

20,000 deaths per year. No demonstrable environmental effect from nuclear power plant effluents has been found, and even in the Gofman-Tamplin risk estimates they produce less than one death per year.

It therefore appears that the expenditures which would be forced on the utilities (and ultimately the public) by the proposed AEC limits would be woefully misdirected toward making what is already quite safe even safer, while neglecting other areas that cry out for attention from those who have a genuine concern for the public health and for the environment.

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Two statements relating to radiation protection were issued during the annual meeting of the Health Physics Society (HPS) held in New York during the week of 11 July. The first is a motion adopted by the board of directors of the HPS.

Inasmuch as the major source of man-made radiation to the U.S. public is from medical x-ray units, the Board of Directors and officers of the Health Physics Society urge each of the respective states to promulgate regulations and/or laws that require operators and medical supervisors of medical x-ray units to have training in radiation protection to the patient.

The second is a statement by the president and past presidents* of the HPS with regard to a paper presented at the 1971 annual meeting by E. J. Sternglass:

On the third such occasion since 1968, Dr. Ernest J. Sternglass, at an annual meeting of the Health Physics Society, presented a paper in which he associates

* H. L. Andrews, University of Rochester; W. D. Claus (retired); F. P. Cowan, Brookhaven National Laboratory; Merrill Eisenbud, New York University; W. T. Ham, Jr., University of Virginia; John R. Horan, U.S. Atomic Energy Commission; Wright H. Langham, Los Alamos Scientific Laboratory; J. S. Laughlin, Sloan-Kettering Memorial Hospital; K. Z. Morgan, Oak Ridge National Laboratory; Claire C. Palmiter, U.S. Environmental Protection Agency; C. M. Patterson, Savannah River Laboratory; Walter S. Snyder, Oak Ridge National Laboratory; J. Newell Stannard, University of Rochester; L. S. Taylor, National Council on Radiation Protection and Measurements.

an increase in infant mortality with low levels of radiation exposure. The material contained in Dr. Sternglass' paper has also been presented publicly at other occasions in various parts of the country. His allegations, made in several forms, have in each instance been analyzed by scientists, physicians, and biostatisticians in the Federal government, in individual States that have been involved in his reports, and by qualified scientists in other countries.

Without exception, these agencies and scientists have concluded that Dr. Sternglass' arguments are not substantiated by the data he presents. The United States Public Health Service, the Environmental Protection Agency, the States of New York, Pennsylvania, Michigan and Illinois have issued formal reports in rebuttal of Dr. Sternglass' arguments. We, the President and Past Presidents of the Health Physics Society, do not agree with the claim of Dr. Sternglass that he has shown that radiation exposure from nuclear power operations has resulted in an increase in infant mortality.

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Managed Creativity

I share the skepticism of many people about President Nixon's intention to conquer cancer by a task force approach. Such a problem would traditionally be handled by small groups of men or individuals who are highly creative in the field. A bureaucracy is rarely creative.

At the same time, it appears that such attempts at "managed creativity" give the nation a novel opportunity to study innovation from the point of view of social reform (1). It is indeed a "natural" experiment, although some would disagree how natural it is to attempt such ventures. Nonetheless, reform is also being advocated as an opportunity to experiment with new social mechanisms (2). It is clearly important to study such phenomena. I would hope that these social experiments are getting adequate attention from the scientific establishment.

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Women with Ph.D's

The low level of information in the letters from Davenport and Jensen (12 Feb., p. 521) concerning women scientists and in the replies you chose to publish (7 May, p. 514) prompts me to suggest that scientists should do more homework. Evidence abounds, for instance, that (i) in all doctoral fields, women receiving the doctorate are brighter than their male counterparts (1); (ii) while studies with the necessary detailed controls over specialty, rank, age, and type of institution are still lacking, according to a study of full-time academic persons, there are no differences in the productivity of men and women scientists (2); (iii) women's durability on academic jobs is slightly, but not significantly, greater than men's although their rate of promotion and their salaries are less (3); (iv) in industry, according to the Department of Labor (4), women do not have the higher absenteeism or turnover that myths credit them with; (v) in spite of these high qualifications, hiring departments give the edge to males when applications are identical except for sex (5).

To judge whether the hiring of Ph.D's has been discriminatory, multiply by .91 [the percentage of women with doctorates working in the last decade (6)] the percentage of Ph.D's that were given to women scientists in the top five departments in each field (7): physics, 2.5 percent; chemistry, 6.9 percent; astronomy, 12.3 percent; biochemistry, 15.6 percent; anthropology, 20.6 percent; physiology-anatomy, 23.1 percent; psychology, 24 percent; and zoology, 29.4 percent. If any of the top five degree-granting institutions has hired enough women at each rank to qualify as discrimination-free, may they please announce their pioneer status.

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