# The Bridge of Values

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In inviting me to speak on this occasion, Philip Handler assured me that you would be pleased to hear from me because I am somewhat set apart from society. He assured me that, being set apart, I am objective and that it would be interesting to know how I view our changing world: What are the significant trends? Are our values truly changing, and with what consequences? What forces shaped yesterday, and which may shape tomorrow? Will the role of natural science or social science differ in the future from its role in the past? And what will be the role of the humanist in giving shape or tone to tomorrow's society? Is the fractionation of our society reversible?

This is a neatly defined topic, which it is easy to seize by either end or the middle, as one chooses, and I shall do so at once. The answer simply is Yes.

It is interesting to know that I am set apart from the world. Now it is true that once in my youth, when I had been disappointed in love and in some other things, I thought seriously of taking monastic vows, but I no longer entertain this entrancing possibility. It is true that I am head of an extremely small government agency with limited funds; perhaps that is what sets me apart. It is true that, though I abjured the cloister, I would prefer to be a recluse. It is also true that the agency which I head is the National Endowment for the Humanities. I fear that the humanities themselves make me thought of as set apart from the world.

For generations humanists, by choice, have conducted themselves in such a way that the world pays them little heed. I am sure that they have suffered as a result, and that this causes them to behave in such a way that the world is less inclined than ever to pay them heed, but what I fear is that the things the humanist deals with-history, philosophy, social and political thoughthave failed society in making its most important and troublesome decisions, as a result of his and their absence from the center of our society. The humanist, I fear, has had little or no part in the resounding achievements of recent decades, but paradoxically it is perhaps as much due to his failure as to the achievements of scientists that our moment of great triumph over nature, achieved through understanding nature, may yet be the moment when an abused nature will ultimately destroy human civilization.

We are now, as nearly everyone knows, in a great dilemma, for we cannot assure our future without denying ourselves the enjoyment of some of our products. But I do not intend to talk about this. I shall instead talk about some of our intellectual dilemmas, for the product of the intellect is as much a part of the new environment as an unreturnable bottle, which is itself the product of a certain kind of intellect.

## Failure to Communicate

Philip Handler wrote me of the two cultures and of his hope that wehumanists and scientists-may cooperate in removing from the public eye the vision of a barrier between thema barrier which he hopes is only in the eye of the beholder, though I think it may have as real an existence as the barrier between a Park Avenue sophisticate and a Harlem black. It is, of course, not only a barrier of social status but a barrier of access to opportunity, of direction and aspiration, of belief and values. Neverthelss, failure to communicate is a result not of incommunicability of knowledge but simply of human failure, of human defi-

ciency, of lack of ability in one group or another to understand or to make itself understood.

What did Snow mean when he coined the famous phrase "two cultures," which has contributed so much to our understanding and, I fear, to our misunderstanding? If one reads Snow's book he is sure that the two cultures are the culture of science and the culture of nonscience, or perhaps of the humanities. Did Snow mean to be taken literally? Or was he using science as a symbol for a well-to-do society and the humanities as a symbol for a deprived one, as I seem to remember he later suggested? Perhaps what he meant does not matter. It is what people believe he said that matters. Whether or not that belief is based in truth is of no great historical importance (though it is of historical interest), for a belief that is truly held has as much effect if it is based in fiction as it would have if it were based in fact. If anyone doubts this, let him study one of the humanities-the history of religions, of which there are many, most of them proclaimed to be the one truth. Or let him study the textbook legend that America has never lost a war or won a peace.

Now if Snow had written about the difficulty that physicists and biologists have in understanding and communicating, he might, if he had chosen people at the right level, toward the middle ranges of competence, have made just as good a case as he made for his two cultures, but the book would not have commanded much attention, for there are clearly not so many physicists and biologists as there are people in general. It is, I think, not so much the discipline as the level of competence that affects the ability to communicate. There is almost as much difficulty between disciplines in the same area as there is between the great areas of, say, the humanities and science. It is almost as hard for a linguist to speak to a historian, or for a practicing engineer to speak to a new Ph.D. in some kinds of physics, as it is for a scientist to talk to a humanist about his work. But I believe communication is easier at the top of the pyramid of competence, where people are likely to be capable of the highest level of generalization, and I believe it is most difficult to communicate in the middle ranges of competence, where generalization is likely to be less accurate and less complete.

When this article was written, the author was chairman of the National Endowment for the Humanities, Washington, D.C. It is adapted from an address presented 28 April 1970 before the National Academy of Sciences, Washington, D.C.

#### Judgments of Value

Since I am officially, at least, a humanist, I should speak of values, for humanists have been tempted for years to proclaim themselves the custodians of values, or at least to hint that values are embedded in the humanities and hardly anywhere else. For years, on the other hand, scientists have proclaimed themselves value-free, though I have rarely known a scientist unwilling to make a judgment of value (or of pretty nearly anything else), particularly if he is young. In recent years some of the best scientists have also become penetrating humanists and have expressed and demonstrated perhaps a greater understanding of human values than their humanist counterparts.

A long generation ago, humanists who wanted to be scientists did the humanities almost irreparable damage by attempting to achieve complete objectivity, which they thought required that they abjure all judgments of value. They reduced history to a simple recital of facts. Since heaps of facts are not very interesting, most history written during the scientific-humanist era was not read, to nobody's great loss. In literary criticism the name of a poet's mistress, or the precise location of the wart on his nose, became more important than the quality of his poems, and criticism languished. Just as scientists have realized that they must concern themselves with values, so humanists have realized that, without values, there can be no humanities, for man's life is a constant story of judgments of values, a choice of better or worse, and there is a new attitude toward values both among humanists and among scientists. Humanists, on the one hand, have recognized that values have an enormous effect upon the thinking and behavior of men. They have recognized that they themselves, by making choices among data and among positions, are in fact making judgments of value, and they are willing to face and proclaim this. Scientists, on the other hand, have recognized that it is no longer possible to dissociate further discoveries about nature from the effect of these discoveries upon nature, or to dissociate knowledge from possible use.

Possibly the bridge between the humanist and the scientist is the value, and possibly through exploration of values we may come, together, better to understand ourselves and each other,

our own work and each other's. Perhaps we may learn to choose the better over the worse more surely than we do now. The values of a society are its basic assumptions, or its basic assumptions are its values. I do not know which. Not all values are related to what is good, to what is bad, or to what is better and to what is worse. Some are related to physical things, such as time and space, and when relationships between time and space are variable, values of human life, of international affairs, and of international organization are changeable too. When there are many relationships between time and space, as there are in our society, with the time required to cover the space between Washington and Chicago almost exactly equivalent to the time required to travel from Washington to one airport and from another airport to Chicago, we have what at best can be described as a confusing situation. When one considers that most of our literature was written in the context of a very different set of time and space relationships, it is not hard to understand why it is so difficult for anyone not old enough or rural enough to have lived in a society powered by animals and wind to understand the conditions of life in an agrarian society, and consequently why it is so difficult for the young to understand the relevance of the literature and thought produced by that society.

Another set of values that involves both the sciences and the humanities we call sexual morality. In the early chapters of the Bible God is quoted as enjoining Adam and Eve to go forth and multiply, as indeed they did. Today we have a terrible and pressing problem of overpopulation, not so much because humans multiplied as because medical scientists have found ways of prolonging life both at its beginning in infancy and at its end in old age. At the same time, efficient ways have been found of preventing its inception, means which we are beginning to use, particularly in those areas where we least need it. Now, part of our value system with respect to sex-a considerable and important and confused value system-is based on conception control by abstinence. Yet on top of that is set a full awareness that we must interfere with procreation if we are to live. Moreover, medical science provides an alternative, but without accompanying values. In those segments

of societies where man is most capable of understanding a complication like this, there is the greatest inclination to interfere with conception, just as in those parts of the more advanced societies where education is better, people will control their numbers fastest, so that we may be overwhelmed by the sheer mass of people who do not control procreation, or we may be overwhelmed by the lower parts of society, as some scholars think happened in ancient Rome. Here the facts have clearly changed. Values must be overwhelmed by fact, or must follow and change.

It is perhaps in the general area of values and their effect upon society now and later that humanists and scientists can best communicate and best join their efforts. Indeed there appears to be an effort in both groups to do this, and I am not surprised, in view of what I have said about communication. that it is toward the top, if not at the top, of both groups that these efforts are taking place. At the same time we have a growing fear of new knowledge and what it may do; this is different, I think, from anti-intellectualism, which it is so fashionable at once to proclaim and to decry. It is not anti-intellectualism to wonder, and to demand that the effects of new knowledge be considered before the knowledge is applied, but since the humanist has as yet no technology through which his new knowledge is applied, he is less conscious than the scientist of the pollution and disturbance that may come just as surely from the application of an idea as from the use of a detergent. Is it possible to limit the application of new knowledge? Is it possible to control its use or application? Not until we are better able to control ourselves, as individuals and as parts of nations, as nations, and as an international society. We will not have this essential control until we can construct a new system of values which corresponds to facts as they are today rather than to facts as they were at various times in the past, or as they were thought to be.

## Need for New Political Instruments

Now, what I have just said about values can be very easily attacked as heresy or even atheism. Indeed, I have heard it so attacked quite recently. It is, of course, not atheism at all; but

a recognition of change in knowledge, for which we will need change in values. Our present political instruments may be adequate to adapt to this change, but I see as yet no evidence that they are, for the one element that is utterly lacking is a modicum of trust -the trust between individuals and trust between societies that makes negotiation and compromise possible. It is also possible to denounce the suggestion of a need for new political instruments as subversive, and I have no doubt that it will be so denounced, but that does not alter the facts of the situation. How are we otherwise to cope with the social results of medical progress and to control the unceasing growth of population? How will we deal with the political results of psychological progress when psychology progresses to such a point that people can understand what other people are thinking and why, what they are doing and will do-and all this before we understand the psychological processes well enough to live in harmony with each other (if ever, indeed, we do)? The interim result is likely to be a period of social and political control of knowledge and its application, with a totalitarian society such as it is difficult to conceive of, for it will be based upon a national knowledge of how to control humans and their work such as Hitler or Stalin never knew, Jefferson never dreamed of, and Orwell never imagined. The use of psychology, I think, is a real dilemma of our time, or it will be if we succeed in prolonging our time through control of the application of knowledge.

On the other hand, we have suffered nearly as much, or perhaps more, from a failure to use knowledge that is readily available. I need not tell you that the discoveries of Mendel lay unnoticed for many years and that the discovery of penicillin was forgotten for many years. In my own field, there is the case of the textbook, which has not benefited from the massive efforts that followed Sputnik to make what is taught in science correspond to what is known. In history, for example, it still takes a generation or more for new facts and new interpretations to find their way from the monograph to the school; thus the textbooks and teaching are archaic, romantic, and wrong. The

result is that historical knowledge is not used by today's policy makers. It has been known, for example, for at least a generation that representative democracy had its origin in local government and that the key event was the discovery of a way to represent that local government, which had a strong popular base, in a representative assembly.

It is ironical that this move was made by the strong kings of England to counterbalance and weaken the strength of the feudal magnates and local officials, but that the ultimate result was control of the king and establishment of what we now know as representative democracy, a peculiar type of government that has flourished successfully only in those countries, mostly English-speaking, which inherited not only representation but strong local institutions. Of course, we are one of these countries. One of our myths is that representative democracy can be exported; another is that there is no other sort of democracy, though if one looks at ancient Athens one can see another kind at once, and if one looks at the Scandinavian countries one can see still another. We have constantly attempted to export representative democracy to other cultures, Latin and Oriental, where the local base does not exist and where, as a result, there is no viable basis of representation and consequently no basis for democracy or for control of the central executive. We must broaden our definition of acceptable government and use the knowledge that we have had for many years to do so, or, at the very least, to learn what we cannot do.

Another myth of our society is that peace and prosperity are the only environment conducive to great intellectual development. This myth persists even though we have had before us for centuries the example of 5th-century Athens, where domestic discord rivaled international strife while, at the same time, ancient man reached his highest intellectual level. We have before us the example of the Renaissance, which our mythology regards as the beginning of the modern mind; international anarchy and domestic discord made it unsafe to walk the streets of Florence at night, yet everyone knows what came out of Florence. Today we have an effort to achieve international order and the fact of continuing disorder. We have terrible conditions in our local environment here and elsewhere in the United States, so that it is said to be unsafe to walk the streets at night. What will we have in the end? At Stockholm last September Glenn Seaborg faced these questions; he began with a warning and ended with a note of hope.

Simply stated the warning is this: Over the next few decades-before the end of this century-mankind will have to face and resolve challenges that may well determine the shape of its life for centuries to come, if not its very survival. There is no doubt that many of these challenges are a result of the rapid growth and cumulative effect of science and technology. There is also no doubt that they are bringing into direct confrontation what many men have tried to separate-fact and value. One aspect of this is that science and morality have been brought face to face. But what I believe will result from this confrontation, albeit after the period of anxiety and agony we seem to have entered, will ultimately be a united force to raise men to a new level of rationality and humanity.

### **Optimism or Prescience?**

Is this mere optimism or prescience? I think, if we do not face our problems, it will have to be called mere optimism, but I think we can overcome them to the point that Seaborg's words will become prescient. We have not much time left in which to do it. We will not have a good base on which to do it unless we greatly strengthen, through education, our use of knowledge, not only in the sciences but in history and philosophy, so that people can think and use all or most of all that is known. I think that we can thereby attack some of the problems that we have produced, and by doing so together, using all the instruments that we have so far forged, can, at a time when we stand on the abyss of permanent extinction, perhaps achieve our greatest success.

Perhaps I have asked more questions than I have answered. But then our language is better suited for asking than for answering questions. I have in fact but reflected on our past with an eye on the present and the future, something we must all learn to do.