

Editorial

EDITORIALS, like most graduation addresses, are quickly forgotten or just utterly ignored. Thus, it takes either supreme arrogance or equivalent lack of concern (for the reader) for the editor of a journal to apply himself to this task without many misgivings. Let it be clearly understood that, while this editor enjoys the tasks of insuring, with the able assistance of the associate editors, that your journal publishes the best of archival-worthy endeavors that are available, he does not pretend to be an expert in foreseeing future trends nor to be sufficiently removed from detailed work to provide an acute appraisal of what is truly relevant on the total current scene. All you can be subjected to is a series of personal opinions about aspects of this important, fledgling area of engineering and science to which your journal is pledged to reflect and convey.

Perhaps the most important areas in which all engineers and scientists need make their opinions known are those in which there is abounding confusion caused by enthusiastic proponents and opponents of national programs involving social welfare, poverty, city planning, air and water pollution, and the exploitation of resources in the oceans, to name a few. There is a great tendency for all these worthy causes to be overplayed by the fervor whipped up by untutored enthusiasts and politicians because it is the *mod* thing to push at the moment. During the last decade, the immediate importance of many ocean-situated resources have been overly touted. The effect of this overplay is to delay, or often to turn off, the possibility of well-programed support of soundly founded endeavors to make a few of the lavish prophecies a reality. In short, the over-all effect of overselling makes references to the entire area *dirty* words.

Much is being said these days about the impending disasters arising from pollution of our waters and atmosphere. Certainly there are real and immediately pressing problems which must be coped with from two sides—one from the enactment of legislation requiring industries and communities to filter or process effluents, and the other to determine from data and theory what the environment can take without harmful limits being exceeded. Engineers' opinions and services are vitally needed on both aspects of the needed solutions.

It was particularly fatuous of our lawmakers to debate (recently) whether engineers who had been involved in aerospace and who are now in desperate need of employment could possibly be used in projects directed at city planning, pollution, etc. These benighted (but alas influential people) ought to be reminded of the fact that, prior to the space program, these same engineers were working on and developing other systems and equipment, that they were not trained for space-associated problems but that they simply used their ability to apply the known physical principles which are operable in the environment of the space about Earth and other celestial bodies.

Certainly the same is true for ocean engineering. If there were to be anything like the federal support of ocean exploration as there has for space, the existing formal programs in ocean engineering could never produce the numbers of professionally trained men and women needed, nor would they need to really. In a very short time, a man well-grounded in fundamentals can learn the central physical features of the ocean environment well enough to design feasible methods

and equipment. This is not to denigrate the specialized programs now being offered in many of the nation's leading colleges in various aspects of science and engineering relating directly to the animal, biological, and physical facets of the oceans. Certainly the unspecialized student and engineer can now turn to many places to learn at a rapid pace the scientific and technological aspects of phenomena peculiar to the oceanic environment.

A particularly bright spot—which, in these days of cut-backs, has grown even brighter—is that projected by the Sea Grant College Program which, until October 1970, was administered by the National Science Foundation. It is now under the National Oceanic and Atmospheric Administration (NOAA) in the U. S. Department of Commerce. The Director of NOAA, Robert White, has recently assured the Sea Grant colleges and those with Sea Grant programs that NOAA will not alter the philosophy under which the many scientific and engineering developments at various universities have progressed during the past two and one-half years.

The Sea Grant Program embraces both scientific and engineering studies and measurements which are to add effectively to present knowledge and to develop techniques as well as trained manpower of use to industries working in the seas. It is hoped that the amalgamation of the various agencies and programs involved with the air and water will be truly effective in securing bedrock data for use by all involved in environmental problems.

There is certainly a wide variety of engineering problems posed by the various operations that are necessary to use and to exploit rationally the seas resources. The editors of the *Journal of Hydronautics* are particularly desirous to receive manuscripts dealing with fresh approaches to these many problems even though the concepts are not demonstrated by experience. A necessary criterion is that the ideas are backed by a mature, professional analysis or realistic model demonstration and not simply authenticated by inventor-type opinion.

During 1970, the contents of this Journal presented a fairly good mix of engineering and scientific articles. It is hoped that, with the maturing of the Sea Grant Program and the coordination of many programs under NOAA, there will be an increasing supply of pertinent papers submitted in 1971, thereby increasing both the scope and quality of your Journal.

During 1971, there are two major changes in publication policy adopted by the AIAA for all its journals, which are motivated by the need to provide information in concise, usable form (and thereby increase the effectiveness of the journals) and also by the need to reduce publication costs. The first of these is the Synoptic, and the second change is the adoption of author-prepared manuscripts. The purpose of the Synoptic is to present on two sides of a single printed page the key concept and results of a study. The Synoptic is not an abstract—it contains results in condensed form; moreover, it is not to be published unless backed up by a full paper, both of which are reviewed. The full paper can then be obtained from the library of the AIAA Technical Information Service by those who wish more elaboration. This concept has great advantages for the author, viz., more readers, and hence greater utilization than is currently the case for full papers. It benefits the AIAA by reducing costs and presenting a

wider spectrum of results in any one issue. A more detailed and effective explanation of the Synoptic is given by Dr. Jerry Grey in this issue and by Gordon L. Dugger's editorial in the *Journal of Spacecraft and Rockets*, as well as the editorial by George Sutton in the January issue of *AIAA Journal*. The inside back cover of all our journals will contain guides for preparing Synoptics.

The move to author-prepared manuscripts, which will then be photocopied in lieu of the use of the hot-type printing process, is entirely dictated by publication costs. Authors will be asked to prepare their final versions according to a specified format. The cooperation of all will be essential for successful reduction of costs. These savings will make it

possible for readers to receive future AIAA publications without the burden of precipitous increases in cost to them.

Associate Editors Winfield Arata and Lincoln Cathers join me in acknowledging our indebtedness to the fine efforts of all our authors and reviewers. Particular thanks are due for the careful work performed by Ruth Bryans, Anne Huth, Carol Poppendieck and their staff in carrying out all the mechanics of the publication process. It is hoped that the content and standards of the *Journal of Hydraulics* have been sufficient to warrant continued support by members, subscribers, and readers alike during 1971!

John P. Breslin
Editor-in-Chief

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Announcement: 1970 Author and Subject Indexes

The indexes of the four AIAA archive journals (*AIAA Journal*, *Journal of Spacecraft and Rockets*, *Journal of Aircraft*, and *Journal of Hydraulics*) will be combined and mailed separately early in 1971. Subscribers are entitled to one copy of the index for each subscription which they had in 1970. Extra copies of the index may be obtained at \$5 per copy. Please address your request for extra copies to the Circulation Department, AIAA, Room 280, 1290 Avenue of the Americas, New York, New York 10019.

The 1968 combined index (including the indexes of the 1967 issues of the *Journal of Hydraulics*) was reprinted, and a few copies are still available, at \$5 per copy, on a first-come, first-served basis. Orders should be sent to the Circulation Department at the above address and must be received by February 15, 1971. A very few copies of the 1969 index are available on the same basis as the 1968 index.

Ruth F. Bryans
Director, Scientific Publications