Historic Cosmology, Identity, and Exploration

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DARPA/NASA 100 Year Starship Symposium, 10/1/2011

Abstract

The role of the soul and spirit in the composition of human endeavor generally takes the form of motivational poster catch phrases or third-hand quotes. If the spirit equals the life of a creature, and one of the signs of life is locomotion, are humans not obliged by something even deeper than our humanity to explore the universe? This paper will look at the roots and observations of our worldviews on identity, exploration, and the limitations and capacities of humanity. It will equip the reader to discuss the nature of exploration with audiences across a wide range of worldviews. Current cultures, regardless of religion or politics, are looped into a series of nihilistic patterns that must be broken by rediscovering our nature as living beings, and our obligations as human beings.

Keywords: exploration, religion, mythology, history

Introduction: Why This Topic?

It's curious that DARPA was holding a starship design symposium, and interesting that there is a theology/philosophy track. It is also interesting that the main goal is to create a 100-year project timeline. In the Medieval era, starting a 100-year project was considered routine – most cathedrals took longer to construct.

Few modern cultures still think in longer time horizons. Unfortunately, the more technologically advanced a current civilization is, the shorter the time horizon of common planning. In the macro sense, this is fairly easy to understand due to several pressures, including the following:

- In business, the "Rule of 72" dictates that a project that does not pay for itself within 7 years is not worth doing. This is a simple formula concerning return on investment, not a philosophical statement.
- Elected officials tend to follow a time horizon concerning the next election, where if a project does not produce a benefit during the next election that can be sited, it tends to lose focus and funding in exchange for projects that can be done in that time frame.
- Moore's Law (the doubling of computer capacity every two years) and other technological exponential trends have a tendency to make quality artifacts obsolete so quickly that it makes little sense to design something to last more than four years.

In the end, modern cultures are shaped by financial, political, and technological systems to think in the short term. The only projects with long time horizons discussed at the moment are the following:

- Space settlement advocacy (including the 100 Year Starship)
- Gene banks, including seed banks to preserve species
- Nuclear waste disposal sites [1]
- Various threats to humanity or culture (these are warning signs rather than blueprints).

With the exception of space advocacy, nothing on this list improves the world beyond the current state. It simply focuses on maintaining the status quo or reducing risk to it. Venture capital and government funding for future-focused designs is nearly impossible due to the first bullet list. However, and this ties back to "Why a philosophical/religious track?", there is this concept: "Where there is no vision, the people parish." (Proverbs 29:18 [2])

So how should society focus on and press toward the one positive goal of space settlement?

What is the Goal?

Put succinctly, the goal is Human Exploration and Settlement of the Heavens.

Space advocates differ on timelines, methods, and so on, but this is the core goal for this discussion. This paper breaks down the terms as they are understood, historically, to the roots of Western Civilization, and follows the legacy of these elements forward to the present and future.

- What does "Human" mean?
- What does "Heaven" mean?
- What is Exploration and Settlement?
- What holds us back?
- What drives us forward?

What does "Human" Mean?

The Judeo-Christian definition of human nature has been the dominant model, because our Western cultures and languages have grown within this worldview for two millennia. Some of these elements are parallel to ancient Greek terminology as well, because it was the prevailing language used during the writing of the New Testament. It was also the dominant educational model during the Hellenistic era, late Middle Ages, and Renaissance.

The Judeo-Christian breakdown of the human entity is body, soul, and spirit. Sometimes, it is also broken down into heart, soul, strength, and mind, but this focuses on action points of the human being – elements of human endeavor that are both controlled by person and used to interface with the world. This paper will focus primarily on the original three elements because they deal with the entity itself rather than the attributes or interfaces.

The Body

The body is the physical entity of a person consisting of matter and information. Studies have shown that 98 percent of a person's atoms are swapped out every six months [3]. In essence, a person is similar to a candle flame. One still refers to the same flame, minute to minute, even though the flame's atoms at the moment were solid wax five minutes ago, and will be air components in five seconds. In a sense, even the Materialist cannot call the body material only. A purely materialist body is a dead body. A living body is a frame of information through which matter passes. It is static and dynamic information, transitional atoms, tooth enamel, and possibly a few metal fillings. The "key performance indicators" (KPI) of the body are health and fitness.

The Spirit

The spirit is associated with the breath, blood, or life force of a human or animal in most worldviews. One without breath or blood is considered dead. God breathing life into a person is considered an act of sentient creation. Scripturally, this is discussed not only with Adam (Genesis 2:7 [2]), but with Ezekiel and the Valley of Dry Bones (Ezekiel 37:1-10 [2]). Note what was said about the body and atomic replacement. The atoms that exist in the body for the shortest period are breath. Spirit is considered an adjective to describe how much "life" is in a person or animal – energy level, awareness, and ambition. Spirit can also describe a group with a common purpose and identity, though usually for groups focused on physical activity, such as sport or military. The KPI of the spirit are energy and resolve.

The Soul

One problem with English is that the word "spiritual" means matters of the soul, not spirit. English lacks a word for matters of the spirit distinct from the soul. This confusion is even stronger in German, where "geist" means soul, spirit, and ghost. In both Greek and Judeo-Christian sources, the soul is essentially the nature of divine image/intelligence implanted in matter, and thus a bit of eternity breathed into mortality that remains intact when the mortality ends life. The soul is the immortal component of a human being. In most cosmologies, is subject to judgment or reward, and subject to eternal life.

In more secular terms, one can call it the mind, as distinct from the brain. The secular immortality, judgment, and reward are related to the reputation and works of the person. Acts of creation also may exist beyond the person's ability to breathe – acts such as having and educating offspring, writings, and other creative acts. So in some sense, the soul is also information, but it is something else.

Another definition of a soul, conversely, is "that which remains when everything else about a person is removed". All attributes are removed, leaving only an entity. The name, body, history, profession, personality, and so on are all attributes. Who is the person when all of that is taken away? To truly answer the question, "who are you?", and give an answer that is not an attribute, is to define one's soul – one's ultimate identity. The KPI of the soul are integrity, independence, and accountability. Without independence, there is no identity or accountability, and therefore no personal integrity.

Greek Creation

The ancient Greeks believed in four terrestrial elements – Fire, Earth, Air, and Water, with a fifth celestial element called "holy ether" or simply ether. At creation, "some god, or Nature" who predated

the Greek pantheon, separated the chaos of five combined elements into strata based on mass. Ether floated to the top, followed by fire, then air, water and finally heaviest earth. The Greek universe is one big settling pond. Earth is not the center of the Ptolemaic universe – it's the bottom.

"Maybe the earth that was freshly formed and newly divorced from the heavenly ether retained some seeds of its kindred element – earth, which Prométheus, the son of Iápetus, sprinkled with raindrops and moulded into the likeness of gods who govern the universe. Where other animals walk on all fours and look to the ground, man was given a towering head and commanded to stand erect, with his face uplifted to gaze on the stars of heaven. Thus clay, so lately no more than a crude and formless substance, was metamorphosed to assume the strange new figure of Man." (Metamorphoses 80-89) [4]

Ovid's Metamorphoses was written roughly 100 years prior to the life of Christ, and was written to roughly the same audience and in the same language as the New Testament. The Greco-Roman and Judeo-Christian models of humanity are very similar in this regard. Both define humanity as a combination of lowly dust and divine spirit. Humans retain the frailty of the first and nobility and permanence of the second. This paradox is a recurring theme in poetry and literature. Ray Bradbury's Forward to "Mars and the Mind of Man" is an ideal example.

"I would take him – warts, bumps, hogwash, mush, and all, every athlete's foot of him, armpit lumps, corns, bad dreams – and put him on the Moon, Mars, and drop him in the Coal Sack Nebula shouting with joy, shrieking with fear, and alive, alive, O!

"Don't think you can improve a thing that is already improved, already lost; always behind but always winning; filled with midnight, burning with sun; sly and untrusty, open and lacking guile.

I sing paradoxical man…
…I sing the entire man, then, going into Space." [5]

Greek Concepts of Human Nature and Life

Aristotle defined the world in terms of form and substance. Substance could be without form (chaos) but form could not be without substance. Ideal forms existed in the ether, with imperfect shadows in the earthly realm. Life was defined by a third component called anima or psyche – akin to the spirit and soul. He divided this into three types; vegetative soul, the animal soul, and the rational soul – found only in man. The Christian equivalency would state that humans have both the animal psyche (called the spirit) and the rational psyche (called the soul).

What does "Heaven" mean?

The term "heaven" has three meanings in biblical contexts and two in Greek, and all have carried forward to English.

- **The First Heaven** is the atmosphere.
- **The Second Heaven** is space - the planets and stars. Basically the observable universe.
- **The Third Heaven** is the context of God's throne, the afterlife, and eternity. It appears to be extra-dimensional or outside the context of the observable universe. It does have a material

nature in the sense that the Bible describes objects there, and time does pass there because things happen in sequence.

One often says "heavens" in English to refer to stars and occasionally storms (“the heavens opened up and poured rain”), because biblical language is so engrained in Western culture. Even so, this can prove confusing when people don't realize this. Children assume Grandma went to live on a cloud with a harp.

Ancient Greeks understood that air was distinct from and heavier than ether and fire, thus first and second/third heavens were distinct. They associated things that were unchanging and immortal with the sky and things that changed and died with Earth and weather. They frequently blurred the lines between space and spiritual matters, seeing the planets as gods or representations thereof, and seeing the Milky Way as the main road of the gods.

What is Exploration and Settlement?

Humans are not unique in our spirit of exploration. It has been observed that when a dog is introduced to a new room, it will go straight to the middle of the room and then look and smell around. A cat, conversely, will go along the walls slowly with a stronger sense of danger, depending more on sound and motion to detect risks. The spirit of exploration is not limited to humanity. Leave the door to a room that is forbidden to a cat or dog open and unobserved for five minutes and one knows where to find the cat or dog. Another oddity is that most people don’t realize an older dog has gone blind until they rearrange the furniture, resulting in collisions. The dogs become so used to the patterns, scents, and paths of a room that they no longer need to reference the scene visually. Exploration, therefore, may be cautious, bold, or inadvertent due to change in the entity and/or environment.

Exploration and Colonization as a Life Function

Expansion of territory for species is necessary for survival. By expanding to the limits of the acceptable habitat, a species acts to prevent an extinction event at a given location from wiping out the entire genome. These events are fairly routine – drought, epidemic, fire, flood, volcano, competitive species, and so on. Conversely, if the danger passes from a given region, the species can spread back into the impacted zone and re-colonize it.

Among the core functions of life are Locomotion and Reproduction. While plants remain rooted, their seeds are designed to spread by various means. For the purpose of animal/human exploration, one could also include Adaptation, Response to Stimuli, and Growth.

In order for a person or animal to explore a new territory, one must be aware it exists, evaluate it in terms of danger and opportunity, and either move there personally and/or spread offspring to that region. Plants, spiders, and coral do the latter blindly, using large numbers of progeny and repeated attempts to spread with wind or water currents. Necessarily, each blind attempt must consume as little energy and matter as possible so that it may be repeated thousands of times. A hybrid approach is used by fruiting trees that invest more energy in seeds with fruit, so that animals may do the locomotion process. In a sense, they are using the intelligence and locomotion of the animals parasitically.

In terms of spaceflight, the plant model may be used if nanotechnology or robotic flight were to become highly affordable. Robotic flight is already more affordable than crewed flight, with robotic missions vastly outnumbering crewed missions and spreading over a much larger range of space. The model would presumably be repeated with starships, with robotic vehicles being optimized for minimal mass

and maximum quantity. Minimal mass is also dictated by the rocket equation, and further enforced with relativistic starship designs due to the increase in mass as the vehicle approaches the speed of light.

Knowingly going from a familiar territory to an unfamiliar one requires a degree of energy, risk tolerance, and strength. The earlier example of the discrete cat and the bold dog gives some feel for where the two animals are on the food chain. Cats depend on evasion for survival if attacked by a larger animal, whereas dogs depend on having the rest of the pack nearby. Dogs often announce themselves into wilderness with barks and howls. By this boldness, they in effect intimidate larger creatures who may hear one animal call and think a meal is available, then hear the responses of other dogs and back away for fear of being outnumbered.

To explore is to potentially live; to stagnate is to inevitably die. The creature that cannot explore or reproduce into new environments is in all probability stagnant because it cannot adapt to a changing environment, and all environments change eventually. As with a single goldfish in a fishbowl or an ant colony with no queen, systemic death is only a matter of time.

What Holds Us Back?

Ancient Greece and Hubris

An irony of ancient Greek stories is a mixed attitude toward adventure. Any attempt to fly or enter the realm of the gods was considered hubris, or excessive pride. Even those with a Greek god as a father were discouraged from doing so. There are four examples, and all end badly for the adventurer.

Prometheus. Known for stealing fire from heaven and bringing it to man, he is punished by the gods for his crime by being chained to a rock and having his liver picked out by an eagle by day only to have it grow back each night.

Phaethon was the son of Helios and the ocean demigoddess Clymene. He seeks assurance from his mother that he really is the son of the sun god. So he goes to the home of the sun god and asks his father if he may drive the chariot of the sun across the heavens. As often happens on first borrowing the father's car keys, he does poorly. After creating deserts and other mishaps, Zeus angrily strikes him with a bolt of lightning and kills him, sending him plunging to earth before he can do any more damage. The horses of the sun chariot continue without him. They rebelled because they sensed a weaker hand guiding them.

Daedalus and Icarus. The father and son flight team attempt to cross an ocean through the sky on wings made of feathers and wax. Icarus, again surrendering to hubris, attempts to fly to the sun and the wax holding his wings together melts, dropping him into the ocean to his death. Daedalus survives but curses his hubris in taking an action that results in his son's death, and swears off flying again.

To be fair, 2400 years ago, it was perfectly logical to associate flying to the skies with excessive pride. There simply was no method available to do so literally. It also implies one wants to elevate one's corrupt carnal self (carne) to the pure realm of the Logos, or perfect untainted celestial form.

Does this mean the Greeks were cowardly with regard to exploration? Absolutely not – they directed their spirit and expansion to the seas. Ancient Greeks were like brave adventurous dogs in the horizontal seas but contemplative and discrete cats in the vertical skies. Exploration of the heavens was

confined to poetry and mathematics. While this provided a foundation for science and philosophy, it also provided an unnecessary inhibition that outlived its usefulness once humanity ran out of Earth to explore.

Greek Preconceptions in the Medieval Mind

Late Medieval and early Renaissance scholarship was rooted in many sources, both ancient and contemporaneous. Greek thought formed the basis of many rules of logic, mathematics, and astronomy. As such, a student of that time period would learn not only Pythagorean mathematics but philosophy from translated works. Similarly, chemistry was a mix of observation, experiential and traditional medicine, and mystical alchemy.

For example, until Newton's Principia described gravity, there was controversy concerning whether or not the Earth rotated. They understood centrifugal force would spin objects away, but when it came to observations of gravity (for example, the moon pulling tides), they were left using terms such as "animal faculties", "virtues", "spirits and humours" and "magnetism" to describe WHY attraction between the moon and oceans occurred. Lacking a non-mystical explanation of gravity to overcome centrifugal force, some were left with the least mystical solution – a stationary Earth [6]. Kepler, Gilbert of Colchester, Galileo, Tycho, and Newton can't be blamed for this – the original texts concerning mathematics, geometry, astronomy, and so on were translations of Greek philosophers and mystics. They were simply following their textbooks until they made enough observations with sufficiently accurate instruments to question them, and then developed sufficient mathematical skill to build more accurate models from scratch. Even the Copernican model initially maintained crystal spheres and other Greek concepts in the first iteration. Galileo did not run afoul of Christian thought with his telescope, but the leftovers of Greek thought on the moon and planets as perfect spheres moving in perfect circles. Kepler's own progress was slowed considerably because he has to overcome his Greek preconception of circular orbits to match the observed orbit of Mars to an ellipse [6].

Bringing common knowledge from roots in Greek philosophy to more modern observational science was an extended effort over several generations, done one step at a time. That said, the effort to break the cultural inhibitions of Plato and Ovid remains a contemporary effort in the present day.

Breaking the Crystal Spheres from Above and Below

The seeds of the unity and split between Greek and Christian worldview can be found in the Gospel of John, chapter 1. Written to a Hellenistic audience, it begins with concepts that are simultaneously perfectly Greek and perfectly Hebrew. "In the beginning was the Word, and the Word was with God, and the Word was God." (John 1:1 [2]) "The Word" here is the English translation of Logos, or perfect celestial form. Logos is considered pure and divine, untainted by both physical distinctness and distance from the corruption of man in flesh (carne). It is the perfect form to which all earthly shadows are imperfect mimics, in accord with Platonic philosophy.

This Gospel continues in harmony with Greek thought until the Incarnation of Christ is put in Greek terms. "And the Word became Flesh, and made his dwelling among us" (John 1:14a [2]). This would have been difficult for a Hellenistic audience with a predisposition to believe that Logos would never lower and dirty itself to become carne. Ironically, it was acceptable for Greek and Roman deities to

appear in human form. It was accepted for the gods to come down as long as humans never ascended. Even the Hellenistic afterlife was just a deeper descent downward into Hades, albeit to either pleasant or unpleasant fates.

Then the scriptures get more complex. Christ lives, dies, is resurrected, and then ascends bodily to the third heaven via the first heaven (Acts 1:9-11 [2]). Add to this the change in the destination of the faithful from Hades (downward) to Heaven (upward), and the eventual bodily resurrection and ascent of the followers of God (1 Thessalonians 4:16-17 [2]). The Greek worldview is literally turned upside down.

Concerns for the End of History

There are some Christians who interpret eschatology (end things) to assume that technological progress will soon come to an end. There is a strong harmonization of world events and systematic theology, particularly dispensationalist eschatology, in the last sixty years. This is not the place to discuss this directly, but rather to deal with this cultural inhibition to space exploration on its own terms.

Consider this passage from a description of the Second Coming of Christ: "And he will send his angels with a loud trumpet call, and they will gather his elect from the four winds, from one end of the heavens to the other." (Matthew 24:31 [2]). This is repeated in the next gospel with a slightly different set of overlapping detail: "And he will send his angels and gather his elect from the four winds, from the ends of the earth to the ends of the heavens." (Mark 13:27 [2]). Elect is another term for devoted followers of Christ. It clearly isn't meant to describe the third heaven because the "elect" there would by definition have already been "gathered". "Four winds" implies that this statement refers to the first heaven. Given the tens of thousands of airline passengers at any given moment, this prophecy is already staged.

The question of space colonization – the gathering the elect from the second heaven as well as the first, is completely open in these passages. Therefore, if an Evangelical objects to the idea of space colonization as a future goal because it violates a worldview concerning the end times, refer to this passage. Space colonization is not a closed issue, even in Evangelical interpretations of scripture.

Other beliefs concerning end times, particularly mystical concepts concerning 2012, or involving climate, economies and populations, are outside the scope of this paper.

Fear of Flight in Modern Culture

The implication of this to Christian thought is that if one is eventually to ascend to the third heaven bodily, the first and second heavens are no longer forbidden to humanity. Furthermore, air travel is explicitly stated with regard to the earthly life in that last passage, where human flight is practically mandatory.

In the past 250 years, the cultural acceptance of human travel in the air, in space, and among the stars became a common theme Western fiction. Greek inhibitions faded from cultural memory and ballooning came forward from new understandings of, ironically, fire-plus-air being lighter than air alone. Eventually, more fictions became fact as Twentieth Century engineering, mathematics, and physics finally became accurate enough to build aircraft and spacecraft.

Society still has some of the ancient Greek inhibition built into modern psychology with a new respect for the dangers of the air. Statistics are unclear, but between 10 and 25 percent of people are afraid to fly depending on your source. A pressurized tube moving at 100 times the speed of a mild jog at high altitude is definitely a new room to which many enter with catlike trepidation. There is a visceral reaction in some that tells the person that they don't belong there. For a population with experiential familiarity with the first heaven, and with a quarter of that population experiencing fear in that environment, one can easily imagine their reaction to the second heaven of space, particularly interplanetary or interstellar space.

What Drives Us Forward?

The Age of Exploration

As noted, while Greco-Roman thought was cautious with regard to the heavens, they were very brave with regard to the seas. The Odyssey, with its voyage to strange new lands, became a common theme of inspiration in Western culture. The coastal trading vessels combined with the mathematics of astronomy and navigation from ancient Greece. As humanity replaced the astrolabe with the sextant, and agricultural timekeeping with navigational timekeeping, the Age of Exploration was launched. Strange tales of sirens and Cyclops were eventually supplanted with stories of natural and cultural wonders in the New World and Pacific. The Greek and Roman sea dogs were never quite tamed, though they did still travel in packs called fleets for protection and support.

Other technologies and vehicles have been used for horizontal exploration. In 1937, the Antarctic Snow Cruiser was built in Chicago, driven to Boston, and shipped to Antarctica. It was a massive rover designed to drive the Antarctic continent from end to end, using an aircraft carried on its back to fly ahead and map routes. Unfortunately, it was designed too heavy and got stuck in the snow within three miles of its launch point. Zeppelins and prop-driven aircraft were used in polar and jungle mapping at the conclusion of the nautical age of exploration.

The age of nautical exploration did not end until the ice caps were fully mapped in the 1950's, culminating in the Nautilus nuclear submarine crossing the ice cap. In 1960, a American nuclear-powered base of 200 inhabitants was built under the Greenland Icecap. This subsurface base, called Camp Century, did research on polar living and construction for eight years prior to the reactor being removed and the base abandoned. The engineers did not replace it, in part because the space age was dawning. They fully expected their next project to be on the moon. Project Horizon was a US Air Force design for such a base. Obviously, this and many efforts in the years since have never got past the design reports after Apollo. It does, however, provide a bridge of continuity between the Age of Sail and the Space Age.

For the most part, the jet aircraft was the first to stop exploring new lands. By the time the practical jet was invented, the surface of Earth had largely been mapped. The jet began the shift from thousands of years of horizontal exploration to decades of vertical exploration with no horizontal component. People stopped asking where a new prototype aircraft went and started asking how high and fast it had flown. The cry of Icarus was finally silent.

In 1969, first Boeing 747, the first Concorde, and Apollo 11 first flew within 12 months of each other. But the exponential growth of aerospace suddenly leveled into a far less ambitious climb. At the end of Apollo, and again at the end of the shuttle era, America has rearranged the furniture and suddenly realized that the dog has gone blind. Institutional routines of always doing the same thing and following the same paths worked for so long. But slowly the vision was lost, so slowly that the dog, being more guided by scent than sight, never panicked about it. And without vision… well, eventually it gets to be time for a new dog.

The Greek roots of culture contained a horizontal driver and a vertical inhibitor. After the inhibitor was supplanted, the driver exploded into an age of exploration until, two thousand years after Ovid, humanity ran out of horizontal Earth to explore. Now society needs a new driver, and needs it in the vector previously occupied by the inhibitor. Humanity needs to go vertical.

The Holy Ether and Worldview

There is a strong commonality of secular, Greco-Roman, and Judeo-Christian thought concerning the purity and beauty of space. Consider a photo of a beautiful nebula from Hubble. Humans have an intrinsic knowledge that the deep sky is completely untainted by our mistakes, pollution, anger, failure, or ugliness. A beautiful child can be corrupted or killed, a beautiful valley can be logged or bombed, but a beautiful nebula is untouchably vast and distant. Even if the Great Nebula of Orion were mined into oblivion by some future civilization, the next galaxy would offer a thousand such vistas. As humans, metabolism and error make much of the beauty before us waste and foul in our wake. Yet humans seek beauty and purity. It is perfectly natural to see beautiful plants as nourishing and put distance between ourselves and our waste products as defense from disease.

"The heavens declare the glory of God; the skies proclaim the work of his hands. Day after day they pour forth speech; night after night they reveal knowledge." (Psalm 19:1-2 [2])

There are many pastors who have used this passage to rationalize the purchase of a telescope. If God hid beautiful nebulae across the second heaven, unknown to humanity until the telescope, it is a responsibility to at least have a look at God's art gallery. The creativity, knowledge, and passion to build rockets are reflections of the knowledge of the heavens. There is nobility and a reward in anything that calls the mind skyward – of this both Greco-Roman and Judeo-Christian tradition agree from the very beginning. The idea that "the Heaven's declare the glory of God" provides the ever-opening beauty that can never be fully corrupted or consumed. The concept that every larger telescope and more distant space probe brings more and more untouched beauty to our eyes inspires at a very visceral level. This inspiration is not limited to Art, Science, or Faith, but inspires all three intensely.

The Soul and the Void

The core principle of the rocket is that it is self-contained. A resilient psyche is critical to interplanetary space travel with nothing but sunlight and spacecraft to form one's environment. Interstellar travel is even more demanding, with not even a sunbeam for company.

Societies, and sometimes individuals, break down through phases of Apathy, Atrophy, and Anarchy. The opposite of each is Passion, Strength, and Integrity. As stated by Alexis De Tocqueville:

"It is because man is capable of rising above the things of the body, and of contemning life itself, of which the beasts have not the least notion, that he can multiply these same things of the body to a degree which inferior races are equally unable to conceive. **Whatever elevates, enlarges, and expands**

the soul, renders it more capable of succeeding in those very undertakings which concern it not. Whatever, on the other hand, enervates or lowers it, weakens it for all purposes, the chiefest, as well as the least, and threatens to render it almost equally impotent for the one and for the other. Hence the soul must remain great and strong, though it were only to devote its strength and greatness from time to time to the service of the body. If men were ever to content themselves with material objects, it is probable that they would lose by degrees the art of producing them; and they would enjoy them in the end, like the brutes, without discernment and without improvement**."** (Emphasis added) [7]

As to the earlier question, "Who are you?" with regard to the soul, here is one attempt to answer: "I am the entity who answers the question. I am the author of these thoughts, but not the intelligence, which can be taken away. I am the one who feels, but not the hormones that can enrage or manipulate. I am measured by the most reflexive of properties - Integrity. If I lack it, I have nothing. If I have it, I can lose anything else and be stronger for it." To footnote this, experience indicates that love also seems to be one of the last elements of the human psyche to disappear in the deathbed or brain injury. It is tied with integrity as an attribute closest to the core of human identity. Humans are social animals; voyagers should never travel alone indefinitely.

The Skillful Task and Vision

It is legitimate to have fears of the world economic and political situation and possible trials by fire in the near term. Indeed, reading stories from 1911 in 2011 reveals shocking similarities of history. But the souls refined in the fires of the world wars, hunger, and depression had the tested integrity to forge the airliner and the moon rocket. The next century may also see the survivors refined in great fires go on to build still greater vessels of exploration. It will be theirs to leave the pharaohs of slavery and push forward to new promised lands, upon new pillars of fire, and claim their inheritance of the children of all three heavens.

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