hospitals. In this sense, waters of any sort in the hospital environment have the potential of becoming massively contaminated with pathogens.

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Reference

1. C. Chambers and N. Clarke, *Advan. Appl. Miacrobiol.* **8**, 105 (1966).

Approval of Research Grants

We continually hear that with restricted funding or research grants the young scientists do not fare well in competition with the older, more established ones. On several occasions various institutes at the National Institutes of Health have made studies of the rate of approval of applications from younger scientists and how it compares with the rate of approval of applications from older scientists. The rate was always about the same for both groups.

I have made a study of the applications that were presented to the National Advisory Heart and Lung Council at its June 1971 meeting. The council reviewed 458 applications, 88 of which were from investigators age 35 and under and 372 of which were from those age 36 and over. The rate of approval for the younger group was 66 percent (57 were approved); the rate for the older group was 58 percent (217 were approved). The funds anticipated in June 1971 for fiscal year 1972 would support only 45 percent (39) of the younger group and 34 percent (126) of the older group.

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Radar System Dismantled

An extraordinarily complex radar system called MAR (multiple array radar) became operational in 1964 at White Sands Missile Range; it was designed to detect incoming missiles for national defense. The receiver of this radar was made up of approximately 2500 separate, circularly polarized, switched elements, each with its own wide-band, low-noise, parametric amplifier. Beam switching by means of aperture synthesis was completely controlled by computer. Such arrays are usually switched manually and never include the luxury of a low-temperature front end.

The aggregate cost of this radar was approximately $160 million. It was an incomparable instrument, operating near the 21-centimeter line for beam-switched observations of distant radio sources and possibly even of supernovas in distant galaxies. Its cost was greater than all the radio astronomical facilities that have been built in this country and possibly in the world. It was three times as expensive as the VLA (very large array), the largest radio astronomy telescope ever proposed.

The MAR radar was dismantled before a proper evaluation could be made of its astronomical capability. Regretfully, we at the New Mexico Institute of Mining and Technology performed the dismantling and salvage without access to the specifications of the ability of the whole system. It is a tragedy indeed that such a short-term military experiment could not have been made available to astronomers who could have made measurements that now may not be made for many decades. Fortunately, 2000 parametric amplifiers were salvaged, and 280 have been presented for use by radio telescopes throughout the world. These alone significantly improve the quality of many instruments.

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Degree of Fact

The scale that Celsius proposed had water boiling at 0° and freezing at 100°, so the official recommendation (see Letters, 19 Feb., p. 628) that the centigrade scale should be called Celsius is even dafter than your correspondents point out (Letters, 9 July, p. 105). A centigrade thermometer with 0° as the freezing point of water was made, however, by Pierre Martel of Geneva in 1742 (*1*).

N. W. PIRIE
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Reference

1. D. J. Bryden, *Brit. J. Hist. Sci.* **5**, 393 (1971).

Human Environment Conference

In a report (News and Comment, 29 Oct., p. 480) about the United Nations Conference on the Human Environment, to be held next year in Stockholm, Robert Gillette writes that I "said that admittance to the proceedings in Stockholm is open to 'member states only' and that therefore Taiwan would, in all probability, be barred."

The question of participation in the Conference on the Human Environment is a matter for decision by the U.N. General Assembly at its current session. I said that invitations to states to participate in the conference would be issued in accordance with the decision of the general assembly.

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Botany's Future

I would like to offer my support for the timely and accurate editorial by Philip H. Abelson (18 June, p. 1195). When *Science* can clearly recognize the atrophy that has characterized much of the last two decades of American botanical history, it is possible to hope that the long trend of the deterioration of botany will cease and reverse its course. Faddism and unbalanced federal funding have played a role in that deterioration. It is time that biologists, scientists, government officials, and the public recognize that botany is not a stepdaughter science. Not only should funding institutions increase research allocations for existing and new botanical work, but universities should consider that academic "reorganization" has rarely benefited botanical science (*1*). Finally, may the enormous botanical wealth of the tropical regions of the world begin to receive the same kind of attention that has been given that of the temperate and arctic regions. The recent establishment of a botanic garden and herbarium at the University of Malaya is one step in that direction.

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Reference

1. W. H. Eshbaugh and T. K. Wilson, *BioScience* **19**, 1072 (1969); W. L. Stern, *Plant Sci. Bull.* **15**, 1 (1969); S. Greenfield, *ibid.* **16**, 6 (1970).