

THE DEVOLUTION of MAN

SCIENTIFIC MATERIALISM AND HUMAN NATURE

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WHAT'S THE MATTER?

Science is one of the most powerful methods of knowing... but of knowing WHAT exactly? Many people-in-the-street, and even some scientists, do not know the answer to this question.²

Science is a materialistic [matter-based] way of knowing. This means that science studies matter, energy, time, and the motion of matter. As a fundamental assumption, science chooses to study only these tangible, physical features of existence. Thus, by assumption, not by proof, science does not measure or study intangibles in existence (if these really exist). Yet, human nature seems to have most of her/his highest and most complex characteristics in the realm of human intangibles. This conundrum helps us to understand ‘what is the matter?’ when science tries to study or describe human nature.

"Science studies nature" is often said. But what is unsaid is that science studies only physical parts of nature. The scientific method intentionally avoids questions in the realm of intangibles such as spirit, psyche, soul, *mind*, human consciousness, humane values, &/or the existence of god. Yet, these intangibles seem to be major aspects of human reality... most humans report the significance of intangible experiences in their lives

In contrast, science assumes questions of human intangibles are not within its domain of study. From its matter-based worldview, science chooses instruments to measure only the physical side of nature. These tools provide us with impressive knowledge and technological advances in electronics, space travel, medical techniques, varieties of new materials, genetic manipulation of the very bases of life, and even biological and chemical influences on human brain. Nonetheless, these tools are not capable of measuring any non-material, spiritual, or values-motivated parts of human existence. Thus, by limitations of

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² **This analysis** is not derived from my being a “creationist,” which I am not, but from my training in physics. In post-Newtonian physics we learned that all equations and theories have limitations dependent upon the initial assumptions used in their derivation or in the experimental design. One cannot derive an expression of electromagnetic forces that assumes magnetic flux is negligible and then use it in situations where magnetism is significant. Newtonian physics, derived from macroscopic observations of gravity, can not be expected to apply on the subatomic level.

its tools of measurement, science has no power to measure whether these intangible human characteristics exist or not. Not surprisingly, with their matter-based perspective, biology and psychology have great trouble studying, or even defining, human ‘*mind*’ [*psyche*]. How then can science validly try to comment upon existence of human *mind* or spirit? By what rationality may some scientists claim that science makes accurate and complete descriptions of humans who seem so to exceed the limited biological urges of animals? Is this ‘What is the matter?’ with the application of science to human nature?

This collision of matter-based science with intangible aspects of human nature is analogous to someone choosing to measure mechanical forces and ignoring electrical forces. S/he would choose tension, torque, force and gravity instruments.... but would not choose instruments to measure electrical currents or voltages. Thus, when asked, the mechanic would tend to say there are no electrical forces around, not because this is true, but because s/he had no instruments appropriate for such measurements. This analogy is only meant to suggest how science may not comment upon intangibles. It is not meant to imply that human *mind* or intangibles are in any way electrical.

We are not criticizing science which is an impressive method of understanding the physical world. We are critiquing science, i.e., highlighting its strengths and weaknesses. Science is like a high-powered Mercedes car; impressively engineered... one of the best cars on the road... but a Mercedes is neither a fighter jet nor a high-speed powerboat. For air or water travel, we need a different vehicle. For knowing human spirit or *mind*, we need a different vehicle than science. While science is pretty good at measuring and describing *mind*-less, genetically programmed, hormonally driven animal nature, it is precisely in the area of *mind*-ful human nature that we really mind and object to how science attempts to describe us.

It is unfortunately very true, as noted by some scientists, that religious views lead some to intolerance, vengefulness, persecution and violence. Sadly, in a significant portion of our history, humans have used their superior intelligence and social structures, clans, nations, governments, economies, technology and religions, to torture and destroy fellow human beings.

DO YOU MIND?

Nevertheless, sometimes science struggles to measure those aspects of human nature, which seem to be intangible, such as love, honesty, justice, mercy, altruism, compassion, integrity, a sense of transcendence, and/or existence of a creator. Not surprisingly, problems occur when science tries to describe these uniquely human characteristics. Intelligent humans ‘mind’ a lot and object to the descriptions of human nature proposed by matter-based chemical, biological, psychological and social sciences’ models which ignore or deny our humane characteristics.

PROBLEM I: *Logical Positivism*: Some scientists, incapable of measuring love with scientific instruments, may erroneously claim, "therefore love does not exist," much like the mechanic might claim electrical voltages that s/he could not measure do not exist. This type of thinking is called *logical positivism*. Logical positivism believes science is the only valid way of knowing everything in the universe. Logical positivism is part of *scientism*, which is a religious faith in science.

Scientism believes science is the all-powerful way of knowing existence, much as Jews or Christians believe in an all-powerful and all knowing god. Scientism is a belief far beyond having confidence in science as a good tool to understand nature. Scientism believes, as a matter of faith not proof, that if science cannot measure something, like love, compassion, or the existence of god, this thing does not exist. Scientism often

acts, erroneously, as though science has disproved the existence of love, altruism, human mind and/or a creator. In fact, science is just not adequate to study, measure, or comment upon such human experiences.

It is important to note that the denial of human mind or humane motivations by some scientists occurs by the assumptions of logical positivism and not by proof... by lacking appropriate measuring tools, not by experiment... and by limitations of the scientist's worldview, not by evidence. To be rational and honest, science can only say, "we do not measure that intangible stuff." Science cannot rationally say it has disproved the existence of human love or mind or god because science has no tools to measure these things. It is no wonder that intelligent people mind such dehumanizing descriptions and object to science's de-valuing human nature. Thus caring humans seem to mind when science tells us that we are incapable of rising above an inexorable "selfish gene" force and that we are incapable of human compassion or selflessness.

PROBLEM II: *RANDOMNESS AND MEANINGLESSNESS*: Another major difference between scientism and the Judeo-Christian view of human nature is that science believes impersonal, unfeeling, arbitrary forces control nature and human behavior. Scientism has been called a "faith in the gospel of randomness and meaninglessness." However, in science models, randomness is not proven by science. It is rather a very direct and inescapable outcome of science's matter-based assumptions. If science assumes matter to be the only existence, how can inert matter and physical forces in nature create meaning or have a plan for human existence?

Judeo-Christian belief proposes a personal creator who is loving, just, compassionate and merciful in ways that arbitrary nature cannot be. This caring creator is the model for humane aspirations. The Judeo-Christian creator has been called the "transcendental interferer" by C.S. Lewis, implying that this personal creator may make some demands upon us as in any good personal relationship. Thus, we are responsible to be committed, honest, fair and caring in our relationships with creator and other human beings

In contrast, scientism has no patience with such a personal creator. In a materialist's belief impersonal forces require nothing of humans: one is free to adapt, compete and survive with no real purpose in life. Also, science has no basis for human values-motivated behavior. Thus, in random meaningless existence, the essential biological value is to "struggle for survival" just as the animals do. Do humans have a right to mind such dehumanizing descriptions of us?

PROBLEM III: *SCIENTIFIC REDUCTIONISM*: Assuming human intangibles do not exist and having no tools to measure intangibles, does not deter some scientists from still attempting to measure human intangible characteristics such as love, altruism and compassion. This creates still another intellectual difficulty. How does science measure intangibles with matter-based methods? This problem is similar to, "How do you measure electromagnetic waves with a torque wrench?"

If love exists, can science measure love? Can science distinguish love from a mere impersonal genetic or hormonal urges to mate? Biological reproductive urges provide offspring and genetic nesting urges produce a protective social structure for the survival of the next generation. In contrast, love may be described as a personal commitment to care for another person. This commitment greatly exceeds animal urges and seems to be independent of costs to oneself. Love is a compassionate mental state putting another first. It is an affirming, supporting, faithful, kind, empathetic, committed, trusting, and sensitive relationship in which each help the other to grow psychologically and spiritually. These are hardly biological survival

characteristics... and sadly seem not all that prevalent in human relationships. Consequently, if a scientist tries to measure love, rather than mating urges, what would s/he measure?

When scientists try to measure human intangible characteristics, they must invariably substitute a tangible material observable in place of the intangible entity. This process of reducing a highly complex human intangible characteristic into a simpler material measurable is called *scientific reductionism*. [Table 1] Thus, to scientifically measure intangible love, scientists substitute tangible measures such as brain neuro-chemicals, hormones, brain electrical activity [EEG], muscle tension, skin sweat, or some specific behaviors such as kissing, hugging or giving flowers. These tangible things [chemicals, electrical energy, behaviors] are measured very accurately by science... but do they measure real human love?

As we know, anger, sexual arousal, fear and hunger all will alter human hormones, EEG and brain chemicals, as no doubt does love. Thus, someone fearful of being caught "cheating" on his/her spouse will have excited levels of most body measures and may be more likely to give higher numbers of hugs and flowers! However, since there are no specific body (material) measures of committed love, we can measure the above parameters with great accuracy, and do powerful mathematical analyses on the measurements, and we can pretend these measures are great science, but they do not tell us much about love. Thus, despite very accurate measurements and with impressive quantifiable outcomes, **scientific reductionism often seems to miss the point when it comes to human nature**. Moreover, science even worsens the insult by substituting demeaning animal urges and biological forces for the highest humane characteristics. Some scientists then conclude that "love is just a biological urge." Thus, it matters to intelligent persons that science ignores or degrades the most humane characteristics in human nature.

MIND OVER MATTER

For a moment let us hypothesize there might exist intangible realities in human existence. Human intangibles invariably relate to distinctly human experiences and motivations including: a) humane values such as trust, compassion, love, mercy, justice, fairness; b) a human tendency to believe that there can be a peaceful and cooperative world; c) a sense that there is a conscience within us that decides, and is responsible for, what we do; and d) a sense that humans transcend mere survival existence. All these experiences, shared among the vast majority of humans, relate to the human *mind* or spirit. These also fit very well with the ancient Greek philosophers' distinctions in human nature between the *appetites* [biological urges] and the *moral will*. These human intangible experiences seem fairly universal.... most people in most cultures in every time in history, and even pre-history, seem to have had experiences which suggest the reality of these humanizing intangibles. And it is these, which significantly raise human potential above the biology of animal existence.

Even Neanderthals seem to have cared for each other. How else would individuals found in Neanderthal graves with severe body trauma and badly broken bones have ever survived, healed and lead a full life? Neanderthal skeletal finds demonstrate care for other human beings. Why did some Neanderthals carefully bury their dead, put some belongings with them and even shower their dead with flower petals? This all seem rather non-survivalist, non-biological, and far more humanely compassionate, than scientific models allow.

Human mind, spirit and humane values are the unique intangible things which distinguish us from apes and that actually make us human. Human brain, our physical biological computer, is only three times bigger than

ape brains... 1500 cc versus 500 cc. This is not all that big a deal, like going from 1 to 3 giga bites on a computer. But human behavior is extraordinarily more complex than ape behavior both:

- A) **Quantitatively:** Humans do much *more*.... mostly in characteristics like intelligence, language, technology, foresight, learning, and social structure; but also
- B) **Qualitatively:** Humans have new and different *kinds* of abilities such as art, music, literature, religion, complexity of technology, law, abstract reasoning, imagination, ethics and morality, and even more so, humane motivations, such as love, mercy, justice, compassion, hope for a better world, and longing for a transcendent.

More than 2500 years of human history also seems to support these experiences of *mind*. Hebrew *Old Testament* emphasizes "compassion for widows & orphans" and desire for "mercy & justice." Babylonian writings direct that "the powerful shall not abuse the weak." Christian *New Testament* urges, "Love thy neighbor as thy self." These humane aspirations starkly oppose the "biological testaments" of *struggle for existence* and *survival of the fittest*, and the capitalistic laws of competition and the wealthiest deserve to be on top. While the latter do seem to describe the "tooth and claw" survivalism of mammal, ape, and some humans, they do not inspire us to the humane, the heroic, or the saintly as described in the best of literature, poetry, religion or imaginations of our human *mind*.

These humane testaments encourage humans to live at a level significantly more caring than animals achieve, or than science seems capable of conceiving. These huge differences between man and ape prompt ethicist and psychiatrist Willard Gaylin to conclude that "There is more distance between man and the chimpanzee than there is between the chimpanzee and the ameba." This view is in direct opposition to Darwin's attempt to make the differences between apes and man seem nearly insignificant. Thus, wouldn't human *mind*, the "moral part," rise above and direct human matter, the biological "appetites" within brain?

IF YOU DON'T MIND

The above problems - and the great disparity between ape and human nature - highlight the significant limitations of scientific materialism when applied to human nature. They also clearly demonstrate how ***science generally de-values human nature*** by excluding or denying human intangibles and values-motivated behavior. Significantly, this is not a correctible condition within science where gathering a bit more data solves the problem. The de-valuing of human nature is rather an inherent inescapable consequence of science's matter-based approach being inadequate to understand human intangible characteristics.

In contrast, things in the physical world such as rocks, planets, cells, organs, plants & animals do not seem to mind when measured by materialistic science. They do not mind when science explains that impersonal forces or cruel and amoral motivations cause their behaviors. They have nothing to lose from measurements of their solely physical characteristics. As presumed by science, inert molecules, rocks, planets, and *mind*-less animals have no immaterial characteristics which escape the notice of science, or which minds such inhuman descriptions. Thus plants and sub-human animals do not object that science explains their reason to exist is solely to struggle, compete and survive.

However, at least some humans seem to have a *mind*, which seems sometimes to be the major source of their motivations and meaning in life. Some people sometimes choose to act in humane ways. Sadly the number

of people acting humanely may not be very high, thus it is no wonder we keep note of persons of great humane-ness in our history.... Abraham, Jesus, Ghandi, Thomas More, Martin L. King or Mother Theresa.

In the World Trade Center disaster [9/11/01] we understand those who fled and forgot others in order to survive. We're not surprised when some are making a profit on what is a tragedy to so many. But we respect, honor, and memorialize those who far exceeded survival instincts to help others, returning into crumbling buildings to guide others out, shielding a helpless person with their own body, letting others flee past as they aided a handicapped person down smoky stairs. It is precisely these *humane* characteristics that most distinguish our heroes (and even ourselves on some occasions) from the animals

In the WTC tragedy, it is the terrorists, which best fit scientific descriptions. The terrorists are the competitors who have acted out *survival of the fittest* biology and who helped their herd to conquer. Survivalists either burn for revenge to conquer their enemy or gloat in their dominance over the victims. To the humane *mind*, perpetrating such suffering on fellow human beings is both unthinkable and unconscionable. Ironically, it is precisely the humane human characteristics which are omitted when science [mis]measures humans.

Omitting human intangibles is how **SCIENCE ALWAYS UNDERVALUES HUMAN NATURE**. To science, love and altruism do not exist or are not the humane values people think they are. Love is just reproductive drive to continue the species, or a way for a weaker female to entrap a stronger male for protection of offspring. As one psychologist said, "Love is just an emotion" [an instinctual urge]. Altruism and compassion, like grooming behavior, are just products of *selfish genes* to secure ones acceptance in the herd, or just cultural conditioning urging the sacrifice of individuals to increase survival of the tribe. To science, love and altruism are biological urges promoting *survival of the fittest*, the *struggle for existence* and genetic strength of the species. Not surprisingly, humans have an impressive sense for detecting this sort of de-valuing of their self-worth, and intelligent persons tend to strenuously doubt the authority of science to comment upon human nature.

However, as a human value and seemingly real human experience, love is a conscious decision to give (not take) care, compassion, loyalty and commitment. Human values such as love are often highlighted in great literature, poetry, and quality religious thought. Comparing the devaluing scientific models with aspiring humanistic and religious views of human nature, it is no wonder that scientific explanations of human nature are viewed as dehumanizing.

The omissions inherent in scientific models of human nature cause some humans to object to being objectified, i.e., thing-a-fied, by the materialistic scientific method. Consequently, while rocks, cells, and animals do not care, humans *do* mind being mis-measured and mis-described and under-valued by the scientific method which omits the most humane of human characteristics. To be human at all, endows one with the right to reject such dehumanizing characterizations.

I'VE HALF A MIND TO...

Nevertheless, science is right. Rocks, planets and plants have no consciousness and many animals seem to have no intangible ideas within their brains, not even *half a mind*, to choose what they do with their lives.

Also, science is right that humans are significantly influenced by genetic biological urges, the Greek's "appetites." Hunger, thirst, sexual urges, anger, a drive to dominate [to control and to win,], territoriality

[possessiveness & greed], fear of death and fear of being inferior are powerful forces in human behavior. This biological programming in our brains has been known for millennia as “*the seven deadly sins*” and “*the animal within*” us.

Evidence abounds of inhumane treatment of others caused by lust for power, greed and sex. It is these forces in human living that are opposed by moral principles and laws of civilization. Thus scientific models of human behavior are right... but only as far as they go.

Scientific models are significantly incomplete... perhaps less than one half the human story. It is the *other half* of human consciousness which this article addresses. There is enormous evidence in lives of the vast majority of people today, through out history and related in works of the humanities that, when they have *half a mind* to, humans know differences between good and evil. Most humans object to injustices, acknowledge a connection of sexual intimacy with commitment, and long to transcend animal existence. Many hope for a world where justice, mercy, beauty, forgiveness and love prevail.

From vast numbers of examples, we observe that humans have recognizable and unique mental characteristics, in enormously greater amounts and with singularly unique humane qualities, unavailable to other animals even the great apes. Thus, most everyone accepts the experience that humans have a *mind*. Humans can aspire toward being humane and to surpass mere biological determinants genetically wired in our brains. This is oddly evidenced by the peculiar thing: only humans study other animals.... no animals have ever taken time to study humans!

Of course, there are disagreements as to what the human *mind* is. Understandably, a materialist worldview will have greatly different expectations of human nature than a religious worldview. Also, not surprisingly, these different philosophies do make a difference in how we choose to guide our lives.

A ***materialist worldview*** begins with the assumption that only matter and energy exist. This materialist faith thus denies the existence of any spiritual dimension to existence. Hence, a materialist worldview tends to be held by atheists, agnostics and persons who tend to be non-religious. Not surprisingly, these persons often prefer technical, business or scientific life-pursuits. For materialists, science and technology tend to give a sense of certitude and order-in-the-universe... roles usually played by religion. Also, the existence, and apparent intangible nature, of human *mind* require some explaining, or explaining away, by scientific materialists.

To a materialist, an intangible view of *mind* is clearly irrational, superstitious and unacceptable. Religious persons certainly erred in blaming the gods for causing inexplicable natural events which were later explained by science, e.g., earthquakes or lightning. Thus a materialist reasons that religious persons also err in giving a spiritual non-material explanation for the human *mind*.

To a materialist, the human *mind* is merely the workings of the physical brain, an immensely complex arrangement of nerve cells [electronic & chemical units], which produce an incredibly high level of computer intelligence. This high complexity produces a vast array of information processing capability, but has only the appearances, not the reality, of free will, unique human creativity, impressive humane values, and a spiritual nature. Thus, alas, to a scientific materialist all these impressive characteristics of human *mind* are but an “illusion,” an artifact of impressively complex, but totally material, neural circuitry in the completely material brain.

In short, the most unique and most humane human characteristics are but “*noise in the works*,” static, as it were, in the highly complex computer of the brain. While admitting that science “*at present may not be able to explain*,” or explain away, this apparent human spirit or intangible *mind*, a materialist holds that the mind is still a solely material phenomenon. But, despite all the appearances of scientific rationality, this view is of course preordained by mater-based faith assumptions, that mater and energy are all that exists.

A ***spiritual worldview***, in contrast, would hold that the *mind* is, in part, a spiritual and immaterial entity called the “person-within” or a soul. Since a spiritual worldview already assumes the existence of intangible realities in the universe, such as a Creator, it is an easy and consistent step to hold that the *mind* is spiritual, not material, in nature.

In a spiritual view, the *mind* directs the material brain in many, or at least some, circumstances. This spirit-within-humans would be viewed as a gift from the Creator. This inspiriting, a sharing in the Creator’s spirit, gives humans free will, enormous creativity, humane values, ability to love, and other human characteristics which elevate humans qualitatively far above the animals. Even the great apes, humans’ “*closest biological relatives*” are left behind in comparison to mind-ful humans... human arts, music, laws, science, technology, social structure, and sometimes even morality.

This spiritual view sees the spirit-within as using the material brain to allow humans to sometimes escape genetic biological determinants. Thus, human mind aspires toward humanitarian ideal, which can greatly exceed animal models of human nature[sadly maybe not too often]. As in Michaelangelo’s “*Creation of Adam*” on the Sistine chapel ceiling, the Creator-inspiriting of humans transforms the “naked ape” into a creature who’s *mind* shares a bit in the Creator’s creativity, intelligence, compassion, mercy, justice and capacity to love. The “*Creation of Adam*” is a symbolic attempt to explain observations of this human uniqueness which other great apes seem not to have acquired.

Shakespeare describes this elevated view of humans having *Hamlet* say,

*“What a piece of work is man: How noble in reason;
How infinite in faculty;
In form and moving how express and admirable;
In action how like an angel; In apprehension how like a god;
The beauty of the world; The paragon of animals.”*

It is primarily in the realm of the unique human intangibles, of humane values and creativity not brain size, that humans are distinct from all other animals. It is not surprising that unique human intangibles are the prime interests and comprise the major themes in the best of the humanities and religion. Conversely, it is precisely these uniquely distinct human characteristics, such as human creativity, humane values, powerful symbolism and search for meaning and purpose, that are mostly ignored, or defined as nonexistent, by science. Science is impotent to measure these characteristics.

As Robert Frost [*The White-Tailed Hornet*] observed about scientific views of human nature:

*Our worship, humor, conscientiousness went long since to the dogs, under the table. And
served us right for having instituted downward comparisons.
As long on earth, as our comparisons were stoutly upward with gods & angels,*

We were [hu]man at least, but little lower than the gods & angels.

*But once comparisons were yielded downward... 'twas disillusion upon disillusion,
We were lost piecemeal to the animals, like people thrown out to delay the wolves*

It would be very sad indeed if we accept only de-humanized scientized 'downward' views of human potential. At best, a scientific view of human nature describes us as intelligent animals who are crafty at technology and survival but are no more able to control our reproductive urges, lust for power, greed for possessions and territory than the animals. [Table 1]

Some scientists also misapply perspectives to claim that human intangible values, love, mercy, compassion, justice & charity, are illusionary because they are not measurable by matter-based scientific methodologies and find little support from animal studies.

It is also sad that some claim humans have a right to live *naturally*, i.e., mainly at these animal levels. It is not at all surprising that these uncritical applications of scientific materialism will always undervalue human potential.

It is even sadder that some people claiming strong adherence to Judeo-Christian values live as though power and wealth are granted them by God with little regard to people with fewer advantages.

The good news is that intelligent persons always *mind* how science is treating us, and some humans will choose to raise human nature to levels of humanity that will be perplexingly obscure to science. Their living of caring humane lives will also exceed religious rationalizations and self-righteousness to exemplify go(o)dly compassion.

Thus, maybe, humans will still be the envy of the animals, should animals have half a *mind* to notice.

Table 1

HUMAN EXPERIENCE: <i>Humane Intangible Values</i>	SCIENTIFIC REDUCTIONISM: <i>Tangible Material Models</i>
1. Love	1. Reproductive urge Self-serving hormonal libido
2. Altruism and compassion	2. Selfish genes
3. Trust & mercy	3. Submissive behavior to remain in the group
4. Justice: Right & wrong	4. Competitive behavior: Dominance
5. Family & community values	5. Herding behavior
6. Committed marriage	6. Reproductive 'pair-bonding' for mutual gene propagation
7. Responsible humane behavior	7. Strategies in the "struggle for existence"
8. Tenderness & care	8. Strategies to 'entrap' a mate to propagate ones genes
9. Meaning & purpose in ones life	9. Competition, survival and propagation
10. Human <i>mind</i>	10. 'Yet-to-be explained' brain circuitry generates an illusion of personhood & free will
11. Integrity & honesty	11. Pragmatic ploy to disguise ones 'struggle to succeed'
12. Sense of transcendence and existence of a Creator	12. Primitive irrational emotionalism to obscure a fear of death