

DAYS OF WONDER

THE *Bhagavad-Gita* is a book about many things, among them human growth. Arjuna, the protagonist—Krishna, the teacher, is not an "active" figure in the poem, but a symbol of the unchanging reality, the *sub specie æternitatis* aspect of life—is the one who grows, and the several discourses of the *Gita* illuminate the stages or conditions of growth. These conditions change, mostly because Arjuna himself changes, and is thus able to move into a new area of experience; but one condition does not change at all: the background of the entire cycle of conversations between Arjuna and Krishna is a *war*.

The placing of this philosophical dialogue at the point of crisis in the Mahabharata, or Great War, can mean only one thing: a complete rejection of the view that human growth must await interludes of calm in human affairs. There is never a moment, that is, when a man is justified in saying that he has "no time for philosophy." The burden of the *Gita* is that he has no time for anything else.

What, in this context, *is* philosophy? It is the shaping of human attitudes to the ideal of wisdom. This, according to the *Gita*, is to be equal to anything that may happen, or can happen; and this is to say that, whatever happens, its cause, meaning, and effect are understood and can be dealt with appropriately.

One result of this definition is that a man may be resigned to the fact that he need not know "everything" to be wise. If he encounters an experience he finds impossible to explain, he does not meet an opaque and frightening "thing," but recognizes that life has brought him into a new area of the learning process. This is the significant fact of the experience. His entire past has been made up of such facts, and so, also, will be his

future. Philosophy, then, is essentially a mood in the approach of the unknown, and wisdom is confidence in the human capacity for knowing. Both are feeling and conviction about the Self. This, we think, is what Krishna means when, in Chapter Thirteen, he tells Arjuna that *Adbyatma*, the ultimate self, "is the light of all lights, and is declared to be beyond all darkness; and it is wisdom itself, the object of wisdom, and that which is to be obtained by wisdom; in the hearts of all it ever presideth."

It may seem a far cry from antique Indian philosophy to contemporary thought in America, yet there is a sense in which this conception of man, and the good of man, is emerging in the thought of our time. For the most part, the evidence for this correlation is negative. We are no longer so sure that we *know* what is wisdom, what is its object, and what wisdom may bring. For many, our time of confidence has given way to a time of fear; but for others, certainty is being replaced by wonder. The honor paid by the best among us to the ancient Greeks is bearing fruit: we are beginning to wonder at the vast, wide world, and at ourselves.

Perhaps there is a parallel between the present and those moments, before the battle, when Arjuna invited Krishna to instruct him. Now, as then, every man's hand is upon his weapons. Now, as then, terrible feelings of insecurity and doubt sweep over the battlefield. What, we are beginning to ask, is it all for—not just the impending war or conflict, but the entire juxtaposition of men and circumstances which clutches our lives and imposes its dread compulsions. There is a longing to become philosophers, to understand. This longing, when it is real, begins in wonder.

What are the signs of wonder? First, there is a lessening of contempt. There is less hard-faced certainty, less righteous indignation. Conceit and the delusions of high virtue are not hard to come by, but even these will weaken in the presence of endlessly contradicting facts. Look around the world for the pure, the good, and the wise. Where are they? The rivers of blood set flowing by the good are as red as those released by the bad actions of evil men. War is the night in which all shirts turn black. Men who are continually sickened by death and destruction eventually lose the savor of their righteousness. Propaganda and indoctrination can do much, but they cannot manufacture self-respect. To be human is to have the capacity for self-respect and to feel deprived when it wastes and is lost. It is not that our beliefs have been proved false so much as that enthusiasm for them is becoming difficult. This is despondency, which grows from disillusionment that has subtle and hidden causes. Fortunately, there is a resilience in human beings which makes them begin to wonder after they have been despondent for a while. This leads to search for new engagements.

What is the form of wondering, of questioning, in our time?

As yet, it hardly has enough shape to be described.

Of course, valid wondering always has a resemblance to the classical inquiries begun by Socrates. Socrates tore down the socially approved certainties of his time. He questioned that men knew what they thought they knew, which is the same as questioning that they *thought*. The Athenians put Socrates to death for insisting that they think, so it could be argued that the Athenians failed completely by losing their great chance to learn through wonderment.

But this judgment rests upon the delusion that cities and cultures are "immortal." The Athenians were luckier than all the other communities in the Western world. They had a Socrates who lived among them a while before they put him to death.

They must have earned him, even though they badly misused him.

There are men about today who question somewhat as Socrates questioned. We haven't executed them, but this may be only because we haven't listened closely enough to what they say. Or it may be because of the incredible deafness of a mass society. You could argue that it was a tribute to the Athenians that Socrates was able to upset them so much. They were sensitive enough to be affected by the searchings of philosophy, constituting a back-door admission of the *importance* of philosophy. Today, there is more of a tendency to ignore philosophers and to execute politically dangerous characters. This is a pathetic miscalculation of the forces which move human beings to action. The Athenians, perhaps, were more acute. In any event, they created a situation which enabled Plato to make Socrates into an immortal example of the spirit of wonder, and to establish a considerable tradition of shame for those who openly interfere with the free expression of free minds. Our modern wonderers may be helped by this, also.

Among the modern wonderers are the editors of *i.e.*, *The Cambridge Review*, a magazine published by some Harvard undergraduates, which has gone out of business because the editors graduated. In their sixth and final issue—which appears with no date and a high indifference to bibliographers—the editorial is devoted to a defense of Criticism. There may be those who feel that the words of this editorial are not quite world-shaking. It is, however, the level of the inquiry to which we call attention. After quoting from it, we shall have other things to say.

The editorial begins by explaining that *i.e.* has been essentially critical—critical of Harvard University. Thereafter, the discussion is general:

Criticism must expect opposition; however, the kind of opposition criticism now receives aims more at destroying it and making its life impossible than at clarifying the issues brought into the open by the critics.

The society fears its critics, and attempts to dismiss their ideas and complaints by arguing that they are products of personal needs, of bitterness and disappointment. That their origin is personal does not necessarily mean that they are therefore of no relevance. We are all personal and the first level of experience is almost by definition subjective completely. To repudiate the critics, is to repudiate ourselves—as private needy individuals. . . .

We partially believe that the price of civilization is paid by the sacrifice of certain individual needs to those of the society as a whole. However, we are also constantly faced with double standards—with the fact that the civilization itself does not know which demands to make on its people and consequently sees them run their lives riot in unpleasurable excesses of all sorts. When we ignore the critic we lose the intellectual basis of leadership which is so necessary to the conscious decisions a community must be able to make if it does not want to give itself up to its own unrewarding chaos. The situation is now devoid of intellectual direction. There are individuals who know and understand, but they tend to blame themselves too much and shy away from public expression of their thoughts. . . .

Our society sees the critic as an annihilator who wants only to wipe out what is. We must make a distinction between destruction and annihilation. The acceptance and understanding of growth entails the acceptance of destruction; it means giving up the idea of preserving the present and controlling the future.

Criticism is destruction, as opposed to annihilation, a purposed and ultimately positive restructuring as opposed to a negation which leads only to further negation. Of course we Americans with our "healthy" attitude toward life turn up our noses at this word destruction. We take the side of more and more growth, more and more happiness, and assume destruction to be naturally opposed to this. Though we really and truly want more and more, just the fact that we want more makes it doubtful how much we want the *actual thing* we want more and more of. The good life is not a quantitative thing; it does not increase; it *is*. To think of it as constantly able to increase, is to misunderstand its nature. It is when it is thought of as only increasing that one can fear its annihilation and contortion. Destruction actually means elimination. We accept and understand the destruction of food by teeth and stomach in eating. Critical destruction clears the way for new growth. Growth can never increase quantitatively; yet it depends on destruction in order

to live to its fullest, in order to renew itself. Its "fullest" cannot, however, be increased, and to ask for such an increase is to ask of the situation more than it can give, and to force it finally to give less.

Here, in this editorial, is a tremendous change in point of view from what, twenty years ago, most young and brilliant men would have been writing about. They would have given us—did give us—blueprints of progress; they would have told us where growth should lead and the things we need more and more of.

What is the "revolution" in the *i.e.* editorial? It is a revolution in the very idea of progress. There is a sense, the editors say, in which there isn't any. The good life is *now* or not at all.

They are suspicious of the pursuit of "actual things." This is more than a mere indictment of material acquisitiveness. "Things" can be of the spirit, too. There is rejection, here, of the entire quantitative scheme of values. This is a wonderful wondering.

In general, the wondering in our time takes the form of a new emphasis on subjective values. All the talk against "conformity" and in behalf of "integrity" is talk about attitudes of mind. People are excited about these subjects—more excited than they are about "social injustice." It is not that they have become indifferent to social injustice, but that they see, perhaps, that social injustice can never survive a spreading atmosphere of honestly held subjective values. An authentic inner life for human beings is the only thing that can recreate our outer lives in terms of the good and just relationships that used to be eagerly sought by political means.

The magazines of our time are dying, or changing, and new ones are being born. *Collier's* has fallen in the squeeze on advertising dollars—going, we suppose to the television networks, instead of to publications—and several more mass media are supposed to succumb in the near future. But the *Reporter* is proving the reality of a readership that certainly did not exist twenty years ago, while the *Nation*, which had become a tired

repetition of outworn liberal themes, has obtained a vigorous new life under the direction of Carey McWilliams. The *Nation* continues to have its traditional content of political commentary, but its pages increasingly show an interest in the analysis of popular culture. The assumption that socializing reforms will automatically make a life worth living is no longer implicit in the *Nation's* editorial outlook. Contributors like David Cort, Kenneth Rexroth, Dan Wakefield, and Marjorie Fischer are striking a new note in its pages. The last-named, in a recent (Jan. 19) article on books written for teenagers (which she finds on the whole dreadfully bad), tells a story which is not inappropriate to repeat here.

John Tunis [relates Miss Fischer], one of the best writers for boys, told a friend of mine this story, and I make bold to repeat it here. One time Mr. Tunis had agreed to speak to a high school where all the students were Negroes. He sat looking out at the eager, bright, brushed and polished children while the principal introduced him. Then he got up to speak, and suddenly he thought of all that these kids must go through during their lives, and he could not get out one word. He turned his back, trying to steady himself, but when he faced the auditorium he still could not speak. The principal rose and put his hand on John Tunis's shoulder, and together they walked up the center aisle out of the auditorium. As they went, all the children rose and applauded.

There are times when silence is richer than speech, and when it is better understood. A man can tarnish the hopes of others just by talking about them, if it is necessary for him to pretend. The dream of the brotherhood of man is in many hearts, but only the fraternity of the wondering can make it come true.

REVIEW

ERNEST GANN AND HUMAN NATURE

TWILIGHT FOR THE GODS, latest novel by Ernest Gann, author of *The High and the Mighty*, *Soldier of Fortune*, and *The Raging Tide*, assembles and draws the salient themes of the author's philosophy into clear focus. It is his special talent to bring a final nobility out of indecision and cowardliness, to show the scoundrel become a hero—and to find his vision of buried integrity even among lesser persons who play a part in his plots. In other words, Gann affirms that man is almost always worth a lot more than he thinks he is.

In *Twilight for the Gods*, prolonged privation and the likelihood of drowning during an apparently hopeless voyage on an old sailing vessel enable the central characters to develop sympathy, kindness and courage. This may be pushing idealism too far, but since we once opposed those who made too many critical remarks on this ground in respect to James Jones' *Eternity*, a writer as able as Mr. Gann can do all the idealistic pushing he wants, so far as we are concerned.

Since *Twilight for the Gods* is primarily an engrossing story—even if we here insist on philosophical asides in relation to it—we quote from a Book-of-the-Month review by John P. Marquand, who does a capable job of advertising the merits which are likely to cause readers to ask for it at the local library. Mr. Marquand summarizes:

A good sea story always rates high on any reader's list, and this one is sound on every page. Also this one has to do with a sailing ship—the ancient barquentine *Cannibal*, square-rigged on her foremast with her main and her mizzen equipped with fore and aft sails. Not many writers, let alone mariners, can sail one of these ships these days either verbally or practically. Maybe Mr. C. S. Forester may stand a few points to windward, but few other writers are in Mr. Gann's class when it comes to running and standing rigging. It is academically interesting to speculate from where Mr. Gann, who was once a commercial airline pilot, derived his knowledge of the sea. Though his dedication and acknowledgements show that he discussed ships and sailing with highly qualified authorities, one likes to think that his love

of the sea and his aesthetic and authentic feel for sailing ships came from taking a voyage of his own in sail. At any rate, from the time that the *Cannibal* leaves Suva in her leaky condition on her way to Mexico to the moment when her very able commander, Captain Bell, sets her afire off Honolulu harbor to save her from the wreckers, there is not a dull moment nor a dull character either. The old sailors are well drawn and so are all the fly-by-night passengers.

Mr. Gann probes deeply—if tolerantly and kindly—into many forms of conventional complacency. His choice of a voyage on an unseaworthy relic of the last days of ocean-going sail provides the opportunity for suggesting that men are always better off when they have to face their personal preoccupations and peculiarities against the backdrop of eternity. This was the theme in *The High and the Mighty*, to a lesser degree in *Soldier of Fortune*, and is perhaps most impressively developed in *Twilight for the Gods*. At about the middle of this perilous voyage, a very ordinary missionary begins to face himself and his religion—so that later his religion will deepen, even as it frees itself from dependence upon orthodox forms.

Overhead the ominous sound of a pump which labors unsatisfactorily to lighten the leaking vessel invites him to a little rethinking, and in the process this Man of God for the first time becomes conscious of a desire to admit a liking for his most provoking verbal assailant in religious discussions:

Reading his Bible, Reverend Butterfield waited patiently for the clanging pump to cease. He read without purpose or desire, and the process of balancing the book on his frail chest, the familiar feel of the leather binding, was more of a comfort to him than the actual words of gospel. For their impact upon his brain had diminished with the thousands of times he had studied the phrases and it occurred to him that his receptive powers had been worn quite as smooth as the leather. While his eyes automatically followed the words he listened to the pump and found himself thinking about Oliver Wiggins. If he was indeed a representative of the Devil, then he was at least a very pleasant one and in some ways it might be a shame to guide him along more virtuous paths. Was virtue animal, vegetable, or mineral? Delighted with the frivolous trend of his thoughts, Butterfield momentarily forgot the sound of the pump.

The formula for virtue was set down unmistakably in the book on his chest and there was, of course, no argument with the sacred document.

How wonderful it was to be away from the mission and discover that it was still possible to think objectively! The formula for virtue was originally mixed to protect a society. Obviously, my dear Butterfield. What a clever theme for a sermon in Hell!

Moses should have met Oliver Wiggins! Yes, even he might have called for an extra thunderbolt to capture his attention. Moses should have ventured among the South Pacific heathens and called particularly upon the island of Thithia! Perhaps he would have been more successful in convincing the inhabitants that they should accept a new formula and cast off their ancient taboos. . . .

When the leaking ship finally makes port, after a virtual miracle of navigation and endurance on the part of the crew, Master Davey Bell reflects on the nature of "business on shore"—having just been visited by an anxious shipbreaker who would like to capture what is left of the *Cannibal* for a paltry three hundred dollars:

After he left, Bell stood for a moment in the center of his cabin. By God, landsmen were busy people! How they hustled! How their faces were filled with worry and self-importance! It was strange that not one of them had asked about the long voyage of the *Cannibal* or seemed to have any conception of her difficulties. Of course. Why should they? Their worries were mainly of security or finance, which were both a drain on the spirit and unending. They rarely had a chance to know the sweetness of peace after danger. He snapped at his suspenders and laughed. The whole lot of them should run away to sea for a time. . . . long enough, anyway, to see themselves without looking in a mirror. But there I go judging, he thought. Yeah. . . . already the special diseases of the land had found their way aboard the *Cannibal*.

Davey Bell, who in his youth lost a ship with thirty-four passengers—and had been unable to throw the weight off his shoulders ever since—finally comes to terms with himself, gaining enough self-respect to place him ever beyond the reach of alcohol addiction and self-pity. He loved the *Cannibal*, but that ship had come to the natural end of a long life, and he finds himself able to leave

matters at that, ready to begin a new existence. The last two sentences of the just quoted paragraph show what Mr. Gann requires in his heroes: sympathy, understanding and determination not to judge and condemn, must complement bravery. Who, Bell asks himself, is he to judge any other man and his frailties, since he has long been a poor judge of his own?

But the ship-breakers don't acquire the *Cannibal*. Davey Bell sails her off shore with one old sailor to help him, and sets the ship afire. In this way he expresses his love for the vanishing art of mastering a sailing ship, as well as his acceptance of a new day which can no longer be postponed.

A passage from "the inner face of Captain Bell's Journal" conveys a good deal of what we have been saying, in the mood of the book:

. . . and so, by God, I wish I could meet myself, and be introduced, as a perfect stranger might—for then I could maybe judge my being, my soul, if that thing exists. . . . and my opinions.

Who in the world would not treasure, and at the same time fear, such a meeting? Stupid as I am, it seems to me it would be the greatest adventure of all, for aren't we, if honest. . . . vastly concerned with ourselves? And when you start doubting, like me now, during these times. . . . how can you tell right from wrong? What kind of a man could have the nerve to judge his fellow human beings? Who has the nerve to set himself up as God?

I find the exploration of others a discouraging job, and in seeking myself, an even greater confusion of parts. Now, it seems to me that no person is of one dimension, neither white nor black, evil or good. It seems to me they are like a ship, of depth and beam and frequently unpredictable behavior. . . . but who really knows?

Twilight for the Gods is published by William Sloane Associates, 1956.

COMMENTARY
"TOPSY TURVY WORLD"

LATELY we came across a copy of an address given by Henry J. Cadbury in April, 1951, before a meeting of the Western College Association, at Whittier, California. Mr. Cadbury's subject was "Science and Conscience," and portions of his discussion are so closely connected with ideas in this week's *Frontiers* article that a quotation seems in order.

After recalling that Albert Einstein said in 1945 that the physicists who participated in creating the atom bomb are harassed by feelings of responsibility and guilt, he comments:

It would be a mistake to lay solely to the scientists the responsibility which all citizens share, but it would be a mistake for us to permit them too easy a retreat. They better than anyone else can give us warning and lead the way. In so far as they attempt to divorce conscience from science they are living themselves a schizoid existence and they are enemies to a truly liberal education. There are signs that they feel this dilemma. There is for example a Society for Social Responsibility in Science. There are also signs that they are withdrawing into the convenient theory that they have no responsibility outside dispassionate science. The late Professor Theodore Richards of Harvard admitted that as a chemist in his laboratory he was concerned only with the constituent elements and properties of TNT, but as a human being he did have responsibility for the uses to which it was put. But Percy Bridgman, the physicist, his colleague and fellow Nobel laureate, says characteristically of the atom bomb: "If anybody should feel guilty, it's God, who put the facts there."

Last December at Stockholm the fiftieth anniversary of the first Nobel awards was celebrated by a large number of prize winners, and an enterprising British magazine sent a representative to interview this unmatched galaxy of brains. Their response was not particularly heartening, for they showed little sense of personal responsibility or political insight.

All this goes to show that just because of science our civilization needs a renewal of the human conscience. It is a topsy turvy world when freedom has to resort to secrecy, when scientists must promise not to reveal curative penicillin to those who control a

large fraction of humanity. The other day top flight Nazis were sentenced to death at Nuremburg because they obeyed their government instead of the moral conscience. Last month at Topeka a Quaker college student was sentenced to three five year terms of imprisonment because he obeyed his conscience instead of his draft board.

These are anomalies which only laggard consciences—*institutionalized* consciences—can tolerate.

CHILDREN ... and Ourselves

A GUIDE TO INDEPENDENT SCHOOLS

THROUGH the kindness of a subscriber, we have acquired a book which many readers might be glad to own—or at least to read. A *Parents' Guide to Independent Schools and Colleges*, by Frank D. Ashburn, is a 1956 publication (Coward-McCann, 253 pp. \$3.75) which usefully supplements such guides to private school selection as those published by Porter Sargent and James Bunting—or rather, we should say that a reading of Ashburn should logically come first; then, if more detailed information is desired, the other guides can be studied. A former Chairman of the Executive Committee of the National Council of Independent Schools, Mr. Ashburn achieves a balanced treatment of both philosophical concepts of education and detailed illustration of characteristic differences between private and public schools. As he explains in his foreword, Ashburn regards independent and public schools not as rivals, but as complementary to one another, yet feels that the special opportunities afforded by the smaller, privately endowed institutions should always be examined by parents before making a selection.

He begins by pointing out that the public school—either secondary or university—is concerned with "the massive premise that schooling is not just for college, nor for a vague mystery known as culture, but for life and life today." "Many of the criticisms directed at the public schools," he continues, "are based on a failure to grasp this premise and its implications."

The great principle is that the state has the responsibility of training, not just scholars, but all future citizens. The corollary is that just as no one class of citizen is better or more valuable than another, so education for any calling which demands the efforts of good people is just as important as any other. In the eyes of God and the American commonwealth, there is no difference in value between the farmer, the clergyman, and the banker.

What is important is that each should be trained to do his particular task as well as his native abilities permit, while learning the responsibilities and duties of all, and developing within himself such capacities for enjoyment as will be available and feasible for him. But there is a contrasting idea sometimes expressed that academic education makes a boy or girl better or more important. When this idea prevails, it sometimes follows that academic education is felt to encourage class distinctions inimical to the American ideal of equality. In some schools this dread of intellectual or social snobbery goes so far that no distinction is made between liberal and vocational training.

Since the heads of independent institutions have less cause to fear political pressure, it is easier for them to realize that "Aristocracy" is not simply a nasty word, and the fact that all children are not natural candidates for the subtleties of a higher education does not make the schools specializing in these opportunities "anti-democratic." In answering the question, "Is there such a thing as Aristocracy in education?", Mr. Ashburn asserts:

There should be. In spite of the fact that more children are being educated than ever before, in spite of the additional facts that more students are reading more, writing more, seeing more, hearing more than any people in history, the culture of the academic aristocracy has been diluted. *Aristocracy* means the rule of the best. It has long seemed a truism that a democracy's only hope of survival is to keep the power of steadily producing an aristocracy of ability. Since in our complex society no single ability can answer all our needs, our democratic aristocrats will be of many kinds. One obviously necessary kind is cultural. Such an aristocratic type has the virtue of being probably the kind least likely to produce a class of inherited economic privilege.

And what is a "liberal" education for? A liberal education is for the man who contributes to our civilization by developing a mind which roams far, and who probes deeply, with questions, the values of the *status quo*; it is not for the person who lives in his "ivory tower," but for one who endeavors to participate, both mentally and emotionally, in the experiences of collective humankind.

Liberal education prepares not for any particular vocation, but for life. A liberally educated man is one who is at home in his world; who understands its nature and his own; who is able to communicate and receive communication; who is able to summon recorded experience to his aid and pleasure in passing judgments and arriving at decisions; who counts the great human and divine spirits as his friends and guides; who is aware of the evil as well as the good in the world; who, through a prolonged period of training, has acquired the abiding habits of mental and moral discipline.

Readers who are interested in what educators have to say about "Progressive Education" will be able to place Mr. Ashburn as a fair man by such paragraphs as the following:

The Progressives had their lunatic fringe (whose clamor with painful frequency drowned out the majority), but it has not always been generally recognized that they also had a central nucleus of severe, clear thinkers who felt just as strongly about standards as anybody and who, far from being content with ecstasy over the dangerous generalization that every child should be urged to express itself, worked rather in the direction of believing that any human being, child or adult, does better if interested. This led them to an irreverent questioning of curricula and course content, of teaching methods but the best of them not only insisted on higher standards than those prevailing, they got them. They made errors, as all pioneers do; they have themselves discarded some of their early aims and practices. But their work remains and to a great extent is standard practice today. Now the pendulum is swinging back to conservatism. But it can never be the same conservatism it was.

A passage from Ashburn's concluding chapter, "A Case for the Humanities," deserves notice. As he suggests, "there is and always has been an indissoluble bond between universities and human freedom. Where one flourishes, both are found; and where one is extinguished, the other perishes. An astonishing number of the decisive spiritual battles of mankind have first been fought out in the universities among faculties of learned men." And while all universities, public or private, represent the spirit of free inquiry, the increasing size of state institutions makes their political administration a matter of ever greater

concern to governments and legislatures. Every professor worth his salt will fight a never-ending battle against political intrusion, but in that fight he will be aided by the faculties of independently endowed institutions without "loyalty-oath" or similar problems. Mr. Ashburn summarizes:

We agree wholeheartedly that there is a need for general education in a free society, that the largest share of American education should be publicly supported, and that a larger participation in educational financing on the part of the Federal and state governments is desirable; but we must also insist that the responsibility and opportunity of independent education is crucial and different. Such places must be above the tides and shoals of party and the present. They must be free to set and maintain standards; to experiment, to preserve, in a time when all tends to mediocrity and standardization (a very different thing from standards), their objective, not of bare utility, but of wisdom.

Goodness has never been legislatable, nor is tolerance a matter of law. These things come from the heart of man, and until men are good, laws will be relatively meaningless. When men become wise and virtuous, it will not be necessary to establish the Kingdom of Heaven by statute. Tolerance cannot be made law any more than can temperance or providence but unwise and sumptuary laws, however noble in intention or far-reaching in purpose, may rouse passions and set them striding across the land.

FRONTIERS The Scientific Conscience

A LITTLE less than twenty years ago, American scientists, in convention assembled, resolved upon a program of "examination of the profound effects of science upon society," and appealed to other scientific bodies throughout the world for cooperation toward this end. The "whereases" of the resolution noted that science has not only transformed the physical and mental environment of men, but is also "adding greatly to the complexities of their social, economic and political relations," and declared, further, that "science is wholly independent of national boundaries and races and creeds and can flourish permanently only where there is peace and intellectual freedom."

This resolution was passed on Dec. 30, 1937—a date ironically close to the eve of World War II. It marked the beginning of what may now be called the cycle of the examination of the scientific *conscience*, mostly by scientists themselves. Already the lights were going out in Europe, and Edwin Grant Conklin, Princeton biologist, in his 1937 address as retiring president of the American Association for the Advancement of Science, was constrained to speak of "the compliant way in which millions of people in Europe have surrendered all freedom not only in government but also in speech, press, thought and conscience on the order of dictators." Noting that the sciences, also, were suffering restriction of research and teaching in some lands, he pointed out that free speech, free thought and free criticism are the very life of science, yet were being stifled in certain lands abroad. He then addressed himself to the scientists themselves, on the subject of freedom:

In spite of a few notable exceptions, it must be confessed that scientists did not win the freedom which they have generally enjoyed, and they have not been conspicuous in defending this freedom when it has been threatened. Perhaps they have lacked that confidence in absolute truth and that emotional

exaltation that have led martyrs and heroes to welcome persecution and death in defense of their faith. Today as in former times it is the religious leaders who are most courageous in resisting tyranny. It was not science but religion and ethics that led Socrates to say to his accusers, "I will obey the god, rather than you." It was not science but religious conviction that led Milton to utter his noble defense of intellectual liberty, "Who ever knew truth put to the worst in a free and open encounter? For who knows not that truth is strong, next to the Almighty?" It was not science but religious patriotism that taught, "Resistance to tyrants is obedience to God." The spirit of science does not cultivate such heroism in the maintenance of freedom. The scientist realizes that his knowledge is relative and not absolute, he conceives it possible that he may be mistaken, and he is willing to wait in confidence that ultimately truth will prevail. Therefore, he has little inclination to suffer and die for his faith, but is willing to wait for the increase and diffusion of knowledge. But he knows better than others that the increase and diffusion of knowledge depend entirely upon freedom to search, experiment, criticize, proclaim. Without these freedoms there can be no science.

In the 1956 meeting of the American Association, the theme of the impact of science on society was again taken up, appearing in the report of the committee on the Social Aspects of Science. This report, submitted on Dec. 31, spoke of the failure to apply scientific discipline in the management of public affairs, at a time when "decisive economic, political and social processes have become profoundly dependent upon science." It is said in the conclusion of the report (quoted in the *Nation* for Jan. 12) that—

The growth of science . . . has greatly improved the condition of human life, [but] it has also generated new hazards of unprecedented magnitude. These include: the dangers to life from widely disseminated radiation, the burden of man-made chemicals, fumes and smogs of unknown biological effects which we now absorb, large-scale deterioration of our natural resources and the potential of totally destructive war. The determination that scientific knowledge is to be used for human good, or for purposes of destruction, is in control of social agencies. For such decisions, these agencies and ultimately the people themselves, need to be aware of the facts and the probable consequences of action. Here scientists can play a decisive role: They can

bring the facts and their estimates of the results of proposed actions before the people.

The report adds, in what the *Nation* calls a "sturdy and challenging tone":

It is now six months since the radiation committee of the National Academy of Science issued a report that called for a series of immediate actions [on the dangers of radiation from H-bomb tests]. . . . There is no evidence that these urgent pleas . . . have yet met with any significant response. Clearly, this is a matter that requires the persistent attention of all scientists. It exemplifies the pressing need that scientists concern themselves with social action.

Well, what sort of "social action" is appropriate for scientists? The problem, as stated by this committee, is that the social agencies which manage public affairs lack the discipline and impartiality of scientific judgment and decision. What can scientists *do* about this?

To ask this question is to produce an insoluble dilemma. Are the scientists to plan and execute a political revolution, in order to introduce the "discipline" which can prevent the misuse of technological power?

J. Bronowski, the Polish mathematician who has lived and worked in England since 1920, sets the problem in another way in his essay, "Science and Human Values," published entire in the *Nation* for Dec. 29:

The body of technical science burdens and threatens us because we are trying to employ the body without the spirit; we are trying to buy the corpse of science. We are hag-ridden by the power of nature, which we should command, because we think its command needs less devotion and understanding than its discovery. And because we know how gunpowder works, we sigh for the days before atomic bombs. But massacre is not prevented by sticking to gunpowder; the Thirty Years' War is proof of that.

Perhaps the chief difficulty lies in the formulation of the problem in institutional terms. Government, we say, is not "scientific." The management of public affairs is without "discipline." Or, the duty of scientists ceases when they place their inventions in the hands of

society, which then must choose what to do with them.

The upshot of such formulations is that *no one* is responsible for the use made of scientific inventions. *Six months*, the AAAS committee exclaims, have gone by since publication of the National Academy of Science report on the dangers from fall-out, and nothing has been done to curb the H-bomb tests!

The fact of the matter may be that the institutional arrangements of modern democratic society are wholly inadequate to cope with emergencies of this sort. If this is the case, then the time may have arrived to stop trying to deal with such emergencies in familiar institutional terms.

The scientists, in examining their consciences, have cast themselves in the role of specialists. Their conception of "duty," therefore, has been modeled on ideas about the duty of specialists. Perhaps they should stop thinking of themselves as specialists, and think of themselves as men. The role of the specialist is limited, with limited responsibilities, but the role of the individual has unlimited responsibilities, in the sense that the private individual is also *everyman*. As everyman, he acts for all in whatever he does.

The institution of democratic government was an evolution in response to the political needs of the eighteenth century. It was a mechanism devised to assure the freedom—the relative freedom—of the individual. It gave voice to the people and it made the governing body responsive to the will of the people. Representative government is a means of checking the typical irresponsibilities of both a mass population and the handful of men in power. *Time* is required to channel the will of the people through legislative bodies; and time, again, is needed to secure the sanction of the legislature for the decisions of political executives. This "time," while it makes things move slowly, is a protection against the follies of national emotionalism and the impulsiveness of rulers. Self-government is a

slow, lumbering, and apparently inefficient process, but the best arrangement that men have been able to work out for both ordering their affairs and preserving their freedom.

Today, we have problems of a sort of which the political architects of the eighteenth century hardly dreamed. The urgencies of national survival are now said to depend upon split-second decisions. Executives in government require the authority to act without consulting the popular will. If they have not this power, we are told, vast destruction may overtake us in a matter of minutes, or perhaps hours. Secrecy, too, has become of the greatest importance in the conduct of national affairs. For our own good, we cannot know the plans which are intended to save us. If the plans are known, they become worthless.

Self-government, in short, has lost much of its meaning. Technology has imposed a new pattern upon human affairs, to the point that our "democracy" is now little more than a "symbolic" affair. A free society, in the old, eighteenth century sense, is a society regarded as vulnerable to total obliteration.

The question is this: If the traditional democratic mechanisms for the control of the exercise of power are no longer effective, then new mechanisms are needed, but can these mechanisms be "democratic"? It does not seem that they can. Not now, at any rate. For democratic controls are controls desired by the majority, or by at least a sizeable and articulate minority. It is questionable whether the general population really *wants* its government to be controlled in this way—controlled, that is, according to the anticipations and best judgment of informed scientific opinion. You may argue that enlightened opinion is on the side of the scientists, but since when has enlightened opinion commanded the direction of *public* opinion?

This situation is now a matter of considerable agitation among scientists, probably because the scientists feel rather strongly their part in bringing on the crisis—the crisis described by the AAAS

committee as a "pressing need that scientists concern themselves with social action."

The scientists have of course already taken several forms of action. They publish a magazine, the *Bulletin of the Atomic Scientists*, in which the best scientific opinion may be examined. They write letters and testify before Congressional committees. Scientists speak at public gatherings regarding the dangers of uncontrolled development of atomic weapons and the threat of politically irresponsible use of the super-bombs. But most scientists still speak and write *as* scientists, when discussing the question. You would think that they belonged to some sort of "side," whose position they are defending.

For example, in the *Bulletin of the Atomic Scientists* for January, Hallen M. Bell goes to some effort to show that the hope of avoiding disaster is greater through scientific enlightenment than through religion. He writes:

One of the major social objectives of the atomic age is the avoidance of atomic war, and this probably requires the abandonment of war as an instrument of international policy. That this goal can be attained by moral or religious influences seems doubtful. The morality of war has always been accepted by most religions, and all the wars of the past seem to have been justified morally. Atomic war, I suspect, can be justified *only* morally. Really, war might be considered the ultimate manifestation of the moral approach to social problems; for its outbreak commonly marks the point at which the issues in dispute have been reduced to a simple question of right and wrong, at which point further negotiation becomes impossible. In the past, there have been many purely religious wars and many outbreaks of violence motivated by religion. In recent times, religious motivations have been prominent in the violence attending the disunion of India, in the fighting in the Near East, in the Spanish Civil War, and to some extent in the ever present cold war—which has actually been called a crusade. This record can hardly suggest that religion can bring peace to the world, in fact, the antagonisms arising from religion will probably be among the most formidable obstacles to overcome in any attempt to achieve that object. Although many religious people seem to be sincerely devoted to the ideal of world peace, they usually

predicate that goal upon the world-wide acceptance of their particular religion, and none of the present religions seem within measurable distance of this preliminary goal.

This is splendid criticism and effective argument. Mr. Bell makes his point, which is that institutional religion is more of a threat to peace than anything else. He thinks, however, that science may succeed where religion has failed. For the difficult project of integrating "the many divergent cultures of the world into a harmonious world society. . . scientific determinations do seem to have the necessary universality, since they are based on commonly available knowledge, and the methods by which they are formulated and verified are substantially the same everywhere."

But what if both he and Dr. Conklin are right? Supposing that the impersonal and universal persuasions of science do supply the logical ground for ending war and the conditions that make for war, what about the record of scientists as *men*? . . . "it must be confessed that scientists did not win the freedom they generally enjoyed, and they have not been conspicuous in defending this freedom when it has been threatened. . . ."

It seems likely that neither institutional science nor institutional religion can save us. A certain heroism is in order, and heroism is not characteristic of institutions. No *church* was ever crucified and no scientific society given to passing splendid resolutions ever suffered the sanctions imposed upon Socrates. But Peter Kapitza, we hear, refused to work on atomic weapons for the Soviets, just as, before him, Otto Hahn, discoverer of atomic fission, refused to place his knowledge at the disposal of the Nazis.

It seems foolish to arraign professions—as foolish as it is to indict whole peoples. The high and reforming decision always comes to individuals, and it comes to them as men, and not as specialists. In times of crisis, institutions usually serve the somewhat disreputable purpose of protecting men from making decisions as

human beings. Thus, to charge them with guilt or special responsibility because of their institutional status is to miss the point. What we do, we must do as men and individuals, expecting no allies, and claiming no security of institutional support. The formulas of institutions are the formulas of delay, of compromise, and of shifting of responsibility. Institutions have a broad and constructive part to play in an era of building and growth, but they are stubborn barriers to the processes of change. Let us stop making "sides" out of science and religion, and let us speak, instead, of men, who are capable of both science and religion, but may be free of the institutional limits to either "scientific" or "religious" behavior.