ACT TWO

THE CREATOR

"Then the Lord God said, "Behold, the man has become like one of Us"[1]

The most critical element of the creative process is the processer – the 'unique' individual (or group of individuals) with a unique repository of massive amounts of somewhat random information residing in their brains. This information is collected via an entire life of unique experiences and environmental influences. Some of this 'collection' is influenced by interest, but most is amassed via random happenstance.

We bring very little with us when we arrive in this universe. Some once thought we were born as blank slates – a 'tabula rasa', in Philosopher John Lock's words. Most now agree we are born with instincts. We are most certainly born with the survival instinct – the primary instinct for all life. Some believe we are born with a soul. Some believe we are reincarnated, and some believe we are in essence part of a greater whole, physically, spiritually, or both.

We are also born with senses – and through the interaction between our senses, our brain and our environment, we learn. We quickly learn that a full stomach feels better than an empty stomach and a dry bottom feels better than a wet bottom. A soft touch feels good, but a slap does not. We fear pain, and we also fear the unknown – until we know whether something deserves our fear. We are curious, not only to learn what needs to be feared, but to learn what feels good. I am not certain we are born with emotions – but fear and desire develop quickly. We learn to fear that which is bad for us, and we learn to desire that which is good for us. As a response to fear we desire safety and security. At first we obtain this safety and security from our

[1] Scofield Study Bible, Genesis Chapter 3, Verse 22

parent or parents. Then their love ignites our capacity to love and to bond which extends outward to others as we venture forth into the world.

Some believe we are born with tendencies – to be shy – to be aggressive – to be gay – to be straight. Today's geneticists are now pondering the thought that our environment 'turns on' certain genes in our DNA, and over several generations this process actually alters our genetic programming. They are raising the possibility that we are born with encoded 'memory' or personality traits – much like a Siberian Husky is born with certain personality traits and/or behaviours, as opposed to other dog breeds.

Before DNA was even contemplated, psychiatrist and philosopher Carl Jung believed we were born with 'archetypes' – imbedded personality programs that are influenced by our environment and ignited by a vital energy he labeled the 'energy of the processes of life'.

Despite whatever spirit, soul, personality and/or programming we are born with, we are born into a family, culture, world, and universe that influences us from the moment we are born (or more precisely from the moment our mother's hormones and food preferences start affecting us, and when our senses begin to operate in the womb). This environmental influence is significant – we are subjected to intense and enduring social and cultural 'programming' and/or reprogramming.

Although our culture will set significant limits on our available choices of personality traits, we still have choices as long as they are within an acceptable range. These 'individual' choices, along with the random nature of our environment and events that happen to us, will ensure we remain unique. No-one, other than an identical twin, is born with the same DNA. We are unique when we are born. And no-one (not even identical twins) faces identical environmental influences. Each and every one of us is therefore a unique individual. Each of us is a created product – we are novel. Our creativity may be limited by the culture we are born into, but we bring this 'uniqueness' to the creative process, and this is the foundational ingredient of that process. A 'creator' by definition is innately creative by virtue of their existence. We are

naturally creative. As Jason Silva says in his highly inspiring video, '*What is Creativity'* (2015), we are unique lenses through which the world is observed, taken in, transformed, and then released.

Input

The creative process requires ingredients – knowledge, information, and experience from an environment within which the 'creator' exists. This includes the natural world and the culture the 'creator' is grounded in, be-it local, provincial, national, and/or global – a culture with its entire history of imbedded information and knowledge that has been created and is accessible to the 'creator'.

Grounding in a social and cultural context provides us with access to the enormous amounts of available information and knowledge that that culture has created (although this grounding does set limits). Like a recipe, we start with flour, baking soda and salt (existing knowledge), we add a new spice to this base, we mix in more ingredients (more information), we add heat, we stir (connect ideas), we add some more spices, we stir some more, our mother drops in a secret ingredient, we stir and brew some more, we put it in the oven (our 'sub' conscious), we add a lot more heat, and then out from the oven pops a wonderfully tasty new cookie. The creative process does not start from nothing. It starts with the information and knowledge that already exists – in an existing domain, several domains, individuals, several individuals, and/or groups, and the natural world.

Weisberg states: "Creative ideas, even those that are radically new, are firmly planted on ideas that came before. There are always antecedents to any creative idea" (p. 52, 53). Although he surmised that Picasso's art is based on "a complex set of experiences unique to Picasso" (p. 47), he concluded that his "analysis supports the proposal that creative works may be closely linked to previous works" (p. 51).

Take the wheel as an example. Someone, at some point in our distant past, decided round stones or pieces of wood attached to a box would save lots of time and energy in the transportation of stuff from one point to another (the first cart). Then someone decided that four stones, or wooden wheels attached to a bigger box with a seat would make an excellent cart that could be pulled by a horse. The wheels eventually became steel for trains, and rubber for cars and trucks. Sometime around the 3rd or 4th century BCE, windmills and water wheels were 'created', and then suddenly in the 19th and 20th centuries, from out of nowhere, without re-creating the wheel, windmills and waterwheels became 'turbines' and a major source of electrical energy.

On the discovery of DNA, Weisberg noted that "the process of discovering the double helix required that the investigators bring much to the situation in the way of knowledge and beliefs" (p. 56). The scientists were part of a domain that had already accumulated much related knowledge, information, and beliefs. The discovery of the double helix may simply have been a factor of two individuals in the field finally meeting up and putting their 'unique' brains together.

Weisberg also examines analogy as a function of creativity and he explains that "solving a problem through analogical transfer is an example of *continuity with the past* in problem solving and, therefore, in creative thinking" (p. 156). Weisberg notes that "in analogical thinking, one uses information from a familiar situation, usually stored in memory, in order to deal with a new situation that is analogous to the familiar one" (p. 155). Einstein, for example, was a master at using analogy to envision his ideas and explain them to others.

Analogy, including metaphor and metonymy, are our primary learning devices. They are fundamental to the creative process. The capacity of the brain to take completely random associations and information and apply an analogy, metaphor and/or metonymy is remarkable. It is, in fact, what we do to learn. Starting with a 'master signifier' at a very young age the signification process begins. The first AHA! Moment for all of us could be very much like the

first moment when Helen Keller, played by Patty Duke, learned the sign for 'water'. Once we learn the first 'sign', or word, or symbol that represents something in the environment, through analogy, whereby we learn that this is like that, we quickly learn other signs, words and symbols, and a life-long series of AHA! Moments has commenced. I believe that the ecstasy we feel when we have these AHA! Moments may actually be a major driver of our curiosity.

The more information in the creative individual's brain, and the more able and motivated they are to connect that information, either consciously or subconsciously, with other information in their brain and external to it, the more random associations they can and will make, significantly increasing the probability that something creative will result. My experience with writing and life coaching has demonstrated to me that the use of metaphor and analogy changes perspective and dramatically increases the probability of creating something new, or finding new solutions. Random association, or conscious and subconscious connection of ideas, concepts, objects, words, etc., that were never associated or connected before (by the individual and/or group, and/or domain, and/or culture) is the engine of creativity. It is in fact, the engine that drives the diversity of life and diversity of the universe. It is a simple equation – A plus B equals C – just as a comet added to earth equaled the extinction of the dinosaur and the rise of mammals.

Knowledge is most certainly a primary factor in the creative process. The more knowledge we have, the more connections we can make, and hence create new combinations, connections, comparisons that create new knowledge. One of Weisberg's wisest conclusions was that analogical capacity can be improved if we "work to acquire a broad and deep personal database that you can draw on to solve the problems that crop up in life" (p. 159).

Magical Glasses - The Hypothesis of Truth

Although it is true that most new ideas are founded on existing knowledge, I know that 'truth' seekers (including scientists) wear magical glasses that both decide what questions to ask, and what data is worthy of their consideration, or what data should be dismissed. This bias creates significant limits on the creative process – for if there is no question, there will be no answer. All truth, and the search for it, is relative.

Each 'scientist' is a unique 'creator' and that uniqueness will significantly influence that which is created by that scientist. And, as has happened quite frequently, it can result in something useful. On the other hand, it could result in a domain entering the wrong rabbit hole that can take decades to get out of.

The rabbit hole that one enters, or the truth that one pursues, or believes, depends on two things: whether or not the hole can be seen, and what is seen when inside the hole. My hypothesis is that all truth is relative to the observer; Wonderland was as real to Alice as the world we live in is to us, and conversely, Wonderland existed only in Alice's mind, as the world we live in only exist in ours. And, since there are an infinite number of rabbit holes, there are an infinite number of truths. It is the belief that there is only one truth that is wrong, and unfortunately, it is oft times deadly wrong.

The belief in one truth divides and destroys nations. It commits genocide, devastates families, kills hope and crushes souls. Truth crashes airplanes into tall buildings. Nonetheless, the search for truth is like a beacon; it propels us forward. With truth we build nations, and with it we hold ourselves together. The search for truth has given us the ageless wisdom of Siddhartha Gautama, the Bible, the Quran, the philosophy of Plato and Aristotle, and the hope of Nietzsche, Kant and Foucault. At its best, the search for truth is humanity's purpose, and it is humanity's hope.

Nevertheless, truth may very well be like the holy-grail; a mirage we will chase to eternity. I have spent my life seeking truth. It has been a passionate, invigorating, meaningful search and I have learned much. However, the truth I search for keeps morphing and expanding. Like the

universe we live in, it keeps expanding beyond my reach, and the closer I get to it, the farther it seems to travel from everybody else. The truth that I have discovered about the search for truth is that there is no end – it's all about the chase. And an incredible chase it is.

Relativity

Hypothetically speaking all truth is relative. Relative to me this is a true hypothesis. I arrive at my conclusion not from the deepest place of deepest thought, but from personal experience. For various reasons at different points in my life I have managed to form very few opinions. When I was younger I lacked conviction and perhaps a bit of courage and I tended to agree with virtually anyone with a reasonable argument. Without conviction, truth to me was mercurial, and I therefore naturally formed an opinion that truth was truly relevant. It became my nature to examine everything anybody said or believed with a large dose of skepticism. Each person had a different perspective, a bias, and in their minds, a different truth. However, like many people, I made the mistake of assuming that by collecting enough information and perspectives I could determine the real truth, inform the world, and be declared the wisest of the wise. This of course was rather ambitious of me, considering that over thousands of years many of our greatest thinkers have spent their lifetimes thinking about reality and have yet to reach any sort of consensus.

I have learned that in many ways our identity determines our reality. We mold reality, or how we perceive it to be, to fit who we are, and/or how we believe the world operates. In the United States, for example, most identify themselves as either Republican or Democrat – in many cases it is a generational identification (they are Republican or Democrat because their fathers and their grandfathers and their great-grandfathers were Republican or Democrat). Their family's identity becomes theirs. A Republican will view President Donald Trump very differently than a Democrat. They will in fact see facts differently. They will create alternate facts or they will believe alternate facts to mold reality in order to protect their identity. More recently it has become clear to me that identity actually creates alternate realities. Just switch

back and forth from CNN and Fox news channels, for example, while attempting to remain as objective as you can, and you might see what I mean. Religion is much the same. The family a person is born into will usually determine her religious beliefs, and religious beliefs significantly influence ones perception of reality. A fundamentalist Christian, for example, believes that God sees all and knows all. They will therefore attempt to act accordingly, lest they be judged unworthy of heaven and are banished to burn in hell for an eternity. If one believes someone is watching and judging everything you do, you will see the world in a very different way than someone who does not. I know some Christians who believe the world is 6,000 years old (because of the timelines in the Bible). They therefore believe that the bones of the dinosaurs were planted by the Devil to fool us. What is quite astounding is that their truth, although unprovable, cannot be proven incorrect, regardless of the seemingly insurmountable evidence to the contrary. For all I know, the Devil may show up one day, perhaps from another dimension, to prove generations of scientists wrong.

Perspective is everything. If I saw my mother get blown to bits by an American made Israeli bomb, I might see nothing wrong with flying an airplane into a tall building full of Americans.

Take climate change as another example. I have heard and/or read that the vast preponderance of the credible scientific evidence suggests that there is a significant probability that human activity is causing the Earth to heat up. Being an autodidactic and skeptical individual I would look for evidence to support this – and in today's world the source of this evidence would be the world-wide-web. Unfortunately, the 'evidence' available on the internet contradicts the theory of climate change as much as it supports it. This is because on the internet it is almost impossible to assess the credibility of the evidence and the credibility of its source – and it would take a lot of time to do so. Everyone appears to be an expert on the internet – and these days credentials are a dime a dozen. Alternate facts are deliberately published en masse by those who are inclined to disbelieve the preponderance of the evidence, but also by those who wish to sway public opinion for their own personal or corporate interests. The result is that

everyone will be able to find more than enough evidence to confirm their existing belief. Albertans, who rely on fossil fuels for their livelihood, do not want to believe in human caused climate change, and they will find ample evidence on the internet to discredit it – as a matter of survival. The days when universities held a monopoly on knowledge, facts, and evidence and 'expertise' are over and the age of alternate facts and relative truth is here to stay. There are now so many perspectives, and so much knowledge has been discovered and created, that any meaningful integration into a comprehensible 'generally accepted' objective reality is now impossible.

I believe that identity is more fixed than reality. It would take a tsunami of evidence (or suffering) to change most people's political, religious or spiritual beliefs – for the vast majority of us, our identity is a matter of life and death – and it is therefore simply easier for us to change reality than to let a significant part of us die.

Stephen Bonnycastle (1996) discusses reality and the concept of paradigms in his novel, *In Search of Authority*. He states that, "we are always interpreting the world around us, and that we can never be sure that we are seeing it as it actually is. […] We are filtering what we see through our paradigm or our ideology, and we can't get at reality in its raw state" (pp. 71-72).

We are connected to the physical world through our senses. Our brain interprets what our senses tell us and this interpretation creates our reality. We will likely never be able to know what reality really is. I will never know, for example, if the red I see when I see a rose is the same red you see. Your red could be my blue, for all we know. It's all relative.

Bonnycastle also rationalizes that if "you accept the idea that you are always looking at the world through a set of assumptions, or a paradigm, then you have to admit that knowledge cannot be absolute. Anything that you know, you know only relative to the paradigm you are using" (p. 70).

We can liken paradigms to boxes; boxes with invisible walls that hold us in. We all live in a

culture box, a gender box, and a sexual orientation box. Many of us also have a religious or spiritual foundation, worldviews that are not always shared, and each of us sees and interprets everything through this worldview.

Although truth is relative to one's worldview, it is also relative to one's circle of awareness. The world of a child begins with she and her mother. Then it expands to her family, to her community and to her extended family. As she ages, her circle of awareness then expands to school, to her town, then perhaps to her country, maybe to the world, and sometimes to the universe, the multi-verse and beyond. We spend our lives expanding our circle of awareness, and as we do we enter larger, fuller paradigms. As our awareness of the universe expands, so does our truth.

Although it is disconcerting to some of the more grounded of us, all physical laws once considered universal and sacrosanct, can also now be considered relative. Quantum physics, for example, is relative to small things and general relativity is relative to big things. Novelist and essayist Arthur Koestler wrote:

> Einstein's space is no closer to reality than Van Gogh's sky. The glory of science is not in a truth more absolute than the truth of Bach or Tolstoy, but in the act of creation itself. The scientist's discoveries impose his own order on chaos, as the composer or painter imposes his; an order that always refers to limited aspects of reality, and is based on the observer's frame of reference, which differs from period to period as a Rembrandt nude differs from a nude by Manet. (Tubegator – online)

Late 19th century psychologist and philosopher William James said "there are so many geometries, so many logics, so many physical and chemical hypotheses, so many classifications, each one of them good for so much and yet not good for everything, that the notion that even the truest formula may be a human device and not a literal transcript has dawned upon us" (1975, p. 206).

According to Astronomer, Dr. Sten Odenwald "Superstring theory is based on three key ideas that remain experimentally unproven after 30 years of research" (Astronomy, 2007, p. 32). He then concludes:

> Without superstring theory, we'd lose the intriguing philosophical prospects for the multi-verse […] We'd have no mathematics for spanning the gap between everyday physics and the high energies where quantum gravity operates […] To learn that 96 percent of the cosmos is unknowable would be a bitter pill for astronomers to swallow. It would be even worse for physicists. Without a logical framework in which to pose and answer questions, our inquiries into the fundamental aspects of the physical world would devolve into semantic quibbles. (p. 34)

Early 20th century philosopher C.E.M. Joad said that according to the pragmatic theory of truth, "we make our own truth just as we make our own reality, the truth of the beliefs we hold and the reality of the objects we perceive being equally relative to our purposes" (1957, p. 453).

Everything is relative. There is no real authority, other than our 'selves', and 'objective' truth does not exist. So, where does this leave us? Fortunately, after collecting all this evidence to support my theory on the relativity of truth, I remain optimistic. I am firm in my belief that we will continue to discover truth, albeit a truth of an infinitely expanding variety.

Let's take Plato's concept of reality, as demonstrated in his allegory of the cave, as an example (*Plato Republic,* p. 187). In this allegory Plato describes a cave where prisoners have spent their entire lives. They can only look forward and all they can see are shadows on a wall in front of them; reflections from people walking in front of a fire behind them. To the prisoners this is all the reality they know; shadows are all they see, and muffled sounds are all they hear. Unless they are taken out of the cave and taught to see the greater reality, they would have no way of knowing this greater reality exists.

This allegory can be extended to our concept of reality. It's like we're all in a cave, but don't know we're in a cave, and will never know we're in a cave until we manage to step out of it. Extending this allegory further, when we do step out of this cave we soon realize we're in another cave, and then we have to step out of this cave, and into another, and then another. The more we learn, the more we assimilate, and the closer we get to reality (whatever that is). To enter a world where anything is possible, a world where creativity thrives, a world where creativity is all that matters, we need to step 'outside the box', and leave the reality we have constructed for ourselves. As the universe expands, so does truth. As our universe expands, so does our truth. The sun revolved around the earth, until it didn't. The earth was flat, until it was round. The universe was small, infinitely small, but now it's big, perhaps infinitely big. Who knows what we'll discover next?

The more I age and the more I experience, the more my truths morph into something I could not have possibly imagined. The truth I had yesterday expanded into the truth I have today and my truth of tomorrow will be something extraordinary, at least to me.

Belief and Reason and the Search for Truth

I believe it is criminal to mold the minds of our young to believe that all relevant knowledge comes from either belief or 'scientific' reason. It is akin to castration. Teaching our children to ignore any source of evidence whatsoever is wrong. Truth is not false because we cannot measure it, nor is it true simply because we believe it.

Qyburn, who conducted Nazi like human experimentation in the television series *Game of Thrones,* surmised that "Belief is so often the death of reason". This alludes to the ongoing disputes between religion (faith and belief) and science (reason) as preeminent sources of knowledge and/or truth. On the surface, the statement appears to be a condemnation of belief, but, considering the mouth from which it spews, it is also most certainly a rebuke of the

'religiously' objective pursuit of science. Nevertheless, while I do believe that belief is often the death of reason, I also believe the reverse to be true; reason is so often the death of belief. And this for me can be more consequentially tragic of the two.

I have no intent to dismiss the scientist who rigidly and wholeheartedly believes in the scientific approach to acquiring knowledge. However, I believe it is a grave error for this 'religious' type of scientist to dismiss other sources of knowledge, including personal experience, inspiration, intuition, and faith.

Our greatest philosophers have wrestled with this for centuries. Immanuel Kant (1724-1804) had to reconcile between his acquired knowledge and that of his belief in God. He said: "I have therefore found it necessary to deny knowledge, in order to make room for faith" (Appelbaum & Thompson, p. 168). William James (1842-1910), the Father of American psychology and Pragmatism, believed that "...both a scientific *and* a philosophical approach must be used in the study of human behaviour and thought. […] Certain metaphysical questions lay beyond the reach of science" (Hergenhahn, 2001, p. 299), and we were "…at best only tangentially aware of and part of the wider realities of life" (Bankart, 1997, p. 219).

Pragmatism, at the time of its birth, was essentially a marriage of belief and reason. Its development was precipitated by a crisis of faith. When I related my own crisis of faith and its resolution to William James's experience, I was able to fully understand and appreciate the complex reasoning that provided the bridge that was necessary to connect an introspective, subjective inner reality to a materialistic, 'objective' external world. James glued the two realities together with the sheer force of will.

The loss of faith is a dreadful thing and I have much empathy for what William James must have experienced. I lived much of my life within fundamentalist Christendom, a faith that firmly rejected who I was. It almost killed me. After many difficult life altering and self-altering events, I eventually garnered enough strength to pull myself out of its narrows. It was a major turning point in my life and it eventually led me toward self-acceptance, self-healing, and a path

to self-actualization. However, although this loss of faith was necessary for my survival, it at first led me into a very long dark night. When I moved away from Christianity I had yet to develop a fully 'self' relevant belief system and, like William James, I suffered long bouts of depression over a period of many years. I found it difficult to be happy in a world without meaning. I eventually built a sustainable, life affirming belief system, and one of its critical pillars is the belief in free will and with it the capacity of the human species to create the future. It was William James who provided me with this pillar when I learned about pragmatism and his 'will to believe', which I renamed the 'will to create'.

William James taught me that truth was relevant. He also taught me that truth could be created. I learned and now firmly believe that each of us has, can have, or must have, a 'self' relevant and valid belief system. A belief system that works for you is relevant and valid to you, and a belief system that works for me is relevant and valid to me. On William James, Ellen Suckiel (1982) says:

> He holds that since beliefs are tools whose function it is to enable the believer in a given empirical environment to fulfill his purposes and answer his interests, a belief is justified – and hence pragmatically true – if it successfully fulfills this function; that is to say, if it enables the believer to account for and predict his experience in ways that most satisfactorily fulfill his ends. (p. 10)

To me, any life affirming and purposeful belief system is valid. Whether you're an atheist, Christian, Buddhist, Muslim, Hindu, or agnostic, it doesn't matter. What does matter is that this belief ignites your being, that it gives you purpose and meaning, and that you create something with it. All life has a creative purpose. William James believed that "...our judgements [...] change the character of *future* reality by the acts to which they lead" (James, *The Meaning of Truth*, 1909, p. [57]223). We have the ability to create the future. All is waiting for us to decide what it will be.

James overcame the rather depressing materialistic philosophies of his age by deciding to believe in free will and therefore believe in his "...individual reality and creative power" (Hergenhahn, 2001, p. 299). It was a pragmatic, purposeful, empowering and humanistic decision. Bankart (1997) states "...that, for James, the exercise of will is a powerful moral force. For him there was no "debate" about free will; its existence was not just a "fact" but a human imperative" (p. 217).

Professor of Philosophy, Emrys Westacott (*Soft Determinism Explained,* 2017) says that some version of soft-determinism "is still probably the most popular view of the free will problem among professional philosophers". Contemporary soft-determinists believe that "we enjoy some degree of control over and responsibility for our actions. And this requirement is met if our actions flow from (are determined by) our decisions, deliberations, desires, and character".

Westacott, says Philosopher Daniel Dennett "in his book *Elbow Room,* argues that what we call free will is a highly developed ability, that we have refined in the course of evolution, to envisage future possibilities and to avoid those we don't like. This concept of freedom (being able to avoid undesirable futures) is compatible with determinism, and it's all we need."

According to R. Wozniak (1995), James's transcendentalist, intuitive psychology, focussed on the "...realization of higher consciousness within the individual personality" (p. 1). Bankart (1997) says that "James work was full of recognition of the essentially creative, spiritual nature of humankind" (p. 217). I believe that consciousness, and the free will it gives us, is a bridge that connects our immeasurable, internal, subjective inner space to the external, material and 'objective' universe. Hergenhahn (2001) explains that for James, consciousness is "...personal, continuous, constantly changing, selective and purposive" (p. 301). This is a critical underpinning to James's pragmatic philosophy and belief in free will.

Whether we believe that we are influenced by 'in born forms', God, instinct, archetypes, the 'sub' conscious, the 'holy spirit', genetics, external events and stimuli, relationships, and/or social construction, it is only the existence of consciousness that enables choice. Consciousness

pays attention to some things and ignores others and then through an assessment of alternatives and future probabilities, and an **act of will**, it decides on an appropriate action. More importantly, the expansion of consciousness enables us to overcome our 'nature', our 'construction', our 'ego' and/or our destiny. It is our consciousness that can make us masters of our own destiny. E. Suckiel (1982) says that "James emphasizes that intellectual activities have important implications for how we live our lives – affecting what we shall do, what we shall become, what sorts of attitudes we shall have, and even how we shall interpret and change the world" (p. 144). Pragmatism, summarizes Bankart (1997), "...became, in a sense, a metaphysics of thinking—a study of how ideas are transformed into actions through the application of human intentionality" (p. 218). Simply put, pragmatism has an inside and an outside and consciousness, and the free will it gives us, enables us to turn the inside out.

According to Steven Cave (2016), "The contemporary scientific image of human behavior is one of neurons firing, causing other neurons to fire, causing our thoughts and deeds, in an unbroken chain that stretches back to our birth and beyond. In principle, we are therefore completely predictable" (paragraph 8). I could effectively argue about the insanity of such a conclusion in a random, chaotic, eternal and infinite cosmos where effects cannot possibly be predicted, even in hindsight, but there are other, less complicated arguments to make. Because 'science' has proven that we act in the 'world' before we are consciously aware of a decision to act, a belief has arisen that free will is an illusion. I am not a brain 'scientist' but I do know that I can operate automatically in this world quite effectively, for long periods of time, while my 'consciousness' is busy on more important things. The 'autonom' within me operates quite effectively without my 'conscious' awareness, especially when I'm driving. My 'consciousness' intervenes in the physical world only when a 'different' choice becomes necessary. This synchronizes quite well with James' ideo-motor theory of behavior which acknowledges that this "automatic process continues unless the mental effort is expended to purposively select and hold an idea of interest in consciousness" (Hergenhahn, p. 305). I also know that my 'sub' conscious,

which is not the ‘autonom’, plays a very large role in deciding what is important for my ‘consciousness’ to pay attention to and when. I believe that any ‘scientific’ conclusions about human consciousness and free will that ignore the ‘sub’ conscious have an extremely high probability of being wrong.

Nevertheless, while scientists and philosophers continue their eons long debate about the existence of free will and ‘consciousness’, I will go on, in pragmatic fashion. Steven Cave, in the same article, explains that a belief in free will has significant consequences. Psychologists Kathleen Vohs, University of Utah, and Jonathan Schooler, University of Pittsburgh conducted several tests, and on a range of measures they found that “people who are induced to believe less in free will are more likely to behave immorally” (paragraph 12). Other researchers also discovered that a lack of belief in free will, or an inducement to such a belief, results in poorer job and academic performance. If people believe they are blameless for their behavior, they simply stop caring about what they do. I cannot imagine living in a world where we all believed that we bore no responsibility for our thoughts and actions. What would be the purpose?

Suckiel (1982) says that James’s pragmatism is “...paramountly an optimistic and moralistic philosophy. Human thought has a creative and originative function. [...] The world is plastic and malleable, and there is room for the affirmation and fulfillment of our hopes and faiths” (p. 12). James’s pragmatism was founded on the belief that we had the will and the ability to take charge of our own lives, and through affecting our behaviour, we could do so. Pragmatism was a redirection of a belief in determinism to an existential declaration that ‘I AM’ and it is the “I” that I am who controls my destiny.

I believe in god, whatever it might be, and I believe in free will too. I also believe in purpose and creative power. Like all life, my purpose is to create. I am a writer and I am creative. I create worlds with my words, but also by virtue of my actions I create the world in which I choose to live. However, I don’t believe in destiny and I don’t subscribe to hope. Hope prolongs suffering, sometimes enormous life-long, even culture long suffering. With hope, we

can suffer through anything, and many of us willingly do, hoping for the next life time, our heavenly reward, that lucky lotto ticket, or that maybe one day that spouse of ours will learn how to squeeze the toothpaste the right way.

I have learned that what I believe affects my actions, and what I believe and what I do form my reality. I believe that I have free will. I therefore act as if I do, and the results are significant. If the universe or multi-verse is as big and as old as some think it might be, then I know that every action I take will have infinite and eternal consequences. Therefore, there is absolutely nothing inconsequential about the decisions I make, and the will I use to make them.

I don't hope for a better tomorrow, or for a better world, or for salvation. I get up every day and I go to work and I do the best I can, and sometimes I write, and sometimes I feel really good, and I try to leave each and every day in which I exist a better day than what it might have been without me. Then, as each day and each week and each year unfolds, the tomorrows get better, and the world gets better, and I get better. There is no hope, without a today. Today I live. Today I love. Today I act. And by acting I create a world of purpose.

With the discoveries of quantum physicists and bio-centrism 'certain metaphysical questions' no longer lay beyond the reach of science. Consciousness, and the role it plays in creating reality, the 'simultaneous theatre of possibility' residing within the quantum field that is our brain, and the free will we have to focus our creative energy and 'collapse' this haze of probability and possibility into the reality that best suits our needs, is a reasonable belief that I, for one, can live with.

Reason and Belief and Intuition

Reason and belief are not mutually exclusive, and I believe that 'belief' is a critical component to the knowledge acquisition process. Belief comes first.

The paradigm or belief system within which one exists determines the questions, or hypotheses, that will be considered, but this paradigm also determines the answers that will be questioned, and those that will not. For example, I believe a universal 'purposeful' phenomenon exists. My reason for existence is to prove this. As a result, when I come across evidence that opposes this hypothesis, I will expend large amounts of energy to discredit it. When I find evidence to support my belief, on the other hand, I will spend very little energy to 'credit' it. Scientists are the same. They start with a theory. It is usually a theory they are very fond of, and it is always a theory that has arisen from their view of the universe. Questions are only asked when answers are sought. If one already has the answer, there will be no question. When something doesn't fit, we will first spend much energy trying to disprove it. And only when we can't disprove it, will we consider opening the door to the box we are in and expand or change our world view. As I stated previously, each of us sees the world through a different lens (magical glasses) and the world will behave according to how it is seen.

Going 'outside the box', to leave a reality that we have constructed for ourselves, and to enter a world where anything is possible, is where creativity thrives. When we enter another universe we open our eyes and we see what would not be seen otherwise.

Philosopher and writer, Steven Cave (2016) explains that in the 1980's physiologist Benjamin Libet proved that free will did not exist by showing that the buildup of electrical activity in the brain "occurs before the person consciously makes a decision to move" (paragraph 7). Cave then suggests that "The conscious experience of deciding to act, which we usually associate with free will, appears to be an add-on, a post hoc reconstruction of events that occurs *after* the brain has already set the act in motion". Or in other words, our 'consciousness' has nothing to do with our acts in the physical world. Robert Lanza and Bob Berman (2009), on the other hand, use this same example to support their theory of *Biocentrism*, which says that life and its consciousness create reality, and not the other way around. They conclude that "what appears "out there" is actually occurring within our own minds" and "that there is no true

disconnect between external and internal" (p. 39). They expand this to conclude that "the 'universe' is simply the complete spatio-temporal logic of the self" (p. 93). This is a very good example of how the paradigm from which one views 'facts' can alter one's reality, and quite significantly so.

Before the 20th Century the vast majority of scientists believed in Newton's theory of gravity – it was a 'reason' able hypothesis. However, it was ditched as a belief when Einstein intuited the theory of 'general relativity'. I say again, reason and belief, especially in the scientific world, are not mutually exclusive.

Lanza and Berman (2016) note that "we humans perceive and evaluate the world using a variety of tools" (p. 173), including logic and direct perception. Under direct perception they include intuition. They say that "most of us trust our intuition above everything else" (p. 174), and I agree. They further explain that "this *instinctive-level perceiving process* reaches an exquisite perfection when an observer is no longer blurring between the various levels of logic and instinct, but focuses exclusively on one tool or the other" (p. 174). Our intuition is strongest and most reliable when we push the logic brain out of the way.

The religious scientist finds it extremely difficult to accept that the greatest scientist of the 20th Century relied on his intuition to resolve the fundamental questions about reality. Albert Einstein was both a philosopher and a scientist. As noted by Karen Wright, in her article *The Master of Mistakes* (Discover, Spring 2009), on general relativity Einstein said "There is no logical path to these laws; only intuition…can reach them" (p. 44). Einstein intuited the answers to the biggest questions ever imagined, and he used metaphors (simple physical pictures) to explain them, and then he pursued the science to prove his answers right. Einstein "gave primacy to "free inventions of the mind," as he called them, which were aloof from facts and phenomena." According to Wright, "The German mathematician Felix Klein accused Einstein of working "under the influence of obscure physical-philosophical impulses."" (p. 44). Nonetheless, for Einstein, intuition was his principle method of discovery. Without it he could

not have envisioned general relativity. Wright clarifies, “Those impulses drove his imagination beyond common sense and ordinary insight to radical and fundamental truths” (p. 44).

Einstein’s beliefs fed his science. Brad Lemley, in his article *A Tangled Life* (Discover, 2009), says Einstein “believed in a “God who reveals himself in the harmony of all that exists” (p.18). Einstein also believed that physical reality existed independent of human existence. If something didn’t fit into his paradigm, he stubbornly refused to believe it, despite overwhelming supporting evidence. According to Karen Wright (2009), Einstein believed the universe was standing still, so he “rigged the equations of general relativity to explain why the cosmos was standing still when it wasn’t” (p. 44). Einstein “invented a fudge factor, called lambda…that could function mathematically to hold the universe at a standstill. The term implied that space itself had energy that resisted the contraction caused by gravity or the expansion from the stretching of space” (p. 44). Furthermore, because he believed that physical reality was independent of human existence, and because he believed in “the harmony of all that exists”, and because he believed that God does not play dice with the universe, Einstein refused to accept the mind blowing discoveries of quantum physics – in his mind, human observation could not possibly affect reality, so in his reality it didn’t.

Einstein held to the faith in his intuition to the very end. Wright says that the last decades of his life were spent on an attempt to develop “a theory subsuming the laws of gravity and subatomic interactions. He would recognize this unified theory, he said, by its beauty or self-evident rightness. He never came close to finding it, but he never doubted that someone would. “I cannot base this conviction on logical reasons,” he said, “My only witness is the pricking of my little finger.”” (p. 45). Tim Folger, in his article *Dreams of a Final Theory* (Discover, 2009), says “Einstein gave rise to the romantic notion that a genius who follows his intuition can create a perfect theory” (p. 60). Folger admits that despite falling prey to this notion (failure to develop a unified theory) Einstein managed to develop the general theory of relativity “in defiance of centuries of physics” (p. 60).

Weisberg acknowledges that "creative thinkers go *beyond* the past to produce genuinely novel ideas and objects" (p. 54). They stretch the boundaries of existing paradigms, and sometimes, like Einstein, they expand beyond them.

Although Einstein created a fudge factor to enable a stubborn hold to the belief in a static universe, this was an incredibly intuitive and prescient solution. Decades later, science would deduce that the universe is expanding and its expansion is accelerating, and for this to be so, astrophysicists must imply a cosmological constant that "imbues empty space with an unidentified force (now generically referred to as "dark energy")" (Wright, p. 45). And hence, Einstein's cosmological constant was reborn.

Very large ideas are twirling around in our science fiction and fantasy novels, in our universities and colleges, on our television and movie screens, in the minds of our philosophers and scientists, and on the internet. One would be hard pressed to determine where the original ideas originated. Did Jules Vern invent the submarine? Who was the first to consider the concept of multiple universes? Gene Roddenberry? Friedrich Nietzsche? And upon which foundation were these ideas created - belief or reason?

Both belief and reason hold us within the paradigm we have built around us in order to survive. We have to establish rules and 'laws' within which to operate. Belief most certainly ignites passion, and sometimes this passion is quite consequential. World Trade Centres will come tumbling down, theories of relativity will pop into someone's mind, and our view of the world might change. Our greatest creative achievements arise when we imagine the unreasonable, the impossible and the improbable; when we travel beyond reason and belief.

Homogeneity and Diversity

The culture into which we are born also has an urge to immortality – it wants to live forever. To endure, a culture must have an appropriate balance between the survival forces of homogeneity and diversity. The cultural survival force of homogeneity, primarily through

hegemony, strongly encourages all born within that culture to conform to that culture. Homogeneity also encourages resistance to other cultures, which sometimes leads to destruction or assimilation (globalization). The opposite of homogeneity is diversity, which is the primary survival strategy for life as a whole. The appropriate balance between homogeneity and diversity creates an optimum tension that provides an environment where a culture will grow and evolve at a pace that does not kill it. A creator born into a culture that promotes diversity over homogeneity will be provided more flexibility and opportunity to create – because in that culture the force of homogeneity is easier to resist.

According to Weisberg, Joy Paul Guilford, a founder of the psychology of creativity, reasoned "that an important step in the creative process must be a breaking away from the past, which is the function of what he called *divergent* thinking. As the name implies, this type of thinking *diverges* from the old and produces novel ideas, which can serve as the basis for a creative product. […] The highly creative individual is assumed to be high in divergent-thinking ability" (p. 95, 96). In other words, a highly creative individual is more able to resist the force of homogeneity. I believe we are all innately divergent – we are unique and therefore some of the ideas we produce will likely diverge from past ideas. The marginalized, and those who resist culture, are relatively more divergent. Massive cultural change, for instance, is usually seeded by the marginalized. Cultures that are not intrinsically diverse are less creative than those that are. Cultures that are not intrinsically diverse do not change without significant outside force, and they usually die from inertia.

Many and One

The creative process is significantly enhanced when several people are involved. Weisberg states that "a scientist's conception of his or her own work sometimes changes radically as the result of input from colleagues during laboratory meetings in which data and analyses are discussed" (p. 84,85). Adding more people to the equation increases the number of ideas, it

significantly increases the number of connections, and it increases the energy applied. Knowledge plus energy plus connection equals creativity. More knowledge plus more energy plus more connection equals exponentially more creativity.

The existence of competition also clearly creates an environment where creativity flourishes. The race to discover the shape of DNA was highly competitive, and the motivation to find the solution first was high. In fact, the shape of DNA could have been discovered by any number of individuals. Weisberg says "Watson and Crick were successful for several reasons. First, they built their theorizing on the work – both the theory and the empirical findings – of others, and that work was relevant to DNA. In addition, Watson and Crick both brought unique expertise to the enterprise, so that each was able to make a contribution to the final product that perhaps no one else in the world could have made at that time" (p. 34). They "were the first to specify the structure of DNA because they were uniquely capable of putting together the necessary pieces of information" (p. 34).

Nonetheless, Crick believed that had he and Watson not 'discovered' the double helix, then someone else would have done so within a few months (p. 55). I believe that the existence of many intelligent and creative people focussed on similar problems will result in huge advances. The theory of relativity, for example, did not leap into existence in Einstein's brain – it percolated in an environment where several scientists were trying to figure 'physics' out. The same phenomenon happened in Athens in ancient Greece and in Italy during the Renaissance.

Csikszentmihalyi argues that if sculptor Ghiberti (Gates of Paradise) "and his fellows were driven to surpass themselves, it was by the intense competition and focussed attention their work attracted" (p. 36). As mentioned previously, he explains that creative products arise "from the synergy of many sources and not only from the mind of a single person".

Cross Pollination - Interdisciplinary Research

Working and competing with others within the same discipline most certainly enhances the creative process. However, crossing disciplines, and/or working with those in other disciplines exponentially enhances this process. Multi-disciplinary studies provides an opportunity to cross pollinate and can result in immensely creative ideas and works. Using the brain as a metaphor, disciplinary studies is much like a brain that creates synapses between touching cells. Interdisciplinary studies, however, creates synapses between cells on opposite sides of the 'universe'. The more synapses we create, the more creative and the more conscious we become.

Csikszentmihalyi acknowledges that creative people "love to make connections with adjacent areas of knowledge" (p. 10). He says that his novel demonstrates that "creativity generally involves crossing the boundaries of domains, so that, for instance, a chemist who adopts quantum mechanics from physics and applies it to molecular bonds can make a more substantive contribution to chemistry than one who stays exclusively within the bounds of chemistry" (p. 9).

Multi-disciplinary studies is an exponential expansion of knowledge through the merging of singularities. This novel is in itself a multi-disciplinary product. Knowledge plus energy plus 'connection' equals creativity.