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The Next 100 Years?

In determining the behavior of humans, excuses seem to be more important than reasons, and one of the functions of the human brain is to find excuses for doing things that are reasonable to do. A centennial is one such excuse. There is no scientific reason why we should celebrate the number 100. The decimal system is only a convenient way to count, derived from the accident that we have ten fingers. The only case for celebrating such an uninteresting and mediocre number as 100 is that it stands roughly for the extreme limit of the single human life. It is, therefore, a good excuse for reminiscing about the past and looking forward into the future.

This is a good occasion, therefore, to think about the next 100 years. Will *Science* still exist? Will science itself still exist? The probability of nuclear war has risen so sharply in the last year that the most probable future in 2080 might be that *Science* will long have ceased to exist, or that something like it might be published in Tasmania, and that science itself will survive, if at all, only in scattered enclaves in a ravaged world. The dismal sequence—science gives knowledge, knowledge gives power, power destroys us—may be the writing on the wall at festivals of science. There is an uncomfortable gap between the wisdom of the folk and the ethos of science. How much ignorance is bliss, and how much curiosity killed the cat? If science leads to nuclear holocaust, may we not expect an immense revulsion of the survivors against it? Much short of this, do we see in Iran the beginnings of a folk revolt against the all-conquering empire of science-based technology?

This is not much of a speech for a birthday party, so let me light a few candles. There are signs of hope. For the first time, I believe, the Council of the AAAS last January passed a resolution instructing the Association to make "Directing Science Toward Peace" a major theme of the 1981 meetings, and to set up a working group on nuclear arms control, which has been done. Congress has set up a commission to study the formation of a National Academy of Peace and Conflict Resolution; the commission is now actively conducting hearings all over the country and will report by the end of the year. The whole concept of unilateral national defense is in deep intellectual trouble, as it becomes increasingly clear that deterrence cannot ultimately be stable, and that the civilian populations of the world are no longer defended by the armed forces for which their taxes pay, but are merely hostages to them.

I do, therefore, see a future for science, both the magazine and the institution. Ignorance does not lead to bliss, and at least the veterinarian's curiosity can save the cat. But I would like to see a motto on the masthead: "We persuade by evidence and not by threat." The renunciation of threat as a means of persuasion is an essential part of the ethic and culture of science; the use of political threat to enforce ideological conformity is the greatest threat to science itself. Science is a world community that transcends national interests and ideologies. It is a weak community, but it has a deep loyalty to the principles that have made it such a remarkable human achievement.

In the last 100 years *Science* has recorded faithfully an extraordinary growth in human knowledge, especially of the physical and biological world. In the next 100 years I see it recording a great growth in knowledge about human learning itself, through which we can learn how to use power for human betterment, and not for human destruction.

—KENNETH E. BOULDING