

THE NATURAL GOD: A GOD EVEN AN ATHEIST CAN BELIEVE IN

by Joel I. Friedman

Abstract. In this paper, I attempt to dissolve the theism/atheism boundary. In the first part, I consider last things, according to mainstream science. In the second part, I define the Natural God as the Force of Nature—evolving, unifying, maximizing—and consider Its relation to last things. Finally, I discuss our knowledge of the Natural God and Its relevance to our personal lives. I argue that we can know the Natural God through scientific reason *combined* with global intuition, and that this knowledge, from the perspective of last things, may help us achieve universal love, ethical action, and personal salvation.

I first consider last things: the end of the physical universe, the end of the earth, the end of human life on earth, and finally, the end of me. I consider these last things from the point of view of mainstream science, because I take it as fundamental that science still gives us the most reliable and accurate picture of the natural world over any other alternative. Science gives us an anchor in reality. Thus, in the first part of this paper I emphasize what contemporary science tells us about these last things (as well as first things). In the second part I develop my conception of the Natural God, a god even an atheist can believe in. This conception is developed within the framework of the scientific world view put forth in part one. Finally, in the third part I discuss our knowledge of the Natural God and Its relevance to our personal lives.

LAST THINGS ACCORDING TO CONTEMPORARY SCIENCE

The end of the universe. Before I talk about the end of the physical universe, I want to say something about its beginning. According to mainstream scientific cosmology, the current form of the universe evolved from an event dating back in time about ten to twenty billion

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years. This initial event is conventionally known as the big bang. The evidence for the big bang is substantial, including the spectral red shift indicating recession of the galaxies, and observations indicating a background radiation with mean temperature for the universe about three degrees Kelvin. Thus, the picture we get from scientific cosmology is of an expanding universe which began with a big bang—an amazing scientific discovery.

Let us now consider the end of this big-banged universe. There are two major scenarios according to current cosmology. First, the universe will continue to expand forever with the galaxies getting farther and farther apart from each other until the universe lapses into a state known as heat death. This is a kind of end. As the galaxies continue to recede, they will all gradually dissipate their heat. According to the second law of thermodynamics, entropy tends to increase until there is less and less order, less and less organized structures. There will remain *on the average* only weakly vibrating molecules, or less. This is heat death. No life is practically possible under such conditions. Matter will continue to recede forever, and Cold will be King. Fortunately, it will take billions and billions of years for true heat death to occur.¹

The second major scenario is that the universe will stop expanding after a certain point, billions and billions of years from now, and will begin to contract. The galaxies will begin to head back toward us and each other, so that eventually they will begin rushing headlong into each other. This will finally end in what is known as universal collapse. Everything, even the atom, will lose its structure in the ensuing gravitational crush. Gravity will be King. Here the name of Albert Einstein looms large, since his gravitational theory (general relativity) *predicts* universal collapse or heat death (Einstein [1920] 1962, 105-13; also Infeld 1949; Rees & Peebles 1980).

Which end our universe will meet depends on the mean density of matter in it. If the mean density is above a certain critical value called ρ , then universal collapse is guaranteed. On the other hand, if the mean density is less than ρ , then heat death is guaranteed. According to current cosmology, the mean density of *visible* matter is far below ρ . That is why it is so important to know how much *invisible* matter there is in the universe (e.g., interstellar matter, intergalactic matter, neutrinos, and black holes). Scientists are continually searching for this "missing matter."

To summarize, according to mainstream scientific cosmology, our universe will end billions and billions of years from now either in heat death or in universal collapse; and no matter how advanced our technology might be, it could only postpone our fate. We are thus bound for total extinction, along with every other macro-object in the universe.

The end of the earth. Before discussing the end of the earth, let me make one statement about its beginning. The earth, as well as the other planets, according to mainstream astronomy, was probably formed from a gaseous mass which condensed and began orbiting the sun around five billion years ago (the Kant-Laplace hypothesis).

As for the end of the earth, current astronomy tells us that our sun has enough hydrogen fuel to last for another five or more billion years, maintaining itself through the process of hydrogen fusion. Hydrogen atoms fuse into helium atoms, giving off thermonuclear energy. Since there is a finite amount of hydrogen in the sun and since the fusion process is irreversible, there must come a time when all or most of the sun's hydrogen will have fused into helium. At that point the sun's processes will radically change. Helium will start fusing massively into heavier elements. The sun will no longer be a stable star but will instead become so hot it will begin to expand, eventually engulfing the earth. In other words, the earth will burn in sunfire, not hellfire.

Note that the end of the earth in no way implies the end of human life. Our technology might be so advanced by that time, assuming we survived so long, that we could easily migrate to other stars and colonize the planets we found there, or even colonize the space near such stars. We could use star energy, as well as planetary or asteroid material, for our survival. Gerard O'Neill of Princeton University thinks we could migrate 10,000 at a time (O'Neill 1982, 122-23).

Thus we see there is a great difference between the end of the physical universe and the end of the earth. In the first case, our technology could do nothing to prevent the end of human life. In the second case, our technology could do a great deal to give us a new life on other star systems.

The end of human life. Again, before considering the end of human life, let us first consider the beginning. According to contemporary biology, all life, including human life, evolved from unicellular organisms. As Charles Darwin taught us, this evolution takes place by natural selection. There has been a four-billion-year evolution of life, a four-billion-year *progress* from the amoeba to the philosopher, as Bertrand Russell once noted. However, it is the philosopher who makes this judgment, says Russell; the amoeba might be of a different opinion. In any case, unicellular organisms in turn evolved from organic molecules, and these in turn evolved from inorganic molecules. With the cracking of the genetic code and the determination of the structure of the DNA molecules carrying the code, together with measurements of "genetic distance" (a kind of evolutionary molecular time clock), this view of evolution has become even more probable than before (see Dobzhansky et al. 1977).

Note that a key theme running throughout all empirical science is evolution. According to current natural science, there is physical evolution, biological evolution, and human evolution. According to current social science, there is cultural evolution, technological evolution, and perhaps evolution of consciousness. Thus, evolution is one of the greatest ideas in all empirical science. Those fundamentalists who speak against it betray the most appalling ignorance of the real world. They turn the Bible into a baby blanket of comforting pseudoscience instead of focusing on the *wisdom* it really contains. The Bible is not a scientific document, and the people who wrote it were simply unaware of evolution.

Considering now the end of human life, it is clear from previous considerations that the end of earth does not imply the end of human life, so long as humans develop a technology which allows for migration to other star systems. Fortunately, we have five billion years or more to develop this technology. However, one may legitimately question whether human life will survive the next five years on this planet, or even the next five thousand, let alone five billion years.

This brings us to various possibilities or scenarios for the future of human life. I shall consider these briefly in turn. According to the first scenario, we may lose out to extraterrestrial life before the five-billion-plus year limit is reached. This is a definite possibility. We may not be alone in this universe. There may be other killers out there.

According to the second scenario, we may lose out to other species on earth in the course of biological evolution. Thus, in the struggle for existence, another competing species may be naturally selected, and we may be selected *against*. In the next billion years, say, there may be great environmental changes on earth, which could markedly decrease our genetic fitness to the point of extinction—the probable fate of the dinosaurs.² There are two main subscenarios here. First, we may lose out to a lower species, for example, a particular species of insect or even an exotic strain of bacteria, or a virus such as AIDS. This could happen under radically changed conditions on earth. Second, we may lose out to a higher, more intelligent, newly evolved species. Just as we have brought about the extinction of other species by hunting or altering their habitats and are now “lords of the earth,” so we too may be made extinct by a more intelligent species of primate or even something beyond primates. Hence, our end may be at the slimy hands or jagged claws of flying flesh-colored creatures with more complex brains than ours, shouting obscenities in a language we do not understand as they do us in.

According to the third scenario, we may lose out to ourselves through nuclear self-destruction. This is unfortunately a real possibil-

ity. Nuclear Winter may be our fate. Although it deserves a lot more discussion, I can only give here my quintessential thoughts on the matter.

Human beings biologically evolved from higher primates and lived perhaps for a half million years in primitive tribal conditions. There were great nomadic migrations, and finally this nomadic life culturally evolved into agricultural life about twenty-thousand years ago, a figure used in current anthropological circles. Agricultural life led to the accumulation of surplus and thus to civilization, that is, to hierarchies and class structure in villages, towns, cities, city-states, national states, and empires. A lot of killing went on throughout all these stages. From all this evolved "civilized" warfare, diplomacy, and the game of power politics (see Bronowski 1973).

These "civilized" ways of handling disputes have now become a real obstacle in the nuclear age. The arms race is simply a sad example of international power politics gone awry. Yet, how can we reasonably expect to transcend our encrusted habits of power politics, which formed at earlier stages of civilization? How can we reasonably expect to end the arms race and reach agreement on nuclear arms reduction when in the current context we are immersed in an atmosphere of mistrust, confrontation, and ideological conflict? We have to contend not only with present cold war realities, but also with the traditions of power politics and human history in general. This is our *Karma*! On the other hand, an unchecked arms race would certainly lead either to economic bankruptcy or nuclear disaster. So what is the solution?

There are two major global forces in the world today: aggressive, international, bureaucratic communism, led by the Soviet Union; and aggressive, multinational, corporate capitalism, led by the United States. Both sides are capable of great violence, and both sides have done terrible things (Vietnam and Afghanistan!). With gross abuses of power to their "credit," each side seems willing to risk the destruction of the entire world in order to preserve its way of life against the other. Both sides are playing nuclear chicken, a power game approaching gross immorality, yet each side remains sanctimonious about its behavior, blaming the other side for the impasse. So what is the solution?

It is fortunate that, as a matter of *objective* fact, both sides can no longer really afford these excesses. The wastage in energy and resources is just too great. Both sides can no longer afford either a massive arms race or a massive war. We can therefore hope that sooner or later both sides will be forced to acknowledge this objective condition and out of sheer fear come to terms with the problem. Surely, it is a matter of genuine self-interest for both sides to find peaceful solutions, since perpetual confrontation is no longer a viable mode. Therefore,

we can only hope that recognition of this objective condition will force both sides to transcend their business-as-usual, power politics mentality and take summitry seriously. (The process may have already begun with the first Reagan-Gorbachev summit in 1985.) However, it is possible that both sides will not be that rational but will instead accelerate the arms race out of control or else push the nuclear buttons, killing off or severely damaging the human race, yet saying all the while that they did not really want this to happen. Thus, we are all subject to this nuclear sword of Damocles, to the threat of nuclear gas chambers that could easily dwarf the chemical gas chambers Hitler contrived. In short, total self-destruction on earth may be our ultimate fate, and empty public relations our essence.

Yet, I cannot help returning to a more optimistic outlook. In the next fifty years, key technological breakthroughs in controlled thermonuclear fusion energy, in genetic engineering of food and medicine, in distribution of safe and simple methods of birth control, and in extensive robotization of work and general computerization may create the objective conditions for worldwide affluence. Under such favorable conditions, the superpowers may be able to resolve their primary differences, allowing new freedom and prosperity throughout the world. This may lead to upward cultural shifts freeing the very intelligence of the world's people. Governments would no longer find it necessary to oppress humanity, and indeed, humanity would no longer tolerate such oppression. This is the sort of optimism I embrace whenever I think of the grimmer alternative for mankind.

The end of me. Alas, I come to the end of me. Before considering my end, I want to say something about my beginning. I was born forty-eight years ago in Hartford, Connecticut. My family moved to southern California when I was eleven years old. I went straight from kindergarten to Ph.D. and thence to tenured professor and departmental chairman, and have taught philosophy at the University of California, Davis for more than eighteen years. Somewhere in the middle, I married, sired two sons, and later divorced. Thus, my personal life is not that unusual. Given that my mother and father lived until ages sixty-seven and eighty-nine respectively, and that my sister and half brother are still living today at ages fifty-four and sixty-five respectively, I suppose I have a good chance of living past seventy-two. That gives me at least twenty-five more years, and I intend to make the most of them.

One of the most certain things on earth is the physical death of every human being. Everyone on record born 150 years ago or more is no longer on record living today. The evidence is thus overwhelming that every human being dies a physical death within a certain span of time.

We are all under nature's death sentence. (Even Christians will admit that Jesus had to suffer physical death.) Technological advances may increase life spans considerably, but sooner or later we must all die. Therefore, I too must die. A valid syllogism!

The question remains: Is there life after death, some sort of survival of consciousness independent of our physical body? Here we leave the realm of science and enter the realm of philosophical speculation. Let us consider Socrates' answer to this question: death is either a complete lack of perception, like an eternal, dreamless sleep; or else death is a change for the soul from here to another place (Plato [4th century B.C.] 1975, 41). (This summarizes the two main possibilities rather nicely.) Socrates also said that for all we know death may be a great blessing; in any case, we should never fear death, since we should never fear the unknown. However, Socrates never read *Hamlet*. Recall Hamlet's "To be or not to be" soliloquy, in which he says, "To die, to sleep, to sleep—perchance to dream. Aye, there's the rub, for in that sleep of death what dreams may come when we have shuffled off this mortal coil must give us pause" (Shakespeare [1594] 1952, 906). Hamlet seems more pessimistic than Socrates about death.

My own view is closer to Socrates'. We simply do not know whether our consciousness will survive bodily death. I do not myself think there is any rationally convincing evidence for conscious life after the death of the body. It is my deep conviction, however, that if we do survive the death of the body, there must still be some sort of physical foundation for our consciousness. *I hold as a fundamental philosophical assumption or working methodological principle that every concrete reality has a law-governed physical basis.* Thus, if the soul lives on, it lives on in some law-governed physical mode, perhaps a very stable field, call it a psi-field if you will, whose laws are yet to be discovered. And if heaven exists, that means the psi-field can be pleasant.

What I want to consider now are some recent empirical studies of people who have been on the verge of death, indeed pronounced clinically dead, and yet who have been revived and have come back to tell their story. Let us not worry whether these people really died. Perhaps they suffered only heart death and not brain death. In any case, they were not rotting corpses which came back to life. They were people who were "dead" for only a short time. What is interesting about these people is the common pattern of reports they gave of their experiences on the verge of death. There is a certain uniformity to these reports, although the extent of this uniformity is a controversial matter.³ Many of these people reported moving through a dark tunnel, with light at the end of the tunnel. Many others reported meeting their friends and relatives long dead. Still others reported moving out of their bodies and looking down on their bodies.

Some researchers claim that these reported experiences constitute solid evidence for life after death. In my opinion this is quite an invalid inference. We know that the mind is capable of systematic hallucinations, whether induced by insanity, drugs, starvation, isolation, religious conversion, or whatever. So why not systematic hallucinations on the verge of death? This would be the brain's last gift before death. In my opinion, reports of verge-of-death experiences tell us more about the human mind and brain, more about the people who report these things, than about the external world. The human mind has great powers of synthesizing experience, especially under extreme conditions. The human mind is a wonderful thing! Thus, seeing is not always believing, and sensory perception should not be taken as the sole criterion of reality (the greatest mistake of pure empiricists). In my view, reason, intuition, and common sense are important criteria as well. Thus, I do not believe it would be valid to infer survival of consciousness after physical death, even if there were a total uniformity of observation reports by people who had been on the verge of death. This does not mean, of course, that I am inferring no survival of consciousness. I am simply taking a skeptical position on the matter. Life after death is one of the great unknowns.

In general, I think it is quite fallacious to infer the veridicality of perceptions experienced under extreme conditions. This applies not only to verge-of-death experiences but also to religious experiences (including mystical experiences), especially of the supernatural. However beneficial such religious experiences may be for the people who have them, this in no way provides rational grounds for belief in anything supernatural. As Thomas Hobbes pointed out long ago, it is one thing to say I dreamed that God talked to me; it is quite another to say God talked to me in a dream. This may be generalized to any sort of extraordinary experience when the conditions of observation are problematic. I conclude that the experience of the supernatural must be distinguished from the supernatural itself. One can very well have the experience without the reality. Rationality requires this distinction. Consequently, belief in anything supernatural is more a matter of faith than of reason; yet, there are so many conflicting faiths in the world. This leads me to confine my attention to the natural. I choose to focus on what is natural.⁴ This is *my* faith!

THE NATURAL GOD

In this second part of the paper, I develop my conception of the Natural God. This is an unconventional view of God, so the reader is forewarned.

My main thesis is that the Natural God is simply the Force of Nature, evolving, unifying, and maximizing through natural laws all other forces and stable structures in the world—atoms, gases, stars, galaxies, planets, DNA, and life itself. The Force of Nature is the very essence of the natural world—Essential Nature.

Due to considerations in the first part of this paper, it is essential to the natural world that it be evolving both physically and biologically, that it be unified by the natural laws which govern the interacting forces and stable structures, and that it be maximal. Since there is only one natural world, there is only one Natural God, the Maximizing Evolving Unifying Force of all other forces in the world. Although the Natural God generates the world through law-governed evolution, It is not external to the world. It is immanent, not transcendent. The Natural God pervades the world in whole and in part; It *is* the world in its very essence, the Evolutionary Force. The Natural God is physical; the physical world is Its body; the Natural God is embodied in the physical world. Mystically speaking, we are in the Natural God, and It is in us.

I owe the idea of the Natural God to the seventeenth-century rationalist philosopher, Benedict Spinoza, although I give it quite a non-rationalist twist. Also very influential are ideas from G. W. F. Hegel, Friedrich Nietzsche, Einstein, Alfred N. Whitehead, as well as Jiddu Krishnamurti and the Oriental philosophies of Advaita Vedanta, Zen Buddhism, and the *Tao Te Ching* (see Krishnamurti 1971, Radhakrishnan & Moore 1957).

Now it may be wondered why nature in essence should be called God. Is not God supposed to be supernatural by definition? Did He not create nature in the beginning? Well, this may be the predominant Judeo-Christian conception of God, but I am offering a very different conception, trying to develop a naturalistic theological view based on the scientific world view. Like Spinoza before me, I am trying to dissolve the boundary between theism and atheism. So back to the task at hand.

I have said that the Natural God is evolving, unifying, and maximizing. Let us take each of these in turn.

The Natural God is evolving. As discussed in the first part, evolution at the various levels of nature is one of the key discoveries of modern science. There is physical evolution, biological evolution, human evolution, and so on. My thesis is that the Force of Nature causes all this evolution and It Itself evolves. Thus, the Natural God is actively evolving in whole and in part. In saying this, I do not mean to imply that the Natural God is conscious of this evolution. Here we must confess our

ignorance as to whether consciousness is a global characteristic of the natural world. This is one of the great mysteries. For all we know, the Natural God may be as blind as a bat or an ocean wave. We just do not know. Still, we may speak more holistically than before. Instead of saying, for example, "this tree has green leaves," we may now say, "the Natural God actively evolves this tree, greening its leaves." Or with Dylan Thomas we may say, "The force that through the green fuse drives the flower, drives my green age" (Thomas 1957, 10).

Recall the two possibilities regarding the end of the physical universe: heat death and universal collapse. These are properties applicable to the natural world as a whole—cosmic properties. Thus, we may say that the Natural God ends in heat death or in universal collapse. The Natural God either fades in force forever, or else shrinks to a point perhaps forever—two kinds of natural death. But if It dies a natural death, is It resurrected? For all we know, the Natural God may well be the Natural Phoenix, rising from the "ashes" of universal collapse with a new big bang, which in turn is followed by a new universal collapse, and so on. The Natural God may thus be an Eternal Cycle of Force. This however is a matter of speculation. No good scientific evidence now exists for an eternal pulsating universe.

The Natural God is unifying. The natural world is stratified into many complex levels all interacting with each other through various forces—nuclear (weak and strong), gravitational, and electromagnetic, as well as biological and cultural. Moreover, all these levels and forces are unified by natural laws. Thus, the natural world can be treated as a single being, with scientific predicates applied to it. I call the unifying of these various forces the Natural Force or the Force of Nature. The Natural Force thus causes the world to be what it is, causes its very unity. It is the essence of the world. Moreover, the natural world has various stable structures, such as atoms, molecules, DNA, stars, and galaxies, all evolving and unified by law-governed forces of the Force of Nature. The Natural Force thereby manifests itself through each part of nature, through each product of interacting forces in evolution. Hence, the Natural Force is in each thing, and each thing is in the Natural Force. This is the basis for saying that the Natural God is unifying. The Natural God governs by a "cosmic equation," if we could but know it.

Speaking generally, the natural world is also unified in its opposites: hot and cold, light and dark, positive and negative, Yang and Yin. On balance, I would say that a basic unity remains despite the disbalance and strife in the world. The Natural God "absorbs" all disbalance and strife through Its mighty unifying powers.

Not all the natural laws governing the forces of the world need be purely deterministic. Natural laws may be statistical also. There may be genuine randomness in the natural world with statistical laws governing the various forces and objects subject to such randomness. This seems to be the case for quantum physical laws of elementary particles as well as for statistical laws in biology. Thus, given the quantum physics bequeathed to us by Niels Bohr and Werner Heisenberg, the Natural God evolves not only in deterministic ways but also in statistical ways. Not every property of the Natural God is determined. Some properties are highly probable, given the natural laws; others are only slightly probable given these laws; still others are due to pure chance (see Heisenberg 1958). The Natural God is not above playing dice (*pace* Einstein). Yet, It is not a slave to the deterministic laws that do apply to It, since these are still laws of Its own nature.

The Natural God is maximizing. The natural world is the maximal natural being, since it contains all other natural beings within itself. Thus, the natural world comprehends all natural existence. Moreover, the Force of Nature comprehends all natural forces acting in the world. This is what is meant by saying that the Natural God is maximizing.

And what of the Supernatural God? How does He fit into this natural scheme of things? Did He not create the natural world as well as all other supernatural beings? Did He not create the Natural God? Does He not miraculously intervene in the world from time to time? The answer to all these questions is no! A flat no! For, given my previously stated fundamental principle that *every concrete reality has a law-governed physical basis*, no such Supernatural God or supernatural beings can possibly exist. They are all impossible! And what of the Judeo-Christian God? Does He not exist? Is He not possible? I answer that if the Judeo-Christian God is identified with the Supernatural God, then He too is impossible given my fundamental principle. However, it is not necessary to make such an identification. The Judeo-Christian God might possibly have a law-governed physical basis and thus not be supernatural. This physical basis, together with the big-banged universe, would then constitute the total physical universe. Therefore, the Judeo-Christian God would simply be the Natural God, though of a different nature than originally thought. Under such an amazing possibility, the big-banged universe would really be just a *fragment* of the total physical universe, just a part of the whole natural world. This big-banged fragment would have been created by the Natural Judeo-Christian God, not out of nothing, but from His physical basis; so the “force fields” of God would comprehend all other force fields. Moreover, one would expect these prior force fields to be more stable

and to evolve in very different ways from those of the big-banged fragment.

And what of heat death or universal collapse? How would these be compatible with the Judeo-Christian God and heaven, assuming a law-governed physical basis? I am afraid one has to wildly speculate in order to come up with possible answers to these questions. First of all, the Natural Judeo-Christian God might naturally prevent both heat death and universal collapse. Perhaps His force fields stabilize the big-banged universe fragment, so that neither scenario occurs. Natural Heaven would then be a unity of stable psi-fields within a stable natural world. This of course is mere speculation about a Supreme Cosmological Constant, but if it should be true, then future science would have to adjust the current scientific world view. On the other hand, it might be the case that the Natural Judeo-Christian God uses heat death for the well-being and stability of sentient psi-fields. Heaven would then be based in heat death, a cold eternity in which psi-field creatures could find blissful unity in the force fields of God, although some of these creatures might find it pure hell if their psi-structures were inadequate. Or, it might be the case that universal collapse is used for the well-being and stability of sentient creatures. Heaven would then be based in universal collapse, a near-infinite density in which *all* psi-field creatures could lovingly stand on the head of a pin. As before, some might find it pure hell.

Such wild speculation is meant to show that the Judeo-Christian God might conceivably be the Natural God, with suitable adjustments in current natural science and orthodox theology. So-called miracles would then be the result of hidden natural causes of which we are ignorant, as Spinoza asserted in chapter 6 of *A Theologico-Political Treatise* ([1670] 1951). Still, I do not think there is any scientific evidence for these possibilities, and even if there were, my fundamental principle would still rule out all supernatural beings, including SuperGod.

Whatever the ultimate nature of the Natural God, I do not claim that we can publicly observe It. The Natural God is a theoretical entity, a theoretical object of knowledge for which global intuitive vision is also possible (see next section). And within my metaphysical framework, it necessarily follows that the Natural God is the Ultimate Source of the natural world, as well as the Natural Source. Thus, I prefer to focus my attention on this primary source of my being.

It should be noted that the Natural God, though maximizing, may not be infinite. Maximization does not imply infinity. Nature may very well be finite, evolving in a finite but unbounded non-Euclidean space. This is what we learn from the big bang model of the universe, thanks to G. F. Bernhard Riemann and Einstein. Nevertheless, such a finite

Natural God is still the Ultimate Maximizer of existence, as much as Its nature allows.

Thus summarizing, we see that the Natural God is actively evolving, unifying, and maximizing. At the same time It might some day die a natural death. This is a modest God! As opposed to the Traditional God, the Natural God has no logico-metaphysical necessity, no necessary infinity or eternity, and no necessary determinism. Such a God is certainly different from Spinoza's God as well as the mainstream Judeo-Christian God. The Natural God is closer to Nietzsche's Dionysian God, though devoid of the eternally recurring excesses of that German philosopher. Given these considerations, it should be clear that the Natural God is a god even an atheist can believe in.

Here I am reminded of a quote by the atheist Nietzsche: "I could not believe in a God unless he knew how to dance."⁵ Well, the Natural God does Its cosmic dance for many billions of years, generating outward expansion and possible inward contraction, maybe through an eternal cycle of expansion and contraction or maybe through just one such cycle, in which case we would have the Death of the Natural God (to paraphrase Nietzsche), unless the Natural God be the Judeo-Christian God appropriately naturalized. On the other hand, the Natural God may generate outward expansion forever, in which case it dances Itself through eternally cold movements. But who are we to judge this cold eternity? Our best hope is to maximally integrate ourselves with the Natural God, whatever Its ultimate nature may be.

THE RELEVANCE OF THE NATURAL GOD TO OUR PERSONAL LIVES

I can well imagine someone objecting: "The Natural God may be interesting to philosophers and scientists, but what use is It in our personal lives? You can't even pray to It."

I answer that the Natural God is the one maximizing force we can focus our mind and hearts on, with genuine knowledge and love. Such forceful focus, such natural meditation may then lead us to better human relations and more courage and comfort on the verge of death. And prayer I say is nothing more than "anthropomorphic meditation"⁶ in contrast to the natural meditation I have been suggesting. So the two comforts are nearly indistinguishable, in my view. Consequently, we need not rely for our happiness on the Supernatural God or the anthropomorphic side of meditation. We can have no rational knowledge of the Supernatural God, only faith; whereas we can have rational knowledge of the Natural God through the laws of Nature.

Recall that the Natural God is, by definition, the Force of the natural world, which maximizes, evolves, and unifies the law-governed natural forces generating the stable structures of the world. Since these natural

forces are governed by laws of nature and since these laws are empirically explanatory, it follows that we can gain rational (though fallible) knowledge of these laws through “inference to the best explanation,” and hence rational knowledge of the Natural God. We first need to know that the natural forces acting on first and last things are evolved, unified, and maximized through natural laws. The Natural God then may be regarded as a simplifying theoretical entity of scientific knowledge.

Yet, rational knowledge, however necessary, is surely insufficient for genuine knowledge. “College knowledge” is never enough. Intuition is the other necessary ingredient for genuine knowledge. To have intuition of the Natural God, we must be able to focus our attention with a global vision, a special kind of intuitive perception. We must be able to take in with a single glance from beginning to end, so to speak, the various forces, properties, laws, and structures of the natural world.

In my view, rational knowledge goes intimately with this intuitive perception. To paraphrase Kant: rational knowledge without intuition is empty; intuition without rational knowledge is blind (although I am using *intuition* in a sense very different from Kant’s). Thus, if we have only a rational knowledge of the Natural God, then we have a kind of abstract knowledge only, whose focus is on technical formulas and formulations—an occupational hazard of scientists and philosophers—leading to undesirable narrowness and overspecialization. This is not *genuine* knowledge of nature. On the other hand, if we have only a global intuitive perception of the Natural God, then we have a kind of blind knowledge only (a “holy fool’s” knowledge), whose focus is on everything and nothing—an occupational hazard of religious teachers and mystics—leading to an overly spiritualized life. Such intuitive perception should not even be called knowledge, since intuition not guided by reason is unreliable. Thus global intuition is not necessarily veridical and may easily lead us astray if unguided by reason. Intuition is a kind of “mind instinct,”⁷ with all the attendant unreliability of instinct in general. I conclude that only a combination of rational knowledge and global intuition is sufficient to give us genuine knowledge of the Natural God. Furthermore, if we integrate these two kinds of cognition, then intuition is achieved more readily with the help of rational knowledge, and conversely. Thus, the more rational knowledge we have, the more intuitive perception we can gain; and the more intuitive perception we have, the more rational knowledge we can gain. The two kinds of cognition mutually reinforce each other in dialectical relation (see Friedman 1978a).

As regards love of the Natural God, I will say, like Spinoza before me, that intuitive-rational knowledge leads to wonder, awe, and love,⁸ and consequently to a better life, and *death*. This is my primary answer to

the question, "What use is the Natural God in our personal lives?" I am going to argue for the rest of this paper that such knowledge is useful in ordinary life and is also useful on the verge of death.

Like the Natural God, we ourselves are very much law-governed by deterministic as well as statistical laws. Our essence is given by the interacting law-governed forces which generate our stable structures. Since genes are the basis for our stable structures (our very physiology), genetic forces are part of our essence. Moreover, the law-governed forces within each individual are finely integrated with, and in part derived from, the law-governed forces of the natural world. Therefore, we are made in the image of the Natural God so to speak; the microcosm is like the macrocosm. Hence, the more knowledge we have of our individual essence, the more knowledge we have of the Natural God, and conversely (another point I owe to Spinoza).⁹

Because of this intimate relation between ourselves and nature, we can gain, through intense mental focus and meditation on nature, global intuitive perception of the Natural God as the Force of Nature actively evolving, unifying, and maximizing the forces and stable structures of the natural world from beginning to end. Such intense knowledge allows us to better understand individual natural objects and forces, as well as individual human beings, including their emotions. We gain a natural sympathy toward others in this way. Such understanding allows us to transform our irrational fears, our petty jealousies, our uncontrollable rages. Indeed, the transformation of as much negative emotion as possible into as much positive emotion as possible is the key to enlightenment, ethical action, and love (still another point due to Spinoza).¹⁰ (For a general overview of Spinoza's *Ethics*, see Friedman 1978b.)

It follows from this that we can transform our feelings of alienation, loneliness, and loss of love. I suppose almost every human being has experienced such loss. Life seems absolutely miserable on such occasions. Yet, if one has an intense understanding of the Natural God and the natural forces and objects generated from It, then such negative emotions are defused. Loneliness is transformed into aloneness, and loss of love is transformed into a search for better relations. (The excess energy regained may be used for the search.) My main point here is that negative emotion does get transformed by holistic knowledge of nature. So what could be more useful in our personal lives? Here we have at least a partial remedy for life's sorrows.

I utterly reject the view of the existentialist philosopher Jean-Paul Sartre that the very structure of human consciousness requires us to negate natural objects, including other human beings, and constantly to resist the world.¹¹ As I understand Sartre, alienation results from the very "nothingness" of human consciousness, which negates and resists

in virtue of being conscious of things. Such a view, I believe, is a gross distortion, although it has enough truth in it to seduce people. Sartre is taking an all-too-prevalent state of mind caused by the stresses and strains of life at this stage of history and elevating this mind-state to a permanent, intrinsic structure of consciousness. Is this not bad phenomenology? I say we can reduce alienation to a minimum if we but maximize our knowledge and love of nature, if we but feel full force the Natural Force within (the *Chi* energy of Chinese philosophy). Love is a corrective to alienation and is certainly not excluded by the structure of our consciousness. In fact, I would say that love naturally grows when our personal power (force) becomes sufficiently integrated with the Power (Force) of Nature, which consequently allows us greater interaction with a greater range of individuals. Thus, we must find the essential forces in ourselves and others and understand them better. Such understanding helps stabilize and strengthen our being in the world. To operate from such strength is to operate from organic unity rather than artificial defense postures. To operate from such organic unity creates love and defeats alienation. Contrary to Sartre, I regard alienation as an historical contingency only, not at all necessary to human consciousness or the human condition, however prevalent it may presently be.

But what can we do right now at this stage of history? I answer that we can strive to become more like the Natural God. We can strive for more self-development by focusing more on the Evolutionary Force; we can strive for more unity in our life, internally and externally, by focusing more on the Unifying Force; and finally, we can strive for more fulfillment in life by focusing more on the Maximizing Force. All three forces constitute one being with three separate functions—the Natural Trinity! (Father = Evolutionary Generator, Son = Unifier, and Holy Spirit = Maximizer.) Thus, we become more powerful individuals the more we focus on nature's God and integrate ourselves with It. Such integration enables us to resolve the otherwise irresolvable conflicts of life. As an example, have I not resolved, or at least mitigated, the conflict between theism and atheism? Have I not dissolved the boundary between them?

As a further example, let us consider sexual-love conflict. I maintain that such conflict can be dissolved or mitigated through intimate relation with the Natural God. There often seems to be a constant war among lovers.¹² Each lover tries to gain advantage and influence over the other, either openly or subtly, or unconsciously. This constant conflict can only be alleviated through love and a genuine understanding of our sexual natures and complex emotions. Such understanding is aided not only by knowing the details of our situation and honestly

talking to each other but also knowing our general biological and psychological nature, and Essential Nature Itself. Such understanding and knowledge makes us less alienated, less lonely, and less afraid of the loss of love. We can then have less desperate, more joyful love-relationships. The more understanding we have of the Power of Nature, the more personal power and integrity we gain, and the more we strengthen our relationship with our lover, or else drop that person entirely. I cannot emphasize enough the importance of personal power and integrity to personal relations.

As a striking example of sexual love in mortal conflict, consider the characters of Winston and Julia in George Orwell's *1984*. In that prophetic book, the hero (or antihero), Winston Smith, is about to be tortured with rats released on his face. He has the choice of saving himself by betraying his lover Julia, or else suffering the rats. So what does he do? In a moment of utter terror, he blurts out: "Do it to Julia! Do it to Julia! Not me! Julia! I don't care what you do to her. Tear her face off, strip her to the bones. Not me! Julia! Not me!" (Orwell [1949] 1961, 236). And what happens after Winston's torturers release him under Big Brother's shadow? Winston is a broken man. He has lost his integrity, and he has also lost his love for Julia. He might as well be dead after this. His life has lost its meaning. This is perhaps the single most tragic event of *1984*.

The point of this example is that there are some situations where to maintain your integrity and love, you have to give up your life. If you are unwilling to do this for your lover, then you are not fully in love. To be able to give up your life in this way, the most intense love of life and nature is necessary, and sufficient. A paradox! What we most love we must be able to give up willingly! I would go so far as to say that the natural basis of all ethics may be found in the necessity to fully commit oneself to love and to life beyond oneself, in order to obtain a maximal life. Such commitment applies not only to sexual love but also to love of family, friends, community, and of course, the Natural God. I maintain therefore that ethical behavior flows naturally from the search for self-fulfillment through selfless love. Yet in following such a path to the end, one may not end up in perfect bliss but rather—just as easily—nailed to a cross. To risk or not to risk the cross! To kill or be killed confronting Roman Power! A dilemma! The *Tao Te Ching* gives the following advice: "If you delight in killing, you cannot fulfill yourself" (Lao Tzu [6th century B.C.] 1972, verse 31). At this point, a momentous conclusion suggests itself: no supernatural or authoritarian basis for ethics is required.

I now return to the mystical. I believe one can have intense mystical experience of the Natural God (just as for the Supernatural God), as

evidenced by the wide variety of mystical experience reported throughout the ages in various cultures (see, e.g., James [1902] 1961). Thus, experientially speaking, the light of nature is very close to the light of Christ, but with this difference: the light of nature is associated with *knowledge* and love, whereas the light of Christ is associated with *faith* and love. In any case, mystical experience, whether of the natural or the supernatural kind, is very rare. It is certainly not produced by human intention and effort. It is a gift, a matter of "grace." Ecstatic mystical experience is felt full force throughout the body and brain, like a cosmic orgasm. Even if one trains to experience such an event, as in Eastern meditative disciplines, one cannot control it, except perhaps to live in such a way that, when the event is about to come, one has the courage not to prevent its coming. One remains receptive to the experience, as in love.

I have been maintaining that mystical experience of the Natural God is compatible with rational knowledge and in part is based upon it. Only mystical *talk* may be incompatible with such knowledge. Mystical talk often seems just so much babble, provoking the wise saying, "Those who know do not speak; those who speak do not know." As regards religious *experience* of the supernatural, I would never say it is incompatible with rational knowledge, only that it is not reinforceable by such knowledge. Unfortunately, such religious experience tends to motivate invalid inferences to the supernatural. I am convinced this is part of humanity's deepest tendency toward self-deception. For these reasons, I prefer to focus on the Natural God alone, on the Natural Christ. Others may have other preferences.

Finally, I return to the end of me.¹³ On the verge of death, the Natural God is now most useful, since at this point no one can help me, and I have nothing to lose if I commit my entire being to the Natural God. At this moment I am free to experience anything nature has to offer, the more light the better. This may require a certain release of the body and a dangerous leap into the unknown. I believe a nearly dead brain is quite capable of physically supporting this one last gift of light. So on the verge of death, I hope to make the most of this natural light, and even before that time if possible.

NOTES

1. Some scientists estimate it will take about 10^{100} years to happen. See, for example, Teplitz & Teplitz (1983).

2. A recent theory about how the dinosaurs became extinct comes from Davis, Hut, and Muller, who theorize that our sun has an invisible companion star which passes periodically through the Oort Cloud (a reservoir of comets [or planetesimals] on the edge of the solar system), causing a deadly rain of these objects to collide with earth every twenty-six million years or so. This in turn causes rising dust particles to dim the sun for long periods of time (Comet Winter). Thus, human life itself may become extinct during

the next pass, scheduled to occur in about fifteen million years. The Alvarez group at the University of California, Berkeley has found, within the geological time frame predicted (or retrodicted) by the theory, geological layers dense in iridium—best explained by catastrophic impacts of extraterrestrial origin. The David-Hut-Miller theory thus provides a good explanation for these iridium layers (Davis, Hut & Muller 1984).

3. See Moody (1975). Both R. A. Moody, Jr. and Elisabeth Kübler-Ross believe the uniformity of these experiences implies survival of consciousness after physical death. I cannot agree with this inference.

4. In response to an unpublished paper on religious belief by Hilary Putnam, I sent him an earlier version of this Natural God paper, together with a letter in which I said, "I would like your opinion as to whether my Natural God (which even an atheist can believe in) could be comforting, *in your sense*, and whether it could serve as the justification for our trust in Nature, in [Hans] Küng's sense. If so, that would show how underdetermined 'God' really is, in both your paper and in Küng's work. On the other hand, if not, then I may infer you require the Supernatural God, and I would then reply, like Cleanthes to Philo, I have found my Natural God, and here I stop my inquiry." (See Hume [1750s] 1948, 36.) When I next saw Putnam, I asked him how he would respond. He said, "I would question your concept of natural." This comment haunted me for a long time, and after much cogitation, I realized I could separate the Supernatural God from the essence of much traditional religious belief, which could subsequently be naturalized so that the Judeo-Christian God would not be supernatural—a possibility discussed in the second part of this paper. I wonder if this revision would satisfy Putnam or Küng? In any case, I now define *natural* as "has a law-governed physical basis made accessible to us by science." Under this definition, the Judeo-Christian God might possibly be natural, although wild speculation is required to make this possibility plausible. (See next section.)

5. See Nietzsche ([1890s] 1968, 153). Kaufman's translation is, "I would believe only in a god who could dance." The original German is, "Ich würde nur an einen Gott glauben, der zu tanzen verstünde," translated differently in this paper. See also Nietzsche ([1890s] 1960, 42).

6. I owe the phrase "anthropomorphic meditation" to Libby Dale, who, in a conversation more than ten years ago, used it to characterize prayer.

7. I owe the phrase "mind instinct" to my son, Raphael Friedman, who, after reading an earlier draft of this paper, instinctively used it to characterize intuition. He was about fourteen years old at the time.

8. See Spinoza ([1675] 1949, part 5: 270, 273). Proposition 27 states: "From this third kind of knowledge [intuitive knowledge] arises the highest possible peace of mind." Corollary to proposition 32 states: "From the third kind of knowledge necessarily springs the intellectual love of God."

9. See Spinoza ([1675] 1949, part 2: 117, 112). Proposition 45 states: "Every idea of any body or actually existing individual thing necessarily involves the eternal and infinite essence of God." Proposition 46 states: "The knowledge of the eternal and infinite essence of God which each idea involves is adequate and perfect." Note 2 of proposition 40 states: "This kind of knowing [intuition] advances from an adequate idea of the formal essence of certain attributes of God to the adequate knowledge of the essence of things."

10. See Spinoza ([1675] 1949, part 5: 256, 260, 264). Proposition 3 states: "An emotion which is a passion ceases to be a passion as soon as we form a clear and distinct idea of it." Corollary to proposition 4 states: "Hence it follows that there is no emotion of which we cannot form some clear and distinct conception." Proposition 10 states: "So long as we are not agitated by emotions which are contrary to our nature do we possess the power of arranging and connecting the modifications of the body according to the order of the intellect." Proposition 15 states: "He who clearly and distinctly understands himself and his emotions loves God, and loves Him better the better he understands himself and his emotions." In Spinoza's philosophy, love of God (or Nature) is associated with harmony among humans.

11. See Sartre ([1943] 1966, 441-526). Sartre defines "consciousness" as "a being, the nature of which is to be conscious of the nothingness of its being" (p. 56). According to Sartre, such a nonsubstantial nothingness is so anxious about its total freedom and lack of

preconceived essence that it constantly flees from itself into substantial beings, trying to give itself a fixed essence; or else it is so nauseated by the hardness of these substantial beings that it flees back to its own insubstantiality. This constant oscillation between the two kinds of being (being-in-itself and being-for-itself), this constant confusion of being, is what Sartre means by "bad faith." While I admit this may be a prevalent state of consciousness in contemporary society (assuming we can make sense of Sartre's language), I deny it is part of the very structure of human consciousness. It is more a perversion of that consciousness.

12. Spouses who are lovers are included; spouses who are not lovers are excluded.

13. If this were my last lecture, I could honestly say, "If this is my last lecture, then this must be my end, since I intend to lecture to the end" which in fact I did say in the lecture version of this paper.

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