CHAPTER SIX

THE NATURE OF THINGS

As long as a philosopher confines himself to problems of ethics such as we have been discussing, his audience may stay with him, hoping to find some help in improving their conduct. But when he moves into the realm of metaphysics, the number of empty seats suddenly increases. This is too much for us, many students decide, now that he has both head and feet in the clouds and is posing questions which not only are unanswerable but don't greatly concern us even if they could be answered. Just now, life in the world is quite real enough for us. When we have made our money and retired on our annuity, then perhaps we shall have time to consider the nature of reality. Not that there is much to it after all—certainly it is far simpler than the philosopher tries to make it with his high-sounding words. The world lies all about us for anyone to see; our senses promptly teach us that fire burns, rain wets, and sunshine ripens the crops. As an old shepherd remarked to a court jester who asked if he knew any philosophy: "I know the more one sickens the worse at ease he is, . . . and that a great cause of the night is lack of the sun." ¹
So goes the popular reaction to metaphysics. The reader has probably noticed how contradictory it is. One objector accuses metaphysics of being too hard, another of being too easy; the questions are unanswerable, but the answers are obvious; the subject loses itself in a vain attempt to penetrate the inscrutable, but merely deals with commonplace matters be covering them with philosophical jargon. Yet, despite this inconsistency, both halves of the objection have truth and common sense in them. Metaphysics is indeed too abstract for daily consumption, and the metaphysical mountain has labored hard to bring forth many a mouse. As we enter its domain we must not forget either of these facts, and must try to associate it as closely as possible with the practical world and the life of the senses. This will be all the easier in that our highroad is literature, the art which excels in uniting the abstract idea with the concrete person and event.

The question asked by metaphysics is, what is the real nature of the universe? What is it made of? How is it put together? Is it as it seems to be, or quite different? Though in a sense these are restatements of the same query, they represent different angles of approach to it, and suggest to us some of the principal metaphysical problems on which philosophers are divided.

The first and most inclusive one is the problem of appearance and reality. The ultimate aim of metaphysics is to separate what is true from what merely appears to be true, a distinction which, far from being impractical, is necessary even for survival. The poisonous toadstool may appear to be an edible mushroom, but is not. The diplomat may appear to be seeking peace, but is really preparing a Pearl Harbor attack. A bee that gets into the house and tries to escape to the garden may fly confidently toward an apparently open space in the wall, only to stun itself against the glass. The bee has made a metaphysical error. So proverbial wisdom is filled with commonplace expressions of the fact that we cannot
always trust our senses, for "things are not always what they seem—skim milk oft masquerades as cream."

The difficulty is that, though everybody admits this fact regarding specific situations, most people refuse to apply it to the universe as a whole. When the metaphysician takes that simple and logical step, he is laughed at and pitied as a dreamer. Yet what has he done? Nothing but this: Granted, he says, that things are not what they seem in this and that specific instance, then perhaps nothing at all anywhere is what it seems. Perhaps we should distrust all the evidence of our senses and admit that our ability to see or touch something is no proof of that thing's existence. Perhaps, in fact, the material world does not exist at all, and the great globe itself is no more than a dream. Dreams seem real while we are experiencing them, sometimes more vividly so than our waking life. Or, if the philosopher is a metaphysician of another stamp, he may reach an opposite conclusion. Starting again from the deceptive character of appearances, he may reason that our strongest inner feelings are without basis in fact; that mind, emotions, spiritual values, are nothing but chemical processes in the brain; that only matter is real, and the so-called immaterial world an illusion. These are the two principal answers to the question of appearance and reality. A believer in the first is called an idealist; a believer in the second, a materialist.

The next problem is that of unity and diversity, which asks whether reality, if one penetrates far enough into it, is all alike, or whether there are two or more different kinds of reality. Metaphysicians have been hounded by a teasing desire to find unity at the heart of things, to simplify the endless diversity of the world into some one inclusive formula. The world is so full of a number of things; but philosophers are far from being as happy as kings about it, and cannot sleep at night until they have discarded all but one, or at least a very few. One reason for this is our minds crave orderliness
and reject chaos; since we feel that unity would be much neater and more economical, we keep hoping that the question of the one and the many may be decided in favor of the one. Some philosophers have so decided it; others, not quite able to reach one real substance, have been satisfied with two; a few have accepted the world's apparent diversity as being real. The first group are called monists; the second, dualists; the third, pluralists.

Still another main problem has occupied the metaphysician: the question of organization. That the universe should be organized at all is rather surprising. The existence of a chaotic, unrelated mass of phenomena would be just as likely. Yet the physical world is on the whole so trustworthy, science has discovered so many reliable laws which govern its actions, that the possibility of a logical organization of every kind of phenomenon is entertained by philosophers without too much skepticism. If so, the problem of how to account for this fact takes its place beside the two others. Whatever reality is, however many parts it has, those parts apparently bear some relation to one another. Why? What has molded them into this particular relationship? Is it something in their inherent nature, or is it intelligent planning by some outside power, or is it perhaps mere chance? This disagreement creates the rival schools of pantheists, theists, and atomists.

In these paragraphs we have described in their simplest terms the meaning of eight technical labels applied to metaphysicians, all ending monotonously in -ist. It is evident that there can be all sorts of permutations among them, produced by combining labels from two or three groups. Thus, a philosopher may be a pantheistic monist, like Spinoza, or even an atomistic materialistic monist, like Epicurus. The technical terms are useful only for the purpose of describing someone's views briefly and definitely, in a kind of philosophical shorthand; what is important is the meaning behind them. As was said above, literature is one of the best methods
of conveying that meaning. As in our discussion of ethics, we shall not attempt to cover systematically all the metaphysical theories, but shall choose a few examples; first, one which vividly points up the problem of appearance and reality, then several which illustrate the problem of organization.

Habit is our enemy when we first enter the field of metaphysics. As babies we were free from preconceived notions about the nature of the world; our minds were confused whirlpools of impressions, sucking in every random piece of evidence that floated past us, engulfing a new phenomenon every minute. Most of our childhood was spent in learning to interpret and use these sense impressions, so that we eventually came to trust them as being our normal criteria of reality. Though we have needed to revise this standard to fit new facts, we have not seen it seriously challenged until now, and therefore we find it hard to understand a philosopher who tells us that all this evidence of our senses may be quite untrustworthy. The first step is the hardest. Once we become aware and acknowledge to ourselves that perhaps reality is not as it seems, we are prepared to embark on the study of what it might be.

A person taking this first step will find the creations of art very helpful to him. In a work of art one accepts unusual ideas at which he would cavil in real life. The artist's imagination simultaneously interprets the present world and builds a new one; and this new creation is mysteriously both like and unlike the world of sensations. The emotion aroused by a poem or play, by releasing a reader from his customary thought patterns, helps him to accept the artist's intuition that alongside or beyond the physical universe there may possibly be a different kind of reality.

This power of art to free the mind is evident in a poem that we have already examined in another connection: Keats's *Ode on a Grecian Urn*. Its verbal music and vivid imagery
make a reader susceptible to thoughts and feelings which he does not ordinarily have. He sees that one test of the reality of anything may be its power to endure, to outlast other transitory phenomena. If so, he may also accept the conclusion that this test casts suspicion on the whole sensory world, because that world is in a state of constant flux, one sensation yielding rapidly to another. The actual people and events portrayed on the urn are long dead; their reality is dim and shadowy. Yet the ideas and emotions which they represent or symbolize have lost none of their power; they still exist, and their survival attests their reality. The flute-payer, the lovers, the Bacchantes, the villagers leading the garlanded heifer to the altar—these are gone. But music, love, religious devotion, and beauty are not gone; they are ubiquitous, as impressive in one age as in another. And all of them are non-material, existing in spite of any changes in the physical world. Thus the poem not only embodies what we have called a metaphysical idealism, but helps to make such a philosophy less unthinkable to its readers. It is the source of the poem’s peculiar power, its elusive quality, and its difficulty.

This difficulty is inherent in the nature of the problem, which is to express a non-material idea in terms of matter, of the concrete imagery always found in literature, and by doing so to give the reader a vivid sense that the world of apparent matter is not necessarily the real one. Perhaps it can be accomplished better in the drama, with its use of actual characters on the stage, than in the less familiar symbols of poetry. Suppose the lovers on the urn should come to life, walk on stage protesting that their author had deserted them after giving them artistic birth, and demand the fulfilment of marriage. Such a situation would startlingly force the idea on the minds of an audience.

Naturally a play of this sort is uncommon. Most playwrights would never think of it, and if they did would discard it as unfit for stage presentation. To give it audience appeal
would require boldness, originality, freedom from conventions, and enough humor to allow for and counteract the inevitable ridicule that it would arouse. Only one modern dramatist has ventured it and has met with remarkable success: the Italian writer Luigi Pirandello, who received the Nobel Prize in 1934.

The background of Pirandello's life gave him both the inclination and the ability to dramatize metaphysical problems. The ability was developed by an extensive philosophical education culminating in a doctorate at the University of Bonn; the inclination resulted from a series of disillusionments with the world as it is, ranging from disappointment at the failure of Italian unification to the personal tragedy of his wife's long insanity. After much experience in teaching and fiction writing, he turned to the drama late in life.

In temperament Pirandello was skeptical but not cynical. He once said, "I think that life is a very sad piece of buffoonery because ... we need to deceive ourselves constantly by creating a reality which from time to time is discovered to be vain and illusory... My art is full of bitter compassion for all who deceive themselves; but this compassion cannot fail to be followed by the cruel derision of destiny which condemns man to deception." He was always on the lookout for self-deception, convinced that things are not what they seem. In philosophy he was a kind of apologetic and tentative idealist, not certain of anything, but regarding it as likely that reality is non-material rather than sensory. He was sadly discouraged, not so much because mankind could never understand this fact (that was natural enough), as because mankind could never even perceive that there was anything to be understood. He is often called a grotesque writer because his work is so strange and startling, as it must be if he is to shock people into realizing that the world is not as it seems.

That Pirandello's emphasis is on deception appears even in his titles. Our curiosity is aroused by stories and plays
called Right You Are (If You Think So), Each of Us His Own Part, or Better Think Twice about It. In his works personal identity is seldom certain, even on the part of the person himself. His characters seem chronically uneasy lest they turn out at any moment to be somebody else. The whole action of Right You Are (If You Think So) concerns the townspeople's attempt to discover whether Mrs. Ponza is or is not the daughter of Mrs. Frola; and the audience never does find out. In the novel The Late Mattia Pascal, the hero masquerades for years as another person, then returns to live quietly in his home town and pay frequent visits to his own tombstone. Opinions and beliefs are no less changeable than identity. In the play Each in His Own Way two characters argue violently about the motives for a suicide; by the next morning each has been so convinced by the other's arguments that they still quarrel, but on reversed sides. Sanity alternates rapidly with insanity. A young nobleman in the play Henry IV, driven insane by a blow on the head, lives under the delusion that he is a medieval emperor. Several years later he recovers his reason, but continues to play his role because he is having too good a time to give it up. Then reality proves too much for him; he is impelled by jealousy to commit a murder, and to avoid the consequences of the crime is forced to retire forever into the world of insane fantasy. Thus again the realms of illusion and reality equivocally overlap.

The idea is most effectively presented, however, in the play Six Characters in Search of an Author, written in 1921, and mainly responsible for Pirandello's reputation and his winning of the Nobel Prize. Here the problem of reality is dramatized with a directness, subtlety, and irony that leave the audience breathless. The scene is the bare stage of a theater, on which a director and his cast are perfunctorily rehearsing a play. Pirandello catches the attention of the audience by at once satirizing himself and his philosophic drama: the play in rehearsal turns out to be one of his own,
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and the actors are grumbling at its obscurity and silliness. If only someone would write them a decent play, they would never bother with Pirandello's. Their wish is soon granted in a manner they never suspected. Six strange people file on stage and entreat the director to hear their story. They are, it seems, not living persons at all, but literary characters created in the mind of an author and then left unrealized because they were never put in a work of art. Now they are wandering homeless in search of fulfilment. If the company will hear their story and produce it as a play, then the characters will live forever like Hamlet or Don Quixote. At first the director, a commonplace person who is impatient with such folly and eager to get on with his work, brushes them aside intolerantly. But as they begin arguing among themselves about whether or not they should have come, his interest is caught by some hints of drama revealed in their recriminations, and he consents at least to listen. From then on the action proceeds on two parallel planes: one the situation among the characters, the other their interaction with the living people.

It is a strange story, morbid yet psychologically convincing, that the characters unfold with mingled reluctance and impatience. The six are unnamed, and called merely Father, Mother, Stepdaughter, Son, Boy, and Child. The father, seeing his wife in love with another man, had allowed her (even urged her, she says) to elope with him. Possibly he was sacrificing himself for her happiness; possibly he was led by a mania for experimenting with other people's lives. At any rate he has taken a keen interest in her three illegitimate children, and years later after her lover's death receives the whole family back into his home, to the chagrin of his legitimate son. The atmosphere in the household, especially after the stepdaughter falls in love with the father, is thick with resentment and suspicion, from which the two sensitive young children particularly suffer. So involved does
this situation become that the actors gloomily conclude it
must be a play by Pirandello also—there is no escaping the
man. Most dramatists would have been content to base their
whole play on this story, but in Pirandello it is only a starting
point. The author, having created his people to fit it, had left
the play unfinished and the characters hanging in the void
from which they insist on being rescued.

In this way arises the problem toward which Pirandello
has been working. What is the relation between these char-
acters and living people? When we speak of a literary creation
as being real, do we mean it or is it a figure of speech? And
incidentally, what is reality? When the director assumes, as
most people would, that the characters are non-existent, they
reply with the main paradox of idealistic philosophy: Granted
that they do not exist physically, yet they are more real than
the director himself because they exist in the mind, and
mental or non-material truth is the only truth that matters.
While the director is still too befuddled to resist, the father
launches three arguments to support their position. First,
they never die as living people do. Second, they are timeless,
not restrained by a sequence of events, but eternally repeating
the same emotions that their creator gave them. Third, they
are changeless, a quality in which living people cannot com-
pete with them at all. You say we are illusions, asserts the
father. Very well, look at a photograph of yourself taken
twenty years ago and see if you are the same person now as
then. If not, were you real in the past, or are you now, or
were you at neither time? So regarded, living people are like
patterns in a kaleidoscope, changing from the moment of their
birth. Only non-material creations of the mind are stable and
lasting.

All this, though baffling to director and audience, is
quite recognizable to the metaphysician. It is merely the old
problem of appearance and reality dramatized to show the
conflict between unthinking materialism and philosophic
idealism. The extent to which Pirandello is serious about it must be decided by the reader. The ironic mingling of moods is startlingly driven home by the ending. As the various scenes are described by the characters, the unfinished play takes form and finishes itself in a climax of mad horror. Crazed by the morbid events taking place in the household, the little boy drowns his younger sister and shoots himself. As the actors rush to him, some exclaiming that he is dead, others that it is merely pretence and make-believe, the father cries in anguish, "Pretense? Reality, sir, reality!" And the distracted director answers, "Pretense? Reality? To hell with it all! Never in my life has such a thing happened to me. I've lost a whole day over these people, a whole day."

Thus reality and illusion are merged, and the average man washes his hands of the whole thing. Yet, deride it as he may, the director will be left with a troublesome feeling that the nature of things may be quite different from what our senses tell us it is. He will not forget the experience, and neither will the audience; for, whether they know it or not, they have looked in the door of metaphysics.

When a person has once opened that door, he finds it hard to keep from entering. Inside he discovers some difficult labyrinths and some pleasant though unfamiliar rooms. Our own visit will be confined to one three-room apartment which almost everyone passes through at some time in his mental life. This apartment is the problem of organization, previously mentioned. It is a favorite subject of controversy because at least three quite understandable cases can be built up, clear arguments can be adduced for each of them, and none of them can be finally proved or refuted. At the same time the choice which a person makes among the three may have considerable influence on his conduct.

A discussion of this problem begins with the assumption that the various parts of the universe are in some way
connected. Some are near each other in space, some occur before or after others in time, some are said to have a causal relation that can be foreseen and relied on. If the temperature falls below 32°F fahrenheit, then water will freeze; if a spark falls into gasoline, an explosion results; if a person’s heart stops beating, he will die. If these assumptions are correct, then the question arises, how can the relationships of space, time, and cause be explained? To this question three famous answers have been given. The organization of the universe has been brought about (1) by chance, (2) by intelligent planning, or (3) by an inherent constructive power. The first answer was upheld by the Greek school of atomists; the second is the belief of theists; the third is characteristic of pantheists. The atomists argue that the apparent unity of the world is an illusion created by the chance combination of myriads of tiny independent particles. Theists, accepting the apparent unity as real, believe that it results from the activity of an external constructive intelligence. Pantheists, likewise accepting unity as a fact, deny that it is anything added to reality, whether by chance or design, and assert that it is part of the very definition of reality itself, one being impossible without the other. Though each theory has many complications, it is our purpose to simplify them as much as possible. Before looking at examples in literature, it may be interesting to see how cogent and attractive a case can be presented for each of the three points of view. Let us imagine our three philosophers appearing before us in turn.

First comes the atomistic materialist, a man of reassuring common sense and sincere desire to relieve our minds of worry. I can see, he says, that you are a little ill at ease about the nature of things. As you look about you at the world, you observe many wonderful events going on, some pleasant and some terrifying. The seasons come and go, grain ripens in the field, hurricanes knock down your houses, people are born, grow old, and die. All these things give
evidence of great powers working all around you, powers which you only half understand and can make only feeble attempts to control. What makes the objects of the universe exhibit such energy? What can explain their power? One answer soon presents itself to you. In your normal experience nothing can move about and exert force unless it is alive; inanimate objects are passive, only animate ones active. Therefore you argue by analogy to a plausible but mistaken conclusion: since the universe appears active and energetic, it too must be alive, must have a brain or several brains to plan and execute all that takes place. You personify it, and either fill it with gods and spirits or else decide that there must be one overruling mind that set it in motion and keeps it going. Then, having created such a god, you spend your life trying to decipher his purposes, maneuvering to propitiate his anger, and worrying lest this powerful deity may punish you either now or after you die. Truly, I am sorry for you; yet I cannot help smiling a little, as I would at a child afraid of bogeys that his own imagination brings forth.

You see, there is one thing you have forgotten. The great power you seek is there before your eyes all the time, constantly producing phenomena no less remarkable than the events of nature. It is the power of time and chance. You see it all around you and never think of questioning its potency. Suppose you toss ten pennies into the air several times. If they fall half heads and half tails you are not surprised, because the chances are in favor of that division; if they fall six and four or even eight and two, you accept the fact that chance might produce that result, and don't assert that somebody must have planned it, or that the coins must be alive. And then, if you toss them often enough, sometime or other they will fall all ten heads or ten tails. Still you say, remarkable as this is, chance was bound to bring it about some time. Every day incredible coincidences happen in a way that precludes any possibility of planning. Then why not
accept the logical implications of this? Increase your ten coins to countless tiny particles moving around in space; increase your time to infinity; and at some point in this endless flux, any conceivable combination of particles is easily possible without anyone's having planned it at all. At this particular cosmic moment the whirling atoms happen to have fallen into the pattern of our universe; but no conscious design is necessary to explain this. Sunset clouds may resemble fiery dragons so precisely that the effect strikes us as intentional; but it is only particles of water vapor drifting by chance across the sky. For your own peace of mind, then, don't peer behind the clouds in search of a god. He is not there. Relax, live without fear, and let the credulous ones have all the gods they want. So saying, the atomist retires, his good deed done for the day.

He is followed by the theist, a person less jaunty and more intense in nature, with composure of face and penetrating eyes that regard us with a comforting yet slightly unnerving certainty. Speaking of credulity, he begins, we have just been treated to an astonishing example of it. We are asked to believe that some billions of particles floating around aimlessly in space could have formed, by pure chance devoid of intention, our universe as we know it. This is a very different matter from tossing ten, or a thousand, coins in the air and having them come down all heads (and the atomist accuses us of arguing by analogy). Suppose that events could occur by chance (which, as I shall explain to you, is questionable), still there is no logical analogy between the coins and the universe. For the ten coins merely come down ten separate heads; there is no connection among them. But the particles forming the universe interact with one another to produce organisms with mutually dependent parts, capable of motion and the functions of life, beautifully calculated to perform purposive activities. These are no cloud shapes of drifting vapor, but independent living beings, able to
maintain their life by absorbing other particles into their bodies, to adjust themselves to their environment by absorbing ideas into their minds, and to reproduce their kind by cooperating with other similar individuals. We are asked to believe that a chance concurrence of atoms has produced, all at the same time, hundreds of male and female animals with the ability to propagate. It is by pure chance, I suppose, that the offspring of a lion happens to be another lion and not a duck. In any given case chance would decree that the atoms which fly together to make a young animal would produce something quite unlike its parents, if not unlike anything ever seen before. How much more remote, then, is the chance that all progeny should be of the same species as their parents, which is actually the case!

Moreover, continues the theist, I do not admit that chance plays any part in the matter, even with the ten coins. Whether a coin falls heads or tails depends not on accident, but on all the physical forces exerted on it—the force with which it is thrown, the angle of its flight, the rate of revolution around its axis, the air pressure exerted on it, any irregularities on its surface. All these are definite ascertainable causes, the like of which are discoverable for the vast majority of events in the world. If for some things we have not yet discovered a cause, that does not prove that none exists. Even assuming a chance universe to be possible, which I don’t, I yet insist that it is highly and wildly improbable. Examine yourselves to see if you believe that a heap of stones and steel, shaken by an earthquake for milleniums, would fall into the shape of the Empire State Building, or that a pile of letters tossed repeatedly into a box would take the order of a Shakespearean play. If you do, that is an act of faith indeed, beside which mine is insignificant.

For my view is in every way simpler and more natural than the atomist’s. It is only in detective stories that the most unlikely explanation is the true one. Here the answer lies
patently before us. The Empire State Building was first planned in the mind and on the blueprints of an architect; before *King Lear* was written, it was planned in Shakespeare's mind. The universe exhibits similar evidence of someone's intention to have made it as it is. Why not conclude, then, that earth, stars, lions, and men are likewise products of a cosmic mind? Whenever we see anything organized, we assume that the organization is intentional. Why not assume the same thing for the greatest of all organizations? The purpose which created the universe must exist in an intelligence which is more inclusive than that universe or any of its parts—in the external constructive intelligence of a God. That is why I am a theist.

Many of us might be willing to rest the case at this point, for our last speaker was eloquent and convincing. But before we can find our hats and depart, a third character appears in the room and stops us with his very first sentence. He is an impressively intellectual man, with dreamy eyes and a furrowed brow. I wonder, he begins, if my friend the theist will tell us who or what created the God that he believes in? I wait eagerly for the answer he never gives me, for I too should be glad to believe in that God—so much, indeed, that I have adapted the theist's name by adding a syllable to it. I call myself a pantheist, indicating my conviction that God is not a separate being, but is the sum of everything in the universe taken together. I heartily sympathize with my friend's scorn of the atomist who would make chance the author of all things. There is more than chance in the universe. But it seems equally unwise to go to the opposite extreme by asserting that it was all planned by an omniscient being who created it. For, I repeat, who created God? I do not profess to answer that question, but I do insist that my belief does not force me to answer it, while the theist's does. He says that the universe is too purposive and too beautifully organized to have created itself; therefore an external mind must have
done so. Very well; let us move his argument one step ahead. An external mind capable of creating the universe is likewise so purposive and so beautifully organized that it could not have created itself either. So we must postulate a second mind that planned the first one, and a third that planned the second. There is no place to stop, and we have explained nothing. This predicament my mathematical friends call an infinite regress, and, sorry as I am to say so, the theist is in it. The sad part of it is that he could easily escape from the dilemma, as I have done, by making one small change in his metaphysics. I agree with him up to the point where he says that God created the universe; but by that statement he involves himself in a contradiction. The universe includes all reality. If God is real, then he is a part of the universe; and if he is part of it, then he did not create it, but he and the universe together must have been created by a greater God who includes both of them. The theist's error lies in placing his God outside the universe. The remedy is simply to bring him inside—or better, bring it inside, for God is not a person but a concept. We are trying to explain the nature of reality, and one essential part of reality is intelligence, coherent organization, just as another essential part is matter to be organized. You cannot separate the two, any more than Shylock could cut out his pound of flesh without taking some blood at the same time. Reality is not inert chaotic matter that took on form when an external mind was inserted into it; it is, and always has been, matter and mind interfused and inseparable.

At this point the pantheist hesitates, perceiving that we are not quite following him. My friends, he says almost querulously, why is it that I never seem to make myself clear? Whenever I say that God is inside of and equal to the universe, people think I am being enigmatic. To me it is so simple and satisfying. Let us see if an analogy will help. Instead of the universe, think of an individual person and
the impression he makes on us. He is physically and mentally mature. His body is muscular and graceful, his conduct intelligent, efficient, consistent, and purposive. He makes plans and carries them out. How are we to account for this remarkable creature? The atomist says that his consistent behavior is an illusion, and that everything he does is mere chance; but no one takes that seriously. The theist says that his behavior must be planned and governed by an external mind somewhere in the void, for which he is a sort of remote-control station; but we never think of such a thing in connection with any individual. Why not admit, as we all naturally do, that the governing mind and nerves are in the person and a part of him, inseparable from his personality? And as this is the simplest explanation of an individual, so is it of the whole universe. The planning mind is part of reality, and the whole universe taken together is God.

As the pantheist departs, there is a short silence in the apartment of metaphysics where we are sitting. This is a little more than we bargained for when we came in, and we wonder if Pirandello is laughing at us at the front door. He at least was entertaining, and we should prefer one of his plays to these dealers in abstractions, for we are seeking illustrations of philosophy in literature. It is good, then, that each of our three theorists has a poet to speak for him.

The Greek scientists came to many wrong conclusions, which seem as laughable to us as our mistakes will appear a thousand years hence. But sometimes they were startlingly right. Handicapped by having no instruments of precision and no technique for carrying on controlled experiments, they nevertheless made some intuitive guesses which anticipated by more than two thousand years the conclusions of modern science. One of these flashes of intuition was the atomic theory, a conception now so improved and brought up to date that we are able at any moment to destroy a large
part of the human race by means of an atomic bomb. True, few people now accept the theory as a metaphysical explanation of the whole universe; but it is now indisputable that at least the material part of that universe is composed of atoms.

For a long time the early Greek philosophers flirted with the notion that everything must be made of some common substance. Perhaps it was water, which can dissolve other substances and can itself assume the form of a solid, a liquid, or a gas. Perhaps it was fire, more powerful than water in melting down hard objects, and existing even in air and earth, as lightning and volcanoes testified. But it was difficult to derive either of these substances from the other, so great is their mutual antipathy. Water, when heated, disappears; fire, when doused, vanishes. The first recorded resolution of this quandary was made by a pre-Socratic philosopher named Democritus, who had the brilliantly simple idea that the primal substance must be quite different from anything known to our senses, must be simply little pieces of raw material capable of being combined to form objects just as stones are combined to form a house. He called these particles atoms, and argued that they might be used to construct the most diverse kinds of substance, exactly as stones may be the raw material for a massive pyramid, a graceful archway, or a picture in mosaic. By imagining a world made up entirely of atoms moving around in space, now uniting in clusters and now falling apart, he explained everything more satisfactorily than it had been explained before. Among his later converts was Epicurus, who adopted atomism as the metaphysic best suited to his hedonistic ethics.

Thus far the theory had been in possession of the philosophers. Soon, however, it got into literature as the subject of a famous poem: *De Rerum Natura*, "Concerning the Nature of Things," written by the Roman poet Lucretius in the first century B. C., and one of the main sources of our knowledge of the whole idea. This poem is truly literature,
not merely a treatise in verse. Lucretius makes the atomic theory vivid and concrete, and inserts emotion into it. Inspired by the vision of a universe of swirling atoms, he creates a panorama of all nature with its parts dissolving and regrouping themselves like patterns in a kaleidoscope. When we speak of a nature poet, we think of one who describes landscapes; but perhaps Lucretius was the only real poet of nature as a whole. After noting first his professed reasons for writing and a special symbol on which he bases much of the poem, we shall see how obsolete and yet how modern his metaphysical theory is.

In explaining his purpose in writing the poem, Lucretius faces directly the conflict between science and religion. The priests, he knows, will be sure to disapprove of his poem, will declaim against him for writing it, and will threaten his readers with damnation for reading it. This is only natural, for it is intentionally directed against them and meant to be a challenge to their power. Too long have they held men under the subjection of fear by teaching them that all good and bad fortune comes from the gods and that those gods must be continually propitiated by prayers and sacrifices. His object is to make men free of this shadow of the supernatural, so that they can live their lives in peace, reassured by knowledge of the real nature of things. This is all the more necessary because the priests, besides enslaving men's minds, have even killed or tortured their bodies. Remember, for instance, the fate of Iphigeneia, the young daughter of Agamemnon. When the Greek army was about to embark for Troy, it was delayed for many weeks at Aulis because its leader Agamemnon had angered the goddess Artemis, who sent contrary winds that held the ships in port. Finally, when the priest Calchas asserted that the only way to assuage Diana's wrath was to sacrifice Iphigeneia at the altar, Agamemnon consented to his own daughter's death. Such evil deeds are the fruits of religion, and Lucretius avows his firm hostility to it.
The gods, however, have their use if only we do not take them seriously. They are the subjects of many interesting tales that enrich poetry and legend. They are convenient personifications of nature; it lends color to our enjoyment of the world to pretend that the sun is Apollo, a lightning flash Jove's thunderbolt, or a field of wheat Mother Ceres. They are useful as symbols in art and literature, just as long as we remember that the symbols have no reality in themselves, but merely illustrate forces of nature. To show this, Lucretius makes recurrent use of an Olympian analogy to picture his conception of the universe. In mythology the gods Mars and Venus were represented as having an ambivalent relation to each other. In character and function they were contraries: Mars the god of war, treachery, sharp weapons, brute force, destruction; Venus the goddess of love, beauty, spring, fertility, growth. Yet, though their tastes were opposite and their activities counteracted each other, they nevertheless fell in love. A pleasant story, somewhat improbable—but what does it mean? It is merely a poetic way of stating a truth of nature which many philosophers have observed: that the world involves a continual alternation of constructive and destructive forces. Vegetation, killed by the brute force of winter, is reborn in the spring. A rushing river erodes the mountain soil, but creates new fertile fields in its delta. The body itself is subject to a process of building up and breaking down which we know as anabolism and catabolism. And the point is, only through this process does nature function at all. At first glance such an alternation seems as wasteful as the Duke of York marching his ten thousand men up the hill and then marching them down again; but in nature, construction and destruction unite to create the life process. Venus and Mars fall in love.

This symbol runs through the poem as a basis for Lucretius' atomistic philosophy, as one kind of evidence that should have revealed the nature of things long before men thought of the notion of atoms. For everything is always losing part
of its substance and gaining new material to replace it. Since objects could not do this if they were solid or uniform in construction, it follows that they must be made of small, separate pieces—that matter must be discontinuous. The fact that it looks solid should not deceive us; a tree looks solid, but has enough space in it for sap to run. As soon as this simple notion of discontinuity is once grasped, evidence for it appears on all sides. Many things act on the senses and yet are invisible: heat, cold, wind, odors. Since they are clearly physical things, they must consist of material particles which are quite real but are too small to be seen. To make a visible object, many such particles must cluster together in a compact mass, and must constantly be replenished as some fly off the surface. This is almost the whole story, but not quite. If the world were composed of nothing but particles, none of the particles could move, since each would be adjacent to another. Therefore, to permit motion, void or empty space must exist. Thus the atomist's simple explanation of the whole universe is that it consists of countless material, physical atoms moving around eternally in empty space, and of nothing else whatsoever.

What set them in motion in the first place? Nothing at all, Lucretius says, because they have always been in motion and always will be; since there is no beginning and no end, the question is meaningless. What has caused them to assume the form of the present universe? Pure chance. Neither inside nor outside the atoms is there any purpose which plans their motions or controls the results. Just as motes in a sunbeam float back and forth, up and down, so do the atoms swirl through the universe, now widely separated in space, now entangled with many other atoms. Such a temporary entanglement may be a star, the earth, or a man, all of which last only a short time and then dissolve into their original particles.
It was no design of the atoms that led them to place themselves in order with keen intelligence, nor did they make an agreement what motions each should produce. But because many atoms, struck with blows and carried along by their own weight from infinite time to the present, have been accustomed to move and meet in all manner of ways and to try various combinations, therefore, being spread abroad through a vast time, by attempting every sort of combination and motion, at length those meet which become the raw material of great things, of sea and sky and the generation of living creatures.  

In thus basing his world on chance, Lucretius, following his master Epicurus, modifies the original atomic theory. Democritus had assumed that atomic motion is mechanical and predictable, governed by an external Fate, or, as we should put it, natural law; the particles are pictured as moving in straight lines, like raindrops. Epicurus and Lucretius found two objections to this picture. First, if the atoms march in straight parallel lines, how can they come in contact with one another? To say that some move faster and overtake others will not explain the continual accretion and dissolution of bodies, for atoms evidently flow into and out of bodies all the time in every direction. Secondly, the notion of a fixed mechanical fate did not coincide with the rest of Epicurus' philosophy. As a hedonist he was impressed by the many random desires of man, the variety of ways in which he seeks happiness or avoids trouble. A planned universe would deprive him of freedom and give him a job to do. Consequently Lucretius describes what he calls the "swerve of the atoms." For the straight parallel lines he substitutes a picture in which individual atoms frequently cut across the line of march as Broadway cuts across Manhattan Island. When this occurs, eddies and cyclones are formed which send the atoms off in all directions and make them collide violently. For the
original swerve there is no reason; it is as unaccountable as the vagaries of free will in human nature, of which indeed it is the explanation. It rescues man from fate, and puts him in a universe of chance.4

But how, we may ask, can the countless objects in nature and the intricate processes of life come about merely by a conglomeration of moving particles? This question Lucretius takes delight in answering. He has at least one explanation for everything, often two or three; which one is correct is not really important, since all of them are based on chance atomic motions, and the reader may take his choice. It is a strange, half fascinating and half ridiculous picture of the world.

The atoms are microscopic solids, tiny pieces of matter that are hard, indivisible, indestructible, the ultimate building blocks of nature.5 They are perfectly solid, containing no void and no internal motion. We first begin to visualize them clearly when Lucretius shows how they vary in size and shape. There are big slow atoms and tiny darting ones. Some are spherical, some conical, or square, or flat, or bent like fish-hooks. We may picture a flotilla of dignified battleship-atoms moving through the void in close formation, with clouds of tiny atoms whisking about them like PT boats or dive-bombers. Nearby a rough, shaggy particle blunders through a shoal of little hooks and needles, gathering sticky atoms as a spaniel gathers burs in the autumn woods. The general activity tosses the particles about, throwing the heavier ones toward the outside of a whirlpool, shooting the light ones rapidly upward as when a spurt of flame roars up a chimney. The number of atoms is infinite, the motion never ending.

The triple variation of size, shape, and speed can explain any phenomenon in the world. Rock is composed of large, heavy atoms, so rough that they remain closely packed; the atoms of water are equally large and heavy, but smooth and easily sliding; air contains light, smooth particles. Sensation is caused by atoms emanating from the surface of an object
and coming in contact with the sense organs. If the atoms are smooth, the sensation is pleasant, like music or fragrance; if very rough or angular, it is painful, like the taste of quinine or the sound of a squeaking axle; if slightly rough, it titillates rather than hurts, like strong spices or the sensation of a rough blanket.

Thought and emotions are as atomic and material as anything else. The mind or soul is composed of minute, spherical, slippery particles that roll about in the body like ball-bearings in a machine and move faster than light. Their relative size may be illustrated by enlarging the whole picture of the body several hundred times until the atoms of flesh and bone become about the size of potatoes, and those of the bodily fluids like blood and lymph about the size of peas. If now we imagine a quantity of plumbago lubricating powder dusted in among the peas and potatoes, we have a notion of the way soul-atoms permeate the body. Though some of them are present in all parts of the body, they congregate in larger crowds in the head and heart, where their vibration produces thoughts and emotions. During growth and maturity, while the body particles are firmly compacted, the soul remains in it because the soul-atoms rebound from the solid framework, and fewer of them escape than can be replenished by new ones entering from the air. But when age begins to render the tissues wide-meshed and flabby, more and more of the soul escapes; the old man may lose his memory along with his teeth, and when most of the soul atoms are gone may sink into second childishness and mere oblivion. When the framework can no longer retain any of the tiny particles, death comes; and at that moment the soul disperses into the air like water from a broken pitcher, never to reunite in a single organism. Though the atoms themselves are immortal, the consciousness which they build up dies with the body.

It might be thought that such a materialistic universe would have no room at all for gods; yet here they are, the
whole Roman pantheon. Perhaps it was a gesture of appeasement to the state religion of Lucretius' time. If so, it was an ironical one, for he deprives the gods of all creative and governing functions and reduces them to the role of idle spectators. Even the gods are atomic, created by chance like everything else and as transitory as the rest of the universe, larger anthropomorphic beings remote from and indifferent to human life, neither creating nor punishing, existing pleasantly in the upper air like good epicureans. If we leave them alone they will not trouble us; there is no need to worship or fear them.

Let us look in conclusion at some of the guesses that Lucretius makes to explain many common phenomena. His attitude is disarming. Admitting that there is no certainty about such things and that alternative explanations are possible, he is still never afraid to try, and always sure that the real cause is some form of atomic motion. Thus he triumphantly explains the effect of a mirror by showing that every object throws off from its surface a continual series of thin films consisting of a layer one atom thick forming an exact copy of the object. If such a film strikes an opaque surface, it is wrecked and dispersed in the air; if it meets a transparent surface, it passes through unscathed; but a mirror causes it to rebound in the same shape as before, only reversed from side to side. This plausible explanation satisfies him, but of some others he is less sure. The motions of planets are probably caused by air currents turning their celestial spheres; thunder and lightning may be due to clouds crashing together and squeezing out fire-atoms like flint and steel. He is uncertain about the phases of the moon, which may result from the sun's reflected light, but may equally well be due to the revolution of a body with a light and a dark side, or to a dark satellite revolving around the moon, or even to the moving atoms' forming a new and differently shaped moon every day. At any rate, it's done by atoms. His most brilliant
guess concerns the cause of magnetism. A magnet, he says, discharges atoms more rapidly than do other objects; this discharge creates a vacuum, into which iron particles are pushed by the air behind them. And why are not particles of wood similarly propelled toward a magnet? They are! But we don't notice the fact because the loose texture of wood permits it to throw off a few surface particles, whereas tightly woven iron must move all at once.

Obsolete as this whole cosmology now seems, Lucretius' poem is still good reading. Knowing nothing of chemical processes, not distinguishing between atoms and molecules or elements and compounds, even less suspecting the existence of electrons, he nevertheless makes many surprisingly accurate conjectures. His writing is attractive for its homely concrete details and for its friendly desire to explain everything which, left unexplained, might frighten his readers. Often his naive confidence of having reassured them is hardly justified. Whether or not the fear of death is allayed by regarding death as the end of all consciousness must remain a matter of opinion. But his amiable desire to be of service is beyond question, and he remains the one literary artist who has transformed the metaphysics of materialism into poetry.

It is not hard to find objections to atomistic materialism. A principal one, the improbability of an organized world having been formed by chance, has already been discussed in our imaginary debate. There is also difficulty with the nature of atoms themselves, and with the assumption that they explain anything. They are regarded as physically existing objects which are indivisible, being the smallest conceivable units of matter. But that statement is self-contradictory. There is no such thing as a smallest conceivable unit of matter because whenever we imagine any unit of matter of any size whatever, it is then possible to conceive of half of it. The only end of this process is to leave the physical realm entirely
and pass over into some non-material entity like energy, as modern science seems now to be doing. At that point we have abandoned materialism in favor of some form of idealism.

Aside from this logical refutation of atomism, there is a further question about its value as a metaphysic. As such its object should be to explain the nature of reality, and this it fails to do because it arbitrarily breaks up the universe into parts which have no relation to real life or real phenomena. The analysis of something into its parts may be very useful, provided the parts are logically related to the purpose for which one does the analyzing; otherwise it is of no value. For example, suppose we are studying the word "planet" to discover its meaning. Examining it, we find that it consists of six units which we call letters; pulling these apart and setting down on the paper P-L-A-N-E-T, we find that we are no nearer our goal than before. If our object had been to spell the word, we should have achieved it; but the analysis has not helped us to interpret its meaning. That meaning, or the reality of the word, lies in the whole of it taken as a single unit, and has nothing to do with the letters as such. It may similarly be argued that atoms, though interesting as separate segments of the universe, give no clue to its total reality and therefore beg the metaphysical question. That the analogy of atoms to letters of a word is a fair one appears from the fact that Lucretius himself uses it, naturally without perceiving that it tells against his theory. "Through these very lines of mine," he says, "you may see letters common to many words, though you must confess that lines and words differ from one another in both meaning and sound. So much can elements do, when nothing is changed but their order." True enough, but just as the elements fall short of explaining the meaning of Lucretius' lines, so are atoms inadequate to explain that of the universe.
As a result of these objections and in revolt against the exaltation of chance to be the leading power in the world, theistic philosophers build their case that a transcendent deity has planned, created, and governed everything. Don't stultify yourself, they say, by concentrating myopically on the letters of a word or the atoms of a universe. If you look at the whole, you will find that it is the expression of a personal cosmic intelligence. The man of real insight sees through nature to the god that is behind it. “The heavens declare the glory of God, and the firmament showeth his handiwork.” In his poem The Hound of Heaven, Francis Thompson pictures man as trying in vain to escape God by taking refuge in nature, only to be tracked down by the inexorable pursuer. He begins:

I fled Him, down the nights and down the days;
I fled Him down the arches of the years;
I fled Him down the labyrinthine ways
Of my own mind; and in the mist of tears
I hid from Him, and under running laughter.

Unable to escape anywhere in human life, the fugitive seeks fellowship in nature, but finds it inadequate:

I knew all the swift importings
On the wilful face of skies;
I knew how the clouds arise
Spumed of the wild sea-snortings . . . .

Against the red throb of its sunset-heart
I laid my own to beat,
And share commingling heat;
But not by that, by that was eased my human heart . . . .

Nature, poor stepdame, cannot slake my drouth. 7

To the theist, physical or material nature is always insufficient, and that for a reason suggested by the word “stepdame.” The theist feels himself orphaned in the im-
personal universe, with nature around him at worst a cruel, at best an indifferent, stepmother; and he will not rest until he finds a father. With Housman, he says,

I, a stranger and afraid
In a world I never made.

But it did not make itself, as the atomist asserts; and the power that created it and all the persons in it must be himself a person—the maker of the human mind must be a greater mind, and the author of human emotions a being capable of deeper emotions. Therefore the benevolence, fatherhood, provision, and power of God are celebrated in theistic poetry, and theistic philosophy is closely associated with religious feeling. In examining them, then, we must distinguish between these two elements of rational argument, emphasized in philosophical writings, and imaginative projection, found mostly in poetry.

Let us look first at the rational basis for the metaphysic. Philosophers have tried repeatedly to find a convincing proof of the existence of God. In general, their attempts may be reduced to three types of argument, each of which has been labeled with an impressive name. They are called the ontological, the cosmological, and the teleological arguments. Each has had its day in the history of philosophy, but each has proved insufficient to satisfy the majority of thinkers over long periods of time; and man's belief in God still remains a matter of faith rather than logic. Instead of observing them in historical order, it may be interesting to proceed from the most abstract to the most concrete and practical of the attempted proofs.

Typical of the subtlety of medieval scholasticism is the ontological argument, first set forth by Anselm, Archbishop of Canterbury in the eleventh century, and repeated in modified form by Descartes in the seventeenth. It is based ultimately on Plato's doctrine that ideas or concepts have an objective existence independent of the mind that contains
them, and on the extension of this in the school of medieval realism, which held that universals are real and not mere names. The simplest statement of the argument, assuming this doctrine as a premise, runs as follows: Everyone has in his mind a concept of an absolutely perfect being, able to do anything and never in the wrong, free of all limitations of space, time, and finitude. If concepts have an actual existence of their own, then such a perfect being must exist; for if he did not, then we could never have had such an idea. Thus the argument is summarized: the existence of an idea of God in the mind proves the existence of God himself in the universe. In this form it is not very convincing. By the same reasoning we could prove the existence of a devil, a hippogriff, or anything else that we are capable of imagining. What right have we to assume that our minds are important enough to guarantee a real objective existence for whatever happens to pass through them? Our first impulse is to dismiss the argument as silly.

This common statement of it, however, obscures the real point, which Anselm expressed more subtly and plausibly. There are two angles of approach to it. First, if we have in our minds a concept of a perfect being who possesses every possible attribute, then we may assume at least that the idea has a mental reality, that it actually exists in our consciousness. The question is, does it also exist in the universe outside our consciousness? Suppose it does not. In that case we can easily imagine another being who does so exist, and our new concept will be more perfect than our original one, because, given two beings exactly the same in every respect except that one has absolute existence while the other has only mental existence, the one with absolute existence is the more perfect. Consequently our first idea was not of a perfect being at all. If we really do have a concept of a perfect being, then he must exist, because anything which exists is more perfect than something which does not. Existence is a necessary attribute of perfection.
The second approach is the one adopted by Descartes. Every person who thinks, says Descartes, is aware that there are some things his individual mind cannot do—that it is limited, finite, and therefore imperfect. But how can we know this? Only by having an idea of perfection with which to compare our own limitations. Without such an idea we could never know them as limitations. And one of the inseparable attributes of perfection must be existence, for nothing which does not exist can be perfect. Finally, Descartes associates the argument with mathematics, and reasons that the proof of God is essentially the same as the proof of a mathematical concept. If you define a Euclidean triangle as a figure bounded by three straight lines, then it follows inevitably that the sum of its angles is one hundred eighty degrees. Similarly, if you define God as a perfect being, then it follows inevitably that he exists.

Though some theists find the ontological argument quite convincing, most modern students regard it with feelings of resentment and frustration. It seems to them too smooth; they feel unaccountably cheated, as by a sleight-of-hand trick, but are at first unable to locate the difficulty. Usually the first clear objection that presents itself is an emotional one. To equate God with the concept of a perfect being fails to satisfy the human craving for a father. This ontological abstraction is not a person; it is simultaneously everything and nothing; it is more like a pantheistic than a theistic conception. Even if this god exists, what is to prove that he created the universe? And the question of his origin remains untouched. Either he has existed infinitely or has created himself; and both suppositions are equally applicable to the atoms of a material universe. Such are the initial objections that come to mind.

In addition, however, we may meet the ontological argument on its own ground and accuse it of two logical fallacies. The first is that, although the argument claims to
begin with a concept in the mind and then pass on to an objective fact, it really never gets out of the mind at all. It does not compare idea and fact, but merely two ideas: one of a being perfect in every respect except that it does not exist, the other of a being equally perfect and also existing. Of these two ideas, the second is unquestionably greater and more meaningful. But it is still in the mental realm, and does not prove at all that there is an external metaphysical reality to correspond to it. Thus, though the argument proves something, it does not prove the question at issue, namely the actual existence of God.

Still more serious is the second fallacy. The argument assumes that everyone does have a concept of absolute perfection. Is this true? If we examine our minds, we may find that any being which we can possibly imagine has some flaw, or is in some way limited, perhaps by time or space, perhaps by logic itself. For example, is it possible for God to die? If so, then his non-existence is conceivable. If not, then that impossibility limits him, and he is no longer a perfect being. This fact would seem to destroy the very basis of the ontological argument.

Is the cosmological argument any more satisfactory? To the extent that it is more straightforward, less abstract and subtle, the answer is yes. It has a plausibly scientific rather than a scholastic air about it. After the groundwork for it was laid by Aristotle, it was developed by St. Augustine as a Christian theological doctrine, and employed by some later philosophers such as John Locke. The initial assumption is that all phenomena in the universe are connected by a chain of cause and effect; there are no fortuitous or unrelated events. Though the atomist would not accept this, even a materialistic scientist would admit that it seems to correspond to the facts of experience, and that at least it has not yet been disproved. Every event, then, has a cause, which in turn is the result of a preceding cause, so that the universe is a series
of cause-effect relationships. But at some point this series must have begun. There must be a first cause behind which we cannot go, an initial impulse that set all the rest in motion; and this first cause is God. Aristotle called it the unmoved mover, because, while it acts upon everything in the universe, nothing ever acts upon it. All other beings are both active and passive; it is never passive.

Despite the fact that this reasoning seems more practical and less irritating, it is easier to refute than the ontological argument because it involves a more glaring assumption—not the original postulate of a causal chain, which may be reasonable enough, but the conclusion which we immediately drew from it. At some point, we said, the series must have begun. Why must it? Merely because our minds cannot envision the concept of an infinite series, but can easily conceive of a first cause? If so, this is only the ontological argument restated in another form: the fact that our minds demand a beginning of the series proves that such a beginning exists. Moreover, we do admit the existence of an infinite series in the field of mathematics. Though we may be unable to imagine it concretely, we do not deny its reality. There is no beginning or end to a variable approaching a limit or to the path of a hyperbolic curve or to an irrational number. Why might not the causal chain of phenomena be such a curve? Consequently the proof turns out to be only an assertion that a first cause necessarily exists because we say it must exist.

When we come to the teleological argument we are on familiar ground, for it is the one adopted by the theistic speaker in our debate, and the one most commonly heard in religious arguments. Briefly, it is the argument from design or purpose. If we see an orderly mechanism such as an automobile or an efficient factory, we infer that it must have been created by an intelligence with a specific purpose in view; it does what it is designed to do. Therefore, seeing evidence of coherent organization in the universe, we infer that a cosmic
intelligence designed it. Our evidence consists in the reliability of natural law; nature can be trusted to do the same things in the same circumstances. Somebody must have arranged it that way. This is the most immediately appealing of the arguments. Even the beautiful structure of a single living body seems convincing proof of a creative mind in the background. A mouse, said Walt Whitman, is enough to stagger sextillions of infidels. Yet enough infidels have remained unstaggered to throw grave doubt on the validity of the argument.

In the first place, it is an argument by analogy, always a dangerous kind of reasoning. An event that occurs under certain circumstances will not necessarily occur under other similar circumstances, because we may have ignored some unseen but vital difference that changes the whole situation. Finding by repeated experiment that water boils at 212° F., we conclude that water will boil at that temperature on top of Mt. Everest. Though the water, fire, and receptacle are the same, the analogy does not hold because we have forgotten the factor of atmospheric pressure. Likewise, when we ascend from human affairs to the cosmic realm we are not safe in drawing analogies. Though from our limited point of view the two are apparently similar, they may be so radically different that nothing true of the one is necessarily true of the other.

Furthermore, even if we grant that the analogy may be valid, the theist who uses it often finds it turning against him. When he is asked what is the apparent purpose that he sees in nature, he usually answers, the welfare of living beings or the development of personality to the highest degree possible. He can scarcely avoid this answer, for otherwise the creative intelligence of God would have as its aim something foreign to its own nature, would become indifferent or malevolent toward its own creatures, and would relegate human life to the position of a useless by-product. The theist
dare not thus lose his personal God. If, however, he does define purpose in terms of human value, then he must face the fact that the universe seems unsuited to that end, except in the case of a few people. God cannot be less efficient than man; yet no trained and intelligent man would carry out a purpose as inefficiently as nature does. Nature is wasteful and random. A carpenter building a house starts with a blueprint, orders materials, cuts them to the proper size, and fastens them together. He does not throw thousands of wooden blocks into a hole, in the hope that eventually the right ones will land on top of one another, and then boast that his success justified all the waste of materials. But nature does. Thousands of seeds are thrown to the wind before one finds fertile ground and creates a tree. More destruction than preservation appears in nature. Indeed, the existence of one species is often contingent upon the destruction of another. Is this the mark of a purposive intelligence?

At this point a common reply is that the hidden design of the system is the process of evolution, that the real blueprint is the survival of the fittest, which necessitates the destruction of the unfit. If we wonder whether the fittest always do survive, we are met triumphantly by the apparent truism that their survival is itself proof of their fitness. Whether or not this is true of species, it is patently false when applied to human individuals—and a personal God must be interested in individuals. Judged by any physical, mental, or moral standard, does a tornado kill the unfit and spare the fit? If a gun accidentally discharged into a crowd kills one man, is that man biologically least suited to survive? This theist must assert if he relies on the design in nature; yet he is troubled to see that, for the development of human personality, the result of the process is often unfairly destructive rather than purposefully constructive. If he insists that all things work together for good he is relying on faith, not reason.
Thus far we have been analyzing the rational arguments for theism. Most theists, after trying one or another of them, revert to the emotional side of their philosophy and base it on the need of the human heart. The belief that the central reality of the universe is a powerful and personal God, a protector and creator, brings to them the peace that passeth all understanding; and they gladly sacrifice the understanding for the sake of the peace. Their metaphysical belief is no longer abstract, but gains intensity by being associated with definite concrete images. God becomes fully a person, with the mind, emotions, and purposes of a magnified human being; at the same time he is a symbol of all constructive power and moral goodness. From this personification of God arises religious poetry, which attempts to fuse in imagination God as a metaphysical entity and God as a personality. Because it deals with two different realms, the human and the spiritual, and tries to express one in terms of the other, it is very difficult poetry to write. While it may rise to an imaginative splendor greater than that of any other art, it may easily sink into ludicrous imagery or lose itself in abstraction. We observed something of this in Dante's Paradiso, where God is robbed of living moral value by being made a motionless center of adoration and blind absorption on the part of the blessed souls in a static empyrean. Let us see how the opposite difficulty appears in another great religious poem, Milton's Paradise Lost.

With the main portion of this work, the story of the Garden of Eden where Adam and Eve were tempted by Satan into man's first disobedience, we are not here concerned. Like most epics, however, this one begins in the middle of the story and then brings the reader up to date by means of a special episodic section called the epic digression. In Books V, VI, and VII of Paradise Lost the Archangel Raphael visits Adam and Eve in the garden in order to warn them against temptation and explain why Satan is particularly eager to
ruin them. As this explanation involves an account of how and why the universe was created, it is a good example of theism turned into poetry, with all the poetic strength and logical weakness of cosmic forces personified.

If a theistic God created the universe, he must be outside that universe and separate from it. Milton pictures this situation by making our universe a small, self-contained unit in a vast infinity of space. Originally this space was divided into two parts: a spiritual realm called Heaven and a surrounding nothingness called Chaos. As yet no cosmos or physical universe existed anywhere. Heaven was inhabited by God and a concourse of angels, who were eternal and uncreated. Thus Milton avoids the postulate of a first cause. Though God and the angels are non-material beings, Raphael describes them in physical terms because the human mind has no conception of spiritual facts. They have bodies, filled not with blood but with celestial ichor. They eat and drink (Eve furnishes Raphael with a good lunch), are subject to pain but not death, make use of mechanical devices and weapons, and feel all human emotions. Had they not been thus personalized, God would never have had a motive for creating the universe.

The trouble began, as troubles often do, over a question of precedence. Hitherto all the angels had been equal under God and contented with their lot, but when God announced that his only son would now be his vicegerent and lord of all Heaven, one of his most effulgent angels, Lucifer, was stung to pride of rank and resentment at the new appointment. This is likely to happen whenever any leader appoints an assistant leader, but how such an evil feeling could enter the heart of an angel Milton does not explain. At any rate Lucifer, in a vigorous fascist oration, communicated his own vexation to thousands of other disgruntled angels, declared war on God, and even won a battle by inventing and manufacturing a new secret weapon overnight. The divine armies
rallied, however, overwhelmed the new weapons by piling uprooted mountains upon them, and drove the rebels off the parapet of Heaven to fall through Chaos. As they fell, God created hell far below to receive them; and there Lucifer, now named Satan, lay,

Hurled headlong flaming from the ethereal sky,
With hideous ruin and combustion, down
To bottomless perdition, there to dwell
In adamantine chains and penal fire.\(^8\)

Thus God's first motive for creating anything was revenge. His next one was something very like pride. Since the civil war had removed about a third of Heaven's population, Satan might well exult in the hope that the celestial realm was now understaffed. This God could never allow; he must demonstrate immediately how little the loss meant to him. I'll show that renegade what I can do, he says in effect:

Lest his heart exalt him in the harm
Already done, to have dispeopled Heaven—
My damage fondly deemed—I can repair
That detriment, if such it be to lose
Self-lost, and in a moment will create
Another world.\(^9\)

God therefore stood on the rim of Heaven and looked out over "the vast, immeasurable abyss, Outrageous as the sea, dark, wasteful, wild." Turning to his divine storehouse, he brought out a pair of golden compasses and marked out the great circle of the universe. Milton describes the act of creation in this wonderful passage:

One foot he centered, and the other turned
Round through the vast profundity obscure,
And said, 'Thus far extend, thus far they bounds, 
This be thy just circumference, O World!' . . .

Darkness profound
Covered the abyss; but on the watery calm
His brooding wings the Spirit of God outspread,
And vital virtue infused, and vital warmth,
Throughout the fluid mass, but downward purged
The black, tartareous, cold, infernal dregs
Adverse to life; then founded, then conglobed
Like things to like, the rest to several place
Disparted, and between spun out the Air,
And Earth, self-balanced, on her center hung.  

Here is a picture to thrill the heart and stir the blood. 
As such it may fittingly represent the emotional and imaginative approach to theism. It is only after Milton's sonorous pentameters have ceased to resound in our ears that we realize how completely he has created God in man's image. Perhaps we are disappointed in this, but it is inevitable that a poet should use whatever method he can to arouse the basic emotions of his readers—in this case the sense of awe and the feeling of reassurance and confidence in a cosmic creator who is also a father. The reason cannot prove the truth of this concept; the imagination cannot picture it in any but human terms. Yet of these two roads to theistic metaphysics, the poetic and imaginative proves for many people the more satisfying.

The distinction between theism and pantheism is less easy to draw than that between theism and atomism. We are still explaining reality by means of a god, but he is a more abstract and elusive being than the creative father of Milton and the Bible. The god of the pantheist did not create reality, but he is reality. He is not the maker of nature, for he and nature are the same thing called by two different names. Every object, event, and thought is a part of God, and taken together they make up the whole of God. Neither nature nor
God was ever created; both have existed simultaneously and inseparably from all eternity. To distinguish between them is like distinguishing between an object and its properties. If you hold an apple in your hand, you recognize it as an apple because it is round, smooth, firm, red outside and white within, furnished with a stem and black seeds, provided with a fragrance, taste, and texture characteristic of an apple. Now suppose you separate all these properties from the object itself, placing on one side the shape, color, smell, taste, and texture, and on the other the apple; then assume that the apple created all these attributes of itself. When you have taken away all the properties, what do you have left? That is the question which the pantheist asks of the theist. Just as the apple consists of its properties, so God consists of all the phenomena of the universe. The universe was not made by God; it is God.

Perhaps the transition to this idea will be clearer if we read two more poems, companion pieces to those we observed under theism. One makes use again of the legend of Lucifer, the other of man's attempt to escape from God. In the first we pass from a long poem to a short one, from an epic to a sonnet. George Meredith's *Lucifer in Star-Light*, written two centuries later than *Paradise Lost*, assumes that the reader knows the story, alludes to it without explanation, and recounts a later episode in it of which Milton had never heard.

On a starr'd night Prince Lucifer uprose.
Tir'd of his dark dominion swung the fiend
Above the rolling ball in cloud part screen'd,
Where sinners hugg'd their spectre of repose.
Poor prey to his hot fit of pride were those.
And now upon his western wing he lean'd,
Now his huge bulk o'er Afric's sands careen'd,
Now the black planet shadow'd Arctic snows.
Soaring through wider zones that prick'd his scars
With memory of the old revolt from Awe,
He reach'd a middle height, and at the stars,
Which are the brain of heaven, he look'd, and sank.—
Around the ancient track marched, rank on rank,
The army of unalterable law.

Here is a significant change of philosophy from Milton's poem. We have the same rebellious Lucifer subject to the same fit of pride and trying once again to assault the parapets of heaven. We have the same result in Satan's discomfiture and return to his dark dominion. But where is God, and where is his host of armed angels piling mountains on the pretender to power? They are simply not there. Nothing is there to impede Lucifer's progress. Or rather, on closer inspection we see that everything is there, and Lucifer cannot fight against everything. What defeats him is not a personal antagonist, but the universe; and once he realizes that fact he gives up in despair, and sinks back to hell untouched by any theistic vengeance.

Symbolically the poem may be interpreted in this way: Lucifer represents the spirit of rebellion in man, the proud energy and ambitious vitality that lead him to chafe against all restrictions. He is irked by things as they are, and determined to change them. Believing himself free to do as he likes and forgetful of past reverses, he tries again to destroy all obstacles to his liberty. He symbolizes not necessarily evil, but independence and individualism bursting the bonds of tradition or fate. Thus he is a personification of a certain attitude common in human life: the feeling of wilfulness, revolt, proud impatience of restraint. The force which opposes him, however, is not a person but the entire universe. It is symbolized, not by a legendary character, but by the starry sky, one of the most impressive and convincing evidences of the orderliness of nature. Nothing disturbs or interferes with the stars. A conjunction of two brilliant planets, occurring at the exact moment and the precise angular distance that have been mathematically foreseen, is an awe-
inspiring sight. Individual will and ambition are insignificant in the face of such a natural order. Pride shrivels when it sees this eternally rational system. Thus the stars represent the brain of heaven, the principle of reason in the universe, which admits of no disorderly conduct on the part of an individual. Satan retreats, not before an army of persons, but before the force of the unchanging cosmic order, "the army of unalterable law."

Once before we found the stars being used as a symbol of the cosmos, in Arnold's poem Self-Dependence. There they illustrated the Stoic ideal of following natural law by performing one's function as faithfully as possible. At the time we were concerned with ethical conduct, but we should now notice a further connection between the symbols. For the Stoics were pantheists, identifying God with the universe. It seems, then, that the pantheistic belief naturally expresses itself in images from nature, and conversely that a tendency to exalt natural law often leads to pantheism.

We may now examine the second poem, which offers a different contrast with theism. Though, as the title indicates, Emerson's Brahma is based primarily on the type of pantheism found in Hindu philosophy, it may apply to the belief in general. Two stanzas will reveal the idea:

If the red slayer thinks he slays,  
Or if the slain thinks he is slain,  
They know not well the subtle ways  
I keep, and pass, and turn again.

They reckon ill who leave me out.  
When me they fly, I am the wings;  
I am the doubter and the doubt,  
And I the hymn the Brahmin sings.

The reader should note that the universe itself (that is, the pantheistic god) is speaking. This is confusing, because if he expresses the emotions of the poem he must be thought of as
a person with human or superhuman feelings, and no longer consistently as a natural order. In this respect the poem illustrates the difficulty of keeping the careful distinction between theistic and pantheistic metaphysics.

But we are not concerned with the poem as a complete expression of the philosophy. Let us rather contrast it with Thompson's *Hound of Heaven* to reveal a striking difference from theism. In both poems we have a human being trying to escape from God, to find a way of life that need not include him. Thompson takes refuge in nature (that is, becomes a pantheist), only to find that nature is no substitute for the real theistic God, who insistently demands his attention and will not give him up. This God is separate from nature, and appears in the poem as an eternal pursuer whose footsteps the fugitive must always hear behind him. Now the image in *Brahma* again exemplifies an essential change in philosophy. Here likewise we have a skeptic trying and failing to escape from God; but he fails for a different reason. The skeptic is no longer pursued by God, but surrounded by him—still more, he himself is part of God. God is the wings with which he would fly, he is the doubter himself, he is even the doubt which exists in the man's mind, because God includes all non-material as well as material things. A mere pursuer might be outdistanced, or at least evaded for a time; but the all-embracing universe is inescapable for even a moment.

These two poems reveal, in the form of concrete images, something of the difference between the two philosophies. We are now ready to investigate pantheism as we did theism, first from the rational and then from the emotional point of view. The one is found in the writings of a famous philosopher, the other in a group of poets who indulged in nature worship.

Any student who wishes to give himself a stimulating intellectual experience while he is learning about pantheism should read at least the first book of *Ethic*, by Baruch Spinoza,
published after his death in 1677. The reading will be arduous and will require the closest attention, but the reward will be commensurate with the effort. Though the volume as a whole concerns ethics, Book I, entitled "Of God," builds a metaphysical background for Spinoza's views of human conduct, and this metaphysic, among other things, is pantheistic. In his time he was considered a dangerous radical, and his works were suppressed as blasphemous by Catholics, Protestants, and Jews alike.

In reading Spinoza, the best place to begin is the Appendix to Book I, which helps explain the ill repute of its author by giving a refutation of the prevailing theism of his day. It is a convincing but irritating essay, written with some acerbity and in a lofty condescending tone, brushing aside his opponents as ignorant children who had never taken the trouble to think clearly about anything. The old prejudices about God, he says, "can easily be rectified with a little thought by anyone." This Appendix is also a logical place to begin because it is easier reading then the main part of the book, and because it clears the ground by explaining the errors in theism.

Those errors we have already discussed earlier in this chapter. Spinoza concentrates mainly on the folly of trying to personify God and the weakness of the commonly used teleological argument. To regard God as a person is an interesting exercise of the imagination, he says; but all proofs based on such an assumption "do not reveal the nature of anything in itself, but only the constitution of the imagination." He traces the psychology of a theist to show how naturally the error originates. From childhood everyone is accustomed to view the objects around him as means of advancing his own welfare, and since he did not create them he decides that another person exists who prepared them for man's use and who likes to be thanked for them just as the man himself likes to have his good deeds appreciated. But
unfortunately many of the objects in nature are injurious instead of useful. Therefore man must have angered God by sinning. When this in turn becomes doubtful because of the obvious fact that injuries attack indiscriminately the pious and the sinful, then man concludes that the ways of God are incomprehensible anyway and the attempt to fathom them impious. Thus the course of theistic metaphysics has led man to a voluntary acceptance of ignorance and superstition in which he might have remained forever had he not been rescued by the most potent of all intellectual influences—namely, the rigorous discipline of mathematics.

This leads us to the main body of the book and to its close connection with mathematics. Spinoza belonged to the large group of philosophers who have been ardent mathematicians, extending from Pythagoras and Plato through Descartes and Leibniz to Bertrand Russell. Mathematical processes have seemed to them closer to pure reason than any other human activity; the axioms of geometry have been models of self-evident truths, of the kind of assumptions that a rationalistic philosopher had to make. Accordingly Spinoza takes over the method wholesale from one field to the other. Do not be surprised to find that the *Ethic* is arranged like a treatise on mathematics, beginning with definitions and axioms, then listing propositions, with formal proofs, corollaries, and scholia. Be sure not to miss the scholia or comments; they contain some of the most interesting material and the most biting remarks.

Among the many ideas expressed in Book I of the *Ethic*, we are concerned with Spinoza's pantheistic conception of God. What sort of God does he conjure from the realm of mathematics? In the first place, he need not worry so much as the rational theist does about proving the existence of God. He does prove it, in three different ways, but the demonstrations are given brusquely and rapidly. This is not surprising, for the pantheistic God does exist, in proper mathematical
terms, by definition. He is defined as the sum and inner essence of everything, as synonymous with the universe. Therefore he must exist if the universe does, since they are two names for the same thing. Indeed, it is not even necessary that we grant the reality of the whole universe, for if anything whatever exists, that thing is what the pantheist means by God. We cannot deny the existence of everything without denying our own reality; and this is impossible because we have clear and distinct evidence of our own existence in the process of thought through which we are now going. If we deny our own reality, the very process of denial proves that reality. And God is also undeniably, because he is the sum of all reality.

In trying to formulate a clear concept of this God, it is important to avoid personifying him. The difficulty involved is shown in the preceding sentence, where we erroneously said him instead of it, but perhaps this is pardonable inasmuch as Spinoza also does it. At the same time he is insistent that no personal attributes should be ascribed to God. God is not composed of a body and a mind as man is, nor is he either body alone or mind alone. If he were any of these, or in any sense a separate entity, then he must somehow have been created, either by himself or by an external force; and this would simply move the metaphysical problem back one step to account for that creative force. Instead, he includes in himself all matter and all mind, a totality of substance which has never been created, but exists in infinite time. Spinoza refers here not to separate objects or individual minds, but to the essence of mind and matter, which he calls substance. Nothing created substance because there is nothing else in the universe that could create it; if anything else existed, it too would be a part of substance. Therefore it pertains to the inherent nature of substance to exist, and this existence is necessarily infinite. To Spinoza this fact is so self-evident as hardly to need proof. His close reasoning and his impatience
may be seen in this sentence:

If anyone were to say that he possessed a clear and distinct, this is, a true, idea of substance, and that he nevertheless doubted whether such a substance exists, he would be in the same position as if he were to say that he had a true idea and nevertheless doubted whether or not it was false (as is evident to anyone who pays a little attention) \(^{14}\)

This infinite substance, then, includes everything there is. If it manifests itself in the mental or spiritual realm, it is called \( \text{res cogitans} \) (substance thinking); if in the physical realm, it is called \( \text{res extensa} \) (substance extended in space); but it is all the same primal stuff. And the totality of this substance, consisting of an infinite number of attributes, is God.

It is therefore inaccurate to speak of God's will or God's decrees. He does not decide that something shall happen and then make it happen. It comes about inevitably because of God's nature, that is, the nature of the universe. The theist says, God's will be done. The pantheist says, God's will is done, because whatever occurs is necessarily his will. He has no free choice, could not have changed his decrees, and the world as it is is the outward expression of his nature.\(^ {15}\) He has no intellect or will in our sense of the words, though he includes all intellect and will as part of himself. He is the inherent essence of all phenomena and all thought. He is everything. And when understood in this way, Spinoza insists, God is greater, more exalted, and more satisfying than any theistic image of a creative father.

Spinoza sets before us one example of the rational formulation of pantheism. His approach is completely intellectual, distrustful of emotion and imagination. When he entitles the fourth book of the \( \text{Ethic} \) "Of Human Bondage," he means slavery to the passions; when he calls the fifth book "Of
Human Liberty," he means the power of the intellect to free us from the passions. Beware of the imagination, he warns us; it will deceive you with false pictures. We may find this distrust vindicated when we now turn to the emotional interpretation of pantheism. As with theism, poets have often sacrificed logic to fulfil their emotional needs, and in doing so have distorted the philosophy while apparently accepting it.

The best example of this is the group of English poets called Romanticists, who flourished between 1790 and 1825, a little more than a century after Spinoza. Their typical attitude was partly a reaction against a period of coldness and lack of emotion in both literature and social life. Though it is unsafe to generalize about a whole period, these poets were convinced that the eighteenth century, in its formal manners and polished urbanity, had evaded or slurred over the fundamental human feelings, had relied on a superficial type of common sense, and had been guilty of self-satisfaction in regarding itself as the ultimate era of enlightenment. They were repelled by the eighteenth-century view of both religion and nature. The Established Church had shown a tendency to become formalized, worldly, and perfunctory. A fashionable new faith called Deism had arisen, which held that God, after creating the world like a skilful mechanic and then providing a set of laws to keep it going and the human race to run it, had sensibly gone away and left it in our care. Though of course we should give God credit for what he did, we need have no further concern about him. Nor need we have any particular interest in nature, except to grow enough crops to maintain society, or in moments of relaxation to look out the window at an artificially pruned formal garden. Few people thought of contemplating landscape in its native state, because doing so might arouse feelings that would disturb the beholder's equanimity. Both these attitudes seemed to the Romanticists intolerably arid.
The change was precipitated by the upheavals that occurred at the end of the century. The American and the French Revolutions, followed by a world war, shook English society out of its complacency. The new group of writers possessed unusual lyrical genius and unstable nervous temperaments which made them easy prey to disillusionment and despair. They needed a comfort which the established religion did not provide, and most of them found that comfort in the beauty of nature. As a refuge from the sad state of the world and the misunderstanding of their fellow men, they fled to mountains and forests, the grandeur of thunderstorms and the silent ministry of frost at midnight. In beautiful poetic imagery they idealized nature, and from this it was a short step to worshipping the natural world, feeling the mystic unity of all creation, and finally identifying every part of it with God. Though they were not avowed or rational pantheists, the implication of their poetry is pantheistic.

An interesting evidence of this tendency is their choice of words to express their own relation to nature, which they desired to make as close and intimate as the relation of the parts of nature to one another. They did not wish to observe the world; they wished to be completely absorbed in it as a garden is absorbed in moonlight or a seed in the earth. The mysterious emotional union for which they longed was extended into the complete union of all nature to form God.

Byron, watching a thunderstorm on Lake Geneva, exclaims,

"Most glorious night!
Thou wert not sent for slumber! Let me be
A sharer in thy fierce and far delight,
A portion of the tempest and of thee!"

and expresses his relation with nature thus:

"I steal
From all I may be, or have been before,
To mingle with the Universe."
Shelley, sitting for hours on a hillside in northern Italy, gradually feels creeping over him that sense of mystical unity with the world which brings peaceful relaxation in the midst of trouble, and creates from it poetry of unusual beauty:

And the plains that silent lie
Underneath the leaves unsodden
Where the infant frost has trodden
With his morning-winged feet,
Whose bright print is gleaming yet;
And the red and golden vines,
Piercing with their trellised lines
The rough, dark-skirted wilderness;
The dun and bladed grass no less,
Pointing from this hoary tower
In the windless air; the flower
Glimmering at my feet; the line
Of the olive-sandalled Appennine
In the south dimly islanded;
And the Alps, whose snows are spread
High between the clouds and sun;
And of living things each one;
And my spirit, which so long
Darkened this swift stream of song,—
Interpenetrated lie
By the glory of the sky.  

Leaves, flowers, mountains, animals, and poet—all are merged in the single body of the universe. When God is made part of the picture, he and nature are similarly amalgamated. "But 'tis God Diffused through all that doth make all one whole," writes Coleridge; and Wordsworth, in the period before he abandoned his early philosophy, writes an unusually overt expression of pantheism:

That interior life . . .
In which all beings live with god, themselves
Are god, Existing in the mighty whole
As indistinguishable as the cloudless East
At noon is from the cloudless West, when all
The hemisphere is one cerulean blue.\textsuperscript{19}

The words which have been italicized in these passages speak for themselves: portion, mingle, interpenetrated, diffused, indistinguishable. Let us add finally the most famous of all, when Wordsworth, revisiting a beloved valley after a five-year absence, sums up all that nature has come to mean to him, from sensuous pleasure up through moral inspiration and emotional quietude to the climax of

\begin{quote}
A sense sublime
Of something far more deeply \textit{interfused},
Whose dwelling is the light of setting suns,
And the round ocean, and the living air,
And the blue sky, and in the mind of man;
A motion and a spirit that impels
All thinking things, all objects of all thought,
And rolls through all things.\textsuperscript{20}
\end{quote}

A sublime something interfused in man and nature alike can be none other than the pantheistic God.

It is evident that these emotional expressions of pantheism possess a force and beauty entirely lacking in the rational approach; it is evident also that they considerably change the philosophy in ways that Spinoza would not approve. He would lament the substitution of imaginative revery for mathematical rigor, and would protest that the Romanticists worshipped the external sensory manifestations of nature, the mere modes of the universe, instead of its essential substance. And nature as a refuge would not appeal to him. Especially Shelley and Byron demand that nature, while absorbing them into its bosom, should exclude the rest of mankind—an egoistic attitude very different from philosophic inclusiveness. Equally unphilosophical is the Romantic reiteration that nature is perfect. When Byron says, "I can see nothing to loathe in nature," or Wordsworth asserts that
"Nature never did betray The heart that loved her," they are expressing personal feelings quite alien to real pantheism, in which the sum total of the universe, good and evil alike, is accepted as constituting the essence of God. Thus, as with theism, the imaginative approach to pantheism involves both strength and weakness.

Pantheism has never been a popular metaphysic. It is vaguer and more difficult than the other two we have studied. The power of chance and the power of intelligent planning are clearly understandable, whether we accept them or not; but the pantheist can never quite explain just what he means when he says that God is the infinite essence of the universe. The theory has the advantages and the disadvantages of all compromise. It is open to attack from both sides. Theists consider it humanly unsatisfying. Better have no god than an impersonal force of nature of which you are supposedly a part but with which you can have no real association. Materialists call it a weak compromise with religion, a partial but hesitant deification of the scientific world. Yet there remains the possibility that its vagueness may be due, not to loose thinking but to profundity; that it is difficult because it sets its sights higher than the others; and that there may be an advantage in refusing to accept the simplification of either theist or materialist.