

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

Science serves its readers as a forum for the presentation and discussion of important issues related to the advancement of science, including the presentation of minority or conflicting points of view, rather than by publishing only material on which a consensus has been reached. Accordon which a consensus has been reached. Accordingly, all articles published in Science—including editorials, news and comment, and book reviews—are signed and reflect the individual views of the authors and not official points of view adopted by the AAAS or the institutions with which the authors

Editorial Board

ALFRED BROWN
JAMES F. CROW
THOMAS KUHN
ELLIOTT W. MONTROLL

FRANK PRESS
FRANK W. PUTNAM WALTER O. ROBERTS

1973

H. S. GUTOWSKY ARTHUR D. HASLER RUDOLF KOMPFNER DANIEL E. KOSHLAND, JR. GARDNER LINDZEY RAYMOND H. THOMPSON EDWARD O. WILSON

Editorial Staff

Editor

PHILIP H. ABELSON

Publisher WILLIAM BEVAN Business Manager HANS NUSSBAUM

Managing Editor: ROBERT V. ORMES

Assistant Editors: ELLEN E. MURPHY, JOHN E. RINGLE

Assistant to the Editor: NANCY TEIMOURIAN

News and Comment: John Walsh, Deborah Shap-ley, Robert Gillette, Nicholas Wade, Constance HOLDEN, BARBARA J. CULLITON, SCHERRAINE MACK

Research News: ALLEN L. HAMMOND, WILLIAM

Book Reviews: SYLVIA EBERHART, KATHERINE LIV-INGSTON, KATHRYN MOUTON

Cover Editor: GRAYCE FINGER

Editorial Assistants: MARGARET ALLEN, ISABELLA BOULDIN, BLAIR BURNS, ELEANORE BUTZ, RONNA Cline, Annette Diamante, Mary Dorfman, Judith Givelber, Marlene Glaser, Corrine Harris, Oliver HEATWOLE, CHRISTINE KARLIK, MARSHALL KATHAN, MARGARET LLOYD, JANE MINOR, DANIEL RABOVSKY, PATRICIA ROWE, LEAH RYAN, LOIS SCHMITT, YA LI SWIGART, ALICE THEILE

Guide to Scientific Instruments: RICHARD SOMMER

Membership Recruitment: LEONARD WRAY; Subscriptions: BETTE SEEMUND; Addressing: THOMAS BAZAN

Advertising Staff

Director EARL J. SCHERAGO Production Manager

Advertising Sales Manager: RICHARD L. CHARLES

Sales: New York, N.Y. 10036: Herbert L. Burklund, 11 W. 42 St. (212-PE-6-1858); Scotch Plains, N.J. 07076: C. Richard Callis, 12 Unami Lane (201-889-4873); Medfield, Mass. 02052: Richard M. Ezequelle, 4 Rolling Lane (617-444-1439); CHICAGO, ILL. 60611: John P. Cahill, Room 2107, 919 N. Michigan Ave. (312-DE-7-4973; BEVERLY HILLS, CALIF. 90211: Winn Nance, 111 N. La Cienega Blvd. (213-657-2772)

EDITORIAL CORRESPONDENCE: 1515 Massachusetts Ave., NW, Washington, D.C. 20005. Phones: (Area code 202) Central office: 467-4350; Book Reviews: 467-4367; Business Office: 467-4411; Circulation: 467-4417; Guide to Scientific Instruments: 467-4400. views: 467-4367; Business Unice: 407-421, Cartesian: 467-44417; Guide to Scientific Instruments: 467-4480; News and Comment: 467-4430; Reprints and Permissions: 467-4483; Research News: 467-4321, Reviewing: 467-4440. Cable: Advancesci, Washington. Copies of "Instructions for Contributors" can be obtained from the editorial office. See also page xv, Science, 24 December 1971. ADVERTISING CORRESPONDENCE: Room 1740, 11 W. 42 St., New York, N.Y. 10036. Phone: 212-PE-6-1858.

Career Education—A New Priority

Most of us who read Science have found our careers to be a central and important source of satisfaction and meaning in our lives. But our educational system has not made available to many of our young people the sense of dignity and achievement of a meaningful career.

Too often, young men and women find their work by chance, rather than after an assessment of their own abilities and interests and of the opportunities that are available to them. In a simpler age, young people saw their parents and other adults at work and often worked beside them, developing skills and an understanding of the world of work. But today, our homes and schools are separated from our places of work. Young people have little knowledge of the world of work. Formal education must therefore do a better job of preparing and informing students for the choices they face.

We need, too, greater flexibility about the timing of various phases of our education. Educational opportunity should not be artificially confined to the first third of one's life. It should, instead, be accessible to men and women as they want and need it to allow growth and change throughout their lives.

The key to reform in contemporary American education lies, I believe, in the concept of "career education." In the primary grades, children should learn more about the world of work and the various roles they might play in it. In the middle grades hands-on experience and practical observation of career areas that are of most interest should be provided. In high school and postsecondary education, children need the opportunity to learn specific skills to lead them to meaningful employment. Further, career education means the opportunity for an individual to return for further formal learning as it is needed and wanted.

Perhaps most immediately we see career education as a new source of motivation in the lives of all young people as they move up the education ladder. The development of career education has been made a Presidential priority, and, in the U.S. Office of Education, I have made it our first priority.

To move career education from the realm of ideas into the world, we are working in several ways simultaneously. The concept itself needs further refinement and debate, and for this we are using both the talents on our own staff in the Department of Health, Education, and Welfare and also enlisting the critical abilities of scholars and practitioners in a number of relevant fields.

At the same time, we are developing a series of models to explore what career education could be like in practice. Six school districts across the country are cooperating in the development and testing of curriculum innovations for career education. These efforts will continue through the next school year. An "employer-based" model is also being designed to test the possibility of basing the education of some young people outside of traditional schools. We are also working on models to bring career education to those who are cut off from the usual institutional sources of education, in homes and in special arrangements for isolated or migrant families. Most of the states are also developing their own programs and centers to begin providing career education for many young

The path of change is never smooth or clear. But we believe that the basic concept of career education holds promise for major and needed reform.—Sidney P. Marland, Jr., U.S. Commissioner of Education