

AMERICAN ASSOCIATION
FOR THE
ADVANCEMENT OF SCIENCE

Board of Directors

CHAUNCEY D. LEAKE, *Retiring President, Chairman*
THOMAS PARK, *President*
PAUL M. GROSS, *President Elect*
HARRISON BROWN DON K. PRICE
HENRY EYRING ALFRED S. ROMER
H. BENTLEY GLASS WILLIAM W. RUBEY
MARGARET MEAD ALAN T. WATERMAN
PAUL A. SCHERER, *Treasurer*
DAEL WOLFLE, *Executive Officer*

Editorial Board

KONRAD B. KRAUSKOPF H. BURR STEINBACH
EDWIN M. LERNER WILLIAM L. STRAUS, JR.
PHILIP M. MORSE EDWARD L. TATUM

Editorial Staff

DAEL WOLFLE HANS NUSSBAUM
Publisher Business Manager

GRAHAM DUSHANE
Editor

JOSEPH TURNER ROBERT V. ORMES
Associate Editor Managing Editor

ELLEN E. MURPHY, *Assistant Editor*

NANCY TEIMOURIAN, *Assistant to the Editor*

News: HOWARD MARGOLIS

Book Reviews: SARAH S. DEES

Editorial Assistants: NANCY S. HAMILTON, EDGAR C. RICH, BARBARA SUTHERLAND, CONRAD YUNG-KWAI

Staff Assistants: GENEVIEVE M. KIRBY, PATRICIA D. PADDOCK

Advertising Staff

EARL J. SCHERAGO, *Director*

BERNICE SCHWARTZ, *Production Manager*

Sales: RICHARD L. CHARLES (New York, N.Y., PE 6-1858); C. RICHARD CALLIS (Old Bridge, N.J., CL 4-3680); HERBERT BURKLUND (Chicago, Ill., DE 7-4973); DILLENBECK-GALAVAN (Los Angeles, Calif., DU 5-3991)

SCIENCE, now combined with THE SCIENTIFIC MONTHLY, is published each Friday by the American Association for the Advancement of Science at National Publishing Company, Washington, D.C. SCIENCE is indexed in the *Reader's Guide to Periodical Literature*.

Editorial correspondence should be addressed to SCIENCE, 1515 Massachusetts Ave., NW, Washington 5, D.C. Manuscripts should be typed with double spacing and submitted in duplicate. The AAAS assumes no responsibility for the safety of manuscripts. Opinions expressed by authors are their own and do not necessarily reflect the opinions of the AAAS or the institutions with which the authors are affiliated. For detailed suggestions on the preparation of manuscripts, see *Science* 125, 16 (4 Jan. 1957).

Advertising correspondence should be addressed to SCIENCE, Room 1740, 11 West 42 St., New York 36, N.Y.

Change of address notification should be sent to 1515 Massachusetts Ave., NW, Washington 5, D.C., 4 weeks in advance. Furnish an address label from a recent issue. Give both old and new addresses, including zone numbers.

Annual subscriptions: \$8.50; foreign postage, \$1.50; Canadian postage, 75¢. Single copies, 35¢. Cable address: Advancesci, Washington.

Copyright © 1961 by the American Association for the Advancement of Science.

A Matter of Perspective

If sending a man to the moon and bringing him back were entirely a scientific affair, then, as one suggestion has it, we ought to send a midget. Not only would the midget himself constitute a much smaller payload, but his requirements for food, oxygen, shielding from harmful radiation, and disposal of body wastes would be comparably reduced in scale.

Our present astronauts, it is true, do have the benefit of military training and discipline. But midgets who have had professional experience in circuses and carnivals will have absorbed the equally demanding traditions of show business. As for intelligence, Barnum's famous Tom Thumb was so bright that at the age of five he could be convincingly billed as an eleven-year-old.

This suggestion concerning our moon efforts would have been readily understood by the Eisenhower Administration. In those days American research in space was not regarded as part of a weight-lifting contest with the Russians. The problem was one of balancing the great costs of increased rocket power against the possibilities of miniaturization.

From such a viewpoint, we would have no cause to bow our heads in shame if we put one of the little troupers on the moon for a few days. He could do as much scientific work there as any normal-sized person. Besides, anyone concerned about national prestige who really looks into the matter can see that mere rocket power is not the best indicator of a nation's scientific prowess.

But times have changed. In the thinking that characterizes the Kennedy Administration, the trip is no longer regarded as entirely a scientific affair. There is a space race going on and we must win it in terms the judges can understand. The presence of an American midget on the moon, if followed by the appearance of a Russian of more ordinary dimensions, would still leave us running second.

In the matter of specifying costs, there is also a contrast between the two administrations. Under Eisenhower, no public statement was ever made concerning the cost of a lunar landing. Under Kennedy, we are given the bill. The cost (for a normal-sized person) over the next five years is put at \$7 to \$9 billion, with the total cost estimated at \$20 to \$40 billion.

Kennedy has kept his promise to discuss public issues honestly. Science stands to gain from the trip to the moon, possibly greatly. But the primary issue, as Kennedy says, is the effect of the undertaking on the struggle between the Soviet Union and the West. It may well be that midgets, like everyone else, should ask not what their country can do for them, but what they can do for their country. Their service, however, lies elsewhere.

Of course, even if we proceed on these terms we may still lose. The Russians, with their greater experience in matters concerning prestige and confidence, may turn around and send up the fattest fat-lady they can lay their hands on.—J.T.