

NARST

Newsletter

QUARTERLY NEWSLETTER OF THE NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING

Fall 1966

Craig Sipe Editor for this Issue*

6/18 ~~V.A.~~ 1967 ANNUAL MEETING

The Annual Meeting of NARST will be held in Chicago on February 17-20 at the Pick-Congress Hotel. The Secretary-Treasurer will make further details available in January.

CALL FOR PAPERS

The program for the 1967 Annual Meeting will be in charge of President-Elect John M. Mason, Science and Mathematics Teaching Center, Michigan State University, East Lansing, Michigan, 48823. The full tentative text of proposed papers and 150 word abstracts should be in Dr. Mason's hands by October 15, 1966. Plan for either a 15 minute presentation, an 8 minute report, or some negotiated time allotment. Discussion time will be allocated the longer presentations. The Program Committee, consisting of John Mason (Chairman), Albert Piltz, Frank Sutman, David Butts, Stephen Winter, and Robert Yager, will, among other things, act as a review board for the papers.

NEW OFFICERS

The officers for the current year are Craig Sipe (Peabody), President; John Mason (Michigan State), President-Elect; Milton Pella (Wisconsin), Immediate Past President; Joseph Novak (Purdue), Secretary-Treasurer; Lloyd Johnson (USOE), Research Coordinator; Arnold Lahti (Western Washington) and Willard Jacobson (Teachers College, Columbia), Members-at-Large of the Executive Board. Stanley Marshall (Florida State) is currently serving as Editor of the Journal of Research in Science Teaching.

BRIEF REPORT ON 1966 MEETING

Attendance was good at the 1966 Annual Meeting. The papers were interesting and John Compton's luncheon remarks were outstanding. Dr. Compton, Associate Professor of Philosophy at Vanderbilt University, is a philosopher of science with a sincere interest in science education research and teacher preparation. The burden of his remarks were that scientists and philosophers no longer subscribe widely to the stereotyped methodology of science described by Mack, Wolf, and Nagel.

*You have my apology for the lateness of the Newsletter. The press of personal and professional obligations has been unusually severe during the spring and summer.

Instead, we must look to such men as Toulmin, Braithwaite, and Bronowski for guidance. The newer view is more flexible. It admits probabilistic reasoning, it recognizes multiple causation, more clearly describes the role of logic in model building, and makes of induction a less formal operation.

Your Executive Board shares your concern over the absence of longer discussion periods and the presentation of involved papers on topics of little significance. The matter was rather well put in the remarks of Stephen Winter (Buffalo) and Frank Sutman (Temple) as they requested publication of the following note.

"We feel that this was one of the most successful meetings of NARST. There were many papers reporting excellent studies which attests to the lively status of our profession. On the other hand, the delivery of papers often led to unfavorable comments by audience and speakers alike because (a) the audience normally read the speaker's paper instead of listening to him, (b) there was little time for discussion, and (c) audio-visual aids were not used to advantage.

"We think that some of these problems can be alleviated if, when papers are requested, more specific directions are provided to prospective speakers and we would like to recommend to John Mason that he institute procedures like the following on a trial basis for the 1967 meeting:

1. Each prospective speaker submit an abstract of no more than 300 words to the program chairman at least one month prior to the meeting. This same abstract should be duplicated (200 copies) to be handed out at the time of the presentation.
2. Each speaker submit the full publishable paper to the program chairman at the same time the abstract is submitted. (This paper could then be forwarded directly to the Journal of Research in Science Teaching.)
3. The announcement sent to program participants include information related to the availability of audio-visual devices, and suggestions for preparing good slides or overlays.
4. The program for 1967 be organized around interest groups; and time be allocated, within each group, for discussion of each paper presented.
5. Only presentations that are research or related to research in science education be invited in announcing the program.

"We believe the above procedures will give JRST the opportunity to serve the NARST membership more effectively, and will serve both speakers and audience at the annual meetings. If you feel it advisable, we would suggest that this letter be printed in the Newsletter to obtain membership consideration and reactions."

The time will come when the membership exercises considerable restraint in the presentation of views which reflect little empirical evidence or carefully developed logic.

NOMINATING COMMITTEE

Darrell Barnard (New York University) chairs a nominating committee consisting of himself, Fred Dutton (Michigan State), and James Rutledge (Nebraska). Their report will be published in a forthcoming Newsletter. The provision of the by-laws on elections reads: "The slate proposed by the Nominating Committee shall be published in the Newsletter at least four (4) months prior to the Annual Meeting. Nominations may also be made by petition of ten (10) Members which shall be in the hands of the Secretary three (3) months prior to the Annual Meeting. . . ."

JRST EDITOR COMMITTEE

J. Stanley Marshall (Florida State) has asked to be relieved of the editorship of the Journal of Research in Science Teaching. The committee charged with submitting a recommendation to the Executive Board on his successor consists of Milton Pella (Wisconsin) as chairman, Ernest Burkman (Florida State), Lloyd Johnson (USOE), Joseph Jordan (John Wiley & Sons, Inc.), are the Immediate Past President, President-Elect, publisher's representative, Research Coordinator, and representatives of the publications board and editorial board. Their report is due in late October. Should you have thoughts on the selection of an editor, write Dr. Pella.

COOPERATIVE COMMITTEE

George Mallinson (Western Michigan) continues his effective representation of NARST on the Cooperative Committee on the Teaching of Science and Mathematics. Dean Mallinson is currently working on the Far-Reaching Programs Committee of that group. Few of us realize the contribution our representative has made through the years and the special efforts he continues to make in keeping us informed on the Committee's work. It is a job well done. Ralph Lefler (Purdue) is Chairman of the Cooperative Committee.

NEWS NOTES

We would like to feature the changes in position, new assignments, and the like in the next Newsletter. Write Craig Sipe at 547 Riverview Drive, Apartment B-1, Columbus, Ohio, 43202, within the next three weeks and I shall see that the editor of the fall issue gets the information.

Some of the changes I have heard of are the following. Paul Westmeyer becomes Chairman, Science Education Department, Florida State University. Ernest Burkman

is director of the recently funded FSU Junior High School Curriculum Project. Ted Andrews has joined the Greater Cleveland Curriculum Project. Fletcher Watson and Jim Rutherford continue to work with Harvard Project Physics. John Richardson and Robert Howe are associated with the ERIC Clearinghouse for Science Education, now located in Columbus. Philip Johnson has an overseas assignment as Fulbright Lecturer at the University in Chile. Ralph Lefler plans to be working in New Zealand for a part of the year. Craig Sipe will be a visiting professor at the Ohio State University. John Mason visited Europe in the spring. There is a lot of other news. Let's share a few more bits of information.

- DON'T FORGET THE CALL FOR PAPERS -

NOTE ON MEMBERSHIP

We are approaching the 500 mark in paid Members and Associate Members. This year we hope to solicit extensively for new members. Please pass along the enclosed Associate Membership blanks to students or colleagues you think should be in N.A.R.S.T. New application forms for regular membership are being printed and will be sent to you soon.

FALL NEWSLETTER

NARST MEETINGS

NARST always holds a meeting in conjunction with the annual meeting of the American Association for the Advancement of Science. This year, the meeting will be held in Washington, D.C. on Thursday afternoon, December 29. Two specially prepared papers will serve as the basis for discussion: "Preparing Secondary Science Teachers for 1980". Try to come.

The Annual Meeting of NARST will be held in Chicago on February 24-26 at the Pick-Congress Hotel. John Mason, the program chairman, has sent out a call for papers. We expect to have an exciting and rewarding program.

ELECTIONS

The Nominating Committee composed of:

J. Darrell Barnard, Chairman
Frederic B. Dutton
Philip A. Rutledge

has placed in nomination the following persons:

For President-Elect:

Dr. Willard J. Jacobson
Department of Science Education
Teachers College
Columbia University

Dr. Joseph D. Novak
Department of Biology
Purdue University

For Secretary-Treasurer:

Dr. Richard Haney
Department of Curriculum and Instruction
University of Wisconsin, Milwaukee

Dr. Thomas W. Taylor
Science and Mathematics Teaching Center
Michigan State University

For Member-at-Large of the Executive Board:

Dr. David P. Butts
 Science Education Center
 University of Texas

Dr. Stephen S. Winter
 State University of New York
 at Buffalo, New York

For Research Coordinator:

Dr. Robert Howe
 Associate Director
 ERIC Clearinghouse for Science Education
 Columbus, Ohio

JRST EDITOR

The Executive Board of NARST will soon consider the recommendation of the JRST Editor Selection Committee for the selection of Dr. Stanley Marshall's successor. Dr. Marshall has asked to be relieved of this responsibility. He is now Associate Dean, College of Education, Florida State University. The JOURNAL OF RESEARCH IN SCIENCE TEACHING has established itself as a going and respected enterprise under Dr. Marshall's leadership. He merits the commendation of the membership.

COOPERATIVE COMMITTEE ON THE TEACHING
 OF SCIENCE AND MATHEMATICS

Dr. John S. Richardson, Coordinator for Science Education at the Ohio State University, has been appointed NARST Representative to the Cooperative Committee on the Teaching of Science and Mathematics, succeeding Dr. George G. Mallinson, Dean of Graduate School at Western Michigan University. Dr. Mallinson has been our representative since 1949, establishing an enviable record of service to both the Cooperative Committee and to NARST.

In submitting his resignation to President Sipe, Dr. Mallinson noted--

I want you to know that I appreciate the confidence that has been placed in me to serve the NARST. It has been a most exciting period during which to serve, particularly with the vast changes that have taken place in science education. I do not regret one minute that I have spent in the task but ultimately a time comes to call it off. This is it. Again, my thanks to the NARST.

The Association is fortunate to have among its membership individuals who can make significant contributions to the examination of national issues in science teaching.

MEMBERSHIP APPLICATIONS

Secretary-Treasurer Joseph D. Novak, Department of Biological Sciences at Purdue University, suggests that applications for membership be processed in the following way. The individual should file an application for associate membership, sending a \$10 check for dues with the application. If the applicant has research qualifications, he may wish to file also the longer personal data form. Applications for associate membership are acted upon immediately. The Journal subscription usually begins with the first issue of the volume corresponding to the next calendar year. That is, associate memberships processed in December 1966 will receive Issue 1 of Volume V of the Journal (1967). The applications for membership require the action of the Executive Board.

In recent years the Board has acted by mail at least once during the year and at the Annual Meeting. The nature of our affiliation with AAAS requires that the Board review the research qualifications of new members; by doing this members qualify for the title of Fellow, AAAS, if they are members of AAAS. The Secretary of Section Q of AAAS submits NARST nominations for Fellow status in AAAS.

AD HOC COMMITTEES

Some members have expressed concern over the difficulty encountered in making their wishes known on items of concern to the Association. Too many times, it is asserted, a decision has been made by intent or default without canvassing adequately the membership. President Sipe is encouraging the formulation of guidelines, arrived at through discussion and consensus, to assist the officers and the Executive Board. The time to generate alternatives is in advance of the Annual Meeting. At the Annual Meeting, with its short, business session, it is probably better to make a choice of alternatives. Prior to the Annual Meeting in Chicago on February 24-26, a number of members will be asked to serve on ad hoc committees dealing with some of our general concerns.

NEWS NOTES

John C. Mayfield, It is with regret that we report the death of John C. Mayfield. For many years he made important contributions to his field. He will be missed.

Luther A. Arnold, University of Florida, was a consultant and lecturer in a CHEMS Institute in India in 1965. He is educational consultant with the Florida Phosphate Council. He has evaluative studies of the Florida Science Fair Program and the Research Participation Program for Selected High School Students. underway. He recently received the alumni Distinguished Service Award from Augsburg College.

J. Myron Atkin, University of Illinois. Has recently been appointed Associate Dean of the College of Education. He will work in the areas of research and service. He plans to continue his work in science education research and development.

Gene Atkinson, University of Houston. Is in a new position as of September, 1966 and is working in Bureau of Educational Research and Services and teaching courses in general field of higher education.

Thomas G. Aylesworth, Doubleday and Co. Has recently accepted a position as Senior Editor in the Juvenile department of Doubleday and Co. He has also been appointed Senior Editor in charge of juvenile books for The Natural History Press of American Museum of Natural History and a member of the editorial board of The Natural History Press.

Lloyd M. Bennett, Texas Woman's University. Has been promoted to Associate Professor of Secondary and Science Education. He has completed a book on Elementary Science Instructional Materials and has studies of Secondary Level Counselors, a Secondary Curricular Study, and Marine Biological Science underway.

J. Joel Berger, has moved to 270 Jay Street, Brooklyn 1, N.Y.

Sam S. Blanc, San Diego State College. Has been appointed Assistant Professor at the School of Education. He will be teaching elementary science courses for teachers and supervising student teachers.

Ralph H. Blumenthal, Grumman Aircraft Corp. Has collaborated with Henry Semat in writing College Physics: A Programmed Aid, 4 volumes. The volumes will begin to appear early in 1967.

Sami I. Boulos, State University of New York College at New Paltz. Is collaborating on a book with Ned Bingham. He has a study underway of "Underachievement among College Students as a Function of Perceptual Disturbances".

H. Jess Brown, Salt Lake City Schools. Has taken a position as Science Education Specialist K-12 in the Salt Lake City Schools. During the summer he was Health Services Officer at the Northeastern Radiological Health Laboratory, Winchester, Massachusetts.

Stanley B. Brown, Southwestern Oregon Community College. Is Dean of Instruction and Science Area Consultant on a research project, "Comparison of Achievement in Science, Mathematics, and Language Arts in Secondary Schools of England, Scotland, Wales, and the United States."

Ernest Burkman, Florida State University. Is Director of the FSU Junior High School Science Curriculum Project. This is a major research and development project scheduled to continue for five years and result in a coordinated science sequence for grades seven through nine.

David P. Butts, University of Texas. Is program planning chairman for the Science Education ADD program of the Southwestern Educational Development Laboratory and Director and Network coordinator for the Curriculum Demonstration Network. He has underway a GOCARD Study and analysis of the impact of AAAS curriculum on students who have been in the program 0,1,2, or 3, continuous years, and inservice assessment of the impact on curriculum innovation on teachers, students, and classroom practices, a teacher adoption study analyzing the use of science materials and the transfer of methodology between discipline areas, and a longitudinal study of cognitive and attitude change.

John D. Cunningham, Keene State College, is Professor of Science Education. He is also Area Coordinator for the Florida State University Junior High School Science Curriculum Project and on the Board of Trustees of the New Hampshire Science Teaching Foundation.

Catherine W. Dale, Eastern Kentucky University, is Assistant Professor of Biology and is developing a documentation system for science education.

Jerry B. Davis, Hofstra University, is Program Coordinator of Science Education and Director of an In-service Institute for BSCS biology teachers.

Marjorie Gardner, University of Maryland, spent June and July teaching and consulting in a CHEM Study Institute at Vikram University in Ujjain, India. She also discussed developments in American science education at the University of Teheran, National University, and with personnel in the Ministry of Education in Iran. She is continuing her work as coordinator for the Teacher's Guide for the Earth Science Curriculum Project. She has also assumed responsibility as Chairman of the NSTA Science Teaching Materials Review Committee.

Claude W. Gatewood, Colorado State University, is engaged in the supervision of student science teachers and is Associate Director of the Colorado-Wyoming Junior Academy of Science. He is giving instruction in science methods and undertaking some status studies in science education.

Richard M. Harbeck, The Franklin Institute, is responsible for development and direction of educational activities of the Franklin Institute. These activities include program operation as well as the stimulation of research and development.

Zylpha D. Hulbut, Barber-Scotia College, is Chairman of a department of natural sciences that includes seven faculty members and almost 400 students.

J. W. George Ivany, Teachers College, Columbia University, is now Assistant Professor of Natural Sciences with special responsibility for the development of physical sciences education.

Arnold M. Lahti, Western Washington State College, is in the third year of a six year Longitudinal Study of the Effectiveness of Children's Experimentation and Learning of Selected Physics Principles.

Ethelreda Laughlin, Cuyahoga Community College, is Sciences and Mathematics Department Head. Studying the correlation between test results on such examinations as the Toledo Placement Test and future success in Chemistry courses.

Jerome J. Notkin, Hofstra University, has returned to a position as Director of the Astronomy and Space Science Institute after a term of service as Visiting Professor at the University of Hawaii.

Greta Oppe, Galveston Public Schools, has retired after fifty years of service as a teacher in the Galveston Schools. She has been honored as a Distinguished Fellow by the Texas Academy of Science and by the Texas State Teachers Association. Miss Oppe has just returned from the Orient where she

studied Lutheran World Federation Missions in Japan, Taiwan, Hong Kong, and Hawaii.

Ronald J. Raven, State University of New York at Buffalo, has just completed the initial phase of Research on Programming Creativity into Piaget's Mental Abilities.

Ernest D. Riggsby, Troy State College, has been appointed Project Coordinator for a Media Project. Granted a one year leave of absence to direct project work on the task of improving science curriculum for K-12 in Southeast Alabama. He is also writing a second in a series of programmed units in aerospace science.

James T. Robinson, Teachers College, Columbia University, is now Associate Professor of Natural Sciences with special responsibility for the development of biological sciences education.

SCIENCE CURRICULUM IMPROVEMENT STUDY

University of California

Robert Karplus and Herbert Thier are Director and Assistant Director, respectively, of SCIS. The SCIS unit MATERIAL OBJECTS is now available in a limited edition for D.C. Heath and Co.

Chester Lawson, is Director of Life Sciences Program.

Luke Steiner, is Director of Physical Science. Several NARST members are Coordinators of SCIS Trial Centers:

Julian Brandou, Michigan State University Trial Center

Albert Carr, University of Hawaii Trial Center

Stanford Davis, UCLA Trial Center

John Renner, University of Oklahoma Trial Center

Mary Rowe, Teachers College, Columbia University Trial Center

Willard Jacobson, Director of Teacher Education for SCIS.

David Stoppel, University of Minnesota Technical Institute, Crookston, is Chairman of the General Education Division of this new Technical Institute. He is planning an evaluation of the new program of study in general education, agriculture, and business.

Zachariah Subarsky, MINNEMAST, University of Minnesota, returned to the United States after a 3½ year assignment with the Ford Foundation helping to set up a science teacher service and in-service training center in East Africa. Now, appointed as Associate Professor of Biology at the University of Minnesota and assigned to MINNEMAST.

Robert B. Sund, Colorado State College, has co-authored with Leslie Trowbridge a book entitled Teaching Science by Inquiry in Secondary Schools. The book is being published by Charles E. Merrill Books, Inc. He is directing a project to individualize BSCS Green Version Biology. He is also to direct a study designed to develop an inquiry junior high school biology course. He was on leave for the 1965-66 academic year studying at the University of Geneva with Piaget and Inhelder and at Harvard University. In the summer he gave a six week course at the College of Guam.

Leslie Trowbridge, Colorado State College, has been appointed Chairman of the Department of Science Education. He has co-authored with Robert Teaching Science by Inquiry, and they are also collaborating in a study to individualize elementary science methods classes.

William C. Van Deventer, Western Michigan University, is engaged in the development of "Open-ended Laboratory-Centered Science Investigations at the Junior High School Level." The preparation of these investigations is directed toward a limited number of "Cross-Cutting Ideas" in two or more fields of science. At the present time the research centers on methods of evaluation of student attainment of the selected ideas.

Alan M. Voelker, University of Wisconsin, is engaged in concept learning studies with elementary school children directed at conceptual change.

Paul W. Welliver, North Carolina State Department of Public Instruction. Work centers primarily around curriculum bulletin writing and using television for primary grade science instruction and teacher in-service training.

Paul Westmeyer, Florida State University, is Professor and Head of the Department of Science Education and also Director of the AAAS in-service Project materials, co-author and supervisor of excursions for the FSU Junior High School Project, and is engaged in the analysis of data collected in the 1965-66 AAAS dissemination project in Florida. He has under preparation monographs for junior high school science and a junior high school physical science textbook.

Robert N. White, Clarksville, Indiana, High School, is studying the relative effectiveness of classroom activity variables relative to student achievement increases.

Leon Winslow, Greenville College, served as Director of the 1966 Shell Merit Fellowship Program at Cornell University. He has been a featured speaker at several professional meetings.

Stephen S. Winter, State University of New York at Buffalo, is now a full Professor. On leave to Harvard Project Physics where he is working in developing a semantic differential instrument to assess science interest among students.

Roger L. Wood, Wisconsin State University, Stevens Point. Newly appointed assistant Professor at this institution.

John H. Woodburn, Chevy Chase, Maryland, is inviting any and all to join in two research and development projects: (1) The development and standardization of a test to measure student knowledge and, hopefully, proficiency in methods and procedures of science. (2) Identification of the factors which seem to influence students to or not to elect chemistry, physics, second level biology, earth science, and other primarily elective science courses.

Robert E. Yager, University of Iowa, is heading one of five test centers for the new FSU Junior High Curricula Project. Collecting data from the initial use of the Iowa Science and Culture Study in the University of Iowa laboratory school. The revised materials will be used and evaluated in a number of pilot schools during 1967-68.

Warren E. Yasso, Teachers College, Columbia University, was appointed Associate Professor of Natural Sciences with special responsibility for the development of earth sciences education.

There will be more NARST NEWSLETTERS. Send news of you and those you know to our president:

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We want to hear from you.

Willard Jacobson,
Editor for this Issue