Killing the Goose

BECAUSE this is a journal of research, a large portion of our authors and readers are associated with engineering schools, while many of those in government and industry maintain strong academic ties. Thus we are all heartened by recent trends of increased employment demand for engineering graduates at all levels, and by the increase in applicants to engineering schools. Unfortunately, the latter is causing a burgeoning undergraduate enrollment, without a corresponding increase in faculty or graduate students who are qualified to be teaching assistants. One often hears that the large salary differential between academia and industry accounts for the decrease in attractiveness of academic positions. That, however, is only part of the story. A brief survey I conducted among engineering school directors revealed other important factors regarding career selection. First, many school administrators have been slow to authorize increases in faculty positions; thus the teaching load for existing faculty positions has increased enormously, both in terms of shear numbers of students and frequent course switches among junior faculty members. In times past, relief was obtainable through the departments of the federal government by broad support of research at universities, thus gaining the classroom "relief time" so important in attracting new faculty. In addition, the funds could also support graduate students and greatly enhance their ability to remain in school.

Now, however, we hear quite the opposite: namely, that federal policy officials wish to cease broad research support programs in favor of supporting only institutions of proven excellence, and then only for programs that are promising. The dangers in this new policy are compound. First, either the undergraduate students will not receive the quality of education that they deserve, or enrollment will have to be trimmed, both of which will hamper industrial revitalization and decrease the available pool for new graduate students and faculty. This can further increase the demand for competent senior and middle-level technical personnel, which will deplete faculty and graduate enrollment even further. This, compounded by a lack of first-rate equipment, can easily result in suffocation of engineering schools. The government administration should carefully rethink its policy toward support of research at engineering schools, lest it kill the goose.

In addition, selectivity implies omnipotence. Perhaps the baroque can be identified easily. But what about new areas? What is this country's record in the past hundred years of judging the merits of the airplane, jet propulsion, rocketry, space, and even energy? A broad-spectrum support of research is a partial guard against being left behind, with the ensuing scramble to catch up.

It is possible that new sources of support for aerospace engineering research need to be developed. Perhaps private sources will come forward, similar to that recently offered in the field of biological engineering. The funding route, instead of from private sources to the tax collector to the federal agency to the university, could be shortened considerably. There is also an opportunity for technical societies such as AIAA, through its technical committee structure, both to help set goals and to evaluate performance, since the brain power assembled in these technical committees is unequalled anywhere. But passive acceptance of the present policy will lead to slow strangulation of our technical schools, with the consequence that reindustrialization and military modernization both will suffer.

Back home at the *AIAA Journal*, 1981 has seen a 4% increase in the number of pages printed, but there was a 25% increase in papers submitted. The ratio of acceptances to submissions is still about 75%, so it is not surprising that the average time to publication is now 12 months. Also, it is 6 months from acceptance to printing—far greater than the normal 3 months (for composing, proofreading, dummying, etc.). We presently reject papers in about 16 weeks, which is about 20% longer than the time given in the Acceptance Procedure; the average time to acceptance is 32 weeks, because of the extra time needed by the author for revision and by the Associate Editor to evaluate the revisions. Finally, the *Journal of Hydronautics* has ceased publication. The outstanding manuscripts and scope have been distributed among the rest of the AIAA archival journals.

Administratively, we have now insured that the *Engineering Index* abstracts our preprints as well as journals. The increased availability of computerized title, author, and reference search from accessible remote terminals may, in fact, relieve almost completely the previous concept of selective dissemination. A person can obtain the latest (up to last month) desired listing in just a few minutes and a copy of the paper in about a week. This service neatly complements manual searches of International Aerospace Abstracts, STAR, etc. All that is needed is proper motivation for technical personnel (and managers too!) to go to their libraries. Perhaps librarians should think about new ways to attract readers, such as various kinds of refreshments (or entertainment?).

It is also hoped that our readership approves of our spectrum and distribution of subjects. For those of you who wish to see increased emphasis in particular fields, please encourage your colleagues to submit their papers to us. We also wish to note the change in the responsibilities of AIAA's Technical Directors, with each to have a responsibility for a group of technical disciplines. In practice, this will mean greater participation of the Associate Editors in the technical committees to increase the coordination between meetings and publications, because the AIAA meetings generate most of the papers submitted for publication.

Acknowledgments

Many thanks to our Managing Editor, Elaine Camhi, and welcome to Editorial Assistant, Linda Laufer. The expeditious handling of your manuscripts at my end is due to the skill of Connie DiStefano, who mailed about 1200 papers during the past year. On behalf of the authors and readership, gratitude and many thanks are offered to our retiring Associate Editor Dr. Warren Strahle, and to our reviewers, whose names are listed on the following pages, for maintaining our technical excellence. I also wish to warmly welcome our new Associate Editor, Dr. Ben Zinn.

Happy Holidays to all, and to all a good year.

George W. Sutton
Editor-in-Chief