

# Trinitarian Humanism

“The Spiritual Nature of the Human Soul”

## Fatima Politics and Social Renewal

### Volume I

By

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Dedicated to the Leaders of all Nations

For the  
Glory of Man

And the

Greater Glory  
of the Most Holy Trinity  
(In whose image man is made)

*"Jesus coming, spoke to them, saying: All power is given to me in heaven and in earth. Going therefore, teach ye all nations; baptizing them in the name of the Father, and of the Son, and of the Holy Ghost. Teaching them to observe all things whatsoever I have commanded you: and behold I am with you all days, even to the consummation of the world" (Matthew 28:18-20).*



## FOREWORD

**TRINITARIAN HUMANISM** is part of a groundbreaking series of books rooted in Marian-Trinitarian spirituality and Catholic social teaching that the author refers to as *Fatima, Politics, and Social Renewal*. It is addressed to all men and women called to be architects of a new man and a new humanity. This collection is rooted in the authentic spirit of Vatican Council II and the vision shared by Popes Benedict XVI and John Paul II who intended by their own social teaching and the implementation of the Council's teaching to "propose to all men and women... an integral and solidary humanism capable of creating a new social, economic and political order, founded on the dignity and freedom of every human person, to be brought about in peace, justice and solidarity" (Pontifical Council for Justice and Peace, para 19). "Then, under the necessary help of divine grace, there will arise a generation of new men, the molders of a new humanity" (Vatican Council II, *Gaudium et Spes*, para 30).

In his "Last Will and Testament", John Paul II entrusted this patrimony, which he refers to as a "great treasure", to future generations called upon to make it a reality:

I am convinced that once again and for a long time it will be given to the new generations to draw from the riches that this Council of the 20th century has lavished. As a Bishop who has participated in the conciliar event from the first to the last day, *I wish to entrust this great treasure to all those who are or will be in the future called to realize it* (para 4 emphasis added).

Those adults called to be molders of a new humanity were the young people whom Pope Paul VI, breathing the spirit of Vatican II, previously exhorted to the same task:

Dear young people of every language and culture, a high and exhilarating task awaits you: that of becoming men and women capable of solidarity, peace and love of life, with respect for everyone. Become *craftsmen of a new humanity* where brothers and sisters – members all of the same family – are able at last to live in peace.

Dr. Marzak points out that there cannot be new humanity unless we know what a man is, thereby revealing pioneering evidence that melds our physical makeup with our soul and spiritual essence that significantly

advances our understanding of man as a being made in the image of God. Political, economic, and social structures built by the *wisdom of man* alone, without God, are experiments that are repeatedly and invariably destined to crumble. God handed us paradise and we handed it back to Him. Through His mercy, He provides us a new path to peace and salvation and He repeatedly shows us where the path He would have us walk lies. However, we choose to walk our own path, one that leads to massive sin and its consequence, suffering. As history has repeatedly taught, if we choose to construct the household without His help, it will be in need of constant repair until it ultimately falls in upon itself" (Psalm 127:1-2).

Social renewal requires proper education and formation as well as a vast array of intellectual and professional competence. As the author points out, "wisely constructed constitutions, solidaristic economic-social systems, sound educational theories, and successful pedagogies do not occur spontaneously. God the Creator made us in His image as co-creators; it is our dignity as beings made in His image to work with Him, and an affront to that dignity to wait for Him to do the work for us, as if His Church were some type of welfare state waiting for a heavenly handout. We must do our part for the social renewal of the modern world".

"The laity *must* take up the renewal of the temporal order as their own special obligation.... Preeminent among the works of this type of apostolate is that of Christian social action which the sacred synod desires to see extended to the whole temporal sphere, including culture"

In this regard, "Centers of documentation and study not only in theology but also in anthropology, psychology, sociology, and methodology should be established for all fields of the apostolate for the better development of the natural capacities of the laity-men and women, young persons and adults. Laymen should above all learn the principles and conclusions of the social doctrine so as to become capable of working for the development of this doctrine to the best of their ability and of rightly applying these same principles and conclusions to individual cases"(Vatican II: *Decree on the Apostolate of the Laity*, 1965).

Successful God-centered social reconstruction preceded by individual sanctification and requisite education is the message and goal of this series. Since God-centered social renewal begins with a definition of man, it should begin with a definition that is supported by philosophical and scientific research that includes a Trinitarian dimension as well. In this



regard, Pope Benedict XVI, commenting on evolutionary issues related to Christian anthropology stated: "I find it important to underline that the theory of evolution implies questions that must be assigned to philosophy and which themselves lead beyond the realms of science". Pope Benedict continues:

"Anthropogenesis is the rise of the spirit, which cannot be excavated with a shovel" (Horn, 2008, pp 15-16).

Dr. Marzak utilizes an integral methodology combining chemistry, biology, philosophy, Trinitarian Theology, and the Message of Fatima to rise beyond the realms of science to develop and articulate a profound and new Trinitarian Humanism suitable as the starting point for successful social renewal in the modern world.

I believe this book in concert with the books to follow are necessary to help us understand and acquire Fatima's promised *Era of Peace*, save many lost souls, and strengthen the Mystical Body of Christ. Coupled with many graces from God and abundant toil in communion with the requests made of us through the Fatima message, this series will be central to the quest for personal sanctification strengthened by the proper theological, philosophical, and scientific education and insight necessary to build the new social structures.

**Michael La Corte**  
Executive Director  
Fatima Family Apostolate International



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*Trinitarian Humanism*

## **Endorsement of Prof. Americo Pablo López-Ortiz, International President of the World Apostolate of Fatima**

I am more than glad to endorse this book by Dr. David Marzak on Fatima, Politics, and Catholic Social Renewal for an *Era of Peace*. This book comes to fill a void in the interpretation of the authentic Message of Fatima as it covers the need to implement the Plan from Heaven revealed to the three little shepherds of Fatima by Our Blessed Mother on behalf of her Divine Son, Jesus Christ. The Message of Fatima has the potentiality to renew our infirmed societies and bring an era of peace and hope to humanity based on the establishment of the Kingdom of God on earth. But to do this, the corrupted structures of our societies must be changed by the efforts of many good willed human beings, who inspired by the Gospel of Jesus Christ, actualized by the Message of Fatima – a true echo of the Gospel – will have the wisdom, courage and virtue to apply the Trinitarian formula devised by God Himself to bring a new era to humanity.

The Message of Fatima is the Message of the Most Blessed Trinity as the Trinitarian God revealed to the three little shepherds of Fatima through the light that came out of the Immaculate Heart of Mary. That light was God Himself. That light was our Blessed Mother's contemplative vision of God, which she shared with the children of Fatima to discover for them the most powerful religious experience anyone can have, the experience of God's love, grace and mercy. The children were immersed in an ocean of love, grace and mercy; they felt themselves loved by God in such a manner that they received increased knowledge of God's nature as well as perfect knowledge of themselves, as they saw their inner being in a perfect image as one can see himself as in the best of mirrors.

Dr. Marzak provides a vision for leadership built upon this mystery central to what John Paul II referred to as "*Christian anthropology*" or definition of the human person, the fundamental starting point for successful social renewal.

The author reminds us that social reconstruction depends on an ability to identify and return to our historic roots, to the great people who were the architects and builders of Europe and in this communion to renew building the kingdom on its ancient Christian foundation. Pope Benedict recently alerted us to the importance of these roots, which he said can "*inspire a new humanism*" to meet the challenges of a desacralized world.

Dr. Marzak provides us with such an inspired new humanism, what he refers to as *Trinitarian Humanism*, as the first step toward renewal.

*Trinitarian Humanism*

Utilizing an integral composite of chemistry, molecular biology and philosophy, he leads us through a journey beginning with life and conception to examine every human power and operation in order to identify fundamental *differences of kind* that make human beings distinct from all other beings.

**Prof. Americo Pablo Lopez-Ortiz**  
**International President of the World Apostolate of Fatima**



## Fatima Politics and Social Renewal TRINITARIAN HUMANISM

"IF YOU ARE GOING to do anything, do it right"! I remember hearing this moral exhortation many times while growing up. Then, while serving as a missionary high-school teacher in the Diocese of Gallup, New Mexico, I remember the day Deacon Paul Berhost handed me a new social encyclical by John Paul II entitled *Laborem Exercens*. As I began to absorb this first in a series of John Paul's social doctrine supplemented by auxiliary research, I came across these words, "A proper study of the social question begins with an answer to the question what is man". I paused, reflected, and put the book down while saying to myself, "no sense going any further with *Laborem Exercens*, I do not know what man is". This lack of a demonstrable Christian anthropology and a desire to "do things right" sent me on a long journey to find an answer to this elusive question, which ends with the publication of *Trinitarian Humanism* the first in a series of new books devoted to Christian social doctrine and modern social renewal based on a new humanism, a well demonstrated answer to the question what is man.

Anyone interested in social renewal and doing it "right" should realize that the social question rests on a proper answer to the question, what is man? Moreover, it rests more than ever, on the need for a new humanism, a definition of the human person up to the challenges of the times. Accordingly, when dealing with the social question, Pope Benedict placed this need up front before all else:

"Certainly joint action on a political, economic, and juridical level is needed, but even before that, it is necessary to reflect together on a moral and spiritual level. *What is even more vital is to promote a new humanism*" (April 10, 2008).

Thus, I was stunned when Prof. Americo Lopez-Ortiz, International President of the World Apostolate of Fatima, wrote that the author of this book, "provides us with an inspired *new humanism*, what he refers to as "*Trinitarian Humanism*", as the first step toward political, economic, and social renewal."

Since *Trinitarian Humanism* is a new and astounding humanism related to modern social, political and economic renewal, I would like to begin with some quite astounding events: The appearances of the Blessed Virgin Mary to three shepherd children that occurred in 1917 in Fatima,

Portugal at the time of the Bolshevik Revolution in Russian and the height of World War I and a closely related papal encyclical.

### **The Queen of Peace and Catholic Social Doctrine**

*“The ‘new evangelization’, which the modern world urgently needs and which I have emphasized many times, must include among its essential elements a proclamation of the Church’s social doctrine....This doctrine is... a source of unity and peace” (John Paul II, 1991).*

MODERN CHRISTIAN SOCIAL teaching provides a theological blueprint for politics and social renewal. It begins with the encyclical *Rerum Novarum* promulgated by Pope Leo XIII on May 15, 1891 and subsequently dubbed the “Magna Carta” of Catholic Social Doctrine. Leo was concerned with the growth of socialism and the inability of capitalism to satisfy genuine human needs. He foresaw the rise of Marxism and understood the inherent contradictions in emergent atheistic socialism and unregulated capitalism that were exacerbating progress towards peace and social justice. The pope invited all sides to examine their behavior and to act in accordance with the norms of charity and justice. Unfortunately, the tide of worker dissatisfaction, exacerbated by writers such as Carl Menger, Herbert Spencer, Karl Marx, and Friedrich Engels, had reached a peak. Unregulated private property, a liberal spirit of Social Darwinism, and lack of a social safety net significantly contributed to the growing tumult which, from Leo’s perspective, required rectification based on Gospel norms and natural law. Eventually, significant changes would come but not until the necessary, *albeit* flawed “New Deal” of Franklin Delano Roosevelt and the malevolent rise of Communism in Soviet Russia.

Consequently, by 1914, all prospects for peace faded and the world plunged into the First World War. By March of 1917, the Russian Empire collapsed under the collective weight of war austerity, occultism, famine, and social unrest. Within seven months, the Bolsheviks brought “Holy Mother Russia”, the bastion of Orthodoxy, to her knees. Using the Kremlin as a platform, the revolutionaries promoted materialism and atheistic communism through violent worldwide revolution, including the destruction of nations and war against God, His church, Christianity and all forms of religion. The malicious tenor of the attack is evident in a letter written by Lenin to an old colleague:

“We are...the real revolutionaries – yes, we are going to tear the whole thing down! We shall destroy and smash everything, ha, ha, ha, with the result that everything will be smashed to smithereens and fly off in all directions, and nothing will remain standing! Yes, we are going to destroy everything, and on the ruins we will build our temple!...The ultimate truth lies in communism, which must now be brought into existence...And don't talk to me. It is better for you if you don't talk, for I shall attack mercilessly anyone who smells of counter-revolution. Against the counter revolutionaries, whoever they are, I shall employ Comrade Uritsky, ha-ha-ha. Do you know him? It will be better for you, I think if you don't make his acquaintance”. (Carroll, pgs. 26-27).

Men like Lenin, and those who follow him, can never bring peace, harmony and world brotherhood as they boast. Peace is a fruit of the Holy Spirit who proceeds from the Father and the Son (Galatians 5:22). Apart from them, they might do “great” things, but they will never do “good” things:

“Their feet run to evil, and they make haste to shed innocent blood: their thoughts are thoughts of iniquity; wasting and destruction are in their paths. The way of peace they know not” (Isaiah 59:78).

### **Fatima and the Way of Peace**

To counter their assault and to help bring peace and an end to the war, on May 13, 1917, the Blessed Virgin Mary (the Queen of Peace) appeared to Jacinta and Francisco Marto and Lucia dos Santos at a place known as Fatima, Portugal. What followed was a series of miraculous events meant to turn the world back to God so that it could be healed and find peace.

During her visits the Virgin Mary accurately foretold a public miracle “for all to see and believe” (the “Miracle of the Sun” - October 13, 1917), prophesied World War II (to be preceded by an “unknown light” which occurred on January 25, 1928 as recorded in newspapers throughout the northern hemisphere), she named and identified a future pope (Pius XI), the rise of Communism in Russia, and then throughout the world, to be followed by the “Triumph of Her Immaculate Heart”, the “conversion of Russia” and then a promised “*Era of Peace*”. All these events have occurred except the final conversion of Russia and an *Era of Peace*. Jacinto and Francisco have been beatified, and on November 13, 2008, Pope Benedict XVI dispensed the five year waiting period to begin the process for the

beatification of Sister Lucia the last survivor of the three Fatima seers who died February 13, 2005.

To avoid global calamity, Our Lady asked for the consecration of Russia to her Immaculate Heart, which she promised would be followed by its conversion. After decades of controversy and continued delay, the consecration was finally accomplished by Pope John Paul II on March 25, 1984, which was followed shortly thereafter by the granting of religious freedom in Russia in 1990. Sister Lucia said this was the beginning of the conversion prophesized by the Virgin Mary.

“Sister Lucia explained that the collegial Consecration made on March 25, 1984, was accepted by God. She said that the “conversion” of Russia...meant the granting of freedom of religion in that country” (Haffert, 1999, Chapter Two).

The granting of religious freedom in Russia was followed by an increasing number of significant events including the formal dissolution of the Soviet Union on December 8, 1991, the Feast of the Immaculate Conception, complemented, a few weeks later, by the taking down of the communist flag from over the Kremlin for the last time on Christmas Day, December 25, 1991 thereby symbolizing the end of atheistic communism and foreshadowing the return of Russia as a world power to its ancient Christian patrimony.

The dismantling of the USSR on Christmas Day was complemented by events on January 1, 1992, the year's most Solemn Feast in honour of the “Mother of God”. On this solemn Marian feast day, “Russia”-re-emerged as a sovereign nation promising religious freedom and the protection of Christianity, its ancient patrimony. Then on June 1, 2010, Russian Prime Minister (then president) Dmitry Medvedev demonstrated his commitment to this patrimony by signing a law making July 28 a national holiday thereby officially recognizing the founding of Russia as a Christian nation with the Baptism of Prince Vladimir in Kiev in 988. Speaking at the annual celebration commemorating the Baptism of the Rus he said:

“The continual work of the Russian Orthodox Church will affect the revival of Christianity in our nation. Thanks to the Orthodox faith, Russian culture through the years, has acquired Biblical values on which the system of moral ideals for our nation is built” (US Department of State, 2010).

Russian moral ideals and Christian cultural patrimony provide a deep reservoir of spiritual energy connected to the fulfillment of what certain Russians refer to as her “messianic destiny”, a destiny shared with other Slavic nations, to Europe and to the world as written in Russian national literature, as alluded to at Fatima, and as contained in the Diary of the Polish Saint, Faustina. Vladimir Soloviev (whom Pope John Paul II referred to as, one of the modern world’s great “witnesses of the faith and illustrious Christian thinkers”), wrote, before the events at Fatima occurred, that Russia is destined to play a great religious role in the modern world:

“The distinctively religious character of the Russian people as well as the mystical tendency exhibited in our philosophy, our literature and our arts seem to indicate for Russia a great religious mission” (1900, p 44).

“The profoundly religious and monarchic instinct of the Russian people, certain prophetic events in its past history, the enormous and compact bulk of its Empire, the great latent strength of the national spirit in contrast to the poverty and emptiness of its actual existence – all this seems to indicate that it is the historic destiny of Russia to provide the Universal Church with the political power which it requires for the salvation and regeneration of Europe and of the world” (1900, p 29).

According to Hans Urs von Balthasar quoted by Gregory Flazov in *Communio* (1997, p 24), Soloviev provides “beyond question, the most profound vindication and the most comprehensive philosophical statement of the Christian totality in modern times”.

The Virgin Mary not only said that Russia would be “converted”, she also said that it was out of Russia that all the errors of communism would spread throughout the world and that it would promote wars, persecution of the Church and an attack on the papacy; after all that, Russia would be converted and then an “*Era of Peace*” would be granted to humanity. If what Soloviev writes is correct, it is fitting that the nation which waged war against God for the greater course of the twentieth century should be entrusted with a great religious mission in the twenty-first. An *Era of Peace* will not happen in a day or even a year or a decade. What was revealed at Fatima is part of a larger historical process; it is part of the saga of salvation history that is still unfolding. Sister Luca has passed away, but before she left earth to be united with her friends in heaven she revealed to us that Fatima is an ongoing process:

“People expect things to happen immediately within their own time frame. But Fatima is still in its Third Day. *The Triumph is an ongoing process*”. Now, repeating herself, she said: “Fatima is still in its Third Day. We are now in the post Consecration period. The First Day was the apparition period. The Second was the post apparition, pre-Consecration period. *The Fatima Week has not yet ended*” (Haffert, 1999, Chapter 1).

According to the Sister Lucia, the first day was the Apparition Period (1916-1929) followed by the second day or Pre-Consecration Period (1929-1984) and the third day or Consecration Period (1984 -present). We are now in that third day. The consecration occurred in 1984, so the first two days lasted approximately 69 years, an average of 39 years each. We are now in 2013; it has been 29 years since the consecration of Russia and the events of this day are still unfolding. Thus, we might deduce that we are beyond the crucial half way mark, and *soon we will be in the fourth day*. Fatima is an ongoing event.

Whether or not Russia will continue developing as a Christian nation and whether or not the Christian nations of the world and of Europe will rise and play a decisive role, all men and women of good-will have a significant role to play in this unfolding historical drama. An *Era of Peace* requires, first of all, personal conversion followed by committed work in every domain of the social apostolate but especially in the areas of *education, formation, and politics*. This series, “*Fatima, Politics, and Social Renewal*”, is a contribution to all three areas with a special plea to pursue inner *spiritual renewal-metanoia* (conversion leading to communion and solidarity) before other efforts aimed at *social renewal*. It would be an egregious mistake to “strain at a gnat”, that is, turn all our energies to social renewal, but “swallow the camel” of personal sanctification upon which all success of the former necessarily depends. Good social structures do not make men and women good (although they certainly impact their development); good men and good women make good social structures. First, interior personal sanctity, second external social renewal:

“Woe to you, scribes and Pharisees, hypocrites! For you clean the outside of the cup and of the dish, but inside they are full of robbery and self-indulgence. “You blind Pharisee, first clean the *inside* of the cup and of the dish, so that the *outside* of it may become clean also” (Matthew 23:25).

Nonetheless, following the necessary prerequisite and ongoing process of interior *metanoia*, the best efforts of laymen and women should

be devoted to mastering and then concretizing the universal principles of Christian social ethics within their particular social domains. Wisely constructed constitutions, solidaristic economic-social systems, sound educational theories, and successful pedagogies do not occur spontaneously. God the Creator made us in His image as *co-creators*; it is our dignity as His children to work with Him, and an affront to that dignity to wait for Him to do the work for us as if His Church were some type of welfare state waiting for a heavenly handout. He works with men and through them; we must do our part for the social renewal and of the modern world.

“The laity *must* take up the renewal of the temporal order as their own special obligation.... Preeminent among the works of this type of apostolate is that of Christian social action which the sacred synod desires to see extended to the whole temporal sphere, including culture” (Vatican II: Decree on the Apostolate of the Laity, 1965).

This type of work requires sanctity as well as theoretical and practical wisdom, understanding, competence, and knowledge:

“Centers of documentation and study not only in theology but also in anthropology, psychology, sociology, and methodology should be established for all fields of the apostolate for the better development of the natural capacities of the laity-men and women, young persons and adults. *Laymen should above all learn the principles and conclusions of the social doctrine* so as to become capable of working for the development of this doctrine to the best of their ability and of rightly applying these same principles and conclusions to individual cases” (*Decree on Apostolate of the Laity*).

This book is devoted to the foregoing exhortation as it is related to social renewal and toward attainment of the promised *Era of Peace*. It initiates a multi-volume journey into the Church's social doctrine by first unpacking the deepest of its principles, the one that is ancillary to ethics, politics, and education, the one which John Paul II states, is “the proper starting point of the social question” *viz.*, the mystery, dignity and nature of the human person. This is usually referred to as philosophical anthropology or philosophical psychology. I prefer Trinitarian Psychology, or “*Trinitarian Humanism*”.

The goal of *Trinitarian Humanism* is to search for and discover a *spiritual difference of kind* that makes human beings unique from all other

beings. This search necessitates an objective sojourn into the mysteries of the human body. In the process, we will consider materialistic and atheistic arguments about chemical evolution and animal psychology and juxtapose them to counter arguments proposed by theists such as Saint Augustine, Saint Thomas Aquinas, and Pope John Paul II. In the end, our research will be rewarded by discovery of the deepest truths about human nature resulting from an integrated approach uniting biology, chemistry, and perennial philosophy.

If this research is capable of discovering a spiritual *difference of kind*, we will have achieved our purpose, *viz.*, the necessary empirical and philosophical foundation ancillary to the study of theological anthropology, which is an attempt to understand human nature from a theological perspective congruent with the necessary empirical and philosophical research that precedes it in this volume.<sup>1</sup>

## **Overview of Chapters:**

### **Chapter One: Chemistry, Biology and the Origin of Life**

Chapter One begins the search for a *Trinitarian Humanism* by examining questions related to the origins of life. The chapter provides a compact comparison between the ideas of chemical evolution (abiogenesis/biopoiesis)<sup>2</sup> the scientific idea of biogenesis (life from life), and the philosophical idea of the soul as life force and form of the body.

### **Chapter Two: Relationship of Soul, Form, and DNA**

Chapter Two continues the exploration of life by focusing on genetic data within DNA and its relationship to a body's form and its soul. It is demonstrated that genetic data within DNA is associated more with the *spiritual nature of the soul* than it is with physical properties of matter. That is, DNA and the life force that animates the human body are both related to matter but are more related to the spiritual soul as *cause* of the body. It is concluded that unique as they are, neither *life* nor *form* provide

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<sup>1</sup> *In Volume Two, we will endeavor to expand and illuminate the difference by examining it in the light of the mystery of the Holy Trinity, thereby elevating and rounding out our definition of the human person before embarking into the realms of ethics, politics, and Christian social renewal.*

<sup>2</sup> *Interestingly, the idea of chemical evolution had its modern origins in communist USSR.*



us with the *difference of kind* we are looking for because *all* animals and plants are characterized by life and form.

**Chapter Three: Life, Form, and "Sentient Thinking" and  
Chapter Four: A Look at Darwin and Post-Darwinian Research**

Following an examination of life and form, the search for differences of kind is continued by undertaking an examination of sensation, perception, consciousness, memory, and imagination. Modern and contemporary cognitive research is explored to indicate and clarify how cognitive similarities between human beings and animals have led to mistaken conclusions, such as those made by Darwin in his "*Descent of Man*" and post-Darwinian researchers, who confuse "perceptual thought" for "conceptual thought" and therefore erroneously conclude that human beings and animals *differ only in degree*.

**Chapter Five: Only Human Beings Think Rationally and  
Chapter Six: Language and Thinking**

After failing to find a *difference of kind* through isolated empirical approaches, philosophy and science are integrated to advance beyond what science has been able to discover by itself. This needed integral approach is employed in the study of the human mind to finally discover the sought after *differences of kind*. These findings are buttressed by empirical evidence and logical demonstration; they also include contemporary examples and a unique demonstration to reveal inimitable human spiritual attributes not found in any other animal.

As a result of this research, it will be demonstrated, and therefore concluded, that human beings are by nature composite integral spiritual-physical beings. It will also be demonstrated and concluded that no other animal provides any empirical or philosophical evidence that would lead us to conclude that they are endowed with an immortal spiritual soul capable of existing apart from its body as we shall see that the human soul is.

This research also includes an analysis and critique of syncretic New Age thought, which capitalizes on the *anomie* of modern man manifest in the modern search for spiritual meaning. Because modern man is in search of spiritual answers, the New Age, although not well known among the masses, has become an alternative and highly popular world-view, shared among elites. New Age thought is replete with its own integral model (science, philosophy, and theology) of man, the cosmos, and society.

It presents a well-integrated evolutionary cosmogony that includes the spiritual actualization of man as an evolving spiritual being. New Age thought is shown to be an off-spring of an evolutionary paradigm associated with Marxism-Leninism, the so-called "Old Atheism", or simply "Communism". Because this association is made, a further analysis, (relegated mostly to notes and appendices) of Fatima and the "Conversion of Russia" promised at Fatima, Mikhail Gorbachev, Dmitry Medvedev, and Vladimir Putin is made throughout the book.

## CHAPTER ONE

### **The Human Body: Chemistry, Biology and the Origin of Life**

AN ANSWER TO THE QUESTION what is man, what is a human person, is the Preamble to all subsequent work in the fields of ethics, politics, and social science. Because politics is the study of the *common good* for individual persons living in society, it is dependent on ancillary studies in ethics that deal with the *individual good* of human persons according to their nature. It must be possible to answer ethical questions pertaining to the *individual good* or it will prove impossible to answer broader political questions pertaining to the *common good*. However, to speak correctly about individual human good requires prior knowledge about what a human being is (human nature). Therefore, while politics is dependent upon foundational studies in ethics, ethics is dependent upon ancillary studies in psychology/anthropology that provide a needed definition of the human person. Thus, the study of politics is premature without a prior study of ethics, preceded by a study of psychology. Consequently, the task of this book is a psychological task to develop a definition of the human person, ancillary to the study of ethics and politics, necessary for the successful work of social renewal in the modern world.

#### ***Study of the Human Person by Examination of the Human Body***

Analysis of the human person begins with empirical examination of the physical attributes of the human body. Study of the human body requires a foray in the fields of biology and chemistry, which in turn leads to deeper exploration into the realms of philosophy and theology that deal with the spiritual nature of the human soul. In fact, it is through study of the physical, biological, and chemical attributes of the human body that questions arise leading to a study of the spiritual attributes of the human soul.

Scientists and philosophers typically approach the question of human nature by initially conducting a *broad observation* of observable phenomena followed by their classification as either living or non-living beings. Complex species classification (taxonomy) requires further *detailed observation* necessary to derive a definition that captures the essence and species specific difference of each observed thing.

Aristotle, the “Father of Biology”, was the earliest philosopher to engage in empirical classification of this type. Later taxonomies were generated by scientists such as Carl Linnaeus, the “Father of Modern Taxonomy”, who arranged all living and non-living things into three kingdoms: Mineral, Plant, and Animal. Although Aristotle did not label minerals as a kingdom, he, like Linnaeus, acknowledged their existence while focusing his emphasis on living things in the animal and plant kingdoms.<sup>3</sup>

### *Crossing the Threshold from Nonliving Elements to Living Organisms*

Human beings are one of numerous living species that populate the Earth’s biosphere. This abundant array of diverse life forms all share a generally accepted and common set of characteristics that distinguish them from non-living beings: self-movement, metabolism, organization, growth, reproduction, homeostasis, and DNA<sup>4</sup>.

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<sup>3</sup> While recent taxonomy has listed up to six kingdoms of living organisms (**Fungi, Protista, Archaea, Eubacteria, Plantae, and Animalia**), for current purposes, we are most interested in the more recent end of the taxonomy dealing with plants and animals as well as non-living minerals and elements.

<sup>4</sup> **Self-Motion:** The quality of an organism to move itself. A rock flying through the air has motion but not self-motion; a non-living thing cannot move itself. Living things are capable of self-motion. For example, a tree, though stationary, moves itself upward through the ground and toward the sky via its own internal organic powers.

**Metabolism:** The process whereby living organisms break down substances and convert them into usable energy necessary to drive cellular work. This work is required for synthesizing other substances into functional cellular parts by first breaking them down or “de composing” them and then integrating or “composing” them into new and constituent cellular parts in a process necessary for growth and continued life.

**Organization:** The complex and systematic conversion of separate substances having their own identity into a new substance in which the old substance is taken up into the new and, in the process, shares its identity as an organically arranged part of an integrated set of systems and sub-systems that function together for the good of the organism.

**Growth:** Orderly increase in size by the accumulation of matter that requires organized synthesis (composition) of the products of metabolism.

**Reproduction:** The ability to produce new cells within a living being as the result of cellular division or the production of new individuals from a parent organism.

**Homeostasis:** The ability of an organism to counter entropy or to self regulate and maintain a constant balance of its parts for the good of the whole, for example, shivering to increase or perspiring to reduce body temperature and keep it in an internal range necessary for the continued good of the organism contrary to external environmental fluctuations and patterns.

Psychology is the study of *living* human beings that share these seven characteristics with all other living beings. Psychology, the study of the human *psyche-spirit*, begins with a study of the human body. The human body is a living organism composed of *non-living elements* and minerals found in the earth.

Thus, analysis of human nature appropriately begins with a study of the Mineral Kingdom consisting of non-living atoms, elements, and molecules – the basic physical building blocks of the human body and of all observable phenomena. In this study, one of the first questions that come to mind is: why do some atoms/minerals support life and others do not? A corollary question follows: what is the origin of this elusive phenomenon referred to as life? This vital question is quite astounding, especially when it is realized that all living bodies (human, animal, and plant) are composed of non-living minerals and elements that somehow *acquire life* as they are *transformed* from simple *non-living* mineral constituents into complex *living* bodily substances.

The question about the origin of life that animates non-living matter is so perplexing that thinkers such as Charles Darwin initially ignored it and began thinking about biological evolution on the foundation of life “as a given” without attempting to explain its origin. Darwin wrote his famous treatise about the, “*Origin of Species*”; he did **not** attempt to answer the philosophical/theological question about the “origin of life” – that was beyond the ability of empirical science. This perspective was short lived. First, Darwin changed his mind; then he was followed by a school of scientists who have continually attempted to provide a natural/materialistic explanation for the origin of life. All subsequent hypotheses and experiments, including the now famous “Miller-Urey Experiment”<sup>5</sup>, intending to demonstrate that living organisms evolve chemically from nonliving matter have proven unsatisfactory.

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*DNA: Chains of nucleic acids containing embedded genome or data to form plant, animal, and human bodies.*

<sup>5</sup> The Miller-Urey experiment (1953) is a classical textbook example of an attempt to generate amino acids, the basic building blocks of the body thought to be precursors to life. It is based on Russian Alexander Oparin’s hypothesis that life arose spontaneously from evolving increasingly complex molecules (DNA, RNA, amino acids etc). It was hypothesized that an evolutionary chemical biosynthesis occurred in a primordial environment much different than our own. Realizing that oxygen inhibits the formation of macro-molecules, Miller and Urey extracted oxygen from their experimental chemical environment. After assembling the appropriate chemicals and jolting them with energy, they were able to induce some amino acids but they were a “racemic mix” consisting of an approximately **equal number of right and left hand** amino acids, which is detrimental to life. Living bodies are composed of non-racemic left handed amino acids only

The experimental results have been so unsatisfactory that materialist have generally conceded that in our *known environment*, the every-day environment that is observable and empirically verifiable, the origin of life from nonlife is basically impossible. All *observable* evidence shouts against such a proposition (life from non-life); everywhere we look, we observe *life from life*. The materialists have therefore been forced to posit an alternative hypothetical and *unobservable* environment in which life *supposedly* arose from non-life *via* a process known as “*chemical evolution*” by means of spontaneous generation or abiogenesis/biopoiesis. Because abiogenesis has never been observed nor the hypothesis ever verified, ironically it has become an atheistic “*article of faith*”. This group of scientists (materialist-atheists) has found it necessary to advocate unverified novel ideas (spontaneous generation, abiogenesis, and biopoiesis). These ideas place them in opposition to ubiquitous empirical reality and to renowned scientists, such as Louis Pasteur, whose experiments had, we thought, ended the dispute about spontaneous generation generations ago. Materialists however, continue to insist that Pasteur’s experiments are irrelevant because, according to them, Pasteur’s results are only applicable in the “**current environment**”, the one we know and observe all around us – they are not applicable in supposed hypothetical environments that have ever been observed. For example, *Talk of Origins* author John Wilkins (2004) arguing against Pasteur notes:

“What Louis Pasteur and the others who denied spontaneous generation demonstrated is that life does not *currently spontaneously* arise in complex form from nonlife in nature”.

Since it has proven impossible to demonstrate that life arises spontaneously from nonliving elements in our “*current*” environment, scientists committed to chemical evolution are forced to dismiss Pasteur’s findings as irrelevant. Since they cannot accept the facts of life found in the world as we know it, they are forced to hypothesize and believe in some other *unobservable* and therefore *unverifiable* environment in order to sustain their unverified hypothesis. Unfortunately, such a hypothetical

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*In living organisms DNA (nucleic acids) and amino acids building blocks are “non-racemic”. That is, they are all one type. Nucleic acids are right-handed while almost all amino acids are left handed. Miller’s chemical soup yielded an equal number of both right and left handed. When both are found together, they are useless for chemical evolution. For example, the smallest living thing is a one celled bacteria; even something this small has an amazing 12,000,000 non-racemic right-handed nucleotides in its DNA. To build a strand of bacteria DNA from a 50-50 racemic mixture of right and left handed nucleotides using only right hand nucleotides would require 12 million successive right handed nucleic acids and not one left handed nucleic acid although 6,000,000 are present.*

environment is merely an imaginary construct—no such imaginary environment in which life arises spontaneously from non-life has ever been observed or experimentally verified. Even if such an environment could be experimentally concocted, one in which life could be demonstrated to rise spontaneously from non-life, no one could be sure to any *high degree of probability*, required for such a proof, that such an artificially constructed laboratory environment did in fact actually ever exist.

In short, the only verifiable environment we know of is *the one in which we live*, the “current one”, the one that most mainstream geologists say is the only one we can rely on; anything else is a result of scientific imagination. For example, Comte de Buffon, the “*Father of Modern Natural History*” (the scientific research of plants and animals) wrote:

“In order to judge what has happened, or even what will happen, *one need only examine what is happening*....Events which occur every day, movements which succeed each other and repeat themselves without interruption, constant and constantly reiterated operations, these are our causes and our reasons” (Quoted in Gillespie, p. 578).

Arguing for this same universally verifiable approach, James Hutton, the “*Father of Modern Geology*” wrote:

“The past history of our globe must be explained by what can be seen to be happening *now*....No powers are to be employed that are not natural to the globe, no action to be admitted except that of which we know the principle” (Quoted in Holmes, p. 43-4).

Finally, Sir Charles Lyell, author of *The Principles of Geology*, the scientist who established the geological principles governing the use of methods still employed by geologists today (methods such as radiometric dating) states that,

“*Only present-day* erosional, sedimentary, volcanic, and tectonic processes at *present-day rates* of intensity, frequency, and magnitude should be used to interpret past geological activity” (Mortenson, 2007).

In spite of insistence by the patriarchs of natural history and geology to adhere to currently *observed data*, dissenting biologists who advocate spontaneous generation are forced to deny the ubiquitous facts of everyday life (the data does not support their hypothetical conclusions),

which should be “our causes and our reasons”. Instead of accepting verifiable data, materialists concoct an *unverified* wonderland to rescue their *unverified* hypothesis. This hypothesis runs contrary to everything we can observe about the origin of life in everything that acquires life from tiny one-celled organisms to more complex plants, animals, and human beings. Every living thing that populates the immense global ecosystem at every period of recorded human history runs contrary to this unverified hypothesis.

Numerous attempts have been made to induce life in divergent hypothetical environments, but nothing living has ever resulted. The materialists/atheists simply cannot have it both ways, (See Endnote: Cannot Have it Both Ways: Spontaneous Generation and Geometric Dating). We either use *observable data* or *unobservable data*. If *ubiquitous observable data* is rejected, there is nothing left but specious assumptions about *unobservable primordial data* – the ubiquitous data does not and cannot confirm a creative *albeit* imaginary atheistic hypothesis. The laws of nature are the same today as they were yesterday; this is a fundamental rule of physics. According to physicist Harold Schroeder (2009, p 4),

“If the laws of nature are not fixed, if they are being tampered with in some miraculous way, then science is useless. *The consistency of nature is a basic tenet of all scientific inquiry*”.

Instead of doing the reasonable thing and accepting the empirical fact that life cannot arise from non-life, as observable evidence indicates (and experiments such as Pasteur’s demonstrate), some scientists unscientifically reject the empirical facts. They continue to cling to an undemonstrated and unverified belief that life came from non-life and then spend numerous hours trying to prove their point to an increasingly unconvinced audience of scientific and philosophical experts; even untrained laymen and laywomen find this one hard to believe, esp. when it is realized that it is backed by the scantiest of evidence, in fact, by no *valid* scientific evidence at all.

It is intellectually unfair to expect a reasonable person to accept a conclusion based upon some imaginary unknown that might be or might have been while everything that is shouts against it. Nonetheless, because of their tenacity in the face of overwhelming evidence to the contrary, the question deserves further investigation.



**NOTE:**

Before proceeding, it is necessary to distinguish “*Spontaneous Generation*” from what is now referred to as “*Abiogenesis*” or “*Biopoesis*”. Spontaneous generation is technically speaking not a theory that addresses the *origin of life*, but rather a belief that living things can emerge from non-living matter. Spontaneous generation is not about the **very first origin** of life but about life coming from non-life **at any time**. *Abiogenesis* (chemical evolution) is concerned with the actual origin of the first life itself.

Abiogenesis is a belief based on an unverified hypothesis that proposes primordial spontaneous “chemical evolution” of non-living elements into living organisms. It is believed that sugars, phosphates, and nucleic acids (the building blocks of DNA that contain instructions for building bodily parts) and amino acids somehow self-assembled into RNA/DNA, proteins, genetic data, and then into cellular organelle (cell organs) and ultimately into a complex cell that then somehow came to life. The idea began with Russian scientist Aleksandr Ivanovich Oparin (Oparin worked for Lenin and the Communist Party at the Soviet Academy of Science) who published the “*Origin of Life*” (1924) in which he proposed that the first life emerged through a gradual chemical evolution of carbon based molecules within the now famous but imaginary and unverified “primordial soup”.

Technically speaking, spontaneous generation is not the same as chemical evolution or abiogenesis, both deal with the same topic: life from non-life. Chemicals are not alive; any supposed evolution of non-living chemicals into living organisms is certainly a spontaneous (unplanned or undirected) process. Although spontaneous generation is not thought to result from the evolution of chemical elements into cells, but, rather from decaying or already existing organic substances, spontaneous generation and abiogenesis seem to differ only in degree. They both defy empirical observation of chemical and biological processes, and they both rely on spontaneous chemical composition of either dead or decaying matter.

Although a thinker as eminent as Aristotle believed in spontaneous generation, his lack of sophisticated scientific instruments to assist observation makes it easy to excuse him. He could not observe the minute chemical realms explored by contemporary microbiologists and therefore

incorrectly concluded from raw observation that flies arise spontaneously from putrid matter and mice from decaying hay.<sup>6</sup>

As early as the 17th century, Francesco Redi (1626–1697) demonstrated that some plants and animals only *appear* to develop spontaneously; they really develop from eggs and semen—putrefying matter is merely a substrate on which animals deposit their eggs. However, atheists like Lamarck (1774–1829) continued to insist on spontaneous generation. They believed that “spontaneous generation was necessary in order to understand the discontinuities in fossil records and the evolution from the lower forms on the escalator of life to the more complex higher organisms” (Gason, 1995). More recently, advances in the field of molecular biology, especially the development of DNA and RNA sequence technology, have reinvigorated evolutionary biology and especially the idea of abiogenesis.

Nevertheless, whether it is a chemical evolutionary process of non-living chemicals (abiogenesis) or a reversal of the decomposition of once living but decaying matter that halts its decomposition and begins the process of composition (spontaneous generation), abiogenesis and spontaneous generation seem to imply the same thing. They will therefore be used interchangeably throughout this text.

Abiogenesis is simply a *more improbable* variant of life from non-life: If a living body cannot arise from a non-living carcass (spontaneous generation) endowed with every necessary chemical element and compound, including DNA and RNA arranged in proper sequence, as well as amino acids and everything else needed for cellular construction including actually existing cells and their complex organs (organelle), *how much more improbable must “Chemical Evolution” or abiogenesis be?* Chemical evolution, unlike spontaneous generation, lacks every one of these necessary constituents and thus has to somehow manufacture them all (amino acids, nucleic acids, proteins, RNA, DNA, genetic data, complex living cells, and cell parts) from raw dirt.

### ***Moving Forward: Non-Living Elements and Living Cells***

The human body is composed of various non-living chemical and minerals<sup>7</sup>. The integration of these nonliving minerals contributes to vital

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<sup>6</sup> Moreover, because ancient pagan cosmogony lacked revealed knowledge of God as Creator, Aristotle, like his mentor Plato, focused on the **form of matter** more than he did on the **origin of matter** (more on its essence than on its existence). Modern scientists have no such excuse.

bodily functions such as: the forming of skin, bones, and teeth; maintaining normal acid to base balance; heart rhythm; muscle contraction; transmission of nerve impulses; cell structure and the manufacture of hormones and enzymes that variously effect cell activity.

All the non-living mineral substances used for these operations are derived from water and soil through complex metabolic processes to become constituent *living* parts of plant and animal cells. Thus, *living* bodies receive minerals and other nutrients (vitamins, sugars, amino acids, and salts) *via* a cellular conversion process whereby non-living matter becomes an integral part of a living body and in the process acquires life itself.

The perplexing question is: how does nonliving matter get transformed into a living cell? Clearly, the vital life giving force is not in the elements themselves; elements are non-living substances that undergo a metamorphic process whereby they take on complex functions and characteristics of an *already living organism* for the use of cellular growth and the development of new cells. **This is the only origin of life that science has ever observed:** the genesis of life in non-living elements by contact with and incorporation into already living organisms. Empirical science has demonstrated the philosophical and theological positions of life from life; it has also demonstrated that life does *not* arise spontaneously from non-life; yet, a considerable number of atheistic/agnostic scientists who realize that they need abiogenesis as a prop for their atheism, and historical determinism, still accept it in spite of logical inconsistency and clear empirical evidence to the contrary. Presumably, they accept it because in the absence of abiogenesis some other cause of life, such as a Creator, would have to be posited.

Interestingly, it is possible to believe in a Creator and to simultaneously believe in *biological* evolution (not *chemical* evolution the type we are examining here). Biology is a complex **life science**, the study of *already living organisms* while chemistry is a complex **physical science**, the study of *non-living elements*. There are many scientists, such as Francis Collins who headed up the Human Genome Project, who are theists (Collins is a Christian theist). While believing in evolution, he also states in

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<sup>7</sup> **Major Minerals** are those which the human body requires 100 milligrams or more of each day, such as Sodium, Potassium, and Calcium. **Trace Minerals** are those of which the Human body requires less than 100 milligrams each day, such as, Iron, Zinc, Copper, and Manganese.

his book, *DNA, The Language of God* that, "God is the source of all life and that life expresses the will of God" (p. 203).

Moreover, the Catholic Church has long held this position. In his address to the Pontifical Academy of Sciences, Pope John Paul II stated,

"In his encyclical *Humani Generis* (1950) my predecessor Pius XII has already affirmed that there is no conflict between evolution (biological not chemical evolution) and the doctrine of the faith regarding man and his vocation, provided that we do not lose sight of certain fixed points".

These fixed points include the supernatural origin of life and the spiritual nature of the human soul, which we shall explore later.

Leading scientific teams have been unable to generate one living cellular part (organelle or small organ) and certainly not an entire cellular organism. The most advanced efforts involve lab scientists in a type of information piracy, whereby researchers gather bits of DNA from lab donors (other living cells) and then exploit another already living cell's intrinsic capabilities to do the complex work of building proteins by introducing the DNA bits into the living cell's cytoplasm while they observe the process. If scientists understand the process, they should be able to duplicate it *without a living cell*. All they understand is that *non-living chemicals* are transformed by *living cells* using DNA and cellular machinery to engender complex living bodily parts. Something so little understood and *impossible without a living cell* (as can be observed in any laboratory engaged in cellular technology) is believed by atheists, contrary to all available evidence, to have happened spontaneously without a living cell involved in any way to act as precursor.

In the materialists' proposed imaginary scenario, DNA is not only believed to have manufactured itself from nucleic acids, it also is believed to have had some type of unknown relationship with amino acids such that DNA molecules somehow knew beforehand exactly how many and what types of amino acids were needed to form a body part, what the chemical properties and functions of these amino acids were and how they reacted when combined. Without knowledge of these things, it would not be possible to code the genetic instructions into the DNA necessary for the synthesis of amino acids to manufacture the proteins from which cells and body parts are made. Non-living non-thinking chemicals accidentally became *nucleic acids* and then accidentally developed an ineffable "miracle code" for converting amino acids into proteins, while related chemicals

somehow simultaneously developed into the exact number and type of amino acids ready to be manipulated by *self-assembled organelle* and *self-assembled DNA* with its *self-assembled genetic code* to then generate something even more remarkable, a *living cell*. **Of course, none of this imaginary hypothesis has ever been observed.** Instead of dismissing it and relying on the evidence before us in every living cell *viz.*, life comes from life (biogenesis) and proteins as well as DNA/RNA are manufactured inside of living cells, we are told, that *the logical, observable, and verifiable evidence* before us including valid experiments such as Pasteur's must be dismissed, while some creative bit of imagination about some *hypothetical and fantastic process of chemical evolution* must be accepted because without it, spontaneous generation, the first atheistic principle of life and therefore of atheistic evolution, must be dismissed.

### **Why All the Fuss?**

*Abiogenesis is the first principle of "Atheistic Evolution"*. It stands at the threshold of chemical evolution as the point where *chemical evolution* terminates and *biological evolution* begins, where chemicals supposedly ceased to be inanimate and came to life. *Abiogenesis was therefore the chemical threshold of life*, the point past which simple non-living chemicals ceased to exist and emerged from some unexplainable and miraculous synapse as a complex living organism. If biological evolution is to occur without a Creator to initiate the process, abiogenesis is its starting point or its necessary first principle. To build an evolutionary house requires a foundation; without it, the house will eventually crumble. **Abiogenesis/chemical evolution is the unverified hypothetical foundation of atheistic biological evolution.** It is a principle that has *not* been attained by the scientific method globally practiced since its inception. Like atheistic communism, with which it is associated, abiogenesis is being rejected as a false proposition detrimental to human development.

I would like to clarify the point: the topic at this moment is *chemical evolution*; it is **not** *biological evolution*. As pointed out above, a *logical* evolutionary argument can be made from a theistic premise; however, "*atheistic evolution*" lacks such a *logical starting point*. It begins with the illogical and empirically unverified first premise of abiogenesis. Because this book is the first in a series devoted to politics and social renewal, the question of evolution is of interest. But, it is of interest *not* from a chemical or biological perspective. It is of interest from an *ontological* and *sociological* perspective, which involves a necessary sojourn into chemistry and biology. Our concern is to demonstrate (1) an objective, logical, and species

specific or universal definition of human nature and (2) the existence of a natural moral order contingent upon this nature and its effect on politics. There is no intent to dispute *biological evolution*. Rather, it is being pointed out that **abiogenesis is both illogical and unverified, and therefore a poor scientific starting point for knowledge about human nature**. Abiogenesis, if blindly adhered to, leads to a materialist anthropology that views human beings as mere impulse driven animals and to a corollary social/cultural system that works against man because it lacks any solid objective, universal, and rational moral foundation rooted in human nature. Without such a moral foundation rooted in the truth about man, it is impossible to transcend the relative politics of power and domination and thereby safeguard the rights and dignity of human beings as the history of Atheistic Communism attests.

This helps us to realize why scientists such as Oparin *et al* were so deeply invested in the idea of abiogenesis: They worked for political leaders committed to violence and revolution – to a political ideology antithetical to human development. Without abiogenesis, the entire *atheistic* superstructure built on the foundation of materialistic *evolution* necessarily crumbles. Well, the atheistic superstructure has collapsed in the East and it is tottering in the West. Abiogenesis, is not a valid first principle; it is neither *a priori* self-evident (prior to observation) nor *a posteriori* empirically verified (that is, following or subsequent to observation)<sup>8</sup>. So what exactly is it? If it excludes, as it does, *a priori empirical observation* and *a posteriori* principles necessary for *logical demonstration*, abiogenesis is neither empirically verifiable nor logically demonstrable. There are few other choices except (1) glorified *opinion* (what the Greeks referred to as “*doxa*”), (2) *ideology*, or (3) *psychological malady*, which seems to be the same thing as faith in an illogical and unverified opinion-become-ideology due to either a bad life-experience, intellectual absenteeism, or a regular paycheck. **Absent a valid empirical and logical foundational principle, it is difficult to understand how atheistic evolution can claim to be a theory**; (it is sunk before it ever leaves port). It is at best a working hypothesis in need of a *demonstrated* first principle to establish its validity.

On the other hand, *theistic evolution*, as seen above, can be a valid theory; it at least has a *logical*, although *empirically* unverifiable first cause, *viz.*, a living Creator and both a logical and empirically verifiable first

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<sup>8</sup> Both empirical science and philosophy utilize *a priori* and *a posteriori* principles. They are based on observation and logic. There are no other valid principles. Abiogenesis is therefore reduced to opinion or unverified imagination.

principle (biogenesis or life from life) that leads to the idea of theistic evolution. Atheistic evolution, regardless of Pope John Paul II's 1996 statement to the Pontifical Academy of Sciences in which he refers to evolution as a "theory", cannot say the same. John Paul II was speaking about "*biological*" evolution" not about "*chemical*" evolution. The first principle of atheistic chemical evolution (abiogenesis) is *neither logically demonstrable nor empirically verifiable*. Although it might proceed logically and empirically *from an assumed point of life* forward, it cannot plausibly begin to move (that is, become a life-science) until it accounts for the origin of life, *which is something it has been unable to do*. Since biology is a "life science", it is difficult to see how a logically valid jump can be made from *chemical evolution* to the discussion of *biological evolution* when **biology's first principle, life, has not been established as the term of chemical evolution.**

Some ideologues argue that just because DNA, RNA, amino acids, and proteins have never been observed self-replicating outside of a living cell does not mean that they did not self-replicate at some previous unobservable time. Then the ideologues dismiss honest inquirers (those who disavow this idea as illogical or unscientific) with a statement something like this: "Just because you have never seen a fluorescent whale does not mean that fluorescent whales do not exist". Pushing the matter, they go further and state that abiogenesis is like a fluorescent whale therefore, to deny its prior existence is to commit a "logical fallacy" implying that those who dismiss abiogenesis just because it has never been observed are mentally deficient. Then they shake their heads and declare a victory. Having become so accustomed to easy victories over the last hundred years or so, they presume they should win this one just because their adversaries are momentarily stunned; their confusing reasons have always worked before.

### **Possibility is not Probability**

Not so fast; we are now in the *21st century* and people are growing tired of the old con games. All around the world, from Egypt to Western Europe from Syria to the United States and Crimea to Moscow, people are sensing something is wrong and are beginning to challenge the political, financial, and intellectual *ponzi schemes* that work to their detriment.

Of course, anything is “possible” but simple *possibility* does not make something true. Scientists *qua* scientists<sup>9</sup> make predictions based upon *high probability* not mere *possibility*. Let us not confuse possibility for probability. Tests of probability depend upon *observation*, but **abiogenesis is a hypothesis lacking any observations; there are absolutely none at all, that is, zero.** So all that is left is a game of *possibility* wherein *possibility is confused with probability*. **The probability of zero observances is zero.** Even if spontaneous generation were to be observed once, the probability of abiogenesis would still be next to zero. But abiogenesis has never been observed at all!

Since anything is “possible”, researchers have developed scientific tests of “probability” to gauge the likelihood of a possible event. *The more observations made and the more general the population sampled, the more certain is a test of probability of a things possibility.* If a person looking for black birds looks five times and sees only white birds and concludes there are no black ones, his weak conclusion is based on a weak sample. If he looks a thousand times and sees only white birds, his conclusion becomes more valid; if 100,000 times and then a million and sees only white birds on all seven continents, it becomes less and less “probable” that black ones exist until the point is reached that the *possibility* of black birds is excluded. **Generally speaking, the more observations that are made the more valid are inferences drawn from them.** We have seen billions and billions of cells and have looked under microscopes innumerable times and never once has anything like that being proposed by the atheists ever been observed. Being merely “possible” without any empirical evidence, none at all, to support the possibility is not a measure of “probability”; *scientifically speaking* it is nothing (*science proceeds on probabilities not possibilities*). But atheists would have us believe that possibilities are probabilities and if probable, they must be true.

**Scientific decisions** are based upon *high probability not mere possibility*. Intoxicated and or neurotic gamblers bet on something of extremely low probability; nonetheless, a **gambler at least has a chance**; his bet is always a **probable one** not a merely **possible one**. A more prudent person usually calculates probabilities before laying money down; only a fool or lighthearted person does not care. But, a person betting on mere possibility (an event that has never occurred and therefore has no probable or statistical chance of occurring) is worse than the fool betting on the

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<sup>9</sup> *That is scientists acting as actual scientists and therefore making rational inferences based on empirical evidence.*



lowest probability. **A bet on mere possibility is equivalent to a bet on a horse that is not even in the race, while a bet on the least probable is a bet on a horse that is actually in the race, a horse that actually has a chance of winning** because it is verifiably present and thus has some probable chance, even if slight.

Instead of scientists being guided by a well-established theory, we have some scientists guided by an extraordinary unverified and imaginary hypothesis that is *merely possible* and concomitantly acting as if atheistic evolution was a well-established fact. If a hypothesis has not been demonstrated, it is “normally” rejected by the scientific community. **But, in this case, it cannot be rejected without damaging and indeed obliterating the entire atheistic edifice, so atheists believe it and teach it with impunity.** Materialist ideologues claim that theism is faith based and fail to see the hypocrisy in their claim; *viz., their whole idea is faith based.* The theist’s faith is at least logical and based on principles that are empirically verifiable because they actually exist, while the materialist faith is based **on an unverified, illogical, and merely possible idea.** If atheists/materialists want to base their faith on illogical and unverified imagination, which all of nature shouts against, that is their choice. It is not their right to foist their opinion on the rest of the world as if it were some type of established fact.

The idea of atheistic chemical evolution might be palatable if it were admitted that it was only a *hypothesis* in need of a logical or demonstrated first principle; then everything just said could be retracted, but the claim has gone out to all four corners of the globe that atheistic evolution is a “theory”. They might not, for marketing purposes, call it “**atheistic evolution**”, but any evolutionary schema that rests on spontaneous generation as a starting point in the end is atheistic.

In short, to save themselves an egregious embarrassment, materialists must establish abiogenesis as a valid and sound first principle. Therefore, Ernst Haeckel (1883), one of the patriarchs of atheistic evolution, stated,

“If we do not accept the hypothesis of spontaneous generation, then at this one point in the history of evolution we must have recourse to the miracle of a supernatural creation”.

But, this is exactly what the atheists are unwilling to have recourse to; they have an emotional passion against it. Therefore, they continue to look increasingly ridiculous and are able to cover their foolishness by (1) projecting it onto anyone who would dare question their hallowed beliefs

or (2) by imagining and proposing some alternative unverified idea to explain the origin of life, as we shall see.

Unfortunately for the atheists, well imagined experiments such as Miller's do not come close to proving the idea that life comes from non-life in some mysterious fashion or in any fashion at all. Consequently, modern science appears to be moving closer to admission of supernatural creation of some kind. In this regard, Anthony Flew, a renowned atheist<sup>10</sup> has looked at the evidence and decided that spontaneous generation is too weak a base on which to build a theory that proceeds from an unverifiable first principle. In an interview with Dr. Benjamin Wiker, (2007) Flew stated:

"I believe that the origin of life and reproduction simply cannot be explained from a biological standpoint despite numerous efforts to do so. With every passing year, the more that was discovered about the richness and inherent intelligence of life, the less it seemed likely that a chemical soup could magically generate the genetic code. The difference between life and non-life, it became apparent to me, was *ontological* and not *chemical*. The best confirmation of this radical gulf is Richard Dawkins' comical effort to argue in *The God Delusion* that the origin of life can be attributed to a lucky chance. If that's the best argument you have, then the game is over. No, I did not hear a voice. **It was the evidence itself that led me to this conclusion**".

In a *Sunday Times* review, Flew concluded that, "I have been persuaded that it is simply out of the question that the first living matter evolved out of *dead matter* and then developed into an extraordinarily complicated creature" (Wavell, 2004). To assert that life arises from non-life is illogical and non-verifiable. This statement not only contradicts the *logical principle of causality, viz., you cannot get something from something else that the something else does not have to give* (you cannot get apples from a peach tree or a living-thinking organism from dead chemicals – an *effect must be proportionate to its cause*), it is also not empirically verifiable; *no one has ever observed spontaneous generation*.

**However, it is logical to say that life arises from previously existing life** (*a priori* self-evident principle: *effect from proportionate cause*). **This statement is also empirically verifiable** (*A posteriori* empirical

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<sup>10</sup> Flew has lectured for over twenty years at the Universities of Oxford and Aberdeen and authored such books as *Atheistic Humanism* [1993] and *Darwinian Evolution: Social Policy and Social Theory Series* [1984]).

principle, I can see it everywhere I look). Since atheists are unable to provide any empirical evidence in defiance of logic and in denial of universal observations to the contrary, it can be confidently concluded that non-living phenomena acquire life from already living organisms and that the origin of life is a metaphysical power beyond the ability of empirical science to explain. Since the *existence of life* is empirically verified but the question of *life's origin* remains empirically unexplainable, it is necessary to approach the question from another discipline, such as philosophy, that relies upon empirical verification but also transcends it.

Anyone can empirically verify the principle (life from life) by examining the ubiquitous processes of cellular growth and replication. Anyone who examines these processes is able to observe a unique profundity: cells grow from incorporation of non-living mineral elements, (water, oil, sugars and amino acids) through a metabolic process, whereby nonliving matter is transformed into supporting a living thing. *Elements do not confer life to cells as atheists proclaim. Living cells confer life to elements by incorporating them into higher ordered structures and functions. Atheists simply do not have empirical evidence on their side as the philosopher's and theologian's do.* The later begin from the principle of biogenesis or life from life, which is logical as well as **empirically verifiable** and therefore actually valid.

### ***Decomposition of Nonliving Chemical Compounds***

At the opposite end of the life spectrum, when life departs from the human body, the body undergoes a reverse metamorphosis (cell degradation) *via* a process of *decomposition* by which life ceases and the complex constituent parts of each cell slowly, but gradually and inevitably, separate and return to their original non-living chemical state. In this process, **matter is not decreased nor lost, but life and higher ordered composition are.** Decomposition is synonymous with the breakdown of larger molecules that were composed and held together by a **living cell.**

*Thus without life, a cell metamorphs from organized composition to unorganized decomposition, from complex to simple; this is a universal and empirically verifiable process. The physical law of "Entropy"<sup>11</sup> basically*

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<sup>11</sup> *The Second Law of Thermodynamics or Entropy is the measure of unavailable energy. Matter is subject to deterioration, decomposition, chemical break down, and concomitant energy release such that overtime there is less available energy. This is referred to as, "an increase in entropy". It is generally understood that systems left to themselves, invariably tend to move from order to disorder – high energy to low energy. This is a universal and observable scientific phenomenon.*

holds that the universe is constantly losing *usable* energy (moving toward lower order) and never gaining (higher order). This process is referred to as *entropy*. To support their claim of chemical evolution *outside of a living cell*, atheists use the terms “Reverse-Entropy” or “Anti-Entropy” to describe a system that appears to move from less order to higher order. Such terms, however, do not exist in the lexicon of most physicists and chemists because **anti-entropy does not exist**. These terms are used by atheist to describe a situation that has multiple forces in play, e.g., gravity, crystal lattice energy, etc. Their rapid conclusion that something appears to be moving counter to entropy (reverse-entropy) is the result of excluding one or more driving factors in the situation—the **only things that moves to higher order are living things**—cellular mechanisms, whole bodies, animals, and humans investing energy and creativity. All of which, excluding the latter, originate from living cells that produce them; that’s the only *anti-entropy* cycle ever observed. Moreover, the situation that atheists are unable to speak directly to is their most important premise: the notion that small molecules become larger molecules and interact to create other molecules to eventually reproduce themselves and propagate. Chemists, biochemists, and molecular biologists have never *reported* any such scenario nor is plausible based on generally accepted scientific methods.

A brief example will help demonstrate how anti-entropy occurs in living cells that use molecules to sustain life: Human cells are able to import glycogen<sup>12</sup> *via* food intake from blood across their permeable barriers. Once inside of the cell, glycogen is converted through a series of steps that break and form molecular bonds to capture energy as ATP<sup>13</sup>. Additional byproducts, such as carbon dioxide, are also produced and diffused into the blood for elimination by exhalation. ATP fuels cellular machinery, which produce proteins to build up bodily parts. In this process, a cell is able to work against entropy and convert simple molecules into complex parts of a larger intricate system. **Once the cell dies, the energy conversion process stops, and it cannot auto-start; the biochemical machines break down and the universal phenomenon of decomposition reasserts itself.**

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<sup>12</sup> Glycogen is a form of energy storage found in human beings and animals; it results from broken down food converted to a chain of sugar molecules (glucose) that is able to be transferred through the wall of the small intestine and stored in the liver and muscle cells. When the body needs energy, glycogen is broken down into glucose.

<sup>13</sup> ATP or adenosine triphosphate is used for intercellular energy transfer. It is the main energy carrier for most cellular functions including synthesis of macromolecules like DNA and RNA. It releases energy when it is broken down into ADP.

This interesting observation should yield expressions of awe and wonder: **At death, the process of composition, found only in living cells, is replaced by a process of decomposition found in dead cells. When life disappears, living matter returns to its original non-living and simple state.** Once a living cell dies, its constituent parts separate into individual elements of zinc, sodium, calcium, and various molecules; whereby they become available for future composition by another living organism, plant, animal, or human.

Moreover, if the dead cells of soft tissue are found in soil or **water** (primordial soup), they *rapidly diffuse* because of entropy. This process of decomposition is universal and observable; it is an empirically verifiable reality, which I refer to as "*Spontaneous Degeneration*". There is no such observable thing as "spontaneous generation" of non-life to life (anti-entropy), but there is such a thing as *spontaneous degeneration* of life to non-life accompanied by decomposition or move from complex to simple (entropy).

Consistently, scientists with faith in spontaneous generation also believe in anti-entropy **outside of living cells**. But, **like spontaneous generation, which they have been unable to verify, they have never been able to verify anti-entropy either, although they talk much about it.** As they are forced, against all empirical evidence, to believe in *spontaneous generation*, they are also forced to believe in *anti-entropy* or their hypothesis fails. Rather than accept the evidence, they perpetuate an unverified *faith-based* hypothesis as if it were true without any solid empirical evidence and continue to blindly believe and to teach that anti-entropy can somehow occur by the mere presence of energy and matter in an "open system"---this has never been verified.

### ***What is an Open System?***

There are three types of energy systems: *isolated, closed, open*:

An **Isolated System** does *not* exchange **matter** or **energy** with a surrounding environment. The universe is an isolated system; it has no surroundings with which to exchange matter or energy.

A **Closed System** is capable of exchanging **energy** but *not* **matter** with its surrounding environment. A **greenhouse** serves as an example. Since it is enclosed in glass, no new matter enters in; however, energy from the sun is able to penetrate though the glass walls and thus the light's

energy can interact with and affect the cellular system of the enclosed plants.

An **Open System** exchanges both energy and matter with its surrounding environment. This can occur in an open system such as lake when rainfall from the clouds causes the lake to rise and cool, or it can occur through a selective or permeable barrier such as a human cell.

*The human cell is an open system*; it has a permeable boundary to certain molecules such as carbon dioxide (CO<sub>2</sub>), oxygen (O<sub>2</sub>), and water, but its membrane functions as a *selective* boundary for most other elements and molecules, such as salts, to control their concentrations within the cell. Thus, it is possible for an open system, like a cell, to receive both *energy* and *matter* necessary to fuel cellular work of building complex bodily parts and bodily systems from simple molecules and elements (anti-entropy).

**We must be careful not to make the mistake of assuming** (as the ideologues do) **that all that is needed for anti-entropy to occur is an exchange of energy and matter in an open system.** *Energy and matter are necessary, but by themselves they are insufficient to resist entropy.* Both the open and closed system need at least three more things to negate entropy:

- 1) Energy *conversion mechanism* to do complex work, e.g., make protein,
- 2) *Information* such as an algorithm to guide the process, e.g., DNA, and
- 3) A *permeable boundary* to exchange and retain products, e.g., cell membrane.

Numbers (1) and (2) are both critical components of life, but neither has ever been demonstrated to exist or to develop in the absence of life.

Advocates of chemical evolution want to argue that entropy is *not* a universal law, because this permits them to say that chemical evolution is *possible*. In reality, the only reason entropy is *not* a universal law is because of *living cellular systems* capable of energy conversion and work. Materialists neglect to mention the latter because they are trying to argue (in fact their position forces them to argue), contrary to logic and all empirical evidence, that cells form from non-living chemical interactions (anti-entropy). The truth is that the only way biochemicals evolve, **as logic and empirical science demonstrate**, is within an already living cell capable of composition.

To counter this empirical verity, atheists point to such things as the fact that atoms and snowflakes are capable of forming complex designs or crystallizing into highly organized pattern without the aid of a living cell. There is no denying that snowflakes are arranged in geometric patterns, but these patterns are not arranged the way amino acids are arranged in living cells, *viz.*, by information contained in DNA. Crystallizing atoms do not have, nor do they need to have, information to acquire geometric form. They are governed by natural properties inherent in the atoms themselves, which when combined with atmospheric conditions account for the crystal patterns. The relatively small number of atoms and molecules that form crystals, do so because their crystalline structure lowers the energy of the atoms or molecules, *i.e.*, energy from the bulk material is **dissipated into the environment**. This is a completely different phenomenon than what occurs with biochemicals: The syntheses of biomolecules into larger or *massive* proteins and DNA requires **energy intake from the environment**. Large biomolecules are relatively unstable and require a living cell to sustain them or produce more of the same. And, as we have previously noted, biomolecules rapidly degenerate once a cell dies and dissipates. To summarize the contrast between a living cell and a crystalline formation:

- \* One requires *information* the other does not.
- \* One generates *massive biomolecules*, living organelles, and organs; the other has never been observed to do so.
- \* One *absorbs energy* from the environment; the other dissipates it into the environment

### ***Decomposition of DNA: The Instructions for Bodily Parts***

When a body dies, the higher order sequence within DNA breaks down into single base units and eventually into chemical fragments. Thus, DNA is *inappropriately* called “The Code of Life”: Life does not come from DNA. DNA is *not* the *cause* of Life; DNA is a code *associated* with life. Some scientists and materialist philosophers use the term “Code of Life” to imply that DNA holds the secrets to our origin without a Creator. However, most life scientists use this term sparingly to recognize that the gene sequences within DNA prescribe which proteins and how many will be constructed to yield the physical appearance of a species and an individual’s specific appearance. For example, human monozygotic (“identical”) twins have exactly the same genome (entire set of DNA in a living thing). Identical twins originate from a single fertilized egg that splits into two embryos in the earliest stages of development. Any variations in their physical appearance are the result of environment (*e.g.*, differences in nutrient

intake) and DNA mutations, which are unique to each and can occur during development in the womb or anytime during the rest of their life. DNA is not a principle of life.

**DNA is an instruction set for cellular production.** The instructions only become valuable to forming new cell components through the concerted activity of an array of other molecules within a living cell: These massive macro-proteins do not form outside of a living cell because they require vast amounts of energy and the complex machinery of a cell to be created<sup>14</sup>.

*DNA: Is it a "Miracle Code"?*

Although not a code of life, DNA or *deoxyribonucleic acid* has unique attributes that *qualify* it as a miraculous "*Quasi Spiritual Code*", as I will endeavor to demonstrate. According to the United States, National Institute of Health (USNIH), the information in DNA is stored as a code made up of four chemical bases: adenine (A), guanine (G), cytosine (C), and thymine (T). Human DNA consists of about 3 billion bases, and more than 99 percent of those bases are the same in all people. The order, or sequence, of these bases determines the information available for building and maintaining an organism, similar to the way in which letters of the alphabet appear in a certain order to form words and sentences. DNA bases pair up with each other, A with T and C with G, to form horizontal units known as *base pairs*. Each base is also vertically attached to a sugar molecule and a phosphate molecule. Together, a base, sugar, and phosphate are called a *nucleotide*. Nucleotides, with their base pairs, are arranged in two long strands that form a *spiral* called a *double helix*. The structure of the double helix is somewhat like a ladder, with the base pairs forming the ladder's horizontal rungs and the sugar and phosphate molecules forming the vertical sidepieces of the ladder. (See figure 1).

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<sup>14</sup> *The largest molecules that do originate outside of living things are thousands of times smaller than those originating within a cell – thus indicating the absurdity of abiogenesis.*



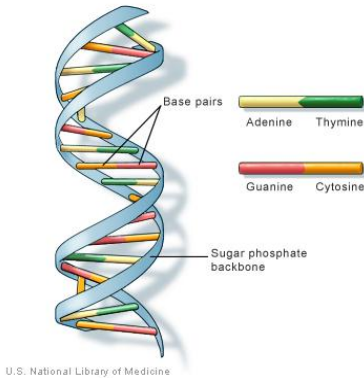


Figure 1: Image from US NIH: <http://ghr.nlm.nih.gov/handbook/basics/dna>

An important property of DNA is its ability to unwind and replicate or duplicate itself. Each strand of unwound or open DNA in the double helix serves as a pattern for duplicating the sequence of bases. When A separates from T, the separate A will attract another T and the separate T will attract another A. This is critical when cells divide; it enables them to duplicate an exact copy of DNA present in old cells, which is need by new cells of the same body.

### *A Critical Observation*

It is of critical importance to note that (1) DNA is a complex molecular structure, while its (2) genetic code (ordering of base pairs) is another something else. They are intimately related but very different, as we shall see in Chapter Four.

### *A Closer Look at DNA*

A cell is the smallest unit of *biological analysis*, but is not the smallest unit of *bio-chemical analysis*. Each living cell, small as it might be, is composed of still smaller molecules, atoms, and sub-atomic parts. **None of these smaller parts contain DNA since DNA is a compilation of many larger molecules and is a massive molecule.** DNA and its genetic data exist only in living organisms, as remnants of once living organisms, or in viruses, which all undergo the normal entropic process of genetic decay when life ceases. In the case of a virus, energy from the environment (such as sunlight and chemical and mechanical forces from the soil) eventually

destroys its protective capsule. The virus' genomic material is then exposed to the environment, which causes further decomposition of its nucleic acids into smaller, stable molecules—in which case, the virus cannot be reconstituted.

DNA, to be sure, can be engendered from dead matter (sugars, phosphates, nitrogen bases) just as proteins can be created from non-living amino acids, **but this only occurs within a living cell, as verified by empirical science.** Non-living things (soil, rocks, water, and air) do not have genetic data for instructions to attain higher complexity. DNA can be found outside of a living cell (virus etc.) but only as the result of a once living thing that has decomposed or is decomposing.

The more durable the medium on which data is stored, the slower will be its decomposition. A DVD disc is a durable medium used to store 40 trillion bits of data (4.7 gigabytes), but like most non-hardened materials, DVD discs decompose and the digital data imprinted or encoded on them disappears with the discs. Likewise, **all the genetic data encoded within a cell disappears when cell matter decomposes.** Because every cell in the human body contains an exact copy of the DNA found in every other cell (excepting gamete cells), biologists are able to find DNA in the cells of decomposing bones; they are among the most durable bodily parts. Given enough time, bones will also disappear. Before they do, paleoanthropologists try to extract the precious data. In short, **DNA is a ubiquitous byproduct of organic decay.**

All of these interesting phenomena lead to a profound yet common sense conclusion: DNA, like life, does not arise from non-living elements nor do any cellular parts or genetic information remain (in the long run) when cells die because their constituent parts inevitably return to their original micro-molecular state. Only living things can direct growth, and they do this by a mysterious but observable process by which information encoded in DNA helps direct the transformation of amino acids, into complex proteins, which become integral parts of living organisms and in the process acquire life themselves.

Since *living cells* are completely *composed of nonliving matter*, the mystery of life found within (or associated with) them must come from somewhere other than the nonliving matter from which they are composed. Life does not just pop into existence from non-living matter. Yet, life exists, and living bodies are composed of non-living matter, which is characterized by a mysterious life force; *although life cannot be empirically observed, its effects can.*

Living things die due to critical injuries, to disease, or naturally (from accumulation of DNA mutations that sustain various tissues and organs). Once death occurs, the mysterious animating power ceases to be present. A once-living and complex integrated animal system capable of reproduction, growth, memory, and imagination decomposes and each of its living parts return to their original simple molecular structure. Atheistic scientists have been unable to account for this phenomenal life-cycle, but philosophers, for over three thousand years, have studied this imperceptible but very real and mysterious force that unites, harmonizes, organizes, and enlivens matter and have consistently referred to it as the *soul*.

**This is why philosophers have insisted that every living thing (humans, animals, and plants) is endowed with a soul or life principle.** Although it might be shocking to think of plants and animals as having souls, *when a soul is understood as the life force, the shock is mitigated* since all living things share the same seven life properties. The soul has been defined as the *vital principle* or *substantial "form"* of a living body or that which gives matter life and actualizes its potencies (Wuellner, S.J., 1956. p. 116).

By "*form*", philosophers mean the expressed nature or essence of a thing, that which interacts with unformed matter and makes it to be one thing rather than another, a dog rather than a cat, an eye rather than a nose etc. The *form* is the specific constituent in a "*substance*" (a being, like the soul, which has existence in itself and not in another) that communicates itself to indeterminate matter and actualizes its potential to become a definite thing (Wuellner, p. 49). Form contributes to the composition of amorphous or decomposed matter into a specific or composed entity such as a human cell. Composed integral cellular units function together in an organized synergistic fashion with powers, properties, and operations vastly exceeding that of the individual atoms and molecules of which they are composed.

Matter, specifically molecules, is unable to self-organize into a complex body; this happens only in the presence of life. To be so transformed, molecules need (1) a life giving *force* (soul), (2) a set of *instructions* (DNA), and (3) complex mechanisms, i.e. *tools and ingredients* (cellular organelles and molecules) necessary to initiate, guide, and fuel the process of transforming simple atomic elements into complex cellular tissues, organs and integrated bodily systems. Take, for example, the process of baking a cake: To bake a cake several constituent parts are

necessary without which a cake cannot be made. To bake a cake, a *cook book* or a set of *instructions* (DNA) is needed. But the instructions are practically useless without the *proper ingredients*, *viz.*, eggs, milk, flour, sugar, and spices (molecules or: minerals, amino acids, and sugars). It is not possible to simply place the cookbook and all of the necessary ingredients on a table and expect a cake to materialize. Proper *tools* such as an oven, bowls, mixers, and spoons (ribosomes, endoplasmic reticulum, golgi, and other organelles) are also needed. Most importantly, there is also need of a *life force* (the living cell itself) capable of transforming energy to initiate the process of **interpreting the instructions, assembling the ingredients, turning on the oven, and removing the cake from the oven when complete.**

Just like the process of baking a cake, four constituents are necessary to create a human body: (1) the proper ingredients (2) a set of instructions (3) proper tools or machinery (4) an initiator or living cause. All four are necessary, none by themselves or any smaller combination are sufficient; *all are required*. As a consequence, atheistic evolutionists who believe in spontaneous generation and reverse entropy outside of living cells are faced with observable and universal evidence and good old common sense that negates their hypothesis about the origin of the genetic code and the cellular mechanisms necessary for its use to assemble a body. **According to atheistic evolutionists, nature composed the ingredients, made the instructions (DNA/genome), provided the complex manufacturing tools (cellular organelle) and conferred life** from which a living cell eventually emerged because unique environmental conditions were just right for a long period of time. No such environment can be described nor is any supporting evidence found in geological records.

### *The Origin of DNA*

If the first living things did not manufacture themselves, where did DNA and the living cell come from? It seems that the two are related: **The genetic code used to build complex protein body parts is useless without the decoding and assembly mechanisms found in living cells. Moreover, living cells cannot manufacture anything without the presence of DNA.** We are thus faced with a perplexing enigma, *viz.*, **DNA cannot be made without a cell, nor can a cell be made without DNA to guide its manufacture.** If a cell is needed to manufacture DNA (as is universally verified in every cell), and if DNA is needed to manufacture other cells (as is universally verified in every cell), which came first, the cell or the DNA?

Speaking logically, neither could be first because each is contingent upon the previous existence of the other for its own existence. DNA does not self-assemble outside of a cell nor is it logical to say that it self-assembled inside the first living cell, which needed DNA for its own composition. Cells simply make copies of existing DNA, which comes from previous cellular DNA. Today's DNA is the same DNA from the origin of life, but with accumulated mutations from cell mechanistic mistakes that minutely alter its sequences. There could be no cell within which DNA could self-manufacture without the previous existence of DNA. That is, DNA is needed to guide matter to become a cell; likewise, a cell is needed to manufacture DNA.

In summary:

(1) Cells are made of complex and integrated protein parts that require DNA instructions for their production; *no one has ever observed* a cell being replicated, manufactured, or produced without DNA.

Therefore,

(2) DNA had to previously exist for a cell to be manufactured. However, this is inherently impossible because DNA has been empirically verified to assemble only within cells.

In one case, the DNA had to exist before the cell, and in the other, the cell had to exist before the DNA. Since this is a circular argument and therefore logically impossible as well as empirically unverifiable; **it is possible at this point to conclude that the two are *positively correlated*, but one cannot be the cause of the other** (*correlation is not causation*). This is indeed a unique relationship – each requires the previous existence of the other before being capable of its own existence.

### *The Chicken or Egg Riddle Solved*

#### **Quick Note**

Before examining the chicken-egg question, it should be clear that there are only two valid ways of demonstrating the scientific validity of any idea: *logical demonstration* and/or *empirical verification*. If either of these is missing, we are not dealing with science but with something else: mere unsupported opinion, which has no claim to validity. In the best case scenario, both logical demonstration and empirical verification can be employed. If empirical verification is not possible, it is necessary to default

to logical demonstration. If neither empirical verification nor logical demonstration can be employed, the proffered answer is unacceptable or the proffered question invalid.

## **End Quick Note**

### **Relationship between a Cell and DNA**

THE INTRIGUING QUESTION regarding the relationship between a cell and its DNA is similar to the classic question concerning the relationship between a chicken and an egg: which came first? This is a difficult but solvable question. The question presumes that either *one* chicken or *one* egg had to come first<sup>15</sup> without ever considering the possibility **that perhaps neither came first; maybe they were simultaneous; maybe there are other possibilities**. When first asked the question, the mind becomes quickly involved in the perplexing circular puzzle. Because it immediately begins to explore each *proffered* possibility, (egg first or chicken first) it misses the logical way out, *viz.*, **neither came first**. The question is not constructed properly. The way that it is asked, a correct answer cannot be found because an empirically verifiable and logically demonstrable answer involves not just one egg or one chicken, but two or more. There are more answers than the two that are proffered.

### *Two or More Choices?*

The question is misleading; it offers only two choices (chicken or egg) when in fact there are others. Consider the first answer, the chicken. This possibility is easily negated; *one chicken* cannot lay a fertile egg because it takes *two* chickens (male and female) to conceive a fertile or live embryo. This is empirically verifiable. Moreover, if we are serious about the matter, it must be asked if the first chicken was an adult or did it develop from a chick? If from a chick, how did it survive without a parent to nurture and protect it? If a single adult, where did it find a partner to propagate the species?

The second answer, the egg, is also negated by empirical verification. What is the logic of one egg? **Two eggs are needed** (male and

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<sup>15</sup> *The evolutionary argument that posits a singular egg as coming first is invalid because it is both empirically non-verified and also illogical – as will be demonstrated, two chickens, or two eggs of diverse gender are needed. Moreover, the evolutionary idea that posits an egg first is a mere hypothesis.*

female) **because soon after the one is hatched the species will die; it takes both a male and a female chicken to continue the species.** Moreover, how would one egg, even if it did hatch (an egg does not normally hatch without a chicken to incubate it), survive without an already existing and mature chicken to nurture it?

To make matters worse, what is the possibility that if there were two eggs or two chickens that in both cases one would be male and the other would be female? Two eggs would *probably* not suffice. In the highly probable case of gender differentiation, more than two eggs or two chickens would be required. Probability (not possibility) dictates that three, four, or even five or more eggs or chickens would be needed. Moreover, if there were two or more eggs and no chickens all would (1) require unavailable incubation, (2) have to be found in the same location and hatch at the same time (in a billion year time span), (3) have to be diverse genders and (4) be able to survive without any form of protection or any means of infant sustenance.

If we examine the question from only the two perspectives offered, as we almost always do (chicken or egg), the question becomes ridiculously circular, illogical, incapable of sense verification and, therefore, nonsensical and dismissed as an unsolvable dilemma. However, **it is not unsolvable; it seems to be a trick question** that confuses and therefore casts a cloud of skepticism or doubt over a vital life topic.

The sleight of hand is missed because other possibilities are not proffered and therefore not seen. If they are not seen, they are usually ignored and therefore not examined. When other possibilities are examined, questions about gender, location, timing, and survivability all surface. In addition to these problems, it is clear that neither a chick or chickens could be first because their origin remains unaccounted for; two chickens do not just appear from nowhere (chemical evolution is a failed hypothesis), and a new species emerging from a prior divergent species has never been verified—*macro-evolution* is a mere unverified hypothetical construct. Until it is verified, it cannot be used in any *valid* form of reasoning. The principle is not *a-priori* self-evident nor *a posteriori* verified; therefore, it is nothing more than an opinion, which does not have a valid place in science except a hypothetical one.

The egg first answer suffers from the same problems: illogical and lack of empirical verification. Even if an egg containing a new species supposedly emerged from an already existing but divergent species is posited, it is empirically unverified. Moreover, the question of the origin of

the parent remains unaccounted for. If the egg hypothesis is correct, eventually, every existing species would have to arise from a one celled organism, but genetics do not support such a hypothesis. **All single celled organisms have only one chromosome, if another chromosome is introduced it is detrimental to survival of the species.** Thus, single celled organisms cannot advance beyond the limit of one chromosome; yet two, three, four, five, and other numbers of chromosomes exist across divergent species. The materialists cannot answer this dilemma. No new species has ever been verified to evolve from another; it is all imaginative speculation<sup>16</sup>. Tremendous variety can be found within each species such as that found between a lap dog and an English Mastiff. Despite their wide variety, both are canines that can breed. Animals of different species cannot propagate beyond the first generation—something referred to as “*genetic isolability*”.

### *It is More Logical to Posit that Something Else Came First*

Because this question has its empirical limits, we are forced to default to logic and to be guided by what can be verified. When this is done, it is concluded that neither the chicken nor the egg came first, but something had to be first, *a necessary Being or Creator* (“Principle of Existential Causality”), the cause of two chickens or two eggs<sup>17</sup>. They had to come from somewhere. Thus, it is logical to accept the theological position offered in Genesis: God did not make just one egg or one chicken. He avoided the problem altogether because, as the theologians tell us, **he made two (male and female) at the same time. This might not be empirically verifiable but it is logical.** The other choices are neither empirically verifiable nor logical. *Micro-evolution*, inter-species differentiation based on variety within the gene pool, is verifiable. *Macro-evolution*, *intra-species evolution resulting in entirely new species diverse from their precursor*, is not.

The way the question is asked, chicken first or egg first, presents a problem that requires plural beings but *only singulars are presented*. This understanding along with knowing that abiogenesis is a failed hypothesis, permits us to answer that, like the chicken or egg, neither the DNA nor the cell came first. Like chicken or egg first, DNA or cell first, results in a

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<sup>16</sup> “*Micro-evolution*”, *inter-species differentiation based on variety within the gene pool, is verifiable.* “*Macro-evolution*”, *intra-species evolution resulting in entirely new species diverse from their precursor, is not.*

<sup>17</sup> *Preferably mature chickens; they are more likely to survive*



circular and empirically unverified hypothesis. It is not logical for one to be antecedent to the other when each needs the other for its continued existence. It is more logical to posit a Creator because both DNA and a living cell (like the chicken and the egg) are certainly in existence, but one cannot empirically be shown to be the cause of the other.

### *Parthenogenesis*

Instead of accepting the logical and empirically verifiable solution, some atheists refuse to cooperate and scour the world looking for a workable anomaly as proof of their ailing case. They try to circumvent this idea by claiming that in actuality *it is possible* (and empirically verifiable) for one parent to engender offspring. This unusual behavior, verified in several species, is known as *parthenogenesis*, a form of *asexual reproduction* where growth of an embryo occurs in the female without fertilization from a male<sup>18</sup>. Parthenogenesis, which *always results in the birth of a female*, occurs in aphids and some bee and scorpion species as well as several reptiles, fish and sharks, but has never been observed in mammals.

Interesting as this observation is, the idea of *parthenogenesis* does *not* apply to our discussion about *abiogenesis*: Parthenogenesis presupposes *biogenesis* (birth from an already existing and living parent), which is subsequent, not antecedent, to abiogenesis. **Our topic is about antecedent abiogenesis (life from chemicals) not subsequent biogenesis (life from already existing life, which comes after abiogenesis).** We are trying to understand the origin of life itself not how birth occurs after life has been attained.

Nonetheless, since parthenogenesis results only in female offspring, a valid question exists: *where do the existing males come from?* Parthenogenesis reduces genetic diversity (because the genetic code used to produce offspring comes from only one source: the mother) and thus is harmful to a species survival. Furthermore, parthenogenesis seems to be a *secondary* alternative resulting from the absence of males. For example, the *Komodo dragon is capable of parthenogenesis, as well as reproducing bisexually*. A team of scientists led by Phillip Watts researched this issue (2006, "Parthenogenesis in Komodo Dragons"). According to Watts et al:

"Female Komodo dragons may switch between asexual and sexual reproduction, depending on the availability of a mate — a finding

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<sup>18</sup> In plants this phenomenon is known as, "apomixis".

that has implications for the breeding of this threatened species in captivity. Most zoos keep only females, with males being moved between zoos for mating, but perhaps they should be kept together to avoid triggering parthenogenesis and thereby decreasing genetic diversity”.

Parthenogenesis is, therefore, an interesting but non-workable anomaly. It seems to involve the sharing of nucleic content [DNA] from two (female) eggs that always results in female offspring that are capable of mating with males of the same species when they are introduced into the population. **It is therefore not evidence of a uni-gender species** but an interesting natural phenomenon most likely caused by segregation of males from females.

### *Creator or Alien Avatar*

Logic and available empirical evidence related to the origin of new life leads us to conclude that life arises from a source that has the power to confer life. Similarly, the logical possibility for origin of genetic information requires that it came from a source that has intelligence and therefore has the intellectual ability necessary to confer or convey information (and life): “I am the way, and the truth (an intellectual attribute), and the life” (John 14:6). Several distinguished atheistic scientists are beginning to admit this logical verity. According to atheist astronomer and mathematician Sir Fredrick Hoyle (1982, p. 16), Director of the Institute of Astronomy at Cambridge University:

“A commonsense interpretation of the facts suggests that a *super intellect* has monkeyed with physics, as well as with chemistry and biology, and that there are no blind forces worth speaking about in nature. The numbers one calculates from the facts seem to me so overwhelming as to put this conclusion (intelligent cause, not chemical evolution) almost beyond question”.

Hoyle also states that,

“The likelihood of the formation of life from inanimate matter is one to a number with 40,000 naughts (zeros) after it... It is big enough to bury Darwin and the whole theory of evolution. There was no primeval soup, neither on this planet nor any other, and if the beginnings of life were not random, they must therefore have

been the product of purposeful intelligence” (New Dawn Magazine, 2006)<sup>19</sup>.

Even Francis Crick the eminent molecular biologist and co-discoverer of DNA, concluded that abiogenesis could not have risen by chance without an *intelligent being* involved. However, because Crick, like Hoyle, is an atheist, he mistakenly replaces God as the logical first cause with a hypothetical interstellar cause referred to as *Panspermia*. This idea of Panspermia is finding an increasingly larger audience among New Age advocates. While Protestants are busy fighting evolution, empirical atheists are jumping from the Darwinian ship for this new idea and often aligning with Panentheists linking science to *New Age* cosmology and, in the most extreme cases, expecting the coming of avatars in space ships from another “dimension” to rescue ailing humanity. These benign aliens will presumably solve human woes including psychological, economical, sociological, and cosmological problems, including a more palatable *origin of life scenario*, by introducing new ideas about cosmogony acceptable to atheists aligning themselves with the “New Age”.

“Terming his model Directed Panspermia, Crick suggested that a “spaceship” carrying “large samples of... microorganisms” was sent to the Earth billions of years ago by an extraterrestrial civilization – either as an experiment, preparation for colonization or a genetic Noah’s Ark of some sort” (New Dawn, 2006).

The esteemed Sir Frederick Hoyle, like Crick, is unable to make the logical jump to a Creator but must rely on some intelligent cause. Like Crick, Hoyle advocates Panspermia:

“Human beings are simply pawns in the game of alien minds that control our every move. They are everywhere, in the sky, on the sea, and in the Earth... It is not an alien intelligence from another planet. It is actually from another universe which entered ours at the very beginning and has been controlling all that has happened since” (Marrs, 1997, p. 355).

Hoyle<sup>20</sup> is perhaps best known for his contribution to the theory of stellar nucleosynthesis (nuclear reactions taking place inside stars to form the

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<sup>19</sup> Hoyle’s measure of probability comes close to agreeing with the position taken in this book: There is zero probability for abiogenesis. All that exists is an unverified and illogical possibility, which as we have seen, is not a measure of probability. A measure of probability requires some actual occurrence of an event necessary to assign it a probability.

nuclei of elements heavier than hydrogen) as well as his rejection of the “Big Bang Theory” in favor of the now discredited “Steady State Theory” of the universe. The “Steady State Theory” is more palatable to an atheist—it argues for an *eternal* universe, one that had no beginning and thus no need of a Creator<sup>21</sup>.

Hoyle probably adopted the *Steady State Theory* as a result of his atheism. The theory’s antithesis, the *Big Bang*, co-originated with Abbe George Lemaitre, a Roman Catholic priest. In 1930, Monsignor Lemaitre proposed the “Primeval Atom Theory” that served as precursor to the Big Bang. “Einstein embraced Lemaitre’s theory in light of the new data. He publicly accepted the new paradigm ...and mentioned Lemaitre’s work in conjunction with Tolman’s as being the convincing factor for him” (Farrel, 2005, p 117).

According to the Primeval Atom Theory, before exploding, all the matter in the universe was concentrated in one primordial point called the “primeval atom”. The universe began when this “primeval atom exploded” as the first manifestation of the big bang (Farrel, 2005, pgs 99-120). Pope Pius XII (1951) declared to the Pontifical Academy of Sciences that the Big Bang theory accorded with the Catholic concept of creation.

“It would seem that present-day science, with one sweeping step back across millions of centuries, has succeeded in bearing witness to that primordial “Fiat lux” (“Let there be light”) uttered at the moment when, along with matter, there burst forth from nothing a sea of light and radiation, while the particles of chemical elements split and formed into millions of galaxies”.

Like Miller and Urey before them, Hoyle and allied *atheistic scientists often* seem to let their atheism guide their science. Thus, as abiogenesis *on earth* seems an increasingly remote possibility, atheists **are in search of an alternative hypothetical *extra-terrestrial* environment** <sup>22</sup>**that might have been more favorable** to the spontaneous generation of life

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<sup>20</sup> *To be fair, it must be said that Hoyle et al are not representative of the scientific community in general. Most respected scientists are not talking about aliens. Moreover, Hoyle was a sci-fi writer; most eminent scientists who work on the deepest advances of science and technology are not.*

<sup>21</sup> *Catholic cosmology permits (does not teach-but permits) the view of an eternal universe as long as its eternity is the result of an eternal act of creation.*

<sup>22</sup> *Or at a minimum an extraterrestrial life, even a water molecule on a meteorite, anything that might support the idea.*

before it was sent to planet earth where the *known laws* of chemistry and physics preclude its fabled occurrence.

Nonetheless, even if correct, Panspermia merely moves the origin of life problem to outer space. It does not answer the question how life arose from non-living elements, nor does it answer the question about the origin of DNA, genetic information, and amino acids or how cellular organelle organized themselves and acquired life in the remotest regions of the universe. It does not matter if, as Panspermia supposes, advanced beings sent live molecules to earth, **the problem of the origin of life and of genomic DNA remains**. Despite their hypothesis and hopes, Crick and Hoyle are stuck with the idea of spontaneous generation. The only advance they have made is to *correctly state that spontaneous generation did not happen on earth*. But, because they cannot concede the idea of a Creator, they are right back to grappling with these just-stated problems and the additional problem of entropy, which is a *law of the universe (not just the earth)*, as well as constraints around molecular dynamics, which require the unique temperature range present on earth – too cold, molecules freeze; too hot, they decompose etc. Crick and Hoyle have simply replaced one illogical hypothesis (abiogenesis on earth) with another (abiogenesis in outer space). Atheists cannot stomach the idea of an omnipotent Creator (Muslim, Jewish, or Christian); the idea is simply repugnant to them.

Life, as we have seen, is not integral to any molecular part prior to cellular synthesis. Molecules, from which cells are made, do not have any life to confer on a cell, **nor is electricity (lightening –what New Agers call “fohat”) a source of life – electricity is a source of power. Not only does electricity lack all seven life attributes, like lightening when it comes in contact with living things, it can kill them!** Life from non-life remains empirically unexplainable, even in outer space. Life nonetheless, comes from somewhere. There is universal empirical evidence that life comes from a being that has life to confer – this is both logical and empirically verifiable. Because it is empirically verifiable, life from an already existing and living Being is a real probability, not just a wishful possibility – since every living thing has a living cause, the probability for a living Creator must be extremely high. Extra terrestrial abiogenesis simply does not answer questions about the origin of life (nor of genetic information) posed by scientists and philosophers. Even a New Age sympathizer like Keith Thompson (1993, p. 235), writing about alien avatars recognizes this fact. According to a supposed “alien contactee”:

“If we are the genetic experiment of a scientifically advanced race, the experiment can only be a manipulation of existing life forms; it

does not include the invention of our whole existence (*that is of life itself*). Our genes can be synthesized, or rearranged; the biological frame of life can be altered, but biology (*life*) itself cannot be invented out of nothing by something that is itself an evolutionary product of the universe”.

Eventually atheists (like Flew, Hoyle, and Crick) should admit the existence of a Creator or some kind of god to account for the physical universe and its various life forms. New Age devotees and avant-garde New Atheists (atheists adopting New Age evolutionary schema) are kindred spirits: Both are advocates of extraterrestrial life (Panspermia) and the doctrine of evolution (a doctrine that is central to both their belief system). New Age cosmogony, however, admits the existence of an Absolute God, from whom the universe originates. But, unlike the Judeo-Christian God and the God of Islam, the New Age God is not a Creator; their god is an “Emanator”<sup>23</sup>.

New Age emanation cosmogony acknowledges a supreme or Ultimate Being, an “Absolute” known as Brahman who exists as ineffable and transcendent Being in the utter beyond. Nonetheless, the beyond Brahman, about whom nothing is known, generates a trinitarian image of Himself from whom divine energy *emanates* out into the universe. Brahman is thus thought to be both transcendent and immanent. Brahman, the transcendent, is manifest in the cosmos as a Trinity: *Brahma*, Vishnu, and Shiva (First Logos, Second Logos, and Third Logos). It is from Brahman’s living trinitarian image that the cosmos “*emanate*” as divine energy giving being, life, and form to all things, which contain a “divine spark” and evolve as fragments of the divine back to their source – evolution is a New Age cosmic law of the universe.

Because evolution is a central tenet of New Age thought, it is likely that *avant-garde* atheists advancing the idea of Panspermia, like Crick, Hoyle, and other “New Atheists”, will join hands with New Age Panentheists<sup>24</sup>. New Atheists and Panentheists are both engaged in looking

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<sup>23</sup> *Emanation is similar to creation in that it accounts for the origin of things form an absolute source, but in its explanation of how the universe originates as an act of emanation rather than of creation the two differ in no small way – an “Emanator” is not a “Creator”. New Agers do not posit a “Creator” God! Emanation means to come from by means of emanation. Emanation is not an free and unnecessary intellectual act – it is a necessary ontological act. Emanation implies determined cause where as creation implies “free will”.*

<sup>24</sup> *Panentheism is a theological term that connotes God as both immanent and transcendent. New Age cosmogony presents God as both immanent and transcendent; it is thus Panentheistic not “Pantheistic”. Pantheism holds that God is immanent, Panenthiesm holds that the immanent God is also transcendent.*

for advanced alien creatures who seeded the earth or are coming back as avatars to take us into a New Age, an age where Christian ideas of life, salvation, and sanctification, have been replaced by evolutionary Pantheist ideas more palatable to the atheists.

In this regard, molecular biologist Michael Denton poignantly comments, “Nothing illustrates more clearly just how intractable a problem the origin of life has become than the fact that world authorities can seriously toy with the ideas of Panspermia” (1986, p. 271). I am not going to offer a critique of Panspermia; I think the idea is so weak that it does not merit further discussion as a scientific theory<sup>25</sup>. *It certainly merits discussion as an imaginary or feigned eschatological scenario*, but that is neither the topic nor the purpose of this chapter or of this book. The purpose of this chapter is to (1) show the empirical and logical implausibility of spontaneous generation, (2) the existence of a life force, and (3) the relationship between this life force and DNA.

**Everywhere we care to look, we find that life is associated with voluminous data and organized knowledge found in DNA.** It does not matter how far out in the universe atheists propose to set their imaginative gaze, cellular composition requires *life* and DNA. It takes *life* to initiate the process of organizing atoms and chemicals into complex cellular forms. **Logic and actually existing ubiquitous empirical evidence point to the idea of a Creator as the cause of life.** According to *verifiable* laws of nature (not *imaginary* ones), matter cannot organize itself into a cell. This requires *life* and *intelligence* capable of organizing matter because verifiable living matter is endowed with **information**, DNA.

All over the world, we are being asked by the proponents of atheistic evolution to support an illogical idea about abiogenesis/biopoiesis as the cause of life and genetic information while **everything that is or can be seen and empirically verified argues against it.** At the same time, the cause (Creator), whom they say cannot be known, is in fact verified by logic and by all that is seen (*life* and *form*).

To summarize the just made points:

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<sup>25</sup> As stated above, Panspermia suffers from all the weaknesses of spontaneous generation. No matter what the atheists might hypothesize about the origin of life, they have been unable to empirically validate it, and their hypothesis suffers from lack of logic: **The principles are not a posteriori empirically verified nor are they a priori self-evident.**

- \* We *cannot* and *do not* see DNA replicating outside of cells as abiogenesis hypothesizes
- \* We *cannot* and *do not* see proteins being generated outside of cells as abiogenesis hypothesizes
- \* We *cannot* and *do not* see life coming forth from non-life as abiogenesis hypothesizes

But

- \* We can and do see life coming *from life*
- \* We can and do see DNA replicated *inside of living cells*
- \* We can and do see proteins generated *inside of living cells*

Atheists are typically intelligent people, but for some reason, on this point, they demonstrate an irrational adherence to an indemonstrable and illogical premise. It is possible to imagine anything, but if interesting mental musings cannot be verified by logical demonstration or empirical verification, they should most likely be dismissed; this is what is normally expected from scientific objectivity. However, the more the issue is examined, the more it appears that abiogenesis is not an objective idea. Rather, it appears that some type of “defense mechanism” engendered by *disassociation* or *discontent* with reality due to the operation of some strong pain, passion, or prejudice seems to be at work.

John Quincy Adams (one of America’s leading Founders), writing in the 18th century, referred to **lack of objectivity as a defense mechanism resulting from “self-deceit” or “self-love”**. Self love usually proceeds from pride and narcissistic preoccupation caused by (1) an intense drive for pleasure and the ceaseless desire for more or (2) from pain and trauma that has resulted in a failure to forgive and be reconciled leading to continual self-pity. Failure to sublimate or to appropriately satisfy intense desires coupled with failure to deal with pains means they are always present; their strong persistence requires immense energy to either mask or suppress them or to act on them; either way, self-love holds onto anger; it holds onto pain, and it constantly seek pleasure. The persistence of such strong passions, even in a mind endowed with intellectual gifts, tends to cloud thinking:

“There is nothing in the science of human nature more curious, or that deserves a critical attention from every order of men so much, as that principle which moral writers have distinguished by the name of *self-deceit*. This principle is the spurious spring of *self-love*; and is, perhaps, the source of the greatest and worst part of the vices and calamities among mankind” (Adams, 1763).



St. Augustine pithily plumbs these depths in his august work, *The City of God* in which he claims (Book xiv, chapter 28) two existential realities based on two species of love:

“Accordingly, two cities have been formed by two loves: the earthly by the love of self, even to the contempt of God; the heavenly by the love of God, even to the contempt of self. The former, in a word, glories in itself, the latter in the Lord”.

Abiogenesis is an intellectually unsupported imaginary construct. It is not surprising that unsupported imaginary constructs proceed from “self-deceit” resulting from self-love as Adams recognized. Augustine takes the discussion deeper by adding *contempt of God* to the relationship between *self-deceit* and *self-love*. From the Augustinian perspective, abiogenesis is more than self-love related to self-deceit; it is a symptom of self-love leading to, or resulting from, contempt of God as confirmed by the fact that it has its origins in atheism.

In this regard, excerpts from Harold Lewis’ Letter of Resignation, written to Curtis G. Callan Jr, President of the American Physical Society (APS), are illustrative. Lewis is Emeritus Professor of Physics at the University of California, Santa Barbara. He is also a former member of the Defense Science Board; former member of the President’s Nuclear Safety Oversight Committee; and former member of the United States Air Force Scientific Advisory Board. Although I do not necessarily agree with his view of global warming, I do agree with his conclusion:

“For reasons that will soon become clear my former pride at being an APS Fellow all these years has been turned into shame, and I am forced, with no pleasure at all, to offer you my resignation from the Society”. It is of course, the global warming scam, with the (literally) trillions of dollars driving it, that has corrupted so many scientists, and has carried APS before it like a rogue wave. It is the greatest and most successful *pseudoscientific fraud* I have seen in my long life as a physicist. Anyone who has the faintest doubt that this is so should force himself to read the Climate Gate documents, which lay it bare. I don’t believe that any real physicist, nay scientist, can read that stuff without revulsion....Everything that has been done in the last year has been designed to silence debate. This is not fun and games, these are serious matters involving vast fractions of our national substance, and the reputation of the Society as a scientific society is at stake....It is fraud on a scale I

have never seen....*This is not science; other forces are at work*" (Watts 2010).

If empirical verification and/or logical demonstration support creative imagination, there are valid tools to work with to substantiate an imaginative or creative hypothesis. Atheists have no such tools and thus rely on public ignorance, argument *ad hominem*, unconscious or conscious denial of reality, or distortion of facts. Empathetic as I might be, I am forced to conclude with Lewis: "*This is not science; other forces are at work*"<sup>26</sup>.

### *What is Going On?*

Taking Adams' and Augustine's perspective, it appears that science is being held captive by atheistic and misotheistic ideologues in contempt of God. Science *qua* science, philosophy, and theology (faith and reason) are natural allies. **Science and religion are not opposed, but the atheists would like everyone to believe that they are.** There is

- (1) Science opposed to theism (atheistic science)
- (2) Science aligned with pseudo-theism/mysticism (New Age Science), and there is
- (3) Science aligned with theism through faith and reason in monotheistic traditions

Either way, science or theism are significantly correlated (either positively [3] or negatively [1 and 2]). Positive correlation means where one is valued so is the other; they move in the same direction. Negative correlation, on the other hand, means that as one goes up or down the other goes in the opposite direction. Items (1-negative correlation) and (3-positive-correlation) are clear, but (2-negative correlation) needs a brief explanation.

**The New Age paradigm, despite all its salutations to science, is vehemently opposed to science.** New Agers ceaselessly advocate science but not *empirical* science that proceeds from a *rational* perspective as science always has. The New Agers are developing a new paradigm in which science will proceed from evolving *intuition* rather than, what they

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<sup>26</sup> Similarly, Nobel Physicist Ivar Giaever discontinued his membership in 2011 with the American Physical Society (APS) because the Board Members, regarding man's contribution to global warming, claimed that "the evidence is incontrovertible", when, according to Giaever, the evidence is sorely lacking. He noted that is not how scientists talk, but rather how people with agendas talk.

see as retrograde rational thought. From the New Age perspective rational thought, especially speculative or philosophical rational thought that deals with ontology, metaphysics, and philosophical psychology, is thought to be part of a retrograde cultural lag left over from Classical Aristotelian Philosophy, Medieval Scholastic Theology, and Modern (but not contemporary) Science and the Age of Reason (Positivism).

In their mutual contempt of rational philosophy and Thomistic theology, which unites faith and reason, **New Ageism meets Atheism in contempt of God.** It matters little that the New Age is ultra-theistic; the fact is, it stands in contempt of the Holy Trinity as revealed by the Word of God. Contempt of Christian revelation about God is enough to cement an alliance between the New Atheism and New Ageism. Atheists need an ally because atheism loses sway in an age that thirsts for spiritual meaning, even if it is drug induced, syncretic, or counter-cultural spiritual meaning. Because we are in such an environment and because communism has been toppled, **atheism, if it is to have any sort of future, must adopt some type of spiritual dimension** (this is the direction Communism under Gorbachev was headed). *Man is a spiritual being and has spiritual needs which must be met.* Human spiritual needs were neglected under the reign of Atheistic Communism and are neglected by the so called “New Atheism”, which must endeavor to somehow meet these spiritual needs (even if falsely) if it is to have a future. **If atheistic science is rooted in contempt of God (the Holy Trinity), it makes little practical difference if it maintains that God does not exist or if it aligns with pseudo-theistic forces** of the New Age contrary to the great world religions.

Interestingly, the falsely labeled “*New Atheism*” of thinkers such as Richard Dawkins *et al* is not new at all—it is **merely an attempt to fuse life into a dying horse.** This dying horse is a pathetic Western ersatz leftover from Soviet Communist days, which is, like the parent that spawned it, headed toward the pacific land of the setting sun. For all their talk about scientific objectivity and recourse to *reason*, atheists seem to operate more from *will power* and thus blatantly (and it seems blindly) violate the laws of logic and empirical verification whenever it suits them. As Dr. David Aikman (2008) notices, there is an emotional

“tone to Dawkins and Hitchens that leaves one scratching one’s head in amazement, one of sizzling vitriol. Not to shock you, but early on in his book Dawkins almost quivers with rage when talking about the Almighty. ‘The God of the Old Testament,’ he thunders in his second chapter, ‘is arguably the most unpleasant character in all fiction’. He is ‘jealous and proud of it, a petty,

unjust, unforgiving control freak'. God is among other things, "vindictive", "bloodthirsty"" misogynistic", "racist", 'infanticidal', 'genocidal', 'filicidal', 'pestilential' and, of course, 'homophobic'."

This does not sound like objective science but like the ranting of an emotional ideologue. Moreover, if atheists would objectively review their own history and tradition (and stop trying to distort it), they will find all of these accusations, and many more, overflowing in their own infamous annals, which contain abundant and unequivocal records that detail human abuse and atrocities committed by atheistic and pseudo-mystic leaders such as Chairman Mao, Joseph Stalin, Adolf Hitler, and their Cambodian comrade, Pol Pot and the Khmer Rouge.

When people believe, as the atheists do, that feeble men make religion, Religion can be "remade" as either a psychological construct that "eviscerates and alienates them from their true human potential [Feuerbach, Freud, Nietzsche], or a social construct created by cunning men for purposes of social control" (Durkheim, Marx).

"It is the simplest thing to unmake it and, having done so, to erect in its place a Frankenstein-like structure of idolatry (the Cult of Lenin, the Cult of Chairman Mao, the Cult of Kim Chong-il, the Cult of Stalin et al) that unleashes upon the human race all the wickedness and cruelty of which humanity has shown itself capable" (Aikman, 2008).

The Soviet experiment failed because it was built upon atheism and a flawed anthropology resulting in faulty socio-economic, political, and eventually even mystical paradigms that in the name of humanity worked against humanity. Atheism, "on that grand a scale cannot sustain a sizeable nation, let alone a civilization" (Abusharif, 2009).

With the Kremlin bastion of international communism in ruins and the new Russia awakening to its Christian culture and heritage, Western atheism is a withering fruit off of the vine which, like the Soviet Union, is headed for the dust bin of history. The Communist Era vanished when the presidents of Russia, Ukraine, and Byelorussia announced its formal dissolution on **Dec. 8, 1991, the Feast of the Immaculate Conception of the Virgin Mary** who had said at Fatima,

"In the end my Immaculate Heart will triumph, Russia will be converted and an Era of Peace will be granted to mankind".

Christmas Day December 25, of the same year, 1991 is another significant day related to this Marian prophecy. On this day, Russia permitted religious freedom, Soviet leader Mikhail Gorbachev resigned from office, and the Red Flag was brought down from the Kremlin for the last time thereby symbolizing the end of atheistic communism and foreshadowing the return of Russia as a world power to its ancient Christian patrimony. On the day of Christ's birth, Christmas, 1991, worldwide atheism lost its *economic* and *ideological* support and began its pervasive decline.

It was as if C. S. Lewis' *Chronicles of Narnia* was unfolding in front of our eyes. The tyrannical rule of Jadis (whom Lewis referred to as the 'White Witch of the North'), renowned for her chilling anger and for the chill of perpetual winter she forced upon her subjects, led to a 'triumphant uprising' heralded by the return of 'Father Christmas' who after being banished for 100 years reappeared with these words,

*"I've come at last. She has kept me out for a long time, but I have got in at last. Aslan is on the move. The Witch's magic is weakening".*

A new springtime was occurring in the North. The old chill of communism was thawing; spring could be seen. The return of Father Christmas was a premonition of a still greater return of "Aslan", the "Lion King", which precipitated a general uprising, the dismantling of the witch's secret police, the reestablishing of the ancient cultural patrimony and the beginning of a new golden era in Narnia. As in Narnia, so in Russia and worldwide – Russia was reborn on the day of Christ's birth, Christmas Day, 1991; all that is left of atheism and communism are ideological holdovers who are increasingly becoming a vanishing breed.

Something new is on the horizon – we we are on the verge of a new world era: an *Era of Peace* that depends on the reparation of Russia for its great error of spreading atheism/materialism into every realm of the globe – into politics, ethics, law, education, the media and even into the supposed objective halls of empirical science. Abiogenesis began in the Soviet Union with Russian scientist Aleksandr Ivanovich Oparin who worked for Communist controlled Moscow State University. Hallowed halls all over the world still feel the effects as evidenced by the so-called "New Atheism" and the birth of Panenthesism, its long prepared for successor. Russia has a debt to pay, to God, to itself, and to the rest of the world. In this regard, Russian President, Vladimir Putin (2008) addressing an Orthodox gathering declared that:

“Both he and those who work with him represent a state which has done a lot over the previous decades to undermine the roots of our history and culture, including the spiritual one”.

He concluded this statement by asserting his hope,

“That the state will repay its debt to the Russian Orthodox Church and other traditional denominations and its debt to the Russian people” (Interfax 2008).

In a televised Christmas message on January 7, 2008, Putin announced:

“The Russian Orthodox Church contributes to the promotion of moral values in society. One should not completely draw a line between the culture and the church. Of course, by law in our country the church is separate from the state. But in the soul and the history of our people it’s all together. It always has been and always will be” (*Investment Watch, 2008*).

According to Interfax (October 7, 2010),

“Patriarch Kirill emphasized the personal involvement and active support by Vladimir Putin who has facilitated ‘good relations of trust’ between the Church and the government. The Patriarch expressed his appreciation for ‘full assistance rendered by the government to recover (the) cultural heritage of Orthodox Russia and its contribution in spiritual education and development of citizens’”.

Events such as these indicate that the theoretical and practical breeding ground for atheistic ideas is undergoing a transformation—atheism is dying. It is going its way along with Communism and Marxism, but syncretism (the synchronizing of different religious beliefs and practices) is on the crest of a New Age. In this regard, a potentially deeper

malady than atheism itself is, as indicated, an alliance between pseudo-mysticism and atheism<sup>27</sup>.

Stephen Asma (2011), writing about the *New Atheism* (of Sam Harris who has been identified as one of the “Four Horsemen of Atheism” along with Richard Dawkins, Dan Dennett and Christopher Hitchens) for the highly regarded *Chronicle of Higher Education*, that both reflects and helps shape the cultural climate on campuses across America, notes the tilt toward theism (pseudo-theism):

“Sam Harris’s new book may be a subtle *turning point* toward a more *normative* social agenda. If public policy is eventually expected to flow from atheism, then its proponents need to have a **more nuanced and global understanding of religion**”.

If Asma is correct, and I believe he is, an alliance between atheism and pseudo-mysticism seems inevitable. According to Asma (2011), Harris and the other horsemen are *not* upset by religion per se; rather, “they are wringing their hands primarily about **Islam and Christianity**,<sup>28</sup> which they think constitute their main combatants in a “zero sum conflict”, meaning one group’s loss is another’s gain – there is no option for mutual gain.

Nonetheless, not all Christians (and presumably, adherents of Islam) are necessarily viewed as enemies of the new thinking or as outdated cultural-lags inhibiting progress in a “zero sum” game. There is a distinction made between “*Christian Progressive*” and “*Christian Regressive*”. It is possible for Christianity, like other religions, to adjust and fit into the syncretic pantheon, but first it must purge archaic teachings on such things as: paternalism, abortion, homosexuality, and papal authority before it can

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<sup>27</sup> This is the direction atheism must go if it is to have any sort of future. The constant in all of this appears to be mutual rejection of the Holy Trinity as revealed in the New Testament. As stated above: atheists advancing the idea of Panspermia will likely join hands with the Panentheists. Both are already interested in looking for alien creatures that seeded the earth or who are coming back as avatars to guide humanity into an advanced New Age, one where Christian ideas of life have been transformed or replaced by Panentheist ones more acceptable to the atheists. Benign avatar humanists, and/or this new syncretic alliance, will presumably introduce a new meta-paradigm which, among other things, claims to solve socio-economic and religio-political problems. The new meta-paradigm also attempts to answer the problem of life’s origins from an integral perspective that unites “Cosmic-Science” and theistic New Age Theology in a way that is more palatable to atheists who are willing to make concessions to theism as long as the Christian idea of God is held in contempt.

<sup>28</sup> Atheist Antony Flew, has rejected Darwinism and primordial soup as explanations for the origin of life, but he is not a Christian; he dismisses conventional forms of divinity as “monstrous oriental despots of the religions of **Christianity and Islam**” (Navell, 2004).

fit as an “alternative new rite” under the New Age umbrella. In this regard, Asma points out:

“In 2009, in Brazil, the archbishop excommunicated doctors for performing an abortion on a 9 year old girl who had been repeatedly raped by her stepfather. The stepfather had impregnated her with twins. The girl’s mother, too, was kicked out of the church, but the rapist was not. That is the kind of dehumanizing and dogmatic religion that should be eliminated. Catholics deserve a better religion than that. But there are still aspects of Catholicism that are humanizing, consoling, and inspirational. Whether it is Catholicism, Protestantism, Islam, Buddhism, or animism, the virtues can be retained while the vices are moderated”.

This is anecdotal reporting: reporting that lacks any form of citation or information necessary to substantiate its veracity. This news report inflames passions while appearing broad-minded. Presumably, there is a place for a Catholic, Protestant, Islamic, and Buddhist positions in the syncretic world view: That which is “humanizing, consoling, and inspirational” can remain, but the “dogmatic, ethical, and judgmental” are, from the New Age perspective, anathema because they are, or have been, *associated* with evil through a game that includes psychological warfare against its perceived enemies. Ivan Pavlov, like Oparin, conducted his research on classical conditioning (associative learning) while on Lenin’s bankroll for the Communist Party. On learning about the power of psychological manipulation *via* association or classical conditioning, Lenin embraced Pavlov and told him that he had, “saved the revolution” (Hunter, 1956, p. 40).

So here we have it. A confrontation between ailing Western atheists/agnostics who can no longer count on the Kremlin bankroll and whose best bet is therefore to “play the old songs” and use what psychological, spiritual, and political tricks they have learned while aligning themselves with New Age syncretists versus Christian theism. The real issue behind much atheism is contempt of God; thus, it makes little difference to progressive atheists if they insist on *no God* or on a *false god*. Given this verity, it is a simple extrapolation: Atheists will predictably join hands with Panentheists. Communist holdovers will predictably adopt an ersatz spirituality and continue to spew forth their hatred of God by offering the world their newly adjusted evolutionary paradigm including a new religion, a new social order, a new man, and a new god.



Although science and traditional religion are being reconciled from a bout of misunderstanding, atheistic scientists will have none of it and are thus forced to look for allies to buttress their contempt of God and of paternal authority. They can expect little support from their old Kremlin champion who is increasingly involved in a different game: the strengthening of Russia and building a national consensus upon the Christian faith.

In this regard, the Russians are seriously reviewing the continued value of Darwinism in the public school curriculum. In February 2009, the Russian Justice Ministry established an Expert Religious Studies Council. The U.S. Commission on International Religious Freedom (USCIRF) reported that this Council has the authority to recommend curricula and participate in the approval process (Blitt, 2010). Reuters reports that the Council's proposed curriculum, which would introduce moral and theological instruction into Russia's public schools, is challenging abiogenesis and atheistic evolution. According to Metropolitan Hilarion who heads the Russian Orthodox Church's external relations department:

"The time has come for the monopoly of Darwinism and the deceptive idea that science in general contradicts religion. These ideas should be left in the past. . . . children should know of other theories too" (Humphreys 2010).

Russian Prime Minister, Dmitry Medvedev, demonstrating his commitment to Orthodoxy and the Christian roots of the nation signed a law on June 1, 2010 making July 28 a national holiday to mark the founding of Christianity in Russia with the baptism of Prince Vladimir in Kiev in 988 (US Department of State, 2010, *International Religious Freedom Report*). Speaking at the annual celebration commemorating the Baptism of Russia he said:

"The continual work of the Russian Orthodox Church will effect the revival of Christianity in our nation. Thanks to the Orthodox faith Russian culture through the years has acquired Biblical values on which the system of moral ideals for our nation is built" (*Pravda*, October 1, 2011).

Putin sent his own message on Easter Sunday, 2008 saying, "The state will continue to support the Church in all its work to enlighten the moral education of our citizens, strengthen the influence of family values, and consolidate unity in the Orthodox community" (Archives of the President of Russia, 2010).

On January 14, 2008, President Putin (then Prime Minister) spoke at a prayer ceremony for the sanctification of Assumption Cathedral at Valday Iversky Monastery in Novgorod. According to *Interfax* (January, 2014) Putin said that

“The Russian government is indebted to the Russian Orthodox Church” and he “promised to facilitate the revival of religion in Russia” and expressed his sincere hope to “repay” the debt”.

In this regard, according to the United States Department of State (2010, *International Religious Freedom Report*)

“In January 2010 Putin announced that the Russian government would provide \$64 million (two billion rubles) to restore ROC (Russian Orthodox Church) holy sites, monasteries, and churches destroyed by the Soviet government”.

On November 30, 2010, Medvedev was present at the Church of Nativity of the Mother of God in the Grand Kremlin Palace to deliver a personal message to Patriarch Kirill of Moscow and all Russia:

“I would like to inform you that today I have signed a law on religious property return to religious organizations. It is a serious law that was long discussed and coordinated” (*Interfax*, November 2010).

Whether they acknowledge it or not, news such as this places the atheists in an uncomfortable and (for them) an unusual position. Due to one of the most phenomenal turn-arounds in world history, they no longer have the support of heavily bankrolled and crafty Kremlin communists dedicated to atheism and abiogenesis. Cut off from the source, new and old atheists will most likely wither and die. At the same time, Western political elites and academics are increasingly touting spiritual values while moving toward a syncretic world view, while the New Atheists’ inane logic is increasingly coming under attack from multiple corners. In spite of substantial gains made by the New Age, they, along with the atheists, have lost their most powerful and influential ally, and neither one nor both combined are unable to carry either the empirical or the logical playing field.

Eric Reitan recently released his critique of the *New Atheism* in a book entitled, *Is God a Delusion*. In his review of this book, Dean Watt (2008) clearly illustrates the intellectual trend against the *New Atheism*:

“While Reitan is only one of many who have entered the fray between the ‘no God’ and the ‘God’ believers, his writing deserves our attention because he has a deeper knowledge of the subject than many others, some of whom he accuses of “careless thinking and intellectual laziness” which “are masked behind bluster and bravado. Dawkins mangling of Aquinas is a perfect example of this wretched trend”.

Reitan serves up Dawkin’s mangling of Aquinas in Chapter Five. Abusharif (2009) summarizes the introduction to this chapter by recalling an experience of the author (Reitan) with a New Atheist colleague in over his head. According to Abusharif (2009), one of Reitan’s colleagues,

“photocopied a page from a book without identifying the author. The page contained summaries of some of Thomas Aquinas’ arguments for the existence of God. When Reitan read the photocopy, he was immediately struck by the fact that the “writer of the passage got the arguments wrong”. The writer then proceeded to make no-God arguments that hinge on these errors. The author of that photocopied page was Richard Dawkins”, one of the acclaimed four horsemen of the New Atheism.

As he read Dawkins’ book he says, “I was taken in by his swagger”.

“Dawkins is clearly confident, writing as if he knows what he’s talking about. The only problem is that, as often as not, he has no idea what he’s talking about” (Reitan, Chapter Five).

When he comments on Dawkins’ refutation of Aquinas, he states:

“No important objections, successful or not, come from Dawkins. Instead he offers cavalier attack on a caricature, in which swagger replaces careful thinking” (Reitan, Chapter Five).

Peter Harrison, Professor of Science and Religion at the University of Oxford, offers similar remarks:

“Dawkins attempts to show the irrationality of religious belief by attacking some of the standard philosophical arguments for God’s existence. Unfortunately, Dawkins has blundered into a field he

knows very little about. He misunderstands the logic of the arguments and how they function in a religious context. His own naive and plodding counter-arguments would make a philosophy undergraduate cringe, and a number of reviewers have mercifully dispatched them" (the arguments, not the undergraduates).

"The book contains more factual and logical blunders than can be dealt with here. However, it has two general weaknesses that are worth highlighting. First, the case presented violates a standard principle of academic debate- that the most powerful critiques are those that succeed against the strongest version of the opponent's position. Dawkins has simply not bothered to familiarise himself with the vast literature on philosophy of religion and science and religion. He has not taken on the most sophisticated representatives of the religious viewpoint. Instead, he finds himself a few easy targets and scores cheap points" (Harrison, 2007).

In summation, given lack of support from the Kremlin, (the twentieth century's behemoth of socialism and atheism) and their own inability to adhere to the rules of academia, empirical verification and logical demonstration, the new atheists seem forced into a necessary alliance with New Age pseudo-theists who share their hatred of the Christian, Islamic, and Jewish God and the desire for a new civilization without Him.

Interesting as this topic might be, there is a more important one that is our focus: finding a *difference of kind* between human beings and other beings that will yield a unique definition of human nature ancillary to and necessary for the work of politics and social renewal in the modern world. The attempt to identify a *difference of kind* properly begins, as it did in this chapter, with an analysis of material constituents of a living body; they are the first phenomena observed when the human person is analyzed. This analysis necessarily involved making a distinction between living and nonliving things, between abiogenesis and biogenesis. In the process, we explored some basic information about cells, DNA and life, which led to the conclusion that life comes from life. Although atheistic empiricists have erred grievously while trying to demonstrate a material cause of this life, many have not learned from their errors and instead have embraced or are embracing Panspermia or something similar prefacing a predictable move toward the New Age paradigm. After demonstrating the weakness of the materialist position and *introducing* the philosophical position as well as factual observations regarding the relationship between the *cell* and *DNA* and *DNA* and *life*, it was concluded that the three (cell,

DNA, and life) are positively correlated and cannot be naturally explained by recourse to matter.

The atheist's attempts to ascribe *life* and *information* to matter have failed; it is clear that they violate principles of logic and are void of empirical evidence needed to substantiate an unverified hypothesis. The explanation offered by the philosophers: the soul, and by the theologians: a Creator, *are at least logical and in accord with empirical evidence, life from life, intelligence from intelligence*. The alternative offered by Panentheists and New Atheists is an imaginative return to a new hypothetical world, which includes the seeding of our planet by alien intelligence known as Panspermia. This idea<sup>29</sup> is not only *illogical, it is empirically unverified as were attempts to demonstrate abiogenesis until the materialists finally gave up and defaulted to outer space*. These ideas are as "far out" as Superman's<sup>30</sup> planet, Krypton. Thus, atheists find themselves in a difficult position: They have been abandoned by the Kremlin and are in need of allies, preferably allies who possess an evolutionary paradigm that, like their own, promises human happiness and fulfillment through social justice even if it entails a spiritual agenda. The New Age spiritual agenda is palatable because it not only presents an evolutionary paradigm; it also posits union with an ersatz god in contempt of God, the Holy Trinity, which is what most atheism is really about.

Disregarding Panspermia and focusing on a more logical and empirically verifiable position, the next chapter will proceed with an analysis of the relationship between life and DNA (life, matter, and intelligence) in search for a *difference of kind* by which human beings can be distinguished from all other beings.

#### ENDNOTE:

#### **Scientific Double Standards Spontaneous Generation and Geometric Dating: Atheists Cannot Have it Both Ways**

Geology and Biology are the two empirical sciences used to make evolutionary arguments. However, the two contradict each other when it comes to the calculation of time and the validity of currently observed data, central tenets of evolution. In the case of spontaneous generation, biologists maintain that *current*

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<sup>29</sup> *Not the idea of alien intelligence, but the idea of abiogenesis, which it retains*

<sup>30</sup> *Fictitious American super-hero who was born on the planet Krypton and sent by his parents to planet earth endowed with superpowers to fight for truth, justice, and the American way".*

**evidence** regarding living cells emerging from living cells (biogenesis) **must be disregarded** because. Biogenesis is such a universal biological occurrence that cells cannot be found currently emerging in nature by means of chemical evolution (abiogenesis). Therefore, it is hypothetically posited that **billions of years ago** cells arose by means of chemical evolution in a hypothetical primordial environment imagined to be so different from the current one that life somehow arose spontaneously from non-life and then **ceased to arise spontaneously thereafter** and thus can no longer be observed.

When it comes to dating the earth, however, geologists maintain that current environments must be accepted and hypothetical *primordial* conditions disregarded - geologists abide by currently observed data. The age of the earth must be calculated using *currently* detected decay rates.

#### IN THE BIOLOGICAL CASE INVOLVING LIFE

**Current observations** regarding cell genesis work against the hypothesis of spontaneous generation, (so they **must be rejected**). Conversely,

#### IN THE GEOLOGICAL CASE, INVOLVING THE DATING OF EARTH

**Current decay rates** favor the elapse of long time necessary for the evolutionary hypothesis (so they **must be accepted**).

To make their evolutionary hypothesis work, atheist geologists need mega-time; so they use *today's* atmospheric conditions to calculate the earth's age - current decay rates significantly increase the time needed to establish the evolutionary argument. To avoid a logical inconsistency, biologists and geologists cannot have it both ways; they should either both adhere to current data or both default to specious assumptions about primordial data.

Science demands that scientists adhere to observable data, to the known universal laws of physics that operate in any environment, such as entropy, and to the rules of logic and logical consistency. **Entropy exists as a law of the physical universe and thus is operative in all environments:** it is found in arctic environments, tropical environments, and continental environments; among plants, minerals, animals and humans; even on Saturn, Venus, and Mars! Science proceeds from universally verifiable physical laws; abiogenesis proceeds from unverified hypothetical constructs contrary to observed laws of nature universally validated by physics, chemistry, and geology *et al.*

If consistent, geologists should be among the first to reject the idea of abiogenesis; chemical evolution is based on a hypothetical primeval construct that rejects current data and well verified universal laws of physics. Abiogenesis exists only in the imagination of biological ideologues, those who are so zealous about their hypothesis that they willingly reject observable and measurable facts that geologists insist must be adhered to even when calculating their evolutionary

argument. So who's got current environments right, the geologists, or the ideological biologists? They cannot both be correct.

To be consistent and agree on one or the other would destroy either the geological argument about the age of the earth or the biological argument about spontaneous generation of the first cells. For the biological conjectures of the atheists to have any validity, geologists and biologists are forced to be inconsistent about current data. As long as people don't notice, the ideologues can promote their failed hypothesis as a validated theory - unfortunately for the ideologues, people are noticing

## CHAPTER TWO

### Relationship of Soul and DNA (Life, Matter, and Intelligence)

*The origin of the [genetic] code is perhaps the most perplexing problem in evolutionary biology. The existing translational machinery is at the same time so complex, so universal and so essential that it is hard to see how it could have come into existence or how life could have existed without it."*

Maynard and Szathmary (1995)

THIS CHAPTER is dedicated to the origin of the genetic code and to the corollary consideration of its relationship to the soul as animating life-force and form of the body, a body that is a living organism miraculously composed of non-living "dirt/earth". This "earth" from which living bodies are formed is unlike other dirt. It not only comes to life, it also acquires definite form due to the interaction of the *soul as life force* with a complex set of *genetic data* embedded in a cell's DNA for the transformation of non-living matter into the animated form of a living body. Matter, from which living beings are formed, contains an inexplicable array of data that, *even before conception*, predetermines or sets limits on the form matter will take after conception.

We see this idea affirmed in Genesis, where the Hebrew word. *adamah* is associated with "life" and "form". *Adamah is used by God to create living things* (Genesis 2:9, 2:19, and 2:7). According to these scriptural accounts, God both *forms*, "(wayyiser)" and "*brings forth*" life from *adamah*. *Wayyiser*, the Hebrew word for formed, appears only two times in scripture (Genesis 2:19, and 2:7); both times, it is associated with *adamah*. *Adamah* is used by God to form Adam and to form living animals and birds.

**Life and information are always found together.** To be of any use, DNA requires a living organism that possesses the requisite abilities necessary to materially express the implicit *form* contained within its genetic code. Microscopic cells are capable of transcribing (reading out) their little understood genetic code using highly specific mechanisms (ribosomes, golgi, etc.) to combine simple amino acids into complex sequences that fold into massive proteins for the production of cells and differentiated tissue necessary to express the form of a living plant, animal, or human body in matter. Without a living cell and its diverse organelle necessary to act upon DNA, the **information contained within DNA**



**would be useless. Likewise, without DNA, a living cell could not produce any particular form** such as a human body or any other species of body.

The existence of cellular DNA presents a curious dilemma: If, during an excavation, some anthropologists or archeologists discovered a *nonliving mechanical device* such as a watch, an automobile, or an airplane, presumably most of them, including any atheist in their company, would likely conclude that the device was designed and created by some type of living and intelligent being. On the other hand, a human body, whose complexity far surpasses that of any mechanical device and whose inexplicable life force is so mysterious that no amount of science has been able to explain it, is thought to have spontaneously self-assembled its microscopic component parts (amino acids, nucleic acids, etc.) from non-living dirt. After which, it supposedly formed a cell replete with DNA, genetic data, transcription devices, and production machinery and then, subsequent to their formation, conferred life upon itself and evolved from a single cell into an intelligent being (without a living or intelligent cause).

If non-living chemicals can randomly combine to form DNA or, for example, a living calf, they certainly should be able to combine to form a non-living clay heifer. Yet, if an anthropologist were to find such a figurine, she would likely conclude that someone created or manufactured it, that it is a cultural artifact to be studied for its value in revealing the cultural beliefs, norms, and folkways of a particular tribe or people. Yet, the same anthropologist, if an atheist, finding an intricate cache of DNA embedded in a decaying bone concludes that the DNA and bone cells both randomly self-assembled, spontaneously acquired life, and then evolved. Anyone who claimed that the less intricate clay bovine self-assembled and then invested significant amounts of time constructing a theory and hypothetical experiments to demonstrate this self-assembly would likely be considered a bit odd. Who would fund that research? Presumably, no one has any financial stake in the evolution of clay statues.

If a highly complex and living body can evolve, it is more likely that a less complex nonliving figurine can also evolve; in fact, given the plentitude of DNA, self-forming clay figurines should be ubiquitous. After all, the more complex is seriously thought, and then universally taught, to have chemically evolved before it ever acquired life, but I have never heard anyone claim this for something so simple as a clay figurine or even a mere piece of pottery. If a simple artifact like a piece of pottery requires a creative act, it is immensely more likely that a complex artifact requires a creative act too. If the greater is the product of chemical evolution, why not

the lesser – greater things depend upon lesser? If the *less complex clay figurine* and its design are evidence of creative intelligence, all the more so for the *more complex human body* and its DNA. A body, moreover, unlike any inanimate thing, *has intelligence encoded into its every fiber*. Nonetheless atheists, as if in ignorance of the fact, continue to ascribe the origin of a cell and its DNA to unintelligent, purposeless, and random acts of chemical evolution.

There is little consistency in this approach; a simple non-living piece of pottery indicates intelligent manufacture, but a multifaceted ineffable living organism characterized by embedded information indicates non-intelligent random self-assembly. If chemical evolution can engender the vast intelligence necessary to create a human body or a non-living cell *before it acquires life*, it certainly should be able to develop the miniscule intelligence necessary to create a clay figurine; it is made from the same “stuff”. In fact, nature should be able to manufacture a clay figurine by simple **random chance** without any intelligence at all!

Stone carvings are found on Easter Island and educational television marshals “scientific” evidence in support of spacemen and advanced intelligence. A cell and its genetic code are discovered and the same educational channels marshal “scientific” evidence in support of chemical evolution and random chance. This is a bewildering disconnect. Atheists and their New Age allies seem so astounded at the intellectual complexity of a stone carving, or at Nazca Lines drawn in the sands of Peru, that they are forced to conjecture space men for what they claim to be something so utterly remarkable that it requires “extraterrestrial intelligence”. Nazca Lines and stone carvings look silly in comparison to DNA and living cells, but the exponentially more complex cells and their inexplicable DNA are explained by natural random chance.

Those who speak loudest about the chemical evolution of DNA and cells are often the same people fascinated by space men who purportedly built the pyramids; certainly, the Panentheists are. If anthropological artifacts are used as evidence to discern unknown cultures, peoples, and places, certainly DNA has a claim to be used similarly. **It is an effect that must, like rock carvings and Nazca Lines, have a proportionate cause at least equal** to that which created the Nazca Lines that pale in comparison.

### ***Form and Information: Differences among Soul, Cell, and DNA***

Although empirical science has been unable to satisfactorily account for the origin of genetic information contained within DNA, philosophers tell us that the *information* found in cells is associated with a cellular life force long termed the *soul*. The soul, they tell us, is the *form* of the body and that which animates it.

By form, philosophers mean that which gives a substance constancy amid change; that which maintains its structure, function, and design in spite of continual cellular alterations; that which shapes it and keeps it what it is rather than something else. For example, aging cells are marked and destroyed with molecules being released for *elimination* or *uptake* by younger cells; meanwhile, a new supply of molecules are released from food in the stomach and circulated for cell uptake and cell division to replace destroyed cells. In this way a body's physical matter changes daily, but its *form* remains constant. If a body's form changed, a living dog could become a living cat. Thus, it is said that the *form* is essential for a thing to be what it is. Without form, matter is amorphous; with form, it takes on a specific structure and is endowed with particular functions that remain as long as there is life and a concomitant ability to process genetic **information**.

*Form* however, and *inform* are two different things. All matter has *form*, but not all matter has *inform*, *information* or "*form* that is *within*". Only *adama* has *inform*. To *inform* means to endow with information that determines the form matter will take because **the form it will take is implicitly contained within its genetic data even before the data is expressed in matter**. Only **living matter has *inform*** (genome comprised of vast DNA sequences – information) that can be actualized within a living cell on account of the soul that animates and gives a cell life. **A soul is able to actualize and express genetic inform by animating matter and thereby initiating cellular processing of genetic information**. Thus, to form and inform are related but different operations: All matter has form; only *adama* has inform.

It is the soul *as life force that acts as the driving catalyst or animating power that gives a body its form*; it is not the cell or its information. Cells and DNA exist, as we have seen, only in the presence of life; wherever life is found, so too are cells and DNA. Nonetheless, both the cell and its genome are necessary conditions for the living *act* of forming a body. The most general thing that can be said about any soul is that it is the "*act of the body*" or that which **actualizes** the potency in matter

(including its genome) to become a particular type of body. Aquinas states in His Commentary on Aristotle's, *De Anima*,

"If there is any one generalization that can be made for any and every soul, the soul will be the primary *act* of a physical bodily organism" (Book II Chapter I #233).

Matter that is informed by DNA has a built in potency to become a particular type of body. But *this potential cannot be actualized unless animated by a life-force*. Before matter is acted upon by the soul to form a body, it is in a state of potency--it is not a particular thing but in potency to become a particular thing. Form is that which makes matter to be a particular thing and the *composite* resulting from the union of matter and form (body and soul) is the particular thing that exists as a result of the union. Thus, the soul is said to be the "act of the body".

**Genome cannot act on its own, so it cannot be a cause;** it does not have life and thus, like all other non-living matter, it is passive until acted upon. There is an apparent driving force that initiates and sustains cellular action and *perhaps* coordinates which genes are turned on and off, replicated, etc. to create a body and sustain life. **Without this driving force to initiate genomic activity, there could not be any form expressed in living matter at all.** The genome contributes to a body's form in a way that no other matter can, i.e. it contributes the genetic information necessary for the soul to form a particular type of body.

In spite of appearances, *it is not the cell that operates, but the soul*. Without the animating force of the soul, there could not be any bodily form expressed in matter no matter how complex a cell and its organelle or the DNA contained in its nucleus might be. The cell appears to be acting, but in reality, it is the soul that animates or initiates the action that takes place within a cell. A cell and its DNA are useless if not animated or given life. *The two (cellular DNA and life) necessarily go together. In the absence of a life force, cells cannot process DNA to form a body.*

### ***Soul Life Force not Miracle Worker***

The soul not only contributes life necessary to express form, it also functions to maintain a body's form until it dies; only then does its bodily form suffer: "spontaneous degeneration" or decomposition. A scientist might say that decomposition results from the inability of dead matter to metabolize nutrients because of a bodily malfunction that caused or

contributed to death. In this, she is probably correct. However, this is beside the point. *Decomposition happens to something that is dead.* Of course, dead matter cannot take in nutrients, but *we are not interested in death – we are interested in life.* We are not interested in decomposition (spontaneous degeneration), but rather with *composition.* **The soul is the principle of life and of composition; it is not the principle of death and decomposition.** In fact, signs of decomposition associated with death indicate the lack or absence of a soul that brings matter to life in the first place.

A soul enlivens matter, but it does not keep it *perpetually alive.* If a body experiences severe trauma during which it cannot repair itself quickly enough to prevent breakdown, such as a gunshot wound or a fatal blow to the head, it will presumably die. **A soul provides the life force that initiates cellular movement in the first place.** It also confers form or works with **information** necessary to organize or compose cells into a unified body. Beyond this, the soul for the most part functions within parameters of the material world.

The soul cannot stop decay and malfunction; these are inherent in matter over time. **The soul is not God; it cannot perform a miracle;** it cannot bring a dying body to life or cure cancer. Like the body, *it too is created;* it did not self-assemble, confer life upon itself, and then spiritually evolve into a human person; there is certainly no evidence for this. Because it is not God, a soul depends on a body's structural functional integrity through which, with which, and in which it operates. It confers life and communicates or interacts with information within indeterminate or less determinate cellular matter to form a composite being (a being consisting of body and soul). **Once a composite body is formed and functioning, the soul is subject to its malfunctions;** if the central nervous system is destroyed, the body is going to malfunction and die. The soul confers life, but once life is given to an organism, it is subject to the basic nutritive needs and continued health of that organism. The soul is not able to multiply loaves and fishes; in the absence of food and other vegetative needs, a body will die.

According to philosophers and theologians, the soul separates from the body when the body is no longer capable of performing its vegetative functions; at this point five stages of decomposition begin<sup>31</sup>. **The**

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<sup>31</sup> **Fresh:** *Fresh begins when the heart stops beating. Because blood is no longer being pumped, it drains to the lower extremities causing discoloration (**livor mortis**) in the vacated parts. Shortly thereafter, the muscles become rigid (**rigor mortis**). Finally, because the cells are no longer performing work, the body begins to cool (**algor mortis**). The cells begin to lose their structural integrity resulting in the release of enzymes that further the process of decay (**autolysis**). Autolysis is often identified by blisters*

**soul initiates life but cannot maintain it in violation of physical and material laws**, which make a body subject to malfunction and decay. This is the similar case for the death of individual cells within the body.

### *What can Logic tell us about the Relationship of the Soul and Genome?*

If a living cell is composed of discrete elements, e.g., molecules that did not and do not have genetic information within them either before or after their integration into a cell, how did the cell acquire its genome to begin with? **A genome is found in every living cell, but it is not in the elements of which a cell is composed, nor could it have been manufactured by the first cell.** As we have seen, cells require the *previous existence* of DNA to guide their assembly and manufacture. DNA is only produced inside of a living cell; it has never been observed by anyone, not even an atheist (despite protestations and proclamations to the contrary) to manufacture outside of a cell. Logically, a living cell, as seen in the previous chapter, could *not* have evolved out of non-living molecules nor has it ever been empirically verified to do so. **A cell does not have intelligence necessary for self-manufacture** – it takes billions of highly diverse cells to make a brain, not just one.

Moreover the genome, an indicator of an intelligent cause, decomposes and loses its chemically encoded information when it ceases to be part of a living cell. Thus, *life force* and *genetic information* are unique *correlated* phenomena; **they are not found in non-living elements either (1) before they begin to be parts of a living cell or (2) after they cease to be parts of a living cell.** These statements are both logical and verifiable. Since it is also clear that the **origin of life and form cannot be explained by empirical or physical science, we have before us a metaphysical issue** requiring different methods that complement and add understanding to

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*on the skin's surface. As oxygen is depleted anaerobic organisms, in the gastrointestinal tract and respiratory system, multiply and begin to breakdown fats, proteins, and carbohydrates into acids and gases (putrefaction) which leads to bloat.*

**Bloat:** *Gases accumulate causing the abdomen to distend and overall bloating. Built up gas pressure is released through mouth, nose and anus. During bloat, maggots hatch and promote further decay by feeding on the body's tissue leading to skin ruptures and the release of additional gases resulting in the stench associated with decay.*

**Active Decay:** *Increased maggot feeding results in tremendous loss of body mass. As cellular fluids are released, bodily tissues are liquefied and bodily stench persists. Active decay ceases with exodus of maggots.*

**Advanced Decay:** *Decomposition slows; easier skin tissue has been consumed. Stench decreases and "skin beetles" arrive.*

**Dry/Remains:** *All that remains is dry skin, cartilage, and bones; the cadaver is skeletonised.*

our empirical observations. As stated by Maynard and Szatmary (1995) at the outset of the chapter:

“The origin of the [genetic] code is perhaps the most perplexing problem in evolutionary biology. The existing translational machinery is at the same time so complex, so universal, and so essential that it is hard to see how it could have come into existences or how life could have existed without it”.

**When we view the issue as a metaphysical phenomenon, a profound array of awe inspiring observations open up before us.** First, genetic codes are associated both with matter and with the animating power of a soul as life force. *That a genome is associated with matter is clear; it is made from it.* That it is associated with the soul (the principle of life) is unclear until it is pointed out, *viz.*

- \* Wherever life is found, genome is found, conversely
- \* Wherever genome is found, life is found
- \* Genome is *never* found in inert or dead matter except in decomposing genetic fragments that exist because they were once parts of a living organism

Thus, **DNA is associated with life or with living matter, more than it is associated with nonlife or with non-living matter from which it is composed.** This is a simple but profound correlation. Please take a moment, and consider it further: **DNA is universally associated with living matter (or previous life) but not with non-living matter.** This conclusion is a simple deduction from the facts. In fact, it is a *fact of life*<sup>32</sup>.

**Without life, genome and genetic information are useless;** without life, they are mere potency to form without actualization. On the other hand, *a life principle without form is meaningless* (life by itself without form would be amorphous with no practical function, structure or unified design); it would be formless *existence* without *essence*. The soul or some spiritual first cause must, it seems, be able to confer *both life and form*; it would be inconsistent to provide one without the other, a futile exercise.

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<sup>32</sup> *Despite what the abiogenesis cohort manufactures about viruses (see end note), viruses are quasi-life forms only because they survive through a **living host**, which incorporates a virus's small genome into its own genome to construct all of the viral components that are then assembled by a cell's organelle.*

\* If life is conferred to a cell, to have any meaning or purpose, the cell must also be informed. This is presumably the reason why DNA or genome (*information*) is universally associated with life as long taught by the Catholic Church (Ecumenical Council of Vienna (1311-1312) :

“We reject as erroneous and contrary to the truth of the catholic faith every doctrine or proposition rashly asserting that the substance of the rational or intellectual soul is not of itself and essentially the form of the human body....We openly profess with holy mother church that the only begotten Son of God. . . assumed in time in the womb of a virgin the parts of our nature united together,. . . namely the human, passible body and the intellectual or rational soul truly of itself and *essentially informing the body*” (Decree One: emphasis added).

In broad summary:

- Wherever living matter is found, genome is found.
- Wherever non-living matter is found, genome is *never* found (except in decomposing corpses that were previously living and thus were previously associated with life).
- Wherever genome is found, living matter is also found; non-living matter is *never* found (except in decomposing corpses that were previously living).
- Wherever genome is not found, non-living matter is always found.

It is only when nonliving matter becomes part of a living organism that genome is found.

- Wherever the soul is found as life force, DNA is also found as an integral component of form; *the two are positively correlated*.

**Thus, DNA is more associated with life and the spiritual soul than it is with the physical body.** Since this observation is empirically verifiable, “*Clearly, the student of politics must know somehow the facts about the soul*” (Aristotle, *Ethics*, Book I para 41) if he wants to be more correct in his analysis of the human person, which is antecedent to his study of politics.

If scientists would work closer with philosophers and theologians and conversely, if theologians and philosophers would work more closely with scientists and learn from them necessary information about the body



(which they tend to misunderstand and ignore) these issues might be better understood by all sides and harmoniously resolved to the benefit of everyone. In his address to the Pontifical Academy of Science (2006), Pope Benedict XVI recognized the inherent limits in the empirical method and the need to integrate the sciences with philosophy and theology:

“The scientific method itself, in its gathering of data and in the processing and use of those data in projections, has inherent limitations that necessarily restrict scientific predictability to specific contexts and approaches. Science cannot, therefore, presume to provide a complete, deterministic representation of our future and of the development of every phenomenon that it studies. . . . Denying that transcendence in the name of a supposed absolute ability of the scientific method to predict and condition the human world would involve the loss of what is human in man, and, by failing to recognize his uniqueness and transcendence, could dangerously open the door to his exploitation”.

Consequently, Benedict states,

“Philosophy and theology might make an important contribution to this fundamentally epistemological question by, for example, helping the empirical sciences to recognize a difference between the mathematical inability to predict certain events and the validity of the principle of causality, or between scientific indeterminacy or contingency and causality on the philosophical level, or, more radically, between evolution as the origin of a succession in space and time, and creation as the ultimate origin of participated being in essential Being”.

It seems as if the philosophers are on to something. There is need for a metaphysical science to account for the biologically unexplained origin of life and for the complex set of code imbedded in all living matter that links “participated being” to “essential Being”, which gives participated being its essential meaning.

Life has *not* been shown to arise spontaneously. Until it is shown to do so, it is logical to presume that life arises from a source with the ability to confer it. For almost three thousand years, philosophers have recognized this life giving substance and named it the “soul”. If the philosophers are right about this, then perhaps they are right about *Homo sapiens* being a thinking animal in search of wisdom and, as the theologians add, in a spirit of love. **The acquisition of wisdom is not only an empirical phenomenon**

**but also a metaphysical attainment of the body-soul composite** that, when more deeply understood, helps to account for classification of man as a unique species *differing in kind* from any other living thing, as will be shown.

Although we have quite a way to go before we can identify a *difference of kind* and a subsequent definition of human nature, these facts bring us closer to a conclusion:

- \* Matter does not acquire life except by contact with a life force present only in living organisms.
- \* All living organisms contain a complex and empirically unexplainable set of genetic information necessary to help direct matter into a particular form characterized by a specific structure and coordinated functions.
- \* Every time matter acquires life, it also acquires a new and more complex form; the two, *life* and *form*, are necessary complements that are positively correlated.

This unique correlation between life and form, when studied in unison with metaphysics as well as natural and revealed theology helps demonstrate **that life and form are not only correlated but also have a common spiritual origin**. As stated above, it would be logically inconsistent to provide one (life) without the other (form). **If life is conferred to a cell, to have any meaning or purpose, the cell must also be informed**. This is presumably the reason that we see genome associated with living matter more than non-living matter: *Genome is a necessary corollary of life*. As a result of the atheists' misunderstanding life, they also misunderstand form—the two always go together. Form is the first *act* of being; if matter is not alive, it cannot act; it can only be acted upon.

### *Like Life, Genome Provides Signs of Having Spiritual Origins*

Genome is the material medium through which the immaterial form of a soul communicates itself to matter. The soul as life force is spiritual, its body is physical. However, **to form a physical body, a soul must cooperate with informed matter**. The soul's form is expressed in matter to engender a physical body suitable to its powers, and operations. DNA is essential to the process, but the origin of its *genome* remains an empirically unexplainable phenomenon. As the repository of complex

information, it seems to have an *intellectual* and, therefore, as we shall see (Chapters Five and Six), spiritual cause.

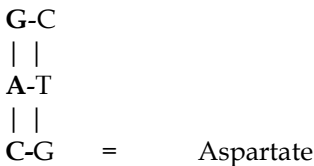
**If this is true, genetic information should show signs of a spiritual origin;** it should have a

- (1) *Spiritual dimension* manifesting its spiritual cause, and a
- (2) *Physical dimension* manifesting its physical properties.

### *Spiritual Cause of Genome*

It was stated in the previous chapter that DNA and its sequences of genetic information are two distinct things that (1) occupy the same space and are (2) made of the same molecular ingredients. DNA's structure consists of two separate linear strands composed of sugars and phosphates joined by strong ester bonds. Nucleic acids (A-T-C-G) appear in order all along these TWO strands. Remember that A is attracted to T and C to G like horizontal rungs of a ladder (base pairs) that bind the two separate linear strands together to form the double helix known as DNA.

These chemical base pairs are like individual letters grouped together into sets of three along a strand of DNA. A set of three base pairs is referred to as a *codon* or coding (word) that corresponds to a particular amino acid. A *gene* is a segment of codons or chemical base pairs (A-T; C-G) along a strand of DNA that, when taken together, contain instructions for the selection and biochemical linking of amino acids that are necessary to make proteins for the building of bodily parts, e.g.,



In the above illustration, (G-A-C) on the left side of the DNA strand is the codon for the amino acid *aspartate*. Every codon has a unique combination of three base pairs that inform a cell what type of amino acid to use in the manufacture of a protein. A set of contiguous codons taken together constitute a gene. In summary, DNA is a macro-molecule on which nucleic base pairs are arranged. Every three base pairs is a codon. A gene is simply a set of codons on a strand of DNA. Ultimately, all the genetic information *within* the entire genome consists of an ordered DNA code comprised of four chemical bases (ATCG).

## NOTE

As stated previously, “genetic data is not written **on** DNA; genetic data is actually an intrinsic part of DNA. If the phosphate-sugar backbone that binds the DNA into two strands is removed, not only does the genetic data (the ordered nucleotides) fall apart, the DNA Double Helix is also lost. **Take away either one (DNA or nucleic acids) and the other simultaneously disappears.**

## END NOTE

### *Like Life, Genome Provides Signs of Having Spiritual Origins Continued*

Although the genetic code (the ordered nucleotides) written into the DNA is one thing and the DNA molecules are another, **both are so interdependent as to actually constitute a *single unit*.** This interesting phenomenon illustrates how complex and unique genetic information is; *there is nothing else like it in the material world.* It is this unique phenomenon that provides empirical evidence for the spiritual origin of the genetic information embedded along the double helix.

If genome has a spiritual origin, **it is a hybrid of *spiritual information expressed in matter*.** In this is true, DNA should not be a *purely spiritual* nor a *purely physical* phenomenon but a *combination*. It should contain evidence of both spiritual and material causes under the premise that a cause is known by its effects. This premise can be analyzed by considering information shared among different hypothetical species of being.

### **Pure Spiritual Beings to Pure Spiritual Beings**

If pure spiritual beings (angels) exist, *their communication should be purely spiritual*; nothing material is needed so nothing material is involved.

### **Pure Spiritual Beings to Physical Beings**

However, if a spiritual being communicates within the material plane, i.e., an angelic apparition to children as at Fatima or a spiritual form encoded in concrete matter as in DNA, there should be evidence of two planes of manifestation, i.e. the spiritual (its origin or cause) and the material (the matter needed to generate an effect in the physical world – its

material cause). Matter is needed because matter is involved. Clearly, genome has material properties. Its spiritual properties are a little more difficult to discern. To find them it helps to consider information that originates from a material source and is received by another, such as from one human being to another. This type of communication involves a physical medium necessary to communicate such a message..

### ***Human Being to Human Being***

In the process of human communication, **two media are involved: one to communicate the message and another to receive it.** Since the communicator and receiver are both bound in matter, the message consists of at least two layers of matter: *one for the message itself and another for its reception.* For example, chalk (first medium) on a chalkboard (second medium), ink on paper, or binary digits on a floppy disk. Chalk symbols are one material cause, whereas a chalkboard is another material cause or medium, which supports presentation of the chalk inscribed information. The two media, chalk and chalkboard, **are capable of being separated from each other. However, when they are separated, e.g., chalk is erased, the data (first medium) disappears, but the chalkboard (second medium) continues to exist** and is available to support new information. Thus, communication in the material plane involves two dimensions or layers of matter, *matter on matter and the persistence of one following the removal of the other.*

**Genetic codes** contain information expressed in matter, but interestingly, such codes **exist as only one plane of matter.** Genome is both (1) a molecular structure and (2) a cache of complex data due to the arrangement of codons unique to each life form. Genome is arranged in such a way that if its nucleic acids are removed, **its DNA backbone is lost.** The genome therefore, contains evidence of metaphysical origins:

- (1) Genomic information and its supporting DNA structure are integrated and thus exists as a single plane of matter,
- (2) Genome has *inseparable instrumentality for defining life form:* DNA base molecules cannot be separated without losing both the DNA's molecular structure (chalkboard) and the genetic information itself.

This anomaly can be explained as a unique intersection between the material plane and the metaphysical plane. The intersection of these two planes as one inseparable unit is a *sui generis (totally unique)* reality not

found anywhere else in the physical-material world, which always requires at least two media for communication, one on top of the other.

In this regard, the East German scientist, J Peil (1973) writes “Information is neither a physical nor a chemical principle like energy and matter, even though the latter are required as carriers”. When information is communicated in the physical plane (even if it originates from a spiritual source), it requires a physical carrier as Peil suggests. Because a human being has a physical body, it is necessary to use a physical device (pen) to originate communication and another physical device (paper) to receive the communication. A pure spirit does not have a physical body, but when it **manifests in the material plane, it must somehow interact with matter or it will remain unseen or unobserved**. Since it is spiritual, it requires at least one plane of matter for its manifestation. Thus, in such a manifestation, there is a dual correspondence between spiritual and physical that involves only one plane of matter as when:

(1) A spiritual soul, as a *life force*, imparts life to a physical body

(2) A spiritual soul, as *form (or cause of form)*, interacts with matter (genome, amino acids, etc.) to inform a body.

This insight is a complement to the previous chapter: The correlation between the **life of a cell** and an unseen **spiritual or animating cause** (soul), is interconnected with the correlation between **information within the cell** (genome) and an unseen **spiritual cause** (soul or God). Both cases (life and form) involve just one plane of matter necessary to animate and inform a body.

In either case, there is only one dimension of matter (an animating soul does not add matter on top of matter nor does information in DNA). Moreover, if either animating life or nucleic acids are removed cells decompose—they do not remain as a chalkboard does when its information is removed. Chalkboards remain because they are *not* integrally united to the data they contain as genome is to DNA or a soul to its body.

“The unity of soul and body is so profound that one has to consider the soul to be the ‘*form*’ of the body: i.e., it is because of its spiritual soul that the body made of matter becomes a *living, human body*” (Catechism of the Catholic Church, 365).

## NOTE

To be the form of the body does *not necessarily* mean that the soul forms the body, rather it more likely means that it is by the *activity* of the soul that a body is formed. The soul has a form of its own that is communicated to its body, which is made in the form of the soul. It is not that the soul forms the body, rather, **the body is formed for the soul by the activity of the soul (its animating power) and thus is made in the form of the soul because, the “activities and dispositions of the soul are also activities and dispositions of the body”** (Aquinas 1951, Book 1, # 23).

In this way, a genetically informed cell (*adama*) can be understood as the complex material cause congruent with and in potency to the form of a particular type of soul expressed or manifest in matter. Whether the soul imparts genome to its cells or God put genome into cells at creation to be acted upon by their soul remains an open question; I tend to favor the latter.

### Hypothesis #1 Uni Plane of Data

*Genetic information is always found coupled with a life force; that is, wherever life is found DNA is also found. And wherever there is no life, there is no DNA. Since life is a spiritual power and DNA-genome is a uni-plane physical medium associated with it, this relationship provides evidence of a physical-spiritual relationship.*

This hypothesis is validated when DNA and genetic data are analyzed. Genes, as we have said, are an ordered array of nucleic acids consisting of bonds that hold DNA together. To build a human body, three billion nucleic acid base pairs spanning 23 different chromosomes inside each human cell nucleus must be sequenced **in an exact order**. If nucleic acids are out of order or missing, all that will exist is a bunch of meaningless nucleic nonsense that will produce nothing *viable*.

The intricately sequenced genetic information in DNA provides evidence of a spiritual origin. Unlike information communicated by a physical source in the physical world, e.g., chalk written on a chalk board, which adds matter to the chalkboard structure in order to communicate a message, information communicated by *a spiritual or immaterial source in the physical world does not require an increase in matter*. In other words, because a spiritual being does not have a material body, material *quantity* is *not* increased when a spiritual substance communicates within the physical plane. The various forms of information communicated among spiritual

and physical beings and the amount of matter required can be summarized as follows:

1. Spiritual being to spiritual being = zero matter
2. Physical being to physical being = two physical dimensions of matter and
3. Spiritual being to physical being = one physical dimension

The reason that (3) requires only one dimension of matter is the unique existence of only one dimension of matter needed for such advanced communications from a spiritual source, e.g., genetic information is written *within* not *on* DNA. DNA and its genome form one composite substance consisting of only one layer of matter.

## **Hypothesis # 2 Loss of Data and Medium versus Retention of Medium**

The distinction between *information carrier* (ink, digits, chalk, etc.) and *information receiver* (paper, disk, chalkboard) such that the removal of the former does not affect the latter holds only when information originates and is communicated within the material plane. It does *not* hold when communication of information involves both the spiritual and physical planes.

In this case (information involving both the physical and spiritual planes), loss of data results in loss of medium as well. **Genome only exists in the "composite"**. Take away either member of the composite (DNA or genome) and **both disappear**. Genome and DNA do not have "separate existence" or existence apart from each other. Thus, when one disappears so too does the other!

This unique phenomenon is not repeated anywhere else in the physical world<sup>33</sup> not even in such an ethereal transfer of information as the spoken word: Images and sounds conveyed by speech can be erased from the human mind by hypnosis or other means. However, in such a case, the brain itself (like every other physical medium used for the storage or communication of information originating in the physical plane) remains intact despite its loss of data.

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<sup>33</sup> *Except in the composite of sentient-nutritive soul and animal-plant bodies, which we shall see.*



*How Come DNA does not remain when its Genetic Data is Removed?*

Except for a miracle, a spiritual being, such as an angel, does not acquire or take matter up into itself to form a body for itself when it manifests itself in the physical plane, but it does use **one** dimension of matter (presumably interacting with light) to communicate its presence. Accordingly, after the resurrection Jesus exhorted His disciple Thomas to, “Reach here with your finger, and see My hands; and reach here your hand and put it into My side; and do not be unbelieving, but believing” (John 20:27).

Since God alone can perform a miracle, Jesus is communicating that He is God because **only God can perform a miracle such as a spiritual Being appearing with a physical body**. He is a spiritual Being miraculously manifest in flesh, a divine Person who is both fully God and fully man. His flesh is real. Thomas can actually touch and feel His body – it is not light or some ethereal substance. Jesus *cannot* therefore be a ghost (non-divine spirit); **a ghost cannot perform a miracle** and therefore cannot form a living body with real flesh. “A ghost does not have flesh”, but the resurrected Jesus does:

“While they were still talking about this, Jesus himself stood among them and said to them, ‘Peace be with you.’ They were startled and frightened, thinking they saw a ghost. He said to them, ‘Why are you troubled, and why do doubts rise in your minds? Look at my hands and my feet. It is I myself! Touch me and see; *a ghost does not have flesh and bones, as you see I have*” (Luke 24: 36-37).

We see a similar association of spirit and matter when the Archangel Raphael (*who cannot perform a miracle*) visited Tobias; even though Raphael **appeared to have flesh, he did not**. After finally revealing his identity to Tobias as one of the seven archangels that stand before the throne of God (Tobit 12:19), Raphael adds, “All the time that I was visible to you I neither ate nor drank anything. ***I only appeared to do so***”.

Raphael is a spiritual being, and thus when manifesting himself in the physical realm, he required one dimension of matter, something like what the New Agers call “ether” or some other lights substance. No angel, not even an archangel, can perform a miracle and take up into himself or create for himself a real human body, but it can use angelic knowledge of nature and the laws of nature to make it appear that it has a body. For an angel to actually acquire a body or appear to acquire a body requires either (1) *possession of someone else’s body* or (2) *mimicry of a body* induced by

supernatural angelic knowledge of nature by which a bodily image is somehow projected and appears to be real. In such mimicry, there is no DNA-genome or real human body although, as in case of Raphael, there appears to be. On the other hand, Jesus, because He is God, could perform a miracle. Thus, to prove that He was *not* a ghost, He had the apostles touch his hands and side to verify his divinity – only God can fashion for Himself and then unite Himself to a real human body consisting of living cells, DNA, and genome, a body, moreover, that is actually His. He used theological knowledge of spiritual beings (ghosts) manifesting in the physical plane, known even to the apostles, to prove He was God and not a ghost – ghosts do not have bodies.

This is presumably one of the reasons why there is apprehension about approving purported apparitions such as those arising from Garabandal, Spain: At one point, the supposed seers reported that their hands went through the Virgin Mary. When they touched her and the infant Jesus, **they reported that they could not feel anything**. Hands pass through light, but they do not pass through a real body made of flesh and bones. If from God, the apparition presumably would have been authenticated by the presence of real flesh as Jesus and the Virgin Mary, who **was assumed body and soul into heaven** by the power of God, should have (*Munificentissimus Deus*, December 8, 1854). The purported “miracle” at Garabandal cannot be confirmed and, in fact, is thrown into question by the assertion of only one dimension of matter where there should be two as in the miracle of God appearing in a real body – this is something an angel cannot perform, not even one of the “Seven Angelic Princes”, unless empowered by God to do so.

A spiritual being like an angel *cannot* form a real human body, but it can manifest an image of a body in the material world. To do so requires only one plane of light matter. DNA, like light and the apparition within it, is presumable *quasi*-spiritual. That is, DNA and genome (like light and apparition) are two diverse but composite things (information and the medium in which it is expressed) manifest in one material dimension. Consequently, **when either is removed** (either the genome [nucleic acids] or the medium in which it is written [DNA]), **the other disappears; nothing remains** (neither the genome nor its supporting DNA backbone) **but unorganized nucleic fragments used to manifest the data**. Similarly, an apparition and the light in which it appears are a diverse but composite substance. Like DNA and genome, when one is removed, the other disappears; nothing remains but unorganized light fragments used to manifest the apparition. The whole thing “goes up in smoke”, so to speak.

Whereas a miraculously created real body, such as the human body of Jesus, continues to exist even after His departure.

Interestingly, the genetic code actually exists *in* matter and not *on* matter. This is a most auspicious finding: “in” is the prefix for information – to place form within or to *inform*. When information is placed within, it results in just one dimension of matter as expected of a *spiritual cause*. However, when speaking of a *material source* (chalk on chalkboard), to inform means to place information on or “*upon*”. Chalk is put on a chalkboard, not in it.

Because the genetic code is contained “*within*” DNA, and because the genome contains data necessary to **express the form** of an animal, plant, or human body: it is literally *in-form* or *information*. Fascinating as this insight is, genome is *not* form; it is only in *potential* to form. The actualization of this potential requires the “act” of a soul or living-animating power capable of transforming *implicit form* (information) into *expressed form* manifest in matter. Form is a deep mystery hidden within the genome. As a deep mystery, genome is appropriately found hidden “*within*” a cell’s nucleus, the deepest recess of any living being! Here, within this mysterious microscopic primordial cavern of cellular life, we find one of the supreme mysteries *associated* with the origin of life and the formation of the human body, *viz.*, a *living* cell and its DNA.

Because genome is (1) associated with life (an immaterial animating power) more than it is with matter and (2) because it has been shown that *genetic information* has spiritual affinities related to a body’s “*form*” by which the soul actualizes the genetic potentials in indeterminate matter to become a specific determined thing, it can be concluded that genetic data “*within*” DNA is more spiritual than physical. Genome is either created by God as the ultimate spiritual first cause or with the soul as the penultimate spiritual contingent cause of both life and form as confirmed by logic, observation, and the magisterial authority of the church (*fides et ratio*).

As stated above, without life, form is useless (form by itself without life would be static information incapable of fulfilling its potential); it would be mere potency without actualization. On the other hand, life without form is meaningless (life by itself without form would be amorphous with no function, structure, or unified design); it would be a mere blob of existence without essence. *Thus, in addition to conferring life, the soul must be able, of necessity, to confer or actualize form. It would be inconsistent to provide the one without the other.*

## Summary and Conclusion

Scientists have spent too much time trying to explain the process of evolution without adequate knowledge of the origin of life on which it all depends. The theory about derivation from chemical evolution and its corollary *hocus pocus* life is an unreasonable starting place. Theories are supposed to help explain and to provide some degree of clarity; **this theory begins with an unobservable and an illogical first principle and, therefore, from the outset, engenders significant controversy and confusion before it ever takes its first step.** Why should anyone listen to anyone else about anything they have to say on a controversial topic when there is monumental and justifiable disagreement about the validity of their very first premise (abiogenesis)? How then can proponents of a theory that is supposed to bring some degree of clarity and provide some predictive validity expect fair minded people to bear with them if their very starting point is itself inexplicable? It certainly is a spectacular claim.

**Perhaps if the atheists had better understood the mystery of the human soul, they could have been in a better position to understand further mysteries contained in the human body.** *Complex genetic codes and living cells* do not spontaneously evolve and pop out of nowhere. Cells are multifaceted and mysterious living organisms containing complex sets of data that come from somewhere. *If there were more respect for the mysterious question of the origins of life and the form of the human body, there might be more respect for the living human beings that result from this mysterious process.* To know man, we must better understand his origins. **Dealing with biological questions pertaining to the evolution of a living organism without first adequately answering questions pertaining to the origins of life itself involves an adroit but unfortunate sidestep of the most fundamental and essential question** and, as a consequence, indiscreetly running headlong into the deep waters of theory formation without an adequate life preserver, in fact, without any life preserver at all. It is fair to say that this is not only theoretically unwise; it is practically imprudent.

There is no *a priori* knowledge needed for philosophical demonstration nor any *a posteriori* evidence necessary for empirical verification that enables a reasonable person to accept the propositions:

- (1) That incomprehensible genetic data arises spontaneously by the remotest chance from mere dirt and chemicals or
- (2) That a living organism rises from an indemonstrable dead cause.

**If a cause is dead, “it is not worth fighting for”.** It is time to speak plain old English: *non-thinking* things, that is, things like dirt, which lack intelligence, do not possess the wisdom to self-confer form. Nor can *non-living* things, like lightning, confer life – they can confer movement and cause death, but they do not confer life. Wisdom and life can only arise from a cause that possesses these *qualities* and is, therefore, capable of conferring them to others. It requires *omniscient wisdom* to inscribe the form of a human body into billions of properly ordered nucleic acids written into one dimension of matter hidden in the nucleus of a microscopic cell, and it requires *omnipotent power* to animate a cell to form a living body and bring dead dirt to life. Abiogenesis does not require omniscience or omnipotence. Contrary to both empirical observation and to logic, it remains a failed hypothesis that has never been verified.

Nonetheless, we have spent so much time on the question of the origin of life and of DNA that it is beginning to appear that chemical evolution is the most important issue in our study of integral psychology and the human soul. Important as life and DNA might be, we do not want to fall into the elusive trap that engages us in a sub-topic, important as it might be, that distracts us from the real work of building a solidaristic social system. **The real issue is not how the human species evolved on this planet but what, in fact, it means to be a human being, what in fact a human being is.**

Pope Benedict XVI is focused on the central issue. As Cardinal Ratzinger, he wrote a commentary on Genesis, in which he stated:

“We cannot say: creation or evolution, inasmuch as **these two things respond to two different realities**. The story of the dust of the earth and the breath of God does not in fact explain how human persons come to be (that is, give knowledge of the process involved) but rather **what they are** (emphasis added). It explains their inmost origin and casts light on the project that they are. And, vice versa, **the theory of evolution** seeks to understand and describe biological developments. But in so doing it **cannot explain where the ‘project’ of human persons comes from, nor their inner origin, nor their particular nature**” (Ratzinger, 1995, p 50).

“Ah! That’s the rub”. It is more important to know what a human being is than it is to know the process of his or her biological evolution. **To better understand human nature requires knowledge of human origins, and knowledge of the human form (body and soul), which cast light on what a human being is.** In this process of understanding human nature, an

integrated methodology utilizing philosophy, theology, and empirical science that thoroughly examines both the spiritual and physical dimensions of man is *apropos*. These two realms of knowledge are complementary, not contradictory.

“We are faced here with two complementary – rather than mutually exclusive – realities”. That is, “The inner unity of creation and evolution and of faith and reason” (Ratzinger 1995, p. 50).

In this chapter, the relationship between the *soul as life force and as form of the body and genome* has been established. Nonetheless, further study is necessitated by the fact that evidence linking *the life and form of the body to the soul*, interesting as it is, yields only a *difference of degree*. **That is, all animals, plants, and humans are animated by a life force, and all have form and a genome.** As profound as these subjects might prove to be, they do not solve our quest to *locate a difference of kind*. To find such a difference, we must move beyond the study of the body to a study of the mind.

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#### END NOTES: Earth's Early Atmosphere

1. Verbatim from: [www.truenews.org/Cretion\\_vs\\_Evolution/origin\\_of\\_life.Html](http://www.truenews.org/Cretion_vs_Evolution/origin_of_life.Html)

“The atmospheric conditions proposed by Oparin, Haldane and Urey were radically different from what exists today. Because oxygen destroys the chemical building blocks of life, they speculated that the early earth had an oxygen-free atmosphere. However, in the last few decades, evidence has surfaced that has convinced most atmospheric scientists **that the early atmosphere contained abundant oxygen.**

In the 1970's Apollo astronauts discovered that **water is broken down into oxygen and hydrogen gas in the upper atmosphere when it is bombarded by ultraviolet radiation.** This process, called *photo dissociation*, is an efficient process which would have resulted in the production of large *quantities* of oxygen in a relatively short time. Studies by the astronauts revealed that **this process is probably a major source of oxygen in our current atmosphere.**

**The assumption of an oxygen-free atmosphere has also been rejected on theoretical grounds.** The ozone layer (O<sub>3</sub> in contrast to O<sub>2</sub>, which supports animal life around planet earth, consists of a thin but critical blanket of oxygen gas in the upper atmosphere. **This layer of oxygen gas as O<sub>3</sub> blocks deadly levels of ultraviolet radiation from the sun.** Without oxygen in the early atmosphere, there could have been no ozone layer over the early earth. **Without an ozone layer, all life on the surface of planet earth would face certain death** from exposure to

intense ultraviolet radiation. Furthermore, the chemical building blocks of proteins, RNA and DNA, would be quickly annihilated because ultraviolet radiation destroys their chemical bonds. It doesn't matter if these newly formed building blocks are in the atmosphere, on dry ground, or under water.

So (chemical) evolutionists have a major dilemma. The chemical building blocks of life would be destroyed if oxygen was present, and they would be destroyed if it were not! This 'catch 22' has been noted by molecular biologist Michael Denton: "What we have then is a sort of 'Catch 22' situation. If we have oxygen we have no organic compounds, but if we don't, we have none either. Even if the building blocks of life could survive the effects of intense ultraviolet radiation and form life spontaneously, the survival of any subsequent life forms would be impossible in the presence of such heavy volume of ultraviolet light. Ozone must be present to protect any surface life from the deadly effects of ultraviolet radiation from the sun.

Finally, the assumption that there was no oxygen in the early atmosphere is not borne out by the geologic evidence. Geologists have discovered evidence of abundant oxygen content in the oldest known rocks on earth. Again, Michael Denton: "Ominously, for believers in the traditional organic soup scenario, there is no clear geochemical evidence to exclude the possibility that oxygen was present in the Earth's atmosphere soon after the formation of its crust.

All of this evidence supports the fact that there was abundant oxygen on early earth. However, with or without oxygen, evolution is in a no-win situation. Spontaneous generation could not have occurred either with oxygen – or without it"!

## 2. Virus Overview: Before reading the Note below, a little overview will help.

A virus is simply a piece of DNA or RNA (a slightly different form of DNA and an intermediate of DNA in cell production) along with some proteins as protective coating. A raw piece of RNA is known as a viroid. Some viroids are covered by a *protein coat* or *capsid*. Other viruses are also *enveloped*, meaning that the capsid is coated with a lipid membrane or viral envelope.

Cells are very selective as to which viral DNA/RNA is admitted across the cell membrane into the cytoplasm. A cell has to recognize the virion (name of a virus before it enters a cell and is replicated by the cell) before admitting it. Once admitted into the cell's cytoplasm the cell acts on it like it would a piece of its own DNA. The cell does not have a brain; it simply operates and does what cells do: use DNA to make a protein by processing its instructions.

Some viruses are RNA based, others are DNA based. If RNA based, it enters the cytoplasm; whereby the cell manufactures proteins using the viral RNA as a template. If it is DNA based it can be taken into the nucleus where it is integrated into the host genome. A *retrovirus* is a type of RNA that is converted to

DNA and inscribed into the host DNA. **RNA viruses** that are used to make proteins in the cytoplasm are known as *riboviruses*.

## End Overview

### NOTE

Wendell Stanley was awarded the Nobel Prize in chemistry (1946) for demonstrating that viruses are a mixture of nucleic acids (constituents of DNA and RNA) and proteins that used host cellular organelle for reproduction. Stanley established the “fact” that a chemical substance (a virus) while itself not alive, could behave as if it were, thereby **supposedly** demonstrating that non-living atoms and molecules could combine in an increasingly complex manner and evolve to a point where they mimicked life itself.

Of course, **the only problem is that Stanley manifests the human propensity to reify non-living things by projecting aspects of living things onto them.** In short, **he presented the evidence (and everyone accepted it) as if the virus is doing the work inside of the cell, when it is the living cell itself that is doing all of the virus’s reproduction.** Atheistic scientists like to say that a virus is “*technically*” nonliving. In fact, viruses are “*absolutely*” non-living and they are **not on their way to life.** Technically implies there is an exception or a catch 22; there is no exception; viruses are not living *nor on their way to life.* The atheist also like to say that viral DNA is **capable of replication inside the cells of living organisms”** (as if something dead could suddenly and magically come to life once inside the cell), **when it is the already living cells themselves that are replicating the viral DNA/RNA.**

Moreover, if a virus is replicated inside a cell, and this is the only way that viruses are made, (we have never found one replicated outside of a cell) then, logically speaking, the cell must be *equal* to or older than viruses themselves. **A virus could not replicate without a cell** and thus, like everything else subject to nature’ laws, outside of a cell, it would degrade.

**Viruses cannot be precursors to living organisms because viruses cannot be replicated without living organisms;** they lack the metabolic and reproductive powers provided by an already living organism or host cell. Again, to propose a virus as an example of an evolving self-replicating molecule increasing in complexity and slowly evolving toward becoming a living cell in some primordial environment is pushing the boundaries of honesty and scientific integrity. In fact, it is beyond the pale. **A virus cannot exist without a cell so it could not have evolved into a cell; it presupposes a cell for its own existence.**

Here we go again, the chicken and the egg: virus first, cell first. The idea just does not work. **The facts demonstrate the opposite of that intended by the ideologues.** So they come up with *the idea of “regressive evolution”* or reverses evolution (something that, like its cousin spontaneous generation, has never been



seen or verified), which maintains that instead of a virus evolving into a cell, a cell devolved into a virus.

This is another example of imagination run wild. **They try to have it both ways** contrary to all available evidence known to science: **anti-entropy outside of cells and entropy inside of cells**. The whole thing is an imaginary construct (which means, it is “made up”).

**No one has ever seen a living cell devolve**; living cells *decompose* when they die or alter their DNA through mutations and lyse, but they do not devolve in a process where every organelle and life support mechanism is progressively removed until all that is left is DNA/RNA.

### Where do Capsids and Viral Envelopes Come From?

Capsids are not acquired through a process of chemical evolution; like a virus, a capsid is *dependent on a living cell* for its manufacture. Although a virus provides the genetic instructions for the formation of a capsid, nothing happens without the cell; the cell provides the sophisticated organelle mechanisms to manufacture the capsid from the virus' genetic instructions. As part of the cellular capsid assembly process, a mechanism is also developed to package the viral DNA/RNA into the manufactured capsid (Newcomb, Homa and Brown, 2005).

Thus, both the virus and its capsid are dependent upon the cell for their manufacture. Neither the DNA nor the capsid “evolve” outside of the cell. The virus does not, as the atheists maintain, “invade” (reification) and “take over” (reification) the cell for its own purposes; raw data cannot have a purpose; it is not alive, and it does not have a brain nor is it an integral part of a biological system that does. This is another defense mechanism, known in psychoanalyses as reification accompanied by projection: projecting life *qualities* onto things that *do not have life*. We are expected to believe that dead DNA just popped into life. That is what we are told when it is said over and over again that DNA *invades* and *takes over* a cell; one minute it is dead and the next it is alive. Rather, the cell controls and achieves the whole process from replication to expulsion.

If a virus could self replicate its DNA then why has a virus *never* been seen to assemble outside of a living cell. If it could, why would it ever enter a cell in the first place, to what purpose would an organism that could self replicate depend on another organism for replication to complete the process of its own evolution? *This would be a step backward not forward*. It conveys no survival advantage and, in fact, cellular replication severely confines and limits the virus because viruses are rejected by most cells; only certain cells permit a limited range of viruses entrance across the cell membrane.

A virus is nonliving and thus can do nothing outside of a cell but decompose; this is presumably the reason why *no virus over ten thousand years has ever been found* (Poinar, 1998). *There is no fossil evidence for viruses*; there is fossil

evidence of organisms infected with a virus but no evidence of a virus itself. This is most likely the case because DNA degrades rapidly.

Thus, reason, common sense, and empirical observation all support cellular decomposition as the origin of viruses. Viral DNA/RNA is not evidence of chemical evolution; we have much better explanations that do not require entrance into the realms of illogical imagination. Imagination is a powerful and necessary scientific tool, but when it becomes illogical and empirically unverifiable, it is no longer imagination but fantasia.



## CHAPTER THREE

### “Matter, Life, Form, DNA and “Sentient Thinking”

NOT ALL THINKING is the same. “Thinking” associated with the *physical* operations of the brain and its integral sense organs is referred to as lower “*sentient thinking*”. Because sentient “thinking” involves the physical brain, it is subject to empirical verification. This type of “thinking”, because it is sentient or sense-based, is limited to memory and imagination relative to concrete sentient phenomena that serve bodily needs such as reproduction, generation of cells, nutrition, and survival. However, in human beings, sentient thinking also constitutes the *basis* for higher “*conceptual thinking*”, which involves rational powers and operations necessary to know the essence of both concrete phenomena and of abstract concepts such as “spirit” and “soul”, as we shall see in later chapters. In the previous chapter, it was demonstrated that inchoate matter does not organize itself, nor does it bring itself to life; similarly, it does not spontaneously form a brain for itself and then start to think. There is no evidence for such a supposition. It is reasonable to presume therefore, that **sentient thinking ability has** (like life and form with which it is associated – only living things with brains can engage in “sentient thought”) **something to do with the animating power of the soul that gives life and form to a body in the first place.**

Although sentient thinking takes place within the brain, **not all thinking is limited to physical things or to the brain** (as will be shown in later chapters). Sentient powers, such as *memory* and *imagination*, adhere to physical laws, which make them both possible and empirically verifiable. There is enough knowledge of anatomy, physiology, biology, chemistry, and physics to understand and **explain memory and imagination as physical processes**. But these sciences cannot adequately explain other types of thinking such as conceptualization, rational thought, and moral judgment. As indicated in previous chapters, biological materialists are able to observe living bodies and thereby significantly increase our understanding of *physical life processes*, but they suffer from an acute inability to explain the *origin of life itself* and fundamental *spiritual life processes*. They are therefore stuck with the embarrassing first principle of abiogenesis. In a similar way, psychologists are able to observe the human brain and significantly augment our understanding of *physical cognitive processes*, but they suffer from an acute inability to explain the *origin of thinking itself* and fundamental *spiritual cognitive processes*. Because they lack an integral methodology including a spiritual dimension, they are

therefore stuck with an outdated and *equally* embarrassing materialist reduction that misses the spiritual manifest in the physical. As a result, they attempt to negate the spiritual with shabby and specious cognitive research similar to that conducted to support abiogenesis.

Cognitive research is approached with great gusto because theists, materialists, and atheists all generally agree that the *difference of kind* we are looking for exists in the mind. But because **materialists limit the mind to a physical brain, they inevitably conclude that the difference between human and animal thinking is merely one of degree. Theists, on the other hand, maintain that the mental difference, in addition to being one of degree, is also one of kind.** In this chapter and in subsequent chapters, we will examine animal and human thinking in search for a *difference of kind* while keeping in mind (1) the inability of matter to animate and organize itself into a living and thinking being, (2) the spiritual nature of the soul as principle of life and of form, and (3) the inability of empirical science to grasp an immaterial cause. This inability accounts for a reduction that has led atheists to (1) misconstrue the origin of life, (2) falsely reify matter and (3) create unverified hypotheses that contradict empirical evidence and sound logic. Since matter cannot self-organize nor self-confer life or form, it seems illogical to insist that it can self-confer still greater spiritual powers such as rational consciousness and the ability to make moral judgments.

Like *life and form, rational thought and moral judgment* exist in spite of the fact that they are adroitly denied or misconstrued by materialists who misunderstand *thinking and moral judgment* as much they misunderstand *life and form*. **Only living beings can think.** We shall see that rational thinking, like life and form, is associated with the body, **but even more so with the soul.** To be able to comprehend the relationship among body, soul, and rational thinking, it is helpful to examine certain differences and similarities among plants, animals, and human beings.

### *Differences and Similarities among Plants, Animals, and Humans*

According to Aristotle and Aquinas, there are three kingdoms (plant, animal, and human) into which all living things can be hierarchically arranged such that each higher kingdom possesses the *qualities* of the kingdom(s) below it plus a unique *quality* not possessed by any organism in the lower kingdom(s). Thus, all plants and animals are characterized by the “*vegetative/nutritive*” *qualities* of life and form, but animals possess an additional “*sentient*” *quality* that plants do not possess. Specifically, plant responses to the environment, including seasonal

changes, are *automatic* and *unconditioned* vegetative/nutritive responses. Animals possess these lower nutritive *qualities*, but they also possess still more complex sentient *qualities* (involving external senses, central nervous system, and a brain) capable of sensation, perception, memory, and imagination, necessary for *associative learning* used in *conditioning*.

Because plants possess nutritive/vegetative functions but lack *cognitive sentient functions*, they cannot be *conditioned* to draw nutrients from the soil. **A dog, however** (because it possess external senses integrally united by a central nervous system to a brain endowed with sentient ability to remember and imagine), **can be conditioned to salivate for food at the ringing of a bell**. A plant might turn itself toward the sun (self-motion), but I have never heard of an experiment that demonstrated that a plant could be conditioned to turn east or west at the sound of a bell. Conditioning requires sense organs, memory, and the sentient ability provided by a brain and central nervous system that enable an animal to associate images and sounds, and to remember and respond to them based upon learned associations.

Plants have never been observed to learn by association (nor has anyone demonstrated that plants have memory, beyond genetic programming responses), or to possess imagination and or the sentient organs necessary for associative learning to take place. They respond to external stimuli through *reflex* (mechanical, physical, or chemical), **not through memory or imagination; they have no discernible internal or external organs capable of such functions**. Plants lack elaborate sensing devices (eyes, ears, nose, and mouth) and integrated relay systems connecting external sentient organs to a highly complex internal organ such as a brain capable of receiving and responding to external stimuli. Because they do not possess such organs or relay mechanisms, it is reasonably concluded that they do not have the powers of sensation and memory necessary for associative learning to occur.

For example, a dog might approach a man dressed in white offering it a bowl of meat while the same man dressed in gray, a color *associated in the dog's memory* with past abuse, might not be approached at all. Instead, the dog might growl and bark in an aggressive or defensive manner. These painful memories elicit a *psychological* fear response that overrides the *physiological* attraction to food resulting in a fight or flight response.

Memory and imagination are referred to as *sentient qualities* because they involve the senses. Unlike *vegetative qualities* (respiration, healing,

metabolism etc. which are automatic) possessed by animals, plants, and humans, sentient *qualities* (memory and imagination) are possessed only by animals and humans. Thus, **an essential distinction is made between vegetative plant life and sentient animal life based upon essential powers inherent in their nature.** Nutritive and sentient differences are universal differences *of kind* that distinguish the animal kingdom from the plant kingdom. Thus, in spite of the fact that all animals and plants possess nutritive powers, the animal kingdom is hierarchically arranged above the plant kingdom.

### *Where do Humans Fit in?*

Since atheists consider *human rational* thinking to be a mere variant of *animal sentient thinking*, they clump human beings with animals. As a result, most taxonomic classification systems contain a clear demarcation between plant kingdom and animal kingdom but not between animals and human beings. Because human beings possess sentient powers and operations, they are placed in the animal kingdom even though they are classified, as “*sapiens*” or wisdom seeking, which connotes a spiritual ability associated with a still higher kingdom of intellectual being.

Unlike 19th and 20th century biologists, who were busy breaking down and analyzing the smallest microscopic components of life (cells, molecules, atoms and subatomic particles), ancient and medieval thinkers, such as Aristotle and Aquinas, were more in tune with contemporary meta-approaches. **They focused on the synergistic whole, on the complete biological-psychological (body-mind) composite, on the entire person, rather than a simple part.** Thus, they were able to discern a third taxonomic dimension, *viz.*, *rational - intellectual life*, which power they found only in human beings who correspondingly occupy a unique third rung on the ladder of life (plant-animal-human) and, therefore, a unique third kingdom that encompasses both the animal and plant kingdoms.

Like animals, humans possess all the *vegetative functions* and processes found in the plant kingdom; they also possess the *sentient functions* and processes found in the animal kingdom. All similarities at these levels (nutritive and sentient) including the autonomic nervous system, memory, and imagination are understood by almost everyone to be *differences of degree*. However, ancient Greek, Roman, and Christian natural law philosophers all insist that human beings possess an unique additional *quality* that makes them *differ in kind* from any plant or animal, *viz.*, rational thinking ability, which they claim is a power of the human soul united to

and dependent upon the brain and central nervous system while at the same time exercising a transcendent ability of conceptualization that is independent of the brain and therefore a mental spiritual *difference of kind*, which we will study later. First, it is necessary to analyze mental physical *differences of degree*.

## ***Part II: Sentient Thinking, Consciousness, Sensation, and Learning***

The human body is a complex macro-organism composed of integrated subgroups (muscular, skeletal, hormonal, cardio-vascular etc.) that work together through the coordinating efforts of the central nervous system. Although many functions such as respiration, digestion, healing, cellular replication etc. occur spontaneously (vegetative or nutritive powers), the present focus is concentrated on those aspects of the body involving conscious actions related to the brain and central nervous system that originate with sensation and conscious choice (sensitive or sentient power).

External sense organs are capable of receiving sense impressions or sensations. A *sensation* is a *conscious response* (not a memory) resulting from stimulation of one or more of the sense organs without any association to past similar experiences – no memory is involved. Sensation includes:

1. An internal or external object that is sensed
2. A faculty/organ capable of receiving the sensed impression, and
3. Conscious Recognition, which brings about a union between sensed object and sensing subject.

Human beings possess five exterior sense organs, each adapted to the performance of a specific function related to life and survival. These five organs are all located on the body's outer surface and, as such, are oriented to receive external stimuli. Four of these five senses are specifically located in the head, and one, touch, is universally present throughout the body. Some of these senses involve direct contact (taste and touch); others require a medium of exchange such as light rays or sound waves; some sensations cannot occur without them.

In addition to five external sense organs, there are also *four internal senses* whose organ is the brain: (1) *sense* consciousness, (2) *sense* discrimination or instinct, (3) memory and (4) imagination.



(1) **Sense Consciousness or “Common Sense”** differentiates stimuli from the various external senses and simultaneously synthesizes them. Each sense organ is capable of receiving only one type of sense data: A nose can smell various aromatic nards but it cannot see them; the ears can hear a song but cannot smell it and so on. **Common sense**, however, is an internal conscious power capable of receiving and interpreting all five sensations either individually or simultaneously as a single unit – this unique power distinguishes common sense from all the external senses.

(2) **Sense Discrimination or Instinct is another internal sense**; it has the ability to apprehend or *immediately grasp* the relationship between a sensed object and an animal’s physiological needs or appetites *without the necessity of prior learning*. This power is synonymous to what Aquinas refers to in human beings as, “intuition” or the human intellectual ability to grasp the truth of *a priori* self-evident principles, such as “you cannot get something from nothing”, *without demonstration*.

(3) **Sense Imagination** is an internal sense that physically retains and combines sensations (images) without memory of their being past. It is the physical mental ability to internally view and recombine stored images.

(4) **Sense Memory** is the internal power to retain, activate, and recall previous sensations stored as images.

Every sensation involves (1) an effect or impression from an external object on a sense organ, (2) a reaction by the nervous system and (3) consciousness of the sensation, which is its term.

The mere impression or presence of a sense object on a sentient organ is *not* a sensation; **sensation follows conscious awareness**. Because a sense organ such as the nose does not possess consciousness, it is incapable of sensation. Sensation occurs only after a subject is aware or conscious of the impression; only then is it sensed by the appropriate sense organ.

### ***Physiological Basis of Sentient Awareness***

Study of how external objects get impressed on sense organs belong to the domain of *physics*; nervous system responses belong to the domain of *physiology*; and, sensation proper, the domain we are interested in, (mental awareness) falls to *psychology*. External sense organ (eye, ear) receive and respond to sense impressions according to physical laws such as the attraction and repulsion of magnetic forces, but sense organs –

themselves - are not aware that they are hearing or seeing anything. Nor can a mere sense impression engender an *emotional response* to external objects. Such complex reactions require a *living being* endowed with *sentient acuity*, a *relay system*, *consciousness*, and *memory*, which are all sentient powers found in humans and animals.

External physical phenomena (sound waves and light rays) are also required for sensation. They are necessary conditions or “carriers” for hearing and seeing. A sound cannot be heard without a sound wave to carry it, nor can an image be seen without a corresponding carrier light ray. Although necessary for hearing and seeing, sound waves and light rays are not the direct cause of hearing or seeing; *they are necessary but insufficient corollary causes of sensation*. In addition to the carrier waves, sensation requires the work of both a body and a conscious subject. Sounds and images carried by waves and rays are impressed on sense organs and then transmitted to the brain where sensation (consciousness) is awakened resulting in an impulse which travels back along a motor pathway thereby causing a relay response in the sense organ. In the absence of *conscious recognition*, no further local response (such as pain, fear, delight etc.) can be elicited even though an event has occurred. A local response presupposes conscious awareness of a sensation. The proof of this verity rests on the empirically verifiable failure to recognize stimuli while sleeping or while under medical anesthesia. Thus, a sensation is experienced in the senses but only after it is relayed to the brain and recognized by sense consciousness.

### *More on Sensation and Light*

Eyesight requires four things: (1) an object to be seen, (2) the power of vision, (3) the presence of light and (4) sense consciousness. Nothing can be perceived without light; it is the medium that connects the power of vision to an *external* object and thereby makes sight possible. In a pitch dark room (one with absolutely no light at all) nothing can be seen, not even by a person with 20-20 vision.

Light travels at an enormous speed; it penetrates through transparent and translucent (blend of transparent and opaque) objects or reflects off of others. Reflected light travels so fast that its detection is physically impossible with eyes. Of course, *the reflected image that reaches the eye is not the actual object that is sensed*. **The sensed object does not move, rather, light moves**, and it carries the image at phenomenal speed through the pupil to the retina within the eye. Thus, sight, like sound, is dependent

on the relay of external data *via* rays, light waves for eyes and sound wave for ears.<sup>34</sup>

Sound waves and light rays continually carry data that once sensed is stored in the brain. **No one is born with a mind full of sensory data; it all has to be acquired through the senses *via* interaction with the external world. That is why people born blind lack images of external objects – they must be visually imprinted on the brain. Nor, for the same reason, do colorblind people have internal images of color.** Sense images result from sense experiences and require *functioning* external sense organs and internal faculties such as memory and imagination, which are necessary for capture and retention.

**The Aristotelian, Thomistic, and Christian position is that nothing is in the mind that is not first in the senses.** Contrary to metempsychosis, Jungian psychoanalysis, and New Age psychology, which claim that concepts, ideas, and memories are innate and awaiting discovery, Aristotle and Aquinas demonstrate that no one is born with preconceived ideas; no one is born wise – *knowledge and wisdom have to be acquired*. Some people suffer the pains necessary to acquire wisdom. Others, even in old age, act foolishly or make foolish decisions because they never searched for and acquired wisdom, and still others try a quick fix through mediums, gurus, peyote or related ersatz spiritual exercises, which take their money, tend to make them “wacky”, and/or result in disassociation, obsession, or possession. The Thomistic position is simple, sane, and demonstrable: The human mind is a vast intellectual power and potential storehouse of all things. It is capable of acquiring understanding, prudence, wisdom, and knowledge of all forms. However, at birth it is a mere blank slate, a “*Tabula Rosa*” as John Locke called it.

No one is born wise, no one is prudent from birth. These intellectual virtues, like scientific and philosophical knowledge of forms, must be acquired. This verity is empirically verifiable; it is not hard to find foolish septuagenarians, and probably impossible to find sagacious infants. Sagacity requires sustained effort! Mental images, like understanding and wisdom must be acquired. There is nothing in the mind that is not somehow traceable to the senses. Thus, **a person born blind does not possess internal images associated with sight**; all his/her images have to be gathered through the coordinated action of other senses, as *Maria*

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<sup>34</sup> Incidentally, sound waves travel at vastly slower speeds, orders of magnitude slower, than light waves because sound waves are physical matter that propagate and collide with other physical matter, typically air, until the physical matter collides with the ear drum. Collisions can arrive with different frequencies, which enable humans to hear music, etc.

*Montessori* understood. This insight constitutes the basis of her educational success and the proliferation of schools bearing her name.

**Although images and concepts are not innate, cognitive potential is.** However, cognitive potential must be trained and educated if it is to develop properly. Since a person's first experience of the world is through his senses, early childhood education properly begins (as Montessori and Rudolph Steiner correctly realized) with a sentient approach that combines the various senses to induce increasingly rich memory and vivid imagination. Enriched memory and imagination spring from acute and diverse sentient observations and habitual mental exercise that turn the lower mind into a fertile seedbed of enriched sentient diversity leading to easily retained and recalled knowledge, complex imagery, and vivid understanding required for creativity and the rational operations of the higher mind, which are necessary for the advanced pursuit and acquisition of wisdom.

**The human mind moves by way of what it knows through sentient observation, memory, imagination, and understanding to things that it does not know, but is capable of knowing through reason, comparison, contrast, analysis, synthesis, and judgment that deepen understanding and lead to wisdom that is acquired as the term of education begun in childhood.** From the Thomistic viewpoint, spontaneous or unexplained knowledge of unknown things or apparent innate knowledge results from either chicanery, a lucky guess, hypnosis, some type of mental suggestion, or from divine or supernatural influence.

In summary, sensation is not a simple automatic physical-nutritive *response* to external stimuli; sensation is a complex *conscious* realization of an external object received by a sense organ, such as the retina of the eye, and relayed to the brain for recognition and further processing. Nonetheless, because **sentient acuity** is characteristic of human beings and all other animals, sensations are mere *differences of degree* explainable by the sentient powers of memory/imagination and physical laws associated with matter; they do not, therefore, distinguish human beings from all other beings. However, at the point where sensations elicit an *emotional* response, they are no longer sensations, but *perceptions*. A sensing subject (animal or human) moves beyond sensation when sense images are *recognized, interpreted,* and followed by a *physiological or an emotional response* (often accompanied in humans by a further cognitive act or judgment), which is stored in the brain as part of a complex nexus known as a ***phantasm or image***. When these events occur, a sensation is transformed into a *perception*.

## Perception

Perception occurs when a person moves beyond mere *awareness* of a sensation and begins to interpret or to ascribe meaning to the sensation. A sensation can be interpreted in one of two ways: By **(1) subjective association**, meaning that current experiences are interpreted in light of similar past experiences or by **(2) rational analysis**, meaning that relative associations are transcended and objects are received by the intellect based on analysis rather than by mere subjective pairing. Rational analysis is a form of perception *limited to human beings*.

Perception is therefore a sensation that is paired with memories and emotions and/or rational analysis that affect the way a sensation is received. If it is not a rational response, it is a subjective emotionally laden response or reaction that is a physiological or sentient determinant of action.

Sensation is a purely physical phenomenon involving conscious awareness of an immediate experience. Perception, on the other hand, is either a sentient or rational response. In the first case, an animal or a person makes a relative or contingent *response* based upon paired associations or associative learning without rational thought being involved. In the second case, a person makes an objective response based upon a rational *judgment* that is superior to a paired association that is merely contingent.

Thus, perceptions join previous experiences and/or rational judgments to present ones. Perception *cannot* exist without sensation. Sensation is a *physiological* process and response to a physical stimulus, whereas perception is a *psychological* response to a sensation that ascribes it either relative or objective meaning. The mental result is called a *percept*.

**Merely receiving and being aware of a sense impression is a sentient act common to all animals.** Once a sensation is interpreted by *association* with past events, it becomes a perception, but it remains an act of a *sentient being* (animal or human). However, it becomes an act of a *human being* when the human mind makes a *rational judgment* based upon apprehension and conceptual understanding of a perceived object. In this case, perception is changed from a sentient association of paired past and present experiences (involving sensation, memory, and imagination) to an experience involving rational apprehension and intellectual judgment possible only for human beings, as will be further analyzed in later chapters.

The human mind operates along a continuum ranging from *lower sentient associative thought* to higher *rational objective thought*. If a person habitually resorts to memory and imagination, he is making sentient based decisions by recourse to contingent or relative associations and paired emotional responses. For example, saying that Barbara does not like Nancy because Nancy reminds her of Cathy or because Nancy makes Barbara feel bad (rather than making rational judgments/decisions about Nancy based on rational thought) involves Barbara in sentient based action stemming from relative associations—this is an associative response common to *all animals*. When a human being engages in these types of sentient acts, they are referred to as “**Acts of Man**”. Acts of man have their origin in the lower sentient mind. *Acts of Man* are distinct from “**Human Acts**” that have their origin in the higher rational mind. Like animal acts, “acts of man” are mere reactions to stimuli *via* paired associations, memory, and elicited emotional responses. They do not have a rational basis. They are based solely on associations, which, being merely relative, have no basis in objective reality.

Because judgments based on associations are relative, they are often unjust or unfair. That is why philosophers refer to sentient based judgments as “*acts of man*” rather than as “*human acts*”. Acts of man are mere sentient acts, which is a nice way of saying that they are animal acts elicited from a human person with an underdeveloped rational mind, a mind capable of objectively responding to sensations and perceptions following rational reflection rather than “blindly”. Because human beings are capable of thinking before acting, they are able to *regulate emotions, understand association mechanisms, and seek explanations for elicited associative responses*. They are therefore capable of either regulating or rationally cooperating with their emotions and perceptions to enhance proper human behavior or of responding to their emotions and perceptions through impulses and subjective associations like an irrational animal.

Although emotion precedes judgment, it should be subjected to judgment before acted upon and stored away as either an emotional *percept* or a rational *concept*. In this way, a percept is elevated from an animal act to a human act resulting in an *objective rational* memory rather than a merely *subjective, associative, and sentient* memory. If a decision is made to dislike a person, it should be based on valid reasons (*verified* commitment of gross injustices, prevarication, or willful violation of natural and derived civil laws *etc.*) and not upon some unidentified association or some vague feeling. A human act occurs when a sensation becomes a thoughtfully *interpreted perception lifted beyond mere association by rational analysis and judgment*. Rational analysis and judgment are operations of the human spiritual or rational soul that, as we shall see, do not belong to a sentient

soul. Interesting as this line of thinking might be, it will have to wait for later chapters – the sentient *soul* and its powers of *memory* and *imagination* are our immediate concern. In summary, when looking at perception as an act of associative meaning, that is, as an *act of man*, there is only a *difference of degree* between the perception of an animal and that of a human being. Perception is therefore not the difference of kind being sought. What about memory?

### *Memory as a Physical Phenomenon*

Memory is a complex mental phenomenon involving sensation, perception, the power to retain and recall sense impressions, and to bring them into the field of consciousness. Just as there are two types of thinking (1) sentient/perceptual resulting in a *percept* and (2) rational/conceptual resulting in a *concept*, and just as there are two types of perception (1) associative *acts of man* and (2) rational *human acts*), there are also two types of memory, spontaneous *sense memory* and voluntary *intellectual memory*.

*Sense Memory*, as stated above, is one of four internal senses (common sense, instinct, imagination, and sense memory). It deals with physical sense stimuli, the type of perceptual/sentient thought we are dealing with in this chapter. Spontaneous memory is elicited by present experiences depends upon stored associations elicited from previous experiences of similar phenomena; *sense memory is governed by association, not by rational thought as intellectual memory is*.

*Intellectual Memory* is not one of the four internal senses – it does not depend upon sensation but upon rational thinking; it deals with recall or recollection of **ideas, axioms, formulas**, etc., Intellectual memory involves recall of past intellectual formulas/concepts and is sometimes called *reminiscence* because it involves objective reflection, comparison, and judgment resulting in acceptance or rejection of a possible solution based upon particular mental procedures, which we will deal with in another chapter.

All memory involves (1) *retention* and (2) *recall*. *Intellectual memory* is facilitated by *understanding*. *Sense memory*, is facilitated by *association*. Our current concern and focus is sense memory – it is a sentient power.

### *Sense Memory and Emotion*

According to Jessica Ruvinsky (2007), there is a relationship between memory and emotion. In an experiment conducted at New York University, experimenters used electrical shock to induce fear among an experimental group of rats. By administering a shock every time the rats heard a beep—the paired events, fear of shock and beep, were successfully associated: *fear could be elicited by the mere sound of a beep*. Experimentally-induced fear was subsequently reduced and then eliminated after experimenters administered the drug U0126 (known to interfere with memory storage) to half of the conditioned rats (*the experimental group*). After administering the drug to the experimental group, experimenters replayed the beep to both groups but did *not* administer electric shocks. Twenty-four hours later (giving U0126 time to work), the experimental group was no longer fearful of the beep, while the other half retained their associated fear.

Thus, it seems that *emotion is an integral part of a percept*—emotions are stored with associated images as part of an *association complex* or *percept*. Emotional responses originate with sensing nerves connected by the central nervous system to the amygdala and the hippocampus of the brain, which are correlated with emotion, and the consolidation of memories (American Psychological Association 1998). Emotions are thus experienced in the body (like memory, sensation, and perception). They are physiological reactions that result when a recalled percept triggers neurological action in the brain, which releases hormones into the bloodstream so that a body can participate with its composite mind in an integral response.

The key point, for our purposes, is that *emotions* like *sensations* and *sense perceptions* are interrelated physiological phenomena that are explained by laws of physics, chemistry, biology, and behavioral psychology. They are *not* therefore *differences of kind* we are looking for. Thus far, we have eliminated matter, life, DNA, form, and the lower mental powers of sensation, perception, and memory. Through a process of elimination, we are left with imagination, consciousness, and rational thought as the only other cognitive powers or types of “thinking” or mental awareness where a *difference of kind* might be found.

### *Imagination as a Physical Phenomenon*

Imagination, like memory, is an internal sense. Images are the result of physical phenomena (light waves, sound waves *etc.*) interacting



with anatomical structures that work together to produce and store sentient-based sights, sounds, and smells in human and animal minds. Imagination can be either *reproductive* or *creative*.

**Reproductive Imagination** is the power of the *sentient* mind to reproduce a stored image of the original sense impression or percept.

**Creative Imagination** is a more complex ability to recombine stored images in order to create new ones that were *never experienced* or observed by any of the senses. That is, the external eyes might never have seen a purple elephant or orange tusks, but they have seen an elephant as well as the colors orange and purple, thus making it possible for the *creative imagination* to recombine these previously experienced phenomena to create something unique from them. Though capable of performing such operations, creative imagination is, nonetheless, ultimately dependent on the five senses for the data by which it performs its creative acts. Imagination is a type of mental operation that most people can readily identify with. Thinking about driving a new car or purchasing a house, going on vacation, and so on are all exercises of reproductive and creative imagination. Many philosophers do not consider reproductive imagination of this sort to be “thinking” *per-se*, but because it can result in adaptation or associative learning, I have no problem considering it a type of lower “mental process”; it certainly is a mental process that involves the brain. It is *common* for almost everyone to refer to imagination of this lower sentient type as “thinking”.

Imagination, moreover, is a mental process that is *involved in higher rational thinking*. But because both animals and human beings have the ability to imagine phenomena, philosophers looking for a *difference of kind* often refuse to consider imagination as thinking *qua* thinking; **it distorts the distinction between human and animal mental processes**. Nonetheless, this distinction can be maintained if we are careful to distinguish between different types of “thinking”, such as, **perceptual** (sentient or material) and **conceptual** (rational or spiritual), to be explored further below, and in the following chapters.

To continue, imagination is the *reproductive* or *creative* construction of images; it is associated with memory, which involves recall necessary for reproduction of images. Although memory and imagination are related but different processes, they are both *physical* processes explainable by physical laws and biological principles.

***Imagination and Memory are Physical Mental Processes Explained by Physical Laws***

Video and still cameras are among the best examples used to demonstrate that reproductive imagination and memory are physical processes explainable by physical laws. Cameras have a light sensing device (lens, black box and shutter) that transfers an external image (*via* a reflected light wave) to an internal mechanism where it is trapped and imprinted on light sensitive film capable of producing an internal duplicate (phantasm) of the external image carried by light and impressed on the physical medium at the back of the camera. In this action, a camera is physically analogous to an animal eye acting in conjunction with the central nervous system (the biological part) and light to produce an image on the back of the eye (retina). Both of these processes involve the conveying, capturing, recording, and storing of exterior images *via* a mechanical device capable of interacting with light to imprint external images on an internal medium through a process governed by physical laws.

Moreover, scientists and engineers have also created software and hardware, including analog and digital devices, capable of memory retention for recordation of moving sights and sounds. Movie projectors or computers are able to relay full motion images to a receiving screen. Through a process of *projected light*, images imprinted on film are *carried out* of the film and onto a screen. This process is analogous to the mind using its interior light to project images out of matter and onto the forebrain where they are observable for internal viewing. Anyone with normal sentient acuity can close their eyes and use their forebrain to imagine an outline of a tree, skyscraper, or any other object. If you do this, you should be able to observe this internal light that lights up the cerebrum and makes external objects internally intelligible.

In short, memory and imagination are physical phenomena (including biological principles that can in turn be analyzed as physical processes including chemical interactions). The recordation and projection of images is something engineers have been able to imitate with cameras, computers, and projectors. Because imagination and memory adhere to physical laws, they can be explained as physical mental processes (not spiritual-metaphysical processes) involving external sense organs and central nervous system. Since sensation, perception, reproductive imagination, sense memory, and emotions all involve physical-cognitive processes possessed both by men and by animals, the difference between

human perceptual thinking and animal perceptual thinking is one of degree as the materialists insist.

### ***How About Consciousness?***

We have nearly exhausted study of the more advanced functions of human beings and animals and have been able to find only *differences of degree*. However, memory and imagination also involve “states of consciousness”. That is, they involve a conscious subject possessing levels of awareness related to sensations and perceptions; perhaps consciousness is the elusive *difference of kind* being searched for.

### ***Transition to Appendix***

Anyone interested in (1) a deeper and *more complex* understanding of the problem of consciousness and (2) the relationship of consciousness to New Age ideas of spiritual evolution and (3) how New Age ideas are being challenged by political changes in Russia, should read the following Appendix: “*What is Consciousness*”. However, since the *difference of kind* being sought is not, in short, to be found in sense consciousness, this section could be overlooked.

At this point, we must ask if *matter, life, DNA, form, sensation, perception, emotion, memory, imagination, and sense consciousness* are all *differences of degree*, is there really a *difference of kind*? Or, is the difference in thinking ability between human beings and animals, like all the other differences, merely a *difference of degree* as Darwin and post-Darwinian researchers have long maintained? Finding an answer to this question requires a close examination of Darwin’s cognitive work, and that of his successors, to determine their positions, weigh their arguments, and evaluate their conclusions in the light of empirical evidence and philosophical reason.

## Chapter Appendix

### *What is Consciousness?*

Consciousness can be defined as, “The internal subjective experience by which man (or animal) becomes *aware* of his own thoughts, feelings, and actions” (Kelly, 1956, p. 54). Consciousness is inherently linked to sensation and perception which are, as we have seen, lower cognitive processes enmeshed in matter and involved in memory and imagination. **Mere sense contact without conscious awareness or the ability to recognize the contact would be meaningless and potentially destructive** (fire burning the skin for example). Likewise, possessing the potential for conscious sensation without *also* possessing external sense organs, like ears and eyes to receive sense impressions, would be frustrating: The potential for consciousness could never be realized or actualized.<sup>35</sup> The seven go together:

- (1) *Sense organs* necessary to receive data
- (2) *A neural relay mechanism and brain* to store and recall
- (3) *Sensations* and
- (4) *Perceptions*
- (5) *Memory* and
- (6) *Imagination* and
- (7) *Consciousness*

**The first six are physical; however, a problem arises when consciousness is added** to the mix. When it is said that animals not only *react* to associated memory and emotion but are also *consciously aware* of their memories and emotions, it is implied that **there is a subject** that experiences them. If humans and animals were not conscious, they could not feel; however, **if they do feel, they must be conscious of their feeling**. That is, they feel or experience their feelings. That this is true seems obvious, *viz.*, animals feel pain, contentment, hunger, and heat. Even human beings, who normally feel a light pinch on the arm while awake, fail to feel the same pinch while sleeping because they are not conscious of it while in a dream state. Clearly, **sensation requires consciousness for there to be feeling or emotive response**. Sentient consciousness is thus thought to be a complex integrated physical process involving the soul *as animating principle*, sense organs, relay mechanisms, a brain, sensation, perception, memory, and imagination culminating in sense consciousness. All are needed; any one by itself would be incapable of actualization and therefore meaningless. They all seem to fit together into a “tight sentient package”. Everything in this package can be demonstrated to

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<sup>35</sup> This is another reason it is held that plants do not have consciousness. If they did, it would be meaningless and cruel. Animals endowed with consciousness also possess the ability to flee from things such as fire and water that can destroy them by flames and flood. Plants, if conscious could only suffer fear and succumb to destruction with no hope of escape or avoidance – they have no such defense mechanisms. If they have consciousness, they are the most abused beings in existence. But, they do not seem to have consciousness. To have consciousness requires sensing organs and a central nervous system as well as memory and imagination, which they give no evidence of possessing,

be a physical activity. However, **when it comes to consciousness there does not seem to be an adequate physical demonstration.**

Engineers for example, are able to develop sensing devices that detect sound and movement, but they remain *unable* to develop sensing devices that feel pain or delight through contact with detected phenomena. A sensing device, no matter how intricate its detection abilities, does not get “hurt” when it is burnt nor does it feel pleasure when it detects warmth on a cold day as an animal does.

It seems that **sensation can be mimicked but consciousness cannot.** If consciousness cannot be physically mimicked, it is fair to ask: Is consciousness a sentient physical phenomenon and therefore a *difference of degree* as thinkers as diverse as Thomists, materialists, atheists and theists, have long maintained, or is consciousness spiritual and thus a possible *difference of kind* we are seeking? We already know that sense consciousness, no matter how spectacular or how inexplicable it might be, even if it proves to be a type of spiritual or immaterial power, can only be a *difference of degree* because, as confirmed by experience, both animals and human beings possess sentient abilities, including sense consciousness. Consequently, no matter how astounding sense consciousness might prove to be, it cannot be a *difference of kind*. Nonetheless, **efforts to demonstrate how matter might be arranged to acquire sentient consciousness have proven unsatisfactory**, giving rise to many competing theories. A few of them are:

**Dualist Theories** (claim consciousness is spiritual and physical)

**Panpsychism** (claim that all material things have some psychic ability distinct from their physical properties developed from “micro-constituents”)

**Eliminativist Theories** (deny consciousness and attempt to replace it with something else more conformable to the mind)

**Identity Theory** (identifies consciousness with physical properties).

The list is so long that,

“No brief survey could be close to comprehensive, but six (other) main types of theories may help to indicate the range of options: higher-order theories, representational theories, cognitive theories, neural theories, quantum theories, and non-physical theories” (Stanford Encyclopedia of Philosophy).

The issue is so clouded that William Kelly, a renowned Catholic psychologist, was forced to conclude that consciousness is an activity of the mind, “brought about in a way which psychology is unable to explain” (1956, p 54).

*Consciousness* is inexplicable because of its intricate involvement with matter: No one has been able to satisfactorily demonstrate how matter can be empowered with consciousness; yet, experts as diverse as materialists, old atheists, and (surprisingly) Aristotelians and Thomists continue to hold that matter can be,

and is, endowed with consciousness. Like life, consciousness is a power that is clearly existent, yet thus far inexplicable by recourse to empirical science.

The problem of matter being endowed with consciousness has arisen because both **materialist philosophers and empirical scientists have been trying to explain consciousness by recourse to matter ALONE**. Using this method, no suitable explanation has been forthcoming. According to Aquinas, sentient consciousness is enmeshed in matter. But **Aquinas does not limit his analysis to matter**; as usual, things are a bit more complicated. Just as there are

- \* **Two types of thinking** (*perceptual and conceptual*)
- \* **Two types of perception** (*acts of man and human acts*)
- \* **Two types of memory** (*spontaneous sense memory and voluntary intellectual memory*)

there are also

- \* **Two types of conscious awareness**, (*sentient/concrete and rational/spiritual*).

### *Species of Soul*

There are two types of thinking, two types of perception, two types of memory and at least two types of consciousness because, according to the Aristotelian and Thomistic philosophers, there are different types or species of soul (vegetative, sentient, and rational). Not all souls are *equal* in their ability to act, in the degree of their powers and operations, or in their order of perfection. Nonetheless, *all* souls have some characteristics in common; *all* souls are principles of *life* and of *form*.

“If then there is any one generalization to be made for *any* and *every* soul, the soul will be the primary act of a physical bodily organism” (Aquinas, 1951, 233).

By this, Aquinas means that *every* species of soul acts on simple indeterminate matter by animating it and actualizing its *form*, whereby both the soul and its matter become a complex composite being characterized by structural and functional unity and harmony.

Both Aristotle and Aquinas understood that **some souls are substances and others are not**. A “*substance*” is defined as a “being that has existence in itself” or that which is “subsistent” or exists in itself and not in another. An “*accident*”, on the other hand, is defined as being that does not exist in itself and, therefore, must exist in another (a substance), or not exist at all. Color, for example, is an accident that must exist in something else that has existence in itself (a substance) or it will not exist at all. A dog is a substance that exists or subsists in itself. It *does not matter if a dog is white or black, it is still a dog; color does not affect what it is, its essence or*

*substance*. If the color is separated out, the color can no longer exist independent of the supporting substance, but the substance, the dog itself, still exists regardless of whether it is brown, white, or black; color is an accident, but dog is a substance.

Thus, to say that a particular species of soul is not a substance is to say that such a soul is not capable of separate existence.<sup>36</sup> The *sentient soul* of an animal is thought to be one of three species of soul. A sentient soul cannot exist unless joined to matter. When joined to matter, the two, sentient soul and its matter, are considered to be a “composite” substance consisting of both sentient soul and its formed body. It is *the composite that is subsistent – i.e., a substance*; its parts separated from each other are not subsistent. A dog is a composite sentient being consisting of sentient soul and matter. As a *composite being*, it is a substance capable of separate existence. However, if its matter were extracted the substance dog would no longer exist. Likewise, if its soul were taken away the substance dog could not exist either, the body would decompose.

Composite sentient beings are therefore **complex substances (matter and soul) that cannot exist apart from each other**. As *complex or composite substances*, they are unlike angels, which are **simple substances**, known as pure spirits (simple means that they have no parts, i.e. they are not composite beings). Simple substances are capable of separate existence, which means that angels are intellectual beings that exercise *intellectual powers and operations* independent of matter (a body) and are thus *not in need of matter to actualize their angelic form*. A **sentient soul**, on the other hand, **does not possess powers and operations that can be exercised independent of matter; everything the mind of an animal is capable of doing involves its body!** It therefore must exist as a composite substance united to physical body. Perennial and Christian philosophers agree on this point.

“Sensation and the consequent operations of the *sensitive soul* are evidently accompanied with change in the body; thus in the act of vision, the pupil of the eye is affected by a reflection of color: and so with the other senses. Hence, it is clear that the sensitive soul has no “per se” operation of its own, and that *every operation of the sensitive soul belongs to the composite*. Wherefore we conclude that as the souls of brute animals have no “per se” operations they are not subsistent. For the operation of anything follows the mode of its being” (Q 75, A 3).

According to Aquinas, **a sentient soul**, unlike a spiritual soul, **is inseparable from its matter; it grows in matter and even dies in matter; it never exists apart from matter**.

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<sup>36</sup> But, this does not mean that a non-subsistent soul is an accident. An accident does not make a thing to be what it is; it simply individualizes it without affecting its essence. A soul, on the other hand, any soul, even a non-subsistent one, determines what a thing will be; an accident does not do this. A sentient soul is not a substance in itself nor is it an accident. But it is a substance when united to its body. Only then are sentient soul and its body taken together considered a substance.

Unless it can be demonstrated that sentient souls possess powers and operations independent of matter, (separate or subsistent), there is no need or rationale to suggest a demonstration for its existence apart from matter. Sentient powers, including sentient consciousness are all dependent upon and tied to matter necessary for the exercise of sentient operations. All evidence we have examined thus far from vegetative operations (respiration, metabolism, healing, etc.) to sentient functions (sensation and perception, memory and imagination) are explainable by recourse to matter. That is why animals are classified as physical, even though they have animating sentient souls. It is also why their souls are called sentient rather than spiritual: Everything they do can be explained by recourse to matter. Consequently, **there is no need to attempt a demonstration for transcendence.** The only dilemma is the one revolving around the issue of consciousness in the sentient composite.

This difficult concept is more comprehensible when it is remembered that **all living matter has an implicit form contained in its information or genetic code** nested in the nucleus of every cell. This code contains directions for the forming of an animal or plant body. **This species of form or *inform***, which we call "**corporeal form**", is **literally enveloped in matter.** *Corporeal form* is distinguished from subsistent or "*separate form*" that characterizes spiritual substances capable of performing spiritual functions independent of matter. Corporeal and separate/spiritual form are both further distinguished from "*material form*" of non-living substances such as dirt and chemicals.

To the point, an *expressed corporeal form* (a fully developed animal body) does not actually exist in a cell until the **information** within its genome is utilized and the corporeal form of a body is actualized from the genome. That is, **it does not exist as a form until expressed in matter**; it is a species of form that is always latent until expressed by the concerted actions of *living* cells and their genetic information used to form an explicit living body. **Corporeal form, like its genome**, as we saw in the last chapter, **vanishes when matter decomposes. Thus, corporeal form is inherent in matter and cannot be separated from it; it is actualized within matter and vanishes with it at death. It never exists apart from matter; it is born in matter and ceases with its decomposition at death. That is, the form of a sentient soul exists only in the composite expressed in matter; only then is it a *real substance that exists in itself (animal body and soul) and not in another.*** This is why Aristotle insisted, contrary to Plato, that corporeal forms (and material forms) have no real existence of their own apart from matter (except perhaps in the mind of God); Aristotle is simply correct.

This is also the Thomistic position supported by empirical science, which demonstrates the *implicit existence* of corporeal form within a genome that acquires actual *explicit existence in a fully formed body* but loses it (form) at death with the body's dissipation; corporeal form exists in matter, is expressed only in matter, and dies with matter. *Thus, sentient consciousness, an activity of a composite being, involves a combination of body and sentient soul; it is not exclusively an act of one or the other;* it certainly does not exist in mere matter outside of a cell and it cannot exist as corporeal form apart from a physical body



because such form has no existence apart from **its body**: Sentient consciousness is not a spiritual substance capable of spiritual acts or of any acts apart from its body! It cannot therefore exist independent of its body; **it exists only in the composite**.

A clarification is necessary before proceeding. Aquinas refers to the human soul (not its body) as a *subsistent form* because it is *spiritual and therefore capable of spiritual acts apart from its body*. It is not the result of a composite union of matter and form; it is simply the substantial form of a living body. But, a spiritual soul and its expressed “corporeal form” are not enmeshed – that is, a spiritual soul does not exist *in* matter. A spiritual soul has its own form apart from matter, that by which it is one type of substance rather than another. As a separate form, it is a substance capable of separate existence, *albeit an incomplete existence*. It is only when joined to its body that it is, like a sentient soul, a *complete* composite substance. Nonetheless, because it is capable of immaterial functions independent of matter, it is considered a separate substance. The rational soul, both as part of a composite substance and apart from the composite, is capable of spiritual functions independent of its bodily functions (such as understanding, which Aquinas held is performed without need of a corporeal organ, Q 75, A 3). Nonetheless, a spiritual soul **needs a body** in which to actualize its potentials (acquire wisdom, understanding, to love etc.). Actualization of these spiritual potentials requires a corollary ability to somehow interact with the physical world in order to acquire sentient based images upon which knowledge, understanding, and wisdom depend (as we shall see).

Consequently, the very first act of *any* soul is to physically express its form in matter. The *sentient soul* operates through its body, with its body and *in* its body – it actualizes all its potential powers, such as memory and imagination, in a physical body. Since the sentient soul can only operate in matter, clearly, it must first form matter into a body. This is why form is said to **be the “first act of the soul”**. In this regard, Aquinas iterates,

“Now *act* is *twofold*: the first act which is a form, and the second act which is operation....Now...Nothing acts except by reason of the first act, namely form” (1952, Question 1, Article 1).

There cannot be an operation without a formed substance capable of operating. Moreover, he states in the same article that form is the, “principle and end of operation”. It is the principle of operation because it is the necessary first act of the soul that acts through its operations. It is also the end of operation because by the soul’s action as formal cause (form), a complete body is made and all subsequent operations, *including the last one*, take place within this body whose end is determined by its form.

Thus, every species of living body is endowed with a species of life-giving soul characterized by various powers and operations that are expressed in *union with matter* (rational soul) or *within matter* (sentient and nutritive souls) owing to the formation of a body through which, with which, and within which (in the case of sentient and nutritive souls) all subsequent action takes place. **The sentient soul**

**cannot act without its animal body, nor can an animal body act without a sentient soul to animate it.**

*The Sentient Soul is “Made”, not “Created”*

These philosophical observations provide intellectual tools that facilitate understanding of consciousness. *The reason many scientists and philosophers have been unable to verify that sentient consciousness is physical is because it is not physical.* On the other hand, it is not purely spiritual either. **Sentient consciousness is a product of the composite that involves a sentient soul, which takes its form within matter, which is the body of the soul.** The sentient soul needs a physical body much like a flame needs a candle in order to actualize its potential to radiate warmth and light. A flame cannot be a flame, and thus cannot radiate light and warmth, without the necessary matter of the candle. Likewise, a candle cannot give off light without the actualizing agency of a flame; **they need each other.** A flame however, once actualized by composite union with its matter, is dependent on the continuity of its matter for its own continuity. The composite candle and flame live and die together so to speak.

Given what we have learned thus far about the animating power of a soul and its interaction with genome within a cell, it should be an easy task to demonstrate that the corporeal form of a sentient soul is not only expressed within matter, it literally unfolds within its matter, lives with its matter and dies with its matter. As stated, a sentient soul’s corporeal form is implied or latent (implicit, not yet expressed) in a cell’s genetic code. From conception, the form of an animal’s body is progressively actualized with each new additional cell. The sentient form of the sentient soul is expressed in its body as its body literally grows out from its first cell. It appears that Aquinas is correct: **Sentient form seems to unfold and develop within matter.**

“Since the *generator* (soul) is like the *generated* (body), it follows of necessity that both the sensitive soul, and all other like forms are *naturally* (not supernaturally) brought into existence by certain *corporeal agents* (that is not by God - He is not a corporeal agent) that reduce the matter from potentiality to act, through some corporeal power of which they are possessed”(Question 118, Article 1).

That is, the composite substance of body and soul is “*made*” not “*created*”. **Creation means to make from nothing** and is thus reserved for spiritual beings – they are not created from any physical substance.. Animal souls or forms, however, are said to be “made” because *after the “creation” of the first one*, all subsequent ones are the result of a natural process whereby sensitive and vegetative souls are “brought into existence” by a “natural, physical”, or “corporeal process”:

“In the *first production* of corporeal creatures...the corporeal forms that bodies had *when first produced came immediately from God*”  
(Q 65, A 4).

Afterwards, sentient bodies are **naturally generated by cooperation of animated cell, DNA, and matter**. Although the first animal cell and its sentient soul seem to have been created (for reasons explored in previous chapters; origin of life and form), subsequent offspring cells and sentient souls need not be:

“Since like is produced from like we must not look for the cause of corporeal forms (*after the first ones*) in any immaterial form (angel or spiritual soul) but in something that is *composite* (composed of matter and form, i.e. the corporeal soul and its body). Corporeal forms, therefore, are caused not as emanations from some immaterial form but by matter being brought forth from potentiality into act by **some composite agent**. But since the composite agent, which is a body, is moved by a *created* spiritual substance (sentient soul created enmeshed in matter) as Augustine says (De Trin. iii, 4,5), it follows further that even corporeal forms are derived from spiritual substances, not emanating from them, but as the term of their movement” (Q 65, A4).

Corporeal forms do not emanate from angels, spiritual beings, or from God, nor are they created by God, (except for the very first ones). They are derived from “something that is composite” (a composite spiritual substance), such as the composite of matter and soul, that brings latent form within DNA from potentiality as (**information**) into actuality. A *living* cell and its DNA work together being moved by a **sentient soul endowed with a spiritual power of life** enmeshed in matter to engender a corporeal form as the first act of the soul’s movement.

This process of being “brought into existence” is a physical or “corporeal” process of the composite (soul and matter, living cell and DNA) by which amorphous matter is transformed or formed into a living body through “**some corporeal power of which they are possessed**”. Although Aquinas did not know what this power was, he knew that it was corporeal. **Modern science has confirmed this position. All animal and plant bodies are literally formed in matter by a living cell acting on information contained within its walls.** A sentient or corporeal form is literally “brought into existence” (or made) by the combined efforts of animating soul, living cell, its complex organelle, amino acids, nucleic acids, sugars and DNA (the corporeal agents of the body-what Aquinas referred to as “*some corporeal power*”) that work together to “reduce matter from potentiality to act” by engendering a body that is **the flesh of its soul**.

DNA enables us to grasp how intermeshed an animal’s body and its sentient soul are – how spirit and matter intersect. In addition to the candle example given above, in which it was shown that a candle’s flame is analogous to a body’s sentient soul (they both live and die with their supporting matter); we have the example of DNA itself. DNA, which is used to form a body, is a unique one-dimensional manifestation of spirit acting in matter. In the previous chapter, we concluded that the inexplicable information contained in a genome is more associated with life than it is with matter and therefore more likely of spiritual origin than of physical. We saw that the genome contained within DNA provides evidence of a spiritual origin because its inexplicable data is intertwined into the

DNA double helix itself; the two (genome and DNA) are so intertwined that when one disappears so too does the other. Genome and DNA are so integrally combined that they constitute one inexplicable composite substance. Neither DNA nor its genome can exist apart from each other; they are *not* subsistent substances. Like DNA and its genome, a sentient soul and its body cannot exist apart from each other; they are not subsistent substances. They exist only as a composite substance – when one disappears, so too does the other!

The two, sentient soul and corporeal body, share a common destiny. Thus, when an animal's body dies and decomposes, its sentient soul likewise disappears as miraculously as it first appeared. This union of spiritual and physical as a composite substance sharing the same destiny is as true of DNA and its genome as it is of a sentient soul and its body: When a genome's supporting DNA body decomposes, its genome likewise disappears as miraculously as it first appeared. *We find this unique occurrence only where spirit and matter intersect:*

- (1) Sentient soul and its physical body, and
- (2) Genome and its supporting DNA body or backbone.

Similarly, a candle's flame also disappears when the matter of its wax body is consumed.

Thus, Aquinas says it is, "false" to say that a sentient soul has both "being (or existence-it is not a substance) and operation". It is false to claim these things of a sentient soul because such a soul cannot exist or have "being" apart from matter; it does not have any separate or subsistent being at all. *All its potential is for matter, all its operations occur in matter.*

### *Theological Support for the Creation and Making of Sentient Souls*

What does sacred scripture have to say on the matter? In the first chapter of Genesis God is quoted as saying:

*"Let the waters bring forth the creeping creature having life....And God said: Let the earth bring forth the living creature in its kind, cattle and creeping things, and beasts of the earth, according to their kinds" (Genesis 1:20-24).*

**In this account, no distinction is made among soul, form, and living matter; they are "called forth" together from matter and in matter.** God called forth creatures from the waters and from the earth. That is, He endowed certain matter with life giving power presumably enmeshing a living and life giving soul or a living cell within the waters and the earth from which He called forth living animals.

Whereas in the act of creating man, Adam was *not* "called forth" from the earth. Rather, God was personally involved. **He personally created man with His**

*own hands*. He *formed* the body and then He *personally breathed* a life giving soul into it.

“And THE LORD GOD *formed* man of the slime of the earth: and breathed into his face the breath of life, and man became a living soul” (Genesis 2:7).

**In neither of Genesis’ two creation accounts does God personally breathe the soul or breath of life into any animal. Only Adam is animated by a personal and external (to his body) primary cause: the breath of God (that is, a Trinitarian soul, the image of God in man, from the breath of Trinitarian Being). All other animals, are called forth in matter and from matter as from an impersonal and internal secondary cause operating within matter itself.**

Thus, the Genesis account seems to lend support to the idea that sentient souls are made enmeshed within matter. Sentient life and form arise, as we have seen, through the combined effort of the composite: a living or ensouled cell and its genetic information from which a corporeal body is formed from an *impersonal and internal secondary cause subject to His primary movement only at creation*. Thus, according to Aquinas, when scripture states, “*let the water and earth bring forth...*” **it is not to be understood as by their own powers**, but by powers that God had planted within them (generative or living seed and cells).

On this issue, he states:

“Not as though the power possessed by water and earth of producing all animals resides in the earth and water themselves...but in the power *originally* (not continually) given the elements of producing them from elemental matter by the power of seed (life and DNA)” (Q 71).

Even though these scriptural references seem to support the point that animals or animal cells and their corporeal souls were formed together from the beginning in matter, it is necessary to reiterate that the sentient soul although enmeshed in matter *and appearing to be physical is, nonetheless, a special species of soul. Because it is a soul, it is not material—all souls are “nonmaterial” principles of life.*

“To seek the nature of the soul, we must premise that the soul is defined as the first *principle of life* of those things which live: for we call living things “animate” (Q. 75).

For the soul to be a principle of life, it must itself have life to confer life, which makes the sentient soul immaterial because:

**“Nothing material can be the first principle of life.** For it is clear that to be a principle of life, or to be alive, does not belong to matter as such; since, if that were the case, all material things would be alive...Therefore matter—which is able to be a living thing or even a principle of life (such as a heart, which is a principle of life but not the first principle)—is as such

only *potentially* a living body. When it is *actually* a body, some principle must be activating its potency for being a living body. **Accordingly, the soul as the first principle of life does not consist of matter; it is rather immaterial so that it can animate matter into a living body**" (Q 75).

Thus, the sentient composite consists of both matter and spiritual form; it is informed matter. *Like genetic information that exists within DNA and not on it, a sentient soul lives within matter and is intimately connected to it (a rational soul, as we shall see, cooperates with matter but does not live "within matter").* Sentient consciousness, therefore is not a product of matter *per-se*; **it is neither matter that is conscious nor per-se the sentient soul but the composite** consisting of matter and sentient soul. **Moreover, because a sentient soul is a species of soul, it is spiritual** (all souls in as far as they are principles of life<sup>37</sup> and form are spiritual). Nonetheless, regardless of its existence as a spiritual principle of life, sentient souls are a species of soul **enmeshed within matter**. As we have demonstrated, when substances share physical and spiritual attributes (DNA-genome; light-angelic apparition), when one is taken away, the other disappears also. Thus, a sentient soul is not *on* an animal or *connected* to an animal be means of a bridging mechanism; a sentient soul is *in* an animal. A sentient soul is so much a part of an animal that when an animal's body dies and decomposes so too does its sentient soul.

It seems that *sensation* and *perception* along with *consciousness* are the result of the composite union of sentient soul and formed body. Memory and imagination are sentient potentials actualized in matter, with matter and through matter; they are impossible without matter. These sentient operations are manifestations of a soul's sentient powers united to matter for their operation. Since memory and imagination can be explained by recourse to matter, the sentient soul, as evidenced by its operations, is not subsistent because all of its operations involve its physical body. Thus, a sentient soul is not eternal but, like its body, temporal and subject to decay; it does not have any activities that transcend matter and thus lives and dies with the matter that it animates. Genome remains in existence only as long as united to DNA. Likewise, a flame remains a flame only as attached to its candle.

A *spiritual soul* (unlike a *sentient soul*), rather than being like a *physical flame* attached to a candle, is more like the *mystical flame* on the *burning bush* that Moses experienced on Mt Sinai. Because the mystical flame represents Divine Being, **it is spiritual and eternal and thus capable of miraculously radiating light and warmth without consuming its matter; it is not enmeshed in matter, but united to it**. The flame on the burning bush is not dependent on its matter (its body) for its power to radiate light, for if it were, it would consume its body. Although related to its body, **the ability to subsist as a flame is not a bodily activity**. On one hand, the mystical flame is capable of subsistence or separate existence apart from the body

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<sup>37</sup> See Endnote: *Sentient Soul Principle of Life, Form and Consciousness*

which it informs. On the other hand, a candle and its flame are a unified composite body, one in which the flame is dependent on its body for its own continued existence – it is non-subsistent. A non-subsistent flame continually consumes its body until, along with its consumed matter, it ceases to exist. Similarly, according to Aquinas, sentient soul and body form one composite so closely united that what affects one also necessarily affects the other. If sentient operations are

*“bodily activities, then the souls of animals are not subsistent (capable of separate existence). But . . . sensation and the consequent operations of the sensitive soul are evidently accompanied with change in the body; thus, in the act of vision, the pupil of the eye is affected by a reflection of color: and so with the other senses. Hence, it is clear that the sensitive soul has no act in and through itself, and that every operation of the sensitive soul belongs to the composite (soul and matter). Wherefore they are not subsistent, for the operation of anything follows the mode of its being” (Question 75).*

Thus, when its body is consumed, a sentient soul likewise vanishes.

### Note Well

A sentient soul is a unique and marvelous substance. It is endowed with unusual and inexplicable spiritual potencies (such as life and form) culminating in sentient consciousness realized in matter. Thus, the soul’s first act is to actualize its form in matter by interacting with its cell’s genome until it generates a suitable composite body through which, with which and in which it is able to exercise its powers and operations of memory, imagination, and sense-consciousness.

Our conclusion, along with Aquinas’, is that sentient souls, including memory, imagination, and consciousness are of such a nature that they live only while enmeshed in matter. According to the creation account recorded in Genesis, **animal sentient souls, unlike human rational souls, were not created outside of matter as spiritual substances capable of separate existence. Empirical observation confirms this theological verity: Animals do not possess any discernible powers or operations capable of functioning independent of their sentient bodies.** Sentient souls, nonetheless, are endowed with spiritual *powers* such as the **powers to confer life and to actualize form.** Life and form, however, are not *substances capable of separate existence nor are they differences of kind.* Accordingly, sentient souls provide no evidence that they are substances capable of *subsistence apart from their bodies.* Nonetheless, they are spiritual – life is an essential *spiritual predicate* of all living things, (Aquinas, Q 18, A 2; Q 75). **It is this spiritual dimension of a sentient soul united to matter that helps to account for the existence of sentient-consciousness.**

### Chapter Highlight

In a composite being consisting of spiritual and material parts, if either part is taken away the other disappears along with it. If the genome is extracted

from its DNA backbone or body, the body disappears with its genetic information. Similarly, if a sentient soul is extracted from its body, the body likewise disappears. Conversely, take away DNA body or sentient body and both genome and sentient soul disappear as well. Like a consumed candle and its flame, "they all go up in smoke".

A sentient soul is not on its body, around its body, or peripherally connected to its body. Like Genome within DNA, a sentient soul is integrally united to its body with which it lives and dies

*Solution: Sentient Consciousness is a Difference of Degree not of Kind*

Just as it has proven impossible to **induce** *life* from matter, so too has it proven impossible to *induce consciousness* in matter. Consciousness, like life, eludes our empirical understanding. Matter has life because it has a soul, which is its life principle. Life is positively associated with form and consciousness, which exist only in composite living substances. It is not matter alone that is alive, but the composite of body and soul. Nor is it matter alone that is conscious, but the body-soul composite. Mere dirt cannot bring itself to life, nor can it give itself consciousness, *which is an even greater perfection*. **Like DNA, consciousness is found only in living matter**, that is, matter endowed with a soul and properly formed for its purposes.

Thus, matter endowed with consciousness is explainable in the same manner that matter endowed by an animating life force is explainable: It has its origin (genesis) from a Being who is able to create a sentient soul as a life-giving principle capable of communicating life and form to matter in order to generate a conscious living body through which it exercises its sentient powers. Like the obvious existence of an *unseen animating power* enmeshed in matter, a sentient soul presents us with an *unseen conscious power* enmeshed in matter; both are clearly there. We experience them continually, but empirical science, by itself, is unable to satisfactorily explain either without the assistance of philosophy and theology - empirical science cannot give an *adequate* account of composite substances involving immaterial powers and operations involving, life, form, and sense consciousness.

Nevertheless, great as sentient consciousness is, it is *not* a *difference of kind*; it is merely a more complex *difference of degree* shared by humans and animals. Between plants and animals, sentient consciousness is a *difference of kind*. Consequently, sentient souls are higher on the *Ladder of being*<sup>38</sup> than nutritive or

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<sup>38</sup> *Being or existence is said to be lowest on the "Ladder of Perfection" because being is common to all actually existing things (all actually existing things have being). Being is on the "Ladder of Perfection" because it is greater than non-being, which as nothing can have no perfection and thus is not on the ladder. The perfection of being consists in its coming to be from nothing. Higher still on the Ladder of Perfection is being endowed with life, which is possessed by fewer and thus less general (only plants, animals, and human beings are endowed with life). Life is even more miraculous than existence and*



vegetative souls. But we are not as interested in differences between plants and animals as we are interested in differences between animals and human beings – animals and human beings are both endowed with consciousness; plants, as far as we can empirically verify, are not.

In conclusion, consciousness is an immaterial sentient property of a sentient soul so enmeshed in its composite matter that neither can be removed without destroying both the other. As a sentient power enmeshed in matter, it is possessed by both humans and animals and is therefore a *difference of degree*. Since we have not been able to find a *difference of kind* by looking at **life, form, genome, sensation, perception, memory, imagination, and consciousness**, it seems that the materialists might be correct, *viz.*, there are no *differences of kind*.

When intricate sentient abilities such as consciousness are coupled with anthropological data about mammals, especially primates seemingly solving problems, the evidence seems to favor the materialists: The evidence for a mere *difference of degree* seems to be overwhelming.

This intriguing finding leaves us asking: Does a *difference of kind between animals and human beings* actually exist, or is rational thinking, like consciousness, merely a *difference of degree* as Darwin and post-Darwinian researchers have long maintained? To find out will require a closer examination of Darwin's cognitive work, and that of his successors, to determine their positions, weigh their evidence, and evaluate their conclusions in the light of empirical evidence and philosophical reason. However, before proceeding to Chapter Four, it seems wise to first examine a perplexing New Age twist wherein the *sentient difference of degree involving sense-consciousness*, because it is in some ways a *spiritual* difference, makes any possible finding of a *spiritual difference of kind* (if one can be found) actually irrelevant.

On the one hand, we have to demonstrate a *spiritual difference of kind* between animals and human beings to the "Old Atheists", (who insist there is only a *difference of degree*). This is something we are endeavoring to do. On the other hand, we have to demonstrate to the "New Agers" that spiritual powers and spiritual substances do *not* evolve from matter, as they insist. If spiritual powers evolve from matter, any finding of an apparent *spiritual difference of kind* (that we are endeavoring to show to the "Old Atheists"), no matter how difficult the endeavor might prove to be, is irrelevant because from the New Age evolutionary perspective it would be only a *difference of degree*.

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*thus capable of a higher perfection (only living things can grow and reproduce themselves. If gold were alive, it could reproduce itself and thus be capable of an even greater perfection than that enjoyed by mere existence). Life is followed by sentience which is possessed by fewer still (only animals and human beings have sentient abilities). Sentience is even more miraculous than life and thus capable of a higher perfection (only sentient beings are conscious of their existence and able to learn from their environments).*

Thus, New Agers present a unique new twist: On one hand, the old atheists are telling us that there is no spiritual *difference of kind* on which to base our anthropology and on the other, the New Agers, and their New Atheist allies, are telling us that it does not matter if we are able to find a *spiritual difference of kind* **because there is no such thing as a stable human substance -- all being constitutes one evolutionary and ever changing continuum** on which *everything is a difference of degree* and everything at one time or another is spiritual. Human beings and the entire human race, they tell us, are continually evolving and continually undergoing species change. Anything we might decipher about human nature today will differ tomorrow.

This perspective is especially relevant because the supposed evolutionary change is no longer eons away. We do not have eons. According to New Age cosmology, the evolutionary cycle is cresting; species change is occurring right now before our eyes!

### *The New Age Twist*

Sentient consciousness, as demonstrated, is a *difference of degree* and thus not relevant to our quest for a unique human anthropology that necessitates finding a *difference of kind*. Almost everyone agrees, sentient consciousness is a *difference of degree*; that should be the end of the discussion. But New Age ideologues would have us believe that all existing things have a spiritual element, which in the process of evolution is developing an increasingly complex consciousness including emotional or Astral Consciousness, Lower Mansic Sense Consciousness, Higher Mansic Rational Consciousness, Intuitive Buddhic Consciousness, Atmic Consciousness, Monadic Consciousness and Logoic or Divine Consciousness.

This idea has a certain logical *consistency* (although it lacks *validity*). That is, if animal Mansic or Sense-Consciousness is a higher *spiritual power* than animal Astral Consciousness enmeshed in a sentient animal body-soul-composite, and if plants, below animals, are endowed with a lower *spiritual principle* of life (but not of sense-consciousness) enmeshed in a nutritive body-soul composite, it seems that sense-consciousness (and all subsequent degrees of consciousness) might have evolved from Astral Consciousness and Astral Consciousness from the spiritual principle of life found in plants.

Consequently, New Agers hold dearly to the idea of spiritual evolution; it is a central tenet of their pagan cosmogony. They embrace the idea of a *spiritual difference of degree*, because the hierarchy of nature, if not properly analyzed and understood, seems to support their theory of evolution of spirit and increasingly divine powers of consciousness from matter<sup>39</sup>. If they are correct about spiritual

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<sup>39</sup> *New Age emanation cosmogony posits an emanation of energy in the form of seven cosmic rays that spontaneously emanate from an ineffable Divine Source as pureveyors of divine power or mystic energy from which all matter and form originate. They use energy theories such as Einstein's to illustrate the plausibility of energy conversion to matter along a universal spectrum which at one end is pure energy*

evolution, then any *difference of kind* we might find hereafter are irrelevant because, from their perspective, everything on the ladder of being is a *difference of degree*; there are no *differences of kind* on a continuum.

Human life as we now know it is, according to New Agers, undergoing a fundamental *essential* and *substantial* change due to the belief that spiritual evolution is reaching a crescendo. They claim that some human beings, due to their constant strenuous efforts to build a “mystical bridge” uniting them to a higher spiritual realm, have evolved so far that they are about to undergo a “secret initiation” enabling them to expand their consciousness, metamorphosize, and exist on a higher “Buddhic Plane” of existence. In the process of spiritual evolution, body, soul, and “personality” are taught to a hindrance toward advancement to the higher Buddhic Plane. To reach this plane, the human body, as we now know it, must be left behind.

Nonetheless, some advanced masters, motivated by love for humanity, may decide to stay behind in bodies on the now occupied “Mansic Plane” of human existence to help ailing humanity undergoing the war of opposing spiritual,

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*manifest as seven spiritual rays that at cosmic speed convert into seven realms of matter each more dense than the preceding.. The closer the rays are to the point of origin, the more spiritual they are thought to be. From these rays come forth all forms beginning with a hierarchy of spiritual beings, which begins as a group of spiritual “monads” or “divine sparks” emanating out from the Divine Source. Despite their origin in the Divine source, these seven rays are not themselves Divine (they are manifestations of the divine). Over time, these sparks descend further and further from the Source; they are believed to **devolve** or **involve**. That is, they become less and less spiritual and eventually metamorphosize by taking on the densest and grossest matter while all the time retaining something of their original spiritual divine spark, albeit hidden in the dense matter they have assumed.*

*At the point of deepest descent into matter, considered to be the mid-point of cosmological evolution, instead of devolving into matter any further, these divine sparks or “monads” begin to evolve out from matter; instead of becoming more and more material, they increasingly become, over great eons of time, more and more spiritual and increasingly self-conscious. After evolving over eons and passing through various mineral, plant, and animal stages, they reach a point of balance in human beings who are uniquely composed of spirit and matter. From this point, they are believed capable of further spiritual evolution out of matter.*

*This stage of cosmological spiritual evolution is, we are told, being achieved by human beings who have prepared themselves by mediation and various mystical practices to receive light from a higher spiritual source across a self-induced mystical bridge called the “Antahkarana” that supposedly connects their soul to a higher spiritual source. The building of the Antahkarana is a necessary preparation for the “fourth initiation” or “crucifixion”. At this point, (the Fourth Initiation) New Age adepts are prepared to shed control of their bodies to an incoming spirit, which they believe to be their “individual or higher spiritual self. **Under the guidance of this indwelling spirit, they begin preparation for further spiritual evolution, which requires them** to leave their bodies to exist as purely spiritual beings in another dimension or plane of existence in which no physical body is needed for the next “fifth initiation” known as the “Resurrection”. Evolution of human beings, of animals, plants, and indeed of the planet itself, is believed to be influenced by the work of New Age disciples gathered in prayer groups throughout the earth, by various gods, and by “ascended masters” who are human beings that have evolved out of their bodies (as they claim Jesus did) and continue to assist humanity by manipulating universal energies to promote or step up evolution. A rapid cycle of evolution is thought to be occurring at this moment of the planet’s history.*

anthropological, and social forces associated with paradigmatic change. The current evolutionary pressures are so great and imminent that they are precipitating a cosmic clash of new and old forces that will result in inevitable death for many. Those who are inspired by love for ailing humanity may retain their current bodily forms. Instead of leaving their bodies, they willingly sacrifice themselves out of love for humanity to embrace the charitable endeavor of “guiding the planet”. To do so, they must stay behind and promote new ceremonies culminating in initiation of willing men and women into Gnostic “sacred mysteries” thereby gaining increased introspection that empowers them to direct their attention toward an internal higher light shining across the so-called “Antahkarana Bridge” beckoning them into the higher Buddhist Kingdom. According to the Lucis Trust, quoting New Age matriarch, Alice Bailey:

“When a man takes the fourth Initiation, he functions in the fourth plane vehicle (body), the buddhic....This great act of renunciation marks the moment when the disciple has nothing in him which relates him to the three (material) worlds of human evolution. His contact with those worlds in the future, will be purely voluntary, and for the purpose of service.

Since he first put his foot upon the Path, he has been trying to build the *antahkarana*. Even that has meant for him an act of faith, and he proceeds in the early stages with the work of building, yet **scarcely knowing what he does**. He follows *blindly* the ancient rules, and attempts to accept as factual that *which has not been proven* to him to be a fact, but which is testified to by countless thousands down the ages. The whole process is in the nature of a culminating triumph of that innate sense of Deity, which has driven man forward from the most primitive experiences and physical adventures, to this great adventure of constructing a pathway for himself, from the dense material world into the spiritual....Now he has to learn to handle them, first of all, by letting them pour into and through him, *via* the antahkarana, and then to direct them towards the immediate objective of the divine plan.

Consciousness and consciousness expansion, in the hands of adept New Agers promoting human development to a spiritually starved and highly conditioned populace, certainly presents a unique and important challenge to Christian anthropology and to social science derived from it.

Atheists and materialists have been unable to account for either life or form by recourse to an evolutionary argument. As we have seen, life (an essential spiritual power) could not evolve out of matter, nor could conferral of form (another essential spiritual power). **If life and form could not evolve from matter**, and they are lower on the *Ladder of Perfection*; **then consciousness** (an even higher perfection found only in living things endowed with the proper sentient abilities) **could not have evolved from matter either**. Materialists have been unable to show how complex matter (such as a living cell) can evolve out of simple matter; now New Agers are attempting to show how complex spiritual operations (higher mind/“*mannas*”, intuition, and “Buddhic consciousness”) can emerge out of the same matter, something much more difficult to do. **Both atheist and New Age**

**ideologues are guilty of presuming life as a starting point in some hypothetical primordial environment.**

The materialists are unable to demonstrate life's arrival from chemical evolution; the spiritualist's idea of emanation fares no better. Moreover, their cosmogony destroys free choice and creative power in God: They would have us believe that energy emanates off of God in the forms of solar rays as if transcendent infinite Being somehow intersects or interacts with finite matter (*pantheism*) while, at the same time, somehow transcending it (*panentheism*). **Emanation is a consequence of Being rather than an act of Divine free choice.** It is taught that energy flows forth into matter from the Divine Essence in a series of *unconscious spiritually evolving* "divine sparks" or "**monads**". These evolving monads, it is taught, must devolve into matter and acquire bodies necessary for ever increasing experience of the *physical universe* and concomitant expansion of consciousness. Consciousness supposedly evolves *via* decent into matter and culminates through further evolutionary ascent back out of matter. Consequently, the human body must eventually be discarded and left behind as an evolutionary drag (as were previous plant and animal bodies): what was once an evolutionary aid becomes a hindrance to any further evolution.

This is a very strange cosmogony. One in which exalted spiritual beings (monads) reduce themselves by taking on matter to evolve and then eons later begin to realize that matter, though necessary for their evolution, is pulling them toward earth rather than the celestial heights from which they came. Strangely, the various bodies acquired over time, which are taught to be necessary for evolution become inferior matter that must be ceremoniously dumped and left behind. An obvious question involves the creation of human bodies: If advanced devas (*quasi-angels*) and avatars, who were once human beings, are so potent, why do some remain behind in human bodies to aid ailing humanity? Why not just create human bodies as needed? **The sobering theological fact is that no being, except God, can create a body from nothing.** Neither "Demon", "Avatar", "Ascended Master" nor any other being, no matter how high or exalted on the evolutionary chain of perfection, can create a human body out of nothing; they cannot even create one from existing matter (spontaneous generation from decaying cells and there DNA). This is something they must be kept quiet, or at an unconscious level, because it is a limit that their "god" does not want to admit. **It is the limiting factor that divides gods from God** and accounts for the chicanery of mystical bridges and lotus postures thought necessary to prepare human bodies for alien possession across the rainbow bridge.

How un-evolved unconscious monads fashioned themselves bodies as they first descended into matter eons ago remains a mystery; advanced avatars (highly advanced helper beings who have gone through eons of evolution into and out of the human stage to vastly higher stages) are not even capable of such a feat! ***Either monads are superior to avatars or they are inferior. If superior, why go through eons of evolution? Why not just make a body from the beginning?*** If monads are inferior to avatars, how were they able to craft plant, animal, and then human bodies if even the highest *avatars* and more advanced "*Logoi*" are unable to do so? So, where are the bodies coming from?

Like presumptuous materialists, New Age spiritists would have us presume that simple monads manufactured DNA and RNA, concocted amino acids, etc., and then figured out the genetic code, formed a body and gave it life. The supposed power lies far beyond any potency we are told a monad might possess; monads, we are taught, *do not possess consciousness*. Moreover, **if monads had intelligence to form bodies and to also bring forth life from dead dirt, they were already more advanced than the human beings they were to become after billions of years of supposed evolution**—human beings (nor avatars) cannot do such things. So where is the evolution?

Human beings have been around for a long time and still cannot demonstrate how life, genome and form spontaneously evolved from matter. Yet, inferior monads that required billions of years to arrive at their present, and still evolving, human state supposedly knew how and had the power to do so from the beginning. If they were these types of beings, why did they need to evolve? Why take billions of years to become a human being, a being that is inferior to what they were at the point of origin?

This is another “far out” idea, an idea so far from any empirical or logically derived truth that its proponents are forced to eschew rational thought in favor of evolving intuition and base their arguments on *specious authority, will power and ancient mystery data* rather than on sound logic and empirical verification. Thus, according to the matriarch Alice Bailey, New Age initiates must “*walk in darkness*” because they are forced to “*blindly*” follow “*the ancient rules*”, and to “*accept as factual*” that “*which has not been proven*” except by the *unverified “testimony of countless thousands down the ages”*.

These arguments sound much like the ones penned by atheists for chemical evolution clothed in different but complementary garb. Neither of these evolutionary schemas are verified by empirical research nor logical demonstration. Nonetheless, both atheists and New Age ideologues, initiates, and adepts are told to blindly believe because of the unverified testimony of “countless” atheists and materialist ideologues “down the ages”. Blind belief smacks of totalitarian rule, a rule based on irrational will-power and authority, the type we are trying to avoid. Human beings are endowed with rational minds capable of discerning good from bad and truth from error. They do this by logically adhering to sound principles aided by experience and observation; no one should surrender their mind to unproven irrational suppositions and “*walk in darkness*” or “*follow blindly*” that which has “*not been proven*” merely because it proceeds with the usual arrogance and pomp associated with false glamour.

Nothing like what the New Agers are proposing has ever been demonstrated. The atheists are *unable* to demonstrate *abiogenesis* or *spontaneous generation*; they do not have a valid first principle to support their “theory” of biological evolution and thus cannot legitimately proceed to talk about any kind of evolution at all and especially not of supposed spiritual evolution. If a physical

body cannot self-evolve from bare matter, how can something even greater, like a spiritual power, self-evolve from mere dirt? <sup>40</sup>

Of course, if the atheists take *biogenesis*, rather than *abiogenesis*, as a starting point, they might be able to make a case. But, to be consistent with their atheism, the atheists must begin with life from non-life and then proceed to argue that spirit evolves out of matter. This is something they have tried to do, with no success, by concocting *imaginary primordial environments* and then, bereft of choices, by allying themselves to proponents of Panspermia or with New Agers who concoct even more fantastic and *imaginary monadic environments*.

**Either way, materialist or monadic, these bedfellows are strapped with the same cosmogonical problem: Explaining how spirit evolves out of matter** when the most ubiquitous and basic material stuff out of which everything is made cannot be shown to have any spiritual properties (life, self-movement, reproduction, respiration, genome, consciousness, or sentient ability) at all. The atheists' illogical and empirically unverified claim that spirit evolves out of matter and the New Agers' equally illogical and empirically unverified statement that spirit is locked up in matter, i.e., everything is endowed with spirit, rests *squarely* on the power of illogical and unverified authority, on things, as New Age matriarch Alice Bailey informs us, that have "not been proven" and must therefore be followed "blindly".

New Age ideology is strapped with the additional problems of:

(1) Demonstrating how an omnipotent God is subject to deterministic emanation and as a consequence seemingly bereft of free choice to create. Moreover, how can anything emanate off of Ultimate Being who exists beyond space and time if there is neither space nor time to emanate out into? Emanation cannot exist because nothing exists outside of, beside, or exterior to Omnipotent Being until created. The "Absolute" must first create something exterior to Himself if there is ever to be any exterior emanation at all, which means creation must be prior. If prior, there is no need of emanation.

(2) Demonstrating the eternity of matter in face of modern cosmology, physics, and astronomy.

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<sup>40</sup> There is a significant difference between the Christian position that posits a created spiritual soul cooperating with matter to achieve its "species-specific" potential and a spirit evolving in matter and along with matter taking on ever more complex forms of **new species**. And then following continual species change, ultimately evolving out of matter to assume an even greater and purely **spiritual species specific form** and continuing to do so until becoming a god and then, eons later, reabsorbed into the source from which it first emanated while along the way shedding itself of its body, soul and personality! The Christian idea posits a "created" soul that actualizes its species specific potential united to its body; as it actualizes itself, it also actualizes its body and its personality while eternally maintaining its species specific form as a mystical member of the body of Christ.

(3) An unverified and illogical cosmogony that begins with more advanced beings (monads) at the beginning of evolution than the evolutionary product billions of years later (plants, dogs, human beings and beyond).

(4) An unverified and illogical cosmogony that begins with divine yet underdeveloped monads that somehow created bodies, a feat that even the most advanced beings in their evolutionary schema ("Ascended Masters", "Spiritual Hierarchy", and even the "Christ"), beings who evolved from monads, remain unable to do.

If evolution is a process that begins with the emanation of living monads from Divine Essence, where are the all the evolving monadic elements? Like primordial environments concocted by materialists, monads seem to be an unverified product of the imagination. If the Almighty continually emanates cosmic energy in the form of monads, we should find these elements of life in every particle of sand. Where are they? Has the Almighty stopped emanation? If he has, the universe seems the result of a conscious free choice, which sounds more like *creation* than *emanation*. If he has not, then the New Agers are stuck, like the atheistic materialists, with a hypothetical, illogical, and unverifiable primordial environment that is a figment of their creative imagination.

Just as atheists should not be permitted a pass to argue biological evolution before demonstrating a cause of life, something they have not been able to do when asked to do so, neither should their New Age comrades be permitted to resort to already living beings endowed with spiritual powers, which enables them to then argue forwards and backwards along some *imaginary evolutionary scale* of being without any empirical or logical evidence that demonstrates the life they claim is in every particle of sand. This is not *academic freedom* properly proceeding from empirical verification and logical demonstration, the only valid measures of intellectual respectability. It is *academic chicanery* permitted to proceed from fantasy and manipulation of existing data in the guise of intellectual respectability because materialist/spiritualists are given a free pass on their central issues and thereby permitted to presume life and spiritual evolution without being able to demonstrate them.

Imaginary environments worked very well for the "*old atheists*" who for well over a century mesmerized the world with their misuse of biology aided by magical words such as "*primordial*" and "*abiogenesis*". Neither these words nor New Age "*emanation*" and "*monads*" can work magic unless they are permitted to do so. No matter how fantastic and confusing their evolutionary cosmogony (false ideas are easier to propagate if are accompanied by confusion), life did not just pop into being from an illogical and unverified cause, nor does it exist in the bowels of the earth as New Agers claim. Like abiogenesis, *involution* and *evolution* of living spiritual monads are illogical and empirically unverified; scientifically and philosophically speaking, they do not exist.

**The Ladder of Perfection is a manifestation of the perfection of Divine Being; it is not a scale of evolutionary change.** There is no logical or empirical link



uniting monads, dirt, spontaneous generation, and life. The only *logical* link between dirt (adama) and life is the one we read about in Genesis: the “Breath of Life”, which God breathed into Adam when He *created* the universe.

The New Age god is not a Creator. By their own admission and insistence, he is an “emanator”. They dislike the word creation because only God can create. The Gnostic god is a “grand architect”. He is neither a master of **being** nor of **creation**. He is a master of manipulation, that is, of manipulating pre-existing matter and currently existing men. He does not have the intelligence or the power to engender genetic code, create matter, and breathe life. Rather, he uses advanced, but still limited, angelic knowledge of the cosmos to manipulate already existing matter like an architect or like one of pharaoh’s magicians. Only God can create from nothing. Thus, their god cannot be God and so pretends by posing as an architect while having those who listen to him think that he has some secret power to create (Genesis 3:4). All he has is more advanced knowledge of the physical universe than his followers; this makes him appear like some kind of god much like science often made Europeans look like gods to primitive natives inhabiting the third world. Whether in science or in cosmogony, materialists and Gnostics must resort to fantastic and imaginary tales, or to the manipulation of empirical facts and distortion of logic because reason does not work well for them. So they are at war with reason: “Hey hey ho ho, Western cultures gotta go”.

It is this same power of reason (practical and theoretical or speculative) that provides logical and empirical evidence from chemistry, biology, and philosophy which, together with theology, provide a valid logical first principle that helps make sense of such questions as life, form, or genome. The created life-animating soul that confers life and form to matter is the same soul that is endowed with species specific consciousness. The fact that consciousness is an *immaterial* power of the sentient soul is irrelevant; *life and form are also spiritual powers* found even in the lowest nutritive or vegetative plants, **below which nothing spiritual or living has ever been found, just mere dirt and basic elements**. The soul is *created* not *evolved*—there is no evidence of the later.

**Atheists and Gnostics share a common fantasy: they both want dirt to come alive or to confer life.** They therefore share a common neurosis (disconnect from reality) informed by pseudo-science and pseudo-philosophy that is at war with authentic science and authentic philosophy. **Life and cellular form have not evolved from mere dirt because there are no quasi-living chemical intermediaries** on either side of the spectrum. *Dirt simply does not have spiritual properties (life, and information—genome) necessary to validate either atheistic primordial hypotheses or esoteric Gnostic cosmogonies.*

Life is the lowest *spiritual principle found in nature* and, allied to life, genome is the lowest *spiritual manifestation* of a spiritual being, but **there is neither life nor genome in dirt**. Nonetheless, DNA and life are found enmeshed in matter (*adama*), but never in simple *non-living matter* lowest on the ladder of being. Life and form are always enmeshed and manifest in living cells containing DNA, which do not have any material precursors and thus cannot be accounted for by evolution no matter how fantastic the scenario. Higher up the scale of perfection from

nutritive plant life, we find the sentient soul. If neither the lower nutritive soul, its genome, nor its principle of life evolved from matter, neither did the more intricate sentient soul evolve from the nutritive soul. Life and form did not arrive in matter by an act of "*emanation*" (which is just sophisticated sophistry meaning evolution). It is much more logical to say that they arrived in matter by an act of creation

**If all things are spiritual as the New Agers maintain, the burden is on them to demonstrate a living planet**, not a planet teeming with plant and animal life, with potential energy, kinetic acceleration, magnetic forces and geological movement, but an actually living planet, that is, minerals and dirt, the bare planet stripped of all its insect, plant, and animal life, stripped of all living things that move upon it in any way and of all other natural forces that appear to be alive but are easily explained by empirical science. If they are correct, they should be able to demonstrate this living bare dirt and, below that, living molecules, atoms, and their living sub-atomic parts—they should all be alive. Like all living things, all rocks and all bare minerals should be **breathing a breath of life and reproducing, as all living things do**, rather than **decaying and decomposing as all non-living things do**.

If the spiritual soul evolved out of matter or passed through matter on its ascent back to its source, as Gnostics maintain, **spirit should be found enmeshed in the most basic matter**. We have looked closely at the simplest forms of being and have found nothing but non-living nucleic acids, amino acids and sub-atomic particles. Under the circumstances, the best ideologues can do is resort to the old *possible/probable*<sup>41</sup> trick while arrogantly and, like their atheistic comrades, boldly pretending that living monads and ever evolving and changing species actually exist. If, sometime in the future, valid evidence (empirical and logical) is presented showing spirit enmeshed in the lowest matter, at the bottom of the scale of being, and everywhere else, we will have to adjust our thinking accordingly. Until that time, **empirical evidence and logic related to the real world, the one we know and live in, not some imaginary one, is the rule**. It is more logical to maintain that life is found enmeshed in sentient matter (along with form and consciousness) not by a process of evolution but by an act of creation.

### *Problem Exacerbated by Communists but They are out of Business*

According to classical Communist theory, at the right historic time (the current one), human evolution will involve a spiritual leap to communism, wherein man's spiritual and inner needs take precedence over his physical ones, with which the spiritual must be integrated.

The real goal of Communist historical determinism was *cultural and spiritual evolution*, not mere *physical evolution*. Because of this hidden agenda, the atheistic materialists in the East were a greater stumbling block than the biological

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<sup>41</sup> *Anything is possible, but only existing things have probability.*

materialists in the West: The communists, following Hegel, were willing to maintain that spirit can evolve out of matter or within it as every New Age branch maintains. ***This is precisely the point that Christianity has ardently opposed: not physical evolution of the body but spiritual evolution of the soul out of matter.*** New Age adepts remain wedded to this idea and seem to have found an ally in adherents of the so-called “New Atheism”, who are often leftover progressive communists-socialists of the Gorbachev camp loyal to their evolutionary paradigm and willing to work for its attainment:

(1) The inevitable historical march toward world peace and the culmination of world history in global brotherhood otherwise known as full Communism or the New Age

and

(2) The spiritual evolution of man culminating in the acquisition of a higher state of consciousness (“Buddhic Intuition”) that makes the former possible.

Christianity has long opposed such ideas. This is what John Paul II was speaking about when he said:

“Theories of evolution which, because of the philosophies which inspire them, regard the spirit either as emerging from the forces of living matter, or as a simple epiphenomenon of that matter, are incompatible with the truth about man” (1996).

Mikhail Gorbachev perceived a change in the social-cultural milieu of modern man which, from his perspective, necessitated a change in human and social development. He correctly saw that outdated modes of production and gross materialism should give way to more democratic, decentralized and humanistic relations of production (such as personal forms of manufacture necessary to replace alienating assembly line production or worker-owned cooperatives rather than corporate or state owned ones etc.) to keep pace with evolving aspirations of the human spirit. From the *avant-garde* Communist and New Age vantage point, **the human spirit is reaching a point of perfection in nature as a result of the evolution of spirit in matter. This is in fact, the highest point of the Communist Dialectic, where Communism and New Age ideologies converge, viz., the realization of God as an evolutionary being immanent in the universe, in history, in man, and, consequently, in social evolution culminating in a golden age for humanity.** Communism, under Gorbachev’s policies of *glasnost* and *perestroika*, was being invigorated by an infusion of “*human potential talk*” and by advocacy of human “*spiritual development*”. The old dog was not quite dead; it was still mixing truth with error with its New Age ally at the crucial moment of its demise.

This was the precise direction in which Gorbachev was heading: he sought to unite Europe with Russia as a cultural unity rooted in the patrimony of the Enlightenment stretching from the Atlantic to the Urals, as advocated in his book *Perestroika*. Marxism-Leninism was an evolutionary program for social change

leading from feudalism to mercantilism, then to capitalism, onward to socialism and then to full communism. At the culmination of its penultimate stage, the so called "Dictatorship of the Proletariat", party members would have to begin handing power over to the workers. To help facilitate the process, the party (as under Gorbachev's leadership) would have to give birth to a nascent and eclectic but false spiritualism, which oppressed men and women were expected to thankfully accept in response to their pent up need for spirituality. Modern men are supposed to be thankful for a false god, the "Christ", who promises apotheosis without "Jesus Christ" in contempt of the Holy Trinity.

"Who is a liar, but he who denieth that *Jesus* is the Christ? This is Antichrist, who denieth the Father, and the Son. Whosoever denieth the Son, the same hath not the Father. He that confesseth the Son, hath the Father also (1 John 2:22-23).

According to Gorbachev (1997), some form of pantheism or nature god is preeminent.

"Look at the sun. If there is no sun, then we cannot exist. So *nature is my god*. To me, nature is sacred. Trees are my temples and forests are my cathedrals. "Nature Is My God."

In 1987, he remarked,

"If the Russian word "perestroika" has easily entered the international lexicon, this is due to more than just interest in what is going on in the Soviet Union. Now the whole world needs restructuring, *i.e.* progressive development, a fundamental change".

Fortunately, Gorbachev's idea of fundamental change was headed off by internal debate within his own party involving hard-line communist conservatives who could not keep up with his thinking and let go of their outdated dictatorship. They failed to realize that the modern world had advanced to the critical point whereby decades, indeed centuries, of materialism had produced a tumultuous tidal wave of pent up spiritual need that continues to grow and demand center place on the world stage. They did the world a favor back in 1991 by helping to railroad Gorbachev and ultimately contributing to the rebirth of Russia as a Christian nation. Instead of its repressed spiritual need being wasted on ersatz gods of the New Age, Russia seems to have opted for the Holy Trinity.

Unfortunately, the communists' left-over mess is still festering everywhere they spread their 20th century disease. In the West and elsewhere, liberals and New Atheists are moving in the direction Gorbachev was tending and increasingly joining hands with their furtive New Age allies who are heirs of the communist legacy committed to moving the globe forward toward the next step of communist cosmological evolution, which is the bedrock of the communist paradigm: the path to the ersatz god that Lenin bragged would replace the Christian God. As part of this agenda, they continue to advocate a global spiritual and an ecological program

that includes, *inter alia*, consciousness and spiritual evolution, social, political, economic, and educational change.

The Russian communists however, to everyone's astonishment, have disengaged from their furtive Gnostic allies. They are no longer playing to an atheist, Hegelian, Marxist, or New Age evolutionary script.

Beginning with the Consecration of Russia on March 25, 1984 by Pope John Paul II, the alliance between Communism and New Ageism was delivered a spiritual broadside. **The socialist tilt toward the New Age under Gorbachev**, (who was setting the stage for a culmination of the evolutionary paradigm, *viz.*, the transition to "full communism" and the "spiritual leap forward"), **was thwarted**, and in its place a way was made for the Christian conversion of Russia and for its leadership among Christian nations. This on-going conversion is increasingly evident in the vital resurgence of moral and spiritual fiber among its leaders, in its people, and as witnessed in an emerging desire to defend the Christian ethos at home and abroad. In his speech to the International Ecumenical Peace Convocation (Interfax, May 22, 2011) Metropolitan Hilarion, foreign relations chief of the Russian Orthodox Church, stated:

"Dear Brothers and Sisters,

Christians ought to fearlessly expose the injustice of modern society without fear of tarnishing our reputation in the eyes of the powers that be and the mass media under their control....We live in an atmosphere where double standards have prevailed, where cynicism predominates, concealed politically correctly under the mask of democracy and concern for human rights, which in fact tramples and distorts both.

There is at last a discussion in the world today not about an abstract infringement on the religious freedom of particular minorities but about the open persecution of Christians. It is no longer possible to hush up the facts *that have long become well planned indeed, not spontaneous persecution at all*. The hour has come to move to effective actions. *We urgently need to organize a system of protecting Christians against persecution*".

Russians ought to know about "well planned persecution" of Christians, they were the ones who lead the pogrom out of the Kremlin in the first place. But much to the chagrin of atheists, socialists, materialists, and New Age devotees, they are adroitly changing sides. Temporally speaking, the game is getting a whole lot more interesting; the Slavic nations, and their allies are one by one turning back to union with Russia. Eastern Ukraine, Serbia, Transnistria, Armenia, Kazakhstan, Tajikistan, and Belarus have already made or are apparently making the about face, while Poland is being wooed heavily by the European Union so that it does not do the same.

According to Interfax, February 8, 2012, President Vladimir Putin promised,

“That it would be one of the tasks of Russia’s foreign policy to defend Christians in other countries who are persecuted for their faith. ‘*You needn’t have any doubt that that’s the way it will be,*’ Putin said at a meeting with Russian religious leaders when Metropolitan Hilarion, foreign relations chief of the Russian Orthodox Church, expressed hope that Russia’s government would stand up for persecuted Christian communities abroad”.

On February 2, 2013, the Prime Minister of Russia, Dmitry Medvedev, said

“I wish for the special relationship now established between the Russian Orthodox Church, the state, and the entire society to grow stronger and serve for the good of our Fatherland” (Interfax, February 1, 2013).

A few of days earlier, the President echoed much the same thing, but with a tone that suggests support coupled with growing admiration:

“Clerics not just do their job, they serve the Almighty, they serve the Lord, they serve people. It is impossible to intimidate them. Yet they obviously need our support and assistance. And this support and assistance must be efficient” (Interfax, January 30, 2012).

It is time for America’s Christian leaders and men of good will here and throughout the world to stand up for their Christian faith and for what is good in all faiths; we are on the verge of the promised *Era of Peace*.

### *Transition to Chapter Four*

As demonstrated, there are spiritual powers of soul manifest in all life forms, even in plants and animals: the animating power of life, form (genome), and, in animals, sentient consciousness. Although sentient consciousness is an immaterial or spiritual property of the sentient soul, it is a *difference of degree* not a *difference of kind*. Consciousness, like life and form does not evolve in matter or from matter. The New Age and New Atheist agenda is about to collapse. Empirically, philosophically, and theologically, it is incorrect. On top of that, politically things are changing. Russia is being converted and is no longer supporting its furtive Western New Age agents, but has begun to manifest support for Christianity.

This is a dynamic development related to the articulation of a Trinitarian anthropology, which is the subject of this book. Thus, at the end of this chapter, we must refocus our attention and ask: Is there really a *difference of kind* or is the thinking ability between human beings and animals, like sentient consciousness, merely a *difference of degree* as Darwin and post-Darwinian researchers have long maintained”? To find out, we will have to undertake a close examination of Darwin’s cognitive work, as well as that of post-Darwinian researchers, to

determine their position, weigh their evidence, and evaluate their conclusions in the light of empirical evidence and philosophical reason. Afterward, we can proceed to articulate *differences of kind* and a new *Trinitarian Humanism*.

**Endnote**

*Sentient Soul: Principle of Life, Form, and Consciousness*

A sentient soul is the *principle of life*, but it is incorrect to assert that sentient life is a substance capable of separate spiritual existence apart from matter; **sentient life by itself apart from matter is not a substance**. Life is a spiritual principle that animates matter, but *the soul is not life*; souls *have* life. **Only God is Life**. He does not merely have life, **He is life**. **Outside of God, life is a principle that animates; it is not a substance but a power or a principle; it is not what a soul is but a principle or power that a soul has**. Being a principle of life does not qualify the soul for separate existence nor does sentient consciousness, which is limited to the realization of *physical things* and *knowledge by association* (it cannot attain to knowledge of a things essence or to the understanding of immaterial things as we shall see the rational soul can). If Aquinas is correct, the sentient soul was made in matter as principle of life and of form.

Since life is a principle/power and **not a substance** capable of separate existence, it must exist in something as a power or principle of its animation. **If the substance is sentient, life is extinguished with its death; if the substance is eternal, life remains with it forever**. *Although life is not a substance and exists only when attached to a substance, we must be careful not to mistake life for an accident* that must exist in a substance or not exist at all. Although life, like an accident, is not a substance capable of separate existence, **unlike an accident it is integral to the essence (what a thing is by definition) of any living thing, and is thus always included in the definition of any living substance or species of soul, rational or sentient**.

“Because we name a thing in accordance with our knowledge of it (as manifest in its operations)...so from external properties names are often imposed to signify essences. Hence, such names are sometimes taken strictly to denote the essence itself....The same must be said of life. The name is given from a certain external appearance, namely, self-movement, yet not precisely to signify this, but rather a substance to which self-movement and the application of itself to any kind of operation belong naturally. To live, accordingly, is nothing else than to **exist in** this or that nature...Hence **“living” is not an accidental but an essential predicate**” (Aquinas, Q 18, A 2).

That is, life affects the essence in a way that an accident does not. Life is not some *unnecessary* added power; it is integral to the essence (while not itself being the essence) because **without life there cannot be any essence, form, or substance at all whether human being, animal, or plant**.

Life, as we have seen, is meaningless without form. **Life is meaningless without form, but form is also meaningless without life; they are always found together.** Thus, **any soul is more than a principle of life; every soul is also a principle of form.** Likewise, an animal's body performs *sentient functions* that are **meaningless** without *sense consciousness*; the two necessarily go together. Thus, **consciousness can be understood as an activity of the composite sentient body and sentient soul.** The body is made in such a way as to receive sensory data and the soul is made in such a way that it is capable of imparting life and form as well as being consciously aware of sensory data and all that is associated with such data through a physical medium capable of memory and imagination. Sensation, perception, and consciousness are the work of a body-soul composite. They can be explained by recourse to matter and the indwelling of an immaterial soul enmeshed within matter. A sentient soul has awareness, but its awareness is limited to physical things, to sensations, and perceptions individualized by unique relative associations.

Although a sentient soul has spiritual properties, it is not a spiritual substance because it does not exist apart from the body-soul composite. It is the composite that is a substance. A sentient soul is endowed with *spiritual principles* of life and form and the ability to impart the power of *sense consciousness* to matter, but it is a finite substance that cannot exist apart from matter: **Life, information, and sense consciousness are not spiritual beings or persons; they are powers, operations, or principles** that can be united to, expressed within, and operative through matter.

Sentient consciousness necessarily involves a physical body, but it is more than a mere physical act; however, it is not a pure spiritual act either. **Because it is completely tied to matter, sense consciousness is only aware of material things.** Such awareness is a *quasi-spiritual function* of a species of soul limited to matter through which, and in which, and with which it is conscious of physical things. **Sentient consciousness is the sentient soul's highest power, its most noble act.** Because there can be no consciousness of physical things without an ability to communicate with the physical world, the sentient soul needs sense organs as well as a central nervous system and brain to function. It therefore forms them as its first act. **Being a form that exists inside of matter (DNA is inside of a cell) and grows with matter into an actualized form of a body, as we have seen, the sentient soul operates within matter and is dependent upon material powers such as memory and imagination as well as sensation for its actualization; it is thus said to live and die with matter.**

The sensory soul is incapable of acting on its own apart from matter. Consequently, *wherever sentient consciousness and physical senses are found, memory and imagination of some degree are also found* because every act of the sensory soul belongs to the composite. **The sensory soul is more than life and form; it is also what gives the composite the ability to sense;** it does this by integral operation with its body. **Sensation is a single operation performed by body and soul together.**



Human beings can experience these sentient limits because human beings have sentient ability; it is part of the essence of a human soul. So what is it like to be an advanced animal with a sentient soul? You would have to stop talking inside yourself and stop analyzing, judging, and evaluating things. In short, **stop thinking about anything you sense, just sense, be guided by your body's impulses and any associations paired with your sensations. In a purely sentient being, these are the highest mode of learning and responding. If you can limit yourself this way, you will have some idea what life is like inside of a sentient animal.**

The *sentient soul* sees with the senses by aid of external light; the **rational or spiritual soul sees with the light of the intellect**, which is something unique and very different, as we shall see in Chapters Five and Chapter Six. Thus, according to Aquinas (Question 65, Article 4), **the forms of corruptible things (genome and sentient souls) are brought into existence and corrupted with the things by which and through which they are generated (sentient bodies)**. Like is produced by like, so corporeal forms that rise from matter are themselves linked to matter and share the destiny of matter as integrated empirical science, philosophy and theology all demonstrate. **Nonetheless, there are many opinions about the derivation of forms**. But, according to Aquinas, **"All these opinions (Plato and Metempsychosis and New Age) seem to have a common origin; they all sought for a cause of forms as though the form were of itself brought into being" or actually exist.**

"Whereas, as Aristotle (Metaph. vii, text. 26, 27, 28) proves, what is, properly speaking, made, is the "composite" (not the form alone). Now, such are the *forms* of corruptible things (composites) that at one time they exist and at another not, without being themselves generated or corrupted, but by reason of the generation or corruption of the "composite"; **since even forms have not being, but composites have being through forms: for, according to a thing's mode of being, is the mode in which it is brought into being. Since, then, like is produced from like, we must not look for the cause of corporeal forms in any immaterial form, but in something that is composite"** (Q 65, A 4).



## CHAPTER FOUR

### A Look at Darwin and Post-Darwinian Research

*The continuing debate over Darwin's theory... is not about to go away. It is not going away because the accumulating discoveries of modern science undercut rather than confirm the claims of neo-Darwinism. It is not going away because free men do not like to be told that there are some questions they are not allowed to ask, and there are some answers they are not allowed to question.*

John G. West<sup>42</sup>

AS DEMONSTRATED in the previous chapter, the *difference of kind* we are looking for is not found in the body. We have examined the human body from the tiniest cell to the most complex synergistic whole-body systems (including sensation, perception, memory, imagination, and consciousness) and have found nothing. It is a mistake to spend any more time looking for a needle in a haystack (that is, for a *difference of kind* in the body) when, in fact, we know that the needle cannot be found there.

#### *Where is the Needle – What is it that Makes a Human Being Human?*

Human beings are not defined by a bodily part, but by a metaphysical ability: humans are the only species that is “*sapiens*”, the only one that has *intelligence to acquire wisdom*. The acquisition of wisdom is an intellectual and spiritual process that cannot be reduced to a material or physical cause, but neither can it be explained without recourse to the physical and material properties of the brain and central nervous system.

Because wisdom is thought to be an *intellectual* and *spiritual* process that transcends knowing by way of association, the ability to acquire wisdom (if it is a spiritual process) is a psychological *difference of kind* that helps define the human species. The unique ability to acquire wisdom involves **mind and body working together as a substantial composite to acquire universal knowledge, but in a very different way from which sentient mind and body work together to acquire relative knowledge.** Mind and body, moreover, are not temporary partners as New Age psychology maintains. In Christian thought, the human *body* is potentially divinized along with the human *soul*, whereas in New Age psychology,

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both body and soul are ceremoniously discarded at a certain advanced stage of human evolution (the “fourth initiation” or “crucifixion”<sup>43</sup>). To avoid this type of body-soul duality and related misunderstanding of the human soul and its relationship to the human body requires a proper understanding of the soul’s nature and of the body-soul composite. According to Christian theology, psychology, and epistemology, body and soul work together in the act of “thinking” (and of loving).

Perennial philosophers looking for a spiritual *difference of kind* between human and animal thinking have consistently turned to psychology (*philosophical and empirical*) to study the body-soul composite, while materialists and atheists looking for a physical *difference of degree* have consistently turned to biology and empirical psychology to study brain functions, cranial capacity, and related cognitive abilities. The former consider thinking required for wisdom to be a function of the soul (in union with its body), while the later have whole-heartedly endeavored to explain thinking solely as a function of the body (or brain), hoping thereby to explain all psychic differences as physiological *differences of degree*. **The intellect must be accounted for; if it is merely a physical phenomenon, as Darwin had hoped, a *difference of kind* cannot be established.** Regardless of how the mind is studied, percipient observers of the issue know that biological arguments regarding evolution of the body, although integral and necessary, are for public consumption. **The real issue is in the mind** and corollary will, which atheists/materialists, until recently, have tried to reduce to a material brain function.

Thus, **the question before us is fundamental: are there discernible spiritual/intellectual characteristics that enable us to define human beings as a unique species, a species that, because of these characteristics, *differs in kind* from all other species?** Anyone who deeply understands the issue defaults to a study of the mind.

Darwin understood the crucial importance of mental ability and, therefore, endeavored to establish a comparative *difference of degree* between the mental processes of animals and those of human beings. He devoted both Chapter Three and Chapter Four in his “*Descent of Man*” to demonstrating and validating his evolutionary theory. Darwin did not rest

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<sup>43</sup> "The life of the man who takes the fourth initiation, or the Crucifixion, is usually one of great sacrifice and suffering. It is the life of the man who makes the Great Renunciation, and even exoterically, it is seen to be strenuous, hard, and painful. He has laid all, even his perfected personality (lower self-in New Age thought), upon the altar of sacrifice, and stands bereft of all. All is renounced: friends, money, reputation, character, standing in the world, family, and **even life itself**" (Lucis Trust, 2012, p. 214).

his case on physical or anatomical differences alone. The core of his argument, in these chapters, is focused on comparative mental processes of men and of animals; he knew the key resided within this domain. **If he could not show a continuity of mental development between man and animals, he could not establish his evolutionary argument.**

Post-Darwinian researchers, keenly aware of the need to demonstrate a continuity of mental development to substantiate their arguments for a *difference of degree*, have zealously studied animal thinking ability to the extent that **the modern period has become known as the "Golden Era" of animal cognition research.** "It seems that every day a new report is being released....Animal cognition is being studied by psychologists, anthropologists, biologists, zoologists, neuroscientists and ecologists, among others" (Stanford Encyclopedia, Animal Cognition, 2011). Below are a few of their arguments beginning with Darwin's as contained in his *Descent of Man*.

### ***What do Darwin and his Contemporaries Have to Say?***

Darwin took physical aim at man's two greatest spiritual attributes: his intellect and his will: his mental ability to acquire knowledge and wisdom and his intellectual appetitive ability to love that which is known by his mind. According to Darwin, these human attributes exist in non-human animals *albeit*, to a lesser degree. Darwin's defense of this thesis, as well as the defense offered by Post-Darwinian researchers, is presented below. As you read through the next few pages, if you begin to wonder if this is really Darwin's defense of his thesis, it is. The following series of Darwin's unverified anecdotal accounts is all the "scientific" evidence he offers. His own arguments help to account for the reason Darwinism is becoming an embarrassment; it is simply no longer tenable. Biological materialist ideologues, like ailing communists, are in need of something more "scientific".

#### ***Darwin's Proof that Animals Love*** **Anecdote # 1**

"Most of the more complex emotions are common to the higher animals and ourselves. Everyone has seen how jealous a dog is of his master's affection, if lavished on any other creature; and I have observed the same fact with monkeys. This shows that animals not only love, but have desire to be loved" (Descent of Man, Chap. 3).

## Quick Note:

Here is supposed proof that animals “love” simply because Darwin says so. Because he has “observed the fact”, the point is considered proven. Similarly, because Darwin has purportedly seen “jealously” in a monkey it “shows” that “animals not only love, but have a desire to be loved.” Are we sure that “everyone” has seen “jealousy” in a dog or that an interested party’s word is all that is necessary for ascent? This approach is similar to the type of argument from authority that New Agers are so fond of (see Appendix pgs. 127-128). Darwin consistently anthropomorphizes his data, that is, he consistently projects human experiences into the mind of an animal and then interprets the behavior based on this subjective projection rather than on the objective data in front of him. Every first-year sociology/psychology student is cautioned about *ethnocentrism* and *defense mechanisms* including the tendency to project one’s own values onto others rather than *evaluating them in terms of their own standards*.

Moreover, even if dogs and monkeys were to become “jealous”, **Jealousy is not a predicate of love?** This little scene can be interpreted any number of ways, but to reduce a profound concept such as love to jealousy demonstrates that Mr. Darwin must have had a poorly developed notion of what love is.

“Love is patient, love is kind *and is not jealous*; love does not brag *and is not arrogant*, does not act unbecomingly; it does not seek its own, is not provoked, does not take into account a wrong *suffered*, does not rejoice in unrighteousness, but rejoices with the truth; bears all things, believes all things, hopes all things, endures all things” (1 Corinthians 13:4).

## **Darwin’s Proof that Animals Love Continued** (Descent of Man, Chap. 4) **Anecdote # 1**

“Several years ago a keeper at the Zoological Gardens showed me some deep and scarcely healed wounds on the nape of his own neck, inflicted on him, whilst kneeling on the floor, by a fierce baboon. The little American monkey, who was a warm friend of this keeper, lived in the same compartment, and was dreadfully afraid of the great baboon. Nevertheless, as soon as he saw his friend in peril, he rushed to the rescue, and by screams and bites so distracted the baboon that the man was able to escape, after, as the surgeon thought, running great risk of his life”.

## Anecdote # 2

“Captain Stansbury found on a salt lake in Utah an old and completely blind pelican, which was very fat, and must have been well fed for a long time by his companions. Mr. Blyth, as he informs me, saw Indian crows feeding two or three of their companions which were blind; and I have heard of an analogous case with the domestic cock. We may, if we choose, call these actions instinctive; but such cases are much too rare for the development of any special instinct”.

### Quick Note:

We are not sure if the old pelican was really blind; there is no verification except good old Captain Stansbury. Was the pelican *completely* blind or *partially* blind? If partially blind, exactly how blind was it? If not completely blind, it might have been able to hunt and feed itself. Nor do we know how the pelican was fed. **It is all “speculation”**; there is no experimental control for intervening variables. We do not know how fat, “very fat” is. There is no comparative data and no attempt to explain being fat on anything else but overeating; there is no baseline and no empirical verification beyond one unsubstantiated observer. Therefore, Darwin jumps to a simple but unsubstantiated conclusion: the pelican was fat because other birds fed it too much. Maybe it was fat due to a chemical imbalance, or a restricted ability for long flight, or some other reasonable explanation. Maybe Stansbury fed it or it was fed in some other way. In short, Darwin did not conduct even the most basic experiment; he abandoned the universal scientific practice of having a control group and an experimental group; he failed to control variables and to discount uncontrolled intervening variables such as Stansbury.

Similarly, regarding the “Indian crows”, we do not know if the crows were feeding their own babies because “companions” is an ambiguous word; nor do we know who Mr. Blyth is or what his credentials are.

## *Darwin's Proof that Animals Have a Free Will*

### Anecdote # 1

“Besides love and sympathy, animals exhibit other *qualities* connected with the social instincts, which in us would be called moral; and I agree with Agassiz that dogs possess something very like a conscience. Dogs possess some power of self-command, and

this does not appear to be wholly the result of fear. As Braubach remarks, they will refrain from stealing food in the absence of their master" (Descent of Man, Chapter 4).

**Quick Note:**

Have you ever seen a dog refrain from food unless trained to do so through fear of punishment, or because satiated or disinterested? What kind of proof is this? Who is Braubach, under what conditions were his anecdotal report observed, and how is it to be replicated for verification?

*Difference of Degree*

**Anecdote # 1**

"There can be *no doubt* that the difference between the mind of the lowest man and that of the highest animal is immense. An anthropomorphous ape, if he could take a dispassionate view of his own case, would admit....that though [he] could make other apes understand by cries some of their perceptions and simpler wants, the notion of expressing definite ideas by definite sounds had never crossed their minds....**Nevertheless, the difference in mind between man and the higher animals, great as it is, certainly is one of degree and not of kind**" (Descent of Man, Chapter 4).

**Quick Note:**

Darwin bases this profound conclusion on specious anecdotes that he thinks prove the point. **If the use of symbolic language** (definite ideas – not images) **never "crossed their minds", it is more logical to conclude that the difference is of kind.** Darwin fails to distinguish adequately between *conceptions* and *perceptions*. **A symbolic word, as we shall see, is a conception not a perception. A sign is a perception.**

Signs can be used to express "simple wants" but not *ideas* or *concepts* – words are needed for this. Words (and artistic renderings) are symbols packed with meaning connoting intellectually derived concepts. They are also the basic building blocks of *propositions* needed for logical thought and for the expression of ideas and conclusions that are *too complex to express with mere signs*. This is a key point in the search for a *difference of kind* that Darwin seems to treat with an air of indifference. He correctly states the relationship between *perception* and *simpler wants* and correctly identifies the animal ability to communicate simple wants through sign language. He even admits that animals do not possess symbolic language



("definite ideas" indicated by "definite sounds", unless by the phrase, "definite ideas" he means "*images*", which he confuses with "*ideas*"). He then falsely concludes (by insisting that mental differences are only of degree) that animals think rationally, or at least have the rudiments of rational intellect without giving any evidence that he understands the issue (what rational thinking is) even though he says that he is "certain" that he does. Perhaps Mr. Dawkins inherited his similar "bluster and bravado" from the patriarch of biological materialism? It worked well for so long.

### ***Rational Thought***

#### **Anecdote # 1**

Darwin's evidence that animals think rationally includes:

"The promptings of reason, after very short experience, are well shewn by the following actions of American monkeys, which stand low in their order. Rengger, a most careful observer, states that when he first gave eggs to his monkeys in Paraguay, they smashed them, and thus lost much of their contents; afterwards they gently hit one end against some hard body, and picked off the bits of shell with their fingers. After cutting themselves only once with any sharp tool, they would not touch it again, or would handle it with the greatest caution" (Descent of Man, Chapter 3).

#### **Anecdote # 2**

"...everyone who has had any experience in setting traps, knows that young animals can be caught much more easily than old ones.... Even with respect to old animals, it is impossible to catch many in the same place and in the same kind of trap, or to destroy them by the same kind of poison.... They must learn caution by seeing their brethren caught or poisoned" (Descent of Man, Chapter 3).

#### **Anecdote # 3**

"I have received several accounts that when telegraphs are first set up in any district, many birds kill themselves by flying against the wires, but that in the course of a very few years they learn to avoid this danger, by seeing, as it would appear, their comrades killed" (Descent of Man, Chapter 3).

**Quick Note:**

Darwin is confusing learning by way of *memory and association* with learning by way of *rational deduction*, as will be demonstrated.

***Intelligence as Measured by Use of Tools***

**Anecdote # 1**

“It has often been said that no animal uses any tool; but the chimpanzee in a state of nature cracks a native fruit, somewhat like a walnut, with a stone. Rengger easily taught an American monkey thus to break open hard palm-nuts; and afterwards of its own accord, it used stones to open other kinds of nuts, as well as boxes. It thus also removed the soft rind of fruit that had a disagreeable flavor” (Descent of Man, Chapter 3).

***Intelligence as Measured by Use of Language***

**Anecdote # 1**

“But man, as a highly competent judge, Archbishop Whately remarks, ‘is not the only animal that can make use of language to express what is passing in his mind, and can understand, more or less, what is so expressed by another’” (Descent of Man, Chapter 3).

**Anecdote # 2**

“That which distinguishes man from the lower animals is not the understanding of articulate sounds, for, as everyone knows, dogs understand many words and sentences...It is not the mere articulation which is our distinguishing character, for parrots and other birds possess this power. Nor is it the mere capacity of connecting definite sounds with definite ideas; for it is certain that some parrots, which have been taught to speak, connect unerringly words with things, and persons with events. The lower animals differ from man *solely* in his almost infinitely larger power of *associating* together the most diversified sounds and ideas; and this obviously depends on the high development of his mental powers” (Descent of Man, Chapter 3).

## **Possession of a Moral Sense**

### **Anecdote # 1**

“If, for instance, to take an extreme case, men were reared under precisely the same conditions as hive-bees, there can hardly be a doubt that our unmarried females would, like the worker-bees, think it a sacred duty to kill their brothers, and mothers would strive to kill their fertile daughters; and no one would think of interfering” *Descent of Man*, Chapter 4).

### **Proofs Offered by Post-Darwin Researchers**

#### **Do Animals Think?**

According to the Stanford Encyclopedia of Philosophy, professor H. J. Glock (2009), argues that “rationality is sometimes understood in terms of acting for reasons”. Animals act for “meaningful purposes”, but there is a difference between “*meaningful purposes*” and “*reasonable purposes*”. Glock seems unaware of the distinction between acting for reasons and acting for meanings. Therefore, he argues that animals are rational because they seem to act for reasonable purposes, in an “agent-neutral fashion”, and, he argues moreover, that animals are sensitive to the *reasons* for their actions. Animals are sensitive to the *meaning* of their actions, but *not* to the *reasons* for their action. They cannot be sensitive to the reasons because, as will be shown in Chapters Five and Six, they do not reason.

Similar to Glock, Fredrick Dretske (1998, 2006) asserts that,

“Some simple learned behaviors such as a bird avoiding eating a monarch butterfly, can be construed as minimally *rational*. Because monarchs that eat toxic milkweed become toxic to birds and other predators, when a bird learns not to eat monarch butterflies after having formed an *association* between eating monarchs and vomiting, it has *reasons* for its avoidance behavior”.

This behavior can be explained, according to Dretske, by the “content of the bird’s thought”.

#### **Problem Solving, Do Animals Make Tools?**

Tool use indicates mental ability; it also implies that tools are manufactured and then used for a specific purpose. In 1917, Wolfgang

Kohler wrote *The Mentality of Apes*. In this book, Kohler reported that he witnessed chimpanzees solving problems that involved the use of tools. He observed them stacking wooden crates to use as ladders to retrieve bananas placed out of reach. If the bananas were on the ground outside of the cage, instead of using a ladder to increase their reach, they used sticks.

According to Kohler (1917), an ape named Sultan “tries” to reach a piece of fruit with a small stick. However,

“Not succeeding, he tears at a piece of wire that projects from the netting of his cage, but that too is in vain ... He suddenly picks up the little stick once more, goes up to the bars directly opposite the long stick, scratches it towards him with the “auxiliary”, seizes it, and goes with it to the point opposite the objective (the banana), which he secures”.

Kohler concluded, even though he used the word “try” that these were *not* episodes of *trial and error* (a valid explanation believed to be one of the foundations of animal learning). Instead, he argued that the apes were imbued with *intellectual insight* or *discovery*, by which they realized the answer and, based on this intellectual insight, implemented it with what he later refers to as, “unwavering purpose”.

Acclaimed primatologist, Jane Goodall (1986) provides a more celebrated episode of chimpanzee tool use. Goodall reported observing chimpanzees making tools by stripping leaves from twigs and then placing them mounds to capture ants: The ants used the twigs to travel upward out of the mounds. In 1990, Imanishi found chimpanzees using rocks to crack open nuts. According to the Stanford Encyclopedia of Philosophy, this is an example of chimpanzees using, “composite tools” to obtain food. Carvalho (2008) claimed that chimpanzees “manufactured” these composite tools, which included “hammers and anvils”.

Moreover, Preutz and Bertolani (2007) reported that chimpanzees manufactured spears in a process that includes, “four or more steps in order to hunt bush babies”. Internet bloggers report such things as “tool construction” entailing up to five steps, including “trimming the tool tip to a point”. Barham and Mitchell (2008, p. 65) report: that “The making of these stabbing tools involves four or more sequential steps from selecting the raw material (branches), trimming the ends, sharpening the tip and applying the tools”.

According to Preutz and Bertolani (2007), ten different chimpanzees jabbed sticks into openings in tree branches and tree trunks to extract galagos (bush babies) from their sleeping nests. In much the same way that chimps modify termite sticks, these chimpanzees stripped twigs of their leaves; they also chewed the ends to sharpen them and in the process produced a “small thrusting spear”.

### ***Do Animals Have Moral Conscience and Reason Morally?***

Recently scientists have become interested in animal morality, i.e., the ability of animals to reason morally like humans. According to the Stanford Encyclopedia (Animal Cognition), Bekoff and Pierce claim,

“That some species have a distinct form of morality that is not a precursor to human morality”.

That is, morality is relative to their species:

“Because they (Bekoff and Pierce 2009, 82) take morality to mean ‘a suite of other-regarding behaviors that cultivate and regulate complex interactions within social groups’, they take the complexity of animal behavior, social organization, and cognitive flexibility to demonstrate that other species have morality in this sense (their morality consists of “other regarding behavior”). Central to the view is that different species have different norms, and that this makes animal morality species-relative. Despite the differences, they claim that the important similarities between species include the capacities for empathy, altruism, cooperation and perhaps a sense of fairness”.

Animal morality differs from human morality, they argue, because animal morality is species-specific (not because morality is rationally determined and dependent upon ontological apprehension and intellectual analysis leading to objective definition of a thing’s essences, which makes normative decisions possible – as we shall see<sup>44</sup>). Thus, animals, like skeptics, are relativists.

On the other hand, Peter Singer (2006) argues that morality crosses species lines and is therefore not species specific: “There is no sound moral

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<sup>44</sup> For a full presentation of normative sciences and their dependence on ontology and intellectual apprehension, see “Integral Methodology, Marzak, 2014).

reason why possession of *basic rights* should be limited to members of a particular species" (Singer seems to be an inter-species moral universalist).

In this regard, Paola Cavalieri, an Italian philosopher known for her advocacy of extending human rights to great apes, established The Great Ape Project (GAP) along with Singer in 1994. The GAP is an international organization consisting of anthropologists and primatologists who advocate a United Nations Declaration of Rights for Great Apes. Specifically, they promote positive rights to life and liberty including negation from torture. In other words, Great Apes deserve some of the fundamental inalienable rights accorded to humans, with whom they form "a community of equals".

In 1994, Cavalieri and Singer published, "*Great Ape Project: Equality Beyond Humanity*", a compilation of thirty-four authors including Richard Dawkins and Jane Goodall. The authors agree that apes are rational and self-conscious animals that deserve the above protections. Their belief in animal rationality is based on the ability of apes to communicate using *sign language*, something philosophers have acknowledged for over two thousand years (the use of perceptual sign language-not of conceptual symbolic language).

### *Do Animals Love?*

Sanjida O'Connel (1995) concluded that apes exhibit complex physiognomy (body-language) relative to diverse emotional states of other apes. De Waal concluded (2006) that, Chimpanzees understand emotions, and respond to different emotional states with different behavior, e.g. consoling the loser of a fight, helping, etc. De Waal takes these behaviors to be evidence of empathy in chimpanzees".

De Waal also reports how a female gorilla, Binjti-Jua, "rescued" a three-year-old boy who had accidentally fallen into her space at the Brookfield Zoo in Chicago" Binti's actions have been interpreted as evidence that animals are capable of love.

### *Do Animals Communicate or Have a Language?*

Initially (1933-1955) researchers tried to teach spoken language to chimpanzees by raising them as human children. However, chimpanzees lack vocal cords necessary to pronounce words, which led to teaching them American Sign Language (ASL), or to use of computer keyboards to facilitate communication. Among, the more famous experiments was

Beatrix and Allen Gardner's experiment with Washoe who, after being captured in the wild when she was about ten months old, learned, through imitation and subsequent training using positive reinforcement, to form 132 signs. Washoe was able to transfer signs such as "more", which was the first "referent" she learned, to several things not just to tickling which she thoroughly enjoyed (Gardner & Gardner 1979: 190, Stanford Encyclopedia). Washoe also transferred words such as "dog" to the sound of an unseen barking dog (191). It is also reported that Washoe spontaneously combined signs into meaningful phrases and imparted this sign knowledge to other chimps that used it as a regular part of their communication repertoire without any input from humans (Gardner & Gardner 1989: 24, Stanford Encyclopedia).

In their 1984 book, *Mind of an Ape* (p 13), David and Ann Premack concluded, "We now know that **someone who comprehends speech must know language, even if he or she cannot produce it**". By this, they mean that chimpanzees able to comprehend human speech must know human language. The Premacks began teaching apes in 1964; their research was conducted at the Universities of Florida, Pennsylvania, and Missouri. Their most successful student was Sarah who learned a nonverbal language consisting of magnetic plastic tokens paired with an object or word. After Sarah had been taught to associate each token with its appropriate object, she could arrange them on a magnetic board used for communication.

In this way, Sarah was taught to parse sentences (make or understand sentences with partial words). For example, when told, "Sarah nose touch", she responded by touching her nose. To make the findings more remarkable, the tokens were designed to look differently than the objects they signified. For example, apple was paired with a blue triangle.

Sarah, moreover, was taught both a list of nouns and of verbs as well as colors and was also reported to select answers requiring "judgment". For example, she figured out that a light cord had to be plugged in before some related problem could be solved.

## Section Summary

Surhone, Timpdon, and Merseken (2010) sum up the current state of research on animal cognition:

"Primates are capable of high levels of cognition; some make tools and use them to acquire foods and for social displays; some have

sophisticated hunting strategies requiring cooperation, influence and rank; they are status conscious, manipulative and capable of deception; they can recognize kin and conspecifics, (members of the same species) they can learn to use symbols and understand aspects of human language including some relational syntax, concepts of number and numerical sequence”.

### **What does this Research Prove?**

Although Darwin’s anecdotes are easily dismissed, the research conducted by his successors is voluminous, well documented, and empirically rigorous – it is not so easy to dismiss. Is it possible to answer all these scientific reports? If no answer can be given, the materialists are correct: The difference between human thinking and animal thinking is only one of degree; man is nothing more than a highly evolved and specialized animal, bound to matter and lacking any spiritual operations necessary to distinguish the human species from other primates and animal species.

### *Answering the Critics*

To begin: Darwin’s evidence is clearly anecdotal; it consists of highly subjective reports and ambiguous accounts by various purported consultants. This is specious data, which if attempted in this book or by any of our contemporaries would be scorned as “unscientific” and dismissed. Moreover, Mr. Darwin seems to lack any philosophical understanding about the human mind; he **fails to make necessary distinctions between types of thinking and types of acting**. Specifically, we expect to find many similarities between human and animal minds, for example, memory and imagination, which are merely *differences of degree*. In fact, **all of Darwin’s examples of animal “thinking” are merely expected sentient *differences of degree*** associated with the lower human mind. As sentient differences, they do not broach the topic of thinking that occurs in the higher human mind except to confuse sentient abilities of the lower mind (*difference of degree*) with rational abilities of the higher mind (*difference of kind*) **followed by facile attempts to pass the supposed congruence off as an established fact because, “It is certain” or “without a doubt” because “Mr. Blythe” says so.**

**All of Darwin’s examples prove nothing new. In fact, they confirm what has been known about sentient thinking for over two thousand years.** The problem is that Darwin *et al* are either (1) poor philosophers (2) engaged in projection and anthropomorphism (3) simply



making honest mistakes presumably because they are not philosophers or are (4) ideologues who do not care about objective science or objective methods as long as their conclusions are accepted and they are therefore vicariously confirmed in their beliefs.

Darwin acknowledges that the difference between humans and animals is vast; nonetheless, he erroneously insists that animals demonstrate rudiments of rational thought that if given enough time will develop into mature rational thought. Time, however, will not do the trick. Animals do not possess the “rudiments” of rational thought. All the proffered examples are nothing more than highly developed sentient abilities, which can be explained by recourse to physics and the properties of matter as demonstrated in earlier chapters. Rational thought however, as we shall see, cannot be explained by physical properties of matter.

Animals have sentient abilities of memory and imagination including learning by *imitation*, by *random occurrence*, by *trial and error* and by being *trained* to do things that seem to require rational thought but can be explained by sentient cognitive abilities. If picking up a rock to smash nuts is the manifestation of a first rational step, then other rational behaviors involving methodical improvement and manufacture of increasingly sophisticated “tools” should be observed. **The fact that a second step has *not* been observed (i.e. improvement) is evidence that rational intelligence is *not* involved, but something else is at work.**

Moreover, frequent comparisons made between the intellectual abilities of human children and anthropoid apes, in order to justify claims of rational intelligence in the latter, are invalid comparisons. **Average children do not reach the age of reason until about their seventh or eighth year. Until that time they too, like chimpanzees and apes, are sentient thinkers.** Thus, to claim that an anthropomorphous primate can think like a child and therefore must possess rational abilities is incredulous. To demonstrate that an adult chimp mind is similar to a two-year-old human mind does little to advance the argument. *The human toddler is progressing through a sentient stage—the difference between the two minds at this stage of development is only one of degree.* To obtain the required validity that makes such comparisons powerful, researchers should pair adult chimps to adult humans who have acquired the type of rational intellectual ability the scientists are purportedly researching.

Neither Darwin’s theory nor subsequent “empirical evidence” can account for the quantum leap that separates primate sentient and human rational abilities. All the empirical evidence to date is nothing more than an

impressive collection of increasingly complex examples that any perennial philosopher, or social scientist equipped with knowledge of philosophical psychology, could explain be recourse to sentience. **Perennial philosophers do not contend that animals cannot “think”; indeed, they can think. What is being contended is that they do not think *rationally* or *conceptually*. The research does nothing to disprove this long held assertion.** Even Darwin admitted that no ape could follow metaphysical reasoning or mathematical problems. Nonetheless, he stubbornly maintained his position that animals have nascent rational abilities. He did this without any compelling evidence except a brilliantly constructed theory backed only by anecdote. Unfortunately, this theory has strongly influenced subsequent cognitive research.

### *Response to the Question Do Animals Think?*

When turning to modern cognitive data, it is important to realize that the group of people who argue that **the most complex phenomena** (the origin of DNA and of a human cell) **are explained by recourse to random action occurring within unverified and imaginary environments are essentially the same ones who now observe the simplest things** (like picking up a stick or a rock to poke a bush or smash a nut) **and claim that they cannot be the result of simple random action, but must be the result of purposeful intelligence.**

Students are asked to believe that DNA and cellular organelle were spontaneously formed from dirt over a time span stretching several hundred million years and then to further believe (without any credible evidence) that the cell miraculously came to life by mere random operations of nature without the involvement of any rational agent. Then they are asked to believe that simple acts such as placing a stick in an ant hill or smashing a nut with a rock are astounding phenomena explainable only by recourse to rational intelligence.

The most complex and unexplainable phenomena in the known universe are taught to be random acts not involving any intelligence, but simple and easily explained occurrences are taken to be so utterly amazing and unheard of in the annals of anthropological history that they could not have happened randomly (or by some other plausible explanation-emulation, trial and error) and, therefore, must be the product of rational intelligence. My core response is, Amazing!

The observation that birds avoid eating monarch butterflies because such butterflies are toxic is not a “mental reason” as researchers propose; it is a *sentient reality* simply explained by memory and association that birds possess as part of their sentient package. It is not a marvel that birds remember getting sick from eating monarch butterflies and afterwards refrain from such behavior. Nor is it a marvel that this simple information can be communicated to other members of the species through various signs such as sounds, bodily movements, or facial gestures. There is no need for anything beyond memory, imagination, and association to explain such natural occurrences. These are aspects of sentient intelligence that are logical and empirically verifiable.

***Response to the Question about Problem Solving, Do Animals Make Tools?***

Consider the spectrum of probabilities from “completely likely” to “no chance” that a proposition accurately explains an outcome. Atheists and materialists inexplicably pass over more likely explanations to embrace highly unlikely ones. For example,

(1) They ascribe the origin of life to *abiogenesis*, which envisages complex life emerging from random iterations while (a) vast evolutionary intermediates are all clearly absent and (b) in direct contradiction to universal entropy, which demonstrates that all things sink to the lowest energy states (become more random and less organized)—life itself is the only glaring exception.

Similarly,

(2) They ascribe “rational thought” to animal actions, which are simply explained by instincts and sentient abilities such as memory and association.

In both scenarios atheists and materialists reject *logical* and *probability* propositions (based on empirical evidence) of cause that point directly to a Creator and are thus forced into confounding propositions that approach the farthest reach of improbability.

Moreover, robust but deceptive reporting is often used for propaganda purposes to exaggerate evidence in order to transform a facile act into a seemingly exceptional feat. For example, “trimming a point” sounds a whole lot more elaborate than “chewing on a twig”, and

“thrusting” a spear” sounds a lot more convincing than “poking a stick”. The Stanford Encyclopedia article about Animal Cognition states: “We now know that chimpanzees make and use tools for a number of different purposes. Chimpanzees at Fongoli, Senegal *manufacture spears in four or more steps* in order to hunt bush babies”.

The author of this article excludes the rudimentary activity, which, if objectively reported would enable the reader to draw common sense and contrary conclusions about the reported “steps” involved in the so-called “manufacturing” process. Moreover, there is no video evidence of either the purported production “process” or of the use of the “spears” purportedly manufactured to *actually* kill bush babies despite the fact that the researchers had video equipment with them. All the available video evidence shows is animals swinging sticks and then pulling a bush baby out of some bushes. The available video never actually shows a spear penetrating a bush baby and killing it. The entire process is a mere manifestation of a *difference of degree* explained by animal sentient abilities. It would be nice to see some better evidence, the type expected from trained professional anthropologists. It is unclear how this article made it past the editorial board or why people associated with the GAP are not incensed by the killing of bush babies by chimpanzees.

Similarly, Sakura and Matsuzawa, (1991) report that chimpanzees “manufacture” stone tools when, in fact, they simply pick up rocks and use them. We are also told that the manufactured tool composites include a “hammer and anvil” when all the research actually confirms is that two rocks were used to smash nuts.

Only human beings “manufacture” tools; a rock is *not* a tool. A rock is a natural product that might be used like a tool or for purposes of a tool, but it is not a tool. It becomes a tool only when it is transformed into a predetermined implement consisting of a number of parts (in either the finished product or as part of the manufacturing process) used for a *predetermined purpose*. Stones attached to sticks with leather straps, or some other binding material, have been used as tools since Paleolithic times. A Neanderthal flaking a hard granite stone and attaching it to a long piece of firm wood for the purpose of hunting is manufacturing a tool. He proceeds from his own intelligence employing knowledge of parts and their synergistic recombination to mentally create something that sentient eyes have never seen. Guided by this intellectual vision involving synergy of parts, he then transforms matter, utilizing a further developed and coordinated manual skill involving mind and trained hand, into a manufactured weapon.

A hammer is a tool that consists of a number of parts designed for a specific purpose and then fitted together. It is probably the oldest tool known to man. The hammer is designed to take advantage of a long light handle for leverage and a heavy head for striking. The head is purposefully shaped for a specific purpose. A rock is neither shaped for a specific purpose nor composed of separate parts, it need not be created in the mind before being manufactured and then used by the hands.

To propose or essentially pretend that rocks are tools is a bit of anthropomorphism or ridiculously dishonest. Using a rock to crack a nut does indicate some type of mental ability (memory, imagination, sensation, perception, consciousness). But it does *not* indicate *rational* mental ability as found in humans who purposefully manufacture tools (nut crackers, hammers *etc.*) from a logical mental pattern that is then applied in the transformation of matter for a predetermined purpose.

Chimpanzees are neither using nor manufacturing “tools”. They are using rocks and sticks *like* tools. **They are engaging in mental tasks equivalent to their sentient ability, which includes imitation (monkey see-monkey do), trial and error, and random occurrence, which are more likely with the passage of time by which passage, according to the atheists, anything is possible.** To call picking up a rock and swinging it or sucking on a stick and poking it “manufacture”, and then to call a rock a “hammer” because it is used to smash a nut and a stick a “spear” because it is poked into a bush, are clear examples of anthropomorphism with propaganda value and perhaps a bit of self-convincing: If a rock is called a hammer long enough, it becomes a hammer. According to renowned American sociologist, W. I. Thomas’ “*Definition of a Situation*”: “If men define a situation as real, it becomes real in its consequences” (1928, 571-572).

The fact that a chimpanzee randomly struck a nut with a rock is not amazing; the fact that the action was mimicked is an everyday occurrence – chimpanzees that are known for their mimicry. It might be argued that using two rocks, one as a hammer and another as an anvil, is evidence of tool use; it is more likely a random or learned event (acquired by imitation or because it was taught by a human who has intelligence). If all that 100 million years of hypothetical evolution can give us is a chimp sucking on a stick, we can be quite sure there is no manufacturing going on; it is simply explained as a memorized random event that is subsequently imitated. **If a chimp possesses the mental ability to manufacture a spear and the best it can do in one-hundred million years is to suck on a stick, we must question the premise that it can make tools.** Evidence that is more

convincing would include secondary attempts **to improve the tools such as purposeful shaping of the so-called “anvil” to better perform its function** or the improvement of the hammer to perform its function. Convincing evidence could also include embellishment of a tool with icons or images such as those found in human art (swords, knives *etc.*). No such evidence exists; if it becomes available, it will have to meet the rigorous scrutiny of the modern scientific community to be considered valid<sup>45</sup>.

Is it too far a stretch of the mind to imagine that somewhere in the millions of years chimpanzees have existed, that one smashed a nut with a rock and another copied the event and continued doing so? **There is no need for rational intelligence to explain this natural occurrence.** We know that animals are endowed with sense consciousness, memory, and imagination. They are therefore able to observe behavior, (even their own), remember, and pass it on.

The only noteworthy thing here is the inconsistency and bias of scientists who claim some very remarkable things without any empirical evidence to the extent of proposing chemical evolution of genomic material outside of a cell followed by the inexplicable miracle of life under the banner of *random chance*. At the same time, they argue that simple things such as a chimp smashing a nut with a rock or reaching for a banana with a stick are so astounding that they transcend all possible natural explanation and therefore must be explained as a manifestation of rational thought. Remarkable!

Finally, plugging in a light as the Premacks reported about Sarah is also an “association” or a memory; it is not a “judgment”. A judgment is a rational choice requiring knowledge of a universal principle and the contingent facts related to its possible application in a particular case. A mental judgment involves universal quidditive knowledge of a cause that enables a person, with such knowledge, to mentally deduce its effects without first having to see them. It involves both the ability to make a rational causative statement and a corollary normative judgment. In Sarah’s case, “judgment” is a misnomer. It might be *qualified* by words such as “perceptual” or “associative”. What it really means in this case is memory and knowledge by association, which are mere sentient acts that appear to be rational if philosophical distinctions are not made.

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<sup>45</sup> One could easily imagine that a researcher with an ideological motive might present natural objects to the chimp and after some time of disappointing observations begin to demonstrate how these objects could be used – thus enabling the chimp to eventually imitate the use of rocks and sticks.

Philosophers make appropriate distinctions between sentient acts and rational acts and among practical judgments, moral judgments, propositional judgments, and speculative or logical judgments. Plugging in a lamp does not involve any judgment – it does not require quidditive knowledge (as well be explained in the following chapters). It is a sentient act involving memory and learning by association, mimicry, or random chance. Again, a researcher is using the wrong word: a word, such as *judgment*, that has philosophical meaning.

### ***Response to the Question Do Animals Have Moral Conscience and Reason Morally?***

According to the patriarchs of materialism, such as Hobbes, Spencer, and Darwin, animals live by an innate “law of the jungle” according to which only the “fittest survive”. There are no universal animal rights, as Singer maintains, that regulate the law of the jungle. If there were, all animals, not only human beings, would be guilty of violating them. To have intellectual ability, as animals are purported to have, and not use it or to have it in such a way that instincts overpower it is useless. Human beings, unlike other animals, make laws to govern their behavior. They are capable of freely adhering to these laws, which requires that human beings, unlike other animals, regulate inordinate passions often harmful to others.

Laws, moreover, must be *promulgated* (formally announced) or they are not laws at all (Aquinas, Q 90, A, 4, First Part of the Second Part); that is, they will have little or no effect. The Ten Commandments and all subsequently derived civil laws are written down and promulgated. It is difficult to imagine how chimpanzees, without writing ability, are able to promulgate any law, let alone discover one. Promulgation is included in the definition of law because law is essential to the survival and growth of the community and each of its individuals – laws must be known. Not everyone uses their reason to derive laws, yet to live in community people must adhere to its laws, even if they fail to use their reason to discover them. Laws are promulgated or written so that those who are too ignorant to attain legal knowledge by their own rational efforts are, nonetheless, benefited by someone else’s knowledge. Laws are written, therefore, everyone is responsible to live by them—ignorance is not an excuse. Thus, if animals have moral capabilities but *under-developed reason*, **they lack the intellectual rudiments necessary to discover moral precepts** and the even greater ability necessary to apply them to particular cases. Therefore, given such an acute intellectual under-ability to discover moral precepts and apply them, sentient **animals stand in dire need of written laws but do**

**not have any!** If human beings, whose rational capacity far exceeds any supposed rational capacity of chimps, require written laws how much more so the chimps, yet they do not have any! If animals cannot promulgate a law, what good is a law to the wider often unthinking community that is subject to them?

So called "species-specific" norms are not signs of moral reasoning; they are signs of diverse biological need, innate animal drives, environmental diversity, or diverse anatomical and physiological structures and functions unique to each species (what Aquinas referred to as the eternal law operating differently in diverse things according to their nature). Animals do not commit murder or other crimes contrary to the natural law known by reason. They do not have legal systems that prohibit such actions; their acts are rooted in instinctual drives, passions, and sentient associations and are therefore not subject to reason. Accordingly, researchers are unable to demonstrate that animals develop and enshrine "species-specific norms", that they subject these norms to the test of reason, and that they are capable of objectively applying these norms, using the same reason, to contingent facts relative to particular cases.

Unfortunately, researchers such as Peter Singer (2006) fail to note the importance of the "natural law"<sup>46</sup>, which they confuse with the "laws of nature"<sup>47</sup> and thus seem to have little problem playing the role of political philosopher talking about morality and animal rights without

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<sup>46</sup> *Founded in our nature and revealed to us by our reason, the moral law is known to us in the measure that reason brings a knowledge of it home to our understanding. The question arises: How far can man be ignorant of the natural law, which, as St. Paul says, is written in the human heart (Romans 2:14)? The general teaching of theologians is that the supreme and primary principles are necessarily known to everyone having the actual use of reason. These principles are really reducible to the primary principle which is expressed by St. Thomas in the form: "Do good and avoid evil". Wherever we find man we find him with a moral code, which is founded on the first principle that good is to be done and evil avoided. When we pass from the universal to more particular conclusions, the case is different. Some follow immediately from the primary, and are so self-evident that they are reached without any complex course of reasoning. Such are, for example: "Do not commit adultery"; "Honour your parents". No person whose reason and moral nature is ever so little developed can remain in ignorance of such precepts except through his own fault. Another class of conclusions comprises those which are reached only by a more or less complex course of reasoning. These may remain unknown to, or be misinterpreted even by persons whose intellectual development is considerable. To reach these more remote precepts, many facts and minor conclusions must be correctly appreciated, and, in estimating their value, a person may easily err, and consequently, without moral fault, come to a false conclusion' (Catholic Encyclopedia 1910, Article on Natural Law).*

<sup>47</sup> *The order which governs the activities of the physical and material laws of nature and the broader universe. Among lower animals and human beings these include instincts and emotions, such as the instinct for self-preservation and care of offspring which are differences of degree.*



understanding what they are talking about. Singer's performance is suspect because his rational credentials include ontological deficiencies such as the following: "Killing a defective infant is *not* morally equivalent to killing a person... Sometimes it is not wrong at all" (Washington Post, La Valle, 2008).

If a handicapped human infant, alive in her mother's arms, is not a person or a moral subject, what is she? Singer is *equating* humanity with physical health and advocating rights for chimpanzees that he would deny to handicapped human beings; he seems to believe that an ape is more of a person than a handicapped infant. It is not difficult to understand why his 1999 appointment as a professor of bioethics at Princeton University caused "widespread protests". "What do people do with a guy who publicly contends that parents should have the right to euthanize children – within 28 days of birth – who have severe handicaps?" (La Valle, 2008).

According to Singer (2006), "*There is no sound moral reason why possession of basic rights should be limited to members of a particular species*". How about the basic right to a trial by peers? Can you imagine a trial jury of chimpanzees or gorillas? Moreover, if animals are subjects endowed with basic rights, as Singer proposes, then all of nature must be brought to trial in *human* courts because animals kill and steal from each other and have no courts of justice to redress grievances and punish offenders. In such cases of animal perfidy, what happens to the basic right to trial by a jury of peers? If there is no trial by peers but only one conducted by a human judge and jury, how is justice to be established especially if the offending party is a great ape? Of course, all of this is absurd, but it is a revealing exercise.

If it is morally *impermissible* for human beings to kill chimpanzees, orangutans and gorillas, as Singer *et al* argue, but morally *permissible* for them to kill each other and various members of other species, we must ask why this is the case. If we are to bring a human to trial for killing chimps, then chimps should be brought to trial for killing bush-babies and their own young. If it is wrong for human beings, it should be wrong for chimpanzees, unless, of course, human beings have rational ability and free choice and chimpanzees do not.

Continuing in this vain, legislative power to draft and promulgate laws necessary to protect and advance rights is meaningless without executive power to enforce such laws. This political fact presents a legal problem: If animals have a right to life, who but human beings are going to enforce the prohibition of chimpanzees killing bush babies or don't bush

babies have a right to life too? We know of no case in which chimpanzees are being tried in a bush baby court. Nor do we know of any universally binding laws on all animal species necessary for such trials to occur and have any meaning. If human beings are the ones doing the enforcing, and the judging, and are also the ones making the laws to guide particular species behaviors<sup>48</sup>, we are back to dominance, because no man can be the judge of his own case (*nemo iudex in sua causa*). If we make the laws, interpret them, and enforce them, how are we to be held accountable? We have enough problems trying to deal with human deviance. How are we to redress all the so-called wrongs done by animals to each other?

If basic moral rights were extended to all species, nature would grind to a halt. It would grind to a halt because all of nature is engaged in a universal violation of these rights and does not have an international inter-species or intra-species court ruled by rational laws of justice devised by the animals themselves for the purpose of promoting justice and protecting their "rights" *vis a vis* members of their own species and those of others who continually abuse them. Animals seek out and kill the weak and most defenseless members of more vulnerable species and no one questions the morality of such acts. But when a human being kills an animal, we supposedly have a moral issue. If chimpanzees (and other species) have a right to life and other human rights, as Singer maintains, then many of them should be brought to trial for their murders and sex crimes.<sup>49</sup>

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<sup>48</sup> *Animals do not seem to have legislative, executive, and judicial branches; they do not seem to promulgate and develop laws that protect supposed rights.*

<sup>49</sup> *"That chimpanzees are not vegetarian pacifists came as a surprise in anthropological circles when (Jane) Goodall first reported the chimps' omnivorous appetites....As the field data accumulated it became clear that the brutal side of chimpanzees is quite real. Males strive to ascend a rigid dominance hierarchy and on reaching high rank wield their political power in brutal ways. Sexual coercion and beating of females who do not submit to male desires are routine. Males patrol the perimeter of their territory, attacking and sometimes murdering their unwary neighbors. Chimpanzees at two study sites in Tanzania (Gombe and Mahale National Parks) were observed to fission into two separate communities, after which the larger community in each case systematically exterminated the smaller".*

*"Chimpanzees are also efficient and ruthless predators, consuming hundreds of prey animals including monkeys, antelope and wild pigs. Their attacks on their favorite prey, the red colobus monkey, are brutal and dramatic. The hunts often involve hand-to-hand combat between a chimp and a monkey, a match that is usually won by the chimp. Small-bodied juveniles are killed by a bite to the neck, whereas adult monkeys are thrashed against the ground or a tree limb. The meat is distributed in Machiavellian fashion by high-ranking males who share with allies and kin, but withhold the prize from rivals" (Craig Stanford 2000).*

Sanford is a professor of anthropology and biological sciences at the University of Southern California and Co-Director of its Jane Goodall Research Centre.

Unfortunately, as noted above, no such intra-species or inter-species legal or judicial structures exist to redress the pervasive mayhem occurring throughout the animal kingdom. Animal rights advocates express a noble sentiment. Nonetheless, ideas such as Singer's are, like those of Darwin, riddled with anthropomorphism involving the projection (and perhaps a bit more) of inalienable human rights derived from natural law onto sentient animals that do not manifest any rudiments of rational thought (such as law promulgation, judicial structures, and rationally guided enforcement mechanisms necessary to promote justice and protection of their supposed "rights"). If no such rationally derived structures, laws, and corresponding enforcement mechanisms exist, how is it that chimpanzees and other animals are subjects of human rights? They are not aware that they have any such rights; otherwise, we would expect them to do something about all the "murders", "rapes", and related violence that rarely ceases among them. They have no such structures nor do they do anything *rational* about physical abuse. They make no appeal to moral conscience but respond with *physiological* fight or flight responses. Animals, like it or not, are governed by *laws of nature* (not *natural law*) that are physiologically determined. Among animals, "might makes right".

Among human beings, that which is right is determined by rationally derived moral standards of justice rooted in human nature. Ideally, human consciences are filled with pity for abused and suffering animals, a pity that moves human beings to do something about animal abuse. **Pity however, is not a moral deduction of reason** from principles of law; **it is a noble sentiment of the heart**, which we should pay attention to. It is a noble thing to defend animals from abuse:

*"The just regardeth the lives of his beasts: but the bowels of the wicked are cruel"* (Proverbs 12:10).

### *Response to Do Animals Love?*

#### *Binti Jua*

According to the *Orlando Sentinel*, August 23, 1996,

"A three-year-old boy was injured after toppling 20 feet into a gorilla compound where seven hulking primates were lounging.

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One of the animals, a rare western lowland female gorilla named Binti- Jua, towing her own 18-month-old daughter, Koola, on her back, acted contrary to legend and whisked the boy to safety”.

Corroborating this report, Tim Friend (2004) a science writer for *USA Today* and author of *Animal Talk*, concludes that, “There is no doubt (sounds like Darwin) that Binti-Jua felt compassion for the primate of a closely related species and intended to help rescue him” (p. 36).

The fact that a researcher or reporter is zealous about Binti Jua’s “rescuing a fallen boy” but not *equally* zealous about *objectively reporting* all the facts, because they might call the whole “love idea” into question, is damaging. Neither the *Sentinel* nor Friend reported that Binti Jua had been neglected by her own mother and consequently raised by humans who endeavored to improve her nurturing skills through *operant conditioning*<sup>50</sup> using a human doll. Binti was rewarded every time she cuddled the doll and carried it to them.

This is good publicity but it lacks scientific objectivity and is deceptive. Stephen Budiansky (2004), Washington editor of the journal *Nature*, writing for the DANA Foundation apparently tired of the deception writes,

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<sup>50</sup> A type of conditioning where behavior is modified by its consequences. **Negative Reinforcement** involves the removal of something aversive following a desired response such as the removal of an irritating noise when an animal performs a desired function. **Positive Reinforcement** adds something following a behavior while negative reinforcement removes something aversive following a behavior.

Behavior that is desirable is positively reinforced with a reward or negatively reinforced by removing an adverse stimulant.

Undesirable behavior is limited by positive reinforcement such as punishment, which is added following behavior.

**Operant Conditioning** follows a behavior; it differs from Classical Conditioning, which is simultaneous with a behavior.

**Classical Conditioning** attempts to condition a behavior such as salivating when presented with food by pairing the presentation of food with an experimentally induced signal such as the sound of a bell until the food and bell are so strongly associated that salivation occurs at the sound of a bell without the food being present. It does not involve rewards and punishments.

“Perhaps I have read too many popular books about animal intelligence over the past 20 years, but they generally hold few surprises for me anymore. The narratives are as predictable as a vaudeville melodrama, and the same stock characters always appear”.

Reacting to Friend, he further states that,

“No doubt” is strong language, especially when one hears the rest of the story, which Friend does not bother telling. “The media made it sound like Binti made a conscious decision to quote unquote ‘save the boy,’ but this is speculation”, Binti’s keeper later complained. “She saved him from what, really? The other animals were not coming after him”. As in the many gushing media reports that followed the original incident, Friend also omitted the rather important fact that Binti had been extensively trained to retrieve a doll and bring it to her keepers. This training was done because many zoo-reared apes fail to display proper maternal behavior (especially if, like Binti, they were hand-reared by humans since infancy). That the boy was stunned by his fall of 20 feet (thus limp like a doll) helped too. As Binti’s keeper explained, had the boy been awake and screaming, ‘Binti might well have elicited a different kind of response’ – Binti would likely have run away or even attacked”.

### *Response to Do Animals Communicate and Have a Language?*

Language is one of the more important issues, but, again, materialists fail to make necessary and proper distinctions. Language and communication are closely related, but they are two separate concepts. **All animals communicate in some manner, but that does not mean that all animals have a human language.** According to renowned linguist Noam (Chomsky, 1968), language requires a logical syntax, which he claimed apes do not possess. Furthermore, the potential to develop a language is innate, so if apes had the potential for learning language, they should be able express it *without* human conditioning. Thus, Chomsky states:

“If an animal had a capacity as biologically sophisticated as language but somehow hadn’t used it until now, it would be an evolutionary miracle, like finding an island of humans who could be taught to fly” (cited in Lloyd 2004, 585).

It is possible to make distinctions among *types of languages* just as it is possible to make distinctions between *types of thinking and judging*. Since it is expected that an animal capable of sensation, memory, imagination, and sentient consciousness should also possess an ability to communicate its basic experiences to others in some fashion, it is not surprising that animals are reported to engage in diverse forms of communication. Animal communication is verifiable, but it is *not* congruent with human communication. Like memory, imagination, consciousness, and thinking, we should be careful to make necessary distinctions. Animal communication occurs by means of "*sign language*" or "*sentient language*", which is something quite distinct from human "*symbolic language*".

In the 1970's Herbert Terrace, a behavioral psychologist at Columbia University headed "Project Nim" to study primate language abilities. Terrace led a team that taught American Sign Language (ASL) to a chimpanzee named Nim Chimpsky (a likely nod to Noam Chomsky). Terrace concluded that Nim was using simple signs to communicate by associating each sign with a reward rather than understanding their meaning. Nim could remember signs but could not build meaningful phrases with them. He could not form words syntactically; he had no idea of grammatical rules that help determine word meaning in a phrase or clause. For example, "John eats cow" and "cow eats John" utilize the same words but their ordering changes the meaning of the phrase.

Chimpanzees answer questions or arrange phrases using various words, but it is unclear that they understand all the words used or how their order in a phrase alters their meaning. The fact that animals communicate by signs is indisputable. Thus, referring to this type of communication as "*Animal Sign Language*" is apropos, if two things are understood: (1) that **animal sign language involves basic association of a concrete noun or simple action word with that of an object and (2) that animal sign language is a language without syntax**. Animal sign language involves a simple conscious recognition of a desired object along with all that is associated with the object (including words) and the additional sentient ability to imagine and to memorize the associated pair(s).

Animal sign language is a type of communication by which animals use signs associated with objects to convey information. The communication is often random, and researchers often have to decipher meaning. "I would like the ball", might be signed as: "Ball" or "Like Ball" or "Ball Give" or "like would I the ball" etc. Such sign language must be flexible (as it is when babies use it) and must leave room for multiple meanings and simple interpretation based on use of "*key words*". That is,

words can be placed in nonsense order (*water give pink* or *give water pink* or even *pink water give*) and still illicit the same response because word phrases derive their meaning from association with a “key word(s)” not from logic or rational understanding. Toddlers speak the same way. Until becoming familiar with language conventions, which leads to habitual ordering of words followed by later conceptualization of their essential meaning and mastery of syntax, they tend to mix words up.

According to Dr. Dennis Bonnette (1993), it is *doubtful* that experimental chimps that are able to produce word sequences such as, “Please machine give apple”, actually understand the meanings of words such as “please” “machine” and “give”, let alone the relationships among them necessary to construct a grammatically correct sentence. It is more likely that “apple” is a keyword that experimental chimps learn to identify or associate with a real apple in order to actually obtain a real apple. As additional words are added to and associated with the keyword word (apple) to form an increasingly complex sentence (please, machine give, et al), the additional words needed to make an apparent sentence are learned as associations that must be present with the keyword “apple” to actually obtain the “apple”.

Thus, when chimpanzees respond to sentences constructed by researchers, it is unclear how they are deciphered by the animals themselves. It seems clear that they recognize the nouns and some simple action verbs and ignore the rest. According to Terrace, their use of language is merely pragmatic (to get a reward), which corresponds with Bonnette’s conclusion that only key words are memorized. Most things taught to Nim could be taught to other animals with similar sentient abilities using appropriate conditioning techniques.

Chomsky and Terrace are two of the more renowned critics of animal language. Another is Thomas Sebeok, an American semiotician and expert in signs and human communication. According to Sebeok,

“In my opinion, the alleged language experiments with apes divide into three groups: one, outright fraud; two, self-deception; three, those (appropriately) conducted by Terrace. The largest class by far is the middle one” (Wade, 1980).

Another recognized authority of animal communication is Heini Hediger, former Director of the Zurich Zoo and also known as the “Father of Zoo Biology”. Hediger (1981) points out that it is practically impossible to eliminate human influence on chimp behavior, “If only for the reason

that every experimental method is necessarily a human method and must thus, *per se*, constitute a human influence on the animal”.

Anything beyond what is common to an animal’s natural memory and communication abilities has to be taught through training, but **nothing taught through training involves the use of operations beyond ones that are already natural to an animal. Nor does associative learning through human training transcend anything that animals are capable of knowing or communicating in their own natural way without the training.** Monkeys can either grunt for a banana, hand-sign for a banana, show a picture of a banana, or press a computer generated icon that represents a banana. All these possibilities, and others, are sentient abilities derived from communication powers and operations already possessed as part of an animal’s sentient sign language package, which includes an ability to (1) create or identify a mental image of an object, (2) remember the image, (3) associate it with another image (similar object, lexigram [symbol corresponding to a word or object], word, or sign and (4) communicate it using the newly associated sign.

As stated above, none of this research demonstrates anything beyond what we already know or expect to discover about animal cognition due to animal sentient abilities. **But, such research often engenders confusion by making mere differences of degree appear to be differences of kind.** This is possible because many people, and often times researchers themselves, lack either appropriate philosophical knowledge to make necessary distinctions, are ideologically opposed to contrary knowledge, are blinded by the passion of pride, or as Sebeok contends, are engaged in an unconscious bout of “self-deception”.

It is clear, as stated, that the research provides nothing new, but it does reaffirm what the philosophers have been saying all along: It reaffirms the fact that animals have senses, memory, imagination, and a resultant and concomitant ability to associate a concrete object with a referent such as a word or some other sign that human beings design to represent the object. According to Donald Bonnette (1993)

“From all this, it is clear that in teaching apes to “talk” man is simply imposing upon them his own system of arbitrary or conventional signs. The signs belong to man, not to the apes. **The apes use them only because we train them to do so.** We thus turn the apes, as Hediger says, into “artifacts” of our own creation....It must be noted that there is no undisputed evidence of ape-



language skills which exceed the domain of the association of *sensible images*".

What researchers have done is to use the natural mental powers of brute animals in a *novel* fashion; they have constrained or forced animals to communicate in a manner that is unnatural to them; that is why the results are so limited. I have no doubt that even more signs and utterances could be elicited, if taught in a more natural way that takes advantage of an ape's natural signing abilities. Nonetheless, all this proves is something we already know, *viz.*, animals have significant perceptual/sentient ability. Because they have memory and imagination, animals can make associations. **Association, however, is very different from reason; it is a mega-difference to the extent of being a "difference of kind".** Reason is based upon the ability to form concepts or to conceptualize. As we shall see, a *rationally deduced concept* is something much greater than a *perceptually associated sign*. Animals naturally generate sentient based images and signs for everything they experience, but they do not generate mental concepts. That chimpanzee *naturally* communicate through gestures or signs developed by association with objects in their environment was confirmed by researchers from the University of St. Andrew in Scotland who, after studying chimpanzees in Uganda for two years, concluded that chimps have at least 66 distinct gestures they regularly use in communication (Gill, 2011).

But, simply because an animal responds to another's gestures and bodily cues, or even to human words, does not mean the animals think rationally. It merely suggests that animals can make and remember associations with icons, signs, and spoken words. Animals *naturally* read bodily signs and signals elicited by members of their own species and even from other species or if *trained* or *conditioned* to do so. The ability to communicate through use of sign language, impressive as it is, is merely the result of associative learning, which requires repetition, an ability to make associations, reward/punishment, memory, and anatomical ability, which enable sign language to be learned and communally shared. Sign language is an impressive ability, but one that is, nonetheless, only a sentient *difference of degree*.

## Section Conclusion

Many perennial philosophers are willing to admit sentient intellectual differences of degree, and, therefore, that animals "think" perceptually. However, there has been no compelling evidence resulting in

congruence over the issue of “Conceptual Thinking”. Darwin’s successors, realizing that this is the issue, have endeavored to respond, but all they have come up with are simple examples of dogs and monkeys doing things that we, frankly, expect them to do; animals have *not* been trained to think either rationally or conceptually. Everything they have been trained to do can be explained by material or physiological causes, motivations, operations and powers of the sentient mind-body composite.

To demonstrate that there is merely a *difference of degree* between men and animals, materialists must be able to:

- (1) Demonstrate that animals think rationally and act freely, as human beings do.

Alternatively, they could try to

- (2) Demonstrate that rational thinking and free will are physical processes.<sup>51</sup>

They have failed to do either, *viz.*, demonstrate (1) that animals think conceptually or rationally, i.e. are spiritual beings or demonstrate (2) that human beings are limited to perceptual thinking or thinking by association, i.e. are merely sentient beings.

### *In Search for a Mental Difference of Kind*

Although, much can be explained about *sentient associative thinking* through recourse to physics, biology, chemistry, and empirical psychology, there is much about *rational thinking*, which cannot be explained by these empirical disciplines because rational thinking is, as we shall see, a spiritual power of the rational soul. It is in this type of thinking, thinking that cannot be *adequately* explained by these disciplines that the *difference of kind* we are looking for resides. According to Aquinas, the human soul is a unique spiritual substance capable of separate existence apart from its body. It is not part of the physical body like an arm or a leg; the rational soul is united to the body as its animating principle and “substantial form” (a substance that gives form to a body), which is communicated to matter through the *quasi-spiritual* medium of genome as we have seen in Chapter Three.

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<sup>51</sup> I do not see how such an argument could be made; materialists have enough trouble with sentient consciousness. Rational thought and free will are vastly superior to sentient consciousness.

*Life and genome* are manifestations of the soul's spiritual power to vitalize and inform matter in cooperation with the cell's physical ability to manufacture bodily parts. *Conceptualization*, likewise, is a manifestation of the soul's spiritual power to think rationally in cooperation with the brain's physical or sentient abilities of sensation, memory, and imagination.

Thus, there are two broad types of thinking: one for sentient-based thought known as *perceptual thinking* and the other for spiritual-based thought known as *conceptual thinking*. Empirical science cannot explain either the **origin of life** or the **origin of its associated genetic code**. Similarly, it cannot explain **the origin of conceptual thinking**, which, like life and genetic information is associated with, and a manifestation of, the spiritual powers of the rational soul.

Diligent philosophical study of the soul and of its origin and powers led to the early growth of metaphysics, a branch of philosophical inquiry into the first principles of "being" (including substance, essence, accident as well natural theology, epistemology, and philosophical psychology, which study spiritual substances: God and the human soul, etc.). Philosophers have studied human psychology as a branch of metaphysics, and thus conceptual human thinking as both a physiological and a metaphysical subject, ever since psychology's inception in the Athenian Lyceum.

Since then, philosophers have consistently concluded that *Homo sapiens*, because of human psyche, or soul, and its inherent intellectual powers, are *different in kind* because human beings possess intellectual powers not found in any other animal. The locus of this difference is in the human ability for rational or conceptual thought culminating in the acquisition of wisdom (and a concomitant ability to love and seek union with that which wisdom apprehends as good and true and beautiful). Since conceptual thinking about, and acquisition of, wisdom is a hallmark of the philosophical enterprise, philosophers probably know something about the type of thinking that culminates in wisdom. For this reason it is wise to give due consideration to their explanation about thinking, which when understood, results in classifying man as a unique species *different in kind* from all other animals.

#### *A Note on Differences of Kind*

The idea of *Homo-sapiens* differing in kind from all other animals is not a novel or unique idea. Since Classical Antiquity, *Homo-sapiens* has

been understood as a unique rational animal distinct in kind from all other animals. All three of the great world religions: Islam, Judaism, and Christianity, as well as thinkers diverse as the Stoics, Plato, Aristotle, Descartes, Spinoza, Kant, Hegel, Locke, and the Framers of the American Republic, all agreed on this point.

In Locke's *Essay on Human Understanding*, we find him arguing that man's reasoning ability and understanding set him apart from all other animals. Like other animals, man has sense, memory and imagination, but according to Locke, "brutes abstract not". That is, they do *not* derive concepts or abstract universal definitions that capture the essence of things.

Similarly, Rene Descartes writing in the 17<sup>th</sup> century commented that, "a difference of merely greater or less (*a difference of degree*) makes no difference to the essence". That is, **a physiological difference of degree is irrelevant when compared to a spiritual difference of kind found in the essence.** It is the essence that makes a human being what he or she is beyond physical appearances. Physical appearances are important because they are reflections of this essence. In fact, the physical body is an integral manifestation of the soul. It is the soul and the body together that make a human person uniquely human; without the human body, there could not be a human person. Nonetheless, a human being (body and soul) is defined more by the interior soul than by the exterior body, which **is the flesh of the soul.** Body and soul go together—in fact, they are one, but it is the body that proceeds from the animating power of the soul acting on matter (as we have seen), not the soul from the body!

In analyzing the body, we have found only *differences of degree*. If there are *differences of kind*, they must be in the soul. For this reason, as already noted, Aristotle insisted that the student of politics must study the soul before all else. If we cannot find a *difference of kind* in the soul, we should surrender the political playing field to the atheists because, in that case, they will be more correct about society because they would be more correct about man.

If the atheists are more correct, advocacy of a normative social science is a waste of time; it can be replaced by a Machiavellian power calculus, by an attempt to identify some type of binding international norm, by a Hobbesian state of nature in which life is naturally "nasty, brutish, and short" or by floating it on the liberal free market and hoping for justice. A mere *difference of degree* between men and animals makes Social Darwinism, Classical Liberalism, or Marxist Materialism *apropos*; likewise, *it makes* all talk about transcendental human dignity and Christian

social science meaningless. To avoid this unfortunate verity, requires an ability to find a *difference of kind*. The preliminary concepts developed in this chapter already demonstrate short comings of Darwinists' and Materialists' approaches. These shortcomings blur distinctions between humans' higher ordered thinking and that of other animals' that might, if clarified, indicate *differences of kind*.

In Book I of his *Ethics* Aristotle makes it clear that in the search for a *difference of kind*, differences of degree, such as the ones we have explored, although fascinating, can be excluded because they are irrelevant.

"Life seems to be common even to plants, but we are seeking what is peculiar to man. Let us exclude, therefore, the life of nutrition and growth (*nutritive or vegetative soul*). Next there would be a life of perception, (*sentient soul*) but it also seems to be common even to the horse, the ox, and every animal" (and can therefore be excluded) (para 19).

We are not seeking what is *common* to human beings and other animals but what is *uncommon*, particular or unique, what Descartes referred to as the *essence or substance*. When philosophers seek the essence of a thing, they examine it in every way possible to arrive at an understanding of what it is in its deepest core, that which distinguishes it from all other things, that by which it is defined or conceptualized. Then they ascribe it a name signifying the substance. Of course, the substance, or inner nature is manifest in the outer nature, but it is the inner in union with the outer that defines a thing, not the outer, nor the inner by itself. This can be explained empirically by recalling that the outer form a body takes is dependent upon the inner *inform(ation)*, which is contained in the genetic data in the nucleus of every cell. The form of the outer body is also the expressed form of the soul concretized in matter.

### ***What is a Substance?***

Everything that exists has "being". However all beings can be divided into two classes: 1) beings that exist in themselves and 2) those that exist in another known as "accidents". A *substance* is "a being whose nature naturally requires it to exist in itself" (Bernard Wuellner S. J., 119). A substance is distinct from an *accident*, which is a type of being that does not exist in itself but must exist in another or it cannot exist at all. For example, the colors brown and red are "accidents" because they do not exist in themselves. They can only exist in a substance such as an animal's body, which can be brown, red, or any other color. If the accident of color could

be separated it would cease to exist; brown cannot be taken from dog and still exist apart from the dog; it does not have a separate existence.<sup>52</sup>

Although accidents must exist in a substance and although substances contain accidents, accidents do not effect or alter substances. A human body remains a human body regardless of its color; color does not change its essence. Accidents do not affect substances, but they are necessary to distinguish one substance from another in the same species; they are components of being that individuate substances.

To distinguish substances from accidents, philosophers say that substances are created and accidents are *concreated* (created in union with). That is, accidents are concreated in a substance as individuating characteristics of the substance. Substances are the universal, underlying, unchanging, and essential components of being that characterize and define every member of a given species. They exist in themselves and persist through every type of accidental change.

The rational soul is a substance that is the *form* of the human body endowed with *powers* that enable it *to act independently of the body*, and can therefore exist apart from the body. The sentient soul of an animal, because it is a corporeal substance with all its potency consummated in matter, has no identifiable spiritual operations (see Appendix, Chapter Three). Thus, the sentient soul is not believed to have any powers that would enable or necessitate its existence apart from its body. Apart from its body, a sentient soul can do nothing. The human soul, however, (as we shall soon see) is an intellectual power, which has an

“...operation in which the (physical) body does not share. Now only that which subsists in itself can have an operation in itself... We must conclude, therefore, that the human soul, which is called intellect or mind, is something incorporeal and subsistent” (Aquinas, Q 75, A 2).

Although substantial, incorporeal or spiritual, and capable of separate existence apart from its body, the human soul in itself is an “incomplete substance”. It is incomplete without its body because the human soul is not endowed with infused knowledge or intuitive knowledge. Instead, as we have seen in our discussion on sensation, the

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<sup>52</sup> Although an accident is not a substance, it has being (but not substantial being), it is something; it might be an accident, but even an accident is something.

human soul begins as a *tabula rosa* endowed with an innate potency for knowledge, understanding, and wisdom, which it acquires and can perfect over time by living a good virtuous life in union with its body. This is why a soul must form a body in which to actualize its potential by acting through it and with it. When the soul is united with its body, the soul-body composite is said to be a “complete substance”.

Thus, a human being is a complete composite substance. Soul and human body together constitute one composite substance consisting of a spiritual intellect operating in union with a physical body. Taken together, the body-soul composite is a complete substance referred to as a *person*. Knowledge of the human person is attained by acquiring knowledge of the composite with emphasis given to the soul. It is possible to study the soul by observing its effects, which are manifest in its *powers* and *operations* (the unique way powers are exercised) that occur through, with, and in its composite body. It is through analysis of its effects manifest in its operations that the soul’s powers and thus its substance are apprehended and conceptualized.

The human body and soul composite is a complete substance from which we derive the *essence* or *definition* of man. Every substance has both *existence* and *essence*. That is, it exists and it exists as something. **The essence is what a substance is by definition.** The two, substance and essence, are used interchangeably. *Substance* is the actually existing thing, while *essence* is the concept or definition given to a substance for intellectual purposes. All substances exist and they exist as something; they have some definite form applicable to every member of a particular species. A substance, such as the human soul, can be defined (essence) by recourse to its powers and operations, which are those unique aspects of being that help distinguish the human species from all other species, or one form from another.

Clearly, the human substance/essence cannot be the physical body by itself: Even though the body is integral to the composite, it has no separate existence apart from the composite. **Apart from the soul-body composite, the body decomposes into its original individuated elemental parts,** (amino acids, nucleic acids *etcetera*). Each elemental part apart from the body is also a substance, but *not* a human substance. As individuated matter, dirt has the potential to become any type of substance or body: animal, plant, or human, but in its decomposed state, it is clearly no longer a human substance.

The rational soul, however, when separate from its body, although incomplete, remains substantially a rational soul. Because it can think and judge independent of the body<sup>53</sup>, it is something unique from the body. Moreover, because it is not material, it is not subject to the physical law of entropy or spontaneous degeneration; it does not decompose. Thus, although both body and soul together form the essence, the soul is the more important constituent member. Nonetheless, the soul *by itself is not* a human being or a human person; a person is composed of both body and soul. Thus, because the human soul is created to live and operate and actualize its being in integral union with a human body, the two are to be reunited, according to Catholic thought, at the Parousia, or “general resurrection,” at the end of time. Every human soul is individuated in a particular body—its body, not just any body. Thus, at the Parousia, each particular soul is united to its particular body—the body in which it was individuated, the body which it fashioned for itself through its individuating acts when form was imparted to matter.

Soul and body *are one being* not two beings; they each have potential for the other. A soul is made for its body and a body for its soul. **Once a soul informs matter and once matter is formed by the soul, there exists one ensouled body, one essence, one substance, and one substantial being.**

As indicated, the human soul has both sentient and rational powers (as well as nutritive ones), whereas animal souls are only sentient (and nutritive). The rational soul does not exist *in* its body; the rational soul is *united to* its body of which it is the form. By its sentient powers, the rational soul exercises sense consciousness in matter, but as a spiritual substance, it remains transcendent.

A soul’s essence does not change when united to its body; it does not change, but its potentialities begin to be actualized: the body is the “first *act* of the soul”. *There is no subsequent act of the soul without a body<sup>54</sup> and no act of a body without a soul.* When first united to its body, the soul is in the state of its first actualization, an actualization that reaches its term through all *subsequent acts* of the **human person**, body and soul. By itself, the soul

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<sup>53</sup> As we shall see, thinking and judging are not physical functions nor are they explainable by recourse to matter, not even to intricately composed matter such as the human body. They are thus thought to be incorporeal or spiritual powers indicative of a spiritual substance such as the human soul.

<sup>54</sup> Except for the period that intervenes between death until the general resurrection, after which body and soul are, according to Catholic theology, reunited.



is a substantial bundle of human potential. It cannot be actualized until its body is formed. After a body is formed and the soul develops its potential for rational thought, it can act or think independently of the body, but even then, it is incomplete without its body. In short, there is no human actualization apart from the human body; human actualization takes place in the body-soul composite.

“The body is necessary for the action of the intellect, not as its origin of action but on the part of the object; for the sense image is to the intellect what color is to the sight” (Aquinas, Q 75, A 2, Reply Obj 3).

To iterate, the human body is an *essential* (as in essence), i.e., not a nonessential, extension of the soul. It **is the manifestation in flesh of what the soul is**; the soul and the body are one composite being. As we have seen, matter is unable to form itself or bring itself to life. The body-soul composite is ensouled matter formed into a human body by which both body and soul are actualized. In fact, a body’s form literally grows out of matter<sup>55</sup>; it is *implicitly* contained in the **information** enclosed within the matter of its first cell, which is its first constituent part, the part from which all other cells and bodily parts grow and to which all other cells are integrally united along with the soul that enlivens the body and gives it form. **Without the soul to give life to a living cell, a body could not be formed, and without a body, the soul could not be actualized nor could it be fully human.** Moreover, without the soul matter could not be animated and naturally perfected as a living thinking human being made in the image and likeness of God—a being in whom even the elements reach their highest perfection and give praise to God:

“Man, though made of body and soul, is a unity. Through his very **bodily condition he sums up in himself the elements of the material world. Through him they are thus brought to their highest perfection and can raise their voice in praise freely given to the Creator.** For this reason man may not despise his bodily life. Rather he is obliged to regard his body as good and to hold it in honor since God has created it and will raise it up on the last day” (Catechism of the Catholic Church, 1989, p 93:364).

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<sup>55</sup> Recall that the *form* or *information* in the genome is actually within the cell in such a way that when the body grows, it grows right out of its first cell by an organic process of cell division initiated at the moment of conception.

Thus, the terms *human substance* connotes the union of a rational soul and its physical body. Together, as the human substance, body and soul reveal what in fact a human being is.

The soul as the principle of life and form, is not a *difference of kind*; all animals and plants have such life and form. But **the human soul, in addition to being the principle of life and form, is also a rational substance**, an intellectual being that can exist apart from matter but which can only be actualized in union with matter. When we speak of the human essence, we therefore mean both the rational soul and the human body<sup>56</sup>.

### Summary

Both body and soul constitute the substance or essence. The substance consists of (1) those aspects of the body that are universal or *common* to all human beings and of (2) *the soul before it is individualized* by its acts as further explained below. In summary, the *human substance is a composite of body (common flesh) and soul* (along with all its vegetative, sentient, and rational powers). *Essence is the universal definition common to all human beings*. Although the substance includes body and soul, which together constitute a human *person*, it does *not* include the performance of *particular* human acts that, together with accidental qualities of the body, make each person a unique and particular *individual*.

### Distinction between "Person" and "Individual"

When we speak of human essence or substance, we are referring to the *universal or common species characteristics* that define all human beings: those aspects of the body-soul composite that each person has in common with all others, the universal possession of mankind.

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<sup>56</sup> *Everyone has a body with the same characteristics or form: eyes, brain, hands, etc. These are all common human characteristics that are essential to the human substance. Because they are universal or common to all human bodies, Aquinas referred to them as "common flesh". The fact that all human beings are individualized by accidental characteristics, such as green eyes or brown hair, does not affect their "common flesh". Accidents, as we have seen, are non-essential; they are **not** part of the universal essence as "common flesh" is. Eye color or skin texture does not make a person human, but every person has eyes and skin, which do contribute to their humanity. Aquinas thus, referred to universal bodily characteristics as "common flesh" and to particular accidental characteristics such as eye color or skin texture as "signate flesh". Signate bodily characteristics are particular accidents that do not fit into the general or universal definition of man.*

Because philosophers seek to understand universal truths, such as the universal essence shared by all human beings, it is important to clarify distinctions between what is universal and therefore *common* to humankind and what is *individualized*. **Once the soul acts with its body, it is becoming actualized and simultaneously individuated by its individual acts** in and with its body. In this way, the body-soul composite becomes a *unique person* or *individual*. In every individualized person, the universal essence continues to exist, but it is *subsumed* underneath the individuating acts that make each person an individual.

It is the universal human essence that constitutes the *difference of kind* among humans and other species that we are pursuing in this book. We are all different individual human persons, but **the universal essence that makes us all the same is always present as the substratum of every individual**. Every individual is an individuated *person* who always retains his or her unique universal species-specific characteristics (physical and spiritual) while simultaneously differing from every other member of the same species by the way he or she develops his/her universal substantial potency through *particular acts* involving both body and soul.

Thus, a person is individuated or distinguished by how he/she chooses to develop or to vitiate his/her potencies and by the individuating characteristics manifest in the body. Human choices are manifest in actions that individuate each person without altering the underlying human substance. This is why John Paul II aptly referred to human beings as "*acting persons*". By choosing the adjective "*acting*", he was placing emphasis on actions performed by *uniquely individual* persons who *co-create* themselves and sanctify (or poison) themselves by their own free choices. John Paul chose to focus on concrete reality involving human choices manifest in action that necessarily involve the human body. It is by our acts that we actualize our potential. In short, John Paul II was giving dynamic vivacity to Thomistic psychology.

This is not to say that John Paul II was more interested in the pastoral actualization or development of human potential than he was with deriving a universal definition of the human person. In fact, he made philosophical anthropology (and its search for, and articulation of, a universal definition of human nature suitable to the times), the fundamental and proper starting point of the whole social question, which he said was integral to the pastoral work of the "*New Evangelization*".

But because, as a priest, shepherd, and pastor he was interested in the salvific acts by which human beings are sanctified, he was intent on

giving his theology (and his anthropology) life and blood. **It is through real life and blood acts of composite body and soul that every individual person co-creates or makes himself.** But before anyone can make himself, it helps to know what he is so that he can better understand what he can become!

Consequently, important as *acting persons* are and exciting as co-creation is, it must be remembered that every individual is always an individual *person*. Everyone is a *human person* before he is an *individual person*. Human dignity resides first in created human nature. Only afterward does it reside in particular human acts that flow from that nature to co-create and perfect an individual person. **Individual acts co-create an individual; they do not create a person! God created man as a *human person*, but leaves it to man to cooperate with Him to co-create and perfect himself as an *individual person*** by recognizing and developing his inherent substantial dignity as a being made in the Trinitarian image of Divine Being destined for *theosis* or *divinization* by a life well lived.

Unlike John Paul II, when he wrote the “*Acting Person*”, we are currently not looking at the *particular individual* but at the *universal person*. **The universal exists not in the *acting person* but, if I may, in the *unacting person*.** The acting person is an *individual person* distinguished by his individual acts. The “unacting person”, however, is universal and therefore indistinguishable from all other human beings. All human beings are personal substances. Universal personhood constitutes the unchanging substantial substratum that undergirds all human acts by which an individual continually changes until he achieves or maximizes his innate substratum human potential. The substratum is human nature in its universal raw potential as unactualized yet complete substance consisting of common matter and rational soul with all its inherent dignity as *image of God*, yet with all its potentials awaiting individual development. Every *individual person* is characterized by a universal substratum individuated by bodily accidents and by particular acts of the body-soul composite.

“Strictly speaking, the essence is what is expressed by the definition. Now, the definition comprises the principles of the species, **but not the individual principles.** Hence, in things composed of matter and form, the essence signifies not only the form, nor only the matter, but what is composed of matter and the common form, as the principles of the species. But what is composed of **this** matter and **this** form (*particular body* and *particular soul*) has the nature of *hypostasis* and *person*. For soul, flesh, and bone belong to the nature of man, whereas **this** soul, **this**

flesh and **this** bone belong to the nature of **this** man. Therefore *hypostasis and person add the individual principles to the idea of essence*" (Aquinas, Q 29, A 3).

Although the acting person is an *individuated essence subject to accidental changes*, he is also a universal substance that never changes. There is never just an individual person no matter how many acts have been performed; **the unchanging human essence** is always present as the **stratum** of the ever-changing **acting person**. **Moreover, the acting person is always an individual; every individual human being is a person and every person is an individual as soon as the soul begins to act through, with, and in its body, which is immediately.** Even from conception, every person is uniquely affected by the womb experience shared in common with mother, father, and family. Even before birth, a unique person is being formed by combined action of soul and body, even when the body is in its first amorphous state following conception, even then its flesh is accidentally particular.

Quite simply, *acting person* and *individual person* mean the same thing because a person is individuated by his or her acts, and the soul acts immediately upon union with matter. However, **at this point in our study of the social question, the acting person is not our focus. The acting person is the concern of ethics.** The "*unacting*" person, the essence or universal substance, is the subject matter of anthropology (psychology) as a branch of philosophy. Anthropology is expected to provide the universal definition of human nature, i.e., that by which human beings are identified as a unique *species* differing in kind from all others.

In short, human *individual* and *human substance/essence* are two different terms. Common or universal attributes of the body along with the universal attributes of the soul go together to make the substance or essence. But I hope it is clear that the soul is the first principle and initiator of action that forms a body and thus the primary focus of our study of human nature and search for a *difference of kind*.

For the remainder of this book, we will be looking for a *difference of kind* resulting from an analysis of the "principles of the species" – the stratum beneath the individual person – the universal form united with common matter most appropriately referred to as "*human substance*". Everything else, that is, individual human acts, are the subsequent concern of ethics and politics. Philosophical anthropology/psychology is concerned with the universal essence or universal definition of the human substance.

*Without such a definition, ethics and politics as authentic and fully developed human sciences are impossible.*

***Substance is Universal but Refers more to the Soul than to the Body***

It is possible to define human nature by focusing on the soul as an ontological substance considered apart from its body. However, while engaged in this process (as we will be below), it is necessary to remember that it is actually the *composite* body and soul that constitutes the human person, *Homo sapiens*. Although the definition is heavily dependent on the soul, both body and soul are included in the universal definition of the human substance.

For example, we could take an imaginative tour through a Veteran's Hospital visiting its various wards. In one ward, we might encounter men and women who have lost their legs defending their country. Who would say that because these soldiers lost their legs they ceased being human beings? We could visit various wards where arms, teeth, hands, eyes, ears, or any other body part was missing and no one would say that these soldiers ceased to be human beings. Any human body part could be taken away and still we would insist that these soldiers are all human beings. If this is the case, **it should be clear that human nature** (that which makes every person human) **does not reside in a bodily part**. That which makes every person human is something greater than the human body. **The universal substance is composite, but existence of the composite ultimately depends on the soul, which animates and informs matter to craft a living body, which is its flesh**. The soul by itself is incomplete until realized or expressed in union with the matter which it informs. Yet, it is the more essential aspect of the composite. A human soul is a substance in itself without its body, *albeit* an incomplete substance. Whereas, **the body by itself is not a substance**; without the soul a body does not and cannot exist. **The body has the form it has because the soul has the form it has**. The body is the physical form of the immaterial soul. Together they constitute a human person capable of performing acts that lead to either human perfection or to human corruption.

One of the most important acts any human person can perform is to know *himself*, that is, to know his essence, *what* he is (his human powers, potencies, potentials). Knowledge of *who* a person is, is also important, but this is "*destiny knowledge*", knowledge of what he can make or has made of his God given essence. *Destiny knowledge*, however, is not possible without prior "*essence knowledge*". Without knowledge of their essence, no one can properly identify their potential; no one can really

know what it is that should or must be developed and what it is that should or must be avoided. Authentic human growth, the maximization of human potential, begins with *correct knowledge* of the human substance (psychology) and then proceeds to *correct action* based on this knowledge (ethics and politics). No one can develop that which they do not know exists; nor can they develop it properly if they do not understand what it is!

Knowledge of human essence is attained by study of the human soul, which is known through its intellectual powers and operations that are manifest by actions that take place through and with its body. It is the rational soul that makes a person human because it endows him with intellectual ability to think about and to know all things, including his own human nature as it exists in itself not merely as it appears to exist. On this note, St Augustine (1887, Book XIV, Chapter XIV) remarks:

“Who then is there, who, if he could not keep both (his treasure or his eyes), but must lose one would not rather lose his treasures than his eyes? And yet if it were put to him on the same condition, whether he would rather lose eyes than mind, who is there with a mind that does not see that he would rather lose the former than the latter? **For a *mind without the eyes of the flesh is still human, but the eyes of the flesh without a mind are bestial.*** And who would not rather be a man, even though blind in fleshly sight, than a beast that can see”?

The search for what is unique about man has led to an ontological search for, and understanding of, the human substance from which we have extracted the human body and sentient soul, because all of their differences, significant as they might be, are *differences of degree*. This leaves only the human soul, purportedly endowed with rational intellect. If so endowed, the rational soul constitutes the universal substratum of an acting person by which each person either acquires wisdom and co-creates himself or ignores and destroys himself.

It is the rational/spiritual soul that sets human beings apart from all other species. What remains in the next chapter, is to show that human beings actually possess spiritual intellectual abilities that cannot be explained by recourse to matter, sentient memory, or imagination and are therefore universal *differences of kind* that characterize the human species.





## CHAPTER FIVE

### Rational Thought: The Fundamental Difference of Kind

THUS FAR, we have examined basic inorganic elements, genome (DNA sequences), the single cell, the soul as principle of life, form, and sentient power (including memory, imagination, sensation, perception, and consciousness). In none of them did we find an apparent *difference of kind*. Moreover, we have examined modern and contemporary animal research and have found that this impressive array of empirical data work together to verify what philosophers have known all along, *viz.*, human beings and sentient animals *differ in degree*. **What the research has failed to demonstrate is a *difference of kind*.** However, it is difficult to find a *difference of kind* between rational and sentient animals when those conducting the research are committed to finding a *difference of degree* and consequently mistake sentient powers for rational ones.

Modern scientists have spent nearly a hundred years trying to demonstrate that animals and human beings *differ in degree*. Decade after decade for about a century, animals have been persuaded, prompted, trained, and conditioned to extract a rational product, but as reviewed in Chapter Four, nothing rational has been forthcoming. **Consequently, all that needs to be shown is that human beings possess a rational ability that animals do not possess.** It is the philosophers' turn to make their case *viz.*, human beings, in addition to being endowed with *sentient ability*, are also endowed with *intellectual ability* and the corollary freedom to make rational choices, which are *differences of kind*. In this chapter, we will examine these differences, which, when more fully understood, enable us to form a proper conceptualization of human nature. Our focal point will be the human rational mind; it is the core or primary *difference of kind* from which other *auxiliary differences of kind* emerge.

In studying the mind, we shall find that there are two operations or behaviors that are unique to human beings: **rational thought** and, its necessary corollary, **free will**. From these operations flow various auxiliary *differences of kind* that distinguish human beings from all other animals. Because auxiliary differences of kind are the most evident, they will be examined first.

### **Things that Only a Human Being Can Do (Auxiliary Differences)**

- 1. Political Association:** Only human beings associate politically
- 2. Artistic Production:** Only human beings co-create artistically
- 3. Cooperative Art:** Only human beings cooperate with nature to grow their own food and to facilitate healing of their own bodies
- 4. Fine Art:** Only human beings produce art to facilitate rest (including Sabbath rest) as an end in itself
- 5. Liberal Art:** Only human beings educate their minds to think rationally

### **Things that Only a Human Being Can Do (Primary Differences)**

- 6. Rational Thinking:** Only human beings think rationally
- 7. Free Will:** Only human beings act freely

### ***Only Human Beings Associate Politically***

Human beings are the only animal species that associates politically. Man has long been considered a “political animal”, which means that it is necessary for human beings to be carefully nurtured within, what the Greeks referred to as a “*polis*” (city-state or organized community) in order to develop their innate potentials. Because human beings do not have natural habiliments which equip them for survival, such as speed, camouflage, fur, fangs or claws, humans must use their intellect to survive. The intellectual development of children requires extended periods of time during which the family, assisted by various other social and religious groups (that together constitute the polis), must nurture them if they are to achieve their human potential. No one is so self-sufficient that he/she can live long or live well without the cooperation of others. Since everyone’s human development is intimately connected to and dependent upon the cooperation of others (*social justice*), they must live in a community to achieve their own *particular good* and to advance that of others, the *common good*.

Since human development unfolds within a *polis*, each village, tribe, state, or nation must establish the rules or laws by which it governs

itself to the end that human beings may develop themselves as individuals in the context of broader communal development. No two peoples govern themselves by exactly the same laws or establish the same structures of government. In addition to democratic forms of government, there are also monarchies, aristocracies, and various other forms, each having their own set of laws, offices, and institutional arrangements intended to promote peace and order, which are necessary prerequisites to the pursuit of happiness or human good.

Human beings are too complex and their potential too great to be governed by mere instinct; it is their highly developed intellect that enables them to devise particular civil laws and constitutional arrangements by which **they govern themselves. If human beings were governed by instinct, instead of particular civil laws and constitutional arrangements, their laws and constitutions would be physiologically determined and therefore universally the same.** Simple observation reveals the opposite, *viz.*, civil laws and constitutional arrangements are *universally different*. There simply is no other animal that has accomplished such an intellectual feat; all the others are governed by instinct and thus do not create intellectually derived civil laws by which they govern themselves.

Some animals, such as the chimpanzee, are known to be *gregarious* and *social* but *not political*. **They cooperate for mutual benefit, but they do not make the laws by which they are governed nor do they establish their own judicial, legislative, and executive branches of government.** Animal are ruled by the law of instinct. Consequently, their social/legal systems are invariable and unchanging.

Conversely, human beings engender divergent legal systems wherever they are found; they are not always governed by the same customs, norms, statutes, or ordinances as their ancestors or even their close neighbors. The laws in China differ from those in Mongolia or Holland; what is legal in Mexico City is illegal in Athens. This verity is so well known that further examples are not necessary. Human beings are not governed by instinct but by laws, statutes, ordinances, and constitutions *of their own making*. **If they were governed by instincts, their constitutions, and civil laws would all be the same.** Since they are governed by intellect, their constitutions and laws derived from the principles stated within them vary widely.

**Instincts do not require rational deductions or contingent applications of universal principles to particular environments. The only adjustments animals make to their environments are explained by non-**

**rational “natural selection”**. Just about everyone (theist and atheist) agrees on this: Animals that are better adapted to a particular niche will survive; others less fit will die or instinctually search for a more suitable environment. Although adaptability or *natural selection* is a type of change, it is *not* a *conscious, rational, or voluntary* change.

Natural selection is not something that an animal does through free will; it is something that is done to an animal. **Animals have no control over natural selection.** They do not rationally *alter* the environment; they biologically *adapt* to it. They simply do not discover universal laws and derive contingent applications nor do they make any laws or institutions by which they govern themselves. This is a basic *difference of kind*.

### **Other Differences of Kind:**

#### ***Only Human Beings Create or Manufacture Things Artistically***

As a result of rational thinking ability integrally united with dexterity, human beings are the only animal that creates things artistically. *All arts are skills.* Skills have to be learned before they are applied. Therefore, artistic creation means skillfully making things with the hands (or other body parts) guided by a logical pattern or design engendered in the mind. Since the human mind is capable of rational thinking, human beings can design intricate products such as automobiles, airplanes, cathedrals, or modern skyscrapers that depend upon knowledge of mathematics, physics, and chemistry *et al.* It can also figure out how to combine ingredients to bake a wedding cake, to fashion wood into furniture, to use steel for framing, or to convert cotton for clothing or an animal’s skin for footwear. The mind can even design weapons for war and master the arts of self-defense. Thus, there are many kinds of arts: manual arts, vocational arts, technical arts, culinary arts, martial arts, liberal arts, fine arts, etc. All these arts are *acquired skills* originating in the mind and manifested by skilled hands (feet) according to a preconceived mental pattern and much training.

**No one is born with these skills; all arts must be learned.** Of course, one person can learn an art from another person, but in such a case, the learner relies on his or her sentient abilities of observation, imitation, and memory. Some people, however, are capable of learning arts on their own. For example, those who *invent* musical instruments and teach themselves to play them and those who first fashion weapons for hunting and self-defense. The first human beings to develop artistic skills had to

self-discover and self-master them; there was no one to teach them. Thus, **they had to be more intelligent or creative than persons who learn skills by imitation.** Thinking about and acquiring skills requires intellectual power and essential quidditive knowledge in order to manipulate and combine raw materials for a particular purpose. Artistic creation requires intellectual ability, manual dexterity, and a free will to co-create as manifest in rich and complex cross-cultural diversity that is *not* evident in animal productions. Animal productions are *not* artistic productions. Therefore, same species animal products are basically all the same.

Self-defense is also an art, a “Martial Art”. Like all other arts, self-defense requires intelligence, foresight, and integral cooperation of mind and body. Related to martial art is the art of manufacture, an “*Operative Art*”, whereby men use their intellectual abilities to fashion weapons from metals and other natural resources which they mold and shape into subparts that function together as a unit for purposes of defense. Only human beings *create* weapons for their defense. Picking up a stick and swinging it does not *qualify* as co-creation of a weapon; a stick does not consist of separate parts synergistically united for a particular purpose. **If animals create artistically by intelligence, we are left wondering why they have not improved their weapons over an evolutionary course that is reported to cover millions of years.** It is claimed that random chemical reactions resulted in *increasingly* complex human cells that somehow acquired life. Certainly, living monkeys with supposed rational intelligence should be able to outdo dead dirt.

If chimpanzees with supposed intelligence can convert parts of a tree into a weapon (to kill bush babies) using intellectual ability and artistic skill, why does their imagined “intellect” *stop* at chewing on a stick or using a branch to extract ants? *Blind chance, according to the materialists, performs better than that.* This is simply a logical inconsistency. **Chewing on a stick and poking it into a bush is simply a natural occurrence explained by the same method atheists use to explain extraordinary things like the origin of a genome, complex cells, and living bodies: they happen randomly** (or, since chimpanzees are more advanced than chemicals, by imitation). Even children swing sticks with no idea of what they are doing. Such facile acts occur all the time; occasionally, they have unforeseen beneficial consequences that are mimicked. Arts however, require the combination of intellectual understanding and foresight, followed by practice, habit formation, and eventually improvement and acquired skill; they are not driven by instinct, imitation, or random chance.

The fact that artistic skills are continually improved is evidence that they are understood and therefore do *not* occur randomly. Clearly human beings use intelligence to **acquire** and **improve** their skills--animals do not. In fact, researchers have not demonstrated animals doing either: *skill acquisition* or *skill improvement* - both require rational intelligence. It does not take rational intelligence to swing a stick or acquired skill to put it into a mound of dirt. If these are “rational skills”, what happened afterward to the functioning intelligence that supposedly produced them? Why are no other “skills” developed by the *same* chimps or mimicking others?

As observed in the previous chapter, extracting ants and other equivalent behaviors, such as using a stick to ward off enemies, are *sentient* feats. All that these feats involve are observation (ants crawling on a stick) followed by natural action (picking the stick up to eat the wandering ants and then placing the stick back into the ant mound to get more). These are sentient based actions rooted in observation, memory, and association as well as self-induced operant conditioning. If rational intelligence is involved, it is fair to expect ongoing empirical observations involving the *same monkeys* engaging in further invention to either improve their sticks or develop alternative devices to facilitate efficiency and productivity as human beings expect of their engineers and inventors.

**Further proof that only humans think and create artistically is the diversity of their artistic productions.** Everywhere we look, we see diversity and creativity. There is Classical Art, Rococo, Baroque, Gothic, Neolithic, Abstract, Impressionist, Romantic, and Modern Art. Brick houses are built differently than igloos or teepees; wooden huts differ from castles of rock. Everywhere we look, people are applying their knowledge and skills differently. **Animals, on the other hand, make everything the same.** From eon to eon and place to place, their products are essentially unchanging. **They are the unchanging because they are guided by determined instinct,** not by free, variable, and accumulative intellectual knowledge that enables human beings to create artistically. Spiders spin webs, bees build hives, and beavers build dams eon upon eon; yet, all we find after millions of years, and from places as diverse as Africa and Canada, are slight differences accounted for by environmental diversity, trial and error, and random chance—they are not technologically diverse co-creative free rational choices.

At best, the products made by animals from the same species are characterized by *minimal variance*. Bees, beavers, and spiders might build *intricate* and *excellent* products, but intricacy is not the issue. **We are not**

**concerned with the excellence of products, but with the manner by which they are produced and improved.** All evidence indicates that animal production, because it is always the same, is driven by an inner impulse. If it were the result of intellect and free choice it would, like human *artistic production*, be diverse and constantly changing.

The “*long periods of time argument*” used by atheists in support of chemical evolution, if consistently applied to supposed artistic/intellectual production, exacerbates their case: The more time that elapses without any significant improvement is compelling evidence that there has not been, nor will there be, any record of *continual* improvement. All that has been observed are simple natural behaviors followed by a bit of anthropomorphic projection. There is no compelling anthropological evidence that offers a verified and replicated demonstration of a multifaceted implement (tool) produced without prompting, followed by a further demonstration in a *monitored* and *controlled* environment of an improvement by addition of new parts, or alteration of old ones, necessary to confirm that the first production was not a random or induced event. A monkey might be *trained* to make or improve a tool consisting of several parts; lacking dexterity, it might take a long time to train, but it is surprising that no one has come forth with such a claim.

All the evidence proffered by Darwin and post-Darwinian researchers is anecdotal or specious; it is based on lack of philosophical knowledge/understanding, lack of convincing empirical evidence, and failure to make proper distinctions, which leads to improper conclusions. For example, Darwin claims that because an orangutan covers itself with a straw mat, it consequently has tool-making ability.

“Brehm states that one of his baboons used to protect itself from the heat of the sun by throwing a straw-mat over its head. In these several habits, we probably see the first steps towards some of the **simpler** arts, such as *rude* architecture and dress, as they arose amongst the early progenitors of man” (Descent of Man, Chap. 3).

Darwin fails to mention that the baboon did *not make the mat*; the baboon *simply picked it up*. This is, another one of Darwin’s infamous anecdotes: Who is Brehm? What are his credentials? What methodology did he follow? Where are his reports published? Are they replicated? Can they be explained by simple natural occurrence or perceptual intellect etc? Such anecdotal reporting is analogous to a baboon on its way to artistic co-creation of an air conditioner because it stuck its hand in water or to building a house because it naturally seeks shelter from exposure to the

elements in a cave. Darwin had a habit of making assumptions or deducing conclusions from evidence that did not support his contentions. It is illogical to predicate *natural* behavior as *learned* art or a “movement toward art” and dishonest to pretend that such predications are somehow licit because adjectives such as, “simpler” and “rude” are used as modifiers. There is nothing *artistic* or *proto-artistic* about putting a mat or leaf on your head. **There is nothing “simple” or “rude” about it because it is neither art nor architecture**; it does not require intelligence at all. However, if the long muzzled fellow was seen weaving a mat instead of picking one up or using a manufactured tool to facilitate the process, we could begin to talk about art.

Are we to believe that not a single baboon in the course of hundreds of millions of years ever covered itself with a leaf and felt good about it, remembered it, and did it again? Instead of an obvious random event, it is proposed that because an ape sat down and picked a mat off of the ground, and in some unexplainable way happened to move the mat toward its head, that it is on its way to becoming an artist. Picking a leaf and placing it on one’s own head does not *qualify* as art; it does not require any thinking at all! If it does not involve any thinking, and there is no reason to think that it does, how can Darwin or anyone claim it is evidence of a purposeful step toward art? **A step toward art requires some type of purposeful intellectual behavior followed by other intellectual steps that are verification of the claim that there was a *first intellectual step***. If there was a “**first step toward a simple art**”, it implies that other innovative steps should follow. Over the course of a hundred million years, where in heavens-name are they?

**Animals do not take intellectual steps because they do not have intellectual ability.** Only human beings have intellectual ability as manifest in the *improvement continuum* that characterizes human creativity. Artistic production is an intellectual *difference of kind*. Therefore, Aristotle defined art as a, “capacity to make, involving a true course of *reasoning*” (Ethics, Book VI: 4).

### *Cooperative Art: Agriculture, Medicine, and Education*

Human beings have learned how to cooperate with the forces of nature to improve agricultural yield and to facilitate healing. Farmers do *not* create food, and medical doctors do *not* heal the body; since plants and animals are living things, they have inherent powers and capacities to grow and heal themselves. However, farmers and doctors have intelligence to



observe, analyze and to understand the growth of plants and the healing of bodies. They have used this knowledge to *cooperate* with nature to induce its natural powers. They have learned what minerals are needed as fertilizers for practically every kind of plant in existence; they know how much sunlight is needed, what types of soil work best, the types of insects attracted to different types of plants, and how to control them. Likewise, doctors have mastered anatomy and physiology, learned the intricacies of chemical imbalances, discovered which medicines work best to increase heart rate, to decrease it, to clear up eruptions on the skin, even to induce bodily growth or loose fat; they can set bones, conduct complex surgery, and regulate diet and exercise to maximize the potential for health.

All of these *cooperative skills* require *conceptual intelligence* necessary to understand the *powers* and *potencies inherent in observed things*. Intelligence is necessary to gain mastery of additional skills needed to facilitate growth of plants, healing of infirm patients, and education of students. No one has ever seen a lemur prepare the soil, plant seeds, irrigate, and fertilize crops to induce their yield; probably **too much time lapses** *between the planting of a seed and its germination to make the necessary association* whereby animals could learn to farm. A monkey might be taught to plant seeds, but given the long lapse of time between planting and germination, it would be unable to make the association needed to continue agricultural production. Therefore, animal agriculture has never been observed. Human beings do not rely solely on associative learning. Because they have intellectual ability, they can understand cause and effect and grasp potencies in seeds necessary to facilitate germination. *Art qua art* requires intellectual discovery, development of related skills and acquired understanding of involved processes. Animal agriculture, *if it did exist*, might be accounted for by trial and error, random chance, mimicry, or perhaps by being taught by a gregarious researcher.

Scientists, farmers, and doctors are constantly discovering new methods. They ask themselves questions, perceive problems to be solved, suffer puzzlement over dilemmas, and follow out implications of a hypothesis. They weigh evidence and create alternative hypotheses, test them and apply the results. They do not rely solely on mimicry, association, or chance but on sheer intelligence fed by imagination.

Certainly, the first people to learn plant cultivation, animal domestication, or how to set a broken bone were not taught by someone else; the procedures are too complex to learn by trial and error and often cause and effect are too far apart in time to be learned by association. Healing procedures require intelligence. **If an animal gets a broken bone,**

**the bone must either heal itself or remain broken for a lifetime; it is not just common sense to set it and certainly not to set it properly.**

Cooperating with nature requires knowledge and understanding of its powers and potencies: knowledge of the essence of things and how they interact with each other. Cooperative art requires rational intelligence that only human beings have.

*Fine Art: Arts that are Ends in Themselves (Including Sabbath Rest)*

Fine arts are arts that are created for their own end. The word “fine” is related to the French *fin* or *end* to connote arts that are ends in themselves. That is, fine arts are enjoyed for their intrinsic worth; they are *not* intended to nourish the body or to gain wealth or riches. They are engaged solely for disinterested pleasure, distinct from any form of utility. They are therefore associated with rest from work, with leisure, and the enjoyment of beauty. Fine arts are also known as *belle arts* or arts of the beautiful. Things that are beautiful are enjoyed for their own sake; they are enjoyed for their spiritual nourishment, for the peace and joy they help confer on the mind.

In the *theoretical* or *speculative realm* of pure intellect for intellect’s sake, human beings are the only animal that ponder the nature of things for no other purpose than to enjoy their goodness and beauty. Philosophers call such thought contemplation. Like fine art, contemplation has no practical purpose; it is meant to lift the soul.

Related to fine art and contemplation we find liturgical art, used to enhance worship, and Sabbath rest. Human beings are the only animal that acknowledges a Creator accompanied by worship enhanced by the various arts (manual, fine, technical, *etc.*). They build temples of praise, fashion musical accompaniments to enhance worship and heighten celebration, they harvest fine wheat and fruit to offer for sacrifice, and develop other arts necessary to design liturgical garb and beautify liturgical celebrations. Animals have never been observed offering a sacrifice or setting aside sanctified space (not territorial space but sanctified space – urine and feces do not sanctify) and adorning it with sacred symbols or setting off a priestly class to lead worship and offer sacrifice. Only man acknowledges and worships his Creator through artistically enhanced liturgical celebrations. Only man sets a day aside for Sabbath rest; this is a *difference of kind* related to contemplation and fine art.

In short, human beings are the only animal that produces fine arts; no animal has ever created a musical instrument, a painting, or sculpture **for simple enjoyment or to express a metaphysical concept through artistic symbols**. All animal production is for survival or for satisfying physiological urges. Only man creates objects for no other reason than their enjoyment and the relaxation they bring. Animals certainly enjoy a sunny day, but lying in the sun is not a fine art; it is a form of physical relaxation that does not involve the conscious creation of anything.

***Liberal Art: Only Human Beings Educate Their Minds to Think Rationally***

*Liberal arts* are also skills. They are skills of the mind intended to facilitate speculative and practical thinking. The mind has potential to acquire wisdom, understanding, and knowledge. However, since no one is born with these intellectual assets, they must be acquired. Their acquisition begins with *pre-intellectual skills* nurtured through early development and trained exercise of observation, reading, writing, speaking, listening, seeing etc. Acquisition of *pre-intellectual skills* is followed by education and training necessary to develop more advanced intellectual skills such as comparing and contrasting, analyzing, synthesizing, categorizing, defining, propositional thinking and judging. Human beings devote vast amounts of time toward the acquisition and development of these skills.

For almost three thousand years, the liberal arts have consisted of a lower division Trivium (grammar, rhetoric, and logic) and an upper division Quadrivium (Arithmetic, Geometry, Astronomy, and Music) devoted to development of the above skills, which are **intended to culminate in intellectual virtue** (understanding, science [logic], wisdom, art, and prudence), **necessary for higher studies and creativity in the various arts and sciences, as well as in philosophy and theology**. *The existence of the liberal arts intended to train the intellect is clear evidence that human beings have intellectual potencies; the fact that these potencies require nourishment, training, and formation is attestation that such potencies actually exist.*

It seems clear that animals do not have need of *liberal arts* because *they do not have rational abilities that require training and then education to enhance artistic production and scientific thinking*. **If animals possessed rational abilities differing only in degree from human beings, their supposed abilities would, like human ones, be in a state of potency and in need of formation**. In fact, given their lower degree of development, animals have exponentially greater need for education and training; yet

nothing remotely similar has been forth coming. There is nothing in the lore of animal psychology to indicate that animals have any type of rational potency requiring extensive schooling devoted solely to the development of intellectual skills associated with reason; in fact, there is no evidence of intellectual training among animals at all. Rational thought does not just happen; it is acquired and therefore must be facilitated – intellectual growth is difficult to achieve. **Human beings are the only animals who engage in efforts to facilitate their intellectual development because they are the only animals that have an intellect to develop.**

In summary, human beings are the only animals that acquire and develop arts and skills because it is by these arts and skills that they *survive, develop, and thrive*; it is through these acquired intellectual skills that humans have dominion over nature. No other animal produces anything in this manner. All animal products are the result of instinct and the sentient abilities of memory and imagination. The human ability to modify the environment and to survive in an unfriendly ecological habitat requires rational ability to understand and develop tools and technology by which uninhabitable environments are *transformed* and made hospitable. Because of these intellectual abilities, human beings, unlike any other animal, are found in every climate and topographical region on earth.

All other animals must adapt to their environments by natural selection *acting upon them* rather than *their acting upon* the environment as human beings do. Consequently, animals are found only in habitats that are *complementary* to their genetic diversity manifest in their physical form, features, and survival instincts. Human beings, however, are the only species to select their environment and adapt it to their needs. They are the only species whose intellect permits them to **reverse entropy by using intelligence and work to convert or harness energy necessary to drive technology that transforms matter and make it serve their needs thereby enabling them to survive in the remotest places.** What human beings lack in natural physical accouterments (fur, fangs, claws, speed *etc.*) they more than make up for by intellectual attainment manifested in artistic production and scientific creativity nurtured by education and training. This is a fundamental *difference of kind* related to human rational ability.

### ***Rational Thinking: The Principle of Origin for All Differences of Kind***

If animals could solve problems using rational thought, they would evolve increasingly sophisticated solutions accompanied by the an increasingly sophisticated *technological continuum* as found within the

human species. But, as we have seen, there is no continuum of increasingly sophisticated solutions found among animals other than man. In fact, **there is no technological continuum at all**. All the so-called problems that other animals supposedly solve are explained by sentient abilities involving memory and imagination, trial and error, or perceptual insight as concluded in the previous chapter. There is no indication that brute animals solve problems through logical deduction from universal principles, deduce unseen effects from knowledge of causes, nor that they think about immaterial substances or abstract ideas (God, angel, soul, liberty, justice); such things cannot be observed by the senses so they cannot be in the sentient mind, which is dependent upon the senses for its data—this is why it is called “sentient”. Moreover, there is no evidence that animals derive moral judgments or engage in ontological analysis, form concepts, name them, categorize them or use symbolic reduction (words) to develop complex propositions, and even more complex syllogisms, as we shall now see that human do.

Every so-called problem solved by an animal, such as gathering bananas with a branch or garnering termites with a stick, is dependent on random occurrence, training or mere mimicry; these are all things that are dependent upon memory and imagination. Even if researchers could demonstrate that in addition to random chance, recall, trial and error, or mimicry, animals are capable of learning aided by the power of active imagination, nothing would change.

“Imagination is *not* a process of thought. The imagination can represent only what has in some way passed through the senses. Its images are the facts of a sensory faculty; they are concrete and individual, while thoughts are spiritual and abstract. Hence images are not the same as thoughts” (Kelly, 1956, p. 79).

Because animals do not provide evidence that they think rationally, that is, because they do not *create things artistically* or *associate politically*, it is concluded that they do not think rationally. This conclusion becomes clearer the more rational thinking is understood and the more it is understood how it differs from *sentient thinking and* “problem solving” (solving that results from memory, association, and imagination).

### ***What is Rational Thought?***

Rational thought is a complex process that requires *reflection* upon sense images imprinted on the physical brain and stored in the

imagination. Matter, can be arranged, and has been arranged, to capture images and sounds, and to store them. However, beyond these sentient abilities, matter has never been arranged to *think rationally*, or in such a way that it is able to *derive ontological definitions*, or to engage in *symbolic reduction*, more advanced *logical deduction*, nor to make either *propositional judgments* or *moral judgments* (which will all be defined below). These intellectual abilities cannot be explained by recourse to matter.

The human mind is, however, capable of engaging in these various intellectual activities. Consequently, **the human mind seems to have a power that transcends matter; it is simply capable of doing things, and of performing intellectual tasks, that cannot be explained by matter.** As we have seen, the rational soul is integrally united with its body, without which it could not receive sensory images or impressions. If you take a moment and reflect on the issue, it will be clear how commonsensical it is. *Matter cannot think*; this observation is very similar to previously explored observations, *viz., matter cannot bring itself to life nor inform itself.*

**Rational thinking, like life and form, is an empirically unexplainable phenomenon.** It cannot be explained by recourse to matter and therefore requires a meta-empirical analysis capable of abstracting knowledge of an immaterial substance such as the human soul. It is said that the soul is immaterial simply because it is not material; we cannot empirically observe a soul. Nonetheless, it obviously exists: *we are all alive, we are all formed from amorphous matter, and we all variably think.* **None of these operations, principles, or powers can be accounted for by the properties of matter or any by any observable laws of nature.** But living, thinking, and form are all observable!

*Life, form, and thinking* are all principles, operations, or powers that *cannot* be explained by a material cause. **They are all integrally involved with matter, but cannot be explained by recourse to matter.** Rational thinking, like life and form, is immaterial or spiritual. However, unlike life and form, rational thinking does not confer a principle or operation to *matter per-se*; the rational soul is not *in* matter as an essential principle or power as life and form are. Thinking requires *cooperation* with matter, *i.e.,* an ability to communicate with matter, but **it does not reside within matter.** According to Jesuit Rev. Bernard Wuellner, reason or rational thinking is defined as the,

“Intellect in its reasoning function....The act of ...drawing conclusions from other judgments; discursive thinking, (proceeding coherently from proposition to proposition)” (p. 105).

Because the intellect performs functions such as *thinking* and *judging* that cannot be explained by recourse to matter, it is thought to be independent of matter and to transcend it. Thus, Aquinas and Aristotle both consider the soul as a *separate spiritual substance*. Since the soul is thought to be spiritual, it cannot “mix” with matter, but it can “communicate”, “co-operate” and be united to matter according to the principle that **the lowest power of the spiritual order (human soul) is capable of communicating with the highest power of the physical order immediately below it (human brain)**<sup>57</sup>:

“This is to say that the lower nature at its highest point reaches something of that which is lowest in the higher nature” (Aquinas, 1954 A 3, Reply).

The lower physical does not evolve into the higher spiritual, but synapses with it so that communication can occur. On this point New Age psychology is in agreement with Christian psychology. According to New Age matriarch Annie Besant (2009), the higher (human) Buddhic or *spiritual* mind is capable of communicating with the lower (human) Mansic or *physical* mind as a result of synaptic principle.

“The Assemblage Point integrates the higher ‘spiritual’ energy centers and the lower ‘physical’ energy centers, enabling free flowing information between body and soul” (Celli, 2011).

That is, the highest power of the sentient corporeal mind is capable of interacting or communicating with the lowest power of the rational spiritual mind as we will further explore below. Thus, thinking is thought to be a spiritual power of the rational soul that is independent of, yet also in some way dependent upon, the sentient soul and central nervous system. Like genome, form, and consciousness, thinking involves the soul and body composite, but it is not a physical process as we shall see. Thinking is a metaphysical power by which a human person can *choose* to reflect (even self-reflect) on any knowable thing through a process of *apprehension* and intellectual absorption known as *conceptualization*.

It is through a series of intellectual stages leading up to conceptualization that the rational soul is able to abstract the essence of

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<sup>57</sup> *The process by which this happens is one of the most difficult to understand and explain. Nonetheless, both Aristotle and Aquinas provide a description (in the study of metaphysics and epistemology) that will be taken up below and in later chapters.*

knowable things through a process that involves dematerialization followed by intellectual absorption whereby the outer phenomenal world becomes an inward *spiritual* part of the human person. In a similar way, it is through the physical process of digestion that the human body is able to abstract vital nutrients from external objects and, in the process, break-down and then physically absorb and incorporate them thereby making the phenomenal world a *physical* part of the human person<sup>58</sup>.

Rational thought is neither a mere *physiological reaction* to an innate drive nor a *sentient response* to a conditioned association. Although it involves the body, rational thought also involves and is dependent upon auxiliary non-material powers such as *apprehension, conceptualization, symbolic reduction, proposition, propositional judgment, and logical judgment* that cannot be explained by recourse to matter.

To facilitate appreciation of conceptual or rational thinking as a spiritual power, a hierarchical explanation (from lowest to highest) of the just listed intellectual operations is presented below.

## Rational Thinking

### *Basic Spiritual Level One: Apprehension*

If the soul at birth is a *tabula rosa* (blank slate lacking any images), it must somehow obtain images of the phenomenal or physical world necessary for reflection or thinking by which it is actualized; it does no good to have intellectual potential if there is not something presented to the mind to think about. The rational mind acquires its data through cooperation with a body that is capable of sensing the phenomenal world and then of relaying its sentient data to a soul that is capable of rational reflection. **The most basic notion about the higher rational mind is its ability to communicate with the lower sentient mind (memory & imagination),** which is similar to the relationship existing between the brain and the body's central nervous system—sensation and perception. The sentient mind (brain) **is capable of obtaining data that enters the brain through the senses,** after which the data is formed into a mental picture and then stored in the brain as an *image* or *percept*. However, **it is one kind of higher-lower ability** (involving a brain and its central nervous

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<sup>58</sup> Moreover, it is through the human ability to abstract, understand, and incorporate the essence of knowable things that human beings gain dominion over them.



system and body) **to register an image in the brain provided by the body, it is another kind of higher-lower ability** (involving rational soul and its brain) **to engage in reflection upon an image provided by the brain and to apprehend, conceptualize, and define it.**

For example, a chimpanzee can use its sentient powers of perception and association to learn that dark clouds mean rain. Thus, when it sees ominous clouds, it can remember rain and head for cover. Although this might look like rational thought, it is lower sentient thought based on images and associations provided by the senses. **The problem is that empirical scientists seem to think that this lesser power is rational and, therefore, erroneously present it to the public as such.** However, this type of “sentient thinking” is clearly a product of memory and association and, therefore, of the lower sentient mind not of the upper rational mind. A chimp seeing rain clouds does not *derive the essence of water* or of a cloud by a process of interior apprehension. Rather, it *associates* dark clouds with rain by a process involving memory and imagination, which enable a chimpanzee to “learn” from its environment.

Clearly, animals can learn. However, whatever they learn (be it from a human teacher, from association or by random chance) is sentient – based. There has not been one experiment or research finding that has shown anything different; this is a conclusion based on a veritable mountain of supportable data.

The sentient mind is limited, like a camera, to the physical picture/image it forms in its head. This picture is a concrete representation of what the senses sense; it is said to be “*particular*” **because the universal concept (form-essence-substance) has not been abstracted from its signate and accidental matter.** A particular object is an object that is known by its accidents, such as color and size, and **with all that is physically and emotionally associated** (positive and negative) **with it.** It is the particular matter, accidents, and attendant associations that are perceived by the senses, not the universal form or essence, which is manifest through matter but can only be known intellectually.

This is one of the most difficult concepts *imaginable*. It has challenged every student of philosophy for over two thousand years. The reason why it is so *unimaginable* is because a form is a *rational conceptualization* derived from universal knowledge of an object’s essence. **Form cannot be perceived by the senses; it must be conceived by the intellect or conceptualized. Form is not a sentient image and therefore is not imaginable**—few students of philosophy seem to get this

quintessential idea! **A mind cannot grasp the essence of anything unless it first understands it – understanding is a rational act, not a sentient act.**

The form of every living thing before it was actualized in matter was dormant or implicit, as we have seen, as **information** in DNA. Scientists are able to observe DNA, but unable to determine what form is implicit in the matter by merely looking at its genetic code. A philosopher in search of an object's essence or form proceeds backwards from an object's observable powers and operations toward the original form of its soul. A body's form was first implicit in its genome. It stretches back beyond a genome to the form of the unobservable soul by which the information in matter is actualized and expressed as a physical body which is the observable form of the soul and. A body is the best representation of a soul's form, but it is not the form – the form is the soul that cannot be seen.

“The unity of soul and body is so profound that one has to consider the soul to be the ‘*form*’ of the body: i.e., it is because of its spiritual soul that the body made of matter becomes a *living, human body*” (Catechism of the Catholic Church, 365).

Knowledge of the soul's form must be gathered from knowledge of its body, which leads to intellectual understanding resulting in a concept, which is a better representation of the soul's form than the image of a particular body. An image of the body is not a form; it is the means whereby a form is intellectually deduced and then defined. A *sentient image* provides only limited and relative understanding; whereas an intellectually derived form provides a universal and more complete understanding free of relative associations and individuating accidents. Form is sheer intellectual knowledge of a substance free of its individuating accidents, relative associations, and physical peculiarities. **A form therefore cannot be seen by the sentient mind; it must be grasped by the intellectual mind, by means of mental abstraction from a sentient image.**

The *sentient mind* grasps physical reality, the *intellect* grasps form, but it does not do this immediately – it requires abstraction. Abstraction requires extensive mental effort by which observed objects are eventually **understood** over and above what sentient based accidents and *relative associations make it appear to be*. **Understanding is an intellectual act; it is not something grasped by the senses – it is not a sentient act.** Nonetheless, understanding is derived *via* sense impressions conveyed by the *physical eyes* to the imagination. From the imagination, the *eyes of the intellect* strip away the non-essential accidents and thereby peer deeper into

the essence to derive an understanding of what a thing is after which it is conceptualized and referred to as an intellectual “form”.

In short, an intellectual *form* is a universal immaterial *noumenon* derived by an immaterial intellectual power, whereas a *sentient image* is a pictorial representation of an external *phenomenon* with all of its arbitrary associations recorded by the sentient mind and stored in the physical brain. Aquinas refers to such an image formed in the sentient mind or the brain as a “*Phantasm*”. A phantasm is simply the image of an object transferred from the senses to the lower concrete or sentient mind with all of its particular associations and accidents. Sentient animals have the ability to form phantasms, as well as remember them and all that is randomly associated with them thereby facilitating adjustment and survival.

Interestingly, although a *phantasm* is an image of an external object, in becoming an image, **it is significantly stripped of matter**. That is, it has become significantly *dematerialized*. Out there beyond the senses, it exists as a concrete object. In the mind of man or animal, the object is represented as a significantly dematerialized image. Nonetheless, **a phantasm is still considered to be a physical reality because it exists in the imagination**, which is a physical medium for images stored in the brain.

Rational thought as a spiritual power of the soul is dependent upon the formation of a phantasm as a significantly dematerialized yet still physical product of the brain. Following impression of a phantasm, the rational mind is capable of further reflection.<sup>59</sup> It is capable of internal examination whereby it observes a still further dematerialized image of a phantasm until it has studied it so thoroughly that it is capable of defining, naming, and classifying it in some type of mental taxonomy. Via a phantasm, the rational mind is able to look at the parts of which a thing is composed and with some effort analyze them to see how they fit together and how they interact with each other to form an integral whole. It is able to look at an object’s design, at its functions or operations, at the potencies in its parts and how they interact with each other. From this analysis, the human mind is able to determine an object’s unseen essence; that is, what it actually is, and what it is capable of doing or achieving as deduced from

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<sup>59</sup> *At this point, the human mind diverges from the animal mind. An animal mind contains images and percepts loaded with relative meaning; it learns by sense association not by further mental abstraction, which requires further dematerialization of an image and a mental power that is able to see beyond the relative to the universal and to derive scientific understanding that far transcends relative associative understanding.*

observation of its various powers and operations. This type of **intellectual insight** is a power that penetrates into the core of being to deduce a universal definition, which lies well beyond relative surface knowledge garnered by mere sentient association. Thus, at this, the first and lowest level of the rational mind known as “**apprehension**”, the rational mind receives, analyzes, evaluates, and knows objects presented to it *via* the senses by means of a further dematerialized<sup>60</sup> “phantasm”.

A fine distinction must be drawn here: A phantasm can be experienced within your own mind by simply imagining an image *without* analyzing it. Do nothing with a mental image except see it and all that is associated with it without making any evaluation or judgment; this is pure imagination or imaging of the sentient mind. Now begin to examine it, study it closely, and analyze its parts, compare it to something else retained in your memory; the moment you engage in this type of internal activity you are *beginning* to *think* about the object in front of you. **This is the beginning of apprehension**, which leads to understanding, which is quite different from forming a phantasm and simply being aware of its existence and related associations..

In order to grasp this concept, it is extremely important to differentiate the **two powers** (imagination and apprehension) and then to realize that once apprehension is called into activity, the two powers interact **simultaneously as the body-soul composite**. Both are involved, but unless you think about it, the two will appear as one because the body and soul are an integral composite – what affects one *immediately* affects the other.

However, it is the **sentient mind, that provides the images and the rational mind or soul that apprehends or begins to think about them**. The fact that there is simultaneous interior and exterior sight is demonstrated by the ability of the upper rational mind to see an object at the same time the physical eyes are seeing it. This can be tested by looking at an object then immediately closing the eyes and internally focusing on what was just seen. It should be apparent that while the eyes are closed that which was just seen externally is also seen internally as a dematerialized “phantasm” appearing on the frontal lobe. This sentient based—phantasm is seen in the mind, but, because the physical eyes are closed, clearly it is *not* observed by them. Rather, it is observed by the *internal eyes of the intellect*, which **simultaneously sees internally what the physical eyes are seeing**

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<sup>60</sup> *The process by which a phantasm is further dematerialized will be explored below.*

externally.

Concerning this point, Aquinas introduces a difficult scholastic term, “*Intelligible Species*”<sup>61</sup> or “*Species Intelligibilis Impressa*”.<sup>62</sup> Since matter, e.g., the central nervous system, has the ability to receive images but does *not* have the ability to study or reflect upon them, analyze them, or think about them, another faculty, the rational or thinking soul, must be involved. This thinking power of the soul transcends matter; matter does not have the ability to reflect upon itself; no one has ever been able to demonstrate that it does. However, the mind can reflect upon itself, and because it can, it has long been thought that it is spiritual.

As stated above, “The lower nature (sentient soul) at its highest point (production of a phantasm) reaches something that is lowest in the higher nature”. Applied here, this means that the lower nature (sentient soul) at its highest point (production of a phantasm) reaches something that is “lowest in the higher nature”. This is the threshold where the higher spiritual soul’s lowest ability to receive a phantasm, *further dematerialize it*, and thereby turn it into an intelligible impressed species necessary for it to be apprehended by the rational soul takes place. That is, **the rational mind, because it is spiritual, is unable to apprehend a sentient based phantasm, even though it has been dematerialized. Even though a phantasm has been significantly dematerialized, it is still impressed in matter** and must be extracted and further dematerialized so that it becomes intelligible to the rational or spiritual soul/mind.

Thus, before the rational soul can exercise its power of apprehension, a phantasm must be made intelligible or knowable to the soul. Although **already significantly dematerialized**, a phantasm must be

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<sup>61</sup> In addition to actually existing species in the real physical world of matter, such as a dog or cat, there are also intellectual representations of these species that exist solely in the mind: There are **intellectual species** and **physical species**. We are talking here about intellectual species, species apprehended by the intellect.

<sup>62</sup> Aquinas speaks of “impressed species” and impressed intelligible species, viz., “*species intelligibilis impressa*”. This is a fine point that has caused great confusion, esp. in use of terminology. The phantasm is an impressed species stored in the imagination as an image available to the sentient soul or mind. The rational mind, however, because it is spiritual and not in the body as a sentient soul is, requires a further dematerialized image that is made intelligible or presentable to its spiritual faculties. Aquinas, therefore, refers to **two types of impressed species**: those which are **impressed on the sense organs** and stored in the imagination known as phantasms and those that are further dematerialized by being lifted out of matter and thereby made intelligible to the intellect: “*species intelligibilis impressa*”.

further abstracted or extracted from the matter of the brain. This further abstraction occurs *via* a process of interior *intellectual light* similar to that of light shining through moving film to project its contained images *out* of the film and onto a movie screen. Although images are projected out from the film, they are also retained on the film just as a phantasm is retained by the imagination while simultaneously being “projected” and thereby “apprehended” or made available for viewing by the rational soul.

**The lowest power of the spiritual soul**, what Aquinas refers to as the “*Agent Intellect*”, shines an *interior light* on the phantasm thereby lifting the image out of matter thereby making it apparent (or intelligible) to the rational mind or soul; it is now referred to as an “*intelligible impressed species*”.

The phantasm remains imbedded in matter (as does the image on the film) while at the same time the “*intelligible impressed species*” is carried out of matter by *interior light*, and thereby further dematerialized thus making it apparent to **the highest power of the spiritual soul**, what Aquinas refers to as the “*Possible Intellect*” or rational mind, for apprehension. Clearly, it is not external bodily eyes that see the impressed intelligible species; it is seen by the internal eyes of the soul<sup>63</sup>.

Once a phantasm is transformed into an “*intelligible impressed species*”, the mind can begin to think about it. The rational mind, through a process of intellectual abstraction and analysis, begins to know more about an object than is possible by mere sense perception and its allied association. **Intellectual knowledge is not dependent upon association, which can make the same object appear good or bad relative to the associations connected with it. Intellectual knowledge transcends sense appearances and relative associations to arrive at a proper understanding** (by close analysis of its parts) of what a thing actually is, its essence, or form, the universal *truth* about its nature *free* of relative *accidents* and contingent *associations*.

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<sup>63</sup> Although, this is not how the process is usually explained, no one knows how this process of converting an impressed species into an intelligible species occurs. Usually some vague notion is presented, such as the “Agent Intellect” (lower power of the rational soul) abstracting accidents out of a phantasm to generate an intelligible species or **universal essence** free of its individuating accidents.

This vague description has always made little sense to me. I prefer to view the process of forming a universal as belonging to the higher “Possible Intellect”. The lower “Agent Intellect” provides the twice dematerialized impressed species to the higher Possible Intellect. It is the higher Possible Intellect that conceptualizes the universal essence by means of **intellectual** abstraction from the intelligible impressed species (*species intelligibilis impressa*), by means of observation and analysis of its causes, parts, operations, functions, structure, and powers etc.

To grasp the essence of any object, the soul must intellectually examine the *intelligible impressed species* by means of which it is able to grasp the various parts, powers, operations, and sub-operations of any object under scrutiny. Furthermore, the soul is capable of synthesizing these various observations to understand how they function as an integral whole. Only then can the mind begin to determine the object's potentials and afterwards adequately define what the object is. **This type of reflection is an operation of the higher Possible Intellect operating at its lowest rational level: *Apprehension*.** Using Aquinas' terms, the process may be summarized as follows:

The higher *Possible Intellect* depends on its lower ability, that of the *Agent Intellect*, to convert a *phantasm* into an *intelligible impressed species* so that the rational soul is able to simultaneously observe or apprehend what the physical eyes are seeing.

Then, the possible intellect is able, if it chooses, to undertake the additional task of studying or analyzing an object, made intelligible to it *via* the twice dematerialized impressed species, in order to derive a definition or concept.

The rational mind is able to examine each object abstracted from matter, but that does not mean that it will do so. **If it does not reflect on each object, it will be limited to particular or contingent knowledge based upon relative associations.** Many people simply react to images and their associated meaning without advancing to a higher level of ontological understanding leading to *universal insight*. **Unfortunately, these people continue to operate almost exclusively from the sentient level;** they are "too busy" to think; unaccustomed to doing so; preoccupied with something else; numbed by psychological pain; are lazy or are contented to have the sentient and relative knowledge of an animal, which is often associated with pleasure and helps them, so they "think", to avoid pain. At this lower level, they do not "know" but rather "sense" their environment and act under the sway of *induced* and *relative associations* and emotions rather than from *deduced universal knowledge*..

Since many people occasionally or predominantly operate from their lower sentient level, it is not surprising that many "scientists" perceive only a *difference of degree* between human thinking and animal thinking. An adult guided by sentient-based thought knows little more than he did when he was a child; few really know their environment as a human being is capable of knowing it. We often "look" at things but do not

really “see” them or know them. How many people can name the trees in their neighborhood and speak cogently about their anatomical structure and parts, the density or chemical composition of their matter, their various uses, how they differ from other trees, what medicinal or other uses the leaves are good for, how long they take to mature, etc? How many can name the flowers and plants, classify them by their parts and knowledge of their functions and uses, e.g. dietary, medicinal? If we are just looking at things and enjoying them, that is good, but we are capable of much more. We can also *know them* and, thereby gain *mastery* or *dominion* over them, a dominion that enables human beings to turn all things to their advantage and to the advantage of others.

Human beings are not *necessarily* controlled by events because they do not *necessarily* respond to them by mere association. Rather, they can acquire control over events based on the extent to which they transcend mere *associative-knowledge* to acquire fuller *ontological-universal dominative-knowledge* of a thing’s essence, whereby they are capable of naming it because they know it and thereby gain dominion over it. This is something that is not possible for any other animal except man. People, who respond to events by sentient association with little or no intellectual reflection, are on the road to psychological manipulation and political conditioning. They are engaging in “*acts of man*” rather than “*human acts*”, as defined in Chapter Three, and are therefore, like animals, subject to conditioning.

Conditioning is a psychological weapon that has been utilized both in East and West. In the West, Skinner and Watson conducted research utilized by marketing experts to induce consumption to save capitalism; while in the East, Pavlov conducted classical conditioning research supported by the Kremlin and then utilized by Lenin to “save the revolution”.

The person who takes time to know things is using both her sentient mind and her rational mind. She looks and sees, listens and hears. It is clear, we can choose to limit our lives to ribald Epicureanism (looking and listening-sensing or experiencing) or choose to live a more fully and completely human life by attempting to see into the essence of things, beginning with ourselves and thereby commencing the journey toward wisdom and authentic spiritual mastery. The existence of free choice is evident from the fact that, (1) many people do think about things, at least a little bit, (2) others turn away to think about nothing or about other things that distract them, while, (3) others have eyes that and see and ears that listen and hear.



### **Obtaining Knowledge and Understanding of the Essence**

**Abstracting a universal essence or form inherent in any object involves four steps;** it involves four steps because **there are four causes**, identified by Aristotle and Aquinas. These four causes, in no particular order, are: (1) **Material Cause**, (2) the **Formal Cause**, (3) the **Efficient Cause**, and (4) the **Final Cause**, all of which when analyzed enable the observer to conceptualize or know the essence of each perceived thing.

Knowledge of the **material cause** provides knowledge of what an object is made of, its elements, its chemical components, and its properties, as well as how these elements function alone and when combined with other elements. Philosophers study the **formal cause** by looking at the object's structure, functions, and operations through which they deduce its powers in order to know something about its form, what it is, its essence and various potentials by which they are able to deduce its **final cause** or purpose, the ends or potencies it is able to achieve. Finally, they also want to know its **efficient cause** or the cause of its existence and of its form (both proximate and ultimate). Is there a natural or supernatural cause or is it a random occurrence? Is it a work of art, or of chance? Is it associated with life or is it non-living? **By knowing something about the efficient cause, something more can be known about the potencies in the effect, which are the result of the efficient cause.**

Nothing is properly known until all four of these causes have been addressed; only afterward, is it possible to define, name, and *properly* classify objects according to their essence or derived definition, and not before. Scientists usually master the *material cause* and then switch gears to application because they are after a utilitarian result and, therefore, stop looking further into the other causes that enable philosophers to derive the essence of things.

Nonetheless, because empirical scientists are *usually* outstanding and astute observers of nature, they frequently know phenomena better than philosophers know them, (universal taxonomies, which require keen observation, are more often the product of scientific investigation than of philosophical). As such, scientists are often in a better position to attain knowledge of an object's essence than philosophers are. The better that objects are examined, known, and categorized, the better one is able to apprehend their essence and subsequently to philosophize.

Philosophy, like science, begins with sentient observation, followed by intellectual apprehension, which leads to conceptualization or

knowledge of a thing's essence by way of its causes. **Philosophers, like scientists, do not stop at the material cause but proceed beyond to examine the other three. The human sciences demand scrutiny beyond the material cause because no one can talk about the proper use of anything or the proper development of a human person unless they first know what a thing or a person is.**

Thus, philosophical and scientific knowledge is not merely sentient associative or relative knowledge; by its very definition, it is intended to be rational, objective, and universal, which it cannot be if it operates from mere association. Association inevitably reduces observation to the highly subjective realm of contingent circumstances because **everyone's associations are different**. Rational knowledge tends to objectify the subjective, something that is aimed at by both empirical science and philosophy. Ideally, a philosopher is trained in empirical observation of "being" before he ever embarks on the philosophical process of extracting a form from matter; that is the way it was for over two thousand years until the nineteenth century bifurcation. Aristotle and Aquinas both had thorough knowledge of the sciences of their day. In fact, Aristotle is the acknowledged, "Father of Biology".

Thus philosophers, if they really *do* philosophy and are not mere students of philosophy, focus on each intelligible species presented by the Agent Intellect to their potentially inquiring intellect, which is capable of examining such species in order to determine their nature based on an analysis of their four causes. It might be thought that a philosopher having conducted these exhaustive intellectual operations has done his job. Nothing could be further from the truth! Knowledge or apprehension of the human substance/essence also known as *quiddity* (although it involves the third and highest level, of abstraction<sup>64</sup>) **is only the beginning of the**

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<sup>64</sup> *The first level of abstraction is attained by physics, which prescind from particular matter to derive knowledge of objects that cannot exist apart from matter.*

*Mathematics reaches higher to engage in the second level of abstraction by prescinding from quality; it is concerned with quantity. It studies mathematical forms independent of matter but mathematical forms do not actually exist apart from matter.*

*Metaphysics reaches the third and highest level of abstraction by prescinding from both quality and quantity to derive pure knowledge of a thing's essence; it is the study of being as being in itself (being qua being void of its individuating matter and its qualitative and quantitative accidents). It studies forms that actually exist apart from matter.*

**philosophic enterprise; it is that upon which all subsequent rational thought and normative-prescriptive practical activity is based.**

Unless the human essence is extracted, political science cannot be a *normative* or a *prescriptive* science – a good cannot be prescribed unless a thing is fully and properly defined (formal cause) and its potentials identified (final cause). Only after examining a substance and forming conclusions about its essence through knowledge of its four causes is a philosopher able to move to **the second level of thought** (not of abstraction, but of higher rational thought), which lies beyond simple apprehension and leads to conceptualization/definition and onward to the more advanced levels of reasoning, speculative understanding and of normative judgment and practical prescription.

### **Level Two: Rational Thinking**

*Conceptualization/Definition or Expressed Intelligible Species (species intelligibilis expressa)*

1. Level One Apprehension
2. **Level Two Conceptualization/Definition: Species Intelligibilis Expressa** (i.e. Level One + Conceptualization)

Level 1 involves a process of intellectual *insight* or apprehension requiring an *intelligible impressed species*, which is an extremely dematerialized image abstracted from a phantasm (*impressed species*) by means of internal intellectual light. Level 2 involves the further process of forming a concept or definition: Once an intelligible *impressed species* is apprehended and known, it can be conceptualized and *expressed* in a definition, what Aquinas referred to as the “*Species Intelligibilis Expressa*” or “*expressed species*”.

*An expressed species is not a picture or pictorial image. The expressed species is a universal definition arrived at by a process of apprehension followed by analysis of the four causes resulting in*

*conceptualization*<sup>65</sup>, which is then *expressed* in a definition, otherwise known as an *expressed species*. An *impressed species* is a dematerialized image. The *expressed species* is a definition! As a definition, **it is not** (cannot be) *seen as an image; it is understood as a concept*. Thus, it is seen by way of being understood.

Conceptual knowledge confers dominion and power over known things, a power that **enables a person endowed with acquired understanding, by means of the four causes, to interiorly deduce potential effects without first having to exteriorly see or experience them – something an animal cannot do**. Intellectual insight is an interior rational power; it is a type of *spiritual knowledge*, because a person possessing intellectual insight is able to deduce an effect from a known cause **without ever having to observe the effect with physical eyes – effects can be interiorly deduced in the mind via essential knowledge of the cause**. That is, the human mind can observe effects *internally* before they are ever seen externally by the senses—this is a spiritual power because it involves intellectual in-sight not dependent on sentient out-sight.

In other words, once the essence of an object is known, the intellect is not dependent on further sentient based experience to deduce an effect. The human mind is therefore endowed with a *spiritual power* that enables it to transcend *relative knowledge* attained by means of sentient association to arrive at *universal knowledge* attained by means of intellectual apprehension followed by conceptualization. *Apprehension* and *conceptualization* empower human beings to grasp the form or the essence of things, and as a result, gain spiritual dominion or mastery over them thereby harnessing their power and potential and placing them in human hands.

For example, a chemist can apprehend and intellectually examine a mesquite tree, study its chemical properties, and determine its density as well as the composition of the density. He can measure the amount of water per *square inch*, and, based upon the tree's age and size, tell you how

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<sup>65</sup> A concept cannot be imaged by a mere sense impression. Concepts are conceived by intellectual conception. They are the result of knowing the essence of things. A married woman physically conceives a new child because she is **known** by her husband. The mind intellectually conceives a new form because an object is **known** by the intellect thereby spiritually birthing a new idea or concept. Concepts are spiritually conceived or born through a process of intellectual apprehension whereby the forms of external things are incorporated into and become part of the human mind. **This is a process far superior to knowledge by means of association, which is always relative and subjective knowledge and therefore not universal and objective true knowing at all**. Once a person apprehends and conceptualizes an essence, he or she acquires a type of dominion or power not possible to one who merely knows an object by means of association.

long it will take to burn and how much smoke it will emit to enhance a Texas style barbecue. He can do all this **without having to actually observe a barbecue**. Because a chemist can intellectually acquire such knowledge and understanding, he does *not* have to see mesquite wood burn to know about its potential smoke content nor the rate of its release; **he can deduce the effect from his knowledge of its material and synergistic formal causes**.

This interior intellectual ability has its basis in Level 1 and 2 apprehension/conceptualization, which empower the rational mind to know *constant universal* effects *a priori* (prior to observation). Thus, conceptual knowledge gained by intellectual **insight** differs from perceptual knowledge gained by mere association, which empowers the sentient mind to know the contingent, ever-changing, and relative effects of things *a posteriori* (following observation) but not *a priori*.

A chimpanzee, endowed with sentient ability, can also acquire knowledge of a mesquite's potential smoke content and even of its rate of release (somewhat crude measure of slow, medium, quick). **But the chimp's knowledge must be based on experience or observation** (it is *a posteriori* only). A chimpanzee does *not* know the **essence** or form of a mesquite tree; it knows only what is received *a posteriori* by its senses along with whatever else is associated with its varying perceptions.<sup>66</sup> A chimpanzee, therefore, cannot make an accurate prediction of an effect without first observing the operation of a cause, whereas **a human being, in possession of rational-substantial knowledge of the tree's essence, can accurately predict an effect without having to observe it**. He or she can foresee an event *via* his or her *internal* knowledge of the cause.

To iterate, **the human mind is thus able to arrive at intellectual knowledge of effects by means of spiritual insight without having to first observe effects through physical eyes**. *This is a spiritual power because it operates independent of sensation and sense perception*. This spiritual power is possessed only by human beings. Other animals are unable to know anything unless first experienced. Sentient knowing is powerful, but always contingent. It is diminished by an inability to see beyond relative surface associations to grasp the inner essence, which alone makes

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<sup>66</sup> A chimpanzee might think that smoke is a signal for a hyena attack if smoke is associated with hyena attacks. Thus, *a posteriori* knowledge is potent but relative knowledge – it does not confer dominion, but it does assist survival.

knowledge universal thereby conferring the power of dominion upon its possessor.

The rational mind, moreover, is not dependent on the senses for its knowledge of *abstract concepts* such as *justice, love, soul, and liberty*. It is capable of deriving intellectual knowledge of these concepts without ever having to **physically see or observe them**. *Abstract concepts cannot be physically observed, but they can be intellectually apprehended and known without the aid of the senses.*

In short, the upper rational mind is more powerful and of a different species of being than the lower sentient mind because it is:

- (1) Able to know (abstract) the essence and universal definition of all things
- (2) Capable of operations of which the senses are incapable
- (3) Capable of exercising power or dominion over things it knows and thus is not limited to subjective sentient knowledge or contingent appearances and associations
- (4) Capable of knowing an effect without having to observe it because it has conceptualized the essence of its cause.

These spiritual abilities of the rational soul should not be confused with an animal's physical ability to sense danger, punishment or reward and, therefore, approach or avoid objects because it "knows" what will happen if they are encountered. For example, a dog sees a dish and expects to eat or it hears an angry voice and it obeys before being punished (from *memory* of past experience) etc. These are not *intellectual responses* but *conditioned* ones. Because they are conditioned responses, they are *changeable, relative, and contingent*. Universal conceptual knowledge is not contingent and relative; it is not subject to variation due to varying associations. **Associations change** and, therefore, so to do responses to stimuli; they are, always relative. Essences or universal forms, on the other hand, do not change; they are universal definitions that are unaltered by contingent circumstances. Mastery of concepts, moreover, confers a type of dominion unknown to sentient beings.

These two ways of knowing an effect (*perceptual or sentient* versus *conceptual or rational*) are quite different; they are *differences of kind*. Conceptual knowledge involves extrapolation from the essence. It is (a)

universal and unchanging **knowledge** and (b) it does not require contingent and changing sense experience in order to be known. In fact, intellectual knowledge must be freed from sentient experiences so as not to be limited by associations that inhibit potential universal understanding of which the intellect is capable. The rational intellect requires sense experience only to extract an essence from matter. But, once an essence is extracted, the intellect does not require any further observation to foresee potential effects. The other, sentient animal extrapolation, is (a) **variable** and (b) *necessarily requires observation*.

### **Rational Thinking, Level Three: Symbolic Reduction, Naming, or Word Symbol**

1. Level One Apprehension
2. Level Two Conceptualization
- 3. Level Three Symbolic Reduction** (i.e., Level Two + Symbolic Reduction)

After forming a concept or definition of an object, a *species intelligibilis expressa*, a further intellectual step is taken by then naming it: "*symbolic reduction*". Level 2 involves the reduction of an apprehension into an expressed concept, and **Level 3 involves the further reduction of an expressed concept into a symbolic word**: a word that captures its meaning and manifests its essence. Symbolic Reduction involves an intellectual ability to grasp a concept well enough to further reduce it into a *single symbolic word loaded with conceptual meaning*. **A word is thus a symbol representing a concept**. It is, moreover, the basic level of symbolic language<sup>67</sup>, the fundamental means by which human beings communicate with each other.

Thus, it is clear that lower *intellectual thinking*<sup>68</sup> (of the upper mind-rational mind) precedes verbal communication or the formation of words: apprehension is conducted without the aid of words). In fact, **apprehension is part of an intellectual process by which words are formed**. Apprehension is followed by conceptualization and then by

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<sup>67</sup> *Excluding morphemes and phonemes*

<sup>68</sup> *By lower intellectual thinking of the upper mind, I mean the mind's ability to **apprehend** and **conceptualize**. As we shall see, the upper mind has still higher intellectual powers. I do not intend, by this use, to infer that rational thinking is a species of intellectual power lowest on the ladder of being: Above **human rational intellectual power** is **angelic intuitive intellectual power** and above the varying degrees of angelic intelligence is the **Divine or omniscient intelligence** of God.*

**symbolic reduction - reducing concepts to single words.** Clearly, lower higher thinking (or the lower powers of the upper mind) takes place before the formation of words. *Words are needed for communication and to facilitate higher thinking, but not for apprehension or lower thinking leading to conceptualization.*

The better that objects are apprehended, conceptualized, and named, the better a person should be able to communicate. The better objects are observed, the better they will be understood. *Understanding facilitates clear communication.* It is not enough to garner definitions from a text book. It is much better to observe each thing for oneself until an intellectual habit is formed of apprehending the essence or form of things. Apprehending an object's essence necessarily precedes conceptualizing a definition.

Following conceptualization, a proper word must be chosen, a word in which *the full definition or concept is packed*. This new word is a *packed symbol* that represents a *concept*, which in turn represents an *apprehension* that represents an *intelligibly impressed species*, which in turn represents a *phantasm* impressed on the brain.

A symbolic word is the basic unit of human symbolic communication *via* spoken words, *but it is not the basic level of higher rational thought*. The basic level of higher rational thought is *apprehension* followed by *conceptualization* and then *symbolic reduction*.

#### **Rational Thinking, Level Four: Formation of a Proposition**

1. Level One Apprehension
2. Level Two Conceptualization
3. Level Three Symbolic Reduction
- 4. Level Four Proposition** (i.e., Level Three + Proposition)

After words are formed, they may be placed into Level 4 Propositions, (math uses axioms) or *a posteriori* and *a priori* principles or premises which are necessary building blocks for Level 5 propositional judgments (examined in the next section). The configuration of propositions involves a higher rational power than the formation of symbolic words because it involves placing **two concepts** (packed into symbolic words) into a single statement to be used as a premise in a logical statement consisting of multiple premises (*sylogism*) to reach conclusions based on sound reason.



## Rational Thinking, Level Five: Propositional Judgment (Understanding)

1. Apprehension
2. Conceptualization
3. Symbolic Reduction
4. Proposition
5. **Propositional Judgment** (i.e., Level Four + Prop. Judgment)

Level 5 thinking involves the intellectual ability to correctly judge propositions. That is, **after a proposition is formed, it must be judged as true or false**. Propositional judgments involve either affirmations or negations of concepts that serve as the subject and predicate of a proposition. An affirmation is a judgment asserting an identity or valid equivalence between a subject and a predicate. For example, the proposition “John is a man” is true or affirmed if what is predicated of “John”, that he is a “man”, is true. To make this judgment requires adequate and prior understanding of the concepts contained in both subject and predicate (John and man).

A negation is a judgment that divides subject from predicate, a judgment that says there is *not* a valid equivalence. A negation is true when it divides correctly and false when it does not. For example, “God is *not* mortal” is a true proposition by way of negation<sup>69</sup>. It requires enough knowledge of the concept “God” and of the concept “mortal” to judge the truth validity of the proposition.

Level (5) Judgment therefore, is a higher level of rational thought than (1) apprehension, (2) conceptualization, (3) symbolic reduction, and (4) formation of a proposition. For a proposition to be true there must be congruence between subject and predicate, which obviously **involves the mind in making a judgment by means of comparison**.

A falsehood or lie is a simple philosophical misplacement of ontological predicates (am, is, are, was, and were): saying “is” when “is not” is the correct ontological predicate. “John *is* good” is untrue if “John *is* bad”. Thus, “is” in the second statement should be replaced with “is not”. **Propositions are logically useless and potentially dangerous if they are not judged as true or false or if they are judged incorrectly**. Once their truth validity is affirmed, a syllogism is strengthened.

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<sup>69</sup> *The way of negation by which we know something of God as a perfect Being involves denying of Him the imperfections and limitations attributed to His creatures.*

### **Rational Thinking, Level Six: *Syllogism (Reason)***

1. Apprehension
2. Conceptualization
3. Symbolic Reduction
4. Proposition
5. Propositional Judgment
- 6. Syllogism (i.e. Level Five + Syllogism)**

A syllogism involves the ability to set up a logical demonstration made of propositions or premises stated in such a way that if the first two are correct the third necessarily follows:

1. All men are intelligent
2. John is a man
3. Therefore, John is intelligent

Logical thinking takes place by means of the syllogism. Obviously, **there cannot be a valid syllogism if there are not first valid propositions.** Moreover, there cannot be valid propositions without prior packaging of concepts into symbolic words, and there cannot be symbolic words to package with conceptual meaning unless there are first intelligibly impressed species to apprehend and a power to apprehend them.

### **Rational Thinking, Level Seven: *Logical Judgment (Reason)***

1. Apprehension
2. Conceptualization
3. Symbolic Reduction
4. Proposition
5. Propositional Judgment
6. Syllogism
- 7. Logical Judgment (Induction and Deduction) (i.e., Level six + Logical Judgment)**

The logical judgment of a syllogism involves more than establishing the truth validity of the propositions; it **involves a judgment regarding the truth validity of the conclusion based upon the correctness of its logic.** If the propositions or principles are true and the logic is false, a syllogism must be rejected. On the other hand, if the principles are true and the logic is correct, the syllogism is judged to be sound, and the conclusions must be accepted to avoid a logical contradiction. For example:

- \* All men are mortal
- \* John is a man
- \* John is mortal

The conclusion about John's mortality is contingent upon the truth validity of the first two propositions and on the logic connecting them. If both logic and premises are correct, the conclusion is "sound" and must be accepted.

Logical judgment, therefore, involves discovering or learning the rules and procedures of correct thinking and applying them correctly to syllogisms. Sound human thinking is therefore based upon the ability to (1) adequately apprehend essences, (2) form conceptualizations from apprehensions, (3) derive adequate symbolic words from conceptualizations, (4) establish propositions from symbolic words, (5) correctly judge propositions, (6) form syllogisms from true propositions, and (7) judge the validity of logic used in a syllogism. Thus according to Aquinas (Q 15, A 1, 1954),

"There is a double composition in the activity of the human soul. There is one by which it joins and divides predicate and subject, by **forming propositions** (*understanding*). The other is that by which it joins by **comparing principles with conclusions**" (syllogism/*reason*).

"In the first composition the same power of the human soul apprehends the simple things, that is, predicate and subject, through their quiddities, and forms a proposition by joining them. Therefore, with like reason there will be one power which grasps principles, a function which belongs to understanding, and which orders principles to conclusions, a function which belongs to reason".

The rational power must first apprehend the quiddity or essence of both subject and predicate and then form a proposition by "joining" and "dividing" them". Aquinas refers to first power of the intellect as "*understanding*", that is, understanding the essence of things and how they relate. The second power of composition involves the use of propositions in a syllogism, which Aquinas refers to as "*reason*" which, orders principles (propositions) to conclusions.

Thus, *understanding precedes and facilitates reason*, which is dependent upon propositions for its object, i.e., the mind cannot reason without understanding propositions, and it cannot reason *well* without **understanding** them correctly and following the rules of logic. In the end, understanding feeds rational thought and culminates in reason and

judgment: (1) propositional judgment and (2) logical judgment, which begin with the generation of an impressed species from a phantasm.

Only human beings are capable of such rational thought and they supply plenty of evidence for its existence. Other animals provide no such evidence; they only **appear** to the *uneducated eye* to be thinking rationally, when in fact, all animal thought is explained by sentient association, memory, and imagination. **Chimpanzees can certainly learn, but this does not mean that they think rationally.** They only appear to think, and researchers who anthropomorphize or who fail to understand the dynamics involved in rational thought readily believe that animals are rational thinkers. This mistake is commonplace because researchers fail to distinguish between *rational* and *sentient* cognition. For example, since a monkey is capable of making associations, it can easily associate dark clouds and thunder with rain. Moreover, if while it is raining a monkey meanders under a tree to stay dry, it can easily remember this association the next time it rains. Thus, when a monkey sees clouds and moves under a tree before it rains, anthropologists unschooled in philosophy probably say that it is thinking *purposefully* and therefore *rationally* when in fact there is nothing rational about the act at all; the act can be explained by memory and association. It is purposeful, *but purposeful is not a test for rational.*

The test for rational, as just demonstrated, consists of intellectual abstraction involving (1) apprehension, (2) the formation of concepts based on understanding of essences, (3) the further reduction of concepts into symbolic words that are then (4) built into propositions that are (5) propositionally judged and then (6) used in syllogisms to deduce conclusions followed by (7) logical judgment.

Sentient animals engage in perceptual or associative thinking; such “sentient based thinking” can be purposeful, even ants get out of the rain. But sentient perceptual powers are unable to transcend matter, apprehend quiddity, conceptualize, symbolically reduce, logically deduce, and exercise propositional and logical judgment.

Since there is plenty of evidence that animals “think” perceptually (learn by association) but no evidence that they think rationally (neither lower abstraction and derivation of quiddity nor higher rational thinking and judgments capable of transcending sentient associations) it is concluded that they do not think at all (except by way of associative perceptual “thought”). If animals are capable of basic apprehension and conceptualization, they should be able to solve problems based upon understanding the essence of things.

What good is a concept unless it can be *practically* applied to (1) make artistic creations or to (2) make prescriptive and normative judgments or to be *speculatively* (theoretically) applied to (1) make propositions that are (2) logically united to other proposition and formed (3) into syllogisms to derive logical conclusions that can be communicated? If animals possessed these intellectual abilities, they could exercise dominion over nature. They would not be limited to an ecological niche and would not have to rely on chance, association, mimicry, or being taught by others; they could figure things out for themselves and not need to wait for sentient experiences to acquire associated knowledge.

### ***Symbolic Language and Communication***

*Complex universal quidditive knowledge of substances* cannot be communicated by *relative associative signs*. **Complex universal quidditive knowledge requires a complex symbolic language commensurate to the tasks of abstract thinking and complex communication.** For example, the concept of energy conservation, or a theory based on twenty or so concepts, cannot be *adequately* communicated by sign language; it must be communicated with symbolic words and mathematical symbols. Symbolic words ease complex communication. Yet, we have zero evidence that animals communicate with symbols packed with essential meaning, which they can manipulate and form into propositions. All evidence of animal communication indicates the use of a *limited sign language* necessary to facilitate exchange of basic information related to concrete objects associated with basic physical needs. Animals possess a rather astounding sentient acuity and ability, but not the ability to deduce essences and reduce them to symbolic words used in syllogisms to further rational thinking of either concrete or abstract things.

Thus, when it is said that animals “think”, it means that they remember and imagine, are conscious of the contents of their thought and, because of these powers and operations, they are able to learn by experience and remember what they have learned, which gives the false impression of rational thinking when, in fact, it is merely sentient. The more acute the senses, the more powerful the learning from experience. Thus, **we can rank animals by sentient acuity and their powers of memory and imagination.** When it is said that an animal is smart, it means that it is observant, has a good memory and a vivid imagination.

### *More on Conceptual Thinking*

Rational thinking ability is an *acquired skill* dependent upon proper education including sentient training in early childhood augmented by further education to develop intellectual skills that make the mind fit for higher scientific and philosophic studies. This observation led Aquinas to conclude that the intellectual formation necessary to grasp theological or philosophical subtleties is so extensive that few develop these abilities to the necessary level; therefore, faith is required:

“If reason were the only way to know God, the human race would remain in the darkest shadows of ignorance. For then the knowledge of God, which makes men perfect and good, would come to be possessed only by a few, and these few would require a long time in order to reach it” (Kenny O.P. 1999, Introduction).

Not everyone develops the intellectual skills of a scientist or of a philosopher, no, not even some doctoral students who mistakenly treat graduate scientific studies like undergraduate liberal arts. They are very different levels of education; undergraduate studies are intended to be intellectually *formative*, while graduate studies are intended to be intellectually *contributive*. Undergraduate liberal arts are intended to mature the intellect and prepare it for advanced independent research that ultimately contributes to individual and social advancement.

Clearly the *development* of intellectual ability is not an instinctual or natural process that simply happens, nor is it one that can simply be poured in from an outside source such as a parent or teacher. This is why education is considered a “*cooperative art*”. Education involves the work of both teacher and of student, who must *cooperate* to develop a student’s potential through a process of guided discovery.

Nonetheless, mental *ability* is innate; everyone has intellectual ability and develops it to varying degrees. However, the general fact that *rational thought must be developed* and requires significant elementary, secondary, and tertiary education before it is properly exercised is evidence that animals do not have such ability. As indicated earlier, animals do not have elementary schools, high schools, or colleges or anything that remotely resembles the liberal arts for intellectual education.

Conceptual *thinking* and *communication* require logic and symbolic language that utilizes words to summarize concepts and to form

propositions necessary for reason. Even Darwin (2002, *Descent*, Chapter 3) understood this,

“A complex train of thought can no more be carried on without the aid of words, whether spoken or silent, than a long calculation without the use of figures or algebra”.

This relationship between language and thinking will be taken up in the next chapter.

## CHAPTER SIX

### Language and Thinking

CHAPTER FIVE CONCLUDED with a quote from Charles Darwin to the effect that thinking could not occur in the absence of words. In actuality, it *is* possible to think without words. As discussed in Chapter Five, apprehension is an intellectual process from which words are derived and afterward used in logical statements and propositional judgments that do require words. Nonetheless, in this chapter, unlike the previous, the focus is not on the *formation* of words and their use in *thinking*, but on their use in *communication*.

Animals do not think rationally nor do they communicate by use of words (**symbols**); animals communicate by use of signs. They use a *sentient based language* consisting of multiple calls or signals associated with physiological survival needs and drives such as species propagation, hunger, fear, pleasure etc. These *signals* or *signs constitute a language of the body, the language of emotions, physiological needs, and related associations*. Words, on the other hand, constitute a **language of a mind** that comprehends the inner nature of things, conceptualizes them, and reduces them to cognitive symbols. Words have definitions that must be understood for their proper use in facilitating conversation and rational thought above the level of apprehension; only the human mind can understand things such as the sentient nature of a dog or the rational nature of a man and then engender appropriate symbolic words suitable to each specific nature. Every universal noun has a definition, which is a predication about the substantial meaning of the object it symbolizes.

A sign connotes a simple recognition that **one thing signifies or is associated with another** (a high shriek is a sign associated with danger; a mating call is a sign associated with estrus, *etc.*). **A sign does not contain the definition of a thing's essence**; it is an indicator of its *existence* and all that is associated with it. A chimpanzee uses signs for various things such as fright or food, e.g., a banana, but neither the chimpanzee nor the sign can tell you what a banana *is*. Knowledge of what a thing is (quiddity) requires study and analysis (chemical, organic, structural, and functional), comparison, classification, identity of its origins, inhibitors, and promoters of its various functions and purposes etc. Once apprehended and examined, an object can be conceptually summarized and then symbolically named. **These names and essential definitions facilitate classification and discussion; they help make communication of complex**



**thoughts possible.** Signs, on the other hand, are used to communicate concrete variables, what things appear to be on their surface including related arbitrary associations. **Compared to symbolic language, sign language is a simple type of language suitable to animals that know things but do not understand them.** A sign conveys a simple sentient message that acquires meaning through association and therefore is used for *facile* forms of communication having to do with physiological needs and drives.

The meaning of a body sign is immediate and obvious, whereas the meaning of a word symbol, such as *animal* or *man*, must be learned by careful study until each substance is known well enough for conceptualization and further symbolic reduction into a word that connotes its essence. Every universal noun is a symbolic representation of a concept that defines an object's essential properties, functions, origin, operations, potencies, and powers. Like a sign, a word connotes something, but it connotes far more than a sentient association or a memorized fight or flight response. It does *not* connote the memory of an image paired with an incidental event or related emotion—it represents an essential ontological understanding of a complex substance reduced to a symbolic representation. *A sign points to something other than itself* with which it is associated, such as a whimper or bark to communicate hunger or fear. In contrast, *a symbol points to the deeper or inner meaning of that which it symbolizes.*

In short, a word is a symbolic reduction of a concept; it is an attempt to economize units of meaning that aid thinking and facilitate communication. A symbol is any synthesized reduction that represents the essential meaning of a substance itself; thus, it can be either *a picture or a word*. A sign merely represents some relative particular sentient meaning associated with a substance. *Because associations and species vary, signs are relative (one dog might wag its tail and another growl at the same stimulus), while symbols, being essential units of meaning, tend toward the universal.* A road sign containing the image of a deer leaping across a road represents an associative unit of meaning, such as deer crossing, be careful. The word "deer" or "Cervidae", however, has a precise scientific meaning that cannot be intuited by simple sense experience or association as danger can. Cervidae requires knowledge of *genus* and *species* characteristics that facilitate classification. It also furthers essential understanding that confers dominion over deer, meliorates communication about them, and furthers learning.

Because the meaning of metaphysical substances are especially difficult to apprehend and conceptualize, they are often conveyed by sacred pictures, icons, religious symbols etc. to represent a mystery. These visual representations connote the "*mysterium tremendum*", the ineffable, that lies hidden beyond mere sentient knowledge by association. Symbols function to **draw us into the mystery** that they represent. **Symbols do not merely point to or connote something else associated with them**; rather, they communicate the meaning of a particular being or event itself. **Sacred picture symbols, like sacred word symbols, connote the essence or the inner sanctuary of the numinous or divine.** They are pathways toward union with or understanding of the mystery they symbolize. *Symbols thus have an inward and deeper unitive meaning, while signs remain on the sentient surface and, as such, they are endowed with associative "other" meaning.* As such, signs have little to do with experiences that lead to unitive ontological knowledge and power by way of rational understanding—they are about *association*, not about *dominion*, or *communion* as the case may be.

Symbols connote inner meaning, for example: the symbol of an angel as a being with wings to connote its ethereal or spiritual nature and power, or of liberty as a blindfolded woman with scales to connote impartiality and fairness. When symbols are understood this way, as distinct, from signs, we are moving in the right direction. Symbols do not connote something external to and *associated* with the object symbolized; they connote something internal and ontologically related to the symbol itself. Words symbolize meaning vaster than the unaided senses can comprehend without thinking.

A picture used as a symbol is often less precise than a word symbol and as such, open to various interpretations, whereas a word, when understood, contains an exact definition hinted at by its structure and etymology. If a picture (or a word) is used to stand for the essence of a thing, it is being used as a symbol; but if it is being used to point to something else with which it is associated, such as a raised white tail (of a deer) to signify danger, it is being used as a sign. Since human beings are classified as rational "*animals*", they communicate with both symbols and signs; they communicate with both their minds and their bodies.

**Words, moreover, are not all equal; some subsume others** and may be used for hierarchical or classification purposes (heuristic device that facilitates learning) or as indicators of general knowledge because other **lesser ideas or concepts can be grouped underneath or within them.** For example, Ed Clark's yet unpublished *Catholic Thesaurus* using terms from

Father John Hardon's *Catholic Dictionary*, contains hundreds of key words or concepts measured by their power to subsume other words. *That is, the greatest or most powerful and universal ideas or concepts include lesser ideas and concepts subsumed beneath them or even within them. Because concepts are rationally derived and related to other concepts, they serve as powerful classification devices that enable the intellect to arrange knowledge into a vast rational hierarchical structure. It is important to remember this idea about "words" as it is significantly related to understanding the highest mysteries of our human nature.* These mysteries will be explored in Volume Two: *Theological Anthropology* pertaining to Trinitarian Theology and the "Word" of God imaged in the rational power of the human mind, which we have only begun to explore in this chapter.

In this regard, according to Clark, the word "God" is related to many other words that can be subsumed underneath or within it. The following word lists are not a pedantic exercise but one that is central to the topic. I do not intend that you read all the words listed below but rather peruse them to get the idea of a rational hierarchy and the relatedness of words to each other and to certain central or key concepts, which subsume or contain others within them. **A word's conceptual power can be measured by the amount of ideas or concepts that are subsumed within or beneath it.** For example, under "God", Clark subsumes:

ALMIGHTY, AUTHOR-CREATION, CHRISTIAN THEISM, CREATOR, DEITY, DIVINE ESSENCE, GNOSTICISM, GOOD SPIRIT, IMMORTALITY-GOD, JEHOVAH, LORD, OTHERNESS, PANENTHEISM, PANTHEISM, PERMANENCE, PURE ACT, SABAOOTH, SEMPITERNITY, SUPREME BEING, THEISM, YAHWEH ADORATION-GOD, ATHEISM, CHRIST'S-(SUFFIXES), CREATION, DISSENT-DOCTRINAL, DIVINE-(SUFFIXES), ETERNITY, GOD-FATHER, GOD'S-(SUFFIXES), HOLY SPIRIT, JESUS CHRIST

Continuing, under the term, "God", Clark also includes a sub-category, "SEE ALSO" in which he includes God's "Attributes and Authority". Under God's "Attributes", he subsumes:

ABSOLUTE, ADOPTION-SUPERNATURAL, APPROPRIATION, ATTRIBUTE, CONSTANT, DIVINE ATTRIBUTES, DIVINITY, FREEDOM-GOD, GOD'S SIMPLICITY, GOD-FATHERHOOD, INCOMMUNICABLE ATTRIBUTE, INCORRUPTIBILITY, NEGATIVE-ATTRIBUTES-GOD, ONENESS-GOD, PERSONAL GOD, POSITIVE-ATTRIBUTES-GOD, PROTOTYPE, PROVIDENT GOD, SACRED, UNCHANGEABLENESS-GOD, UNICITY-GOD, UNIQUENESS-GOD, VOICE-GOD, CHARACTER, CHARACTERISTIC, IMITATION-CHRIST, JESUS CHRIST, KNOWABILITY-GOD, TRINITY-HOLY

Further, under God's "Authority" he subsumes:

DIVINE LAW, DIVINE LIBERTY, FREEDOM-GOD, GOD'S FREEDOM, GOD'S SOVEREIGN- REIGN, GOD'S SOVEREIGNTY, KINGSHIP-CHRIST, LAW-GOD, LORDSHIP-OVER-UNIVERSE, PREDETERMINATION, SUPREME DOMINION, ATHEISM, CATHOLIC EDUCATION, CATHOLICISM, CHURCH-AUTHORITY, COMMANDMENTS-TEN, COMMUNION-OF-SAINTS, DIVINE-GOVERNANCE-CREATION, FAITH-PREAMBLES (SEE), LAW, NATURAL FORCE, PROVIDENCE, REVELATION

One of the words subsumed under God is “Atheism”, which he lists as another concept or word into which or under which many other words are subsumed:

BEHAVIOR-EVIL, CHURCH-AUTHORITY, COMPARATIVE RELIGION, CONSCIENCE, CONVICTION, CULTURE, DEPENDENCE-ON-GOD, DESPAIR, DIGNITY, DISSENT-DOCTRINAL, DIVINE-GOVERNANCE-CREATION, DOCTRINE, EVIL, FAITH, GOD, GOD'S EXISTENCE, GOVERNMENT, HOPE, INTELLECT, KNOWABILITY-GOD, LIBERALISM, LOVE, MATERIALISM, MEDIA, MORALITY, PANSEXUALISM (SEE), PLEASURE SEEKING, PROVIDENCE, REALITY-DIVINE, RELIGION, SATANISM, SCIENCE, SECULARISM, SELFISHNESS, SIN-AGAINST-FAITH, SLOTH (INDIFFERENCE-TO-GOD), SOCIOLOGY, THEOLOGY, ALIENATION-FROM-GOD, AGNOSTICISM, ANGER-AT-GOD, ANTI-RELIGION, ARIANISM, ATHEISTIC COMMUNISM, AVOIDING-GOD, BELIEF-IN-GOD-UNWARRANTED, BIAS-OF SECULARISM, BRAINWASHING, CAUSALISM, CLOSED-MATERIALISTIC-SYSTEM, COMMUNISM-ATHEISTIC, CONTEMPT-FOR-GOD, CRITICAL-REACTION-AGAINST RELIGIOUS- BELIEFS, CYNICISM-ABOUT-GOD'S-EXISTENCE, DEIFICATION-OF-MAN AND- EXCLUSION-OF-GOD, DEHUMANIZATION, DEISM, DELIBERATE-FAULTY NOTION- OF-THE-GOD-OF-THE-GOSPEL, DELIBERATE-NON-INQUIRY-ABOUT-GOD, DELIBERATE-REJECTION-PROOF-GOD'S-EXISTENCE, DEMIURGE, DENIAL ARTICLE- FAITH, DIALECTIC MATERIALISM, DISALLOWANCE-OF-ANY-ABSOLUTE-TRUTH, DISAVOWAL-OF-GOD, DISBELIEF, DISBELIEF-ARTICLE-FAITH, DISBELIEF-IN-DEITY, DISBELIEF-IN-GOD, DODGING-RELIGIOUS-QUESTIONS, EMPIRICISM, ENGROSSMENT-IN-EARTHLY AFFAIRS, ENMITY-TOWARD-GOD, EXCLUSION-OF-GOD, EXCLUSION-OF SPIRITUALITY- REALITY, EXTREMISM, FAITH-PREAMBLES-DENIAL, FATE, FREETHINKER, GNOSTICISM, “GOD-IS-DEAD”, HATE-GOD, HATE-RELIGION, HEATHEN, HUMANISM, IMAGE-GOD-Et al

All this under one word! Again, the intent of this brief exercise is to be an illustrative demonstration about symbolic language and its complex *nexus* of meaning, about the symbolic word and its relationship to other related words, and about their loaded meaning in a hierarchy of being. ***Words are packed with meaning and this meaning is related in some way to all other words.*** A thesaurus such as Clark's represents an ambitious and necessary project. Like the Dewey Decimal System, it is an attempt to order words/concepts so that they can be used for categorizing human knowledge and facilitating research, intellectual growth, understanding, and rational thinking.

Mortimer Adler developed a similar compendium of great ideas known as a “*Syntopicon*”. According to Adler (1952, p. xii-xiv),

“Topics can be related by their relevance to a common term (concept)...Hence the *Syntopicon* is organized, first, by a listing of the ideas that are the important common terms of discussion (concepts); and, then, by an enumeration of the topics that are the various particular points about which the discussion of each of these ideas revolves”.

Adler's *Syntopicon* includes some 3,000 topics subsumed under fewer than 101 concepts or ideas, which are the **most powerful words in the human vocabulary**, those that include and order related topics and

sub-topics. Such words include God, man, animal, mind, sense, government, liberty, soul, and others. According to Adler, the greater ideas or concepts include from as few as six up to seventy-six sub-topics. According to Clark, the greatest words, concepts, or ideas, such as God, include hundreds of sub-topics. These words, and all that is subsumed underneath or within them, cannot be known by merely sensing them or by varied associated meaning (association and conceptualization are different species of knowing); much more than sensing and image-making is needed.

Clark and Adler agree that the listing or ordering of words, ideas, or concepts is not a mere sentient project of the memory and imagination, but a “philosophical project” of the rational mind. “Stated simply, it is the project of creating...a synthesis or summation of (human) thought...which... serve(s) the *intellectual* needs of our time” (Adler, xxxi). Clark’s and Adler’s projects rest upon understanding concepts and definitions and ordering them according to their apprehended substantial meaning in order to facilitate intellectual mastery, communication, and further intellectual development toward grasping the intellectual unity of all forms by appropriate words that designate the substance of things, some ore powerfully than others..

Thus, word symbols can be understood as logical instruments that connote the substantial meaning of things; they are used in propositions, derived from intellectual apprehensions; they are necessary for rational thinking and conceptual communication. A monkey cannot use words or a symbolic language because it cannot apprehend or see into the essence or inner meaning of *phenomena*, and certainly not of *noumena*. If an animal is trained to use a human word, it is able to use it as a *sign* but not as a *symbol*. Unless the difference between signs and symbols is known, it could appear as if the animal using a word possesses some type of rational thinking ability, when in actuality that is not the case at all. Rather, it is a case of *appearance by association*.

As reviewed in Chapter Four, a chimpanzee, such as “Sarah” can learn human words by using images or lexigrams (figures that represent words) reinforced by rewards. Words learned by pairing them with lexigrams reinforced by rewards represent a type of learning: *learning by association*. Words learned by association are *signs* – they are not *symbols* that connote ontological meaning, which remains unaffected by paired associations. If animals learn to understand some human words such as “Koko open refrigerator”, it is because these words can be learned as a sequence of sounds and thus used as signs associated with objects and a

reward related to a physiological urge that binds them together as a percept in the animal's memory/imagination. Percepts are *not* symbols for communicating essence; in the case of animal training, they are sentient-based memories paired with elicited emotions manipulated by rewards and punishments with which they are associated.

Being rational, the human mind is *not* satisfied with mere associations or surface knowledge nor solely with an object's utility or its physiological significance (signification). As can be seen in the above example, a symbolic word such as God has hundreds to thousands of other words or concepts subsumed underneath it. *Advanced understanding* of a word implies further understanding or at least familiarity of that which is subsumed underneath it; if every concept or word had to be defined each time it was used, conversations would never end.

*Symbolic Language is Indicative of a Spiritual Mind which Must Somehow Communicate with the Material World*

Because animals do not possess rational minds capable of delving into the inner meaning of things, *animal communication or language is based on the use of signs* – **animals have no need of symbols**. As demonstrated in the last chapter, the rational mind performs seven functions impossible for mere matter working under its own laws. No one has been able to produce a thinking, conceptualizing, judging, freely-choosing, and living machine; *these abilities transcend natural and material laws* and any logic associated with them.

Because rational intelligence is a spiritual power, it cannot “sense” the phenomenal world - a spirit is not endowed with physical senses necessary for sensation - but it can think about phenomena in the world (and the world itself) when phenomena are intellectually apprehended *via* a process of dematerialization (phantasm-intelligible impressed species) as explored in Chapter Five. Rational thinking is a spiritual operation of the soul. **The human soul must be spiritual because it does spiritual things**. Moreover, on the simple face of it, *thinking matter* is an even greater miracle than *living matter*, and living matter is unexplainable by recourse to empirical science. How then can empirical science explain living matter that also thinks? Clearly, we need an integral methodology that includes philosophy.

As seen in the previous chapter, philosophers have endeavored to understand and explain the rational process. In Thomistic terminology, the eyes, *via* external light, receive dematerialized images or “*impressed species*”

which reside in the imagination as “*phantasms*”. As mentioned, the eyes receive an impression of a real material object in such a way that that the object is dematerialized. From the sense organ, a *phantasm* is stored as an *impressed species* or dematerialized image in the imagination, but even in this state, it is not intelligible or knowable to the spiritual intellect – although significantly dematerialized, it is still impressed in the brain’s matter. An *impressed species* therefore requires further dematerialization to render it intelligible to a spiritual soul. According to Jesuit scholar, Owen Hill Ph.D,

“The naked phantasm cannot work in conjunction with the mind (by “mind” he means the rational soul not the brain), because its material *quality* bars it from intrinsic union with the mind” (p 133).

Therefore the intellect has to extract the image from its matter, which it does by an act of interior illumination; whereby the “form in material things (is made) intelligible by freeing it from sensory conditions and limitations” (Wuellner, p 63).

According to Hill, “It is quite impossible for the intellect to receive unmodified phantasms” (p 131). The intellect therefore lifts phantasms from their matter and presents them dematerialized to the spiritual soul; at this point a sentient image is no longer referred to as a *phantasm* or *impressed image* but as an “*intelligible*” *impressed image*, what Aquinas refers to as a, “*Species Intelligibilis Impressa*. Once the intellect apprehends an impressed image, the spiritual mind is able to think about it, to analyze and judge it, to compare and contrast etc. Ultimately, the intellect acquires understanding or knowledge of an external object’s essence by way of its intelligible impressed species.

Once the mind analyzes, synthesizes, understands, and grasps the form it is no longer an intelligible *impressed species*. Because it is understood, and understanding is a proximate end of apprehension, the form is no longer impressed for analysis; *it is expressed by understanding*. This intellectual grasping of the essence or form is represented in the intellect by a further act, which renders what Aquinas refers to as “*Species Intelligibilis Expressa*”, which is a concept not an image. An expressed species is an intellectual definition or final intelligible expression engendered by an understanding mind. The intellect, that understands and expresses its intelligible species as a concept, then engages in *symbolic reduction* and assigns a name or *word, which it engenders* to express or signify its concept or *intelligibly expressed species*.

Therefore, *sense knowledge* in the *reproductive imagination* and *intellectual knowledge* in the *soul* are two related but diverse stages of knowing. Higher intellectual knowledge begins with a sense impression and terminates in rational judgment *via* the lower sentient imagination.

According to Rev. Owen A. Hill S.J. (1921, p. 36), the rational mind, is endowed with three powers as seen in the previous chapter:

**(1) Apprehension** (level 1, 2, 3)

**(2) Judgment** (levels 4, 5 and 7)

**(3) Reasoning** (levels 6) “There is a double composition in the activity of the human soul. There is one by which it joins and divides predicate and subject, by forming propositions. The other is that by which it joins by comparing principles with conclusions. In the first composition the same power of the human soul apprehends the simple things, that is, predicate and subject, through their quiddities, and forms a proposition by joining them. For both of these are attributed to the possible intellect, according to *The Soul*. Therefore, with like reason there will be one power which grasps principles, a function which belongs to understanding, and which orders principles to conclusions, a function which belongs to reason” (i.e. *sylogism*) (Aquinas, 1954, A1, Contrary 6).

These three powers result in

**(1) Words** (summary of a definition apprehended by the intellect)

**(2) Making and Judging Propositions used for Reasoning** (declarative sentences that are true or false such as “all men are mortal”) and

**(3) Syllogisms Conclusions.**

At present, we are dealing with the lowest intellectual powers of the rational soul: *apprehension*, *conceptualization*, and *symbolic reduction* (levels 1-2-3) expressed in a written word. According to Aquinas, the intellect has power to transform a phantasm into a spiritualized or impressed image (as we have seen) and then to apprehend the essence of the image and give it a name. The former intellectual power (power to further dematerialize an already dematerialized a phantasm) he referred to



as the “*Agent Intellect*” or “*Active Intellect*” and the later power (the power to know the essence or form) he referred to as the “*Potential or Possible Intellect*”. Aquinas calls it the “*Potential Intellect*” because it is endowed with the *potential power or possibility* of knowing the forms or essences of all things. The potential intellect is not naturally endowed or born with innate knowledge or understanding of forms, but it is endowed with a power, which makes it “Possible” to attain such knowledge and understanding.

To avoid philosophical schizophrenia, whereby some philosophers lock themselves into a contemplative world of universal forms and neglect the world of practical affairs, it is important to realize that Aquinas is *not* speaking about *two intellects, but rather two integral operations or powers of one and the same intellect*. The “Active Intellect” synapses with the imagination in order to extract a phantasm from matter and thereby make it intelligible or knowable to the “Possible Intellect”, which studies the *impressed species* and, from it, forms a concept or *expressed species*.

It must be clear that the work of *thinking about* the received species (possible intellect) is much different from the work of *producing them* (agent intellect). The active intellect produces a dematerialized or impressed image; the possible intellect thinks about, analyzes, judges, and endeavors to know the essence of the impressed image. When the image of an object is known, a concept can be formed. As indicated in the previous chapter, a *concept* or the act of conceptualizing is equivalent to *conceiving* or *giving birth to a form* in the human mind. **Before an image is perceived and then known or conceptualized, its form is not in the intellect;** it might have been in the imagination as a *phantasm*, but it was not in the intellect as a *concept, or word*.

**A concept cannot be conceived or born in the mind until it is apprehended, analyzed, and known.** At the point that the intellect grasps its essence, or the point at which it is known, it is “*conceived*” and thus called a “*concept*”. Once the intellect apprehends and names its concepts, the first process of thinking terminates, and newly conceived words can then be used both to communicate and/or to further advance subsequent higher-level thinking through the formation of propositions and syllogisms.

A non-human primate can go as far as forming a phantasm and perhaps even an impressed species (if it is necessary for sentient consciousness), but gives no evidence of intellectual ability necessary for analysis, synthesis, conceptualization, comparing and contrasting,

evaluating, and judging, which are powers of the rational intellect. Non-human primates<sup>70</sup>, do not appear to possess the necessary intellectual faculties necessary to form words and arrange propositions into syllogisms necessary for rational thinking; signs are clearly insufficient for the task. In this regard, Hill (p 123) notes that,

“We know with the mind only what material things we know first with the senses; but what **we discover with the mind in material things is different from what we discover with the senses**. Moreover, the mind rises from its knowledge of material things, to the knowledge of things altogether immaterial or spiritual”.

Thus, human language is symbolic; words symbolize and contain broad meaning beyond sense appearances; they are concise rational summaries of mental images and all that is understood or apprehend by the intellect about an image or object it signifies. According to Aquinas,

“It is evident that **words** relate to the meaning of things signified through the medium of the **intellectual conception**. It follows therefore that we can give a name to anything (only) in as far as we can *understand* it” (Q 13, A 1).

He also says, in the same Article, that, words are “symbols” that signify ideas, which are “the similitude of things”. Most clearly, quoting Aristotle, he states (Q 85, A 2),

“Spoken words are *symbols* of things experienced in the soul. But *words signify things understood*....Therefore things experienced in the soul, namely species (*species intelligibilis expressa*) are the things actually understood”.

Before saying any more about the symbolic nature of human language, it must be clear that the discussion of signs and symbols is broad and diverse with much overlapping. The purpose of this discussion is to illustrate the spiritual nature of the human intellect, not the nature and difference of signs and symbols. I am speaking only of a limited case of *nouns* or symbols using Aristotle’s maxim that we need only refer to an auxiliary topic in-as-much as we need it to advance the primary one.

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<sup>70</sup> Including primates sharing the homo genus but not the species designation “sapiens”, such as *Homo-erectus* and *Homo-habilis*,

In summary, as demonstrated in the previous chapter, men can create artificial memory and imagination; matter can be rearranged to have such properties but not to have the intellectual ability to analyze, compare, contrast, judge, and evaluate. The physical eyes are wonderful organs, but they are limited to external appearances; they cannot look into the inner essence of a thing without the integral participation of a rational mind, which requires a phantasm and the intellectual ability to render a phantasm intelligible and the further ability to, thereafter, conceptualize a universal definition of its inner essence and reduce it to a word.

### *A Closer Look at the Use of Sign and Symbolic Language*

Minds limited to sentient knowledge of phenomena and related associations do not require complex symbolic languages necessary for communication of essential concepts and all that can be derived from them through scientific and philosophical reason. **Since sentient animals communicate but do not require a *symbolic language*, they are endowed with a *sign language* commensurate with their mental abilities.**

Carl Jung, a depth psychologist and patriarch of the New Age, grasped the distinction between signs and symbols; for him, a sign stands for something known externally, a symbol points to an inner unknown. For example, a deer sends a sign by raising its tail indicating danger and every deer comprehends the signal. Similarly, a hungry person rubbing her belly or pointing to her mouth for food is easily understood. Most everyone can grasp a sign; there is not much meaning packed into it. Signs are simple but efficacious means by which animals and human beings communicate. Human beings, however, also communicate by the use of symbols, which Jung understood to stand for things *unknown*. Although he was referring to mysterious things, we can say that almost everything we see is unknown (or known only vaguely), until we study or analyze it; only then does it become clearly known.

Rational thinking requires a powerful language, a symbolic language, which is a superior form of communication *commensurate with a superior ability to reason and communicate*. For example, *pictographs* or *pictograms* (including ancient and prehistoric drawings) and *ideograms* (written characters symbolizing *ideas* without indicating the sounds used to pronounce them) are among the earliest forms of written language known to man. Writing began with the use of *pictograms*, which are sentient pictorial representations (cave paintings, etc.) connoting some real object – in the absence of a *word* for “dog”, a *picture* of a dog is used to represent a

dog. Pictograms are appropriate forms of communication associated with primitive cultures or isolated families and tribes. Nonetheless, the fact that human beings are capable of generating rational concepts and abstract ideas is evident from an early stage, Egyptians and Sumerians engendered *ideograms* (which convey meaning by using images) to communicate **ideas** that are, by their nature, more complex than the concrete objects conveyed by pictograms<sup>71</sup>. Pictograms are still used by some non-literate peoples in Oceania, Africa, and South America. An example of both (*pictogram* and *ideogram*) would be a sign containing a picture of a dog enclosed by a red circle with a red line through the dog meaning, "No Dogs!" The picture of the dog is a pictogram. The image of a red circle with a line through the dog is an ideogram communicating the idea of "no" or "not allowed". This type of communication is good for simple ideas and concrete objects. It is insufficient for ideas that are more complex. It is **sufficient for communicating** the *existence* of complex ideas, such as God, **but not for explaining** their *essence*. Moreover, it is cumbersome; each object must be drawn rather than simply spelled out.

When human beings advanced beyond pictograms and ideograms and learned to create word symbols consisting of *morphemes* (units of meaning) and *phonemes* (units of sound: consonants, vowels, syllables, and whole word sounds), a more complex symbolic language was born. As civilization advanced and ideas became increasingly complex, pictograms and ideograms became increasingly insufficient for written communication. A better method that facilitated accelerated exchange of complex ideas and ongoing cultural/technological advancement was necessary. Consequently, **a written symbolic language that approximated the spoken language** was developed to assure ongoing communication and development of an increasingly complex cultural patrimony.

Since the *spoken* word eases communication and facilitates thinking, it was a logical step to imitate spoken language by engendering a phonetic alphabet with a unique and limited set of characters representing every sound *so that the written word would approximate the spoken word with great economy*. Spoken language was thus transferred into a written language. Pictograms and ideograms were too numerous and conceptually insufficient for the complex symbolic task of an increasingly complex array of concepts and advancing ideas; something more precise than pictograms

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<sup>71</sup> It is unclear if ideograms or pictograms had phonetic equivalents (see De Francis, 2010). Nonetheless, the basic premise comparing animal sign language to human symbolic language remains valid.

and ideograms was needed. *Since its inception, symbolic phonetic language has never been replaced.* In phonetic systems, written words actually sound like spoken words; that is, human beings found a way to transfer an increasingly complex culture and its advancing spoken language into a written language by means of *morphemes* and *phonemes* to effectively approximate spoken words. The use of pictures or signs that were used to signify words or ideas were slowly discarded and replaced by phonetic languages.<sup>72</sup>

The point is *not* that signs are pictures and symbols are *words* (this is not completely true; pictures can also be symbols, and words can be used as signs). The point is that when pictures are used as symbols they are often insufficient. They can be used to refer to the existence of a Being such as God and everyone can grasp the connection. The problem arises when attempts are made to explain/define the Divine Essence in pictures, or with various signs such as facial, oral, or physical gestures. Communication of definitions and the essence of things are better facilitated by written word symbols that approximate spoken words than by picture symbols or mere sentient signs.

Human beings, in need of more complex yet precise word symbols, developed a more complex written symbolic language commensurate with their advanced rational ability. Animals do not have a symbolic language (spoken or written); they do not even have a written sign language! Their “spoken” sign language consists of a limited set of vocal utterances and bodily gestures based on instinct and association. Animals have not developed even the most elementary and primitive type of written picture signs that stand for the simple *existence* of things – they have only a spoken sign language. There is no evidence of any form of written language among any species of non-human animals. While providing ample evidence of possessing varying degrees of perceptual or sentient ability (spoken sign language), animals simply provide no evidence of possessing any type of rational or conceptual ability (symbolic language). As stated, they do not even provide evidence of written *sign* ability.

*Spoken animal signs indicate a primitive language made up of several hundred vocal calls or bodily signals used to communicate simple emotions or physiological needs such as, hunger, rage, delight, pleasure, or*

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<sup>72</sup> *Animals, on the other hand, require and therefore have a spoken **sign language** that has never been replaced. It consists of simple gestures and signals, which are easily conveyed because they deal with basic physiological needs, not deeper ontological ones.*

pain etc. A written symbolic language, on the other hand, in addition to utilizing complex word symbols, also requires syntactical rules that facilitate higher thinking and communication. Grammar, rhetoric, and logic are the three disciplines of the Classical and Medieval Trivium developed for the purpose of facilitating powers of thinking and symbolic communication. It is not surprising, therefore, that the Greeks are accredited with development of the Trivium and were also among the first to develop a written or phonetic language:

“One of the major adaptations, generally attributed to the Greeks, was the narrowing of sound representation from syllabic representation to phonemic representation writing” (De Francis, 1984)

It is not *insignificant* that animals have failed to develop even the most basic written sign language; *their spoken sign language is sufficient for their purposes*. There is nothing so complex in their daily repertoire that needs to be written for posterity; there is no new knowledge that sentient signs cannot handle. Human beings, on the other hand, have not only developed both a spoken and written sign language, they have also developed both *a symbolic spoken language* and *a symbolic written language* to approximate it. They invented the latter, *inter alia*, to communicate and preserve their increasingly complex scientific and cultural patrimony.

Animals have succeeded in developing only a *spoken sign language*. So little information has to be transferred among generations that something as basic as a written sign language is neither needed nor possible. *So very little information is transferred because association results in so little being learned*; so little is learned because nothing is apprehended and conceptualized; nothing is apprehended and conceptualized *because* animals do not have rational minds. All non-human animal learning is based upon trial and error, random discovery, and mimicry, which are mere physiological *differences of degree* flowing from sentient perception.

However, the difference between sign language and symbolic language, like the difference between perceptual and conceptual thought, is a psychological *difference of kind* related to the development of each species. *Without symbolic language aiding thinking and communication, the end or purpose of the human mind would be frustrated*; human development based on acquisition of knowledge and its transmission among generations would be thwarted. This is not to say that human beings lack sign language. Human beings also communicate through signs (the study of which is known as physiognomy). We are born with sentient ability and continue to

communicate with it on a daily basis, such as a hand wave to acknowledge someone at a distance or a warm smile to signify contentment or friendliness.

Similarly, infants possess a repertoire of different signs, such as cries, gestures and sounds, which they use to communicate to their parents. Perceptive parents who pay attention to their baby's cries and gestures easily figure out what they mean and can therefore succor them. Babies, being little bundles of physiological need, are not too hard to figure out. They are either hungry, soiled, want affection, are tired, want a change of position, were bitten, feel sick or various similar things. They do not have psychological problems or complexes; they simply want their basic needs met and have developed an array of signs to communicate these needs. A perceptive parent learns these signs early on and facilitates a healthy relationship and normal development. An infant's gestures, cries, facial expressions, etc. are forms of sign language similar to those used by chimps to communicate their biological needs.

This type of language is not learned by rational deduction; it is either instinctual/natural or learned and facilitated by association. That is, some sounds get attention, others do not; because they are thus paired, they acquire a significant meaning they did not have before an association was formed. The fact that sign language is used by all babies but gradually reduced in frequency as symbolic language is learned and mastered is proof of its inferior nature. After acquiring a symbolic language, *normal* human beings do not regress to sign language. As the superior is acquired and developed, the inferior diminishes in frequency.

Normally developing children progressively acquire a sign language and then slowly transition to a symbolic one, which replaces the earlier perceptual one (like early man who transitioned from pictorial signs to ideographic ones and then gradually to phonemes, morphemes, and symbolic words). Nevertheless, sign language, like perceptual thought, is never totally relinquished; physiognomy can be very revealing. Masters of communication (rhetoricians) or of non-communication (poker players) learn to control their signs/emotions and to detect those of others.

**Animals have not developed a symbolic language because they have not needed one.** Simply because some researchers have taught a few chimpanzees a few words does not mean that chimps have acquired, or have a facility for, symbolic language. *Chimps are merely using words or lexigrams as signs* paired with associative meaning; they are learning new methods of sentient communication as *alternative* forms of sign language.

Just as a picture can be employed as either a symbol or a sign, so too can a word (or lexigram). In fact, **human beings** (toddlers and elementary school students) **first use words as signs before they ever learn to use them as symbols**. If a chimp recognizes some words, it is not because it grasps the ontological essences that they signify but because the words have been paired with objects or sounds associated with a reward or reduced aversive stimuli. **To a chimp, a symbolic word is merely a sign.**

Philosophers, as we have seen, identify two types of thinking ability: *perceptual* and *conceptual*. In turn, perceptual and conceptual thinking are related to two types of communication: sign language and symbolic language, respectively. **Failure to make this distinction leads to confusion when comparing animals and human beings.** Philosophers have not said, and do not say, that animals do not “think” (some philosophers insist that animals do not think, but by this assertion they mean *rational conceptual* not *sentient perceptual* thought); they have said that animals do not think rationally.

### *Only Human Beings Think Rationally*

How do we know human beings think rationally... we are doing it right now! Simply by looking at human abilities and comparing them to animal abilities, as we are doing, and by further demonstrating (as we have done) that:

1. Matter *can be* arranged to contain memories and images, but *not* to apprehend, judge, or reach a logical conclusion
2. The rational mind, unique to human beings, has the ability to deduce effects from causes without the necessity of having to first observe the effects (this means that the mind is capable of thinking without aid of the senses)
3. The powers to judge, compare, and contrast are intellectual powers, which, *like life and form*, cannot be explained by recourse to matter; an effect must be proportionate to its cause and
4. The empirical evidence for so-called animal cognition can be explained by recourse to sentient abilities of memory and imagination, rational extrapolation, ontological judgment, and mathematical calculation cannot.



These four observations lead to the conclusion that rational conceptual thinking is a spiritual, immaterial power possessed only by human beings.

Earlier, it was concluded that symbolic language is needed to communicate complex ideas and to facilitate rational thought. Animals have not developed symbolic language because they do not *need* symbolic language! Presumably, sentient minds do not apprehend universal essences, derive propositions, make philosophic deductions, or develop scientific theories. Therefore, symbolic language is unnecessary. **Sign language is sufficient for communication of sentient needs, but insufficient for communication of apprehended universal essences, derived propositions, philosophic deductions, or scientific theories.** As an example, imagine a chimpanzee trying to communicate a scientific theorem such as  $E=mc^2$  using sign language. This would be both an amusing and frustrating feat – amusing for the audience trying to decipher the attempted communication but frustrating for the chimp. It would have to perform all kinds of sentient antics including dynamic high and low toned utterances, contorted facial gestures, and zany bodily theatrics to communicate the conversion of energy and the laws of thermodynamics. Frustration would give way to insanity if, using the same failed sentient methods, the frustrated chimp had to then apply the general laws of thermodynamics to particular cases and communicate the result to illustrate their veracity.

The poor little chimp would literally flip out from all its futile efforts. Eventually not only the chimp, but also the audience would become worn out and perhaps angry. Abstract scientific or philosophic concepts, hypotheses, and theories cannot be communicated *via* sign language; something much more complex and commensurate to the task is required. **Complex thoughts require a corollary complex language necessary to express them.** This is a fundamental *difference of kind*. We know that human beings can think rationally, there is all kinds of evidence for this. We also know that human beings think perceptually as do other animals, there are mountains of evidence for this. The atheistic *faux pas* results from mistaking perceptual skills for conceptual skills due to a failure to make necessary and proper distinctions.

Either way, it is *not* necessary to demonstrate that animals think perceptually, we have already done that, and moreover, the materialists have done a most wonderful job demonstrating it, nor is it necessary to further demonstrate that human beings think rationally. **But it is necessary to somehow further demonstrate that animals do *not* think conceptually,** something the atheists have implicitly achieved, *viz.*, *all* their proffered examples demonstrate that animals think *perceptually*; there is no evidence

that they think *conceptually*. All that remains is a clear demonstration that further elucidates the fact that animals are only able to think perceptually.

To illustrate this, we have recourse to a famous example involving the case of Helen Keller followed by a discussion of early childhood development and parenting that demonstrates how humans are starkly different than animals. The case of Helen Keller revolves around one simple fact:

“It is a matter of experience that children born deaf and blind never elicit ideas of sounds or colors, whereas such that fall deaf or blind a long or short interval after birth readily elicit ideas of both kinds” (Hill, p 127).

This should be very clear, as much as New Agers and Jungians would like to believe in a thing called the “collective unconscious”, transmigration of souls, or inherited memories, empirical evidence does not support such vagaries. Esoteric evidence taken from séances or mediums is not impressive, even New Agers admit that much of it is bogus; hard evidence is simply lacking. Children born blind simply do not possess images of color nor anything associated with sight, nor do deaf people have percepts of sounds or anything associated with hearing. All images, on which the sentient mind depends for the exercise of memory and imagination and on which the higher mind depends for conceptualization, are the result of reception and conversion of sensed objects into *impressed species*, which are lacking in people born blind. Fortunately, we are endowed with five external senses; if one or more is lost, the others (especially the senses of touch and smell) can compensate for the loss.<sup>73</sup> It is this ability to compensate and educate the senses that led, as previously mentioned, to the “Montessori Method”.

Moving forward, the elementary thought of a child, like that of a chimp, consists of memory and imagination. Generally, a child does not reach the age of reason until seven or eight. **Elementary thinking is, therefore, primarily sentient** and involves the training and growth of memory and imagination including the difficult process of learning the basics of language.

Interestingly, many babies and toddlers pass through a stage often referred to as, “*The Terrible Twos*” associated with the throwing of temper tantrums and emotional outbursts. Some theorists claim that this involves a

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<sup>73</sup> *In this way secondarily derived images or percepts can be formed.*

process of moving from the solipsistic stage of infancy to a more advanced stage during which a child learns to realize the existence of others. Those who fail to do so grow increasingly narcissistic. A temper tantrum can thus be interpreted as a sign of selfishness. If the tantrum is interpreted as selfishness, it is *normally* corrected. Some zealous parents, however, in an effort to form their children morally, apply a corporal correction far too readily. Although there is some truth to the Freudian Theory that babies are “polymorphous perverse” (seek gratification in many diverse ways and consequently are so focused on themselves that they fail to develop an adequate understanding or appreciation of the external world, especially the existence of others), **it is not true that** this is the *only* cause of tantrums. Responding too quickly to supposed selfishness by applying corporal solutions might in fact exacerbate the problem, especially if it is a symptom of a different interpersonal dynamic.

Another way to understand the terrible twos involves empathy and understanding the difficult process of forming a human symbolic language and the frustrations associated with the process. Parents can err by interpreting everything from a moral perspective when in fact, in addition to moral growth, children are also challenged by the experience of **pre-intellectual** psychological growth involving the extremely difficult mastery and use of human language. While children are **endeavoring to learn symbolic language, they necessarily resort to sign language**, such as cries and gestures, to signify physiological or biological needs and a *steadily increasing array* of other things. A selfless and perceptive parent attends to the proper care of his child and consequently pays attention to these signs and learns to identify them with needs. An attentive parent learns the difference between various sounds and gestures. One means I want my diaper changed, another means I am hungry, and another indicates the desire to be held or means I am hurt or feeling discomfort etc.

Once it is realized that these signs are related to biological needs, it should not be too difficult to communicate with a child. First, a parent must understand that communication is taking place. Next, he or she must learn to be a good observer and to learn what the various signs signify or what the child is endeavoring to communicate. This type of sentient communication is easily conditioned. Each cry is a conditioning stimulus. However, if parents neglect their baby or fail to pay proper attention, communication is exacerbated and the infant is forced to resort to other tactics, which, if continually unrewarded, unrecognized or unremembered, lead to deeper frustration and abnormal development, especially if communication fails to improve.

If communication is insufficient for simple biological needs, the situation will most likely grow worse as the child transitions away from sign language toward intricate symbolic language for communication of more complex social and psychological needs and wants. **Human needs and wants are not static but dynamic and evolving**; each stage has its own needs accompanied by a growing series of increasing wants and desires. Low-level frustration caused by failure to properly learn a child's signs (even animal mothers respond to an infant's signs, some more successfully than others) leads to high-level frustration as a child's desires increase in complexity. If the child is rarely or never understood and consequently rarely if ever satisfied, the result is inevitable: frustration. The child wants to be changed, but instead is given a lullaby; the child wants a lullaby, but instead is given something to eat; she wants to eat but is given a teddy bear, and so on, thereby steadily exacerbating the situation. How can this type of communication lead to anything but frustration? Everything is going wrong. In this situation, the proverbial *negative snowball effect* begins to gather increasing downward momentum that ultimately leads to family dysfunction (*inter alia*) grounded in a failure to communicate.

The frustrated parent, instead of meeting needs, often begins to punish an increasingly misunderstood child. In such a case, the helpless infant or toddler is not only unsatisfied, he or she is hurt, and unjustly chastised for expressing her needs and forced to cry even more. The more she cries, the more she is punished, the more she is punished, the more she cries leading to even more punishment and even more cries. The process inevitably grows worse and worse until eventually the snowball grows so big and overwhelming that she stops crying because the pain is too great; then the crippling internalization of pain develops. The original pain of an unmet but necessary need is compounded by the pain inflicted by continual spankings and a disconnected parent; the senses of security, trust and of justice necessary for normal development fail to develop.

Try to imagine the mind of a developing child as she moves from sign to symbolic language. First, the external sense organs and internal memory and imagination must be healthy and operative for the necessary images to form. This requires observation and sentient acuity. Since toddlers can hear, they can begin to remember words. In fact, children have words in their minds before they are ever able to speak them, but **they are not learning new words to apprehend the essence of things** (like a philosopher). **All verbal meaning at this stage is based upon association and signs** (words used as symbols come later; nonetheless this is the first stage in acquiring a symbolic language so it is categorized as symbolic even though **at first, words are used as signs**).

Body and word associations are constantly being formed; if this is understood, a perceptive parent will be consistent in order to foster healthy development of proper associations, i.e., don't tell a baby that a ball is called a pig as a source of humor – this is poor judgment. Associations are primitive mechanisms that run deeply into the human psyche. Moreover, they leave a neural imprint. If a child is shown a ball, she should be told it is a ball and the association should be rehearsed until it is mastered. In fact, it is not really mastered (at this level) until everything that can possibly be experienced about a ball is taught to the child (different sounds it can make, its color, shape, texture, smell, taste, its uses, it bounces, can be kicked, etc. At this early stage, a baby is *not* forming *concepts* but acquiring *percepts* and *associated words* through sentient memory and an emotional sense of trust, which are the foundations for further learning and ultimately of rational intellectual ability. It is difficult for children to learn if they do not know the truth about things and if they lack a sense of trust, either in their parents or their teachers.

Thus, several things are going on in a baby's mind; she has already faced difficulties communicating with bodily signs and now is attempting a mix of word signs and body signs. At first, a child must learn to form associations among her various needs and various bodily signs used to communicate them, and also simultaneously sort through divergent parental responses. Then, as she begins to learn words, she has to also realize that, in addition to her body signs, *words can also be used as communication signs*. She must also learn to make further associations, including appropriate word signs to take the place of body signs or as a means of communicating things that cannot be communicated adequately with body signs.

A child must therefore form two images in her head for every word, one for the object (ball) and another for the word associated with the object, then she must join them. On top of that, she must properly learn to sound the word and then further learn to combine it with other words; she must also come to realize that word signs can replace body signs and then learn to replace the body signs with the new word signs. At first, this complex process involves simple concrete nouns and association; later, verbs and modifiers will be learned as well as syntax and abstract nouns.

It is at this latter point that a child's mental ability begins to outwardly and significantly diverge from a chimp's mental ability. That is when the rules or logic of grammar are introduced and **word signs slowly become ontological symbols packed with essential meaning** (augmented

by keener observation as well as supplemental dictionary and encyclopedia skills) **and not merely associative meaning**. At this point, a child begins to transition from sentient perceptual thinking to intellectual conceptual thinking aided by increased observation, developing mental skills, and increasing intellectual activity.

Significantly, the development of symbolic language accompanies maturation and increasingly complex and *quantitatively* greater accumulation of environmental knowledge. Basic physiological needs become met and are subordinated to acquired needs and wants such as increased knowledge and desire for understanding of growing experiences and concepts such as: outdoors, park, playground, candy, meat, vegetable, sky, stars, moon, sun, bedroom, living room, grandma, friends, church, school, good, bad, *quantity, quality* etc. Fortunately, **as a child's experiences grow increasingly complex, so too do language abilities necessary to communicate them.**

Unfortunately, if parents missed the body signs, they are really going to be challenged by initial word signs, which are not well articulated and often mistaken. **This disconnect is nowhere more frustrating than at the age of two when the transition between body signs and word signs is occurring.** The environment is growing more complex and, therefore, the need for communication skills more acute. There is a time when a child acquires many image signs and unassociated word signs. Then another stage emerges when she forms the associations between the word and the objects but is unable to speak them because her vocal apparatus is not yet sufficient for the purpose. In such a case, she has to ask for a ball but has to communicate this with a gesture and perhaps attempts to mimic a ball; some gestures are hard to perform. Try it. Ask for a ball using signs; try it without a ball being present. If a bodily cue is missed, communication becomes a problem. My granddaughter brings me her shoes; when she does this, I know it is time to go for a walk. If I did not know this, communication would break down; crying (in place of bringing of shoes) is not going to help. I am not sure that there is a cry that I would recognize which means, "Put my shoes on, I would like to go for a walk".

Consequently, a child, at the difficult age of two can easily become frustrated. In the worst case, when verbal and bodily signs are regularly misconstrued or ignored and this ignorance is compounded by undeserved punishments, frustration begins to slowly mount until kaboom! a temper tantrum. "*I want to be understood but no one understands me; these sounds and gestures are just not getting the job done*"! Welcome to the "Terrible Twos". Even an adult wants to be understood, what about a neglected toddler?

The child is already having thoughts too complex to be communicated through body signs; they are too weak of a communication medium. **In human beings, signs are deficient as early as the toddler stage. Interestingly and very revealing, in chimps, they are good for life!**  
*Symbolic Language, Conceptual Thought, and the Case of Helen Keller*

Helen Keller is a particularly striking example of the power and necessity of human symbolic language and a potent demonstration of the fact that *only* human beings develop such a language. Helen was born in Tuscumbia, Alabama on June 27, 1880. She became the first deaf and blind person to earn a bachelor's degree. She also became a productive writer and public speaker who traveled extensively to spread her well-articulated message. Her father was a captain in the confederate army, her mother was the daughter of a Confederate brigadier-general, and her grandmother was the cousin of General Robert E. Lee. Helen was raised in a well-to-do upper middle class family, which provided her with a stimulating environment necessary for normal and accelerated mental development.

Although she was both deaf and blind, **she was *not* born that way.** She was already nineteen months old when she contracted what was probably meningitis or scarlet fever. Helen had already been using signs as a normally developing child and was thereafter able to develop at least 60 more by which she communicated with her family. However, according to the London-based Royal National Institute of Blind People (RNIB):

“The following few years proved very hard for Helen and her family. Helen became a very difficult child, smashing dishes and lamps and terrorizing the whole household with her screaming and temper tantrums. Relatives regarded her as a monster (talk about “terrible twos”) and thought she should be put into an institution. By the time Helen was six her family had become desperate. Looking after Helen was proving too much for them. Kate Keller (her mother) had read in Charles Dickens’ book “American Notes” of the fantastic work that had been done with another deaf and blind child, Laura Bridgman, and travelled to a specialist doctor in Baltimore for advice. They were given confirmation that Helen would never see or hear again but were told not to give up hope, the doctor believed Helen could be taught, and he advised them to visit a local expert on the problems of deaf children”.

Consequently, in an effort to improve her communication skills a 20-year old visually impaired teacher named Anne Sullivan (a former pupil

at Perkins Institution and Massachusetts Asylum for the Blind) came to live with the Keller family; she subsequently became Helen's instructor and companion for 49 years. **It took time for Helen to realize that every object has a word associated with it. She was accustomed to using *body signs* but had not yet learned that *words* could be used for signs that stood for objects in her environment;** she, as all children, was naturally accustomed to body signing for objects the way any infant, toddler or chimp does.

As previously stated, before words can be formed, a child must internalize an image of an object, associate it with a limited number of body signs and additionally learn that spoken words stand for objects and can be used to replace body signs to communicate the image of an object to others. After mastering this difficult step, the child must develop an additional ability to speak the word. Helen was trying to do it all through her handicapped body! No wonder she was frustrated.

However, her tantrums began to subside as she increasingly learned to communicate. Once she understood that Sullivan's tracing of letters on her hand stood for words that represented images in her head and objects in her environment, her appetite for new words became insatiable. The change wrought in her behavior was so great that, "after a month of Anne's teaching, what the people of the time called a 'miracle' occurred" (RNIB). Helen retold the incident that sparked her learning,

"We walked down the path to the well-house, attracted by the fragrance of the honey-suckle with which it was covered. Someone was drawing water and my teacher placed my hand under the spout. As the cool stream gushed over one hand she spelled into the other the word *water*, first slowly, then rapidly. I stood still, my whole attention fixed upon the motions of her fingers. Suddenly I felt a misty consciousness as of something forgotten, a thrill of returning thought, and somehow the mystery of language was revealed to me" (RNIB).

According to RNIB,

"Helen immediately asked Anne for the name of the pump to be spelt on her hand and then the name of the trellis. All the way back to the house Helen learned the name of everything she touched and also asked for Anne's name. Anne spelled the name 'Teacher' on Helen's hand. Within the next few hours Helen learnt the spelling of thirty new words. Helen's progress from then on was



astonishing. Her ability to learn was far in advance of anything that anybody had seen before in someone without sight or hearing”.

After making these adjustments, her ability to communicate flourished. Thereafter, in 1896, she entered The Cambridge School for Young Ladies followed by admittance to Radcliffe from which she graduated in 1904 with a bachelor’s degree after four years of study. Helen went on to become an internationally renowned speaker, author, and advocate of human rights as indicated in an excerpt from a republished speech of 1911:

“The few own the many because they possess the means of livelihood of all ... The country is governed for the richest, for the corporations, the bankers, the land speculators, and for the exploiters of labor. The majority of mankind are working people. So long as their fair demands - the ownership and control of their livelihoods - are set at naught, we can have neither men’s rights nor women’s rights. The majority of mankind is ground down by industrial oppression in order that the small remnant may live in ease” (Keller, 2003).

### ***What Does The Case of Helen Keller Teach About Differences of Kind?***

Helen Keller is a significant example that rational thinking is a *difference of kind*. The rational mind is able to apprehend an essence, conceptualize it, and reduce it to a symbolic word. As far as can be discerned, only human beings possess these complex intellectual abilities. **Without the ability to communicate apprehended concepts and propositional judgments via symbolic language, human beings would be unable to share their ideas and discoveries.** Without a symbolic language, Aquinas could not have written the *Summa Theologiae* nor could Einstein have derived or explained  $E=mc^2$ . Like Helen Keller, they would have become frustrated by the limits of sign language. Her frustration was due to an inability to communicate what was going on inside of her head *at the age of two!*

Helen was on the cusp of acquiring spoken words and using them to communicate. She had already progressed through the *first three steps of acquiring a body sign language:*

- (1) Exercising memory and imagination
- (2) Associating bodily signs with elicited responses and
- (3) Formation of mental images (percepts) to represent these learned *associations*.

And, she was advancing normally toward step four: learning to *substitute word signs for bodily signs*. **Her normal development was interrupted just at the time when she was transitioning to the development of word signs**, which means that *her mind was already full of images too numerous and too intricate to communicate through body signs*.

Moreover, Helen **had not yet learned any word signs nor the fact that acquired word signs could be used in place of her increasingly deficient body signs**, especially to communicate her ever-increasing array of needs and wants. This is evident from the fact that she had not yet made the connection between words and mental images (RNIB). Her mental images were still communicated through bodily signs. Once she made the connection among mental images, sentient experiences, and words like “*water*”, her development from then on was “*astonishing*”.

Helen soon learned that each thing has a word name that eases communication. As she learned new words, her ability to communicate grew exponentially. More importantly, **along with this increased ability to communicate her increasingly complex needs and wants came a correlated decrease in frustration**. Her bodily gestures were simply *inadequate*. The thoughts in her mind were already too complex for communication through simple signs; she needed something more potent and powerful. *She needed a human symbolic language* and eagerly cooperated with her teacher who helped her to acquire such a language to such an extent that her pent-up frustrations continually subsided until she “*normalized*”.

If animals (*whom some researchers claim have minds equal to or greater than a two-year old*) had human thinking abilities, even to the small degree of a *two-year old (older than Helen)*, they would develop increasingly complex thoughts and ideas, make increasingly multiplex mental connections between objects and images, and acquire increasingly complex wants accompanied by increasing frustration with their limited sign language. If they possessed the purported intellectual abilities, they would have developed some sort of symbolic language. *But, they have been unable to do in two million years what every normal little toddler does in two!* Helen had already developed a large number of these increasingly complex wants while still a toddler and they steadily increased thereafter. If animals have

failed to develop a symbolic language, it is not due to an *evolutionary malfunction* but to *ontological inability* rooted in substantial irrelevancy – they do not need symbols.

As previously seen, animals do *not* create artistically – artistic creation requires rational ability. Because they lack artistic skills, they are unable to intellectually transform their environments as co-creators. But, they do not have to; they are characterized by a set of basic needs and adapt to an ecological niche in which those needs are met and in which they exist as “*psychologically balanced dependents*”. If they had the *ability* to think rationally (and to co-create) but lacked a concomitant *ability* to develop a complex symbolic language (necessary to express the conceptualized ideas associated with these intellectual powers), **instead of *psychological balanced animals*, we would expect to find animals flying into rage and trembling with pent up emotion.** Such animals should exhibit neurotic and then increasingly psychotic behavior as communication channels and related anatomical abilities continually prove inadequate for their rational thoughts, creative insights, and corresponding ever-increasing and complex wants. **Generation after generation bottled up and frustrated** (not just a few years like Helen Keller, but generations and centuries) **the whole animal kingdom should be in a mad rage.**

An animal can certainly become neurotic or physiologically disturbed, but this is an abnormality; it is not the “normal state” of animals in their natural habitats. **Presumably, their language or communication ability is commensurate with their mental ability; animals need only body signs--symbols are ontologically irrelevant.** *If animals needed symbolic language, nature would have provided it.* Either God is a cruel taskmaster who enjoys seeing his creatures tremble with rage because He provided them with potentials that cannot be actualized, or He is a wise creator who brings forth powers and operations commensurate with substantial potencies.

Consequently, given

- 1) The convincing empirical evidence that demonstrates animals think perceptually
- 2) All that we know about requirements for rational thinking
- 3) The fact that animals communicate by sign language, and
- 4) The fact that a mismatch between rational ability and communication ability leads to frustration and abnormal behavior,

it is concluded that only human beings *think rationally* and that this intellectual difference is a *difference of kind* manifest in *symbolic language, artistic production, and political association*, which are auxiliary differences of kind found only among human beings.

### *Free Will*

The rational soul has power to extract images from matter, to reflect upon them, to grasp their essence, conceptualize, and reduce them into word symbols. Then, using its discursive power, it is able to form propositions and reason to conclusions without the continued aid of the senses.

These intellectual powers give man mastery over things; he does not respond to them solely from association and memory. He has the potential to know them and thus to promote their proper development and their proper use; he also has the power to transform them by artistic co-creation and thereby exercise dominion over them. Nonetheless, **the rational intellect, as a spiritual power, is incapable of external physical activity; for this, it is dependent upon the cooperation of its body.** Moreover, since the intellect can make judgments about right and wrong or true and false, it is able to move one way or another. It must make choices between this conclusion and that conclusion, this course of action and that course.

Some of the choices the intellect makes stand in opposition to lower biological or physiological urges or drives, which rise spontaneously in response to environmental stimulants or by paired association. As such, a built-in moral dynamic seems to pit mind against body. In reality, the mind is working for the good of the body. As we shall see in the study of ethics, all the body's passions and urges are good, but they must be ordered according to a rational principle or they can work against human development. Choices must be made, and very often choices are made to promote human development that run contrary to momentary sentient desires.

This observation points to the existence of a directive power in man – a power *free* to choose among alternatives based upon intellectual insight rather than simple sentient preferences or associations. This uniquely human power is known as a *free will*. According to Aquinas, the will is an, "*intellectual appetite*". That is, **it exists in the mind not in the body or the sentient soul.** As an intellectual appetite, it *has natural potency toward that which is known by the intellect* (just as the sentient appetites have

natural desires for that which is desired by the body). The will is an intellectual appetite attuned to mind, but like the mind, it must be disciplined, educated, and formed. Because the mind can err, the will can desire wrongly or be overpowered by passions originating in the body.

*Intellectual ability, however, without a concomitant ability to freely act on truths discovered by the mind, often contrary to passions arising in the body, would be an essential deficiency. Of what good is any knowledge that contributes to human development if human beings lack an ability to actualize it and a concomitant ability to oppose contrary desires that inhibit development and thereby negate free actions necessary to benefit themselves and humanity?* Likewise, possessing a free will to choose among divergent and contrary alternatives, without a corollary well-developed mind to guide choices, would negate moral, intellectual, and social development and simply result in chaos—one day one behavior, another day the opposite—requiring political domination by force rather than by appeals to reason.

If there is such a thing as a rational mind capable of intellectual knowledge of final and formal causes and, therefore, of moral judgments, there must also be a free will capable of choice, which often times chooses contrary to instinct, passion, and unreasonable associations. *If free choice does not exist, intellectual ability is meaningless.* Like life and form, *rational thinking and free will go together!* To maintain the existence of one without the existence of the other is an absurdity.

### *Choice-making Ability of Animals*

Animals do make *choices*, but they do *not* make *free choices*. Like every other power or potency studied thus far, **a distinction must be made**. When the mind was studied, a distinction was made between *perceptual* and *conceptual* thought. When language was studied, a distinction was drawn between *sign* language and *symbolic* language. Likewise, a distinction was made between *phantasms* and *impressed species*, between *concepts* and *percepts*, and between learning by *association* and learning by *rational analysis and discovery*. When speaking of choice, a distinction must also be made between *sentient freedom* and *rational freedom* or “*freedom of movement*” and “*freedom of choice*”.

Animals are compelled by their passions, *but they continue to have freedom over their corresponding movements*. That is, although they are under physiological compulsion, such as estrus or hunger, they are free to decide

which direction to move themselves in order to satisfy their urges; they are free to choose which partner to mate with or where to look for food etc. This is certainly a “choice”, but it is not a “free choice”; **it is a choice made under compulsion of appetite or passion. Because it is a choice made under compulsion, an animal is not free to act otherwise; its choice is subordinate to a drive**, which the animal is unable to direct, sublimate, or resist unless motivated by a still stronger drive or fear.

Human beings likewise, act under compulsion, but they are *free to direct or sublimate their drives by an act of the will* which, under the direction of the intellect, does not *necessarily* act to satisfy compulsions. That is why the will is *free*; **it is free to do other than what passions or instincts demand.** Human will *is free not because it chooses how to satisfy a passion, it is free because it is not subject to passion. The will can choose to sublimate, subdue, or to actualize a passion according to its own plan of action as understood by the intellect.* A human being has the ability to act contrary to a passion, even in direct opposition to it. Thus, free will is an exercise of the intellect involving moral/intellectual regulation or dominion over passions, it is not a mere exercise of *sentient choice* regarding the manner by which passions are satiated, which, nonetheless, also falls within its domain.

Animals are driven to act by dominating instincts, which they are unable to suspend or to sublimate for a higher purpose. Because they can decide how to satiate a drive, animals are understood to be endowed with a certain *physiological freedom of movement* but not a *psychological or intellectual freedom of choice*. **Free choice implies the power to intellectually regulate an instinct for a moral purpose, such as love of neighbor.**

Freedom, in short, is *not* the ability to satisfy animal instincts, but the ability to regulate and control them. Or stated more correctly, to direct instincts in unison with the intellect to their proper ontological purposes. *Everyone is free to pursue truth and to choose the good of human development. That is why the species is endowed with freedom as a corollary to intellectual endowment. Human freedom consists in identifying a good*, (which consists of knowing the essence of things and how to actualize or bring them to their full fruition), **along with a concomitant ability of the will to turn toward the good and pursue it**, even if this means that the body’s urges must be sacrificed, sublimated, or disciplined in order to achieve the good. A wise person understands this; it seems so patently clear that little further time needs to be spent on the topic except for a few clarifications.

## *Appetite*

An appetite is a tendency or internal inclination accompanied by physiological sensations such as hunger or sexual desire. These internal inclinations can be consciously or unconsciously induced, but they are all integral to human nature and thus capable of being directed toward what is good or suitable for human development. That is, **every person** (and creature) **has an integral nature that tends toward the actualization of its potencies**. Appetites work for the good of the species, for its actualization and perpetuity. In human beings, however, appetites require direction; they can be misunderstood and thus misapplied to people or things to which they should not be applied. For example, sexuality is among the greatest goods inherent in human nature; although it is certainly an integral good, it can nonetheless be misapplied when the object of attraction is a neighbor's husband or wife. The appetite itself is good; in fact, it is "very good", even sacred, but it requires intellectual and moral direction. Under the sway of a well-developed intellect, it serves human development, under the sway of the passions, it can be destructive.

Since the body-soul composite is a unified human person (a *hypostasis*), what affects the soul also affects the body and *vice versa*. Thus, spiritual joy elicited from intellectual enlightenment, the discovery of propositional truth, or the intellectual appreciation of beauty, involves intimate participation of the body. The body, however, cannot in itself feel the joy of the spirit, such as the spiritual joy that accompanies intellectual enlightenment – this type of joy does not originate in the body.

Although the body is unable to *directly experience* the mind's joy, the endocrine system is affected by mental states and is subject to mental commands; the body is thus able participate in the soul's spiritual states by way of a synaptic parasympathetic command to release hormones that affect feelings and moods. Thus, when the spirit rejoices, as in the case of the creation of a new child, the sentient body participates in this joy by feeling intense physical pleasure. Physical pleasure is the body's mode of participation in the spiritual rejoicing of the soul. It is both a means to an end and a concomitant participation in the achievement of the end. Similarly, but on the other side of the spectrum, when a person is *psychologically* depressed or hurt, the pituitary gland and hypothalamus, in response, release endorphins that act as analgesics. Simply stated, body and soul are an integral unity; what affects one affects the other.

Not all physical appetites are *sentient based*; **some appetites are unconscious** and natural to the body (*vegetative based*) such as the need for

air, blood circulation, and other physiological needs. Others are consciously detected or aroused by association or intellectual discovery including both *sentient* and *rational* appetites associated with perceptual and conceptual thinking, respectively. Because there is conscious awareness of the latter two, they are said to be "*elicited*" rather than simply "*natural*". Elicited appetites, as the name suggests, do not occur unconsciously but are conscious results of either the sentient or rational mind activated toward an object that is experienced or known. **Because things can be known in two ways, as *percepts* or as *concepts*, there are two types of appetites.** (1) *Sense Appetites* follow sense awareness (accompanied by relative associations) of things as they relate to the body. Thus, sense appetites tend toward that which is *physically useful* or *pleasurable* without any further thought to guide them except that provided by relative association, which illicit action if associated with pleasure and inhibit it if associated with pain (or in the case of humans – the rational mind).

(2) *Rational Appetite or human free will*, on the other hand, is a faculty of the rational soul related to intellectual or conceptual knowledge of the *universal essence* of things (such as the dignity of a human person and the unity of marriage). Thus, the will, as an *intellectual appetite*, is able to promote the good as **grasped by the understanding** intellect; something that is not possible for the sentient mind guided only by relative association.

The intellect, however, **does not always know the good of things because it does not always know their essence.** As a result, it often *errs* in application under the false belief that it is operating for a good, when in fact, it might be operating in the opposite direction under the *appearance of good* such as a mere physical pleasure.

Thus, free will, although it naturally tends toward the good, is often persuaded by an *apparent good* or by lower sentient passions, which are good when they are rightly directed. Unfortunately, they can also be misdirected, as they often are, by underdeveloped persons who know neither causes, essences, forms, nor ends, or simply because they are often weak-willed or both. Because animals lack ability to extract knowledge of formal and final causes necessary to direct behavior to a higher universal end, and because they are enmeshed in sentient bodies limited by inductive knowledge limited by random and relative associations, they cannot make free moral judgments nor can they thus act wrongly.

Consequently, **sentient souls are not endowed with free will because a sentient soul operates under compulsion by association.**



Aquinas therefore defines free will as a “*Rational Appetite*”. Nonetheless, the appetites of the human body can be so strong as to impede the operation of rational appetite. Likewise, reason can be so *blind* or *poorly developed* that the sentient passions interfere with the intellect until the will is directed by sentient passions or associations under the *guise of reason*.

Likewise, if the will is not disciplined<sup>74</sup>, it is often too weak to deal with inordinate passions and thus continually acquiesces, even if rationally directed otherwise. Things are exponentially worse if the will is not directed at all or if it is directed improperly due to lack of intellectual attainment and a consequent failure to apprehend quiddity, without which correct moral judgments cannot be made.

“Man when perfected is the best of animals but when separated from law and justice, he is the worst of all; since armed injustice is the more dangerous, and he is equipped at birth with arms, meant to be used by intelligence and virtue, which he may use for the worst ends. Wherefore, if he have not virtue (intellectual and moral), he is the most unholy and most savage of animals, and the most full of lust and gluttony” (Aristotle, *Politics*, Book I, Part II, Para 10).

## Summary

Because a human being is an animal endowed with sentient faculties and abilities, Darwin<sup>75</sup> and his successors, along with materialist thinkers (old and new), are correct: there are many things animals and humans do in common of which the difference is only one of *degree*. However, because they fail to make necessary philosophical distinctions, their research is often riddled with loose ends, inconsistencies, and incorrect conclusions. Although it is possible to search far and wide (Chapters One to Four) for a *difference of kind* between animals and human beings and find nothing, if the search is continued with persistence and humble objectivity, eventually the searcher will be well rewarded (Chapters Five to Six).

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<sup>74</sup> Discipline is properly defined as training in morals by way of difficulty.

<sup>75</sup> For more on the topic of Darwin’s and materialists’ conceptions about rational thinking in animals see Chapter Appendix.

By searching for the cause of *life* and of *form* and of *thinking*, we have been able to identify the human soul, which is a spiritual substance that operates through, with, and in integral union with its body. *The human soul is, nonetheless, capable of separate existence. It is capable of separate existence because it is capable of independent functions.* Thus, it is in the rational soul that the *spiritual differences of kind* we have been looking for are found. These differences include:

- The ability to think rationally, (which begins with apprehension and conceptualization and ends with speculative metaphysical judgments about universal things and with practical political judgments about particular or contingent things) and
- The ability to choose freely.

Rational ability and free will are manifest in *auxiliary differences* of kind including *political association and artistic creation*.

We have been able to find and identify not just one, but several differences of kind from which to proceed to the further study of ethics and then politics. As such, we could smile, rest content, end our foray into psychology and continue on to the next topic, but *the result is not yet satisfactory*. We set out to exercise an *integral methodology*, including (1) empirical science, (2) philosophy, and (3) theology, to develop an *integral definition of man*.

We have considered the former two but not the latter. However, it is within theology that the greatest treasures and mysteries of the human person are found. Theological anthropology might contribute to philosophical and empirical psychology because, according to theology, man is made in the *"image and likeness"* of God. If this is true, we should be able to search for and find this image and likeness imprinted in the human person. However, this attempt will prove futile if we do not first endeavor to know something more about God in order to detect His purported image and likeness in man. That is, it will prove impossible to find the image of God in man if we do not know something about the divine image that we are looking for, if we do not know something about God.

Thus, Volume Two is devoted to theological anthropology, the study of man made to the image of God. It is an attempt to integrate what has been discovered thus far with what can be discovered through Christian theology, especially Trinitarian theology. We have looked for and

found what is unique about man (*differences of kind*) from both empirical and philosophical perspectives. It remains to augment our findings by including a theological perspective in order to round out and complete the quest for an integral anthropology suitable to the spiritual, political, economic, and social demands of the modern world.

Thus, in *Theological Anthropology* we will undertake an attempt to identify the Trinitarian nature of God as revealed in sacred scripture and increasingly understood by the Christian church. Then guided by the light of faith and reason, in further union with philosophy and empirical science, we will look further into the mystery of the human person to discover the mystery of the Holy Trinity, which complements the spiritual nature of the soul that we have been able to confirm by our study of empirical and philosophical psychology.

## Appendix One:

### Darwin and what goes on in an Animal's Mind

ACCORDING TO DARWIN (297, *Descent of Man*), there is a great difficulty in determining if animals think rationally, which arises from the, **"impossibility of judging** what passes through the mind of an animal". He supports his position by offering unconfirmed ideas such as the following: **"A recent writer remarks, that in all such cases** (cases involving the philosophic position that animals do not think rationally) **it is a pure assumption** to assert that the mental act is *not essentially* of the same nature in the animal as in man" (296).

Does what I have presented in this and previous chapter sound like an assumption? In all honesty, who is making the so-called "assumptions" here? Mr. Darwin is probably made more assumptions in his, *Descent of Man*, than any scientist ever made in any one book. Why is it considered an assumption when a philosopher uses empirical evidence and sound logic to demonstrate that **animals do not possess rational thinking ability** but *not* an assumption when atheists, or materialistic scientists, with no credible evidence, claim that **animals do possess rational thinking ability**? If it is a "pure assumption" to say that animals **do not think rationally**, it is even more a case of "pure assumption" to say that animals **do think rationally** since there was and is no scientific evidence to demonstrate the case. There is simply no evidence to support Darwin's assumptions, only specious anecdotes and continual attempts to pawn them off on people lacking the necessary education to gainsay unsupported conclusions. Moreover, where evidence is claimed to exist, when properly understood, it **confirms the philosophic position** (animal thinking is evidence of sentient perceptual ability not of rational conceptual ability), which distinction is missed by ultra-empiricists.

Darwin proclaims that it is **"impossible to judge"** what goes on inside an animal's mind. He then turns around and makes a judgment that he just said was "impossible". He accuses philosophers of **"assuming"** a *difference of kind*. **If, as Darwin claims, it is impossible to know what is going on inside of an animal's mind, how does he know it is a difference of degree and not a difference of kind, if not by pure assumption?** He is the one that claims it is "impossible"; therefore, he should not have made an assumption and accused others of his own behavior. Darwin is a master of disguising his own faults by projecting it onto others; he is the one guilty of making the assumptions. Philosophers *qua* philosophers base their conclusions on valid empirical evidence and sound logic, both of which are lacking in Darwin's infamous anecdotes.

Mr. Darwin confuses concepts and images, just as he confuses perceptual thought and conceptual thought, as well as symbolic language and sign language. He seems unable to make any philosophical distinctions. As evidence of his failure to make any essential philosophic distinction, we need look no further than his own defense of the topic. On page 296 of his *Descent of Man*, we find him *correctly* arguing that:

“The greatest stress (from his philosophical adversaries) seems to be laid on the supposed entire absence in animals of the power of abstraction, or of forming general concepts”.

Although Darwin has knowledge of what the issue is (rational abstraction and forming concepts), he lacks understanding of what it is all about. He presents “the power of abstraction” and “of forming concepts” as if he were some kind of authority on the matter, when in fact, he has no idea of what abstraction is or how a concept is formed; in short, he does not know what he is talking about. There is no better evidence of these intellectual failures than his confusion over these terms used in his own anecdotes. According to Mr. Darwin,

“When a dog sees another dog at a distance, it is often clear that he perceives that it is a dog **in the abstract**; for when he gets nearer his whole manner suddenly changes if the other dog be a friend” (p 296).

In other words, because a dog appears to know another dog from a distance even when its appearance is obscured, it has power to make a mental abstraction. Here he is claiming that a dog has the power of rational abstraction because its distance vision of another dog is fuzzy. **He seems to reduce abstraction/conceptualization to fuzzy vision.** I say “seems” because it is unclear exactly what Mr. Darwin is trying to say here. If perchance you think this is a mistaken interpretation, consider his next example:

“When I say to my terrier in an eager voice, and I have made the trial many times, ‘Hi hi, where is it?’ she at once takes it as a *sign* that something is to be hunted, and generally looks quickly all around, and then rushes into the nearest thicket, to scent for any game, but finding nothing, she looks up into any neighboring tree for a squirrel. Now do not these actions clearly shew that she had in her mind a **general idea** or **concept** that some animal is to be discovered or hunted” (p 297)?

With all due human respect, Mr. Darwin’s does no seem to know what a concept is. First, he claims that fuzzy vision is equivalent to mental abstraction and then he claims that following his “hi hi sign” his dog forms “general ideas” and “concepts” and that he is sure of this because he has conducted the “trial” “many times”. He proclaims that it is impossible to know what goes on inside the mind of an animal and then he claims that certain sentient actions “clearly shew” what is going on inside an animal’s mind. What Darwin’s terrier has in its mind is an image associated with a command and a physiological drive to hunt and garner a reward, which is a *percept* not a *concept*.

Mr. Darwin simply does not know what a concept is nor does he understand the process of abstraction; he gives no indication that he even knows what a “general idea” is or how it is formed. All we have here is a dog reacting to a signal associated with hunting giving rise to an *image* or *sentient percept*. Darwin boldly wandered out of the empirical domain into the domain of the philosopher arrogantly abrogating to himself the use of philosophic terms with no

understanding of what they mean; nonetheless, he dispensed of them like candy because they sounded convincing. He consequently confuses the issue and ultimately reaches a false conclusion about a *difference of degree*. Sign language and the ability to interpret signs, as evidenced by Darwin's terrier, is strong evidence of animal *perceptual* thought, but not of animal *conceptual* thought. Conceptual thought requires symbolic language. Empirical observation consistently confirms that only human beings have this ability. Frankly, Mr. Darwin, you should leave philosophy to the philosophers. Likewise, many philosophers could benefit from a good dose of empirical science.

## Appendix Two:

### Thinking and Sensing are Simultaneous Acts But Their Simultaneity Causes Confusion

When a person thinks, it is not his brain that is doing the thinking, it is his soul. But **it seems to be the brain** because the brain is providing images necessary for thought to occur; **images and thinking about them occur simultaneously**. Because the transition from *sense impression received* to *mental image analyzed* happens so quickly and seamlessly, it is difficult to make a distinction. This distinction can be somewhat clarified by examining a further necessary and subtle distinction, which exists between *intellect* and *apprehension*; they are two different powers.

Powers are attributes of a substance. A *substance* is what a thing is, a *power* is what a thing is capable of doing, and an *operation* is how a particular substance exercises its particular powers. The **soul is a substance; intellect is one of its powers**<sup>76</sup>, the highest power of the rational soul<sup>77</sup>. This power acts through its operations (*apprehension, thinking, loving*). So thinking is an operation that flows from the power of the intellect. This power, in turn, must flow from an essence or substance in which the power resides as in a permanent subject (*suppositum*) capable of such things, i.e., the rational soul.

Thus, the **power to act** and actually acting through various **integral operations** are so closely related that they are difficult to discern unless the distinction is understood. The intellect (power) has the ability to know and judge things (operations); it does this by apprehending and thinking about them and by comparing them to things it already knows (this is the power in operation or act). **Thinking is an act** or operation of an intellectual power, i.e., what the intellect does or how it acts. **But thinking is neither the intellect nor the soul *per-se*. Thinking is an operation; intellect is a power of the rational soul; the rational soul is a substance** that has intellectual power (as well as other powers) characterized by operations such as thinking. If the operation of thinking were removed<sup>78</sup> from the power of the intellect, the operation of apprehension, which precedes thinking, could still occur but the soul would be hindered by lack of an essential operation,

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<sup>76</sup> *The rational soul is endowed with both "intellectual power" as well as "will power".*

<sup>77</sup> *The rational soul is also endowed with sentient and nutritive powers that operate or co-operate with matter to animate and form a body.*

<sup>78</sup> *It is unlikely that a substance could be devoid of an essential POWER. It is more likely that it would suffer from a defect of operation. For example, the human soul has an ability to see through the eyes of its body, if the eyes were lost, it would retain the power of sight, but because of loss of operation it could not see.*

i.e., the ability to think. Thus, the rational soul is a substance endowed with intellectual power (it is also endowed with sentient and nutritive power) and (3) operations by which it acts: *apprehension, thinking, loving*.

Similarly, human beings have the ability to see and hear. But if they become blind or deaf, or both as in the case of Helen Keller, although the ability *to apprehend sights and sounds* would still exist in the soul, the operation would be unable to achieve actualization because of a defect in the organs. Think of it as a man capable of seeing into the depths of the solar system through use of a space telescope. However, if the telescope (type of mechanical organ) were broken, he could no longer see beyond the planets; the power to see remains but the instrument has become defective. Similarly, body and soul necessarily go together, but it is difficult to distinguish between their powers and operations just as it is difficult to distinguish between seeing-eye and telescope or the act of sensing, which involves the body and the act thinking about what is being sensed.

Thinking is an intellectual operation that involves the body and is necessarily dependent upon it while simultaneously transcending the body. **Sensing and thinking are both acts, but the former is an act of the body and the latter is an act of the soul**, which act together in simultaneous unison *as a composite*. That they are different and distinct operations is evident from the fact that the mind can think or reflect on whatever objects the senses perceive or *have* perceived *even in the absence of objects being perceived*. That is, the soul by its power of intellect can apprehend the form of things as they are (1) being perceived or by (2) pulling them out of memory (sentient or intellectual), in which case forms are apprehended by the intellect without any further cooperation of the senses. The rational soul is also capable of deducing effects without ever having to observe an effect simply by knowing a cause. It can also conceptualize highly abstract and immaterial forms never perceived by the senses such as first cause, morality, justice, or charity.

Among immaterial things, **the mind is capable of thinking about itself**; it is able to **think about thinking**, what the philosophers refer to as *epistemology*. Well, **no one could think about thinking unless thinking is something real to think about!** Anyone can think about their own intellect by using their intellect to reflect on itself – introspection.<sup>79</sup> Like Saint Augustine, anyone can think about **what thinking is, about its powers and operations**, or in what type of substance the powers reside (**they have to reside in some substance or they could not exist at all**). Since intellectual reflection of the mind prescind from the body, the substance underlying thinking must in some way be spiritual.

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<sup>79</sup> *Self-reflection is at its highest when the soul is the subject of reflection. Reflection on the body is also a type of self reflection, albeit, a lower one. Anyone who would truly know himself must reflect on his mind, on its powers, and on its operations, and then on its immaterial substance or form – his soul in which the powers and operations inhere. This is followed by an examination of what he or she has done to actualize the powers and potencies discovered by self-reflection. That is, what has he made of his potentials, i.e., how has he co-created his humanity!*



In short, the intellect is a spiritual *power* of the rational soul characterized by its *operations* of apprehension, thinking, and loving, which are the soul in act *via* the power of its intellect; **the power and its operation are not the substance but they are inseparably united to it; they inhere in the substance.** Similarly, there is a distinction between the human **soul, which thinks** and **the human brain, which images**. The images used by the thinking mind are not the thinking mind; they are that of which the thinking mind thinks; they are the object of thinking, that which is in the mind (from the central nervous system) when it thinks about things. In fact, images initiate the process of thinking even thinking about first causes.<sup>80</sup>

Somewhere along the line, this distinction between sensing/perceiving and thinking has been so evident that human beings have contrived a *common* figure of speech to describe it. For example, right now I am sitting at my desk typing. I take a moment and gaze into the kitchen where I see a double oven, but, at the moment, I am not *thinking* about the oven; I am simply *perceiving* it with a 5:00 AM gaze. I am doing nothing else, I am merely seeing or “sensing”. **I am “seeing while my mind is at rest”**. Once I begin to analyze (not merely associate) what I am seeing, my mind (not my brain) springs into action; my brain is supplying an image, by which my mind is engaged in thinking. If I do not analyze the image but simply know it by looking at it and all that is associated with it, I am merely sensing with my body and sentient power of my human soul – I am not thinking. But when I do think about it, it is clear that a motion occurs in my head as I interiorly apprehend images while *simultaneously* looking at exterior objects. **I cannot think about any object by merely looking at it**, but I must look at it in order to have before my mind and *intelligible impressed species (image)* formed by the cooperation of body and soul so that my mind can think if it wishes to do so.

This (intelligible impressed species) is what the soul sees while the eyes are open and looking at an external object conveyed to them by external light. The soul sees with internal eyes and internal intellectual light while its body sees with external eyes and by means of external solar light; **the two occur simultaneously. The soul always sees what the body is seeing, but it does not always think about it.**

The intellect thinks, and in order to do so, it receives a phantasm extracted from the brain to think about something. So we have (1) the *intellect*, which is the power to think and judge, (2) the *operation* of thinking and (3) the *phantasm* transformed into an intelligible impressed species, which is potentially thought about and potentially loved. The three go together. Unless we unbundle them by

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<sup>80</sup> This is why metaphysics is called the “first science” or “first philosophy”: it begins with reflection on being, which is known at the lowest level of abstraction via the senses. Being is the first thing that anyone encounters or knows, but the way they know being and the depth to which it is known (mere existence, associative, empirical, mathematical, philosophical, theological, integral) differs from person to person. All knowing begins with sensing because all knowing begins with an analysis of being; this is the reason metaphysic as the general science or study of being is considered “first philosophy”.

making distinctions among each part, as we just did, it is difficult to see the intellect, the operation, and the phantasm as three different yet integrally united intellectual things. They are so well integrated that it is easy to **mistake “thinking” for “imagining”**, imaging for thinking, or the brain for the soul.

Thus, in the human mind we find both (1) a threefold *image* and (2) a complete union or unity among the three operations of memory, understanding, and loving existing in the substantial unity of the human soul. The unity of the Divine Essence is imaged in the unity of the human intellect, which is one essence characterized by an inseparable trinity of operations: the operations of (1) apprehension (memory) of (2) understanding, by which a *word* is generated and of (3) loving, which brings about a unity between the two thereby joining apprehending mind to known word, which is the image of the known thing.

To be clear: The Trinitarian imprint, which multiplies the essence without increasing it, is manifest in the distinct three-fold operations of the intellect. That is,

- (1) The ability to apprehend and know objects presented to the mind for thought
- (2) The ability to understand and then to assign a mental word to conceptualized objects (species *intelligibilis expressa*)
- (3) The ability to love that which is known (which processes in the mind when it is thought about), especially when that which is known, or thought about, is Father, Son and Holy Spirit.

Clearly, the likeness of the Holy Trinity is in the human body, but **the image could not be in the human person if the rational intellect was not consubstantial with the soul**. Thus, man is made *to the image and in the likeness* of the Holy Trinity, while all other animal are only in the likeness. The human mind is capable of understanding or knowing the essence of all things, of naming, and loving. An animal’s mind is only capable of knowing an object by its external appearances *via* association; it does not understand and therefore it cannot name and cannot love, since love flows from understanding or grasping the inner nature of another being. **To love, a being must first know**: Adam first knew his wife and *then* he loved her and she bore a child; the Father knew His Word before love spirated the Holy Spirit from the Divine Will. The more two people know each other and the more that they image each other by similarity, the more they can love each other. God knows His Word perfectly and the Word is the perfect Image of the Father. That is, His similarity to the Father is perfect. Thus, they love each other perfectly. God knows perfectly and thus can love perfectly; man loves imperfectly and thus loves imperfectly; *animals do not know at all and thus do not love at all*.

## Appendix Three:

### Putting Some Limits on the Human Brain

Using an integral methodology, we set out to find a *difference of kind* between human beings and animals on which the subsequent study of politics as a normative science depends. Employing empirical science and philosophy, we been able to find a *difference of kind* in the human mind; by adding a theological dimension we have also been able to find the image of God in the soul. In summary, it is in the rational mind that the *difference of kind* we have been looking for throughout this book is found; it is also there that the Trinitarian image of God is found. Although the human person is an integral composite of body and soul, our anthropology *amplifies the soul* because the physical body bears only a *likeness* and the differences therein, even the Trinitarian ones, are mere *differences of degree*; **even animals have a Trinitarian likeness in their cells.**

Thus, it is time to put some limits on the body and its most admirable organ – the human brain. The human brain is truly phenomenal but it is not a “miracle organ”. As a phenomenal organ, it is also a physical organ – a *bodily instrument* capable of sentient operations *shared by all animals*. The brain is essential to thinking, but, as we have seen, only to the extent that it is able to de-materialize a phantasm necessary for apprehension. This is its highest power and operation; it is simply not capable of the fantastic things materialists would have us believe. This “stuff” about using only 10% of the brain’s potential is a form of hyperbole, an overstated truism related to the underuse of our memory and imagination.

“Although it's true that at any given moment all of the brain's regions are not concurrently firing, brain researchers using imaging technology have shown that, like the body's muscles, most are continually active over a 24-hour period. ‘Evidence would show over a day you use 100 percent of the brain,’ says John Henley, a neurologist at the Mayo Clinic in Rochester, Minn. Even in sleep, areas such as the frontal cortex, which controls things like higher level thinking and self-awareness, or the somatosensory areas, which help people sense their surroundings, are active” (Scientific American, February 7, 2008).

The brain is a phenomenal physical organ but, after all, it is physical and, as such, it does have physical limits. Let’s not give it more dignity than it is due.

The human brain is capable of memory and imagination, as is the brain of other sentient animals. The sentient brain even forms phantasms by which the body communicates with the soul, but this is the extent of its powers, which pale in significance to the intellectual powers of apprehension, thinking, and loving. *It is the human being, not one of his organs, that remains untapped. It is the human being who uses less than 10% of his potential because he ascribes to the brain what*

*should be ascribed to the body-soul composite.* It is the soul that is untapped, not the brain – the spirit, not matter. We know a lot about the brain but next to nothing about the soul. It is not the brain that thinks; it is the soul that thinks in union with its body and brain. The soul cannot think about anything or perfect its potential for universal knowledge and love *without* its brain. They work together. The brain is a phenomenal sentient physical organ whose magnificence resides in its incredible ability to cooperate with the senses to create sense images, to take the outside world and convert it to the inside. It can record and retain moving and still pictures, detect tactile, olfactory auditory and gustatory stimuli and convert them into *percepts* or multi-dimensional mental images. Moreover, it can significantly dematerialize and store these multifaceted images, with all their sentient capacities intact, for an entire lifetime. It can store and remember percepts, it dematerializes the material world, and makes its content presentable to the intellect, and is thus reaches to the union of spirit and matter; a very profound thing indeed.

The intellect however is *not* the brain; it is a power of the soul. It is the soul that thinks, but since it does not have physical eyes, it cannot see the outer realm encountered by its organs. Yet **the soul needs to experience the world in order to think about it**, to know it in itself and all that it signifies. The soul, as we said, is a *tabula rosa* with *potential* to know all things, even to know and to love itself and God. But it must be educated and trained, formed in intellectual habits, and developed over the course of a life-time. Its first knowledge is obtained from its encounter with the phenomenal world through its body, which provides it with images by which it is able to reason about and know the cosmos and its Creator and thereby transcend the world by way of its knowledge of the world.

Similarly, **when that power of man that thinks about things begins to think about itself (or to think about thinking), it transcends the physical and enters into spiritual reflection about the immaterial substance that it is. The intellect transcends matter the furthest when it thinks about the Creator in whose image the soul itself, the soul by which it is thinking, is made.**

Since the soul is spiritual, when it knows physical things in the phenomenal world, these things must be presented to it in a dematerialized way through what Aquinas calls a "*phantasm*". **The phantasm is the greatest achievement of the physical brain**, for it is the phantasm that is the transition ground between matter and spirit where the soul and body meet. It is the high point of the body, the point of where it communes with the soul through what Aquinas called the "*Agent Intellect*", which is the lowest potency of the rational soul capable of using intellectual light to lift an image of a phantasm out of matter. A phantasm, as we saw, results from sensing an object and then transferring the image of the object to the brain which, in the process, dematerializes it. The soul, using intellectual light, is able to further transform a dematerialized phantasm and spiritualize it, thereby making it intelligible to the intellect.

The rational soul is created in such a way that its intellect has potency for matter; the soul can and must cooperate with matter to gather the sensations from which phantasms and impressed species are derived so that in knowing the latter,

the soul is able to rise from lower associative and descriptive knowledge to higher quidditive, normative, and prescriptive knowledge. **It must have potencies to operate in matter or it could not acquire the phantasms it needs for thinking.** The function of the soul is to think, but to do this it needs images.

The function of the brain is to generate images, but to do this the brain needs the senses. The two, senses and brain, are very different. The brain is a remarkable generator of percepts and phantasms, the senses are relay mechanisms. Senses cannot make images (no one makes an image with their nose) but the brain not only creates images, it creates images that have sight, sound, taste, and touch built into them. **The brain's power exceeds that of its senses, but it is united to its senses as an integral central nervous system necessary for the sentient life of an animal body.**

Likewise, **the soul's power exceeds that of its brain, but it is united to its brain as an integral body-soul composite necessary for the rational life of a human person.** The rational intellect performs operations far beyond what the brain is capable of performing by itself. Similarly, the brain is united to and needs its senses, but performs sentient operations far beyond what the senses are capable of performing by themselves. Body and soul cooperate as a single composite through phantasms generated by the brain and through *intelligible impressed species* generated by the soul (*Active Intellect*) from the phantasm. An intelligible impressed species is a product of both soul and body; at the threshold point where they synapse, the point where matter meets spirit *via* the "*phantasm*" and spirit meets matter *via* the "*impressed species*"; where these two meet (impressed species and phantasm), we find the union and transition ground between body and soul.

At this ethereal transition point, we find, on the one hand, **the body rarifying matter through its highest and most sublime power** by means of **external light rays** necessary to *impress* a dematerialized image into the internal matter of a living brain. While on the other hand, we find the **spirit reaching down through its lowest and least ethereal power using interior light** to carry an image of a dematerialized phantasm out of the brain thereby making it intelligible to the soul. Interior light lifts and carries a *nascent spiritual image* of a *highly dematerialized phantasm* out of matter in an opposite way from that which exterior light helped to impress it on matter in the first place.

**The brain is involved in sensing, remembering, and imagining. It can even acquire knowledge through association, but it cannot think – this is not its job; it is the soul that is doing the thinking.** The job of the brain is to *assist with thinking* in the soul by providing, storing, and recalling phantasms. Beyond its perceptual or sentient functions of memory and imagination (that facilitate perceptual thinking related to physical survival and adaptation), the brain creates percepts or phantasms that enable the soul to think about what the brain is sensing. A thinking soul united to its body provides a human being with superior survival ability, more than that afforded by mere instinct, memory, or imagination upon which animals depend. That is, *a person who knows the forms of things is capable of exercising dominion over them and therefore is better able to survive in ever*

*changing environments than a being that merely knows by simple perception and association.* The latter can only *respond* to things and unconsciously adapt to changing environments; it is reactionary. The former can manipulate and alter environments to his or her advantage; she is proactive. Because human beings can acquire knowledge of an object's essence or quiddity, they can exercise foresight, which gives them power over created things. In short, it is the brain-body composite that supplies the images, but it is the soul that does the thinking about them. Together body and soul form a consubstantial composite that is the wonder of the universe - the synaptic point where spirit and matter meet in the upper mind of a human person, a place where material things are spiritually intelligible.

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## About the Author



Dr. David Marzak has been married for 35 years during which time he and his wife, Lisa, have been blessed with eight children and three grandchildren.

He is a graduate of the University of Notre Dame where he was an Honor Student and President of the Sociology and Psychology Clubs. Following graduation, he served the church as an elementary school teacher and as a missionary middle school and high school English and social studies teacher.

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He is the creator of the “World's Greatest Books” aired on AT&T educational television and online at [www.kolbefoundation.org](http://www.kolbefoundation.org). Currently, he is working as Director of the Kolbe Foundation to establish the *Center for Politics and Christian Civilization*, which is rooted in the new Trinitarian Humanism articulated in this book as the basis for understanding and then applying the social teaching of the church necessary for social, political, and economic renewal in the modern world.