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THE FAIR GOD

THE explanation usually given in legends for the departure of hero-gods from the lands and peoples they have watched over is that their work was done. We have a suspicion, however, that some pious concealment of the facts is involved in this explanation, for, judging from what happened to the Toltecs, and later on to the Aztecs, after their Fair God, Quetzalcoatl, left them to sail away toward the rising sun, his work was far from finished. The legend also says that the god left because it was his "destiny," but it seems quite possible that he was also driven away by a type of psychological insurrection with which no wise man is willing to cope.

This theory—and it is only a theory, lacking in any archeological data to give it support—is that the Toltecs began coming around to Quetzal's temple asking him to "prove" to them why they should be gentle and peaceful, and find contentment in the arts of agriculture and husbandry and handicrafts. Perhaps Quetzal would answer them only in parables, thus giving the more practical members of the Toltec society cause for annoyance. Perhaps he resorted to allegory and myth, as Plato sometimes did when the problem of "proof" was presented to him. Or perhaps he simply recognized in these insistent queries the arrival of the "destiny" the legend refers to, and quietly sailed away.

The gods, according to this view, often have a hard time in getting along with human beings. If you are willing to allow the gods all manner of supernatural powers, their difficulties with man—presumably the "creation" of the gods—raise serious logical problems, for a really powerful god ought to be able to remodel his creatures into more amenable beings, whenever they give him trouble. But if, on the other hand, you decide that the gods are simply exceptionally wise men—completely grown-up men, perhaps—the problem that remains to be solved is of another sort. In this case, it is the problem of deciding what, exactly, is the difference between gods and ordinary men—or between ordinary men and men who are completely grown up.

Supposing the gods to have been real, and not paradoxical images created by poetic imagination, we have to say, first, that the gods are wise, but that their wisdom is of a sort that cannot be communicated with the same self-evident persuasiveness as, say, is found in the simple truths of arithmetic. The practical man will say, "I can see that two plus two equals four, or even that E equals mc^2, but when you tell me that it is better to give than to receive, and that I must convince myself of this through lonely contemplation—when you tell me such things, I am not impressed."

The gods have to deal not only with practical men, but also with practical *intellectual* men, whose questions, from what may be called the "godly" point of view, are probably much more discouraging. The intellectual sets up as a philosopher—as a sort of half-god, that is—and he wants to know about the spiritual unity of which the gods speak with such mystical obscurity. "How do you know," the intellectual will ask the god, "that all our beings are grounded in one great being? Perhaps separateness is the only reality of life." Or he may ask a proof of the immortality of the soul and of the moral law. Thrasymachus and Machiavelli may not be attractive personalities—the kind of men one would choose to people an ideal world—but such men do exist, and they do get along, and maybe they are right.

Probably the best attempt at answering arguments of this sort was made by Plato, in the Socratic dialogues. But not everybody became a

Platonist as a result. Plato, before he died, seems to have realized that the dialectic, although the best method he could find for showing that the gods were right, would not persuade some men at all, and so, in the *Laws*, he advocated the use of force, and even condign punishment, to control the behavior of such individuals, after sweet reasonableness had failed. One could argue that this is evidence that Plato was not himself one of the gods—at least not the kind of a god Quetzalcoatl was—for Plato, in theory, anyway, did not "go away" when reason failed, but sent for the police. Perhaps the gods who "go away" are anarchists at heart. They seem to have been anarchists to the extent that they would not substitute force for persuasion. Perhaps a real god knows that neither men nor the half-god philosophers can grow into actual godly maturity so long as they are *made* to walk in the ways of truth and justice. Perhaps they know that the way of truth and justice becomes something quite different the moment you push somebody in that direction.

It comes to this, that a man who will not respond to the compulsions of hunger is not even a normal animal; that the man who cannot see the necessities imposed upon him by physical circumstances—the sort of realities we determine by observation, by arithmetic, and by other forms of applied mathematics—is not a rational human being; and that the man who has no ear for the inner demands of his moral being is denying his potential godhood. This, perhaps, is what a god might say, if you could get him to talk about it. And, perhaps again, the reason that the gods seldom talk about this problem is that anyone, god or not, who goes about telling people that they are blind to the spiritual aspect of things is liable to end up as Socrates ended up, or Jesus, or Savonarola, or Gandhi. Not that the gods fear death very much; rather, they see that nothing is gained by provoking men to the point where they crucify their Saviors. They know that the men who do crucify their Saviors will then invent a complicated system of self-justification, thus creating another formidable barrier to the truth that is hidden in their hearts.

So, although the gods live in a world of perception in which the inner, ethical compulsions upon what they think and do are as insistent as compulsions exerted by the physical laws of nature upon ordinary mankind, the gods are unable to "reveal" the ethical world to all. They move among men, obeying the inner compulsions, trying to tell about them, trying to help others to feel them, and sometimes men listen and begin to get an idea of the ethical universe on their own account. But when men acquire the habit of denying the reality of the ethical compulsions, the *feeling* that they may be real leaves them almost at once, and, soon after that, the gods go away, too. Their "work," as the legends tell us, is done; although it seems more accurate to say that they are prevented from doing any more work, and so they go away.

The Toltecs and their successors, the Aztecs, did not do very well without their Fair God. They remembered his promise to return some day, but they had forgotten so much of what he was like that when Cortez arrived on the shores of Mexico, because he had a beard and a white skin, they thought he was Quetzal come back. That was a serious mistake, for Cortez believed in the same things the Aztecs believed in—the things that had driven Quetzal away—and he only looked like Quetzal, on the outside. But that, it seems, is all the Aztecs could remember about their god—what he looked like on the outside.

Quetzal, of course, being a god, and therefore sensitive to the workings of the moral law, probably could have told his people that they would mistake Cortez for himself. But that, if the people had believed it, would only have made them think that Quetzal was a very capable god indeed, even though he did talk too much about ethical behavior. And Quetzal knew that winning friends and influencing people by performing miracles of prophecy would not help them to understand the moral law. Only pretended gods

stoop to gaining the confidence of the people by baffling their understanding with miracles. Quetzal, on the other hand, had spent most of his time in Mexico trying to convince the people that there is no such thing as miracles—that whatever happens is the result of law; that in moral matters, it is the moral law which works—and that no miracle can interfere with the moral law.

If the gods ever get together to talk over things like this—and if the gods exist, it stands to reason that they do talk things over—it seems almost inevitable that they would long ago have decided that prophecy, right or wrong, can be very confusing to humans. A prophecy that things are going to be bad leads to a lot of frantic talk about Armageddon—which has been on the point of taking place every five or ten years for the past two or three centuries; and a prophecy that things are going to be good has caused a lot of otherwise sensible people to fold their hands and wait for the Second Coming.

So Quetzal, knowing these things, just said he'd be back. He might have been able to predict a lot of things that would happen, if people went on ignoring the possibility of a moral law, and just saying, "Prove it!" when some of his more faithful followers mentioned the idea. He could have told them, quite simply, that when men assume that power and wealth gained by war and excess of greed are worth having, the earth finally grows tired of them, and lets them into secrets like atomic energy—and then, if they don't blow themselves up right away, they frighten themselves into perpetual anguish just thinking about getting blown up. But if he had told them this, within a hundred years or so some priest would have worked the prophecy up into a claim that all those who join up with *his* temple will be on the Right Side when the time comes, and have the duty and pleasure of blowing up the Wrong People; so Quetzal didn't tell them about atomic energy, either. He just went away.

There are really two kinds of gods that men know about and talk about. There are the gods who say, "You can't get along without what we know," and who, when nobody will listen to them, quietly go away. These are the only gods worth having. Then there are other gods—pretended gods, actually—who never go away willingly. This sort of god hangs on as long as he can, using almost anything to maintain his hold on the faith of the people. He will use guns, torture, threats of punishment in both this world and the next, ritual, prayer, and even psychoanalysis, to keep the beliefs of the people up to par.

This second kind of god makes it very difficult for the first kind of god to teach what he knows to the people. Wherever the second kind of god goes, he creates atheists; he turns honest questioning into cynicism and gives sneering doubters the appearance of having reached the pinnacle of wisdom. He twists everything the first kind of god has taught into dogmas of blind belief, until, by reaction, when a half-god philosopher says something about all men being united in their spiritual being, the angry enemies of the second kind of god reply, *"What* spiritual being? *We* came from the apes, and they're plenty good enough as creators—the apes never threatened us with going to hell!"

So Quetzal, if there is a Quetzal, had better stay away a while longer. If he came back now, who would listen to him, what "work" could he do? Quetzal's genius was in teaching the people how to believe wisely. When they wouldn't or couldn't learn this, he left them to their unbelief. Then others came to teach the people how to believe unwisely—and they were successful for a time. But there is a third class of teachers—honest men, and therefore better men than the priests of the pretended gods—who teach nothing about belief at all, but only doubting. Some day, these honest teachers of doubts will discover that, just as men can believe both wisely and unwisely, so, also, can they doubt unwisely as well as wisely. And when the importance of this discovery is made known, that will be the time, perhaps, for the Fair God to come again.

Letter from
CENTRAL EUROPE

INNSBRUCK.—Austrians and Germans speak the same language and there are other ties between them. One of the differences, however, is that the Austrian can be regarded as a southerner, more easy-going, perhaps, and some have felt that, for these and other reasons, he does not stop at creating, but possesses the ability to produce his creations with charm at the same time. These characteristics, combined with an extraordinarily beautiful landscape, have led Austrians to cultivate singing, dancing and playing instruments—thus weaving a veil of romance about their lives, in consequence of which the city of Vienna and other centers have become world-famous as typical places of joy and amusement.

But whoever imagines Vienna as a gay place should concentrate on the time before World War I, and even then it happened very rarely that a prince, a duke, or just a simple earl fell in love with a laundry-girl and married her straightway. Even during the idyllic period from 1880 to 1900, the majority of the population did not, of course—as the movies still try to make believe—spend their days in laughing and rejoicing, but worked rather hard; and nobody will doubt that, today—after two wars, defeats, and economic disasters—the last traces of that pleasant era have vanished.

The situation is somehow different in the small places, especially in the villages of the Tyrol. Probably since pagan times, the peasantry of this mountainous region have celebrated certain festivals year after year, and they have kept them as faithfully as they do their Roman Catholic faith. During the first years after the late war, the feasts naturally took place on a small scale. But since most of the men have returned from the prisoner-of-war camps, and since another generation is growing up to fill the places of those who did not return from the war, they celebrate the holidays again, as their forefathers did. The day usually starts with a religious and rather colorful procession. Some of the participants are dressed as hunters and shepherds, others wear costumes which they have inherited from their ancestors. Between ten and twenty orchestras, consisting of the peasantry of neighbouring villages and embracing about thirty members each, fill the air with brass music, looking very striking in their vests striped with green, red and yellow, and their large, black felt hats decorated with fresh flowers and multi-colored ribbons. A meadow in the midst of a vast forest is the locality where the villagers spend the afternoon. Surrounded by hundreds or thousands of onlookers, the young men wrestle, in pairs, in conformity with specific regulations and with surprising elegance of style. A number of other sports and games, probably played centuries ago on the same meadow, find the interest of other crowds, while a certain kind of dancing, the quick Tyrolean *Schulplattler,* done to rhythmic clapping, usually forms the main attraction.

The village festivals go on—each one at a different place—till the end of fall. It was a fine idea of UNESCO to send about a thousand university students of the German language, from numerous other countries, to visit the Tyrol, where they live in small communities in the valleys, in some cases far from traffic centers, where they are visited and supplied with lectures by famous scientists of the University of Innsbruck, and where they have opportunity to get acquainted with the genuine character of these inhabitants of Central Europe.

And what have the Austrian cities to offer? Besides snow-covered summits and deep green pastures, Austria has an Old World culture, with treasures of art, music and science. The authorities as well as the population have done their utmost to organize cultural events of high standing. "A hundred years ago the Vienna Waltz was born—the sweet, light-hearted melody that has captivated the music-lovers of the world—music that brings the joyous lilt of the Blue Danube and the stately strains of the Emperor's Waltz as delightful greeting . . . celebrate with us the hundredth Anniversary of the Strauss Waltz!" runs a prospectus published by the Austrian capital's municipality, while Salzburg and Bregenz are planning a matchless programme for their *Festspiele.*

Numbers of foreigners have arrived already and populate the first-class hotels. The thousands of smaller inns and the boarding houses remain practically empty, however. They will come to life again, only when the Allied Authorities in Germany lift the ban which still prohibits Germans from traveling to Austria, and vice versa.

CENTRAL EUROPEAN CORRESPONDENT

REVIEW
WARNING ON TIDINESS

IT is always a good idea, when a definite tendency is emerging in thought, to look for the logical limit of the new enthusiasm, however much one may agree in general with the view it represents. There is usually something worth saving in yesterday's truth, and the eagerness with which others are leaving it behind is an excellent reason for making one last and thorough inspection of the now unpopular verity before packing it away in some intellectual attic. The dated truths which are carelessly thrown aside—often, only because we expected too much of them—have a way of coming back to life in unexpected moments; and important truths, if ignored too long, can sometimes be made to lend their authority to the wrong kind of revolution, or to a wave of ugly reaction.

The new enthusiasm, today, is for what is called the "organic society," as contrasted with various "individualistic" heresies. No man is an island, and it is time we realized it. The emphasis is on human ecology—on the interdependence of one man with all the rest—instead of upon the Renaissance conception of the creative individual in uninhibited self-expression. We are discovering the importance of order and hierarchy all over again, relearning the value of traditional wisdom and established law. Meanwhile, philosophers with religious leanings keep telling us that no one can think clear thoughts without a "cosmology" to believe in.

Fundamentally, it is the quest for inner as well as outer security and order. An organic society will have Standards—which, admittedly, we lack. As the last vestige of the material reality upon which we have depended, the atom, dissolves into faceless equations, and as the scientists, whom we have trusted and admired, plead like small boys with the leaders of the Military State not to use the H-Bomb *first*, we feel a little like the mystic who, having gazed for a lifetime through his private window into the Infinite, is finally convinced that God is not a Person, and weeps bitterly for his lost security in an illusion that can never be regained.

Whom, then, are we thinking of deserting, in our search for a more "organic" way of life? What optimisms do we now call childish, and what braveries of the human spirit seem as impudent follies which, because we embraced them for a time, have led us to the brink of almost certain ruin?

William James comes to the fore at once—tough-minded William James, with his pluralistic universe, his refusal to yield to any system, his impartial, friendly intellect and his amiable skepticism. If we are going to live in the organic universe of Plato, or Aquinas or Hegel, we must be sure to bring James along, if only as insurance against the day that we might want to get out again. For it was James who helped us to get out, once before. John Dewey, too, James's disciple, had better come, lest our organic society be allowed to grow too tidy to be borne. The trouble with most humanly devised organic societies is that they are not organic enough—that is, they don't seem to be able to accommodate the infinitely diverse possibilities of the human beings who have to live in them.

What, exactly, is an "organic society"? First of all, it is a society which *grows*, like a family, instead of being contracted for. The advocate of organicism looks with disfavor upon the idea of a social contract. Freedom, he says, is not something you barter, but something you give. The social contract commercializes the idea of human community. It develops from the theory that men can't trust one another. The good society rests upon trust: why, then, symbolize *distrust* in a legal agreement among men to treat one another decently? The idea of contracting for liberty—of, in a sense, buying and selling it—is a corrupting influence. If we love one another—and if we do not, we are lost, anyhow—we shall accord freedom to one another without contracts.

But who, Mr. James and Mr. Dewey will want to know, is at the top of this pyramid of love? Further, who will reside in the preferred courses of affection and freedom? The reply *might* be that God—Who is Love—is naturally at the top, and that His loyal believers will naturally occupy the more select apartments.

And Mr. James and Mr. Dewey will rise triumphant at this reply, exclaiming, "You said just what we expected—and a pox on your god and his true believers! We are going back to the pluralistic universe where nobody knows all the answers and you can make an honest—well, partly honest—deal for your position in life.)"

There is no denying that we need an organic universe very badly; that buying and selling, and killing and fearing have walled up our hearts and tortured our consciences and tied up our minds in neurotic twists. There is no denying that, one way or another, we have to learn to trust one another, which means that we shall have to learn to believe in the dignity of man, and that we and others possess it. But do we know what an organic society with the dignity of man as its natural blossom would really be like? Has anyone offered blueprints for such a society?

G. S. Fraser, writing in the *New Statesman and Nation* for Jan. 7, has some useful comments to make on an organic society which went wrong very early in its history—the one planned by Karl Marx. He writes:

> What seems to me dangerous in the Marxist dialectic, as in its Hegelian parent, is its gnosticism; its practical assumption that the whole logic and structure of nature and history are, of necessity, completely transparent to instructed thought. If *bourgeois* thought fails to grasp the world tidily in its entirety, one reason, I would have thought, is that the world is, in fact, not transparent; that it is complicated, plural, and hard to grasp. . . . There are aspects, . . . of the liberal tradition—especially its niggling, qualifying, hesitating, defining attitudes—that one would be sorry indeed to surrender wholesale to his [the Marxist's] eager and honest persuasions.

Assuredly, our organic society must have a place for large uncertainties—it should be a society in which uncertainties will not amount to mortal wounds. And there are other matters which ought to be settled beforehand. What of the unpliable individuals who will doubtless take their own time in blending with the high purposes we have proposed? W. Macneile Dixon, writing of system-building moralists in *The Human Situation*, wonders what they will do with "the lovable scamps, of whom the world is full, who astonish us by doing magnificent things of which their virtuous neighbors are quite incapable, exhibiting a self-sacrifice or a cheerfulness in adversity, or in face of death, which saints might envy." Mr. Dixon, not without a system to present on his own account—and one of the best, we think—has some wise counsels for the planners of the Good Society, whether organic or some other. He says:

> To me it sometimes seems that our moralists would do well to cease their upbraidings and apply themselves to the interesting problem—"How is goodness to be made the object of passionate desire, as attractive as fame, success, or even adventure?" . . . And our reformers might do a great service to humanity if they could explain to us why a diet of milk and water does not appear to suit the human race, why the milksop has never been the hero of the romancers, why the biographers of the peacemakers lack readers, why the lives of dare-devils, of buccaneers and smugglers and all manner of wild men captivate the youthful souls, the young folk so recently—if we are to believe Plato and Wordsworth—arrived from heaven, trailing clouds of glory from their celestial home. There is a mystery for them, upon which to exercise their wits.

So, while we are applauding the arguments and sharing the longing for an organic society, let us dream of it generously, and hospitably, lest, on the eve of its inauguration, we find ourselves mournfully reflecting upon how much better, how much more wisely, the world might be arranged, if certain upsetting and stubbornly non-organic souls had been sent to colonize another planet.

COMMENTARY
INGLORIOUS, SUBORDINATE

A READER, happening upon J. B. S. Haldane's essay, *Daedalus, or Science and the Future* (1923), finds matter deserving of comment.

* * *

The scientist's opening remark serves as a fortuitous interpretation of the "ominous cloud" described in MANAS [for Jan. 4, in an article on Los Angeles' "Smog" problem]. Recollecting a battle glimpsed by him in 1915, Haldane writes:

> Through a blur of dust and fumes there appear . . . great black and yellow masses of smoke which seem to be disintegrating the works of man with an almost visible hatred. These form the chief parts of the picture, but somewhere in the middle distance one can see a few irrelevant looking human figures, and soon there are fewer. It is hard to believe that these are the protagonists in the battle. One would rather choose those huge substantive oily black masses which are so much more conspicuous and suppose that the men are in reality their servants, and playing an inglorious, subordinate, and fatal part in the combat. It is possible, after all, that this view is correct.

Now, here, in the main, is an intensified depiction, a *revelation,* of man's plight in the midst of that malefic pall which he has unwisely summoned from the magic bottle of Science. Of a certainty, man more and more becomes an irrelevant figure, stranded "somewhere in the middle distance" of the industrial panorama. In the lethal atmosphere of ever-spreading Progress, man inevitably dwindles into a creature increasingly inglorious, subordinate, and fatally engaged in war against itself.

* * *

Prof. Haldane's paper turns out to be first in a series of essays by eminent scientists and philosophers. The second essay, called *Icarus, or the Future of Science,* is by Bertrand Russell, and the third, by F. C. S. Schiller, has the title, *Tantalus, or the Future of Man.* The gloomy contents of these little books thoroughly justify the allusions of their titles. If any generalization may be safely made about them, it is that pessimists make the best prophets. Prof. Schiller, however, rejects the charge of pessimism by the following argument, with what success, the reader may be left to judge:

> If it is called "pessimism" to point out the methods by which men may escape destruction, because men do not care to adopt them, I suppose it must be "optimism" to rush violently and open-eyed down a precipice, and to expect to be saved by a miracle. Certainly such would appear to be the belief upon which human affairs are at present conducted.

CHILDREN
. . . and Ourselves

OUR previous suggestions for improved schooling have been concerned chiefly with the type of environment which may increase the child's receptivity to learning. He needs, we have said, a "nature-environment" which he can share with teachers, and a partially agrarian environment, and a specific focus for communal work projects in which teachers also participate.

A recent story in *Houselold* magazine indicates the startling effectiveness of integral living between teachers and pupils as an aid to correcting what we usually call "juvenile delinquencies." In Ellsworth, Kansas, an Episcopalian minister named Robert Mize founded a school for boys on the theory that the conditions of a natural community life will discourage anti-social tendencies and help creative energies to be released. In the St. Francis School, founded by Mize, boys learn how to help support themselves and even to earn some spending money. During one summer, the boys worked thirty hours a week, and were paid on a time and over-time basis. They raised stock and crops. This school has been in existence only since the latter part of 1945, yet in that short time such a change of psychological attitude has taken place among Father Mize's "juvenile delinquent" wards that not an adolescent in the St. Francis home but has been given sums of money to pay various bills around town—and no misappropriations occur.

The Reverend Mize's school should not be called a school, in the usual sense, for all of its occupants attend the regular public schools in the district. But these children attended public schools before. The significant part of their learning now takes place outside of school grounds, and they are given a focus for improved interest when they do enter the classrooms.

Skeptical townsfolk in Ellsworth have gradually become convinced that Father Mize's type of rehabilitation program for delinquents can be successful, and now are proud of the distinction among educators which the St. Francis Boys' School has earned. Though Father Mize's sagacity in child psychology would probably assure him a creditable success in any locality, it is likely that the semi-rural setting helps youngsters to round out stunted or unbalanced personalities. Fortunately, Father Mize has never been heavily endowed, and the children know that failure to cooperate with the economy of the home may force it to close. Their "sense of community," then, begins at the beginning, as it should, and from this basis extends in many directions.

Just as the children participate in the maintenance of the home, so do they also participate in disciplinary decisions. The child may choose his punishment among certain alternatives. There are no "trusties" at St. Francis, since every boy is adjudged capable of meriting trust. But indirectly, Father Mize does some good teaching in respect to the abstract principle of justice. No "punishment" is allowed to interfere with imminent plans, the conditions of retribution beginning after an excursion to town or some looked-forward-to event.

In the public school, a "small community" meets the larger one, and proceeds to work to earn its acceptance. In Ellsworth, that acceptance has been rather complete, some of the St. Francis boys marrying into town families and apparently successfully overcoming any opprobrium which might be expected to be attached to the conditions which led to their being at St. Francis. Once again we may remind ourselves that it does not take money or influence to launch some kind of "small-community-core" in educational endeavor. In fact, it can be inaugurated in every home, just as can an introduction to the philosophical—or if we like, religious—mysteries and beauties of nature. Whenever and however this type of community is accomplished, we will discover that we have a real locus of education.

The teaching of those specific subjects which we tend to regard as the expected "practical"

ingredients of any curriculum will be effective only to the degree that a good background is provided for study. The child whose interest has been aroused in learning how to grow things on a plot of land has some natural groundwork for an interest in soil chemistry, and for ways of appreciating methods of comparison to determine the value of different soils. This, in turn, can become an introduction to mathematics. The child who has spent enough quiet time out-of-doors to be familiar with the stars—and thus develop a rudimentary interest in astronomy—has a natural background for the study of physics. (Here we might remember that the evolution of modern physics, from the time of Copernicus, began with a thoughtful pondering of the mysterious motions of the planets.) The first introduction to spelling and the use of words can come from a desire to achieve sufficient clarity of expression in interchanging ideas in conducting the affairs of community. If language were recognized as having this primary meaning, we would probably never have had occasion to develop a set of specialists known as semanticists, and perhaps it is because language has been considered a thing in itself, a separate "discipline," educationally speaking, that vagueness of expression and obscurantism have resulted.

Arthur E. Morgan, a leading advocate of education through community experiences, has described in *Community Service News* (November-December, 1945) what he calls "natural education"—a type of relationship between children and parents and other members of the community which can be most beneficial when the child is habitually "under foot" during the normal activities of productive work. Of one such occasion, he wrote:

> A couple of children were about the place, accepted as part of nature. In each case these children saw human relations. They saw bargains being made and kept. They were absorbing standards of craftsmanship, of mutual tolerance, of co-operation. The basic cultural inheritance was being transmitted to them. In many of our small communities it still is possible to recapture this process of natural education. Can democracy actually exist and thrive except as parents, teachers and society discover this principle and live by it? Is not this a root principle of democracy and of community?

All this suggests that the most satisfactory beginning for an ideal school would be a very small one, where units of teachers and pupils were sufficiently mobile to study the relationship of man to his natural environment without elaborately planned and highly organized excursions. Most high-schools do provide occasional class excursions to visit industrial and farming enterprises, but the size of the classes and the fact that teachers regard this as but a minor supplement to their established notions of teaching reduces any benefit to a minimum.

No one can "organize" an ideal school. All of the activities we have described will contribute to educational success only if the particular pupils and the particular teachers *wish* to be together. There is no guarantee that a good theoretical teacher will know how to integrate his work with the study and appreciation of a natural environment. Many teachers are deeply set in habitual patterns and would find it difficult to make use of the community environment and the values it can supply.

The "ideal" school, therefore, would have to begin with some sort of interest group, or else would have to develop, within a large collection of teachers and pupils, some core of teaching and learning humans who would be equal to comprehensive tasks and who shared a basic common denominator of interest. This, in turn, implies that it is possible for a fine school to start with part-time associations between the qualified adults and qualified children who might find some natural focus for community enterprise and will value whatever "education" might be accomplished.

FRONTIERS

What is an Organism?

WHILE it seems reasonable to expect the science of biology to give some sort of answer to this question, biologists are no more able to say what an organism is than physicists can tell us what an atom is, or theologians tell us what a "soul" is. Actually most scientists take the view that *what* a thing is, if the question has any meaning at all, is beyond the scope of scientific inquiry. Science may tell us how a thing appears, what it does, and how it works, but the nature of its essential being is a metaphysical problem in which scientists, as such, take no interest—or so they say.

Those of us who are not scientists, however, and even the human beings inside those who are scientists, commonly think and talk as though knowledge of things in themselves were both desirable and possible to obtain. We want this kind of knowledge because our ethical and moral life depends upon it. The dynamic aspect of knowledge has to do with purposes—we cannot think about what is good for man without some idea of what man is; and we cannot feel any moral stability in our relationships with the natural world without some idea of the nature of the beings or creatures which make it up. Then, from a philosophical viewpoint, we want to be able to "place" such forms of life as animals and plants in the general scheme of things. *Feeling*, as well as knowing, is involved in our relationships with nature, and what men feel about the living things around them is affected by what is thought to be the meaning of their activities. Even esthetic appreciation of the beauties of nature seems to be bound up in subtle ways with our sense of the various purposes which are being fulfilled.

Although scientists may deny that they can tell us anything about the "essence" or "purpose" of an organism, human beings always take what the scientists say and give it some metaphysical significance. For human beings are incurably metaphysical in their mental processes, and will always infuse a philosophical meaning into their ideas about the world. Even familiar concepts of science which we suppose are hard-headedly skeptical have their origin in metaphysical thinking. For example, the idea of organisms as machines—or as functioning according to the same principles as machines—dates from a philosophical argument about meaning in the eighteenth century. Lamettrie wrote his notorious *Man a Machine* to contradict the Christian theory of creation. When Diderot asserted that the wonders of nature are so impressive that atheism can have no standing—the believer in creation, he said, could strike down an atheist with a butterfly's wing or with the eye of a gnat, and has, in fact, the weight of the entire universe to crush him—Lamettrie was not dismayed. He replied that, besides God and besides Blind Chance, there is another possible source of the wonders of the world—Nature herself. The natural world is full of its own powers and potencies, which testify on behalf of Nature, not for God. Only ignorance of natural forces makes men suppose that the "weight of the universe" can frighten a true atheist into humble belief. And Lamettrie eagerly recites the findings of the science of his day to prove that man is a machine. Animals, too, are machines, although they stand to man as an ordinary timepiece would to one of Huyghens' astronomical clocks.

So, from being decorations of God's footstool and public utilities supplied to mankind on the fourth and fifth days of Creation, organisms became machines, testifying to the inherent potentialities of the natural world. The storm raised by Lamettrie with his "machine" hypothesis was an early chapter in the long controversy between theology and materialism—a controversy which still goes on, although with arguments less naively phrased. Today, materialism takes its stand on the proposition that there is no indwelling or controlling intelligence in nature, and that all the phenomena of life will ultimately be explained by scientific laws which can be stated without reference to any "purpose" or "meaning."

In his introduction to Lange's *History of Materialism* (Harcourt, Brace), Bertrand Russell sums up the issues as they stood in 1925:

> In our own time, the old battle of materialism persists chiefly in biology and physiology. Some men of science maintain that the phenomena of living organisms cannot be explained solely in terms of chemistry and physics; others maintain that such explanation is always theoretically possible. Professor J. S. Haldane may be regarded, in this country [England], as the leading exponent of the former view; in Germany it is associated with Driesch. One of the most effective champions of the mechanistic view was Jacques Loeb, who showed *(inter alia)* that a sea-urchin could have a pin for its father, and afterwards extended this result to animals much higher in the scale. The controversy may be expected to last for a long time, since even if the mechanists are in the right, they are not likely soon to find explanations of all vital phenomena of the sort their theory postulates. It will be a severe blow to the vitalists when protoplasm is manufactured in the laboratory, but they will probably take refuge in saying that their theories only apply to multi-cellular organisms. Later, they will confine vitalism to vertebrates, then to mammals then to men, and last of all to white men—or perhaps it will be yellow men by that time. Ordinary scientific probability suggests, however, that the sphere of mechanistic explanation in regard to vital phenomena is likely to be indefinitely extended by the progress of biological knowledge.

Written in the heyday of scientific materialism, this passage clearly shows where Mr. Russell's sympathies lie. He is on the side of the machine. But in 1925, unlike the state of affairs in the eighteenth century, the side of the machine was the side of orthodoxy in science. It is still, although more from habit, today, than from any great wealth of confirming scientific evidence. Actually, an increasing number of scientists are now becoming interested in presenting reasons for thinking that the machine idea is as inadequate for twentieth-century biology as the God-idea was for eighteenth-century rationalism. But the trouble with many of the anti-machine arguments, usually presented by the "vitalists," is that they often seem to be an opening wedge for the return of the supernatural into scientific thought. The machine conception of living things may be a limited one, but at least it is one that protects science from the intrusions of angels and goblins, the die-hard mechanists say. The latter have a natural reluctance to admit, even tacitly, the possibility of entities which are not entirely subject to the known laws of physics and chemistry. The vitalists, therefore, are commonly accused of trying to make something supernatural out of the mysteries of science, and this is regarded as an unhealthy tendency. (For an excellent review of various speculations and attitudes among biologists on this general problem, see William McDougall's *The Riddle of Life,* Methuen, 1938.)

However, in the twenty-five years since Mr. Russell cast his laconic vote for mechanism, there have been new developments in biology which allow concessions to both sides, and at the same time raise the problem of the organism to a higher level of analysis. Conceivably, the "intelligence" which the vitalists claim gives direction and even purpose to organic life behaves according to laws of *life*—laws which are neither "mechanistic" nor inaccessible to strict scientific observation. For example, in *Science* for Jan. 13, Ludwig von Bertalanffy, professor of biology at the University of Ottawa, presents his theory of "open systems," in explanation of the phenomena of life, as contrasted with the "closed systems" of physics. A closed system is ruled by the second law of thermodynamics; eventually, it is overtaken by what the physicists call entropy—it "runs down," finally reaching the dead-end "equilibrium" of purely random motion. An open system, however—a system which is open to an external environment, as are all living things—while affected by the second law of thermodynamics, may also build up its functions while it is running down. This, Prof. Bertalanffy points out, is characteristic of living organisms. His article is devoted to an expansion of physical theory to include organic phenomena, and has the curious effect of freeing physics, in some relationships, at least, from its purely deterministic character.

A living organism has the innate capacity to maintain its organic integrity despite widely varying external conditions. No closed physical system can "do" this. Living things are not absolutely shaped by circumstances, but often shape themselves perfectly despite extremely adverse circumstances. They are like machines that oil themselves, or watches that wind themselves. Prof. Bertalanffy attempts to formulate laws for the behavior of "open systems" that will apply to living organisms:

> In organic development and evolution, a transition toward states of higher order and differentiation seems to occur. The tendency toward increasing complication has been indicated as a primary characteristic of the living, as opposed to inanimate, nature. . . . These problems acquire new aspects if we pass from closed systems, solely taken into account by classical thermodynamics, to open systems. Therefore, such systems may spontaneously develop toward states of greater heterogeneity and complexity. Probably it is just the thermodynamical characteristic of organisms as open systems that is at the basis of the apparent contrast of catamorphosis in inanimate, and anamorphosis in living, nature. This is obviously so for the transition toward higher complexity in development, which is possible only at the expense of energies won by oxidation and other energy-yielding processes. In regard to evolution, these considerations show that the supposed violation of physical laws does not exist, or, more strictly speaking, that it disappears by the extension of physical theory.

The degree of this "extension" is suggested by its application to "certain inorganic systems," which Prof. Bertalanffy does not identify further, but which, he says, "show a paradoxical behavior, as if the system 'knew' of the final state which it has to attain in the future."

Something had to "give," either in the resistance to vitalist arguments, or in the strict determinism of mechanistic theory. The idea of "open systems," even if a purely physical concept in form, certainly broadens the possibilities of meaning in physics, while holding fast to the discipline of exact science.