpretive Thought* and starts thinking: “I am not going to put up with this cold and I know what to do about it”. This new *Interpretive Thought* creates an electro-bio-chemical reaction in the body that produces an energy surge and a pleasant physiological experience that some might refer to as “joy”, “hope”, or “happiness”. Person “B” starts packing to go to a warmer climate.

Overall Conclusion and Review

Today, the old conception of what science *is* has been turned inside out regarding human nature and even nature itself.²⁵ Given this state of things, it is therefore, imperative that each one of us—in our spheres of influence and to the degree we are in leadership positions—do all in our power to make sure that others become aware that the new data emerging from bio-neurological research, when elaborated within the framework of quantum physics, demonstrates beyond any shadow of a doubt (1) that we are mindful persons and hence responsible for our *Interpretive Thoughts* that we let guide us and not just our words and actions, (2) that our *Interpretive Thoughts* about our meaning and purpose in life increases or limits our life possibilities and (3) that the physical brain of itself cannot accomplish all the operations of consciousness—self awareness—that we experience when we choose an “A” or a “B”.

²⁴ In this context, it is helpful to note that it has been proven not only that the same genre of *Interpretive Thoughts* produce the same genre of electro-bio-chemical reaction and the same genre of feelings across all cultures, but also create the same genre of facial expressions across all cultures. See footnote 5.

²⁵ Robert Nadeau & Menas Kafatos, *The Non-Local Universe, The New Physics and Matters of the Mind*, Oxford University Press, New York, p. 178.

In other words, our *Interpretive Thoughts* and ability to choose are not able to be empirically reducible to pure matter as it is impossible to create a specific *Interpretive Thought* by simply reverse engineering—reproducing—the exact chemical, biological and electrical components that can be measured as the result of a particular *Interpretive Thought*. For example if you were to tell the person measuring the electro-bio-chemical output from an *Interpretive Thought*—I am happy because I just got a great job promotion, the reintroduction of the same concoction of the togetherness of electrical impulses, and biological and chemical components will not create the same *Interpretive Thought* although it will most probably create a similar *physiological sensation*. Consequently, the human experience of choice requires the hypothesis that our *Interpretive Thoughts* and our ability to choose among *Interpretive Thoughts* are in some way immaterial

Summary: we are not cogs in a machine!

We are persons with the ability to see and ponder options (think—have various possible *Interpretive Thoughts* on a subject) and to choose one and apply our will power to pursue those options, those *Interpretive Thoughts*. We can make choices and we are responsible not only for our actions and words but for the *Interpretive Thoughts* that we let guide our words and actions and that inform the meaning and purpose of our lives.

Chapter 2:

Appreciating Newton, the Scientific Method, and LTH

However, before going on to learning LTH, we need to have a proper appreciation of the blessings and benefits for humankind of Sir Isaac Newton's [1642-1727] scientific work, which Newton strictly limited to the study of the material universe. In the process we will also better comprehend the obscurantism perpetrated against human progress regarding human agency, human freedom, and personal responsibility by those who took Newtonian Physics and made it into a totalitarian worldview that could explain the entirety of the human phenomenon. So let us take a step back and briefly look at the key aspects of Isaac's work. Doing so will enable us to also appreciate how his work helped us exit the various forms of obscurantism and superstition that faith based entities had placed for centuries on the progress of disciplined reason—science—seeking to understand the laws that are embedded in matter.

In April 1686 Newton officially presented his three-part *Mathematical Principles of Natural Philosophy* (Science)—comprehensible mainly to mathematicians—wherein he demonstrated *the law of universal gravitation*²⁶ and presented his *three laws of motion*.²⁷ Of no less importance was Newton's influence on the *scientific method*. Of course, it was René Descartes (1596-1650) who first created the processes of the scientific method and rejected the notion that everything could be determined by pure logical deduction. Descartes argued that scientific knowledge must include recourse to disciplined observation and experimentation. In fact, he published his *Discourse on the Method of Rightly Conducting the Reason and Seeking for Truth in the Sciences* already in 1637, before Newton was even born. Descartes' four principles of the scientific method were:

1. *Doubt everything*: "The first of these was to accept nothing as true which I did not clearly recognize to be so: that is to say, carefully to avoid haste and prejudice in judgments, and to accept in them nothing more than what was presented to my mind so clearly and distinctly that I could have no occasion to doubt it."
2. *Break every problem into smaller parts*: "The second was to divide up each of the difficulties which I examined into as many parts as possible, and as seemed requisite in order that it might be resolved in the best manner possible."
3. *Solve the simplest problems first*: "The third was to carry on my reflections in due order commencing with objects that were the most simple and easy to understand, in order to rise little by little, or by degrees, to knowledge of the most complex, assuming an order, even if a fictitious one, among those which do not follow a natural sequence relatively to one another."
4. *Be thorough*. "The last was in all cases to make enumerations so complete and reviews so general that I should be certain of having omitted nothing."

²⁶ Every particle in the material universe is attracted to every other particle by a force proportional to a product of their masses and inversely proportional to the square of the distance between them; $F=(G m_1 m_2)/r^2$.

²⁷ [1] An object at rest will remain at rest unless acted on by an unbalanced force. An object in motion continues in motion with the same speed and in the same direction unless acted upon by an unbalanced force." [2] Acceleration is produced when a force acts on a mass. The greater the mass (of the object being accelerated) the greater the amount of force needed (to accelerate the object). [3] For every action, there is an equal and opposite re-action.

What Newton did was to radically systematize the use of Descartes' experimental procedures. Newton's methodology balanced both theoretical and experimental inquiry²⁸ and mathematical and mechanical approaches. Newton mathematized all of the physical sciences, *reducing their study to a rigorous, universally verifiable and rational procedure*. These basic principles of scientific investigation have persisted virtually without alteration until today.

Notwithstanding his brilliant and rigorous systematizing of the scientific method and the blessings that it has brought us, Newton never intended it to be nor believed that it was the only path to knowledge and understanding, especially as it regards the meaning and purpose of human life and the ultimate origin of all things.

In fact, during his presidency of the Royal Society, Newton wrote, "We are not to introduce divine revelations into philosophy [science], nor philosophical [scientific] opinions into religion." Newton, himself a theologian, kept to this discipline and was able to properly balance the relationship between science (reason applied rigorously to the observable created order) and theology (reason applied rigorously to one's faith that there are divine revelations in their sacred writings). In regards to theological endeavors, Newton, who wrote over 1.2 million words on biblical subjects,²⁹ never tried to reduce God to a rationalistic, scientific, or mathematical principle. Newton's God was not an impersonal First Cause as portrayed by some later Enlightenment philosophers; Newton's God was the God of the Scriptures who freely creates and rules the world, who speaks and acts in history. Newton believed in a God of "actions [in nature and history], creating, preserving, and governing ... all things according to his good will and pleasure."³⁰

Only later Enlightenment thinkers made Newton's Physics into a "god", a philosophy, a theology, a dogma. They did this by making their scientific opinions or hypotheses—some of which were derived from brilliant and penetrating study of the material universe—the grounds for ultimate truth about the meaning of life and the complete and entire explanation of the human phenomenon. This was and is clearly most profoundly damaging to the understanding of the human phenomenon. Why? Because whatever about the human phenomenon that they could not fit neatly and rationally into their materialistic, deterministic worldview, they called an *illusion*. Since they could not explain the universal human experience of the ability to make choices between an "A" and a "B", they explained it away as a false sensory perception in the name of their faith in their god. Since Newton's maximum about the physical world, "every particle in the

²⁸ Let me repeat the first part of his methodology in terms that many might remember from their own high school science classes: "Newton balanced both theoretical—the *hypothesis*—and experimental inquiry—*verification by universally repeatable outcomes given the same conditions*."

²⁹ This was not known widely until the auction of his nonscientific writings in 1936. Much of Newton's theology work was not as rigorous as that of Reformation theologians who preceded him. Also noteworthy is that as rigorous as Newton was, he also experimented widely in alchemy and speculative biblical prophecy and end times. Newton was called by some as orthodox and some as unorthodox. In either case, the point is that Newton did not divinize his methodology but was working primarily to understand the natural order by the disciplined scientific method. See www.christianitytoday.com/history/issues/issue-30/faith-behind-famous-isaac-newton.html for other insights into his life.

³⁰ Newton was also a practicing member of the Anglican church. Newton attended services and participated in special projects, such as paying for the distribution of Bibles among the poor, and serving on a commission to build fifty new churches in the London area. Charles E. Hummel, *The Galileo Connection and Genesis: God's Creative Call*, Inter Varsity, 1991 article in Christianity Today/Christian History magazine.

material universe being attracted to every other particle”, could not explain this universally verifiable experience of making choices between an “A” and a “B”, these protagonists glossed over that mountainous reality of choice and called it an *illusion*.

According to these “theologians”, the human person was but a fatalistic, deterministic materialistic cog in a meaningless universe of material particles. Some of them went so far as to say that all past events pre-ordained and these pasty events predestined all present actions, choices, and even thoughts and, by logical extension, the future. “*Choice is an illusion!*” And then came Quantum Physics, which did not put aside the rigorous scientific method systematized by Newton, but through a new optic in scientific development was able to provide a more cogent and coherent scientific explanation not only of the material world but of the universal experience of choice and free will.³¹

Indeed, two centuries after Newton, (1) James Clerk Maxwell’s theory of electro magnetism and related mathematical and statistical equations³² (1865) laid a foundation for (2) Albert Einstein’s theory of relativity and an ever expanding universe (1905-12), which opened a path to (3) Werner Heisenberg’s “indeterminacy theory” (1927) and eventually led to (4) Quantum Physics replacing Newton’s clocklike model of the natural universe. Nevertheless, mathematical physicist Stephen Hawking wrote—and I agree with him: “Newton’s theory will never be outmoded.” Newton model was “designed to predict the motions of the heavenly bodies; it does its job with unbelievable accuracy ... it remains in daily use to predict the orbits of moons and planets, comets and spacecraft. Newton is a colossus without parallel in the history of science.”

The Effects of Newton / the Scientific Method on LTH.

In the context of Newton’s effort to separate the object of reason’s inquiry into observable phenomenon using the scientific method and reason’s inquiry into divine revelation as contained in the Scripture about who God is and what it means to be fully and truly human, it is important to note that in creating the *Life Transforming Habits* program with its self-awareness exercises, I have respected the rigorous separation of my research and my hypotheses from my theology or philosophy and from all and any religion of philosophy. Indeed, I have not introduced any of my faith-based, theological conclusions about the human phenomenon into LTH. For example, while I have hypothesized that whenever anyone—of whatever creed, political persuasion, race, religion or nationality and in whatever geographical location—perceives that they have been demeaned in anyway, *they would all have very similar physiological experiences*, I have based this, not on divine revelation, but on disciplined observation and a convergence of empirical research.

Moreover, while today it can now be demonstrated more easily that similar perceptions—similar Interpretive Thoughts—do cause a similar release of an electro-bio-chemical concoctions into

³¹ The exact explanation of how free will and choice come about and are measurable is an ongoing discussion and there is no agreement even among quantum physicists and neuroscientists. *The Volitional Brain: Toward a Neuroscience of Free Will* gives a good glimpse of the discussion already back in 1999, which is ongoing today.

³² It is noteworthy that James Clerk Maxwell is an example of a theological belief being used as a hypothesis that became a verifiable scientific set of equations and insights, but only after rigorous examination and experimentation. (Whatever your philosophical, political, or theological persuasion, extreme rigor is required in science and should be verifiable by others using the same methodology, irrespective of their political, philosophical, or religious beliefs.)

one's physical brain and body and do cause similar physiological sensations, I still do not say that my hypothesis has been proven beyond any doubt or that it is not open to further refinement. Nevertheless, I do maintain that, based on the ever-mounting data confirming this cause and effect, that the probability grows that this hypothesis could become universal accepted as an empirically grounded, universal law. In other words, while it still requires further inquiry and verification, it is a solid hypothesis. To this end, I have developed mathematical formula for others to utilize when the instruments of measurement are developed and when sufficient funds can be gathered to carry out the necessary controlled experimentations. While tools of measurement that are not invasive do not as yet exist, the staggering amount of biological, electrical, and chemical data that will eventually be collected will easily be processed given the advent of quantum computing, further proving and refining the hypothesis or, perhaps, disproving it.

Note, however, that as a safeguard in LTH training against “constriction to conform to a possible universal law”, we do not tell participants that I have hypnotized that a universal law might be at work. Instead, participants in LTH training are constantly asked to verify their own *physiological experiences* resulting from following the diverse types of *Interpretive Thoughts* exercises presented in the LTH program. If they **do not** experience the *physiological outcome* that I have hypothesized, we—I and those who have been trained to train others—take care to gather their feedback so that we might further our research into the *physiological effects* of one's micro and macro *Interpretive Thoughts* on one's physiology.³³ In cases where the participants might already know that I have hypothesized that a universal law might be at work—their having previously read any of my works on the subject or heard about it from others—we tell them that only their experience is the valid one. The problem is not with them, but perhaps (1) with the construction of the LTH exercise itself, (2) with the execution of the LTH exercise by the trainer, (3) or with the hypothesis itself. Moreover, we let them know that their experience might call for (4) a further refinement of the hypothesis or (5) that a whole new direction of enquiry might be required.

Moreover, the LTH programs I have developed are not geared to prove a hypothesis but to help a person (1) to become more fully aware of what they are saying to themselves all day long (self-talk awareness), (2) to use their experience—feelings—related to the electro-bio-chemical concoctions produced by those *Interpretive Thoughts* as a self-awareness tool, and (3A) as the person becomes ever more fully aware of their self-talk—more fully conscious of what they are saying to themselves—(3B) to evaluate their *Interpretive Thoughts* and to decide in merit. If they are congruent, they will accept an *Interpretive Thought* if it promotes their Core Values and Life Vision³⁴ and reject an *Interpretive Thought* if it is contrary to their understanding of what it means for them to be truly and fully human; i.e. their Core Values and Life Vision. To this end, LTH has a whole skill set dedicated to helping a person clarify, define and defend their own Core Value and their own Life Vision. Through such self-awareness, they now have the ability and enhanced possibility to self-engineer their *Interpretive Thoughts* according to their Core Values and Life Vision

³³ I have developed mathematical models, even though the necessary tools of exact measurement of the speed of individual *Interpretive Thoughts* at the electro level have yet to be created. Nevertheless, there is abundant data at the micro biological and chemical levels that point in the direction of the effect of one's *Interpretive Thoughts* on their body chemistry.

³⁴ See *Life Transforming Habits, i-skill 6: Value and Vision* to ponder and then clarify your own Core values and Life Vision. It is free online at www.lifetransforminghabits.com.

Best Practices, the Scientific Method, and LTH.

At a macro level we might say, for example, in medicine, that hospital administrators, doctor and nurses are looking for “Best Practices” and while this is not strictly speaking as rigorous as scientific research, the principles are similar if vigorously pursued. I maintain that Best Practices should be an ongoing applied principle in every field and in every industry, from education to engineering and, in particular, in the field of human relationships and self-mastery.

LTH strives to be among the Best Practice in the field of self-mastery and relationship enhancement through constant verification and refinement. Take, for example, that when we developed Ground Zero to meet a particular need of teens, we quickly came to realize that the self-awareness created by doing the Ground Zero exercise was actually necessary for people of all ages—pre and post teenage—and therefore we put it into the basic skills sets and placed it first. Nevertheless, while Ground Zero is considered our most ground-breaking, self-awareness skill, it is no longer the first skills set. In fact, based on outcome, in 2018, we realized that it was more productive to have the participant begin with the process of discerning their Core Values and Life Vision. Therefore, LTH moved Values and Vision from our sixth skill set to our first skill set.

The goal of LTH is to be considered one of the best, if not the Best Practice in its field for training a person in self-mastery and relationship enhancement, irrespective of race, religion, nationality, culture, language, educational level or economic status.