Ethics Based on Science Alone?

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The Association of Baha'i Studies
San Francisco
August 11 – 14, 2011

Published in *Studies in Baha'i Philosophy*
Volume 4, 2015.

1: Introduction

In 2010, Sam Harris published The Moral Landscape: How Science Can Determine Human Values in order to demonstrate that values, ethics, morality do not require more than an empirical basis.[1] There is no need for any appeal to a transcendental God, prophets or holy books in order to establish a viable system of personal and social ethics. Moreover, by using the sciences – particularly physiology and neurosciences – as a basis for ethics, we would be able to develop a universal morality true for all humans by virtue of our common nature, and certain by virtue of its empirical foundations. Scientific research would eliminate 'guesswork' and 'opinion-swapping' in ethics.

In the following paragraphs we shall very briefly examine the history of similar attempts in Western philosophy. This information is not added for cosmetic purposes, but rather to provide a historical perspective on the concept of a purely empirical and science based ethic, not only in regards to philosophical critiques but also in regards to the actual application of such ideas in modern history.

In modern times, there were at least three attempts, i.e. Kantianism, utilitarianism and Social Darwinism to disengage ethics from any form of theism and transcendentalism and to establish ethics on a purely rational and empirical foundation. The most illustrious early predecessor of Harris's project is Kant's work in developing a purely rational ethic that rejects any reliance on transcendental i.e. non-empirical beings. In the Preface to Religion Within the Limits of Reason Alone (1793), Kant writes,

So far as morality is based upon the conception of man as a free agent who, just because he is

free, binds himself through his reason to unconditioned laws, it stands in need neither of the idea of another Being over him, for him to apprehend his duty, nor of an incentive other than the law itself, for him to do his duty. At least it is man's own fault if he is subject to such a need; and if he is, this need can be relieved through nothing outside himself [2]

The gist of these statements is clear: "morality" is independent of everything except reason which is the basis of all moral injunctions; ethics does not even rely upon God. If we are to devise a system of ethics it must work strictly within the empirical realm and must have no other basis than reason. In this book, Kant goes even further than he did in Critique of Practical Reason in which he says that the idea of God is a practical necessity for an ethical system although this does not give us "the least encouragement to run riot into the transcendent."[3] As a transcendent being, God has no place in ethics.

Utilitarianism is another predecessor of Harris's project. Broadly speaking, utilitarianism is often encapsulated in the phrase 'the greatest good for the greatest number' which sets up a standard for making moral judgments on clearly empirical grounds. As Jeremy Bentham, the founder of this school, says, the moral good conforms to the:

the greatest happiness or greatest felicity principle . . . which states the greatest happiness of all those whose interest is in question, as being the right and proper, and only right and proper and universally desirable, end of human action . . . [This forms the] . . . standard of right and wrong, by which alone the propriety of human conduct, in every situation, can with propriety be tried. [4]

Although Bentham speaks of "happiness" in general, his ideas focus more on pleasure which he believed we could measure empirically by means of his "hedonistic calculus" (or "felicific calculus") on a quantitative scale including such factors as intensity, duration, predictability (certainty) and purity, i.e. the absence of later pain. Mill, however, centers his deliberations on "happiness," a far more encompassing term than 'pleasure.' He writes:

The creed which accepts as the foundation of morals, Utility, or the Greatest Happiness Principle, holds that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness.[5]

Mill associates happiness with "well-being" [6] which is also something we can measure empirically in order to build a moral system. "Well-being," as we have noted before, is Harris's chosen basis for morality. [7] Mill differed from Bentham insofar as Mill thought there were qualitative differences between experiences. Some pleasure or happiness is of a higher quality than others and, therefore, more desirable. "It is better to be a human being dissatisfied than a pig satisfied; better to be Socrates dissatisfied than a fool satisfied."[8] As we shall see, Mill's doubts about the hedonistic calculus also point to some problems with "well-being."

More direct efforts to link science and ethics started after the publication of Darwin's Origin of the Species in 1859. Although Darwin himself never involved himself in these issues, attempts to adapt the theory of evolution to personal and social ethics were widespread throughout Europe. The "social Darwinists" as they were known applied the principle of the "survival of the fittest" to the analysis of poverty and other social ills, usually to point out that the lower classes were less "fit" than their superiors. According to such social Darwinists, it was wrong from a scientific point of view, to help the poor since doing so merely helped the "unfit" to propagate and weaken the social fabric. Other social Darwinists followed Darwin's cousin, Francis Galton, to establish eugenics with its goal of preventing 'inferior' people from reproducing and thereby 'diluting' the human gene pool. 'Inferiors' included not only those with obvious physical and mental disabilities, but also other races (so-called "scientific racism"), various ethnic groups, criminals, and social "undesirables" in general. Eugenics was highly popular and had a wide following throughout Europe, Britain and the Commonwealth as well as in the U.S. and Canada.

Social Darwinism, which sought to build a personal and social ethic on the basis of science, had its most terrible fruit in the Third Reich where its theories were applied to the mentally and physically handicapped, to international politics as well as to 'inferior' races. We shall examine this more closely later, but for now, it must be recalled that a purely science-based ethic played an important role in these horrific events. In addition, it should be pointed out that Marxism also attempted to build ethics on both 'hard' sciences such as chemistry, biology, economics and history. Such ethics were an integral part of "scientific socialism." In terms of how human beings were treated, the results were no better than in Soviet Russia than in the Third Reich.

Before we proceed to examine the arguments regarding naturalistic ethics, it is important to define our two key terms – ethics and science- as precisely as we can. Ethics is the study of what is right or wrong, allowed or disallowed, good or evil, just or unjust, virtuous or blameworthy. It helps us understand and clarify our obligations i.e. the things we 'ought' to do, which is to say, our duties, and explains why these certain acts are imperative and not merely optional. In short, ethics are prescriptive i.e. they tell us what we must do and under what circumstances we must do it. They are not descriptive, i.e. their chief purpose is not to describe the past or current actual practices or choices of various societies, cultures or sub-cultures. Although such information may be highly useful to ethical studies, it is tangential to ethical studies, more a matter of sociology and cultural anthropology than ethics per se. Ethics also evaluates our actions according to some standard. An important sub-branch of ethics is meta-ethics which focuses on different kinds of ethical theories, how they are justified and by what authority, as well as the meaning of ethical terms. For example, does the statement "Murder is wrong" mean the emotional statement "Boo, hiss on murder!" or does it mean "Murder violates God's command" or "Murder does not usually serve social well-being"? The answer depends on the ethical system being applied.

Traditionally, ethics have been closely associated with religion – although this is not to say that every ethical system is necessarily based on religion. This is clearly recognized by ‘Abdu’l-Bahá who also acknowledges that those following such systems may do much good. The virtues of these humanly devised belief-systems notwithstanding ‘Abdu’l-Bahá sees them as deficient in a significant way:

Now, today, we meet with people in the world who, in truth, desire the universal good, and who according to their power occupy themselves in protecting the oppressed and in aiding the poor: they are enthusiastic for peace and the universal well-being. Although from this point of view they may be perfect, if they are deprived of the knowledge and love of God, they are imperfect.[9]

In other words, ‘Abdu’l-Bahá accepts that people can independently develop positive ethical systems and practices within a worldly perspective yet he finds these systems “imperfect” because they lack “the knowledge and love of God.” What they lack is something that no humanistic or scientific ethic that denies the Transcendent can have – the authority of God.

Before proceeding, it should be noted that “the knowledge . . . of God” entails the understanding that God’s authority is based on His position as the Source and final cause of everything that exists. This ‘authority’ covers two senses of the word, ‘power to command’ and ‘legitimacy’ or ‘right to command.’ As universal creator, God demonstrates His power or ability to command; insofar as there is no one who can replace Him without depriving the universe of its ground of being, i.e. harming all existence. The inherent problem of any purely humanistic and scientific ethic is the issue of whose authority will ground moral prescriptions? If we rely strictly on reason, we are, in the last analysis, left with no more than human opinions, with all of their attendant weaknesses. Such ethical reasoning is necessary but it is not sufficient to give moral imperatives the gravitas, firmness and certainty they need to earn compliance. This God is not, of course, the vision of God held by any particular religion, but rather an abstract concept we cannot get along without, a “regulative idea” as Kant put it, needed to complete an ethical system. As Kant already understood in The Critique of Practical Reason, a purely immanent and phenomenal ethics cannot work. God, even if we cannot prove His ontological existence, must at least be postulated to make effective value judgments possible by telling us what we should do and why and by whose authority.

From this we may conclude that attempts to devise an ethical system based purely on rationality and/or science is inherently incomplete.

In order to assess whether science alone can “determine human values”[10] we must be clear and precise about is meant by ‘science.’ Let us begin by noting that the word ‘science’ refers both to

a body of knowledge acquired in a special way and to the process by which such knowledge is acquired. This process, the scientific method, only studies phenomena that:

1) are physical/material,

2) are susceptible to empirical direct or indirect observation by the humans senses or instruments,

3) are measurable or quantifiable,

4) are results of repeatable experiments or observations,

5) are observer independent, and

6) are disprovable by observation and/or experiment.

Knowledge derived from this method can be interpreted into various kinds of testable theories that are often modified as new information is gathered. No scientific claim or theory is exempt from this although some theories have been so well-established that efforts to disprove or modify them have virtually ceased. Of course, each area of study must adapt the scientific method to its own particular material.

A problematic area is the so-called 'soft sciences' such as psychology and sociology which cannot meet all the standards of the scientific method of the so-called 'hard sciences' because their subject matter is not suitable to that method. How, for example, can we precisely define attitudes like "social frustration" and quantify them in anything more than a general, i.e. statistical way?[11] Some of this data is not repeatable, not clearly objective and may not even be observer independent. Consequently, there is much room for professionals to arrive at contrary conclusions - which, indeed, they have. In regards to physical psychology, neuroscience has remedied some of these problems but as we shall see major difficulties remain.

Finally, before we plunge into our subject, it is important to clarify again that we do not deny that science in some cases has a part to play in ethical decision-making. Sometimes, science can, indeed, provide invaluable information about a problem; this is most obvious but by no means confined to medical ethics. However there is a vast difference between claiming that science can

assist our decision making with valuable information, and saying that the scientific method can in and of itself tell us whether an action is 'good' or 'evil.' 'virtuous' or 'blameworthy.' That is something humans must decide in a process that may include science but will inevitably include other considerations as well. Science may be necessary but it is not sufficient.

2: Problems

The most obvious difficulty with Harris's belief that scientific, empirical knowledge is the only valid form of knowledge is that it is self-refuting. No scientific experiment could either prove or disprove that claim. Thus, the empiricist claim cannot meet its own standard for validity – which is a weak start for any proposal. However, we must be careful how we interpret this. It does not invalidate science per se as some allege or make science into a form of 'faith' but it does leave the door open to other ways of knowing about reality. Whether or not science should – or even can – incorporate these other ways of knowing into a coherent philosophy of science is beyond the scope of this essay. What we can conclude for now is that the validity of these other ways of knowing are, at least in principle, 'on the table.'

Among contemporaries, Harris, Sheehan,[12] Rottschaeffer[13] and others wish to establish ethics on a strictly empirical, i.e. scientific foundation, one based on experimentation and observation. This goal brings them into collision with a problem that some other ethical systems – such as Kant's deontological ethics – do not encounter. This is the famous distinction between facts and values. The problem is that if we wish to establish a strictly empirical system of morality, it is necessary to close the gap between empirical facts which are established by the scientific method and human values which are the products of human judgments about those facts. From a purely empirical perspective, valuation is something that we bring to the facts; the facts themselves do not give us an evaluative judgment, although they do give us the material for such judgments. For example, nothing in the strictly empirical evidence from a body sprawled on the sidewalk allows us to establish that this death is 'sad,' 'wrong' or 'evil.' Such moral evaluations are not scientifically testable because moral values are not physical, measurable, physically observable, observer independent, objective or disprovable.' No coroner's report will say that certain physical evidence shows the moral evil of this death. How could the scientific method even begin to investigate the 'evil' nature of such an event? How could scientific criteria or experimentation establish the moral 'rightness' (or 'wrongness') of picking a flower or the 'duty' (obligation) to save a child from drowning? Moral values – obligations, good, evil, degrees of permissibility – are simply not proper scientific objects, i.e. they are not suited to discovery or exploration by the scientific method.

It is important to note that we must not confuse the process of reaching ethical judgments with the sociological and psychological study of the judgments that people make. The first of these is the subject of this essay. The latter study measures the popularity of opinions, and the intensity with which they are held and does not measure the moral value of the act per se. The fact-value distinction is clearly at work. The fact that a certain opinion has a popularity rating of 80%

cannot in itself make that opinion morally right, i.e. provide moral guidance. Morality is not a matter of popularity, but rather of having certain attributes that make an action 'right.' The scientific method cannot measure 'rightness.'

Harris is fully aware of this difficulty which is why he claims that "the divide between facts and values is illusory."[14] He states that "the division between facts and values is intellectually unsustainable especially from the perspective of neuroscience."[15] The problem here is self-evident: a brain scan, even of the most positive state of mind imaginable, is still only a brain scan, an objective piece of scientific data subject to all the limitations of the scientific method. Nothing in the data provided by the brain scan itself tells us whether this state of mind or state of brain or the action that accompanies it is morally 'good,' 'allowable,' 'virtuous' or 'blameworthy.' Nothing in the brain scan itself can instruct us whether we should are obligated or have a duty to avoid or cultivate such acts or their correlated states of mind. If moral obligation or duties are proper scientific objects, then what, for example, are their measurable attributes? This problem is not just a matter of awaiting future refinements in fMRI technology; rather the problem is intrinsic to the machinery itself. fMRI machines are not designed to detect moral evaluations because such evaluations do not meet the criteria of being scientific objects, i.e. they are not physical, measurable, physically observable, observer independent, objective or disprovable. Brain scans alone cannot tell us whether or not actions are moral or immoral.

The same problem undermines Harris's argument that:

science can, in principle, help us understand what we should do and should want – and, therefore, what other people should do and want in order to live the best lives possible.[16]

The problems here are almost self-evident. How can one set up a scientific experiment to determine the moral 'rightness' of an action or intention? Sociological and psychological studies can only determine what people currently think or plan, but not ethical correctness itself. What can a brain scan tell us about the moral properties of its correlated act? There is simply no data in the scan or in the physical brain itself that tells us an act is good or evil. A positive scan may be correlated with acts of kindness – in a Mother Teresa – or with acts of terror – in an Osama bin Laden. The scan itself shows no preference. Therefore, how could brain scans obligate us to do anything? What measurable attributes does it have that imposes an 'ought' on us, i.e. require or compel us to make certain moral choices? What are the physical characteristics of such an obligation? Can we actually see it in the brain scan itself? Only a moment's reflection is needed to understand that the concept of 'obligation' or 'should' or 'ought' simply is not relevant to brain scans.

Of course, science can tell us that people who have a lot of type X brain scans tend to be a lot physically healthier than people who have a lot of type O's. However, science cannot tell us why

we are morally obligated to prefer type X scans, why we 'ought' to, or why it is our 'duty' to facilitate type X scans in as many people as possible. Interestingly enough Harris admits as much: "Science cannot tell us why, scientifically, we should value health."[17] In effect, he concedes that science has nothing to say about moral valuations or obligations and, thereby, undermines his own thesis. It seems clear that if "scientifically" speaking there is no reason to value something as self-evidently important as health, then the there is not much hope of building an ethical system – with all its complex questions – on science alone. For example, how can it help with the more complex stories such as "Transplant."[18] Five people are dying, each from the failure of a different organ. Also in the room is one healthy man with a minor complaint. Are we justified in killing the healthy man and using his organs to save five others? What about the greatest good – or well-being – for the greatest number? No brain scan has even the slightest relevance in answering such a question. Or, "Liar," a story often played out in 20th century history: you believe in always telling the truth, but one night, you are hiding an innocent man from unjust persecutors. The police come and ask if you have anyone in your house. Most people would probably lie (or like to think they would) but the real point of recounting this story is that no conceivable scientific experiment has the slightest bearing on the morality of your act. Science is simply not intended or equipped to answer these kinds of questions.[19]

The modern formulation of this difficulty came from David Hume who objected to the way some moral treatises moved from an 'is' or 'is not,' i.e. from a matter of fact to an 'ought' or 'ought' not, i.e. from an empirical fact to a moral prescription.[20] According to Hume – and numerous other philosophers since then – a description of facts cannot logically lead to a moral prescriptions obligating us to accept certain acts as 'good.' Violating the 'is-ought' distinction is precisely the error of social Darwinism which believes that because we observe a struggle for existence in nature, our society, which is embedded in nature, ought to be modeled on this struggle. Yet no such imperative can be found in any empirical examination of the natural facts. This obligation to imitate the struggle for existence is not inherent in the facts themselves; rather, it is something we bring or attach to the facts externally. Nor does anything intrinsic to the facts require us to evaluate them as 'good' or 'right' or 'allowed.'

Harris tries to brush aside the 'is-ought' problem, claiming it as "another dismal product of Abrahamic religion"[21] – an ironic claim since Hume himself was a strict empiricist; indeed, Harris finds this problem so troublesome that he moves the detailed discussion into the footnotes. In an effort to show the intimate connection between 'is' and 'ought' or facts and values, he says that even a truth-claim about the composition of water appeals "to the values of empiricism and logic."[22]

This argument has three problems. First, as noted above, the values we attach to "empiricism and logic" are not intrinsic in them; only after we decide to value certain kinds of knowledge, do we assign them instrumental value as the best way to gain the knowledge we value. It is our

judgment that gives them value and nothing else. Second, if as Harris and others claim, there is no real distinction between fact and value or 'is' and 'ought,' then the values must be inherent in the facts i.e. empirically, scientifically, discoverable. Such a claim, however, would violate the scientific method which cannot study non-physical realities. From a logical and empirical point of view, Harris et al can say no more than that values are connected to facts by virtue of our choice to make such a connection, not because of any inherent link between them. Third, the scientific or epistemological value assigned to "empiricism and logic" is obviously a different kind of from the moral values discussed in ethics which concerns judgments of right and wrong, good and evil, as well as obligations and permissibility. Harris is comparing apples and oranges. Elsewhere he quotes Dennett who writes, "If 'ought' cannot be derived from 'is,' just what can it be derived from?"[23]

That question is exactly the heart of the problem for empiricists – if the empirical facts of nature cannot logically serve as the foundation of morals, what can? The inability of empirical facts alone to provide a foundation for ethics puts a variety of options on the table including Kant's deontological ethics, virtue ethics and various forms of theistic ethics.

3: 'Is' to 'Ought' in Theistic Systems

In contrast to empiricist ontologies, the 'is-ought' problem does not necessarily exist in theistic ontologies. The reason is obvious: empiricism does not allow us to find more in nature that what can be known by the five senses or instruments. Whatever cannot be known by the scientific method is simply not there. Empirical study will not discover 'obligations' or 'duties' or moral prescriptions or any other non-material factors in the objects or events of the world. Consequently, it is impossible to cross the logical barrier between 'is' and 'ought,' or between 'descriptions' of what is and 'prescriptions' of what should be. At best, any attempt to link an empirical fact with a moral prescription is an illustration employed to improve communication with an audience. We might say that people of different races ought to co-exist peacefully just as black and white doves do.[24] But this is pure embellishment and has no logical argumentative value and certainly implies nothing about a spiritual dimension in reality. It is a pleasing simile, nothing more and cannot be the basis for a prescription. The link between the example and the lesson is merely accidental, an 'add-on' that has no intrinsic connection to the subject at hand.

However, if we are able to "awaken spiritual susceptibilities"[25] in ourselves, the situation is quite different. Then we will be able to perceive "the spiritual significance of all things[]"[26] and be able to recognize that the created material world reflects "spiritual realities"[27] or "ideal realities"[28] that allow us to "become informed of the mysteries of the world of significances."[29] This "spiritual significance" is not merely in the eye of the beholder; it is an ontologically real aspect of things. Bahá'u'lláh says:

Whatever is in the heavens and whatever is on the earth is a direct evidence of the revelation within it of the attributes and names of God, inasmuch as within every atom are enshrined the signs that bear eloquent testimony to the revelation of that Most Great Light. Methinks, but for the potency of that revelation, no being could ever exist. How resplendent the luminaries of knowledge that shine in an atom, and how vast the oceans of wisdom that surge within a drop . . . all things, in their inmost reality, testify to the revelation of the names and attributes of God within them. Each according to its capacity, indicateth, and is expressive of, the knowledge of God. [30]

Bahá'u'lláh makes it clear that there is more to reality than what is empirically perceptible, i.e. the "signs . . . of that Most Great Light." Indeed, there are spiritual signs embedded in physical reality that directly reveals the "names and attributes of God" which appear in all things to an appropriate degree and upon which physical existence depends. In other words, these signs are ontologically real – even though they are not detectable by empirical methods. Through the signs and knowledge revealed or instantiated in His creations, God makes His will known to a degree consistent with humankind's abilities to understand. (For example, structure and function in a single cell may be seen as a reference to a source of cosmic order.) Therefore, it is not necessarily a logical error to extract an ethical argument, i.e. an 'ought' or a prescription, from a natural fact, an 'is.' A particular argument may be due to its own inherent flaws but in itself the procedure of reasoning from an 'is' to an 'ought' in a universe preternaturally charged with spiritual significances is valid. Consequently, prescriptions based on natural facts are grounded in an ontology that gives spiritual – in this case, ethical – significance to natural facts. The ethical significance of a natural fact reflects "spiritual realities"[31] that are not available to empirical analysis. Thus, spiritually speaking, there is an intrinsic connection between the subject matter and the moral to be learned. Natural facts have "spiritual significance"[32] which is not just a pleasing but fictitious analogy but is, rather, ontologically real, like "the luminaries of knowledge that shine in an atom."[33]

Through the signs and knowledge revealed or instantiated in His creations, God makes His will known to a degree consistent with humankind's abilities to understand. (For example, structure and function in a single cell may be seen as a reference to a source of cosmic order.) Precisely because nature is more than empirically knowable reality, theists may legitimately reach conclusions that transcend the limits of strictly empirical analysis. Of course, theists may disagree about which specific moral imperative may be taken from certain natural facts, but that does not invalidate the effort to go beyond mere material knowledge.

Here is a particular example. 'Abdu'l-Bahá states:

For Christ declared, "Love your enemies, ... and pray for them which ... persecute you; that you may be the children of your Father which is in heaven: for he maketh his sun to rise on the evil and on the good, and sendeth rain on the just and on the unjust."[34]

From this natural example, he extracts a moral lesson, an 'ought,' an obligation, a prescription for human behavior. We are to be like the rain and offer good to everyone. From an empiricist perspective, this is an illogical violation of the 'is-ought' distinction simply because the behavior of doves has nothing to say about human obligations. Such a moral lesson cannot be found in the empirical facts of the case. However, in Bahá'í ontology, the constituents of creation are filled with spiritual significances and doing so does not violate the 'is-ought' distinction.

Of course, it might be argued that 'Abdu'l-Bahá simply uses rain as a convenient illustration just as an empiricist might. However, for an empiricist, this illustration is at best a clever and pleasing analogy; there is no intrinsic connection between the example and the lesson drawn from it. The connection is purely accidental. Consequently, the example and lesson have no intrinsic authority, i.e. no more authority than the quality of the argument in which it is used. This is not true of theism. 'Abdu'l-Bahá's use of this natural illustration is grounded in an ontology that gives spiritual – in this case, ethical – significance to natural facts. The ethical significance of the illustration reflects "spiritual realities"[35] that are not available to empirical analysis and requires the development of our inherent and uniquely human "spiritual susceptibilities."[36] Therefore, 'Abdu'l-Bahá's example is not merely a pleasing embellishment but points to a real ethical truth. From this it follows that there is an intrinsic connection between the subject matter and the moral explicated by 'Abdu'l-Bahá'

Of course, all this is not to say that God created rain solely for the purpose of teaching humans about doing good to all. .Rain, like anything else, has other reasons for being, but, it also performs a spiritual function for those who are spiritually awake.

4: Well-Being

Harris believes that the concept of 'well-being' can solve most problems surrounding scientific ethics. This concept, he claims, make it possible to build a scientific ethics that can be objectively demonstrated to be valid for all human beings in the past, present and future. Central to his thesis is the view that well-being which is "the only thing we can reasonably value . . . must at some point translate into facts about brains and their interaction with the world at large."[37] These "facts about brains" and behaviors can be objectively observed, measured and, in the case of brain responses, can be subject to experiment. Elsewhere he adds:

Questions about values – about meaning, morality, and life's larger purpose – are really

questions about the well-being of conscious creatures. Values, therefore translate into facts that can be scientifically understood[38]

Furthermore:

Meaning, values, morality and the good life must relate to facts about the well-being of conscious creatures – and in our case, must lawfully depend upon events in the world and upon states of the human brain.[39]

Because brain states can be studied scientifically with instruments like fMRI's, Harris believes that science can make decisions about what is ethically right or wrong. fMRI's make it possible to gain objective knowledge about which brain states are correlated with well-being and which are not. In his view, 'good' is whatever leads to well-being. In addition, because values in themselves are the "set of attitudes, choices, and behaviors that potentially affect our well-being as well as that of other conscious minds,"[40] the study of brain states can also help us to identify positive values worth striving for. In other words, we decide what is good or bad by its effect on ourselves and/or others.

This project of a science-based ethic has at least five serious difficulties. First, it turns Haris's own argument against itself. If well-being is the measure of morality, then there is no clear reason to abandon religion, and with it, a religious basis of ethics. Religion as a phenomenon has lasted through five millennia of recorded history, and has provided countless human beings with a sense of meaning and significance, a sense of being cared for by superior beings, a sense of comfort and a source of personal strength. The fact that this phenomenon makes no reasonable sense to Harris et al, and may be based on lies and deception, is utterly irrelevant to its positive effects including its positive effects on brain scans. So why would we rid ourselves of something that has added so much to our well-being? The obvious reply is that religion also causes an enormous amount of misery – but this argument is weaker than it looks. If religion causes more misery than comfort, it would have lost its survival value, i.e. its evolutionary viability and been replaced by something else. Our human ancestors had to be very practical about survival. Obviously there is something about religion that makes it worthwhile, i.e. it generates a 'positive surplus' in well-being that encourages us to keep it. To put it in Harris's neuro-scientific terms, religion provides more positive than negative brain scans! This argument, based on evolutionary survival can, in itself, support the idea of keeping religion as a net-benefit to humankind.

Second, is the problem with the claim that "Values, therefore translate into facts that can be scientifically understood."[41] The problem is that something vital is lost in the translation. The scientific method which is designed to provide quantitative knowledge cannot deal with qualitative differences among various kinds of values and meanings. For example, a positive brain scan may be obtained from dedicated Christians or Bahá'ís and from dedicated members of the SS or Stalin's NKVD all of whom believe they are doing self-sacrificial good for their own

society and humankind at large. However, no one would disagree that there are absolutely decisive qualitative differences between these beliefs. This method, by virtue of its inherent nature, cannot access these differences. It can measure all the outward manifestations of these beliefs but it cannot measure and evaluate these beliefs in themselves and, therefore, misses essential qualitative aspects of ideas and human experience. Clearly, all the facts about human existence cannot be understood by the quantitative scientific method. As we shall see below, the whole issue of "qualia" i.e. the qualitative aspects of experience and consciousness is an insoluble problem for this materialist concept of values.

The third problem concerns 'well-being' itself. Well-being is a result, i.e. a consequence of other actions, and, like all desired outcomes, is often subject to the hazards of worldly circumstance over which we have relatively little control. In short, well-being is hostage to the world. This makes it extremely vulnerable and, therefore, an unstable foundation for ethics. However, we are in control of our intentions and of our attitude towards the world. As Bahá'u'lláh says:

My first counsel is this: Possess a pure, kindly and radiant heart, that thine may be a sovereignty ancient, imperishable and everlasting.[42]

This inner standard makes us independent of the vicissitudes of the world, and, in that sense, sovereign over it. We can cultivate the virtue of detachment, one of the key Bahá'í values. 'Abdu'l-Bahá says:

Our greatest efforts must be directed towards detachment from the things of the world; we must strive to become more spiritual, more luminous, to follow the counsel of the Divine Teaching, to serve the cause of unity and true equality, to be merciful, to reflect the love of the Highest on all men, so that the light of the Spirit shall be apparent in all our deeds, to the end that all humanity shall be united, the stormy sea thereof calmed, and all rough waves disappear from off the surface of life's ocean henceforth unruffled and peaceful. [43]

In other words, when we attain detachment from the world and the outcomes of our actions, we have become more open to spiritual influences because we are not pre-occupied with anything else. The mirror is clean for the light. This improves our ability to reflect spirituality into the world through our actions.

The fourth problem is Harris's admission that "what constitutes well-being genuinely open."[44] This decisively undermines his project. How, for example, can science help us choose among the numerous purely humanistic philosophies whose definitions of well-being are contradictory? How can we choose between Aristotle and Marx? Between Sartrean existentialism and Mill's utilitarianism? Between social Darwinism and Bloch's philosophy of hope? No experiment meeting the criteria of science, no conceivable amount of data can identify the best concept of well-being in any of these cases. Consequently, we cannot help but conclude that the inability to

provide scientific grounds to distinguish among these non-theistic alternatives weakens the force of Harris's project. We must also conclude that science does not offer a viable way of avoiding moral relativism – as he wishes to do[45] – insofar as it does not provide an neutral "archimedean standpoint" from which to make judgments among these philosophies and their associated values.

Of course, science may have consultative input to deciding the best way to meet our physicals needs, but as we rise to more complex B-needs such as the need for love, a social network and a sense of meaning, it becomes clear that science has nothing to add. Not only personal but also cultural and philosophical factors come into play, thereby preventing any clear scientifically attainable consensus on what well-being is at the higher level. For example, well-being for a male in ancient Sparta was to be a 'perfect' soldier, inured to incredible physical hardship, unquestioningly obedient to the state and his commanders right down to choice of mates and absolutely unflinching in battle. On the other hand, in Athens, well-being for a male meant not having to do physical work for a living, being an active, well-known and respected citizen, who could, if necessary be a soldier, and actively cultivating body and mind. There is no scientific way to say that one of these has more well-being than another because nothing in this choice is quantifiable. Brain scans will not help because they only report satisfaction level and not the nature of what we are satisfied with. What are we to do when various ways of achieving well-being are irreconcilable and clash? This is a vital issue because the 20th century was preoccupied with armed conflicts among programs for universal well-being. Each ideology – liberal democracy, Fascism and Communism – was fighting for the best way of life, i.e. the way of life providing the most well-being.

This leads to the fifth problem: 'What kind of questions can a science-based ethics answer?' Clearly, science can answer some questions related to human physical well-being insofar as it can determine the optimum requirements for bodily flourishing. In other words, science can solve problems related to the D or deficit needs of Maslow's hierarchy of needs which are valid for all historical times and places and fall within a "finite range of answers." What it cannot do, however, is tell us why we are obligated to meet the D-needs of others as long as we ourselves are looked after. It cannot tell us why we should look after the D-needs of the old, the sick, the handicapped of all ages, the criminal and otherwise socially divergent, or the foreigner. And the reason, as previously noted, is that the scientific method does not deal with obligations, with 'should' and 'ought' in regards to human action. This is not a matter of being unable to "resolve all questions of value," it is a matter of being unable to resolve any questions of value at all.

The foregoing observations point to the question whether neuroscience is even relevant to relevant to deciding ethical questions. In our view, this reliance is a misstep. After all, we do not judge people for their brain-states but for their overt acts or omissions, for their expressed attitudes, their spoken words – not for the acts they only imagine or contemplate or words they

think but did not say. Will brain scans actually add to or otherwise affect our judgments about the virtue or blameworthiness of an act or utterance? A brain state is what it is and as such entails no necessary moral judgments or conclusions. There is no ethical significance to these brain states in and of themselves. It may, of course, be argued that in some cases such scans are relevant because the person committing an act has a certain kind of brain deficit that does not afflict others. However, this does not change the moral quality of the act. Torturing a dog for pleasure is no less evil because the perpetrator has brain damage. Such damage may help explain why the act was performed and suggest society's responses to the crime, but it has no bearing on the moral nature of the act itself.

4: Well-Being and the Philosophy of Man

The foregoing discussion points out that well-being can only be defined in terms of our philosophy of human nature. We can only know what is genuinely good for people if we have an understanding of human nature, i.e. a philosophy of man. Only then can we identify what kind of acts ensure well-being for each kind of creature. Only when we understand human nature are we able to make decisions about what actually constitutes 'well-being.' This situation leads to a problem we have encountered before: how can science and the scientific method decide which philosophy of man best meets the needs of well-being? A materialist philosophy will insist that only measurable material factors be taken into consideration while a non-materialist philosophy will insist that spiritual factors must also be included. However, there is no scientific method of deciding between these two philosophies – and so we are left in the position of having to make a fundamental choice without the benefit of science, i.e. which philosophy best satisfies human well-being. This failure undermines Harris's argument about the powers of science in discourse about ethics.

Let us examine this subject of well-being and the philosophy of man more closely. It is evident that our philosophy of man will momentously affect our ethics. For example, a non-materialist philosophy such as seen in the Bahá'í Writings, will have clear consequences about the ultimate, i.e. 'super-natural' destiny and well-being of each person.[46] If we think we must achieve all our goals within the limits of the material world, our concept of what constitutes well-being, i.e. our physical and psychological needs and appropriate values and attitudes will be confined to the constraints of materiality. By way of contrast, a non-materialist philosophy of man recognizes that our lives do not end here, and therefore, ethical responsibility for our earthly actions does not end here either. Nor can such a philosophy restrict its concept of well-being, or goals, values or appropriate action to the material world. Thus, every action must be understood in the light of eternity, i.e. sub specie aeterni. From this it becomes clear that the materialists like Harris and Sheehan live in completely different existential world than a non-materialist. For example, sometimes, as in the extreme and tragic cases of martyrdom for the Faith, people have been required to weigh all earthly well-being against eternal well-being. To a materialist, such ethical considerations are meaningless.

Let us examine this ontological effect on ethics more closely. There are far-reaching ramifications to the belief that both matter and spirit comprise the universe and its constituents. The belief that all human beings are endowed with an eternal soul from God, adds an intensity of value to human beings, and such acts as charity, kindness in the face of adversity and patience with immaturity that cannot be provided by any merely philosophical considerations. The latter, however brilliant they may be, are the valuations of fallible men, whereas the former are the valuations of God, the Creator of all. The valuations of men lack the gravitas of God's valuations, they lack the ontological authority and legitimacy of a super-human Being Who knows human nature better than we ever can. Thus, philosophical injunctions alone lack the force of divine imperative, something recognized by Kant who found it necessary to postulate the existence of God as a "regulative principle" even after he (so he thought) had shown that all previous proofs of God were invalid.[47] The necessity for at least some divine imperatives is also supported by the existence of humankind's lower nature which, according to Bahá'u'lláh, is inclined to rebelliousness and impropriety when given too much liberty.[48] Given our lower animal nature, humans do not always act rationally, nor do all cultures value rationality alike nor do all people even strive for rationality as distinct from personal convenience for example, and, therefore, it is clear that ethics require a greater-than-human Source. Where appeals to reason are ineffective, appeals to authority must be relied on.

Having observed how our ontology affects our concepts of well-being and ethics, let us see whether the case for the materialist view of human nature is as strong as Harris and Sheehan allege. Both agree that "humans are purely physical"[49] and that we must find out "[w]hat morality must look like if humans are physical beings only."[50] The only significant difference between Harris and Sheehan is that Sheehan pursues this goal of "natural morality"[51] by studying evolution – in particular Richard Dawkin's theory of the 'selfish gene' – whereas Harris employs evidence from the neurosciences. Therefore, in regards to human nature, concepts such as 'soul,' 'mind' and 'spirit' do not refer to real things with genuine capacity for action. In Harris's view, the only salvageable term here is 'mind' which is really a confused reference to the scientifically measurable brain. 'Mind' in its traditional meaning is an unscientific chimera, as are 'soul' and 'spirit.' Harris, Sheehan and others are what 'Abdu'l-Bahá calls "materialists"[52] for whom "man is the body only."[53] Human nature is entirely physical and this limits their concept of well-being to what is measurably good: brain states, behaviors, physical health and well-being, pleasure, happiness and the like – anything that can be studied by neuroscience, psychology and sociology. Spirituality and moral concepts can only be studied by means of certain brain states and/or measurable social consequences. Two points are clear: this is a materialist philosophy of man and it is a reductionist philosophy. Spiritual experiences are stripped of their ontological and/or epistemological dimension and reduced to correlative brain states that are scientifically measurable. This inevitably distorts our understanding of them and leads us to false conclusions about human nature. The same is true of ethical judgments such as 'virtuous' or 'blameworthy.'

There are severe problems with this materialist view of humankind, so many in fact, that we can outline only a few directly relevant to Harris's theory and the Bahá'í teachings. For example, the materialist view of human nature asserts the identity of mind and brain. Indeed, such a view is known as the "identity theory"[54] of mind according to which brain and mind processes are one and the same. The most obvious logical difficulty here is best described by Leibniz' principle of the "indiscernbility of identicals"[55] according to which we should not be able to observe any differences between things that re identical. After all, what is the difference between water and H2O? The problem with identifying mind and brain is that mind or consciousness has numerous qualities that brain does not. This difference is easily illustrated by a brain scan of my memories of a Hawaiian holiday. The brain scan gives us none of the qualia, i.e. the experiential qualities of my memory – lights, sounds, smells, candlelight dinners and so on. Obviously these qualia are completely different in kind from electro-chemical actions in the brain. In fact, these qualia only constitute our minds, not our brains.[56] Even if we could trace the memory of a sunset to a particular set of stimulated neurons, the question still remains about why such electrical stimulation should be experienced as a hazy red or a pleasant sound. According to cognitive scientist David Chalmers:

no level of sophistication in understanding the physical aspects of the brain or behavior or cognitive processes such as learning and reasoning can bring us closer to understanding the qualitative aspect of the conscious mind.[57]

In other words, the problem of the brain-mind differences is not solvable in principle by the scientific method because it cannot deal with qualia in themselves or with the reasons for material processes manifesting as qualia in the mind. In fact, from a strictly material viewpoint, it is not clear why a conscious mind even exists place especially if, as Harris says, the mind is an epiphenomenon[58] and has no power of free will over our actions. However, if we do not need the conscious mind to act – why does it exist? Why would nature deceive us in this manner? We shall deal with this again below. In regards to accounting for the mind, Chalmers says:

Materialism is a beautiful and compelling view of the world, but to account for consciousness, we have to go beyond the resources it provides . . . materialism is false and [ ] a form of dualism is true.[59]

We reach the same conclusion that physical states are not mental states with their qualia by reflecting on the nature of 'meaning.' No amount of physical analysis of a book can ever tell us what it means. 'Meaning' is not reducible to marks on a page, chemical combinations or to electronic marks on a computer screen or to brain or computer processes. For meaning to appear or manifest in the physical world, brains or computers are needed, but they only know various brain or computer states and can tell us nothing about what these states actually 'mean.' In other words, for meaning to appear in the material world, brains and computers are necessary but not sufficient. Meanings are an example of what 'Abdu'l-Bahá calls "intellectual realities,"[60] i.e. non-sensible realities that are "perceptible to reason"[61] which is why "it hath become evident that reason is a spiritual faculty, not physical (or material)."[62] The mind is able to comprehend

meanings precisely because both mind-reason and meaning are non-material. From this we may conclude that mind is distinct from brain though associated with it in some way.

The same conclusion is attained by John Searle's now philosophically infamous "Chinese Room" experiment which is an up-dated version of "Leibniz Mill." Searle's argument posits a man sitting in a room; the man understands no Chinese whatever and has only an instruction book that tells what symbols to use under what circumstances. Simply by following the rules about what symbols must go together, the man can answer questions posed to him in Chinese without understanding a word of the language or the answers he gives. He knows the right physical actions but not the meaning of these actions. Like a computer or a human brain, he manipulates markers. The key observation here is that the operator could be replaced by mechanical or electronic parts, from which it follows that no mind at all is needed to make the Chinese Room work. This demonstrates that brain (the operator or his material replacements) and mind (which understands what it is doing) are not identical though related.

Another reason to think that mind and brain are distinct comes from evolution. If mind is identical to brain, why would conscious experience, i.e. mind even exist in the first place?[63] Why did the brain develop consciousness and its qualia and the universal human experience of being able to control our actions by means of will? (We shall see below how both Sheehan and Harris see consciousness as an epiphenomenon, a by-product of brain processes; it cannot control brain action at all.) Why would the evolutionary selective process continue to favor such an apparently ineffective delusion since the beginnings of humankind? The saliency of these question is high-lighted by the 'p-zombie' thought experiments.[64] (philosophical zombie) Let us suppose we planned to create a robot – a zombie – that behaves in all ways like a normal human being. If it is possible to build such a p-zombie, then obviously consciousness is not necessary since the p-zombie can do everything people can do without being conscious. This suggests that human beings do not need consciousness which demonstrates that consciousness or mind is, so to speak, an 'add-on' i.e. something extra, and is, therefore, not the same thing as the brain. Furthermore, consciousness is obviously not a by-product or epiphenomenon of the complex physical circuitry. This strongly implies that some form of mind-brain dualism is true. It also implies that the 'add-on' of consciousness is not material. On the other hand, if a p-zombie is impossible to make, two other consequences follow. First, consciousness is, in fact, necessary and Harris's and Sheehan's notion that it is a powerless epiphenomenon is false. Things cannot be necessary and powerless at the same time. Second, if the physical circuitry is not sufficient to create consciousness, it follows that consciousness must be an 'add-on' from outside the physical system, i.e. it must originate from a reality that is not physical, i.e. spiritual. This also implies that brain and mind are distinct which entails some form of mind-brain dualism. Thus, whether we can or cannot build p-zombies, the materialist outlook is caught on the horns of a dilemma. In either case, we demonstrate mind-brain dualism as well as the non-physical nature of the mind. Since from a Bahá'í perspective, mind is a power or capacity of the soul, the p-zombie thought experiment also demonstrates the existence and non-material nature of the soul.

These arguments – and there are others[65]– show there are good reasons to reject the materialist view of human nature, or, at least give serious attention to non-materialist alternatives. Brain and mind are not the same (though connected) and, therefore, humankind has both a physical and a non-physical nature. The Bahá'í Writings present this view.

'Abdu'l-Bahá agrees that the mind and brain are distinct. He says, "the mind has no place but it is connected with the brain."[66] Matter, of course, must have a place, and, the fact that mind, unlike brain, has none means that mind and brain cannot be identical.

We may reach the same conclusion by recalling that according to Abdu'l-Bahá, the soul includes the mind which is "a "power of the human spirit."[67] The "human spirit and the rational soul – designate one thing."[68] Since the mind is an aspect of the soul and the soul is distinct from the body, the mind must also be distinct from the brain. From these statements it is clear that the Writings have taken a side in this on-going debate between various groups of neuro-scientists and philosophers.

5: A Digression (Sort of . . .)

Interestingly enough, the Bahá'í Writings offer some suggestions as to how the brain and mind are related. However, it must be noted that these suggestions come from a philosophic viewpoint and are not scientific, i.e. the Writings explain the relationship in terms of general principles instead of specific, measurable processes. 'Abdu'l-Bahá states:

Know that the human spirit is one, but it manifests itself in various members of the body in a certain (measure or) form. The human spirit is existent in the sight (eyes); it is also existent in the brain . . . it is also existent in the heart, which organ is largely connected with the brain or the center of the mind . . .[69]

He also states that "the spirit is connected with the body, as this light is with this mirror."[70] According to this view, the body is the appearance or manifestation of the human spirit in the material world. This is the relationship between a model and its specific instantiation in a certain set of circumstances at a certain time; between an idea and its particular application; between a theme statement and its explication; or between the light in the sun and the reflected light in the mirror. In each case we have a primary source and its specific instantiation which manifests in something else. This harmonizes with the concept that the "the Kingdom is the real world, and this nether place is only its shadow stretching out"[71] or that the world is comparable to "images reflected in water."[72]

The Kingdom is the model of which the material world is a shadow.

More precisely, what these examples illustrate is the relationship between form and matter, insofar as the human spirit, of which the mind is a power, provides the form that turns a collection of amorphous matter into a specifically human body. This theory, known as hylomorphism, states that all things except God are a combination of matter and form and that form is the active principle that makes a matter into a certain kind of being. (Even the simplest matter has form; we can identify and mathematically describe different subatomic particles only because they have form. Without form there would be no way of distinguishing them experimentally or mathematically.) It should be noted, however, that Bahá'í hylomorphism has some unique features that differentiate it from Aristotelian or Thomistic hylomorphism but these distinctions play no role in this discussion. For our purposes we may conclude that according to the Writings, mind is the form of brain, just as the soul or spirit is the form of the body. This is why 'Abdu'l-Bahá says that the soul is not in the body and therefore does not leave at death. [73] It simply manifests itself elsewhere on a higher, non-material and spiritual plane. It has not 'gone' anywhere.

Another passage by 'Abdu'l-Bahá leads to the same conclusion. He says:

Some think that the body is the substance and exists by itself, and that the spirit is accidental and depends upon the substance of the body, although, on the contrary, the rational soul is the substance, and the body depends upon it. If the accident -- that is to say, the body -- be destroyed, the substance, the spirit, remains.[74]

Using the conceptual framework and language of Aristotle, 'Abdu'l-Bahá says that the soul i.e. "substance,"[75] essence or form has independent existence and confers existence on the body. Conferring human existence on a body requires giving it a particular, human form, i.e. a human essence; otherwise it could not exist as a human body. In other words, the relationship between soul (including mind) and body (including brain) is the same as the relationship as form to matter. By saying that the body is an "accident," 'Abdu'l-Bahá is once again using Aristotelian language to point out that the body is not necessary to the existence of the soul. The red on my cup, the position of my sitting dog are accidents; they can both be changed without my cup ceasing to be a cup or my dog a ceasing to be a dog. The body and brain can disappear but the soul and mind will continue.

6: "The Illusion of Free Will"

One aspect of the materialist philosophy of man stands out as particularly troublesome is the denial of free will. Sheehan, who espouses the traditional machine (or computer) model of human nature formulated by Hobbes and de la Mettrie, informs us tha:t

the determinism we see in the natural physical world, which must apply to all physical machines

including our human brains seems necessarily to preclude our having any true freedom of the will.[77]

Sheehan succinctly sums up the causality argument against free will:

If the state of one's brain is determined by physics from any moment to a moment hence, and if one's brain makes a decision between those moments, then the decision is determined by the physics that control the brain not by any source of volition.[78]

In other words, the principle of causality determines every event, and there is no agent who is not bound by causality and who can interfere with or manipulate the causal process. Without causal determination, rationality and science cannot exist because prediction would be impossible. Without prediction, there would be no rationality, since it is rationality that informs us of possible future consequences of our acts. Harris also employs this causal argument when he writes that "no account of causality leaves room for free will"[79] which he calls an "illusion."[80]

Harris agrees with Sheehan but pursues his argument mainly from the viewpoint of neuroscience, alleging that the experiments of Benjamin Libet show free will does not exist.

The physiologist Benjamin Libet famously demonstrated that activity in the brain's motor regions can be detected some 350 milliseconds before a person feels that he has decided to move.[81]

Harris and others interpret this to mean that the decision to move has been made by the subconscious before consciousness is even aware and can make a choice. He says, "Clearly, findings of this kind are difficult to reconcile with the sense that one is the conscious source of one's actions."[82] In short, despite their beliefs, humans are not conscious agents, i.e. have no free will.

Rather than delve into the various technical disagreements about what these findings mean[83], we shall focus on one, evolution-based objection to which we have already alluded in reference to the existence of consciousness itself. Why would evolutionary processes select in favor of a totally deceptive mechanism such as described by Libet in which we experience ourselves as effective agents when, in reality, we are not? If decisions are already made unconsciously, then why do we need even consciousness in the first place? Why do we waste precious energy on this charade when other aspects of our brains and/or bodies could make better use of the calories? Moreover, if the self-experience of being an effective agent is an "illusion" why has it endured

through hundreds of thousands if not millions of years of human evolution? When we view Libet's and Harris's interpretation of these experiments from an evolutionary perspective, it becomes self-evident that something about the experiments is either amiss or is not being understood correctly. Why would we evolve to think we are taking action when we are not? It would have been much simpler not to have evolved consciousness at all.

This position is strengthened when we realize that the vastly overwhelming majority of people experience themselves as conscious agents. Only a miniscule number of people experience themselves as robots controlled by their bio-chemistry or from the outside; such self-experience is usually associated with mental illness. Harris's and Libet's interpretation of the experiment violates common self-experience and the premises of all ethical, social and legal systems past and present so drastically that it cannot be accepted at face value. Of course, normally a common consent argument such as this is extremely weak , but in this case we are not discussing abstract intellectual issues, or facts about the nature or history. These are all external to individuals; however, our self-experience is internal to us and it is immediate. To claim that countless billions of human beings have been deluded in their daily, deepest personal self-experience is an extra-ordinary claim that requires extra-ordinary evidence. Neither Libet nor Harris provide this and, therefore, do not give us anywhere near sufficient reason to accept their claims.

For his part, Sheehan tries to deny free will on logical and evolutionary grounds.

He contends that "rational thought precludes free will"[84] because "one cannot expect to make a rational decision by identifying the best option, only then to freely choose some lessor [sic] option; that would be irrational."[85] In other words, to be rational we have no choice but to choose the best, i.e. most rational alternative. This argument leads to his evolutionary argument:

Why would the forces of natural selection ever prefer an animal that has the ability to discard the rational option, over an animal whose will is always bound to choose the course that is rationally deemed the best? The truth is, evolution would quickly eliminate any ability to choose freely in favor of a strictly deterministic and rationally motivated being.[86]

Evolution selects against the irrational i.e. those who do not always adopt the best, i.e. rational options. Nature does not see any value in free will since irrationality is not conducive to survival. There at least three problems with this claim. First, it makes the logical error of 'proving too much.' If Sheehan's theory were true, humans beings everywhere would be paragons of rationality; the existence of irrational choices and behaviors would be a rarity in human behavior –but we all know from our experience this is not the case. Indeed, for atheists like Sheehan, the very continued existence of religion is prima facie evidence against this theory. In addition, fads in entertainment, fashion and food, and a lot of advertisements would cease working if people were simply rational. Thus, prima facie evidence shows that evolution did not select for strict empirical rationality. In Sheehan's terms, this means humans are not determined by rationality,

but are free to act irrationally if they so choose.

The reason why brings us to the second problem with Sheehan's contention. Anyone who has ever been in serious physical danger – or viewed 2001: A Space Odyssey – understands that survival, and with it, the ability to propagate one's genes, often belongs to those who have a combination of good luck and a capacity to take 'crazy,' totally irrational chances. We see this in Bowman's ability to 'outsmart' the hyper-rational computer HAL to get back into the spaceship in order to regain control. Conversations with war veterans leads to a similar conclusion. Rationality is necessary but it is not sufficient for survival, especially in extremely volatile situations. Evolution did not select for rationality alone but also for luck and a certain capacity for irrationality. Not surprisingly, this is exactly what we see around us and in ourselves. We are all people who have varying aptitudes for rationality, a certain amount of good luck as well as an ability to act 'crazy.' In other words, the best survival odds are with humans who can be rational but who have the flexibility to over-ride their rational faculties when necessary. In Sheehan's terms, this means that humans are not absolutely determined by rationality and are free to act irrationally if they choose to do so.

This leads us to the foundational flaw in Sheehan's thinking, i.e. the premise that "rational thought precludes free will." Why should it? There is no inherent attribute in rationality itself that makes it impossible for us to choose something else or even not to choose. This is because our intellect and our will are not the same faculties; our intellect may think one thing but our will may desire something else, i.e. the classic head and heart conflict. As we have seen in the examples above, just because we are sure an act is rational does not mean we are automatically compelled to do it. Logic and practicality are not always the same things, as Kant demonstrated in Critique of Pure Reason when he rejects God theoretically but accepts Him as a practical necessity.

Interestingly enough, the Bahá'í Writings agree with Sheehan and Harris that nature is entirely deterministic. 'Abdu'l-Bahá writes:

All material phenomena are subject to nature. All material organisms are captives of nature. None of them can deviate in the slightest from the law of nature.[87]

This means that laws such as the law causality hold true and that nothing in nature can escape this law. Elsewhere he says:

All creation below the kingdom of man is the captive of nature; it cannot deviate in the slightest degree from nature's laws.[88]

It makes no difference whether these laws are classical or statistical, matter is bound to obey

them. Humankind, however, is an exception because, as we have seen in discussing the differences between brain and mind, we are more than bodies. The physical body, is a "material phenomenon" and is subject to the laws of nature but the power of the soul and mind is not. 'Abdu'l-Bahá refers when he states:

there is a power in him [man] which is beyond nature, for it is capable of breaking and subduing the laws of nature. If this power were not supernatural and extraordinary, man's accomplishments would not have been possible.[89]

In the Tablet to August Forel, he states:

that inner faculty in man, unseen of the eye, wresteth the sword from the hands of nature, and giveth it a grievous blow. All other beings, however great, are bereft of such perfections. Man hath the powers of will and understanding, but nature hath them not. Nature is constrained, man is free.[90]

At this point we may clearly discern why the philosophy of mind and the philosophy of man is so important. If we accept that mind and brain are identical and that man is a purely physical being, then we must agree with Sheehan and Harris that freewill is an illusion. The brain, after all, follows all bio-chemical and physical laws of causality and these, in turn, determine thought and feeling. On the other hand if we reject the concept of brain-mind identity and, thereby, the materialist view of human nature as logically untenable, free will is saved because the soul is a supernatural agent who is not subject to the laws of nature. Such freedom from the laws of nature is an absolute necessity for the will to be free.

'Abdu'l-Bahá summarizes the Bahá'í position on free will as follows:

Some things are subject to the free will of man, such as justice, equity, tyranny and injustice, in other words, good and evil actions; it is evident and clear that these actions are, for the most part, left to the will of man. But there are certain things to which man is forced and compelled, such as sleep, death, sickness, decline of power, injuries and misfortunes; these are not subject to the will of man, and he is not responsible for them, for he is compelled to endure them. But in the choice of good and bad actions he is free, and he commits them according to his own will.[91]

Elsewhere he says:

Man, however, though in body the captive of nature is yet free in his mind and soul, and hath the mastery over nature . . . yet his soul and mind interfere with the laws thereof [of nature][92]

Clearly, the Bahá'í philosophy of man does not espouse a 'triumph of the will' insofar as free

will does not extend over all aspects of our existence. Certain physical necessities and processes as well as circumstances limit or even completely negate our powers to choose. However, the Writings say "[t]he truth is that God has given to man certain powers which are supernatural. How then can man be considered a captive of nature?"[93] If we are not "captive[s] of nature" then obviously the laws of causality do not apply to the spirit, and, therefore the spirit is free, i.e. an agent acting in the world. Among other things, while we cannot will these necessities and accidental events away, we are able to choose our manner of responding to them, in ways that are good or evil, in ways that reflect our spiritual nature or not, in ways which do or do not serve our well-being and the well-being of humankind. In short, we are certainly free when it comes to spiritual-ethical matters. We are free to choose to manifest our "Divine nature . . . [as] . . . shown forth in love, mercy, kindness, truth and justice."[94] We are also free from nature insofar as master some aspects of it through the development of science and technology.

The Bahá'í Writings elaborate this freedom in another way. 'Abdu'l-Bahá says:

In man there are two natures; his spiritual or higher nature and his material or lower nature. In one he approaches God, in the other he lives for the world alone. Signs of both these natures are to be found in men. In his material aspect he expresses untruth, cruelty and injustice; all these are the outcome of his lower nature. The attributes of his Divine nature are shown forth in love, mercy, kindness, truth and justice, one and all being expressions of his higher nature. Every good habit, every noble quality belongs to man's spiritual nature, whereas all his imperfections and sinful actions are born of his material nature.[95]

Humankind is not limited to a physical or material nature – which is all the scientific method and its instruments recognize. By focusing exclusively on our physical nature, science only concerns itself with the lower aspects of human nature, specifically, those parts subject to causality and the instincts of animals. This misrepresents human nature insofar as it creates a reductionist, i.e. partial, and, therefore, inaccurate portrait of us; it also ignores those aspects which are "supernatural" and free of physical causality. Consequently, it is difficult to see how science alone could serve as an adequate basis for ethics. How could it appropriately assess what our true well-being is, or what our ethical responsibilities are?

Having misrepresented humankind, science is also unable to help us with situations in which our physical and our spiritual well-being clash. For example, at a time of financial distress, we find a wallet containing a large amount of money. We face a choice of material advantage or well-being by keeping the wallet or spiritual growth by returning it to its rightful owner. The scientific method offers no way of settling the issue. Examining brain scans to see which choice stimulates the most pleasure or even mere satisfaction or the least anxiety will not help us to decide which response is morally right. Brain scans have nothing to say about the virtue of honesty or other ethical information. All they can tell us is which act gives more satisfaction or pleasure, or less anxiety – but those are not moral judgments unless we choose to equate pleasure with moral rectitude. But that only raises the question of what scientific evidence could possibly

support such an equation? Here, too, the scientific method fails us. Finally, it should be noted that even if we reject the concept of spiritual well-being and even the concept of a soul, science could not help us with the problem of what to do with the wallet.

If this example is too homely, we can try a hot potato like abortion. What conceivable experiment or brain scan could help decide between the well-being of the mother and the well-being of the child? A brain scan showing that the mother is happier or less anxious with one option than another works only if we equate happiness with moral correctness or low anxiety – and there is no scientific way of proving that equation is morally correct. It must simply be assumed. Nor is moral correctness always a cause of happiness or satisfaction; indeed, it may be quite painful. Once again, we see that there is no inherent connection between well-being and morality.

7: Utilitarianism/Consequentialism

Another serious difficulty with Harris's project of making science alone the foundation of ethics is the utilitarianism implicit in his concept of well-being. He writes that "in the moral sphere, it is safe to begin with the premise that it is good to avoid behaving in such a way as to produce the worst possible misery for everyone."[96] This is the converse of the utilitarian principle of providing 'the greatest good for the greatest number.' Harris admits that his views on well-being "commit[] [him] to some form of consequentialism."[97] Consequentialism, a form of utilitarianism, maintains that 'good' or 'bad' can only judged by the consequences that follow an action. Whatever enhances well-being is good and whatever does not, is bad. Both utilitarianism and consequentialism differ from other systems of ethics which are based on such principles as obeying God i.e. divine command theory; doing our duty regardless of consequences; respecting others and their rights; or acquiring virtues.

One of the obvious problems for utilitarian and consequentialist statements is that they do not tell us much. No system of ethics strives for "the worst possible misery for everyone" or seeks to avoid 'the greatest good for the greatest number.' All ethical systems aim at achieving 'well-being' for as many as possible – it is their concepts of what well-being is and how to achieve it differ dramatically. Thus, in themselves the utilitarian and consequentialist principles add nothing new to discourse in ethics.

What gives Harris's consequentialism its distinct meaning is the insistence that well-being must

be scientifically measurable and must be attainable strictly through empirical means. In other words, well-being shall be measured an index of bodily health, by psychological determinations of mental health and, of course, by brain scans. This will provide the objectivity for the "moral realism"[98] required to establish a universally valid morality. He desires a global ethics that is valid for everyone and will also apply to all cultures at all times and in all circumstances. He does not think customs that negate well-being should be excused for 'cultural' or religious reasons.

Using science as a tool to determine values creates problems for Harris's consequentialism. The first of these is that ethics cannot be judged only by their results, i.e. whether or not they create well-being. Assessing results may be necessary although Kant's deontological ethics deny that results have any relevance at all – but it is not sufficient insofar as it leaves out some of the most important aspects of ethics: intent and purity of motive. The truth is that we do not have such complete control over the often volatile vicissitudes of life that we can fairly judge an action without considering intent and purity of motive as well as result. In short, science alone cannot be a basis of ethics.

The problem for Harris's theory is that neither intent nor purity of motive are scientifically and objectively measurable. Nor are they available to all observers, falsifiable, or repeatable. In order to deal with this problem we are either forced to withdraw the scientific criterion from ethics or we are forced to water down our definition of 'science' to accommodate our inability to measure intent and purity of motive. Both these options undermine Harris's project.

Just as science cannot measure intent and purity of motive, it cannot determine the nature of justice. How, for example, can the criteria of the scientific method establish whether or not a certain distribution is 'just'? Or whether a certain law is 'just.' To define 'just' as 'equal' does not solve the problem because we must then use science to prove that 'equality' is justice – and science lacks the means to do this without falling into an infinite regress. This means that to judge a certain action as 'just' we must first establish we must bring to the table certain pre-scientific assumptions or axioms about the nature of justice. In other words, science alone is not capable of establishing an ethic.

It is also evident that consequentialism cannot solve moral conflicts between the well-being of the one and the many. For example, scientifically obtained data cannot provide us with ethical guidance about deciding whether we should interfere in other people's lives for their own good? Using utilitarianism and consequentialism criteria of the greatest good or well-being for the greatest number, we could justifiably force people to stop smoking, get a gym membership and use it each day, eat only the healthiest food, drive smaller cars, read only great classics and watch only art films to improve their minds and so on. This raises two issues. First, it is doubtful that scientifically established well-being can help us balance individual and collective rights in this

case, even though from a strictly scientific viewpoint we could justify any of these measures to enhance well-being in a measurable way. No scientific measure can weigh the integrity and inherent dignity of a human being against the well-being of a collective. Yet this question is one we often confront in proposed legislation in modern times.

8: Conclusion

While there may be a few agreements between the Bahá'í Writings and the project to build a scientific ethic, these agreements are peripheral rather than substantive. For example, the Bahá'í Faith shares the goal of a 'universal ethic' insofar as it teaches that "All men will adhere to one religion, will have one common faith, will be blended into one race, and become a single people."[99] This approximate agreement is not enough to overcome numerous substantive differences.

We are left with the question of whether science has a role in ethical debate. If science insists on retaining the scientific method as currently formulated, then it is clear that science's role in ethics will be very limited. At most it will be able to supply facts to an ethical debate, but at no point will it be able to actually render an ethical decision on its own ground. It simply doesn't deal with such issues as good, evil, justice, intent, purity of motive, spiritual well-being all of which are the substance of ethics. To do so, science would have to abandon materialism and re-invent the entire scientific method. Given its success in its own areas, there is little reason why it should do so.

Footnotes

[1] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values*. New York: Free Press, 2010.

[2] Immanuel; Kant, *Preface to Religion Within the Limits of Reason Alone,* trans. by Theodore M Greene and Hoyt M Hudson, http://www.hkbu.edu.hk/~ppp/rbbr/toc.html

[3] Immanuel Kant, *Critique of Practical Reason,* trans by Thomas Kingsmill Abbott, Chpt. 1, http://philosophy.eserver.org/kant/critique-of-practical-reaso.txt

[4] Jeremy Bentham, *An Introduction to the Principles of Morals and Legislation,* p. 11. This note was added to Chapter 1 by Bentham in July, 1822.

[5] John Stuart Mill, *Utilitarianism*, London, Longmans, Green, 1901. p. 9; emphasis added.

[6] John Stuart Mill, *Utilitarianism*, p. 33, 88.

[7] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values,* p. 2.

[8] John Stuart Mill, *Utilitarianism*, p. 14.

[9] 'Abdu'l-Bahá, *Some Answered Questions,* p. 302 – 303.

[10] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values.*

[11] Jared Diamond, "Soft Sciences Are Often Harder Than Hard Sciences," Discover, August, 1987.

[12] Evan Louis Sheehan, *The Laughing Genes,* p. 1 – 11.

[13] William A. Rottschaeffer, "Scientific Naturalist Ethics" in *Science and Ethics,* ed. by Paul Kurtz, p. 285 – 305

[14] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values,* p. 14.

[15] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values,* p. 24.

[16] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values,* p. 28; original emphasis

[17] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values,* p. 37; original emphasis

[18] Julia Driver, *Ethics: The Fundamentals,* p. 131.

[19] Harris tries to dismiss the question about "why the well-being of conscious beings ought to matter to us" (p. 32). He says he does "not think anyone sincerely believes this kind of moral skepticism makes sense" (p. 32). He misses the point of the question which is not to doubt that well-being is worthwhile but to show that science cannot establish the moral 'goodness' of this goal – which he admits several pages later, saying "Science cannot tell us why, scientifically, we should value health" (p. 37).

[20] David Hume, *A Treatise of Human Nature, Book III,* Part I, Section 1.

[21] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values,* p. 38.

[22] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values,* p. 203.

[23] Daniel Dennett, quoted in Sam Harris, T*he Moral Landscape: How Science Can Determine Human Values,* p. 196; original emphasis.

[24] As ‘Abdu’l-Bahá, does in *The Promulgation of Universal Peac*e, p. 45. However, as we shall see below, there is more here than embellishment or good communication.

[25] ‘Abdu’l-Bahá, *The Promulgation of Universal Peac*e, p. 7.

[26] ‘Abdu’l-Bahá, *Paris Talks*, p. 98.

[27] ‘Abdu’l-Bahá, *The Promulgation of Universal Peace*, p. 302.

[28] ‘Abdu’l-Bahá, *The Promulgation of Universal Peace*, p. 303.

[29] ‘Abdu’l-Bahá, *The Promulgation of Universal Peace*, p. 303.

[30] Bahá’u’lláh, *Gleanings from the Writings of Bahá’u’lláh*, XC, p. 177.

[31] ‘Abdu’l-Bahá, *The Promulgation of Universal Peace*, p. 302.

[32] ‘Abdu’l-Bahá, *Paris Talks*, p. 98.

[33] Bahá’u’lláh, *Gleanings from the Writings of Bahá’u’lláh*, XC, p. 177.

[34] ‘Abdu’l-Bahá, *The Promulgation of Universal Peace*, p. 86.

[35] ‘Abdu’l-Bahá, *The Promulgation of Universal Peace*, p. 302.

[36] ‘Abdu’l-Bahá, *The Promulgation of Universal Peace*, p. 7.

[37] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values,* p. 11.

[38] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values*, p. 1.

[39] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values,* p. 6.

[40] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values*, p. 12.

[41] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values*, p. 1.

[42] Bahá’u’lláh, *The Arabic Hidden Words,* # 1.

[43] ‘Abdu’l-Bahá, *Paris Talks,* p. 87.; emphasis added.

[44] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values*, p. 12. emphasis added.

[45] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values*, p. 45.

[46] The Bahá'í Faith does not believe in a hell of never-ending punishment, but it does teach eternal spiritual evolution or improvement which entails facing and understanding our earthly actions to the fullest extent possible

[47] Immanuel Kant, *Critique of Pure Reason*, chpt. 1.

[48] Bahá'u'lláh, *Gleanings from the Writings of Bahá'u'lláh*, CLIX, p. 335.

[49] Evan Louis Sheehan, *The Laughing Genes,* p. 5.

[50] Evan Louis Sheehan, *The Laughing Genes,* p. 5

[51] Evan Louis Sheehan, *The Laughing Genes*, p. 5

[52] 'Abdu'l-Bahá, *The Promulgation of Universal Peace*, p. 240.

[53] 'Abdu'l-Bahá, *The Promulgation of Universal Peace*, p. 239.

[54] Ian Ravenscroft, *Philosophy of Mind*, p. 45.

[55] Ian Ravenscroft, *Philosophy of Mind*, p. 45

[56] Richard L. Gregory, *The Oxford Companion to The Mind*, p. 488.

[57] "Consciousness Resurrected" by Guven Guzeldere in *Philosophy Now,* Issue 36, June/July 2002, p.14.

[58] An epiphenomenon is a secondary phenomenon (mind) related to a primary phenomenon (brain). The epiphenomenon cannot affect the primary phenomenon.

[59] David J. Chalmers, *The Conscious Mind*, p. xiv – xv.

[60] 'Abdu'l-Bahá, *Some Answered Questions*, p. 186.

[61] 'Abdu'l-Bahá, *Tablets of 'Abdu'l-Bahá*, Vol.1, p. 208.

[62] 'Abdu'l-Bahá, *Tablets of 'Abdu'l-Bahá*, Vol.1, p. 208.

[63] Where and how did matter get the capacity to develop such a thing?

[64] For a general discussion of p-zombies, see David. J. Chalmers, *The Conscious Mind* and http://plato.stanford.edu/entries/zombies/

[65] For example, see Mortimer J Adler, *Intellect: Mind Over Matter*.

[66] 'Abdu'l-Bahá, *Some Answered Questions,* p. 242.

[67] ‘Abdu’l-Bahá, S*ome Answered Questions,* p. 209.

[68] ‘Abdu’l-Bahá, *Some Answered Questions,* p. 208.

[69] ‘Abdu’l-Bahá, *Tablets of ‘Abdu’l-Bahá,* Vol. 1, p. 102.

[70] ‘Abdu’l-Bahá, *Some Answered Questions,* p. 239.

[71] Selections from the *Writings of ‘Abdu’l-Bahá* p. 178.

[72] Selections from the *Writings of ‘Abdu’l-Bahá* p. 178.

[73] ‘Abdu’l-Bahá, *Some Answered Questions,* p. 239.

[74] ‘Abdu’l-Bahá, *Some Answered Questions,* p. 239.

[75] The word ‘substance’ has two meanings here. It does not mean ‘material stuff.’ First, in its main Aristotelian sense, it means something that can exist by itself, independent of other things; e.g. my cup exists independently of my pens, lamp and books. Second, ‘substance’ means the ‘essence’ of something, in this case, humankind. The cup also has an essence, i.e. a character or nature that makes it a receptacle for liquids. Without this essence, it would not be a cup just as without the soul, a collection of matter would not be a human body. The soul-essence informs matter so that it takes on human form just as the essence dictates the ‘form’ of the cup. ‘Form,’ ‘substance’ and ‘essence’ are thus interchangeable terms.

[76] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values,* p. 102.

[77] Evan Louis Sheehan, *The Laughing Genes: A scientific Perspective on Ethics and Morality,* p. 210.

[78] Evan Louis Sheehan, *The Laughing Genes: A scientific Perspective on Ethics and Morality,* p. 212.

[79] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values,* p. 104.

[80] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values,* p. 102.

[81] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values,* p. 103.

[82] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values,* p. 103.

[83] There are several interpretations of Libet’s findings that are consistent with free will.

[84] Evan Louis Sheehan, *The Laughing Genes: A scientific Perspective on Ethics and Morality,* p. 222.

[85] Evan Louis Sheehan, *The Laughing Genes: A scientific Perspective on Ethics and Morality*, p. 222.

[86] Evan Louis Sheehan, *The Laughing Genes: A scientific Perspective on Ethics and Morality*, p. 231.

[87] ‘Abdu’l-Bahá, The Promulgation of Universal Peace, p. 258.

[88] ‘Abdu’l-Bahá, *The Promulgation of Universal Peace*, p. 241.

[89] ‘Abdu’l-Bahá, *The Promulgation of Universal Peace*, p. 360; emphasis added.

[90] ‘Abdu’l-Bahá, Tablet to August Forel, p. 11.

[91] ‘Abdu’l-Bahá, *Some Answered Questions,* p. 248; emphasis added.

[92] ‘Abdu’l-Bahá, Tablet to August Forel, p. 10; emphasis added.

[93] ‘Abdu’l-Bahá, *The Promulgation of Universal Peace*, p. 17; emphasis added.

[94] ‘Abdu’l-Bahá, *Paris Talks*, p. 60.

[95] ‘Abdu’l-Bahá, *Paris Talks,* p. 60; emphasis added.

[96] Sam Harris, *The Moral Landscape: How Science Can Determine Human Value*s, p. 39.

[97] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values*, p. 62.

[98] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values*, p. 2.

[99] ‘Abdu’l-Bahá, *Some Answered Questions*, p. 65.