

phia. Juan de la Fuente, M.D., was professor of medicine in the Real Universidad de México in 1580. It may be that the first medical work in America was the Badianus Manuscript, which was buried for 400 years in the Vatican Library and is the only surviving evidence of medical practice by Maya or Aztec, whose great libraries were burned.

Since we spend billions of dollars on our Good Neighbor Policy, would it not be good policy to remember our neighbors now and then?

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Fast-Reactor Programs Here and Abroad

In his review of the four volumes listed under the heading "Peaceful uses of atomic energy" (12 Feb., p. 721), J. D. Cockcroft expresses two opinions which I would question.

The first is one in which he refers to the fuel and fuel cycle of the Experimental Breeder Reactor 2 as "unconventional." The nuclear-power business is only about 15 years old. Within this time span, it is difficult to argue that any phase of reactor work has become conventional. Perhaps the closest to conventional power-reactor fuels are the uranium oxide fuels for water reactors and the Magnox fuels for the British gas reactors. The only fuel-processing method that is in any sense "conventional" is the aqueous method. Both the fluoride-volatility and pyroprocessing (used with EBR-2) methods are receiving serious consideration for commercial application by U.S. industry, but at present these are obviously "unconventional" because they are untried on a large scale. Studies currently under way at Argonne National Laboratory on both these new processing methods indicate that the processes are technically and economically sound. And the metallic-fuel systems which can be accommodated by the pyroprocessing method can be uranium-plutonium with or without any desired alloying addition. The fissium alloying elements need not be used. The decision which resulted in the fissium fuel for EBR-2 was made at least seven years ago. Certainly progressive changes take place.

The second opinion is expressed in

the sentence "The United States effort in fast reactors, after leading with Experimental Breeder Reactor 1, has fallen several years behind that of Britain and Russia." It is true that Britain has had the Dounreay fast reactor and the Russians the BR-5 fast reactor operating at power for some time, whereas the EBR-2 and the Fermi are not at design power. The EBR-2 has operated to 45 megawatts and has demonstrated very stable conditions. But the total fast-reactor program is not tied up in the reactors themselves. The United States has significant development efforts in uranium-plutonium fuels of the metal, oxide, and carbide types, in sodium-system components such as boilers and pumps, in fast-reactor physics and safety, in the reprocessing of fuels of high plutonium content, and in the engineering studies of large (1000-electrical-megawatt) fast-reactor systems. Most of this work is being funded by the United States Atomic Energy Commission, and all such work is reported in open literature which is available to Britain and Russia. While I believe the U.S. has not "fallen several years behind," it is not possible to substantiate my belief because the comparable developmental efforts in Britain and Russia, particularly in fuel- and reactor-system studies, are not reported for general distribution.

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Silicone Producer

The excellent article "Chemical background of silicone" by J. F. Hyde (19 Feb., p. 829) mentions the three older silicone producers in the United States. Your readers may be interested to know that Stauffer Chemical Company's Silicone Division, in Adrian, Michigan, is on the threshold of becoming a fourth major silicone producer. Its first integrated plant will start producing a complete line of silicone fluids, rubbers, and resins by the end of summer, 1965. The research and development laboratories, moreover, have been working on various innovations which are expected to contribute to further significant advance in organo-silicone technology.

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Information Exchange Group No. 1

In early 1961 the first Information Exchange Group (IEG No. 1) was set up as an experimental venture under the aegis of the National Institutes of Health and the initiative of Errett C. Albritton. It covered the field of electron transfer and oxidative phosphorylation. The starting premise was that the usual exchange of information among workers in an active field is highly inefficient and that this inefficiency is a major deterrent to rapid progress. The IEG was designed to maximize exchange of information in a given field of science. It is now possible to evaluate accurately what has been achieved in one field in the course of a four-year trial period.

The membership of IEG No. 1 includes every active worker in its designated field in this country and abroad. At least 90 percent of the important papers published anywhere in the world on electron transfer, oxidative phosphorylation, and related topics are submitted to the IEG, and these reach the membership 3 to 12 months before the same papers can be read in the usual journals. Despite the absence of any editorial screening, the papers submitted to the exchange (a total of over 300 at the time of writing) have been of uniformly high quality. The judgment of one's peers serves as a major deterrent to the submission of marginal papers of the potboiler variety.

The IEG has been of special assistance to research scientists in foreign laboratories who previously have been isolated from the mainstreams of meetings and word-of-mouth reports. The IEG has, in fact, equalized the opportunities for everybody in its research area, worldwide, to be "in the know" and to share in the rapid dissemination of information.

The IEG offers a forum for discussion of controversial matters, and this forum has made it possible to air differences almost as soon as the triggering paper is published. Controversy and discussion have been rehabilitated as necessary and desirable instruments of scientific progress.

In replies to a recent questionnaire sent to 50 members of the IEG, there was complete unanimity that the IEG is fulfilling a unique and indispensable function.

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