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Silver Lining

Public attention has, quite understandably, been focused on the dangerous aspects of nuclear radiation, on the potentiality of genetic damage, and, if worst comes to worst, on the possibility of total or near-total destruction of the human race. The recent political campaign has kept the dangers much in the public mind. The image of the mushroom cloud and the thought of the lethal rain from heaven (or fallout from the stratosphere) give us ample reason for anxiety.

But there is a silver lining to the mushroom cloud. Owing to the use of radioactive and other isotopes as tracers, our understanding of metabolic processes in plants and animals is progressing more rapidly than at any time in history; diagnosis and treatment of many diseases have been facilitated and great progress has been made in the study of soil mechanics and of wear in metals, to mention only a few of the many possible examples. We can scarcely doubt that the research made possible by man-made radioactive and other isotopes will lead to an understanding of fundamental processes that will yield great benefits to man's health and material welfare.

Similarly, great potential benefits are to be expected from the application of nuclear energy to the generation of electricity. Especially in countries with dwindling sources of coal and oil and with inadequate sources of hydroelectric power, the development of power reactors should play an important economic role. In the United Kingdom, for example, restrictions in the conventional sources of power have stimulated rapid advance in the design and construction of nuclear reactors for power production. The recent completion of the reactor at Calder Hall is a noteworthy beginning in the large-scale production of commercially significant amounts of power. According to Sir George Thomson, in an address to the British Association for the Advancement of Science, by 1975 the U.K. will be deriving about 40 percent of its total power from nuclear energy at a saving of about 40 million tons of coal per year. The importance of this is the more obvious when it is considered in connection with the fact that in recent years the U.K. has changed from an exporter to an importer of coal. "Carrying coals to Newcastle" no longer conveys the notion of a superfluous act. As Sir George said in reference to the nuclear power program, "There have been few cases in economic history in which a discovery has come so completely in the nick of time."

The technical possibilities of our times are almost unlimited. It is technically possible for all nations to benefit from the nuclear age in improved health, better materials, and more power. It is technically possible to reduce, if not to eliminate, the economic disparities among nations and correspondingly to reduce the chances of war for economic advantage.

Technical possibilities are one thing, political possibilities are another. It is a hopeful political sign that 82 nations in the U.N. have now agreed to a statute for the International Atomic Energy Agency, an agency created to "accelerate and enlarge the contribution of atomic energy to peace, health, and prosperity throughout the world." Even the least altruistic among us ought to hope that the new agency will succeed.—G. DUS.