Scientific concepts of human nature and their implications to bioethics in a Scientific and Technologically-Altered World

James E. Trosko
Ph.D. in Genetics
Professor, Dept. of Pediatrics/Human Development
Division of Human Genetics, Genetic Toxicology, and Oncology
College of Human Medicine, Michigan State University
United States of America

To try to address the plethora of ecological, psychosocial and individual moral crises caused by the proliferation and misuse of scientific knowledge and technological advances in our culture by examining each one in isolation of the larger “global” issues, fails to recognize the underlying philosophical basis for the plethora of moral dilemmas we are witnessing. In essence, it has to be said that the ecological, cultural and individual psycho-social problems of today cannot be ameliorated by recycling pop bottles, training more psychiatrists, imposing traditional philosophical and religious indoctrination on everyone or arranging “pre-emptive strikes” on tyrants perceived as abusing human rights. We must attack the cause not the symptoms. The cause, I propose, resides in our head in the form of a bankrupt philosophy of human nature. Moreover, I make the assumption, as others have, that each individual holds a view of human nature, which shapes policies and practices of human intervention, which, in turn, influence biological and psycho-social development.

How does one begin to deal with the challenge of finding a “moral compass” in a world in which individuals must: “make sense of the senseless”; do the right thing on a daily basis to deal with short-term needs while not understanding the long-term consequences; find a psychological rationale for surviving in one’s cultural environment which suppresses fundamental human needs; deal with frightening unknowns created by new technological advances which challenge outmoded world views; not use knowledge and powerful technologies to deny basic human needs and rights of individuals; and search for some “universal” truths to assist moral judgments in a pluralistic world of conflicting religious ethical values? Try to imagine, if one is a member of one of the few remaining primitive tribes, how you could cope with the changes demanded of you when you are confronted with new experiences, choices and challenges to cons of unchanging traditional values? How can any one of us, in a growing population of over 6 billion people, deal with the stresses...
due to diminishing basic resources (water, food, fuel/energy, clean air, clean water, meaningful job opportunities, job security, etc.) with traditional world-views based on views of human nature that are being challenged by advances in the scientific understanding of human biology and of astrophysics which is giving us a very humble image our place in time and space.

As an individual within a certain ethnic, racial, gender and religious group, how can we make sense of that “moral compass”, imposed on us by being a member of a particular group, when, in fact, there is not even unanimity within that group, let alone between groups in our contemporary world? Beset with all kinds of threatening stresses, whether one is a member of a few primitive tribes seeing the age-old traditions being destroyed by invading technology, or as a member of the technologically global society seeing how the non-use and misuse of technology is threatening the global temperature, water pollution, the nature of the food we eat, etc., the idea of finding a moral “solution” to these problems seems hopeless.

To each member of any religious group, believing that religious belief is the well-spring for ones moral values, a factual problem exists, namely that not only within each religious group, but between all religious groups, is the fundamental assumption that the “Truth” lies only within one’s religious world view. To any religious group that believes that all religious views share the same human values ignores the fact that those shared values are more often than not ignored when dealing with differences in mythological interpretations of the details of the differences [e.g., the interpretation of the Bible during the Reformation]. In brief, in a pluralistic world of multiple religions, of a few atheists and even fewer critical agnostics, the realistic expectations that, if we could all be educated, enticed, indoctrinated or forced to believe in the same religious world view, there would be a way to solve these global and individual moral crises. However, both from a theoretical point of view, as well as a practical one, this will never come to pass.

While many within a religious or philosophical group believe there are moral absolutes, the fact is that no person can ever know the “Absolute Truth”. In addition, whether one believes in absolute moral truths or in some kind of relativistic ethical framework, it is also a fact that human beings are moral agents, acting in a forever changing world, who must live with the moral, as well as physical, biological and psychological, consequences of their moral acts.
Scientific concepts of human nature and their implications to bioethics…

“Every ethic is founded in a philosophy of human nature and every philosophy of human nature points towards ethical behavior” (James Drane)

F.S.C. Northrop’s analysis of contemporary moral problems comes to grips with the fundamental issue. In essence, he states that our problems are rooted in a view of the human-nature relationship which is dualistic in holding that the means of technological advance can be derived from nature, but the ends which direct them, cannot. If this is true, then the apparent inability to resolve many of our contemporary and future medical-moral dilemmas stems from the fact that our culture lacks a meaningful view of human nature that would naturally breed humane moral values to govern our science and technology. In a pluralistic world, and even within most countries, pluralistic worldviews exist. When these different value-generating worldviews generate political choices for the goals of their society and roles that each individual must play in that society, the stage is set for the suppression of the human potential of a subpopulation of the society.

Moreover, James Drane, a contemporary philosopher has stated, “Every ethic is founded in a philosophy of human nature and every philosophy of human nature points towards ethical behavior.” If this is true, then the apparent inability to resolve many of our contemporary and future medical-moral dilemmas stems from the fact that our culture lacks a meaningful view of human nature that would naturally breed humane moral values to govern our science and technology. In a pluralistic world, and even within most countries, pluralistic worldviews exist. When these different value-generating worldviews generate political choices for the goals of their society and roles that each individual must play in that society, the stage is set for the suppression of the human potential of a subpopulation of the society.

Leon Eisenberg, a Harvard psychiatrist, emphasizes the important role culture has in shaping our moral behavior when he stated:

“The planets will move as they always have whether we adopt a geocentric or a heliocentric view of the heavens. It is only the equations we generate to account for those motions that will be more or less complex; the motions of the planets are sublimely indifferent to our earth-bound astronomy. But the behavior of man is not independent of the theories of human behavior that men adopt.”

“The modern medical profession… continues to believe it has a duty to keep alive as many people as possible. In many parts of the world doctors apply their intelligence to our aspect of man’s welfare—survival and deny their moral right to apply it to the problem as a whole. Through medical care and improved sanitation they are responsible for millions living more years in increasing misery. Their refusal to consider their responsibility in these matters does not seem to them to comprise their intellectual integrity… They set the stage for disaster; then, like Pilate, they wash their hands of the consequences.”

Scientific Opinion

Journal of the International Society of Bioethics SIBI

January-June 2003

70
“When we examine the ethical options we have for moral behavior, we note easily two extreme positions exemplified by Maoist-China, on one hand, and by a laissez-faire, free market capitalistic society, such as the United States, on the other.”

When we examine the ethical options we have for moral behavior, we note easily two extreme positions exemplified by Maoist-China, on one hand, and by a laissez-faire, “free market” capitalistic society, such as the United States, on the other. From a biological standpoint, a priori-absolute ethics (cultural monism) and laissez-faire-relativistic ethics (“do your own thing”) are culturally non-adaptive. Neither one takes into account the realities of human nature. In one case, society “knows” best how to meet the basic human needs of its citizens. This suppresses the individual’s ability to actuate individual creativity and abilities. On the other hand, by allowing each individual to chart his or her own life’s plan at the total disregard to the social responsibilities we owe our society, by seeking our individual needs and wants, we, in essence, deny them for all. [After all, human beings are social animals and cannot develop or survive as human beings without other human beings].

While it might be argued that to draw any comparison with this philosophical/political conclusion and with some well documented, scientific biological process is folly, if not dangerous, the fact is, within the human being, exists a homeostatic, cybernetic feedback system of positive and negative signals that helps to maintain health. The breakdown in the way DNA molecules, biochemical reactions, cell-cell, and organ to organ communicate can lead to diseases. By analogy, when parents communicate (transfer positive and negative information, via language, body language, role modeling, and touch) to their children, or spouses to their spouses, teachers to students, governments to their constituents, and nations to nations, one can achieve “healthy” human relationships. When that communication process at the human level is interrupted by deception, secrecy, lies, ignorance and blind world views (Individuals seeing and hearing what they want to see or hear), an unhealthy human relationship is created either at the human-ecological level, individual human to human level, or nation to nation level.

Jacques Monod, in his *Chance and Necessity*, clearly describes what is wrong in our technological West when he stated,

“For their moral bases the ‘liberal’ societies of the West still teach—or pay lip-service to—a disgusting farrago of Judeo-Christian religiosity, scientific progressism, belief in the ‘natural’ rights of man, and utilitarian pragmatism.”

From the preceding, I believe it is clear that our task, although im-
mense, if not impossible, is to impart culturally, scientific-grounded views of human nature into religious, economic and political institutions, such that moral values will not be in ignorance of or in defiance of the biological realities of human nature (Bioethics). In essence, this is what Daniel Callahan of the Hastings Center was calling for when he stated:

“To build a fresh ethic for the life sciences is to build a culture.”

Anything short of that will fail. We should not ignore what John Dewey once said:

“A culture which permits science to destroy traditional values but which distrusts its power to create new ones is destroying itself.”

At this point, let me stress that I am not saying that science can determine which values are right or wrong (so-called “Naturalistic Fallacy”—that the “ought” can be derived from the “is”), but that no human values can be maintained in ignorance or in defiance of the “is”.

Max Otto, a philosopher, pointed this out nicely when he stated that the universe is run by natural forces and laws, not by moral laws. However, human societies that live in the natural world must live by moral laws. If those moral laws contradict or ignore the nature laws, it will be the human societies, not the physical universe, which suffer the consequences of such defiance.

Moreover, John Tonsor was quoted as stating that:

“If we are to act ecumenically let us begin not with theology but with ethics. Let us put ethics at the center of our undergraduate curricula and stress the ethical implications of all post-secondary education whether it is broadly humanistic or narrowly vocational. If we cannot agree on how to act there is little hope that we shall agree on what we are to believe.”

The following models of human nature are an attempt to provide such an understanding of ourselves that specific moral problems will be resolved in such ways as to minimize human suffering and to maximize the generation of human values which will enhance survival of the human species, quality of life of the whole society and the enhancement of the human potential for each individual.

**Scientific Views of Human Nature**

1. Nature and Nurture Model

Ashley Montagu’s statement accurately describes this model: “He-
“Our biological sciences have clearly and unequivocally shown that our biological phenotype is the result of nature AND nurture, NOT nature VERSUS nurture”

There are those who, while agreeing, with the “scientific” interpretations of these situations, could also claim that there are “supernatural” elements that must be integrated with the scientific facts. In other words, what has this analysis gained anyone? In other words, even the scientific interpretations of the “real world” are limited and constantly changing. The only difference of a scientific interpretation is that it is potentially self-correcting, whereas, religious interpretations are usually more stable and more resistant to quick self-correction.

The concept of “human nature” has for centuries evoked sterile arguments, primarily in the context of whether that “nature” is a “blank slate” to be molded by the physical and cultural environment or one in which one’s “nature” is constitutive as determined by “fate”, or genes. Our biological sciences have clearly and unequivocally shown that our biological phenotype is the result of nature and nurture, not nature versus nurture. The current argument exists on the human behavior level. To what extent does our behavior have “nature” or genetic components? The underlying problem appears to touch on age-old philosophical issue of “free-will” or of “determinism”.

In the context of our evolutionary-derived brain that leads to human
consensus, the brain is clearly determined by a nature and nurture interaction. Once consciousness emerged from that interaction due to the differentiation of various kinds, number and architectural arrangement of those brain cells, we perceive we have “free will”. However, when we make choices, based on that perceived “free will”, our experience, both consciousness, gained from our ability to learn and store information, and unconscious molecular information, based on our biologically-based brain functions ("That warm feeling that we are right or that feeling of fear or hatred that surround our conscious knowledge"), contribute to our making our own “nature”. This might be, in part, conceptualized by what Jose Ortega y Gasset said: “Man has no nature. What he has is... a history.” Our life choices, which shape our “nature”, are a complex interaction of genetic and environmental interactions. Most of those that shape our biological phenotype come from this interaction with the physical and chemical factors at the DNA, biochemical, cellular, and physiological levels. Those that shape the behavioral “phenotype” are not as easily traced because of the complex link between the genetic contributions to consciousness and the unknown, to date, involvement of culture factors on the conscious and unconscious influences on our biology. Is there any doubt that psychosocial/cultural stress can influence our physiology (health) or conscious choices? As Potter has noted, there seems to be an interplay between two sets of genes that influences the human psyche, those for the fatal flaw and those for global bioethics.17, 18

In essence, it appears we have neither “free will” or are we “determined” to do what we do, but rather, we have “self-will.”19

In this day and age of having sequenced the human genome, the philosophical claim that human nature is “constitutive” in our genes is just dead wrong. Genes, alone, do not determine “human nature”, let alone human choices and human behavior. The gene or DNA must not only interact with various environmental triggers to form a protein product, but in many, if not most, cases the individual gene product must interact with other genes and gene products. In turn, the individual cell in which the gene(s) is (are) expressed must interact with other cells within the same tissue and other organs. On the other hand, with our current understanding of human genetics, the environmental factors (physical, chemical, dietary, social/cultural) do not act on a “blank slate”. The biology of a human being, from the single fertilized egg, developing embryo/fetus, neonate, adolescent, sexual mature adult and aging individual,
is a unique genetic “sensor” for all those environmental signals which “turn-on” or “turn-off” the expression of the genes of that individual. Given that no human being (except identical twins) starts with the exact set of genes and no individual, including identical twins, ever gets exposed to the exact set of environmental triggers, is it any wonder that no two humans will be identical with regard to either their physical phenotype or behavioral phenotypes? On the other hand, the influence of each of the genetic and environmental facts can be seen when one stereotypes the looks of a given ethnic group or the political values of a certain regional or religious group. All this demonstrates is that, while most of the individuals of the ethnic, regional or religious group “look alike or behave” in a similar fashion, not all do. Those “odd” individuals have somehow broken-free from any genetic or environmental “determinism”. This suggests these individuals have either or both different genes and environmental histories.

2. Hierarchical View of Human Nature

Here, E. Laszlo, a systems philosopher, describes this model: “First, we are a collection of natural systems, living things second, thirdly human beings, members of a society and culture fourth, and unique individuals fifth.” Any religious view of human nature that isolates the human being from the forces of the physical, chemical, biological, psychological and cultural world has already created a view of human nature that is bound to generate ethical values that will either suppress human nature or jeopardize human survival. Up until now, the consequences of these views of human nature, while being tragic to millions of human beings, has not eliminated the human species. With the power of modern technologies to make survival-threatening changes to human existence because these changes can occur globally, crossing political boundaries and human generations. Human beings simply cannot escape the consequences of their individual or collective actions. While the effluence of human action in the past made local and transient changes in environment, only rarely did they lead to the extinction of the following generations. Today, we, as a world that is using knowledge and technology, guided by short-term and non-scientifically-derived values, which have powerful global and cross-generational, consequences, can jeopardize human existence. In other words, today, we can, indeed, suffer the “effluence of our affluence”. By that, it is meant that the selfish and short-term individual benefits one might get out of using technology could come back and effect our long-term health and
Scientific concepts of human nature and their implications to bioethics...

“We have modified our environment (physical and abstract) so radically that we must now modify ourselves in order to exist in this new environment” (Norbert Wiener)

survival. One needs only to look at what the abundance of inexpensive food and the misuse of the types of food have done to the current generation of adults and children of America.

3. Cybernetic View of Human Nature

Norbert Wiener provides us with the insight for this model: “We have modified our environment (physical and abstract) so radically that we must now modify ourselves in order to exist in this new environment.” Any world view that holds the human beings are resistant to the forces of nature that cause other living creatures to become extinct and we can somehow escape the consequences of our actions, not only biologically, but socially or culturally, is a world view that has helped to create the crises we find ourselves today. Humans have adapted to the changes in their environment in the past, in part because those changes are inevitable and more recently, but more recently because of human intervention.

It has been said, in one form or another by many, “Men build walls, but walls build men”. Previous pre-human and early human actions and their detritus had ecologically-repairable and “biologically-degradable” consequences and, with minor exceptions, did not have long lasting effects on the human environment. Today, our human ideological and technological detritus is long lasting and not as socially or biologically-degradable [e.g., religious dogma; the pesticide DDT; radioactive fallout]. We cannot escape the consequences of our actions. This is illustrated by Jose Delgado when he stated: “Similarly, it may be humiliating to find that our personality is formed by a constellation of elements borrowed from our ancestors and from our environment, related to stereotyped ideological, behavioral, and cultural systems, and dependent on a continuous stream of sensory inputs. This is also a scientific fact, however, which we must accept and adapt to. The concept of individuals as self-sufficient and independent entities is based on false premises and may be the origin of our misunderstandings, frustrations, and failures.”

To use “absolute” ethical values from a non-scientific view of human nature, even though it is well known to have consequences on the survival or quality of life of those human beings, and to absolve that moral stance on the immoral consequences of that act, creates a crisis in moral hypocrisy. To use scientific knowledge to control deaths in newborns [Sterile handling of newborn; use of antibodies, drugs; nutrition; etc], but not to use knowledge/technology to con-
Scientific concepts of human nature and their implications to bioethics…

“Humans, today, do create an image of the nature of our human nature”

4. Bio-Symbolic View of Human Nature

E. Cassirer’s statement accurately portrays another aspect of human nature: “Man is... no longer a physical universe, man lives in a symbolic (abstract or ideological) universe.”

Pre-humans, those whose daily consciousness was little different that those of animals [like a deer caught in the headlights of a car], were “trapped” by the immediacy of the present and not conscious of the past or not able to create a symbolic future. Humans, today, do create an image of the nature of our human nature. If the symbolic view places humans above the forces of the physical, chemical, biological, psycho-social and culture worlds, our view of human nature will, of course, help to generate ethical values very different from those symbolic views of human nature based in scientific examination and scientific rigor of experimental testing. To show that human DNA can be damaged by environmental agents, that can cause mutations known to occur in bacteria, lower organisms and non-human primates [which is a scientific fact], should make it clear that we must establish a more realistic view in our symbolic view of human nature that could help generate more ethical values for both human survival and a more equitable quality of life for all.

5. Biocultural-Evolutionary View of Human Nature

H. Horowitz, a molecular biologist, conceptualizes this view in this way: “For not only is man himself a part of nature, a naked ape in the current idiom, but he is a naked ape in a universe that is decaying to a homogenized nothingness. Any philosophy of man or any theology that is not adjusted to this particular loss of innocence is simply ignoring the intellectual scientific milieu in which modern man must function.”

This is the bottom line. Can we, as human individuals or as global human society, continue to ignore the fact that the disconnect between the use of powerful scientific knowledge and technologies and the non-scientific views of human nature will only continue to exacerbate our current problems and create new moral dilemmas? Our best hope under this situation is, at best, “miserable survival” for most human beings. Or as Rene Dubos stated: “Man makes himself through enlightened choices that enhance his humanness.”
Bioethics

With these models of human nature at the focus of our consciousness, we can now, I believe, understand that there is a philosophical option to ethical monism and ethical laissez-faire relativism. And that would be Bioethical pluralism. In essence, it states that science and technology can contribute to moral resolutions in these levels: (1) options it provides human beings for survival beyond just “miserable survival”; (2) predictions of the consequences of these options on human survival, the quality of life during that survival; (3) the understanding of our biological nature and of the consequences of the different value choices on the quality of that survival. It forces us to explicate our values and it helps us understand which values maximize or minimize, in any particular case, human survival and the quality of life.

Before one can try to resolve individual ethical issues, not only those associated with the narrow view of “bioethics”, such as: “Ought we clone human beings from embryonic stem cells?” “Ought we use human embryonic or adult stem cells for regenerative medicine?” “Ought genetic engineering be permitted to remedy genetic disorders?” “Ought the information gained from the human genome project be used for insurance screening?” etc., but for the larger, “deep, global bioethical issues”, it is necessary to understand both the nature of the ethicist and the ethical process. Classical moral philosophy and moral theology have basically ignored both of these critical elements in making ethical decisions. Within the classical framework, it was only necessary to develop an internal consistent logical framework of ethic principles that “stand alone” or are independent of the human being’s process of making those ethical decisions and the short and long term consequences of those decisions. In other words, ethical principles are seen as absolute and logical derivatives of first principles. Pejorative labels are normally given to those ethical systems that try to take into account the consequences of “relativistic” or “consequential” ethical systems.

Dr. Van R. Potter, as a cancer biologist, recognized that human beings are, as are all living creatures, inextricably linked to their environments and subject to all those same forces of the natural world that has led to the evolution or extinction of biological species. He, as others, knew that there were two major components of making any ethical decision, namely, the “factual” component and the “value or ethical” component. What we determine as “facts” was, in the West, the purview of science. Science’s job is to deter-
mine the “is’s” of the natural world, while philosophers and theologians were to determine the way the world “ought” to be. Facts, therefore, are thought to be “objectively” determined, while the moral “values” must be intuitively obvious, to be given by holy writs, or by religious or “spiritual” insight. Facts, as they are determined by the scientific enterprise, will always be, at best, incomplete and at worse, dead wrong. Naïve views of scientific facts were thought to be “value-free”.

On the other hand, values are not determined as “right” or “wrong”, nor can there be any objective calculus to determine which ethical value choice is “correct” or “incorrect”. Do these ethic values stand-alone from either the ethicist or from the feedback of the short or long-term consequences of the ethical choice? Dr. Potter’s answer is definitely not. If the “Naturalistic Fallacy” is bankrupt, as is any “scientism” view of moral values, namely, that ethic values can be derived from facts, then are we saddled with the current Western legacy of the mutual exclusive domains of science and of philosophical/theological thought? Cannot there be some integration of our ideas of “facts” and “values”, since philosophers of science and scientists themselves are in agreement that all facts are “value-laden”? In addition, at least some ethical philosophers agree that moral values are not independent of the human making the value choice or of human experience or “facts”. Therefore, if there is not a real mutual-exclusive distinction between “facts” and “values”, it is philosophically untenable to claim that neither scientific or philosophical/theological ways of knowing can claim exclusive domain of one or the other component of ethical decision-making.

The consequence of this modern way of viewing ethical decision-making is what Dr. Potter was thinking when he coined the term, “Bioethics”33-35. The idea that individuals with knowledge should not use that knowledge as “shamans” but to use knowledge to assist in a manner to reduce human suffering and to maximize a sustainable environment for all to survive in a manner better than a “miserable survival mode”.29 His first step outside the realm of his expertise as a cancer scientist and on his way to flesh out his “bioethical” philosophy was when he coined the phrase, “humility with responsibility”.36 How then can one start to understand “bioethics” if one can no longer adhere to the mutual exclusive domains of facts and values, between the “is” and the “ought” or to a scientism that claims the “oughts” can be derived from the “is’s”? Dr. Potter’s view was that if philosophers and theologians continue to ignore, if not arrogantly defy, what modern
Science is saying about the oneness of all human beings. We are at first all biological creatures; second, we are all earthlings; third, we are all social animals with individual genetic abilities and potentials; fourth, we are subject to the forces of nature; and fifth, we are culturally and experientially pluralistic in the way we live, think and feel. We are, therefore, setting ourselves up for continued human conflicts, human misery and suffering.

Only by either the total education of all human beings of these facts of our universal common biological and social needs or the re-symbolic transformation of the religious symbols and philosophical tenets that help shape the moral behavior of the different pluralist/cultural world views, can there be hope to bring about a radical change from the destructive consequences of traditional philosophical/theological ideologies that have used powerful scientific facts and technologies in unethical ways. With the use of the education option being almost hopeless to overcome the unethical use of knowledge and technology by those who use it for short-term personal benefit at the expense of the short and long term detriment of the other human beings and of ecological sustainability, can there be a way to avert this current state of our “politics”? This current state of affairs is best described by the old adages of: “Them that gots, gets!” or the classic definition of the “Golden Rule”: “Them that gots gold, get to rule!” One of Dr. Potter’s dreams was to educate Pope John to the biological nature of the human species. His view of Pope John’s enormous platform of influence, of his charisma, and of his symbolic influence of moral persuasion, was that the Pope could reduce the misery and suffering of hundreds of millions of people by the transformation of the religious symbols that generated his moral authority. He felt that this was the most efficacious manner by which political, religious, sports and entertainment idols, to whom millions of individuals used as moral role models, could help put the world on a more “global bioethical” course.

Dr. Van R. Potter’s thought evolved in time from a simple, almost naïve concept of “Bioethics”, to a more scientifically-grounded Global Bioethics and then to a more sensitive way of knowing, Deep Global Bioethics.
Scientific concepts of human nature and their implications to bioethics…

“Bioethics is not just the ethics of medical interventions. It is not just the ethics of human decisions on the environment. It must strive for a sustainable and stable biosphere, one in which each individual could find dignity in their station in life”

est scientific view of human nature. Therefore, if one cannot educate or coerce a scientific view of human nature on everyone, how can all the different religious and philosophical world-views be made to generate the same or universal ethical values?

His solution was to have each religious mythology integrate into the ethical-generating symbols scientifically-sound principles of human nature and our relationship to an ever-changing ecological and cultural world. It was not a matter that Buddha, Jesus, Mohammed, or any other religious-value generating role model, be replaced, but that this value-generating myth symbol must be able to evoke “scientific role modeling behavior”, to have the religious leaders of each religion interpret the ancient myth stories to provide the easy to understand concepts that would allow the believers to share a universal view of human nature would be a more pragmatic solution to our current problems. This is not to suggest that this is, in itself, an easy solution to all the crises on the whole human-biological eco-system. After all, can one imagine educating the current world religious leaders, current global politicians, current global economic/cultural “movers and shakers”?

Whether the crises we are experiencing are those that have always existed or are new because of the ignorant and unethical misuse of knowledge and technology, we must find ethical means to deal with the world-wide overpopulation issue; the suffering of billions of people due to polluted air and water, lack of food, education and of self-dignity, the eroding ecosystems needed to sustain both biota and humans, the continued generation of national conflicts, wars, and of terrorism. These issues dwarf any bioethical issues due to modern medical science, including “cloning human beings from stem cells.”

Bioethics is not just the ethics of medical interventions. It is not just the ethics of human decisions on the environment. It must strive for a sustainable and stable biosphere, one in which each individual could find dignity in their station in life. At the bedrock bottom, human nature has both an interacting genetic and cultural component. Human genetics makes human consciousness possible. Human consciousness makes possible an almost infinite number of cultural environments. These cultural environments, in turn, shape human consciousness. However, because the genetic component of human nature is rather limited in comparison to the conscious component, it is imperative that the cultural manifestations of our consciousness (which includes our ethical and moral concepts) take into
account the aforementioned realities of our human nature. Both self-interests and societal interests, rather than being seen as competitive and mutually exclusive, should be seen as the reality of our human nature. As it has been correctly extrapolated from Potter’s view of Bio-ethics, Grinnell et al. have stated:

“At the bedrock bottom, human nature has both an interacting genetic and cultural component”

That is because not all of the cultural manifestations or cultural environments that we create will allow humans to adapt and survive in a manner that will ensure human dignity and the survival of the human species. Until and unless these fundamental ideas are integrated into religious, philosophical and political ideologies, there will not be a hopeful solution to the current and pending human/ecological crises.

References