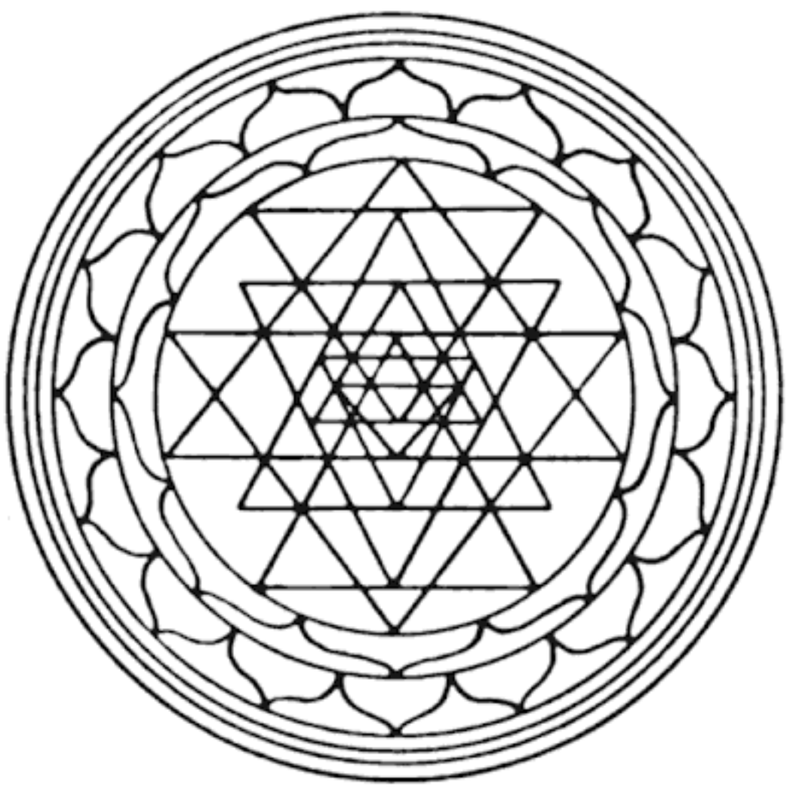
THE SPIRIT OF Spinoza



Healing the Mind

Neal Grossman

With a Foreword by Huston Smith

ICRL Press

Princeton, New Jersey

THE SPIRIT OF SPINOZA: Healing the Mind

By Neal Grossman

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FOREWORD

Neal Grossman was a student of mine while I was teaching at MIT, which means that I have known him for forty-some years. Only during the latest of these years, however, did he tell me of an experience that dates back to when he was fifteen or sixteen years old, one that I find so prescient of the book in hand that I can think of no more appropriate way to open this foreword than to relate it.

Neal was exploring the streets of Boston one summer afternoon when he found himself passing its public library, and with nothing better to do he entered. Dazed by its seemingly endless corridors of books, he wandered down one of them, and there his eye fell on Plato's dialogues. He had heard of Plato, and to satisfy his curiosity he pulled the book from its shelf, took it to a reading table, and let it fall open. *Mirabile dictu*, what then greeted him was the most famous passage in all of the dialogues, the Allegory of the Cave, which together with Moses' vision of Mount Sinai in flames, is one of the twin foundations of Western civilization. When he came to the end of the allegory with its moral that education is not what most people take it to be, but instead should be "to put true knowledge into souls that do not possess it, as if inserting vision into blind eyes," he found that tears were streaming down his cheeks.

When Grossman reported that episode, I heard it as a harbinger of the book in hand, but to bring out the full force of that book I need to say something about the years that intervened between the afternoon I have recounted and the writing of this book.

Innately intelligent and in search of truth, which our culture assumes can be most assuredly found in science, Grossman entered M.I.T., where his undergraduate major was physics. That institute requires its undergraduates to take 20 percent of their courses in humanities and the social sciences, which led him to my two courses on world religions. There he found echoes of Plato's idea of a domain more ultimate than the physical universe, and he staked out as his life's project to investigate whether the concept of a transcendent reality was compatible with our best scientific understanding of the world. To qualify for it he entered the then-strongest graduate program in history and philosophy of science in the country, at the University of Indiana, and when his doctorate was in hand the University of Illinois at Chicago hired him to teach that subject. Ten years later, having satisfied himself with regard to the basic compatibility of physics and spirituality, he lost interest in the philosophy of science per se and turned to teaching those philosophers whose first ambition was to change people's lives.

This book, originally entitled *Healing the Mind*, is the first printout of that switch in his career and, to put the matter bluntly, it is one of the very few books that makes me regret that I am not still in the classroom where I could teach from it. It has taken its author a decade to get it published, for it falls between two stools. Academic presses wouldn't touch it, even though Spinoza scholars gave it flying colors for its understanding of Spinoza, but because of its New Age mentality and the exercises Grossman includes to open readers to where Spinoza's ideas can enter the lives they are actually living, thus effecting the improvement that Spinoza hoped for. Meanwhile, New Age presses all assumed that Spinoza was too heady for their audiences. Had Grossman compromised on either of these fronts, this book would have been issued years earlier, but true to the book's message, its author refused to compromise, even if that meant that his book would never be published. That it has been published warrants our thanks to both its principled author and its publisher, who saw the promise in Grossman's deft handling of the splice between ideas and their impacts on life.

This Foreword could appropriately end here, but my own love for Spinoza leads me to extend it to point out the exalted character of this book's subject.

Spinoza's given name was Benedict, which is the Latinized equivalent of the Hebrew *baruch*, meaning blessing or benediction. (Latin was the intellectual language of Spinoza's Europe and the one in which he wrote.) This makes his name translate into English as Blessed Spinoza. No epithet was ever more appropriate, for as Bertrand Russell pointed out in his *History of Western Philosophy*, "Spinoza is the noblest and most loveable of the great philosophers." This is true, but it leads to what I have elsewhere dubbed the Spinoza anomaly, which is: Why is Spinoza so loved and respected but little followed? Today there are Platonists, Thomists, Kantians, and Wittgensteinians, but few if any philosophers who call themselves Spinozists.

There is an easy way to resolve this anomaly, which I shall note only to put it behind me. According to this superficial resolution, Spinoza is loved because his life was exemplary, and he is not followed because his metaphysics is thought to be mistaken. If he was not mistaken in trying to construct a metaphysical system in the first place, as many philosophers today would contend, he was clearly mistaken in the way he went about devising it. Given the excitement attending the birth of modern science in the seventeenth century, we can understand why the geometrical method excited him, but too much has happened in the three hundred years that have followed to allow us to take it seriously. Geometrics have become multiple, logic turns out to be dead-end in paradoxes, and all efforts to

find bedrock foundations on which logic's ladder might be planted unshakably—foundationalism—have led to quicksand. Percepts shift with their contexts (Gestalt psychology), facts reflect the theories that sponsor them (science and cognition generally), and there appear not to be any elementary particles from which nature is constructed (particle physics).

I call the foregoing resolutions of the Spinoza anomaly superficial because they trivialize the truth component in what we esteem, a move that is particularly unseemly for philosophers. It assumes that the not-less-than-holy life Spinoza lived was unrelated to the truth he saw. (Not-less-than-holy; I will fill in that epithet. By birth a man in exile and by temperament a recluse, Spinoza showed not the slightest bitterness in the face of the centuries of persecution his people had suffered and his excommunication by his own Jewish community in Amsterdam. Whatever the matter at hand, he always brought to it a mind free of attachment to self, party, or nation.) Or, if we prefer to hew to the cognitive grounds for our admiration of him, it assumes that coherence alone suffices to win our respect, whereas outside the formal sciences we know that it does not suffice if it did we would honor paranoids, for their logic tends to be impeccable; it is their premises that are out of touch with reality. To reduce metaphysics to a game well played is to rob it (and ultimately all philosophy) of its basis and importance. The mind that is fed "wholly with joy . . . unmingled with sadness" (*On the Improvement of the Understanding*) is not a mind applauding a logical victory. We need an explanation of the Spinoza anomaly that avoids the travesty of disjoining the respect we accord a philosopher from the question of whether he was right.

I suggest the following. Philosophers sense that Spinoza was right, but do not follow him because they do not understand how he reached his conclusions. The arguments that carried him to them, while logically impeccable, have not delivered his conclusions to many other philosophers, which is another way of saying that they have not found them existentially compelling. This way of putting the matter may seem as paradoxical as the anomaly I introduce it to resolve, but of course it isn't. Right and left, our instincts for truth outstrip the reasons we adduce to justify them we always know more than we can explain how we know it. Insofar as we claim the opposite, we exhibit what might be called "the European mistake": the mistake of thinking that it is the role of the sage to explain things from zero, whereas in fact his vocation is first to see and then to cause to see; that is, to provide a key. The classic error of Western rationalism is to assume that metaphysical conclusions are no stronger than the arguments adduced to support them and that they collapse the moment weaknesses in those arguments

are exposed, an exposure that is easily accomplished because the premises of metaphysical proofs invariably elude everyday consensual experience. The truth is the reverse. Rather than being the causes of certainty, metaphysical arguments are their results. This makes the certainty in one sense subjective, but at the same time it is objective if it prolongs realities that are independent of our minds.

In calling the mistake just cited Western, I mean, of course, that it is the recent Western mistake; our very word theory derives from *theoria*, a term originally drawn from the theater and implying vision. Like Plato, Spinoza saw something. Had his mysticism been ecstatic we might be inclined to say that he experienced something, but because it was immaculately intellective-gnostic, or jnanic as Vedantists would say, it is better to say that he saw, or perhaps sensed, something (saw captures the clarity of his controlling insight, sensed captures its intuitive character, the difficulty of conveying it to persons who have had no direct contact with it). A moment ago we were citing Gestalt psychology and particle physics to document the mind's inability to arrive at empirical indubitables. For the phenomenal world this is plain fact, awash as that world is in relativity and change in Maya, to reach again for a Vedantic term. But beneath this remorseless flux Spinoza detected something permanent. This is not the place to try to say what that something is the book does that better than I could. It is enough here to say that he saw as clearly as man ever has what Substance is and how it is related to accident, grasping at the same time that everything participates in both while being always accident in relation to the one and only Substance that empowers it. In doing so he understood the nature not only of authentic religion, but also of metaphysics in the etymological sense of that word. As for philosophers, they sense that he had hold of that meaning, however little they may be able to follow his approach to it or blaze an alternative route.

This is my suggestion regarding the Spinoza anomaly. Philosophers do not call themselves Spinozists because the way he articulates his insight is, for the most part, not the way they would do so; it is too colored by thought patterns of a bygone era. But metaphysical systems are not mirror images of reality; they are symbols—fingers pointing at the moon, as Ch´an Buddhists would say. And Spinoza's finger, we sense (many of us do, at least), was precisely and accurately angled. That is why we honor him. He points us toward truth of a mode that, to the degree that we succeed in embodying it, can free us as it freed him.

I speak of degree, and it is important to close with this, for truth that is as existential as the kind Spinoza was immersed in is not simply accepted or rejected; it is appropriated incrementally. Sufis liken three stages in the acquisition of gnosis

to hearing about fire, seeing fire, and being burned by fire. Comparably, one can respond affirmatively to Spinoza by assenting to what he says, seeing what he saw, and being consumed by what he saw. George Eliot was onto these distinctions when she wrote, "Spinoza says from his own soul what all the world is saying by rote." And (if I may venture this conjecture) it was alertness to the importance of these degrees of assimilation that caused the author of this book to insist that it include the exercises he devised to knead Spinoza's outlook into the lives his students, if I may put the matter that way. He would prefer not to have his book published rather than to forgo the opportunity he saw to make Spinoza live in the lives of his students and thereby ennoble them.

Not many can rise to the point of being "burned" by Spinoza's vision, for it involves recognizing one's individuality as a cosmic accident. But Spinoza himself is living proof that it is possible to catch sight of something so majestic—a Good beyond all goods—that at the mere sight of it one loses personal desires, forgets oneself in its contemplation, and adds a new dimension to the treasures of the soul. Spinoza has been faulted because his *Deus sive Natura* (God or Nature) is impersonal—transpersonal would be a better word. His audience is a different breed, or again better, a level of the soul that everyone possesses but that is too deeply buried in most people for them to detect on their own. It is the level at which one glimpses the Absolute, that cold, remote, emotionless Beyond where nothing stirs, where there is no agitation, where there is only that immaculate, almost unreachable height of the aloneness of God.

On completing his second reading of Spinoza's *Ethics* Goethe said, "I have never seen things so clearly, or been so much at peace." Welcome, dear reader, to *The Spirit of Spinoza*. I know of no other book that rivals this one in its resources for helping you to make Goethe's words your own.

— Huston Smith, 2003

INTRODUCTION

Many years ago, when I was an undergraduate physics major at MIT, I heard a story about Albert Einstein. According to the story, when Einstein came to this country he was asked whether he believed in God. He replied that he believed in the God of Spinoza. Einstein's opinions carried enormous weight for me, and, even though I thought of myself as an atheist at the time, if Spinoza's God was good enough for Einstein, He was going to be good enough for me too. I resolved to investigate.

Flash forward fifteen or sixteen years. I am a recently tenured philosopher of science with a promising career ahead of me. There are two piles of books on my desk. The first pile consists of all the stuff I needed to read to stay current in my chosen field of specialization, a field which, as a graduate student and for many years thereafter, had been of great interest to me, but in which I was now loosing interest. The second pile consists of material that I had always wanted to explore, but never had sufficient time to delve into. For many months I hovered uneasily between the two piles, unable to muster the interest and motivation to read from the first pile, but feeling guilty for wanting to read from the second. I finally resolved the dilemma by realizing that my true commitment as a philosopher must be to my own real interests, wherever they may lead, and not to a sense of obligation to keep up with what had been my chosen area of specialization. What is the point, I thought, of having tenure if I did not use the freedom that comes with tenure to explore my true interests? The first book on the second pile was Spinoza's masterpiece, entitled simply, *Ethics*.

Spinoza came to my assistance right away. Many editions of the *Ethics* include a short, unfinished, early treatise by Spinoza, entitled "On the Emendation of the Understanding." In the first few pages of this treatise, Spinoza describes his own struggle between doing what is necessary to have a successful career in a socially sanctioned profession and seeking spiritual truth. "I perceived that if true happiness were placed in the former I should necessarily miss it; while if, on the other hand, it were not so placed, and I gave them my whole attention, I should equally fail." And Spinoza had much more to lose than just a "promising career." He had been an outstanding student, and his teachers believed he would become a great world-renown Jewish theologian, with fame and reputation equal to and perhaps surpassing that of Moses Maimonedes. For Spinoza, following his true interests meant, not only that he would have no such career, but also that he would

be excommunicated from the Jewish community of Amsterdam. At this point in my own life, the example Spinoza set gave me much courage.

Around the same time difficulties in my personal life lead me to therapy. But once in therapy, I got "hooked" by the process, and for the next fifteen years or so participated in numerous workshops, growth groups, and training programs, beginning as a frightened participant and ending as an experienced group-leader. Like most intellectuals, I was, as they say, dead from the neck down. Not only was I not in touch with my emotions, but also I actively resisted becoming aware of them. I recall, with humor now, how long it took my therapist to get me to recognize the difference between a feeling and a thought. During this time period, I explored everything from Humanistic Psychology to New Age Spirituality. I found much that was just fluff in all of this, but I also found much more that was very useful. One thing is clear to me now: had I not explored my own emotional nature in some depth, I would have not been able fully to understand Spinoza. Or, to put it differently, my understanding would have been merely intellectual, not experiential.

In philosophy courses and textbooks, Spinoza is classified as a seventeenth-century rationalist philosopher, sandwiched between Descartes, who lived in the generation before Spinoza, and Leibniz, who lived in the generation after. This classification, although not without some justification, is very misleading. For Spinoza has much more in common with Eastern thought generally, and Buddhism in particular, than he does with either of the two aforementioned philosophers. The system of thought contained in the *Ethics* is a system of spiritual psychotherapy—*spiritual,* because its goal is union with God, *psychotherapy,* because the path to this goal lies through an understanding and transcendence of what the Dalai Lama (in his book, *Ethics for a New Millennium*) has called our "afflictive emotions." It is possible, Spinoza maintains, to live a life free from bondage to the afflictive emotions of envy, hatred, anger, depression, guilt, blame, anxiety, fear, and so forth; his entire system of philosophy is dedicated to freeing us from this bondage. Spinoza is not a mere metaphysician, lost in remote abstractions, but a very practical spiritual teacher whose aim, as he explicitly states, is to "lead us, by the hand, as it were, to a knowledge of the human mind and its highest happiness." (*Ethics,* part 2, preface).

The more deeply I penetrated into Spinoza's teachings, the more appreciation and admiration I felt. Not only is his system of thought intellectually elegant and beautiful, but also, it is immensely practical. Here is a philosophy that offers, not just moral platitudes, but practical guidance for living. His theory of emotions is

not just some quaint, antiquated seventeenth-century theory, but timeless in the same sense that Buddhism is timeless. It is true, as I said above, that exploring my own emotions through therapy and groups helped me to understand Spinoza; but it is equally true that Spinoza's theory of emotions helped me to understand my own emotional nature. Moreover, Spinoza's theory explained to my satisfaction why therapy works when it does work, and also, why therapy doesn't always work.

However, it seemed to me that I was somewhat alone in my appreciation of Spinoza. On the one hand, those who felt themselves to be on a "spiritual path" and who were honestly struggling to rid themselves of the afflictive emotions could not avail themselves of the assistance offered by Spinoza because they could not penetrate the admittedly difficult seventeenth-century philosophical jargon in terms of which he wrote. On the other hand, professional philosophers, whose training might enable them to understand Spinoza, are, for the most part, caught up in the materialist and atheistic ideology that dominates academia today and are hence unable to comprehend fully a philosophy that aims at union with what they believe to be a non-existent God. Moreover, on the whole, academics lack the experience of working with their own emotions in a therapeutic context, and hence lack the personal data that is necessary to fully understand, appreciate, and benefit from, Spinoza's philosophy. Thus, those who can penetrate Spinoza's system of thought are not interested in learning from him personally, whereas those who might be interested in learning from him personally are not able to penetrate his system of thought.

The purpose of this book is to make Spinoza's system of thought accessible and available to those who can benefit from it. It is written as a sort of intellectual self-help book, self-contained, free from footnotes, and as much as possible, free from jargon. It contains many "exercises," integrated into the text, which invite the reader to apply the ideas under discussion to her or his personal life. Without such application, it is not possible fully to understand the ideas, any more than one could understand how to play tennis just by reading a book. Or perhaps a better analogy is that one does not fully understand a given scientific theory without spending some time in the lab. The laboratory provides the data that the given theory supposedly explains; it provides the evidence that supports the theory. So the laboratory of our personal lives constitutes the data that Spinoza's theory explains. Moreover, just as an adequate scientific theory not only explains its subject matter but also gives us some control over it, so also, an adequate theory of human emotions not only explains our emotions, but, through the understanding provided by the theory, gives us some control over them, so that even if not fully

released from bondage, we suffer much less. So I urge the reader not to skip over the exercises, but to take the time to do the necessary self-reflection and introspection. Indeed, I think it would be more beneficial to do the exercises and skip the text, than to read the text and skip the exercises.

Spinoza, as I have said, is a spiritual therapist. But his system of therapy is embedded in a sophisticated theory of human emotions, which is itself embedded in a theoretical understanding of what it is to be a human being, which in turn is embedded in a theoretical understanding of God and the relationship between God and the world. Altogether, it is a system of thought that is both intellectually satisfying and emotionally healing. Reading this book will require some effort. Intellectual effort is required to grasp the concepts, and personal effort is required to do the exercises. It is my belief, and also my wish, that this effort will be deeply rewarding.

Twenty Years Later

This book was completed in its original form about twenty years ago. After several unsuccessful attempts to get it published, the book languished in a desk drawer for another ten years. It was eventually published by Susquehanna University Press in 2003, with the title: *Healing the Mind: The Philosophy of Spinoza Adapted for a New Age*. It has been "out of print" for several years and copies have been hard to find, and expensive when found. I am, to say the least, not aggressive when it comes to pushing or publicizing my own work, and this book might very well still be languishing in my desk drawer were it not for a "chance" encounter with the publisher of ICRL Press. On the one hand, it would never occur to me that a science press would be interested in the ideas of a historical philosopher. On the other hand, it perhaps should have occurred to me, as many scientists have found in Spinoza a philosopher whose ideas they can relate to. Spinoza's system of thought is a natural fit for those scientists and consciousness researchers who have come to the conclusion that (i) the consciousness we now experience ourselves as being is not produced by the brain, and (ii) the Source of the consciousness we experience ourselves as being is a consciousness greater than our own, and which also includes our own. This appears to be the conclusion that scientists are coming to, based on research on the Near-Death Experience, children with verifiable past-life memories, communications with deceased individuals under controlled laboratory conditions, electronic voice phenomena, psychic research in its various forms, including of course the impeccable research done at the Princeton Engineering Anomalous Research Lab. Spinoza, I believe, would

welcome finding a home among such courageous scientists, and his system of thought provides an elegant conceptual framework for those scientists whose empirical research has lead them to the two conclusions mentioned above.

But as I have emphasized, Spinoza is more than a metaphysician; he is a spiritual therapist, and the personal guidance he offers for living one's life is unique in the history of philosophy. To merely study Spinoza as scholars do, without following him in one's personal life, is seriously to short-change oneself. To reach mid-life, let alone advanced years, without spiritual values that are applied to personal life is among the more unfortunate things that can happen to a person. For the "continuous and supreme joy" that Spinoza promises [in the Treatise on the Emendation of the Intellect] is psychologically achievable. Indeed, even short of attaining the exalted state of Blessedness, which consists in a conscious, continuous, and experiential "knowledge of the union which the mind has with the Whole of Nature," it is psychologically possible to become free from the various afflictive emotions, which freedom allows for great happiness, tranquility, and peace of mind. No goal is more worthy of a human being than this. In Spinoza's own words,

> . . . a free man hates no one, is angry with no one, envies no one, is indignant with no one, despises no one, and is in no way prone to pride. . . . Furthermore, the free man has this foremost in his mind, that all things follow from the necessity of the divine nature, and that therefore whatever he thinks to be irksome and bad, and whatever besides seems impious, horrible, unjust, and base arises from the fact that he conceives the things themselves in a distorted, fragmented, confused way. For this reason he endeavors above all to conceive things as they are in themselves and to remove the obstacles to true knowledge, such as hatred, anger, envy, derision, pride, and other things of this sort. And so he endeavors, as far as he can, to do well and rejoice. (*Ethics*, part 1V, proposition 73)

For Further Reading

If the reader has any doubts concerning either the reality or achievability of the state of consciousness Spinoza calls "Blessedness," I urge her or him to consult the vast literature on the Near Death Experience. Tens of thousands of people have experienced this state of consciousness. Of course, they do not use 17th century philosophical jargon to describe their experiences, thank goodness, but

even a cursory look at descriptions of Near-Death Experiences will convince the reader that they are experiencing the very same thing Spinoza's philosophy guides us towards: (i) identity with the Being of Light, (ii) an Unconditional Love so powerful that most NDErs do not want to return to their body, (iii) a felt sense of waking up to a Reality infinitely greater than what is experienced while embodied, (iv) and a sense of themselves as eternal. Spinoza would add that one does not need to first die in order to attain this state of consciousness. It is available to us now, even while still embodied. This is the universal testimony of all mystics, those who *have* attained Blessedness while alive. There are a number of contemporary spiritual teachers who, in their writings, talks, and workshops, exemplify the spirit of Spinoza. In particular, reading anything by Eckhart Tolle will deepen your appreciation of Spinoza's system of thought, and will greatly assist in applying that system of thought to your personal life.

— Neal Grossman, March 2014

WHO IS SPINOZA?

Baruch de Espinoza was born in Amsterdam in 1632, the son of Jewish refugees from the Portuguese Inquisition. His father was a prosperous merchant and Baruch was given the best education possible for a Jewish boy at that time. The rabbis who taught him, impressed with his intellectual gifts, had very high hopes that he would become a great Jewish rabbi and philosopher. These hopes were dashed when the young Spinoza began discussing ideas that were heretical to both the Jewish and Christian concepts of God and religion. In particular, Spinoza rejected the concept of a theistic God who creates the world out of nothing, in favor of the concept of a pantheistic (or pan*en*theistic) God who creates the world out of Himself. Confrontations with the religious authorities escalated, until he was finally excommunicated from Judaism in 1656, after which he changed his name to *Benedictus*.

For the next twenty years, until his death in 1677, Spinoza supported himself financially by grinding lenses, wrote down his philosophical views, and maintained a rich and extensive correspondence with many of the leading intellectuals of Europe. He was esteemed not only for his ideas, but also for the kind of person he was, and he warmly and graciously received many visitors into his home. Towards the end of his short life he turned down an offer for a professorship at the prestigious University of Heidelberg, as he did not wish to be held accountable for his thinking to any Institution.

Immediately after his death—probably caused by inhaling glass dust—other philosophers simply did not know what to make of his philosophy. He was referred to as "that God-intoxicated man" by one and as "that accursed atheist" by another. His writings fell into oblivion for about 150 years, until he was "discovered", not by philosophers, but by poets (Goethe, Coleridge, Wordsworth, Shelley, and others), who by temperament tend to be more sympathetic than philosophers to the *spirituality* inherent in Spinoza's system of thought. As Hegel wrote early in the 19TH Century, "To be a philosopher you must first be a Spinozist: if you have no Spinozism, you have no philosophy."

For those interested in a biography of Spinoza, I recommend *Spinoza: A Life*, by Steven Nadler, Cambridge University Press (April 2001).

METAPHYSICS

There are many ways in which a human being can live his or her life, yet it seems that very few of us are able to live in such a way as to enjoy true happiness and peace of mind. Spinoza asks whether it is possible to attain a state of mind in which one enjoys *continuous* happiness. Now, we are all familiar with *transitory* happiness—a happiness that lasts for a short period of time and usually arises as a result of a satisfaction of some desire. And most of us have also experienced occasional moments of peace of mind. Is there an upper limit to these fleeting experiences of happiness and peace of mind? Or can they be extended indefinitely until happiness and peace of mind completely permeate the personality, flowing continuously through one's mind much as the blood flows continuously through the body?

Spinoza affirms that such a permanent state of mind is possible, and this places him in the tradition of mystical philosophers, for only mystics believe in, and claim to experience, a state of consciousness in which one enjoys "supreme and continuous happiness." This state of consciousness ultimately consists, as Spinoza says, in an awareness of the union that exists between the individual human mind and the Mind of God.

Now if this is so—if our mind is already united with God's mind—then two questions immediately present themselves: (1) Why are we not *now* aware of our connection with God? and (2) How can we become aware of this connection? The answer to the first question involves a detailed analysis of the nature of the human condition, especially of human emotions and how our emotions limit our ability to understand; the answer to the second question involves a detailed therapy—that is to say, a practice, which when followed will allow us to overcome the limitations of our emotional nature and to experience ourselves directly as a "part" of the infinite Mind of God.

The uniqueness and elegance of Spinoza's system of thought consists in a derivation of a psychological theory, with its consequent therapy, from metaphysical first principles. The human being, after all, is a part of reality; hence any conceptual account or theory of human beings, whether of our physical nature (physiology) or our mental nature (psychology), must follow from, or be a part of, a more general theory of the nature of reality per se. By the term "metaphysics" I shall mean any general theory of the nature of reality. The "first principles" of Spinoza's metaphysics are extraordinarily simple and self-evident, although, like the simplicity of a Beethoven quartet, it takes some attentiveness to fully appreciate.

FIRST PRINCIPLES

Let us begin with where we are right now. We are beginning an inquiry into the nature of things generally (metaphysics) with the intention of applying what we learn to better understand ourselves (psychology), from which will arise, we hope, understanding, greater happiness, and peace of mind. How do we know that such an inquiry will bear fruit? Why should we believe that it is possible for us to understand the nature of things? Why should we believe that reality is intelligible?

We respond to this question by observing that a willingness to believe in the intelligibility of the world, which includes ourselves as a part, is a prerequisite to any inquiry into the nature of things. It would be quite irrational to attempt to figure out the nature of things, including oneself, without believing that the nature of things is such that it can be figured out. It would be absurd, for example, for someone to work on a jigsaw puzzle while believing that the pieces do not fit. Even an "I don't know whether the pieces fit" attitude is not fully rational because with such an attitude one is likely to give up at the first sign of difficulty. That is, with an agnostic "I don't know if the world is intelligible" attitude, when faced with something one doesn't yet understand one is likely to take one's lack of understanding as evidence that the world is unintelligible, rather than make the effort to change one's way of thinking about things. Only an initial faith in the intelligibility of the world, ourselves included, will provide the motivation necessary for pushing through our own limitations.

The title of one of Spinoza's works, "A Treatise on the Emendation of the Understanding," implies that our present mode of understanding is faulty and that the conceptual framework with which we approach the world is not adequate and needs to be "corrected," "mended," or "healed." This is not a matter of merely adding more "facts" or "information" to our present set of beliefs—it is a matter of radically changing and transforming the very process of understanding itself. I recognize that this is likely to be insulting to the ego, which always likes to believe that its present conceptual framework is perfectly adequate. This attachment of the ego to its present conceptual framework, however, is an impediment to growth and self-knowledge, for when confronted with a situation that the ego does not understand it will conclude that the thing in question is not intelligible and abandon the process of inquiry rather than conclude that it is the conceptual framework, the "mind-set," of the individual that needs to be emended. For example, Freud preferred to believe that women are mysterious and irrational (unintelligible) rather than believe that his conceptual framework was just not

adequate for understanding women. Had he been less arrogant, he might have taken his inability to understand women as *his* inability (and made the effort to emend his own understanding). Instead, he took his inability to understand women as "evidence" that women are not understandable. Thus, a rational inquiry into the nature of things requires an initial attitude of faith in the intelligibility of reality, accompanied by an attitude of humility toward our present way of conceiving that reality.

I used the word "initial" in the above sentence because after one has approached things with this attitude one soon gains sufficient evidence to justify the initial faith. To refuse to taste the pudding until it can be "proven" that it tastes good is quite irrational, for the only "proof" possible lies in the eating. So when Spinoza says, in effect, that there is a better way of living in the world—a way that leads to continuous happiness, peace of mind, and social harmony—the only real proof that there *is* this better way lies in following the path he has indicated for us and finding out through our own experience whether this path leads to increased happiness and peace of mind. If so, then our own experience will constitute the "proof" that our initial faith—without which we would not be motivated to follow the sometimes arduous path—was justified.

Now, the belief in the fundamental intelligibility of reality has profound and immediate consequences. For it leads to what has been called a principle of sufficient reason: i.e. given anything that happens, anything that *is,* there is a reason why the thing has happened and why it is. We may not *know* what the reason is for a particular thing's existence or behavior, but that doesn't mean that there *is* no reason. The belief in the intelligibility of the world implies a commitment to believe that there is a reason or cause for everything that happens, and that this principle of sufficient reason applies to mental events as well as to physical events. A belief in this principle, as Einstein observed, is also essential for science. Can you imagine a scientist, when confronted with a specific phenomenon he doesn't understand, ever, under any circumstances, saying "well this must be one of those things for which there is no reason?" I think not. Rather, the scientific attitude toward such a phenomenon would be something like: "There must be a reason or cause for this phenomenon, even though I do not yet know what it is." The principle of sufficient reason is both a metaphysical principle and a methodological rule. As a metaphysical principle it asserts that everything that goes on within the world is causally linked with other things; as a methodological rule it guides us, when confronted with a situation we don't understand, to assume that understanding is always possible—that there is a reason why the situation has occurred that we do not yet know.

The principle of sufficient reason leads directly to the concept of God. The existence of God is the most obvious thing in the world, but its obviousness is hidden by our tendency to form mental images and then demand proof that our images correspond to reality. This tendency must be avoided; we will give several examples later on, taken from mathematics and science, that demonstrate our ability to understand many things for which we cannot also form an image in our mind. A brief example will suffice for now. It is obvious to our understanding that the set consisting of all the natural numbers (0, 1, 2, 3 . . .) has an infinite number of members, even though we cannot with our imagination picture all the (infinitely many) numbers. The fact that we cannot form an image of an infinite number of things does not mean we do not have an adequate understanding of the concept of infinity. It means only that there are some things we can understand but cannot picture. The concept of God is one of those things.

THE EXISTENCE OF GOD

The conception of God most prevalent in Western societies is highly anthropomorphic. "Anthropomorphic" means the unjustified projection of human qualities onto things that are not human. The Western concept of God—a concept invented by ancient desert tribes, refined somewhat over the years, and made intellectually respectable by Descartes—consists in forming an image of a being with human qualities. Some of these qualities are magnified indefinitely (God is all-*knowing*, all-*powerful*, all-*good*), while others are not (God is imagined to be emotionally affected by what we do—God is pleased or displeased with us in the same way in which *we* are pleased or displeased with others). When people, including philosophers and theologians, ask whether the existence of God can be proven, they generally mean to ask whether this image, which they have formed in their minds, can be proven to correspond to anything in reality—that is to say, to anything outside their imagination. The fact that this image of God has no existence outside of the imagination means not that God does not exist, but that the popular image of God is, like Santa Claus, a fiction.

So we must form a different, non-anthropomorphic conception of God—a conception from which God's existence will follow directly. Indeed, the fact that it is possible to doubt whether the Judeo-Christian concept of God exists is in itself a reason to question the adequacy of that particular conception. We seek a

conception of God—a definition of God—from which her existence follows, in much the same way that the non-existence of married bachelors follows from the definitions of the terms "married" and "bachelor." This procedure is generally referred to as the "ontological proof for the existence of God"—the attempt to prove that the existence of God follows from the concept of God (or from the meaning of the term "God").

Such proofs have generally failed because philosophers have held on to an inadequate concept of God. A criterion for an adequate concept of God is that his existence follows immediately from the definition of the concept. We will give two definitions of "God" and then show that they are equivalent to one another—that is, that both definitions define the same concept. The reason for giving two definitions at once is that the first is logically more fundamental, but the existence of God is easier to see right away from the second.

(1) "God" = "independent being" or "a being the existence of which does not depend on anything other than itself."
(2) "God" = "the totality of everything there is" or simply "all-that-is"

God's existence follows immediately from the second definition, for anyone who claims to doubt whether God as so defined, exists, has simply not understood the definition. No one can doubt that everything which exists does in fact exist—that is simply a tautology. What, of course, is different here and which requires further elaboration is the "appropriateness" of defining the term "God" in this way. Therefore, we will discuss the more usual definition of God (definition 1 above) and show that it leads logically to definition two. For now, the reader should reflect that defining God as all-that-is does indeed necessitate the existence of God thus defined and that no other definition of God (that does not entail definition 2) has this consequence.

Before considering the first definition of God, I want to make very clear the immense difference between Spinoza's conception of God and the more popular Judeo-Christian conception of God. The difference between these two conceptions is most apparent when one considers the question: what is the relation between God, on the one hand, and Creation (or the World), on the other? The familiar Judeo-Christian view conceives of God as wholly other than the world, much as a sculptor is different from the sculpture he creates, or the watchmaker is different from the watch he makes. So God, like the watchmaker, is conceived as making the world, winding it up, so to speak, yet remaining *other than* and

external to the created world. The Spinozistic conception of God, on the contrary, holds that the world is internal to God. This can be expressed in many ways: there is nothing but God, God creates the World out of himself, the World is a part of God, the World is a manifestation of God, nothing is external to God, God has no "outside," God is One with respect to which there is no other, all things are in God, or as St. Paul puts it, "in Him we live and move and have our being."

Thus, the physical universe as a whole may be thought of quite literally, as constituting the body of God, to which Spinoza gives the name *Extension*. Similarly, the mental universe as a whole (which includes our minds, but is not limited only to human minds) constitutes the Mind of God, to which Spinoza gives the name *Thought*. It follows from this that we ourselves, body and mind, are constituted by and form a part of the very fabric of God. The difference between these two conceptions of the relation between God and the world cannot be overemphasized. In the Judeo-Christian account, the human being is totally outside of God; the alienation of humans from their Creator is built into the very concept of God. In the Spinozistic account, the human being is intrinsically connected with God—the fact that most of us do not experience conscious awareness of our connection with God means, for Spinoza, not that this connection does not exist, but only that our present level of awareness is not sufficiently developed to experience the connection. Spinoza's philosophy aims at leading us to this experience.

We now return to the first definition of God. The concept of independent being is in itself fairly obvious: an independent being is one that needs no other being in order to exist; a dependent being is one that needs other beings in order to exist. How to apply this concept is less obvious. It is quite easy to see that nothing in the physical world satisfies the concept of independent being. Take our own body, for example. It came into being in time and hence its existence depended on things external to itself; moreover, once the body comes into being, its continued existence is dependent on things and processes external to itself. It would perish instantly if Earth lost its oxygen, if the sun became extinct, etc. But this applies to any and every object within the physical world. Every thing—from rocks to galaxies—comes into being in time and hence depends for its existence on those things and processes out of which it emerged.

It might be tempting to conclude, incorrectly, that since everything in the world is dependent on other things, then either (1) the concept of independent being is vacuous or (2) the concept of independent being refers to a being not in the world. But this is a false dichotomy, for it does not consider the possibility

that the world as a whole might satisfy the concept of independent being. Let us now consider this possibility.

The so-called causal proof for the existence of God goes roughly as follows: we assume that every event has a cause. Take any event and call it A. A will have a cause, say B. But B is also something, so it too will have a cause, say C. The original version (Aristotle's) of this argument appeals to the intuition that this causal chain (...C→B→A) cannot extend indefinitely, and so there must be a "first cause" that sets in motion the whole causal chain and terminates in the event A (God →...C→B→A).

Critics of this argument point out that the notion of an infinite causal chain, which extends without limit into the past and the future, is fully intelligible, and therefore the postulate of a first cause is unnecessary. That is, it could be the case, these critics argue, that the world consists of a series of events (objects, beings) each one of which depends causally upon some other(s) which depends causally upon some other(s), etc., and that there need exist no object nor being that is independent in the sense defined above. Notice that this criticism of the causal argument for the existence of God really rests on the claim that metaphysical conclusions (that there must be a "first cause") cannot be drawn from what we can or cannot imagine (an infinite series of events). It is true that we cannot imagine—that is to say, we cannot form a picture in our minds of—a world in which every event is caused by a preceding event which is caused by a preceding event ad infinitum, with no "first event" to set the whole thing in motion. But our inability to imagine such a world does not mean that we cannot understand it perfectly well.

For example, consider the set of all (positive and negative) integers:

I = {...-3, -2, -1, 0, 1, 2, 3 ...}

I is a set consisting of an infinite number of members, with no "first" member and no "last" member. No one can picture this set in its entirety, yet this set and all its properties is completely understood mathematically. This illustrates a general principle in Spinoza's philosophy: our ability to understand is not limited by our ability to picture, and vice versa. We can understand many things that we cannot imagine ("imagine" means here "to picture in the mind," "to form an image in the mind"), and conversely, we can imagine many things that cannot be understood. We shall come back to this later and illustrate it in detail. Now let us return to the causal argument.

So we have concluded that our inability to picture a world with no first cause does not mean that the world cannot be conceived in this way. Let us then conceive of such a world: W = {...C→B→A→...}, a world in which everything that is depends upon something other than itself. Now, this conception of the world is supposed to show that the so-called causal argument for the existence of God fails—that the world could be an infinite series of dependent beings and therefore the concept of an independent being is not needed. We will show, however, that this conception of the world, far from rendering the concept of independent being unnecessary, actually requires it. For the very conception of the world as a series of dependent events makes it possible to talk about the *series* as a whole, in much the same way that one can talk about the *set* of all numbers. And just as the *set* of all numbers (I) has properties different from those of any of its members, so also the *series* (W) of dependent events will have properties quite different from those of any of its members.

In fact, a little reflection will show that W has all the properties usually associated with God. Clearly, W cannot depend for its existence on anything outside of itself because there is nothing outside of itself. Thus its existence depends only on itself and W satisfies the concept of independent being. Does W exist "in time" (temporal) or is W "outside" time (eternal)? Clearly, only individual members of W can be in time; W as a whole exists outside time, yet includes time within itself. Does W exist necessarily or contingently? Since there is nothing external to W, there is nothing upon which W's existence could be contingent; hence W exists necessarily. For the conception of W includes everything that is—past, present, and future, mental, physical, and anything else, if there be anything else. We have thus arrived at the concept of an independent being—a being that includes within itself all dependent beings, such as ourselves, a being whose existence is self-caused, eternal, and necessary. We cannot form an image of such a being, but we can understand the concept perfectly well.

Let us now return to the Judeo-Christian conception of God, contrasting it with the present Spinozistic conception. Under the Judeo-Christian conception, God is an independent being wholly other than the world or anything within the world. What is wrong with such a conception, and why is Spinoza's conception more adequate? In the first place, Spinoza's conception is simpler, for according to the Judeo-Christian conception, there is God *and* there is the world; whereas according to Spinoza's conception, there is only God (everything else being included in the Being of God). A deeper problem with the Judeo-Christian conception is that it is not fully consistent. For consider the following question:

does the fact of the world's existence, or the existence of anything within the world, have any effect on God? If we answer "yes" to this question, then God is no longer an independent being, since her nature is held to be affected by, and hence dependent on, the world.

For example, if God is thought to be "pleased" or "displeased" by anything we do, and if "we" are regarded as existing external to God, then God's "mood," so to speak, depends upon our actions (which are believed to be external to God), and hence God no longer satisfies the concept of Independent Being. So if God is to be wholly other than the world, and is also to be an independent being, then there can be no interaction between God and the world. Indeed, God cannot even be said to have knowledge of the world, because such knowledge would alter his state of mind, and hence his state of mind would *depend* on both the existence and the nature of the world. If, for example, we imagine that God created the world in Time, then God's state of mind would have to be different before and after the creation. Just as when we now perceive something that formerly was not present, and so our state of mind depends upon the object we see, so God, after creation, would "perceive" a world that was formerly not present; and hence, his state of mind would *depend upon* the existence of something external to her—the world.

Now it may be objected that one thing may be independent of another thing and still be affected by it, so that God could be affected by the world and still be independent of it. This is the more popular conception of "independent," and it allows us to think of ourselves as independent beings who are merely affected by, but not dependent on, our interactions with other beings and objects external to ourselves. But if we keep our understanding fixed on the definition of an independent being as a being whose existence and nature depend only on itself and on nothing external to itself, then it is quite apparent that only the world-as-a-whole satisfies this definition. For the contents of God's mind must surely be a part of his nature, and if those contents are different before and after the creation of the world, then so is God's nature different. Hence God's nature is made to depend on the existence of a world external to himself, and therefore God, conceived as wholly other than the world, cannot be regarded as an independent being—a being whose existence and nature depend only on herself.

Furthermore, it is difficult to understand why God, conceived as wholly other than the world, would ever create the world in the first place. The principle of sufficient reason tells us that there must be some reason why the world exists rather than doesn't exist, and that, since the world is not the cause of its own existence, this reason must be external to the world; that is, it must lie in God. But it is

hard to understand why God would have any reason for creating the world. All the "reasons" usually given—that God was lonely, that he had some inner need or desire—contradict the concept of God as independent and self-sufficient and are merely anthropomorphic projections of the motivation we human beings have for doing things. And since God can have no reason for creating the world, the existence of the world appears arbitrary and without meaning.

A PRACTICAL APPLICATION

Much more could be said about these matters, but I do not wish to indulge in metaphysical excursions for their own sake, beyond what is necessary to develop a conceptual framework that satisfies the demands of reason for logical consistency and assists us in finding our way toward greater happiness, the latter being our main purpose. The framework that we have developed teaches us that the world and everything in it, including ourselves, is a manifestation and expression of the Nature of God; that everything that is, is internal to God; and hence, that every cell within our body and every thought within our mind are parts of the very being of God. We are thus quite literally sparks of divinity with a touch of amnesia (since we do not consciously experience our own divinity—our connection with God), and our purpose here on earth must be, as Plato might put it, to recollect the divinity we already are (for it is not possible to be without being a part of God). In this "recollection" lies our happiness. Spinoza's conceptual framework is most useful because it aligns our intellect toward this understanding (of the connection between ourselves and God) and contains specific practices—a therapy—for overcoming those parts of ourselves that create the illusion of separateness. The mere thought that we are "sparks of divinity," if kept before the mind will be useful in overcoming much negativity.

Since our aim is chiefly practical, we want to derive as quickly as possible some concrete guidance for the emendation of our understanding—or for removing obstacles and limitations to our own happiness, which is the same thing. Although we will discuss emotions in detail later on, it will be most useful here to give a concrete example of how the metaphysical conception of God previously outlined can be used to derive specific guidelines for treating dysfunctional emotions.

Perhaps of all the emotions that consume our mental energy, impairing our ability to understand and our capacity to feel joy, none is as debilitating as the

emotion of guilt. Now guilt involves a feeling of regret for some past action of ours that we believe could have and should have been different. We may, for example, feel guilty because we lied to someone, or because we lost our temper, or because we failed to achieve the goals we set for ourselves. To be specific, let us consider the case in which a person feels guilty after losing her temper and speaking harshly to someone. The person, while feeling the guilt, torments herself by thinking, "I should not have lost my temper," "I should not have shouted," "I should have behaved differently." The belief that I should have behaved differently involves the belief that it was possible to have acted differently. But is this belief really so?

According to the principal of sufficient reason, for any and every thing or event—whether the event be a human action or not—there is a reason or cause why the event happened rather than didn't happen, and why it happened in the particular way it did, rather than in some other way. If the event in question be a human action, such as losing one's temper, then there is a cause why that action occurred, whether we know what it is or not. For the action to have been different, its cause would have had to be different. But the cause of any action must be another object, event, or action, which as such, must also have a cause—that is, a reason why it is what it is. For the cause of the original action to have been different, *its* cause would then have had to be different. We thus have an infinite regress leading ultimately to the totality of All-There-Is, or God. Since God is the cause of all things, for any particular thing to have been different, including human behavior, God herself would have to be different from what she is. But how is this possible? Could the totality of All-There-Is really be different from what it in fact is?

Well, the principle of sufficient reason tells us that for anything to be other than what it is, its cause would have to be different. But what could cause All-There-Is to be different from what it is? The answer is, of course, nothing, since there *is* nothing outside of All-There-Is. To put it simply, since any particular thing that is (including a human action for which one feels guilt) is a part of All-There-Is, for the particular thing to have been different, All-There-Is would have to be different. But since there is nothing outside of All-There-Is, there is nothing that could cause All-There-Is to be different. Therefore, All-There-Is is *necessarily* what it is and could not possibly be other than what it is, and this necessity extends in the minutest detail to each and every particular thing within the totality of All-There-Is.

Returning to our feeling of guilt that arises out of some past behavior of ours and involves the belief that we should have behaved differently from the

way we did, once we understand that this belief rests on the belief that All-There-Is, or God, could have or should have been different—a metaphysical absurdity—then the feeling of guilt will subside. In the same way, it can be shown that many of our emotional responses rest on this false belief that All-There-Is could be different from what it is. Blaming another person for his or her actions involves the same metaphysical error as does the feeling of guilt—which latter is blame directed toward oneself rather than toward another.

The reader will no doubt have many objections to this, so habituated are we to those emotional responses, such as blame and guilt, which are based on the belief that a given thing could have been other than what it in fact is. We acknowledge that a logical demonstration is rarely sufficient to overcome an habituated response; therefore, we wish to do three things which will make our understanding more lively: (1) to begin a "practice," (2) to show more clearly the holistic nature of All-There-Is and what this implies for particular things (one implication being that a given thing could not have been other than it is), and (3) to show why it is that the mind tends to believe otherwise.

EXERCISE 1: Although the "practice" or therapy that Spinoza develops is based on his fully detailed theory of emotions, which we will present later, it is very important to begin the practice as soon as possible, even if its rational basis is not yet fully understood. So, consider some past behavior of yours about which you feel a little guilt. (It is better to begin with something that involves a little, rather than a lot, of guilt; practicing this exercise to remove little guilts will give you the strength to remove the larger guilt.) Let your attention go back and forth from the specific past behavior to the present feeling of guilt that arises as you recollect that past behavior. Now introduce the thought "this past behavior could not possibly have been otherwise" (you may play with different wordings for this thought, e.g., "if my behavior in that situation were different, then All-There-Is would have had to be different, which is absurd," or "my behavior followed from the Nature of God and could not have been otherwise," etc.). Even if you do not yet fully believe it, repeat this thought to yourself as your attention goes back and forth between the memory of the past behavior and the present feeling of guilt. Notice what happens to the feeling of guilt. Even if this exercise is practiced for only a few minutes each day, you will notice a substantial reduction in the intensity of your guilt feelings, and eventually they will subside altogether.

This exercise may also be used to alleviate feelings of hurt and anger that appear to be caused by someone else's behavior toward you. Let your attention alternate between the other person's past behavior and the present feeling (hurt, anger, blame, etc.) that arises in you when you recollect that behavior. (And, as before, it will be better to begin with a "little" hurt rather than a "big" hurt.) Now introduce the thought "this person could not have behaved differently" (or "this person's behavior was a direct consequence of the nature of All-There-Is" or "to wish that this person's behavior were different is to wish that God were different," etc. And again, as before, notice how the feeling of hurt or anger subsides as you repeat that thought. Many readers will no doubt resist attempting this exercise, or will attempt it only halfheartedly, so firmly habituated are we to the belief that such emotions (guilt, anger, etc.) are justified and appropriate responses to our own and other's behavior. We will show later that this belief is quite false and that these emotions are deeply harmful to the individual. For now, I urge the reader to practice these exercises daily in a spirit of playful curiosity. The proof of the pudding is in the eating—try it and see what happens.

THE WHOLENESS OF CREATION

We now return to the concept of All-There-Is. We wish to understand more deeply why it is that this concept represents a single, indivisible, individual whole, rather than a mere collection of parts. For example, one may form the concept of the set of all objects on my desk, but this set (consisting of papers, pens, mail, telephone, memos, books, etc.) is not a single individual—it is merely an aggregate of parts. By contrast, the set of all molecules in my desk, or the set of all cells in my body, is not an aggregate of parts but a single individual whole—the desk and my body, respectively. Why do we insist that God, defined as All-There-Is, is more like the set of all cells in my body than the set of all objects on my desk—that All-There-Is is a whole, and not a mere aggregate of parts?

Now although Spinoza believed, rightly I think, that the holistic nature of All-There-Is could be demonstrated "a priori," that is, from the very concept or definition of All-There-Is, he also believed that our minds are more likely to be convinced by "a posteriori" demonstrations, that is, by appeals to our own experience. We are fortunate today to have at our disposal a wealth of collective experience, namely science, that was unavailable in Spinoza's

time. Many excellent books have been written by physicists that explain the revolutionary nature of the "new" physics, and the reader is strongly urged to seek out several of these books. We will use the results of quantum theory and modern cosmology—with just enough explication of the physics to render the concepts intelligible to the reader—to show that the physical universe (we here consider only the *physical* world; the mental world we will discuss later) is a single indivisible whole.

Holism and atomism

Let us use the term *holism* to refer to any metaphysical framework that holds that the world is a single, indivisible whole, not reducible to the sum of its "parts"; and let us use the term *atomism* to refer to any metaphysical framework that holds that the world is not an indivisible whole, but rather, is made up of and reducible to its parts—that the world is an aggregate of parts. Each framework carries with it an associated methodology, that is to say, a way of approaching any given problem. For example, if, as atomism asserts, the world really is made up of parts, then the right method of understanding any phenomenon is to break it up into its constituent parts. These "parts" will in turn also have parts, and this process of reduction continues until one has reached the ultimate parts. On the other hand, if the whole is more than the sum of its parts, as Holism asserts, then the correct method of understanding any particular thing involves finding a larger whole in which the particular thing is embedded. This larger whole will itself be embedded in a still larger whole, and this process of "embedding" continues until one has reached the "Ultimate Whole"—All-There-Is, or God.

The human body, for example, conceived *atomistically*, is made up of cells, so to understand the body one must understand the behavior of the cells. But cells are in turn made up of molecules, so to understand the cells one must understand the behavior of the molecules that constitute the cells. But molecules are made up of atoms, etc., and this process of division continues until one has reached the ultimate "building blocks" of the material world. On the other hand, the human body, conceived holistically, is in dynamic interaction with a larger physical ecosystem, without which the body could neither have been brought into being nor continue to be. Thus, to understand the body, one must understand the larger ecosystem in which the body is embedded, and which makes the continued existence of the body possible. This larger system—from which the body receives its food, oxygen, water, etc.—is embedded in a still larger system (Earth as a whole), which is embedded in a still larger system (solar system, galaxy, etc.),

and this process of embedding continues until one has arrived at the ultimate ecological unit—the universe as a whole.

Now, both holism and atomism, considered as methodologies, are immensely useful and both can be employed simultaneously to understand any given phenomenon. A meteorologist, for example, to understand the weather, would need to know about both the nature of the molecules that make up the atmosphere *and* how the atmosphere interacts with the surface of the earth. However, holism and atomism, when considered metaphysically—as theses about the nature of reality—cannot both be true. For either the physical world is made up of ultimate parts, in which case atomism is true, or it is not made up of ultimate parts, in which case holism is true.

So, let us suppose for the moment that atomism is true—that the physical world is constituted by, or made up of, ultimate building blocks and that everything is explainable in terms of the nature and arrangement of these ultimate parts. What must these parts be like? First of all, these parts must be *simple;* for if they were complex, that is, if they were made up of anything, then they would not be ultimate but would depend upon the things out of which they were made.

More importantly, the ultimate parts must be *independent.* Now, by hypothesis, the ultimate parts cannot depend upon anything other than themselves, because there is nothing other than these ultimate parts; anything that is not itself an ultimate part is merely an aggregate of a certain number of such parts. Moreover, a given ultimate part cannot depend on other ultimate parts, for if it did—if **a** depended on say **b** and **c,** which in turn depended on **d**, **e**, and **f**, etc.—then one would no longer have an atomistic framework, since each part would depend on other parts which would depend upon still other parts, etc., and this results in each part depending on the totality of all parts, which is holism.

And finally, an ultimate part cannot be created or destroyed in time, for if this were to happen then, according to the principle of sufficient reason, there must be a cause for why the given ultimate part came to exist or ceased to exist, and the given part would then depend for its being on this cause and would not be independent. Keep in mind that according to atomism anything that is not ultimate comes to be in time as a result of the motion and arrangement of the ultimate parts that constitute the thing. But this could not account for how an ultimate part itself could come into being. Therefore, in any atomistic framework, the ultimate parts must be simple, independent, uncreated, and indestructible.

The demise of atomism

It is a remarkable and conclusive result of contemporary physics that there are not, nor can there be, any objects which satisfy the above conditions. The full story of this result, as mentioned, is explained by various physicists in numerous books on the subject, to which the interested reader is referred. We will here give a brief account of the story, in a way that will bring out its metaphysical aspects.

Consider the problem of change. Descartes considers this problem by discussing a ball of wax, which when heated, becomes liquid. How do we know that the liquid wax is the same wax as the solid wax, given that the two appear so different to our senses? How is it possible for something that is solid to become something that is liquid, or for something that is liquid to become something that is gaseous (water to steam)? Is it the same "thing," which is first solid and then liquid? Or has something that was solid changed into something else that is liquid? What does physics tell us?

First of all, physics tells us that solids, liquids, and gases are all made up of tiny particles called molecules, too small to be seen with the eye. These molecules are in a state of constant motion, and the amount of their motion depends on the temperature of the object. At relatively low temperatures, molecular motion is small, which allows the molecules to get close to one another, forming a solid. At higher temperatures, the molecules move too fast to get close to one another, but not fast enough to altogether escape from one another's company, and they begin to roll over one another. This comprises the liquid state. At still higher temperatures, the molecules move too fast to enter into any relationship with one another, thus forming the gaseous state. So given a change, say, of (solid) ice to (liquid) water to (gaseous) steam, we say (1) that the individual molecules that constitute the given piece of ice are the same molecules that constitute the water and the steam, (2) the degree of motion of the molecules determines whether the molecules arrange themselves in solid, liquid or gaseous form, and (3) this degree of motion is affected by the temperature.

The general, that is to say, metaphysical, structure of this explanation is as follows: given an observed qualitative change (solid to liquid), physics postulates the existence of something that does not change and explains the qualitative transformation (of solid to liquid) in terms of quantitative differences among the molecules. The intuition here is that the fact of qualitative change would be a deep mystery—it would violate the principle of sufficient reason—unless there were some cause for the change through which the change could be understood. And this understanding seems to consist in "seeing" that the qualitatively distinct

solid and liquid are merely different manifestations, or different states, of the same underlying reality, namely the molecules that constitute them.

Now, continuing this line of reasoning, molecules themselves can undergo qualitative change. For example, a water molecule can, under suitable conditions, transform into molecules of hydrogen and oxygen. This transformation would be as mysterious as frogs transforming into princes if there were nothing that remained invariant under the transformation. So, as before, physics postulates the existence of something—atoms, in this case—that remain unchanged during the transformation and in terms of which the transformation can be understood. Thus, the atoms that make up the water molecule before the change are the very same atoms that, after the change, make up the oxygen and hydrogen molecules. The different compounds are merely different arrangements of the same underlying stuff (the atoms), and *that's* how it is possible for different compounds to change one into another.

Recalling the third criterion for "ultimate particles," one way of telling that the molecule is not an ultimate unit of matter is that a given molecule can be created and destroyed in time. That which remains invariant, that which does not change, during a given transformation, is more fundamental (more "basic," more "ultimate," more "real") than that which comes into being and/or passes away during the transformation. So, during the transformation of water into hydrogen and oxygen—$2H_2O \rightarrow 2H_2 + O_2$—we say that, *because* the atoms that make up the initial water molecules are the *same* atoms that make up the final hydrogen and oxygen molecules, (whereas the water molecule ceases to exist and the hydrogen and oxygen molecules begin to exist), that *therefore* the atoms are more fundamental objects than the molecules.

What about the atoms themselves? Do they satisfy the conditions for being an "ultimate unit" of matter? The answer is, of course, no, since they too undergo qualitative change. For under appropriate conditions, a given atom can transform into two or more other atoms (fission) or two or more different atoms can combine to form a single atom (fusion). Physics explains this transformation by postulating the existence of something that remains invariant as the atoms change, in terms of which the atoms themselves are defined, and in such a way that the possibility of such qualitative change can be understood. As everyone knows, the atom is defined in terms of the so-called elementary particles (neutrons, protons, electrons), and transformations among atoms are simply different arrangements of the same elementary particles. Thus, when a given uranium atom decays into two other atoms, the same protons, neutrons, and electrons that formerly constituted

the uranium atom now constitute the two new atoms. During the transformation, the uranium atom ceases to exist, the other two atoms begin to exist, but the elementary particles remain the same. It is for this reason that the elementary particles are regarded as more fundamental than the atoms which they constitute.

What about the elementary particles themselves? Do they satisfy our criteria for being ultimate units of matter? The answer is, perhaps surprisingly, no, because every elementary particle can be created and destroyed, that is to say, they undergo qualitative transformations similar to (and in some ways more dramatic than) the transformations that occur at the atomic and molecular level. The elementary particles can transform not only into one another, but also into pure energy. To account for this change, we again postulate the existence of some underlying "stuff" that remains invariant as the particles undergo transformation.

It is at this point that atomistic methodology, which was so successful until now, breaks down completely. For it is not possible to regard this invariant underlying "stuff" as a still smaller particle. To be sure, physicists have tried to apply atomistic methodology to explain particle transformation, but the "quarks," which they postulate to constitute the particles fail to satisfy the conditions for an atomistic metaphysics. For one thing, the quarks also undergo qualitative transformation (both into one another and into other particles), and thus bring us no closer to the ultimate units of matter which Atomism requires. But more interestingly, quarks cannot exist separately—that is to say, quarks cannot exist apart from the particles that they constitute. Now a bunch of "parts" that cannot exist independently of the whole that they constitute are not really parts at all. The quarks, because they do not exist independently of the whole that they supposedly constitute, fail to satisfy the independence criterion (in addition to failing the criterion of permanence) for an atomistic framework.

So, back to our search for an underlying stuff or substance that remains invariant as the particles transform. This basic stuff, according to physics, is pure energy. Consider the following example: suppose we have an electromagnet and gradually increase the intensity of the magnetic field between the poles. When the intensity of the magnetic field reaches a certain level, electrons and positrons will be observed to emanate from the region of space between the poles. According to physics, before the creation of the particles the magnetic field contained a certain amount of energy. After the creation of the particles, the energy in the magnetic field is reduced by an amount equal to that required to create a particle ($E = mc^2$). Thus the total energy before and after the appearance of the particles is constant, and energy therefore represents a more fundamental level of being than do the

particles. Indeed, the particle itself is a form of energy. And since particles make up atoms, which make up molecules, which make up everything else, the basic stuff, which constitutes the being of everything physical, is energy. Particulate matter is one form in which energy can exist; non-particulate matter, or "field," is another form.

Thus, we have shown that there are no viable candidates for the position of ultimate units of matter, and that every proposed candidate violates the criterion of permanence and/or independence. Physics also tells us—and I will merely state this without going into the details—that there can exist no object that is both extended (in space) and simple. Anything that occupies space cannot be simple; that is, it must have an internal structure, and so the concept of something that is "solid" matter through and through is vacuous, according to physics. So if there were to exist an ultimate unit of matter it could not have any extension in space.

Holism and quantum physics

I wish to turn now to the independence criterion and show that not only is the negative result (that atomism is false) true, but so also is the positive result that, according to physics, the material world is a single indivisible whole. Now, we all have a feeling for the difference between a "whole" (such as my desk, or my body) and a mere aggregate of parts (such as the objects on my desk). If we are asked to say what it is that makes one thing a unity and another thing an aggregate, we would probably say that spatial contiguity of the parts is necessary for something to be a unity. The molecules that constitute my desk and the cells that constitute my body are next to one another in space. On the other hand, if two or more things are, or can be, spatially separated—such as the objects on my desk—then that is usually sufficient to conclude that these objects do not form a natural unity but merely an aggregate of parts. It is a dramatic consequence of the quantum theory, however, a consequence initially discovered by Einstein, that spatial separation is not a sufficient condition for individuation. Let us explain.

Consider the following thought experiment: we get two identical movie cameras that we place at right angles to each other. They are each focused on the same live cat, and we begin and stop each camera at the same time. It is obvious that the films from the two cameras will look quite different from one another; when one shows the cat's head, the other will show the cat's side, and so on. Suppose we give our two films to someone who does not know that they are films of the same cat, taken simultaneously but from different perspectives. Could this person, by analyzing the films frame by frame, arrive at the conclusion that the

two films are films of one and the same cat? The answer is of course, yes; there would be frame by frame correlations between the two films that would lead an observer to conclude that the two films are different perspectives of the same underlying reality—the cat.

Now the quantum theory predicts—and these predictions have been verified—that under certain conditions two spatially separated objects will behave as if they are different perspectives of the same underlying reality. That is, a "frame by frame" analysis will reveal correlations between the behavior of the two spatially objects; these correlations indicate that the two objects, which appear to be distinct, are really parts of, or aspects of, a single underlying unity. And this is what is meant when I said that spatial separation is not sufficient for individuation, for although the two objects (atoms, particles) in question may be very far apart spatially, they are not independently existing individuals, but are parts of a larger unity.

Now, under what conditions does this feature of quantum wholeness manifest itself? The conditions are simple: any two (or more) particles that interact with each other will exhibit this feature of wholeness and will continue to exhibit it even after the interaction has ceased. No matter how far the particles move away from each other spatially, they will continue to exhibit the kind of correlations that lead us to conclude that they (the particles) are not independently existing individuals, but are aspects, or parts, of a larger unity. This "larger unity" includes the two particles but has holistic features that cannot be explained in terms of two independently existing particles. These holistic features will continue indefinitely until or unless something external to the two-particle system interferes with it, destroying the unity. Summarizing, quantum theory shows that (1) any two or more interacting particles form a "whole" that is not reducible to the sum of its parts; (2) this whole persists even after the interaction has ceased and the particles have become spatially separated; and (3) this wholeness can be broken only if the system interacts with something external to it.

What can we conclude from this about the physical universe as a whole? According to modern cosmology, the universe is expanding. This means that in the past the universe was smaller, and the farther back we go in time, the smaller the universe gets. At the moment of the big bang, all the "stuff" (energy) of the physical universe is concentrated at a single point. Clearly at this time, and shortly afterward, everything is in very strong interaction with everything else. Therefore, at the time of the big bang, condition one above is satisfied, and everything in the universe must be regarded as constituting a "whole" that is not reducible to the

sum of its parts. Furthermore, since there is nothing external to the universe, there is nothing that could break this wholeness, and so condition three can never be satisfied. Hence, according to condition two, this wholeness must persist even after the "parts" of the universe have become spatially separated. The entire physical universe is thus a single individual—a whole, a unity—not divisible into parts.

Recall our previous discussion of physics' unsuccessful search for the "ultimate" building blocks of physical reality. The intuition that guided us (from molecules to atoms to elementary particles) is that whatever is invariant under a given transformation must be more real than, or more fundamental than, those things that change, that either begin or cease to exist. Physics' search for ultimate units was unsuccessful because there is no particle that continues to exist under all transformations. The only thing that remains invariant under all possible transformations is the universe as a whole, for no matter what changes may occur within the universe, the universe always retains its unity as a single indivisible whole. It is thus the most fundamental reality, or I should say, the only fundamental reality, since there is nothing external to it.

I think this is sufficient to demonstrate that All-There-Is is a single indivisible Being, an Individual Whole, an organic Unity, and can in no way be regarded as a mere aggregate of parts. Yet, it must be admitted that when we look around us it certainly *seems* as if what we perceive is a bunch of disconnected objects. But from the fact that we do not perceive with our senses the interconnection between things, it does not follow that all things are not really interconnected. For, as we shall see later, our body, which itself is a part of the unbroken wholeness of Nature, has the ability, through its sense organs, to create images of things as if they were separate and distinct. So the fact that the world appears to us as if it were constituted by separately existing things, tells us more about the nature of our sense organs than about the nature of things as they are in themselves. Science, which transcends the limitations of human perception, aspires to gives us an understanding of things as they are in themselves, not merely as they appear to human beings. And according to this understanding, all things are interconnected in such a way as to constitute a single indivisible Being. Therefore, those who have been reluctant to embrace a holistic worldview out of fear that such a worldview is "unscientific" may now completely relinquish their fears. For holism is not only fully compatible with modern science, it is the only worldview that is.

This excursion into physics not only informs us about the nature of the world—that its nature is holistic, not atomistic—but also tells us something about the nature of the understanding itself. For, whereas sense perception

always works in terms of concrete images of things, the understanding, if we take modern science to exemplify what it is to understand, works in terms of those features or properties that individual things have in common, and that remain invariant as the individuals themselves undergo all sorts of change and transformation. It must be emphasized that *methodologically speaking,* both atomism and holism can give genuine understanding of particular things, and science avails itself of both methodologies. Any finite thing is both constituted by smaller units and itself constitutes a part of a larger unit. The human body, for example, is constituted by molecules that exist both before and after the human body comes into and passes out of existence; the molecule is therefore a useful concept through which the body can be understood. (Molecules are common to all bodies and are invariant as individual bodies arise and perish.) But equally, the human body is a part of a larger ecosystem, (atmosphere, food chain, etc.), which it requires in order to maintain its form. This larger ecosystem is also (as were the molecules) common to all human bodies and invariant as individual bodies arise and perish; and hence, the human body can also be understood in terms of the role it plays—i.e., its function—within the larger ecosystem. From a metaphysical perspective, however, there is only one ultimate invariant, as we have shown, namely the Universe-as-a-Whole. For only God, or All-There-Is, is common to all things and remains invariant as individual things come into being and pass away. Therefore, from this ultimate perspective, God is the cause of things and is the ultimate "sufficient reason" through which all things must be understood.

THE CAUSALITY OF GOD

Divine necessity

We will elaborate on the claim that God is the cause of all things because we wish to remove from the mind the habit of thinking of God as a "remote" cause, as a Being who, so to speak, wound the universe up at some long ago time and then ceased to have anything to do with it. The concept of God we are here developing holds that the universe is a process of continuous creation—that God is eternally present to each and every thing there is. Let us then consider a particular thing, say, an individual human body, and ask, what is the cause of this body? Now this

question can be approached, methodologically, from many different perspectives, but each perspective ultimately involves the concept of God.

For example, if we proceed atomistically and attempt to explain the body in terms of the atoms or molecules that constitute the body, we are led to ask several questions.

1. For each atom in the body, there was a cause for its coming into being, and so to understand the body in terms of its constituent atoms leads us to ask for the cause of each atom. Now atoms in fact are created in stars, and indeed, the heavier elements (like iron) are created only in supernovas. So the existence of our body is intimately linked with the existence of supernovas in that were supernovas not to exist, our bodies could not exist either, and therefore an understanding of our bodies in this way involves an understanding of the forces that generate supernovas. But these forces have to do with the most general nature of matter, energy, space, and time, and therefore an understanding of any particular physical thing involves understanding the Universe-as-a-Whole.

2. If we consider the atoms that constitute our body, at a time after their creation but prior to their being organized in the specific arrangement that constitutes the given body, one can then ask, what is responsible for organizing and arranging all these atoms into the specific form of the body? (This, in philosophical jargon, is asking for the *efficient cause* of the body's existence). Since each atom in my body has a causal history, to understand the body in this way involves understanding the history of each and every atom in my body. That is to say, insofar as my body depends for its existence on the particular atoms that constitute it, it also depends for its existence on the physical laws and processes responsible for bringing each atom in my body into physical proximity with each other atom in my body.

For example, how did a specific iron atom, which originated in a supernova millions of years ago and light years away, get into my body so as to form a part of my body? Well, first of all it had to travel from the supernova in which it was made to Earth. But during the course of this journey it was influenced by many things

(gravitational fields, electromagnetic radiation, space-time warps, and myriads of other particles). Had any one of these other things been different, that particular iron atom could not have reached Earth. Therefore, since an understanding of how that iron atom reached Earth involves an understanding of all the things that influenced it on its journey, and since an understanding of these other things involves an understanding of the physical universe as a whole, it is easy to see that my body (which is constituted of billions of atoms, each one of which came here from someplace else) depends for its existence on the whole universe.

3. It is a tribute to science (and to the power of the human mind that invented science) that it has shown us in great detail the why's and wherefore's of the interconnectedness of all individual things. This interconnectedness applies not only to the past with which our bodies' existence is connected, and depends on those processes that created and brought together the atoms that constitute it, but also to the present. That is, given that the atoms that constitute the body have been brought together so as to constitute the body, this set of atoms requires continuous interaction with the rest of the universe in order to maintain the form of the human body. For the atoms could not maintain the form of the body were the earth to cease to exist; Earth could not continue to exist were the Sun to cease to exist; the sun could not continue to exist if the galaxy were to cease to exist; but our own galaxy is interconnected with other galaxies, etc., and thus we see that the continued existence of our body involves the Universe-as-a-Whole.

It is clear, therefore, that the Universe-as-a-Whole, or All-There-Is, is necessarily involved in (1) creating the raw materials out of which our body is made; (2) organizing the raw materials into the form of the human body (or, to put it better, creating the body out of those raw materials); (3) continuously sustaining that form for as long as the atoms are arranged in that form; and eventually (4) destroying the body. Moreover, the very raw materials, the atoms that constitute our body, are themselves manifestations of an underlying and all-pervasive energy (Spinoza, writing before Newton, uses the term "motion and rest") that constitutes the very being of All-There-Is, or God, insofar as God is conceived physically.

Could it really have been otherwise?

Once the total dependency of the human body, indeed, of any given thing, upon God is understood, it follows that for any given thing to be or to have been different from what it in fact is, the totality of All-There-Is, or God, would have to be different from what she in fact is. But if God could really have been different from what she is, then there would have to be a cause or reason sufficient to explain why God is not in fact different from what she is. This "cause" cannot lie outside of God, for there is nothing outside of God. But to say that the cause of God's not being different from what he is lies inside of God, is to say that God contains within himself, within his own nature, the reason for being what he is, rather than something different. Therefore, it is absurd to conceive that God could possibly be other than what it in fact is, for God is what she is out of an inner necessity; and since everything that exists is caused by, depends upon, and is a part of, God, this divine necessity extends to all things whatsoever. Therefore we conclude that nothing could be or could have been other than what it in fact is (or was or will be).

Although this is all very clear and straightforward, we must nevertheless acknowledge that it is extremely rare for philosophical consideration to dispel deeply ingrained habits of thinking and the emotional responses that are consequences of those habits of thinking. As mentioned earlier, the emotion of guilt depends upon the (false) belief that a given past behavior of ours could have (or should have) been different, and hence to change that belief would destroy the emotion. As anyone who has been involved in therapy knows, our emotional patterns have a life of their own and actively resist any attempt to change them. Since the majority of our emotional patterns involve the belief that a given action of ours or another's could have been other than what it is or was, these emotional patterns will actively resist any effort to remove or alter the belief upon which they rest and will present to the mind many objections concerning the conceptions we are here presenting (e.g., "we can't have a moral world unless we can blame or praise people for their actions," "a world without free will is meaningless," "how can the evils of the world follow from God?," etc., etc.). Therefore, in addition to having shown the falsity of the belief that a given thing could have been other than what it is, we will now show why it is that most people not only hold this belief, but regard it as obvious and self-evident.

Now this belief is quite universal and appears in just about every known culture. Therefore, the conditions under which this belief is formed—that is to say, the psychological causes of the belief—must also be universal, a part of the "human condition."

The causes of this belief cannot lie in experience, for experience teaches us only what is, not what could be. Suppose, for example, I enter my office and observe a certain book lying on the left side of my desk. This experience tells me only what is—that the book is now lying on the left side of my desk. From this experience I have no basis for believing that the book could have been lying on the right side of my desk, so if, while observing that the book is in fact on the left, I also believe that the book could have been on the right, I am believing something that does not originate in my experience. Something must be "added" to my experience of the book as lying on the left in order to get the belief that it could have been lying on the right. This "something," according to Spinoza, is *imagination*.

Spinoza uses the term "imagination" to refer to any mental experience that involves an image. The term "imaging" would perhaps be more appropriate for contemporary readers, since "imaginary" has the connotations of "seeing something which isn't there." Nevertheless, we will retain Spinoza's usage, keeping in mind that by the term "imaginary" Spinoza means not only forming an image of something that isn't real, so to speak, but also forming an image of something whether it be really there or not. Thus, when the mind perceives a tree that exists, Spinoza would say the mind *imagines* (forms an image of) the tree. But the mind also imagines a tree when it forms an image of a tree that isn't there (hallucination); and it also imagines a tree when it remembers a past experience of perceiving a tree. The mind also has the power to imagine things that it knows to be contrary to fact, as when we form a mental picture of a winged horse, a Santa Claus, or, to return to our present discussion, of a book, which in fact is lying on the left side of my desk, as lying on the right side. But from the fact that we can form an image of something as being different from what it is, we cannot infer that the thing itself could have been different.

Suppose, furthermore, that yesterday the book was on the right side and that today, while perceiving the book on the left side I remember that the book was on the right side yesterday. The presence of this second image (representing the book on the right side) invites us to believe that *today* the book could have been on the right side. But clearly our experience tells us only that yesterday the book was on the right and today it is on the left; experience does not teach us that on either day the book could have been any place other than where it in fact was. Our tendency to think otherwise comes from (1) the ability of the mind to create contrary-to-fact images of things together with (2) the inability of the mind to find any reason why what it imagines could not be so. But it is quite obvious that neither our ignorance of why a given thing is and hence must be what it is, nor

our ability to form an image of a thing as different from what it is, can in any way support the erroneous belief that a given thing could have been in any way other than what it is. One more example should suffice to remove any remaining doubt.

Suppose I toss a coin in the air and after it lands, but before you can see which side has landed up, I cover the coin with my foot. If I ask you whether it is possible that the coin landed heads up, you will say "yes"; similarly, if I ask you whether it is possible that the coin landed tails up, you will again say yes. Now what is meant by the term "possible" in this context? It cannot refer to the actual coin, since the coin has already landed and it is either (a) heads up—in which case it is not possible that it be tails up—or (b) it is tails up—in which case it is not possible that it be heads up. So if (a) has occurred, but you do not know that (a) has occurred, you will say that it is *possible* that the coin show tails up when I remove my foot. But the only thing you can mean by this usage of the term "possible" is simply that you do not know, that you are ignorant, which of the outcomes has in fact occurred. The mind will form two images, one representing the coin as landing heads up, the other representing the coin as landing tails up. The mind then deceives itself into believing that either of these images could really be the case; but actually only one of these images could really be the case and the mind does not know which of its images corresponds to the facts. Later, I remove my foot and you see that the coin shows heads up; now I ask you, could the coin have shown tails up? You will be tempted to answer "yes," but this error stems from the facts that (1) you recall the time when you did not know which outcome had occurred and (2) at that time your mind *imagined* two outcomes, one of which was in agreement with the fact, the other of which was contrary to the fact. But from the fact that we were once (or are now) ignorant of the true outcome, and from the fact that we did form, or are forming, or remember having formed, contrary to fact images of the outcome, it does not follow that the outcome itself could have been anything other than it was in fact. Therefore we affirm what is really a tautology, that everything is what it is and that nothing could have been other than what it in fact is. This "tautology" is an essential consequence of the metaphysics of holism and must be kept firmly in mind. It is a fairly simple matter to see the truth of this with respect to books and coins; it is somewhat more difficult to apply this truth to ourselves.

The illusion of free will

But yet, we human beings, body and soul, are a part of God, and for us to be different from what we are or to have been different from what we were (and this includes all our thoughts, feelings, emotional responses, behaviors, actions, etc.)

God herself would have had to be different, which is impossible (This does not imply, it should be noted, that tomorrow we will be the same as we are today.). For the same forces that produced the galaxies, stars, and planets also produced the human being, who is a part of nature and follows the natural order of things and is not an "exception" to nature.

The overwhelming tendency of human beings to believe that in a given situation they *could have* behaved differently from how they in fact behaved, or that they *could have* made a decision contrary to the one they in fact made, reflects a powerful egocentricism that claims that humans are exceptions to nature. Every action or behavior of our body and every thought or decision of our mind is an event within the natural order of things and hence it has a cause, which cause is also within the natural order of things, and that cause itself has a cause, etc. So if any given action or thought of ours were different from what it was, the whole natural order of things would have to be different. But this is absurd, since the natural order of things (the term "natural" is of course redundant, since the order of things could not be other than what it is) is a manifestation of the Nature of God, and it is impossible that God should have a different nature.

Indeed, if we pay but a little attention to the psychological process to which we give the name "deliberating," "choosing," "deciding," etc., we will easily see that this process in no way justifies our belief that in a given situation we could have "decided" to do something other than what we in fact decided to do. Let us consider a specific example of a so-called free choice. I am at an ice cream parlor and I have to decide from among, say, 20 different flavors. The psychological process of deciding involves representing to myself—that is, forming an image of, or simply, *imagining*—the tastes of the different flavors, observing my own reactions to these images, alternating back and forth among the taste images until I settle on one to which my own reaction feels most positive, at which point I place my order. Let's say I order chocolate. Why am I tempted to believe, after I've ordered chocolate, that I *could have* ordered coffee? For all my experience teaches me is that at one time I was deliberating and then I ordered chocolate. Experience does not teach me that the result of the process of deliberating on that particular occasion could have been anything other than what it in fact was. The temptation to believe otherwise arises, as before, from the fact that we now remember (after ordering chocolate) the sequence of images representing alternative flavors together with the fact that at that time we did not know which of the images would prevail and hence were "free" to imagine that an image, different from the one that did prevail, might possibly prevail.

But this sequence of images that represents what appears to be possible "choices" is itself determined by physiological and psychological causes (even though we may be ignorant of these causes), and the fact that these images present themselves to the mind cannot in any way support the belief that we could have made a "choice" different from the one we actually made. Every process of "deliberating," "choosing," "deciding," etc., has this structure: (1) a series of images, representing what appear to be different "possibilities," present themselves to the mind; (2) the mind alternates back and forth among the images, drawing perhaps further images (representing, say, consequences of each "possibility"); (3) eventually one of the images grows stronger and prevails; and (4) then the mind acts on the image that has prevailed. It does not follow from the fact that a series of images is presented to the mind and the mind does not know at the time which of these images will prevail, that an image that did not in fact prevail could have prevailed. Therefore, we affirm that everything that is—and this includes those mental processes referred to as "deliberation," etc.—is a part of the natural order of things that expresses a divine necessity and could neither be nor have been different from what it in fact is.

The importance of practice

It is not enough to give merely intellectual assent to this consequence of Holistic metaphysics; it must be applied on a daily basis to every emotional response, such as blame or guilt, which is inconsistent with this principle. For the reality of our day-to-day experience is primarily sensory and emotional. The sole purpose of metaphysics is to provide a conceptual framework in terms of which our day-to-day experience can be transformed in a direction of increased happiness and peace of mind. This transformation cannot occur unless one is willing to bring one's own emotional responses into harmony with one's intellectual understandings and this harmony cannot come into being without constant practice. The merely intellectual understanding—that, say, the emotion of guilt is based on the false belief that in a given past circumstance one could have behaved differently—cannot by itself remove such feelings of guilt, any more than one can learn the game of tennis simply by reading about it. What is required is to bring the intellectual understanding to bear on concrete instances of the emotion, so that each time guilt is felt the mind gently reminds itself of what it understands intellectually. This must be done over and over again, until the understanding of guilt so completely pervades one's being that the highly dysfunctional emotion is no longer a part of one's character structure.

EXERCISE 2: Each time a feeling of guilt or an impulse to blame another occurs, remind yourself that this particular feeling of guilt or this particular impulse to blame, insofar as these emotional responses involve the false belief that either you (in the case of guilt) or another (in the case of blame) could have acted differently in a specific circumstance, is out of harmony with what your mind understands to be true, i.e. that nothing could have been other than what it in fact is or was. This process of reminding will not instantly remove the feeling of guilt, any more than one or two practice sessions at the piano will make you a proficient pianist. But with even a little practice some progress will be noticed, and one will then have some positive reinforcement that one is on a path that *leads* somewhere, and that one is not engaging in mere intellectual mind games.

Indeed, this conception of philosophy as providing an intellectual map that leads somewhere and hence must be followed in practice if one is to get to where the map leads is essential for understanding Spinoza. For much of what passes for philosophy today *is* of the nature of an intellectual mind game—interesting, perhaps, like a crossword puzzle, but not intended to be relevant to one's personal life, and hence useless as a basis in terms of which to understand and improve the quality of one's concrete, daily emotional reality. But Spinoza's philosophy *is* intended to be relevant to daily living; it is thus impossible to understand Spinoza merely by reading his books, but only by applying his ideas to one's own personal life. Only in this way can the relevance be experienced. Let us briefly discuss this concept of philosophy as intellectual map in more general terms.

Suppose several people are walking in a forest and begin to realize they are lost. One of them formulates the question, "Where are we?" Someone else in the group responds, "You are right here." Now consider why this statement is not an adequate response to the question. First of all, it must be acknowledged that this response is absolutely and undoubtedly true, it is logically impeccable. But as true as it is, it is absolutely useless because it is of no help in getting out of the forest. Any adequate response to the question must involve a way of getting out of the forest. To be told that you are right here, even to be given a detailed description of the terrain visible from "right here," does not respond to the request, implicit in the question, for guidance on how to get out of the forest.

A *useful* response to the question would be in the form of a map that would include (1) a general description of the whole terrain and (2) an "X" marking the

place where the people are presently. The second point is important. For in order that a map be useful to a given individual, the individual must be able to locate herself on the map. Now much of philosophy belongs to this "true but useless" category. For example, Descartes responds to the question "What am I?" with "You are a thing that thinks." But just as a person lost in the forest knows that he is "right here" before he asks "Where am I?", so we already knew we were a "thinking thing" before we asked "What am I?"; and thus Descartes' reply is as undoubtedly useless as it is undoubtedly true. For anyone who has felt in her soul the question "What am I?" is asking for an answer that can be used as a guide for living. If one also feels, however vaguely, that there must be a *better* way of living than the path of material acquisition and self-aggrandizement prevalent in society, then any intellectual map that is to be an adequate response to this question must show a path leading to this "better way" of increased happiness, fulfillment, etc. But for such a map to be useful as a guide it must make detailed and explicit contact with where one is at right now; that is to say, with one's present emotional reality.

Part of the intellectual map we are in the process of constructing includes the principle that nothing could have been otherwise. But this general principle remains useless until the individual applies it to his daily personal life. This process of applying a metaphysical principle to concrete daily life, whereby the later is transformed and the former more deeply understood, is the process of locating oneself on the map and using the map as a guide. If, as we follow the map, we find that the new terrain we experience is as described by the map, then we gain both greater trust in, and better understanding of, the map itself, as well as a "better way" of living our lives. We now proceed with a further elaboration of Spinoza's "map."

MIND AND BODY

So, what are we? We know thus far that whatever we are, we are a part of a larger Whole. But this by itself is not sufficient to distinguish the part of God that is a human being from any other part of God. We need a more detailed account of what it is to be a specifically human portion of the being of God. We all believe that we have a physical component (our body) and a psychological component (our mind). What is the relation between the two? Historically, there have been three major responses to this question.

1. There exists only the physical; what we call "mind" is simply the product of material processes occurring in the brain, and should those processes cease, our mind would also cease to exist. This point of view we will call "materialism."

2. There exists only the mental. That which appears to be physical, including our bodies, is simply an illusion created by a (not necessarily human) Mind or Spirit. We will call this view "Idealism."

3. There exists both the mental *and* the physical; the mental cannot be "reduced to" the physical and the physical is not an illusion created by the mental. It is this third position that Spinoza adopts, although, there are tendencies in his system toward Idealism.

Now it is interesting to note that Spinoza never gives any argument, or reason, for believing the third response rather than first. He assumes from the beginning that mind and matter are distinct kinds of substance, neither reducible to the other. Perhaps he didn't feel the need to give a reason for this because the people he was writing for already believed it. Today also, the great majority of people believe the third response, and not the first. Nevertheless, materialism has become intellectually fashionable, and our universities are overwhelmingly dominated by people who sincerely believe that their mind is solely a product of their neurons, that their consciousness will be totally extinguished when their body dies, and that anyone who believes otherwise has fallen prey to religious superstition. We, therefore, discuss briefly, and offer several considerations, why Materialism should be rejected.

Some considerations against materialism

I say "considerations" rather than "proofs," because, as history shows, any belief system may be clung to no matter what the evidence to the contrary may be; to those who are deeply wedded to materialism and whose whole life would be thrown in disarray should they come to believe in the existence of spirit, what I have to say here will not be convincing (for there is nothing that could convince such people). The following considerations, therefore, are addressed to those intellectuals who feel in their hearts and suspect in their minds that perhaps we are more than just bodies, and yet are hesitant to explore for themselves a non-materialistic framework because they fear ridicule from their friends and colleagues.

1. One consideration is a kind of argument from authority: many, if not most, of the creative geniuses of our culture—poets, novelists, artists, musicians, scientists and philosophers—have expressed strong beliefs in a spiritual dimension to reality. Of course, this is merely a consideration, not an argument, but is it not odd that our intelligentsia at best ignores, and at worst treats with scorn and ridicule, a worldview espoused by so many of our culture's acknowledged creative geniuses? Are these geniuses all soft-headed, mushy-brained, fuzzy thinkers? When Einstein wrote in 1936 that

> ...everyone who is seriously engaged in the pursuit of science becomes convinced that the laws of nature manifest the existence of a spirit vastly superior to that of man, and one in the face of which we with our modest powers must feel humble. (M. Jammer, *Einstein and Religion: Physics and Theology*, 1999)...

was he being soft-headed, uncritical? Why is it that almost without exception the great creative scientists of this century (Einstein, Schroedinger, deBroglie, Heisenberg, Pauli, Godel, Eddington, Bohm, Wigner, Margenau, etc.) ascribed to a spiritual worldview? And why is it that this fact is systematically ignored by most intellectuals?

2. A second consideration, which in my opinion is direct evidence for the survival of consciousness after the death of the body, is the phenomenon of the near-death experience (NDE). There is a growing body of data, collected by respectable physicians and psychologists, subjected to appropriate statistical analysis, that appear to rule out every attempt to explain (or explain away) the NDE and other such phenomena in physiological and/or psychological terms. To my knowledge, there is not a single researcher in the field who, as a result of his research, is not inclined to take the NDE at face value—that is, people really do leave their bodies during such experiences. One would think that intellectuals would undertake a serious study of this phenomenon, because the issue—whether consciousness can exist outside the body—is so important and so highly relevant for assessing life's meaning. And yet, like the bishop who refused to look through Galileo's telescope

(because he "knew" there could be no such thing as moons circling Jupiter), the intellectuals of our time generally refuse to look at what is at the very least strong *prima facia* evidence for the existence of consciousness independent of the body.

3. The third consideration involves the intuition that there are no rational grounds for suicide. A person who takes, or attempts to take, his own life, by that act demonstrates that his mind was unbalanced at the time. It does not matter what "reasons" he gives for committing suicide, because the reasons are themselves the product of an unbalanced mind. I believe this would be the attitude of all psychiatrists and therapists. I cannot imagine any circumstances under which a psychiatrist might say to a suicidal client, "Yes, you have good reasons to kill yourself. I agree that that's the rational thing to do." Now if the intuition that suicidal behavior is a symptom of mental imbalance is accepted, then I want to apply this intuition to collective behavior. For example, when the tragedy of mass suicide involving the followers of Jim Jones occurred in Guyana, no one argued that they had good reasons to kill themselves. On the contrary, everyone agreed that the fact of mass suicide was sufficient evidence for the claim that Jones and his followers were psychologically unbalanced.

Cannot the same argument be advanced for Western civilization as a whole? For Western civilization is now actively contemplating suicide in two ways: (1) through global nuclear war and (2) through irreversible pollution and destruction of the environment upon which our existence depends. But isn't this insane? Suppose an anthropologist from another planet visits Earth after we self-destruct by means of nuclear war. What will he think? Will he think that we had "good reasons" to destroy ourselves, or will he automatically take the fact that we destroyed ourselves as proof that we had collectively gone insane? Would he not ask, "What did these poor deluded people believe, what did they value, how did they live their lives, how did they become so psychologically unbalanced that they could see no alternative to self-destruction?"

I suggest that the materialist beliefs and values of our culture are leading directly to self-destruction and that these beliefs and values therefore

may properly be called insane. As men and women of good conscience, we should not participate in a thought structure that is leading toward the annihilation of life on Earth, but instead explore, intellectually and personally, with our hearts and our minds, alternative thought-systems such as Plato's and Spinoza's, which provide metaphysical grounds for fostering, in ourselves and in others, life-supporting values and qualities such as cooperation, compassion, true generosity, genuine acceptance and appreciation of those who are different from us, and Universal Love.

4. For our final consideration, we will present a version of an argument first given by William James in his essay "On Human Immortality." This argument is among the masterpieces of philosophical reasoning, for it grants the materialist just about everything and yet demonstrates that there can be no compelling reasons for believing that spirit does not exist. Now the materialist believes that human beings are nothing over and above a physical body, which includes the brain, and hence, everything about us must be explicable solely in terms of the body. In particular, those aspects of ourselves we are in the habit of calling "mental" or "psychological"—e.g., thoughts, consciousness, awareness, etc.—must be produced by the body (since otherwise they would have a reality independent of the body, which is contrary to materialism). Since in this view the mind itself is produced by the body, specifically the nervous system, there can be nothing in the mind that is independent of our body, and our mind is thus a function of our body. To say that the mind is a function of the body means that there can be nothing in our mind that does not correlate with something or other in our body. Now although we have presented above some empirical reasons for thinking that this is false—i.e., people, in the near-death experience report a continuation of conscious experience even when the brain is not functioning, let us here assume that it is true. That is, let us assume a complete functional dependence of the mind on the body—that there is no thought, no perception, no feeling however subtle, that does not depend on the functioning of the brain. William James grants this, and then shows that this still cannot prove that materialism is true. What James says, in effect, is from the fact (if it be a fact) that our conscious experience is *totally dependent* upon our

nervous system, it does not follow that our consciousness is *produced* by our nervous system.

Consider, for example, a television set. Everyone will agree that the picture that appears on the screen is a function of the inner workings of the set. Every detail of color, shading, motion, etc., corresponds to something happening in the mechanism of the set, and nothing can appear on the screen that does not correspond to something in the mechanism. But yet we know that the picture itself does not originate in the mechanism of the set; it originates in the TV studio and is transmitted in the form of electromagnetic radiation to the antenna of our television set. The set itself is simply a receiver: it transforms the electromagnetic signals (which signals exist independently of any TV set) into the form of sound and light that we experience when we watch TV. The TV set does not generate or produce the signal (or information); it merely transforms ("transmits" is James' term) it from one form (electromagnetic) into another (visible picture). Thus it does not follow from the fact that there is a one-to-one correspondence between the picture and the mechanism of the set that the picture is produced by the mechanism.

Analogously, from the fact that our conscious experience is, or may be, a total function of the nervous system, so that nothing can belong to the former that does not have some counterpart in the latter, it does not follow that our consciousness is produced by, or originates in, the nervous system. It could be that our body is simply a mechanism that receives a consciousness that exists independent of the body and transforms it into the form we experience as "our own." The most neurophysiology can demonstrate is the wondrous details of the correlation between conscious experience and the brain. It cannot decide the issue between whether the brain produces conscious experience or whether the brain merely transforms consciousness from one form into another. Thus, neurophysiology is *neutral* with respect to this issue, and there are no scientific reasons for preferring a materialistic point of view over a non-materialist point of view. Once the reader sees that materialism is a non sequitur, that it does not and cannot ever follow from the facts of neurophysiology, he is then free

to examine other philosophical perspectives concerning the nature of the mind and its relation to the body.

The relationship between mind and body

We now return to Spinoza's account of the mind and its relation to the body. Given that mind and body are distinct in kind— so that neither is reducible to, or explicable in terms of, the other, what is the relationship between them? Spinoza's response to this question is greatly different from what the majority of people believe. Most people believe that the mind and body interact with each other, that one can affect the other. It seems very obvious that a desire (which is in the mind) can cause the body to move; e.g., the desire to, say, take a walk causes the body to walk, or that harmonious sound waves striking the ear can cause the mind to experience beauty. Nothing seems more obvious than that the mind can affect the body and vice versa. Nevertheless, Spinoza denies that any interaction can occur, and the basis for his denial is very straightforward.

The common view, which Spinoza rejects, asserts

1. Mind and Body are distinct in kind, and

2. Mind and Body can interact with one another.

It is easy to see that these two statements are inconsistent; that is, they cannot both be true. For if we assume that mind and body are distinct in kind, then they have nothing in common (for if they shared anything in common, they would not be distinct in kind). But if they have nothing in common, then they cannot possibly interact with one another. In other words, what it means to say that two things can interact is that something from one affects the other, and therefore, that the two things must have in common the *means* by which they interact. But if they share in common the means by which they interact, then they cannot be distinct in kind. For example, when we perceive an external object, our body and the object interact—the same light that is reflected by the object enters our body through our eyes, and so that light is something that our body has in common with the external body. Our body and (any) external body are similar in kind; they are both made up of matter and it is because of this that one can affect the other. But consciousness, or mind, we are supposing, is not made up of matter; it is distinct from matter and therefore has nothing in common with matter, and thus cannot interact with matter.

I do not wish to belabor the point, but so habituated are we to imagining that (1) and (2) above are both true that the illogic of this position is apt to be difficult to see through. Let us consider two physical objects, A and B, and let us suppose that A and B interact with each other. There must then be some *means* by which A and B interact—e.g., they could interact through physical contact, gravitational attraction, electrical force, etc. When this is analyzed according to physics, it is apparent that every interaction between any two physical objects involves an exchange of energy, which energy is also physical, between the two objects. It is because A and B are both *physical* objects that they both have energy and have *in common* the energy that they exchange in order to interact. That is, the very same energy that, say, leaves A, is absorbed by B. But B is able to absorb this energy, and hence to be affected by A, only because B is of the same nature as A—that is to say, both are *physical* objects and energy is a defining characteristic of what it is to be a physical object.

If we now suppose that A is physical and B is not physical, then how is it possible for A to affect B? For since B is not a physical object, it is not characterized by physical energy (if it were so characterized, it would be physical in nature), and hence is not capable of being affected by A. Conversely B cannot affect A, since the only means by which A can be affected is by absorbing or "feeling" some physical influence; but if B could produce something physical that could then affect A, then B would itself have to be physical. Thus, summarizing, if two things have nothing in common, they cannot interact because in order to interact they would have to have in common the means by which they interact.

According to Spinoza, mind and body are distinct in kind, which means they have nothing in common, which in turn means they cannot interact with one another. How, then, can we explain the fact that mind and body *appear* to affect one another? For it certainly does *seem* to be the case that I can move my body simply by willing my body to move and that it is the mental *willing* that causes the physical motion of the body. If there is no causal connection between mind and body, then what is the explanation for the observed correlation between them? Spinoza holds that this observed correlation is to be explained in terms of a deeper underlying reality, namely God. The physical and the mental are qualitatively distinct aspects—"Attributes," in Spinoza's terminology—of God. Because they are qualitatively distinct, there can be no interaction between them; because they are aspects of the *same* God, there will be correlations between them.

I wish to present an analogy that I believe will assist the imagination in picturing what Spinoza has in mind. The analogy is meant to appeal to the

imagination, and hence must not be taken literally. Let us imagine that God is standing in front of a large number of mirrors. Imagine, further, that each mirror is differently curved, so that God is reflected *completely* in each mirror, but since the mirrors are all different, the reflected images of God will all be different from one another. It is clear, in this analogy, that there can be no interaction between the different images of God, yet there will certainly be correlations between the images since the different images are reflections of the *same* God. Now, one of these complete reflections of God is the entire physical universe, the "body" of God. Spinoza calls this the Attribute of Extension. Our body is a part of this Attribute. Another is the entire mental universe, the "mind" of God, which Spinoza calls the Attribute of Thought. Our mind is a part of this Attribute. The relation between the mind and the body is simply that they are different reflections of one and the same part of God. The human mind is a part of God reflected in the mirror of Thought; the human body is the very same part of God, but reflected in the mirror of Extension.

A note on terminology: The most basic distinction in Spinoza's metaphysical "map" is between independent being and dependent being. Spinoza uses the term "substance" or "God" when referring to the former, and "mode" or "modification" when referring to the latter. Any dependent being, such as a physical object or a finite mind, *depends on* independent being; that is, it is included in the larger whole that is God. So by referring to a given object as a *mode* of God, Spinoza explicitly reminds us of the dependency of that object on God. An Attribute of God is a complete reflection of God; the Being of God expresses itself, or manifests itself, in an infinite number of qualitatively distinct dimensions, each one of which is called an Attribute of God. We humans are aware of only two: the physical (Extension) and the mental (Thought). Thus, in Spinoza's terminology, the human being is a mode of God. The human body is that mode of God expressed in the Attribute of Extension; the human mind is the same mode of God, but expressed, or manifested, in the Attribute of Thought.

Let us now examine several consequences of our analogy. As we have already indicated, the reason why the mind cannot affect the body and vice versa is that the mind and the body are different mirror images of the same part, or mode, of God. An image that appears in one mirror cannot affect an image that appears in another mirror. The reason why mind and body are correlated with each other is because they are both images of the *same* mode of God. This "correlation" is a very general feature of Spinoza's system and is not limited only to human bodies and human minds. Every physical object must have some counterpart in the

Attribute of Thought, because a physical object *is* a mode of God reflected in, or manifested in, the physical dimension; that same mode of God is also reflected in, or manifested in, the mental dimension. Thus, if we consider a given physical thing—whether it be a table, a rock, a star, or a magnetic field—that thing must have a counterpart, or correlate in the Attribute of Thought. Spinoza refers to this correlate as the mind of the thing, or the idea of the thing. This is why Spinoza is often regarded as a pantheist: there is nothing in the physical world that is not associated with mind or consciousness.

This is a feature of Spinoza's system that may be difficult for some people to accept, for our anthropomorphic tendencies make us uneasy with the notion that intelligence can manifest itself in nonhuman forms. But it is a consequence of our model that in the same way that there exist physical objects, or bodies, that are not human, so also are there mental objects, or minds, that are not human. It is, on this view, as absurd to believe that the human mind is the only kind of mind there is as it is to believe that the human body is the only kind of body there is. Moreover, since the human body is a part of a larger physical ecosystem (Earth), which is part of a still larger ecosystem (the solar system), etc., and this process of inclusion continues until we reach the physical universe as a whole, or the Body of God—so also, the human mind is a part of a larger *mental* ecosystem (the "mind" of Earth), which is a part of a still larger mental structure, etc., and this process of inclusion continues until we reach the mental universe as a whole, or the Mind of God. The human mind is thus a part of a larger mental reality, and our salvation or liberation consists in experiencing our connection with this larger reality.

Now, because each "mirror," or Attribute, is a self-contained whole, the manifestation of God in one mirror (say, Extension) can neither influence nor be influenced by God's appearance in any other mirror (say, Thought). So when we are considering the events occurring in a given mirror, we can explain those events only in terms of the given mirror. Each mirror is explanatorily complete and self-sufficient; the human body must be explained only in physical terms and the human mind must be explained *only* in mental terms. Thus every activity of the body—and this includes so-called purposive activity—has its cause and explanation solely within the physical world; and similarly, every activity of the mind has its cause and explanation solely within the mental world. Nevertheless, although mind and body do not interact with one another, there are structural correlations between them that are due to their being different images of the *same* mode of God, It is therefore possible to infer some things about one from knowing about the other. We have already given two examples of this: (1) from the fact that there are physical bodies

that are nonhuman we infer that there are mental bodies, (or minds, or spirits) that are nonhuman; and (2) from the fact that the human body is a part of a larger physical system we infer that the human mind is a part of a larger mental system.

A third example is: (3) from the fact that the human body is composite to a high degree—being constituted by bodies (e.g., cells), which are themselves constituted by bodies (molecules), etc.—we infer that the human mind is also composite to a high degree, being constituted by thoughts that are in turn constituted by other thoughts, etc. Since our awareness does not extend to most of these thoughts, any more than it extends to most of the physical structures that constitute our body, it is appropriate to say that we are generally unconscious of most of the mental structures (thoughts, ideas, feelings, etc.) that collectively constitute our mind.

Finally, (4) from the fact that our body contains within itself other bodies—bacteria, viruses, chemicals—that do not have the same nature as the human body, and that some of these other bodies are harmful and some are beneficial, it follows that the human mind contains within itself other mental objects that do not have the same nature as our own mind, some of which may be harmful to us, others of which may be beneficial. These are some of the things about the nature of our mind that may be inferred from our knowledge of the nature of our bodies together with the general structural parallelism that holds between mind and body.

However, the similarities between the mental and the physical are structural only, for the Attributes of Thought and Extension are qualitatively distinct and have nothing in common. *Awareness* is a characteristic only of minds; *extension* in space and *duration* in time are characteristic only of material objects. The mind can, and does, experience spatial and temporal relations as long as it is associated with a body, but when it withdraws from the physical into itself, it experiences its own nature, i.e., consciousness per se, and this nature has nothing to do with time. For the Attribute of Thought is the Mind of God and contains within itself an awareness first of its own nature and second of the natures of all the other Attributes or ways in which the Being of God manifests itself. Space and Time pertain only to Extension, not to Thought or to any of the other dimensions in which the Divine Nature express itself. The Mind of God is eternal, that is to say, outside of time; and since the human mind is a portion of—a mode of—the Divine Mind, it follows that the human mind, in its essential nature, is also eternal. The human mind, however, has so thoroughly identified with the experiences of its body that it has forgotten its own essential nature and is unable to conceive of the possibility of conscious experience outside of time. Indeed, even God herself is pictured as existing in Time. It will be useful, therefore, to "stretch

our minds" on this point, so that we become more open to the idea of (or at least the possibility of) non-temporal conscious experience.

SPACE, TIME, AND ETERNITY

In medieval days, a philosopher who wished to show that his ideas were intellectually respectable had to show that they were in agreement with the Bible. Today, agreement with science has replaced agreement with the Bible as the mark of intellectual respectability. And I think this indicates progress, because science does not limit itself only to what can be imagined, or pictured, but strives to attain an understanding of the common properties of things even when that understanding, as physics clearly shows, involves using concepts that cannot be pictured by the mind. We have already appealed to the authority of physics when we showed that holism is the only metaphysics in harmony with physics. We shall now appeal to physics to show that space and time, as *we* experience it, are not fundamental categories, even of Extension. That is to say, if we pose the question, is there anything "beyond" space and time, physics answers "yes."

The expanding universe and the limits of the imagination

Most of us are perhaps familiar with some of the ideas we wish to discuss. We have all heard about black holes and the expanding universe, but the philosophical significance of these concepts has not been fully appreciated. Let us first consider the fact that the universe is expanding; the galaxies are receding from one another. At earlier times, the universe was smaller than it is now, and because the rate of expansion is known, it is possible to determine the time at which the entire universe was contained within an infinitesimally small volume. This is the moment at which the "big bang" occurred. Although the fact that the universe is expanding is familiar to most people, what is not familiar is the fact that it is impossible to imagine, or picture, this process.

For the mind invariably pictures the material of the universe expanding *into* a pre-existent space, but this picture is false because space does not "pre-exist." There is no space external to the universe *into* which the universe expands, and yet the mind cannot visualize the galaxies flying away from one another without also (falsely) visualizing a space into which the galaxies are flying. An oft-used analogy invites the reader to picture the expanding universe analogously to an expanding

balloon. The galaxies are analogous to dots placed on the surface of the balloon; as the balloon is blown up, the dots will appear to recede from one another. In this example, it is clear that the space between the dots on the surface of the balloon does not pre-exist, but rather comes into existence as the balloon is blown up. That is, if we consider a Time at which the distance between dots is, say, one centimeter, and a later time at which the distance between dots is two centimeters, and then if we ask where does this extra one-centimeter distance come from, it is clear that it does not pre-exist on the surface of the balloon, but comes into existence as the balloon is blown up. The increased distance between dots on the two-dimensional surface of the balloon comes into existence *because* the balloon is expanding into a three-dimensional space. Analogously, the increased distance between galaxies in three-dimensional space comes into existence *because* the universe is expanding into a higher dimensional space. Just as an expanding two-dimensional spherical surface *requires* a third dimension into which it can expand, so also an expanding three-dimensional space (or four-dimensional space-time) requires a fourth (fifth) dimension into which it can expand.

The expansion of the three-dimensional universe into a higher dimension illustrates two points: (1) the ordinary three-dimensional space of human sense experience cannot be all there is—there must be "something" beyond ordinary space; and (2) this "something more" cannot be imagined, since the human mind's ability to form images is based upon its association with the body's experiences in three-dimensional space. But as mathematics and physics show, the mind's inability to form images of higher dimensional spaces does not mean that such spaces cannot be understood. Ordinary three-dimensional space (and time also) must then be conceived as lying on the "surface" of a higher dimensional space.

These same physical facts (the expansion of the universe) also indicate that time, like three-dimensional space, cannot be the most fundamental level of physical reality. For time, like space, does not exist prior to the big bang, but comes into existence with the big bang. The human mind incorrectly imagines that the big bang occurred at some moment *in* time. But this picture falsely represents time as pre-existing prior to the big bang, whereas, according to physics, time, like space, originates in the same process that generates the big bang itself.

The emanation of the spatio-temporal order from its eternal source

Let us carry our analysis further. The principle of sufficient reason asserts that there is a cause or reason for everything that happens. The big bang is certainly a happening so there must be a cause or reason for it. But this cause or reason cannot

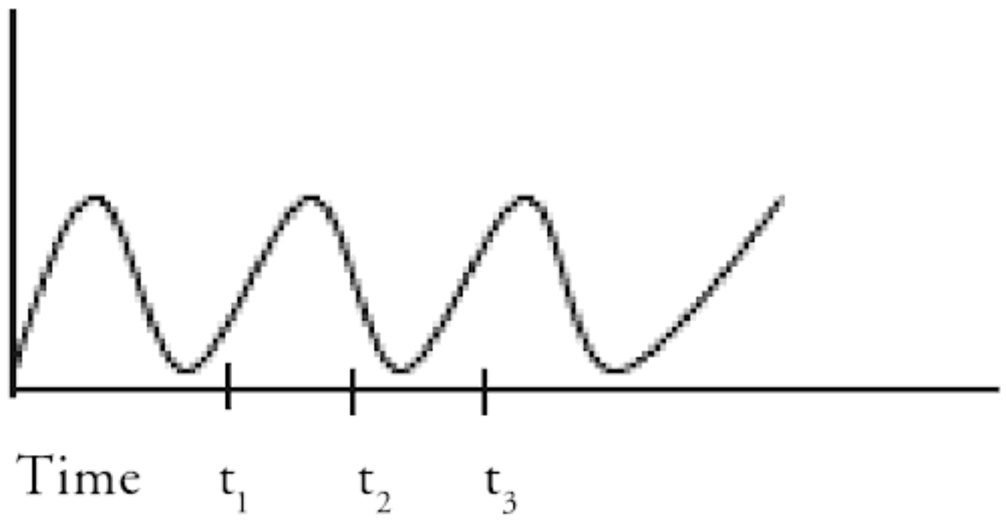
be something that is "in" time (or space), because time itself comes into existence with the big bang. Therefore, the cause of the big bang must be something that exists outside of time. If we agree to use the word "eternal" to refer to anything that exists outside of time (and this is Spinoza's usage) it is clear that the entire physical universe as we experience it—the world of things in space and time—depends for its existence on causes that are eternal. Furthermore, since the cause of the big bang is eternal, i.e. it is not a temporal process that begins to exist or ceases to exist in time, it follows that this cause exists "now," and not only at the moment, so to speak, of the big bang. Therefore, the spatio-temporal universe must be *continuously emanating* from its eternal cause.

We will now develop a model in terms of which this process of continuous emanation may be better understood. This model will also assist us in understanding the possibility of Attributes other than Thought and Extension. I should add that the model to be developed here is not, as yet, required by today's physics, but it is strongly suggested by it. We begin with the concept of a black hole. Imagine, if you will, a sheet of paper in which a hole has been punched. Although the hole can be located by an imaginary two-dimensional being residing in the paper and its size can be measured, the hole itself is quite literally a place where the paper is not. Similarly, although a black hole can be located in space and time, and its size and mass determined, the hole itself is literally a "place" where space and time are not. Now imagine two identical holes at opposite ends of a sheet of paper. If we are allowed to curve the paper, it will be possible to curve it so that the two holes coincide with one another. A two-dimensional space traveler could then cover the distance between the holes in an instant, by going through one hole and emerging from the other, rather than by traveling in the plane of the paper. Similarly, it is possible for two black holes to be connected, even though they are very far apart in space and time. A three-dimensional space traveler could cross that huge distance in an instant, simply by entering one black hole and emerging from the other hole with which it is connected.

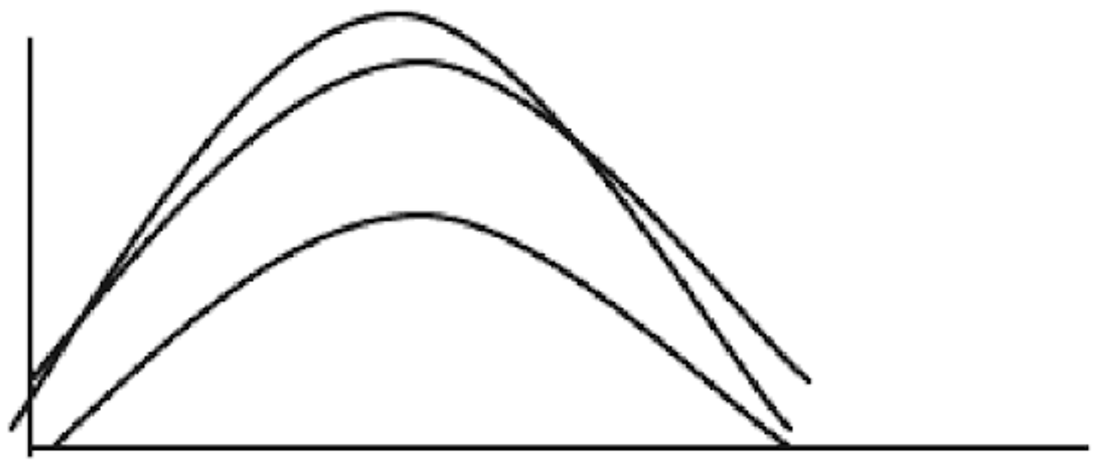
This example again shows that space and time cannot be ultimate features of the world, even though we cannot imagine a world that is not "in" space and time. For it is theoretically possible to enter a black hole here and now and instantly re-emerge millions of light-years away, and millions of years in the past or future, thus bypassing the usual spatial-temporal connections. By "theoretically possible" I mean that physics provides us with the conceptual apparatus for *understanding* (but not for *imagining*) how this could actually happen. The fact that ordinary space-time connections can be bypassed, that under certain conditions one can

get from here to there without traversing the three-dimensional space in between, means that there exists non–spatial-temporal connections between things (such connections are called "topological," in the language of mathematics).

According to prevailing physical theory, the entire world of three-dimensional space and time, together with the matter/energy that "fills" space-time, emerged from a "singularity," or black hole, at the moment of the big bang. One model of the universe holds that this process of expansion will continue until some maximum size is reached, after which the universe will undergo a process of contraction until it collapses back into a black hole, whereupon it will re-emerge, expand again to some maximum size, contract and collapse, etc., this process of expansion and contraction continuing forever. Let us call this model the Oscillating Universe Mode. The picture looks something like this:



It should be obvious, however, that there is something wrong with this way of picturing an oscillating universe. For on the one hand we are picturing (imagining) these oscillations as occurring *in time,* with successive universes undergoing their cycles of expansion and contraction *one after the other.* But on the other hand, physics tells us that this picture is incorrect, because time does not exist within a black hole, and hence it is incorrect to picture these cycles of expansion and contraction as occurring in time. Time (and space) exist *within* a cycle, but not across the hole that connects one cycle with another; thus, one may correctly say that t_2 is later than t_1, but not that t_3 is later than t_2. The oscillations themselves occur in a higher dimensional space. Although this process cannot be pictured, a representation which depicts these universes as happening all at once is more accurate than the above representation which depicts them as happening "one after the other" in time.



Our model, therefore, depicts physical reality as consisting of an infinite number of spatio-temporal worlds, all of which exist simultaneously in a higher dimensional space. I wish to suggest that this concept of parallel worlds be thought of as an *analogy* for better understanding the infinite number of Attributes, or ways in which God expresses himself. The analogy must not be taken literally, since all the (infinitely many) parallel worlds in our model exist *within* the Attribute of Extension. Nevertheless, our model is useful for showing how a given thing can simultaneously express itself in infinitely many ways. For just as in our model Extension expresses itself in terms of infinitely many simultaneously existing three-dimensional worlds, of which our world is but one, so also God expresses himself in terms of infinitely many simultaneously existing Attributes of which Extension is but one.

To develop our model still further, recall that we said earlier that a given black hole must be topologically connected (this means simply that the connection is not spatial-temporal) with another black hole. The two connected black holes must have identical physical characteristics (size, mass, rotation), since they are actually one and the same hole, even though there may be a large spatial and temporal separation between them. According to our model, the three-dimensional universe initially exploded out of a black hole and will eventually implode into a black hole. Since these two holes or singularities have identical physical characteristics (because the overall mass/energy and rotation of the universe remain constant), it is possible to identify the two holes. Thus, even though there appears to be a large temporal separation between the big bang and the final collapse, the black holes out of which and into which these two events occur are not two distinct holes, but one hole. But if the beginning of space and time (the big bang) is the same "point" as the end of space and time (the final collapse) then what is the status—the metaphysical status—of all activity that seems to be happening in between?

The logic here seems as paradoxical as it is straightforward; if what appears to be two distinct points are really one and the same point, then there can be nothing "in between" them, and whatever appears to be "in between"—the entire spatial-temporal world—has the status, metaphysically speaking, of an illusion. If the black holes marking the beginning and end of the spatial-temporal universe are not *two* holes, but one and the same hole, then the entire spatial-temporal world must be conceived as existing within, inside of, this hole. Thus, the entire world of space, time, and things in space and time is contained within an eternal object—that is, an object that is itself outside of space and time, and hence is continuously present to all spatial-temporal events that occur within it.

This is perhaps what Plato meant when he said that time is the moving image of eternity. Indeed, Plato, in his famous allegory of the cave, explicitly compares the three-dimensional spatial and temporal world to shadows that appear on the wall of a cave. Just as a shadow is a two-dimensional image of a three-dimensional reality, so the entire spatial-temporal world is a 3 + 1 dimensional image of a higher, eternal reality that is *continuously present.* This last point is important. The object must be continuously present in order to cast a shadow. So also, the eternal object—the black hole out of which and into which our world emerges and merges—must be continuously present in order that our world continue to exist. We must resist the notion of an "absentee Creator." For the cause of our world is not some Big Event that happened long ago and now no longer exists. Once it is understood that the cause is eternal—outside of space and time—then it is obvious that this cause must be continuously present and that our spatial-temporal world continuously emanates from its eternal source.

2 THE MIND

THE GENERAL NATURE OF SENSE EXPERIENCE

We indicated before that one of the reasons why we are not consciously aware of our connection with the whole of Nature has to do with sense experience, which presents to our awareness a world of seemingly separated and disconnected objects. Philosophers over the ages have been divided about whether our senses are like "windows" through which we experience reality directly, or whether they are more like "chains" which constrain the mind to experience a fragmented and truncated distortion of reality. Although common opinion holds the former, that our senses allow us to experience the world more or less as it is, the mystical philosophers such as Plato and Spinoza hold the latter view—that our senses represent to the mind a highly confused and inadequate image of reality.

Plato compares the world as it appears to our senses to mere shadows of "real" things, and says we are under the systematic illusion that the shadows are the only reality. In Plato's metaphor, our senses make it appear as if all we are is a body, since the consciousness that experiences through the body is not an "object" that can be perceived by the senses.

Thus, it seems to us as we though we are only a body. The mind, although independent of the body and eternal in its own nature, has so thoroughly associated itself with that portion of Extension that is its body that it has forgotten its own nature and is convinced that it *is* its body. For Plato, our happiness consists in "remembering" that we are not a material shadow, but a portion of a soul that has temporarily lost itself in a material form. It is much the same for Spinoza, except that his language is less poetic than Plato's. For Spinoza, our happiness, or Blessedness, consists in identifying with the Attribute of Thought and experiencing ourselves as such—that is, as a "portion" of consciousness that together with all other portions (some human, most not) collectively constitute the Mind of God—rather than identifying ourselves with, *and experiencing ourselves as,* that mode of Extension that we call our body.

Since sense experience is a major factor in creating and sustaining the illusion that our mind exists in isolation and separateness from other minds, and since this illusion of separateness engenders many emotions, such as fear, anxiety, and envy,