

Response to Lecture by
Dr. Stig Ramel, Director, Nobel Foundation*

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To read through the list of Nobel Prize winners down through the years is to trace some of the 20th century's proudest members in seeking to advance the frontiers of knowledge, ease hunger and pain, reach the peaks of human spirit, and uphold the essential sanity in a vision of a world without war. The Nobel Prize, be it in the sciences, for literature, or for peace, forcefully underlines the argument that reason and the intellect remain humankind's best hope of survival in a world that is swiftly changing, highly competitive, and given to great violence.

At the same time, it needs to be candidly admitted that more than a few of these significant scientific advances recognized by award of the Nobel Prize have had ultimate byproducts that have done more to terrorize than to gentle humanity.

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I mean this in no way to denigrate any Nobel laureates nor the value of their scientific or humanitarian efforts. They could not have known what the final outcome of their accomplishments would be. Max Planck in 1918, when he won the Nobel Prize for physics, could not have been expected to see the road from quantum theory to Hiroshima and the nuclear arms race. Political, economic and cultural decisions well beyond his control intervened along the way.

The point I do wish to make is how very deeply embedded science and technology are in the very fabric of our societies and how very susceptible they are to the many pulls and counter-pulls of societies. It is therefore essential that we learn to make science and technology serve more clearly and more unambiguously humankind's social and ethical goals.

We live in a world that is torn by fear of nuclear annihilation, economic disorder, political fragmentation, conflict and drift and a vulnerability that aggravates our sense of uncertainty and unpredictability. Somehow we have allowed science and technology to become part of the general problem, not the solution -- they now serve our fears rather than our better creative humanitarian impulses.

We need to make science and technology more socially and politically accountable without destroying the creative process -- and more responsive to the reality of the increasing interdependence of our global society, however unfairly skewed that interdependence may be. Embodied in this is the notion

that no country can any longer hope to overcome its problems in isolation simply on the basis of national solutions. Any national solutions will have to be within the context of the international dimensions of such responses in collective, co-ordinated action. In this context, it needs to be stressed that knowledge can have no boundaries -- a concept very much in keeping with the philosophy of the Nobel Prizes which are awarded for valuable contributions to the "good of humanity."

For this process of internationalizing knowledge to work, however, we need to come to terms with the structural inequities in the distribution of power, wealth, access to resources and, above all, inequities in knowledge and technological production capacities. Six of the major industrialized countries now account for 85 per cent of the global expenditure on research and development. These same six nations employ 70 per cent of the world's scientists and engineers.

The developing nations must have their own critical capacities to evaluate and relate creatively to the knowledge being produced in the more affluent nations. They will need to set their own research agendas and themselves produce the conceptual and analytical tools needed for the understanding of their own societies.

Two basic problems arise here. One is the problem of scientific equality -- the need for a more equal distribution of scientific capability around the globe for, as I have already indicated, it is now badly skewed against the South. The second

problem is for the non-Western civilizations to develop the endogenous scientific capability and creativity to deal with their own problems when they are quite different in character, have a different history, and have spoken or unspoken goals of their society or culture that is quite different from those of the West.

Implicit in the first problem is the challenge of how to develop scientific capabilities within the third world more rapidly -- without sacrificing the pursuit of excellence it seems to me that modern communications technology -- at least in principle -- now makes this possible. There is great urgency about this. First, because the continued dependency of the developing countries is essentially a scientific and technological one. Second, there is the likelihood that the scientific and technological revolution may well create new third world dependencies. I have in mind here areas like biotechnology, energy technology, communications, micro-electronics and materials technology. Unless the third world countries actively participate themselves in this scientific revolution, this could further reduce their autonomy and widen the great gap that already exists between North and South.

All this poses very difficult challenges to scientists and scholars -- in the third world but also those elsewhere who see knowledge as a tool to improve the lot of humankind and uplift its spirit. It is a challenge we are wrestling with at the United Nations University in trying to bring together

different schools of thought, disciplines, and different ideological and cultural perspectives to focus on what our Charter terms "the pressing global problems of human survival, development and welfare." We have a particular interest in assisting young scholars to increase their intellectual capabilities and gain recognition on the international scene. We have also been considering ways in which innovation and creativity in the international scholarly community, particularly in the third world, might be singled out and rewarded.

In our activities to date, we have been privileged to have the advice and experience of several Nobel laureates. Sir John Kendrew of the United Kingdom, a 1962 co-winner in chemistry, is currently Chairman of our governing Council. The physicist Abdus Salam, 1979 winner in that field, is a member of our Advisory Committee. With this participation of the quality of intellectual excellence recognized by the Nobel Prize, along with growing numbers of scholars around the world, we believe we are beginning to see an already significant response at the international level to problems that must be tackled together. Once again, Dr. Ramel, we thank you for your stimulating and highly informative lecture about intellectual excellence and its recognition, a subject in which we have deep common interest.

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