Journal of Spacecraft and Rockets

VOLUME 6 JANUARY 1969 NUMBER 1

On Economy and Enlightenment

As this Journal enters its sixth year of publication, there is great concern within our Institute about the economic facts of life to be faced by our journals in 1969. Subscriptions have been declining slowly for several years. Two factors here are the great convenience of today's copying machines and the reduced number of new project starts in aerospace R&D, which has led to many changes of fields by members. Another aspect of our book-balancing, the system of voluntary page charges, also is feeling the bite of tightened budgets. This vital means of supporting a reasonable* share of our publishing cost can represent the difference between a healthy, high-quality journal which will stand the test of time and a debilitated one that provides neither quality in individual papers nor the coverage and balance we seek.

If our economic pinch becomes much worse, authors may expect to feel its effect in two ways: 1) more frequent rejections and 2) requests for more drastic reductions in length. Some of you may think, "I want smaller journals, anyway. Maybe this trend would be a good one." But if more rejections occur, whose field will suffer most? Yours? A frequent complaint has been, "You don't publish enough papers in my field." This charge is unfair at present, because we publish all of the papers received which are judged by reviewers and ourselves to be worthy of publication. On the other hand, we try very hard to see that each paper is presented concisely, as authors will attest. Requests for more drastic reductions in length would undoubtedly cause many authors to leave out key elements, thus severely compromising the value of the paper.

We call your attention to Dr. George Sutton's comments on this subject and on our review procedures in the January 1969 issue of AIAA Journal. We hope that all who are interested in this Institute and its role in our profession will give serious thought to these matters.

The Author's Contribution and Responsibility

There is one obvious way that authors can reduce our editorial and economic burden at its source: write well. A great deal of our expense results from 1) the need to return papers for revision and re-revision and 2) the extensive correspondence and/or telephone communication that often is required to complete a job properly. If a valuable technical paper is written well in the beginning, it will cost less to process, it will be published sooner, and, most important of all, it will serve its purpose of information transfer and enlightenment rather than "obscurantism."† Goudsmit said:

"One of the causes of bad writing is that so many young [writers]...have never faced the challenge of explaining something they know very well to a student who knows

nothing about it... another reason for writing an obscure paper... is the common subconscious fear of exposing one-self to scrutiny. If a paper is too clear, it might be too easy for readers to see through it and discover its weaknesses. We observe this same behavior with the lecturer who writes a formula on the blackboard and erases it almost immediately..."

"Thus we believe that writing incomprehensible papers is not an indication of the author's erudition but merely reveals a common psychological defect."

To the general charge to avoid subconscious obscurantism, we would add the following advice to authors:

- 1) If in doubt, leave it out. If you can explain it, do so in direct, basic English, using simple and unambiguous wording.
- 2) Develop lines of thought concisely. Do not fill your paper with redundancies, which waste the reader's time and may even cause him to wonder whether he misunderstood what you were trying to say earlier.
- 3) Imagine that you are writing to an intelligent colleague who has never worked in your particular field or specialty. Your audience probably will include your boss, technical reviewers, editors, foreign students, and people who will switch from different work to this specialty next year.
- 4) If your analysis requires assumptions, state them concisely and justify them if need be. If excessive explanation would be required for the nonspecialist, cite a good readily available reference, which will explain the fine points.
- 5) Avoid unnecessary name-dropping but give credit when credit is due by citing *pertinent* background references.
- 6) If you need help, seek it; if you need time, take it. Use deadlines as incentives but not as excuses.
- 7) Don't oversell. Obvious salesmanship will sour the reviewers (who are likely to be your competitors) and the editors, and exaggerated technical claims will cloud the real merits of your work and may cause all of it to be doubted or ignored. Stick to the facts.

All of these comments apply equally to an oral presentation, of course.

Some Questions for Administrators

To you who have administrative or public relations duties, we would like to address a few questions. We raise these questions because some of the poorest papers come from some of the largest and supposedly best equipped organizations.

- 1) Don't you agree that a well-written journal paper is a valuable asset to both an author and his organization, whereas a poorly prepared paper reflects unfavorably on both?
- 2) Is writing or editing help available to those on your staff who need it? Are they encouraged to seek it?
- 3) Are authors encouraged to spend the time required to do a good job on their papers?

If each of us, author, administrator, reviewer, and editor, aims for papers written clearly and concisely to enlighten his colleagues, we will have better journals, and we will get more mileage from them.

(Continued on page 2.)

^{*} The present page charge represents approximately 40% of the total cost of a published page in one of our journals.

[†] Goudsmit, S. A., "Obscurantism," Physical Review Letters, Vol. 13, Oct. 26, 1964, pp. 519–520.



GORDON L. DUGGER Editor-in-Chief

B.Ch.E. 1944, and M.S.E. 1947, University of Florida. Ph.D. (Chemical Engineering) 1953, Case Institute of Technology.

Special interests are in the propulsion area, particularly supersonic combustion, ramjets, and rocket-thrust augmentation.

Supervisor, Hypersonic Propulsion Group, Applied Physics Laboratory, The Johns Hopkins University, Silver Spring, Md.



DAVID H. GARBER

Associate Editor
A.B. (Physics) 1940.
A.M. (Physics) 1941, University of Pennsylvania.
Ph.D. (Physics) 1953, Stanford University.

Special interests are manned and unmanned spacecraft and spacecraft systems, and space sciences, including atmospheric, planetary, interplanetary, astronomical, and exobiological observations and instrumentation.

Scientific Assistant to the Director, McDonnell Douglas Astronautics Company, Huntington Beach, Calif.



JOHN C. HOUBOLT

Associate Editor
B.S. (Civil Engineering) 1940,
University of Illinois.
M.S. (Civil Engineering)
1942, University of Illinois.
Ph.D. (Technical Science)
1957, ETH Swiss Federal
Institute of Technology.

Special interests are structural dynamics, aeroelasticity, atmospheric turbulence, aerodynamic noise, space flight and rendezvous.

Senior Vice President and Senior Consultant, Aeronautical Research Associates of Princeton, Inc., Princeton, N. J.



WILLIAM R. MICKELSEN Associate Editor

B.S. (Mechanical Engineering) 1948, University of Wisconsin.

M.S. (Aeronautical Engineering) 1953, Case Institute of Technology.

Special interests are electric propulsion, space electric power, and nuclear propulsion.

Professor of Mechanical Engineering, Colorado State University, Fort Collins,

Our Editors

Two of our Associate Editors, Eugene Love and Arvin Smith, have completed three long years of dedicated service. We offer them a hearty vote of thanks for a job well done.

Two new Associate Editors are Yusuf Yoler and William Mickelsen. We are pleased to welcome them aboard. David Garber, John Houbolt, John Miller, and Bernard Miller are continuing. We hope to serve you well.

Gordon L. Dugger Editor-in-Chief



BERNARD P. MILLER

Associate Editor
B.S. (Aeronautical Engineering) 1950, Pennsylvania State University.

Graduate studies at U.S. Air Force Institute of Technology, Princeton University, and Cornell University.

Special interests are sensors, communications, spacecraft design, and systems engineering.

Project Engineer, Earth Resources Satellite System Program, Astro-Electronics Division, Radio Corporation of America, Princeton, N. J.



JOHN E. MILLER

Associate Editor
B.S. 1949, United States Military Academy.
M.S. 1953, Massachusetts Institute of Technology.

Special interests are inertial guidance and control, inertial component design and utilization, and system engineering.

Technical Director, Apollo Group, Instrumentation Laboratory, Massachusetts Institute of Technology, Cambridge, Mass.



YUSUF A. YOLER Associate Editor

B.S. (Mechanical Engineering) 1949, Robert College, Istanbul, Turkey.
Ph.D. (Aeronautics) 1954,

California Institute of Technology.

Special interests are strategic ballistic and cruise missile systems, re-entry vehicle systems and technology.

Manager, Advanced Strategic Systems, Missile and Information Systems Division, The Boeing Company, Seattle, Wash.