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The Race for the "Gold" in Research

It is the conviction of scientists that more basic research will profit not only the globe, but also the specific countries in which it is carried out. The former is essentially obvious. Although one nation may at the beginning have an edge in producing television sets, hybrid corn, or new solid-state materials, the technology rapidly spreads to all countries in the world, and everyone lives better than they did before. The latter, the competitiveness argument for research funding, is blurred, however, by the internationality of science. A scientist's lab is open to any scientist, regardless of international borders, and scientists like to publish in journals that are read all over the world.

Is it contradictory, therefore, to make an argument for governments to increase support for basic research to increase national competitiveness and at the same time maintain the international community of science? At first glance, it would seem that the two are incompatible. Indeed, there are even some shortsighted proposals to exclude foreigners from meetings and from laboratories. Yet, the easiest and most feasible solution is a world patent system. If the countries of the world agreed to recognize a world patent, then countries trying to increase the global standard of living and, incidentally, their own by supporting basic research would have the protection of a patent system. Such a system would give governments an incentive to increase basic research funds, and a country that proceeded to get patents would give itself and its workers a short-term advantage. Ultimately, the entire world would benefit because those short-term advantages would be converted into globally useful new products and processes. Such a system would also help maintain the internationalization of the scientific community without endangering either the flow of knowledge among scientists or the recognition of the value of their work in their own country.

The idea is so simple and so straightforward that one wonders why it has not been put into operation already. Here one comes face to face with harsh reality. There are groups working on patent harmonization, a term that means that patent provisions in all countries would have similar approaches and mutual respect. Today the United States gives priority rights to those who are "first to invent," whereas most of Europe and Japan have a "first to file" system. Among the objectors to a change in U.S. law are universities, which want a period of grace between the time the invention is made in the laboratory and the time publication occurs in a scientific journal. It is possible to see how international compromises could be effected by some combination of first to file and grace periods for publication. But technicalities become stumbling blocks in treaties when individual countries see benefits or threats to their economic well-being. These involve genuine disputes about the internationalization of property rights and protection for developing countries and are not to be taken lightly.

The United States should make a major concession in shifting to a first-to-file system because so much of the rest of the world has adopted the first-to-file approach. Other countries should compromise on a grace period because there are features of the U.S. law protecting the lone inventor and the university researcher that are desirable. A compromise including both first to file and a grace period would allow the harmonization of patent law, which would be a service to the entire world. A world patent is probably a concept for the future, but reciprocal treaties with countries that see the benefits are already being discussed. The scientific community must realize that the world has changed and that some of the informality that formerly permitted great strides in international science is going to have to be replaced by more formal arrangements, and these may provide a basis for a fairer and more productive international system of research. When flags are raised and anthems sung for the gold medal in a downhill slalom race, one can at least imagine that eventually countries would experience as much excitement and as much pride for winning the gold in the race for the cystic fibrosis gene or the giant slalom down the Josephson junction. Perhaps there should be a supermedal for the nation contributing the most funds to basic research, since the citizens of the world would recognize that they were the ultimate beneficiaries of such an investment, no matter where it occurred. A national competitiveness in the coordination and flexing of intellectual muscles would be a competition in which all would benefit.—DANIEL E. KOSHLAND, JR.