

PREFACE

This volume is the edited proceedings of a research conference which explored "The Relationships between Speech and Learning to Read," sponsored by the Growth and Development Branch of the National Institute of Child Health and Human Development and held May 16 through 19, 1971, at Belmont, the Smithsonian Institution's conference center at Elkridge, Maryland. The conference was organized by Drs. James F. Kavanagh of the Growth and Development Branch and the Cochairmen, Alvin M. Liberman and James J. Jenkins; Franklin S. Cooper and Ignatius G. Mattingly also participated in the early planning sessions.

The National Institute of Child Health and Human Development (NICHD) is one of the ten mission-oriented National Institutes of Health (NIH), the research arm of the Public Health Service in the Department of Health, Education, and Welfare. Since it was established in 1963, the NICHD has vigorously stimulated, developed, and supported basic biomedical and behavioral research that has extended our knowledge of child health and human development. The Institute has been concerned with both normal and certain pathological processes and with the whole individual as well as with specific systems. From such knowledge and understanding gained through relevant research have come rational guides for optimizing normal human growth and development as well as establishing appropriate diagnostic, treatment, and ameliorating procedures.

As a significant part of this research effort, the NICHD has supported basic investigations that are leading to a better understanding of the processes whereby individuals acquire and develop the ability to communicate, particularly with language, and the role of communication in human growth and development.

The conference series, "Communicating by Language," has been an integral part of this important research program. The first meeting in the series, which was held at Princeton, New Jersey in 1964, was an interdisciplinary exchange between scientists who were actively engaged in studying the Speech Process. (The edited transcript is now out of print.) The second conference, which was convened at Old Point Comfort, Virginia in 1965, examined Language Development in Children from a psycholinguistic point of view. (The proceedings were later published by The M.I.T. Press as *The Genesis of Language*.) The third conference in the series, held in New Orleans in 1968, was an informal, interdisciplinary meeting of experts who were concentrating their research efforts on the Reading Process. (The proceedings were published by the Government Printing Office as *Communicating by Language*.)

The Reading Process.) By means of each of the four meetings and the resultant publications, the Institute has attempted to determine existing and potential directions for research in particular aspects of human communication, and to identify the roles which various disciplines can and do play in expanding that knowledge, both independently and jointly.

The point of departure for this, the fourth conference was the contrast between the ease with which most children acquire speech and the difficulty they generally have with reading. By comparing the processes that underlie these forms of linguistic communication, and by studying the relationships between them, we hope it will be possible to understand better why so many children who can listen and speak so well should find it so very difficult to read and write. Our aim is to reveal what is now known about this comparison, and by framing the important questions, to stimulate appropriate and useful research.

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Due to a sudden illness, Dr. Martin was unable to attend the conference, but his paper included in these proceedings was orally summarized by Dr. John Lotz and then discussed by the conferees.

Some of the data reported in Dr. Crowder's paper were collected with the support of grant GB 15157 from the National Science Foundation. Dr. Crowder would also like to thank the Academic Press, Inc. for its permission to reprint Figure 3 from R. G. Crowder. The role of one's own voice in immediate memory, *Cognitive Psychology*, 1970, 1:157-158; and Figures 1 and 2 from R. G. Crowder. The sound of consonants and vowels in immediate memory, *Journal of Verbal Learning and Verbal Behavior*, 1971, 10:587-596.

Dr. Gibson's work was supported in part by a grant (USOE OEG-2-9-420446-1071-010) from the U.S. Office of Education. Dr. O'Neil received support through grant MH-13390-04 from the National Institute of Mental Health.

Dr. Halle acknowledges assistance received from the National Institute of Child Health and Human Development (5T01 HD 00111) and from the National Institute of Mental Health (MH-13390). Dr. Halle also wishes to express his appreciation to Professor Willard Walker for permission to use portions of an unpublished paper entitled "An Experiment in Programmed Cross-Cultural Education."

Dr. Posner's research was supported in part by the National Science Foundation under grant GB-21020, and by the Air Force Offices of Scientific Research under contract F-44620-67-0099. Dr. Posner and his coauthors also wish to thank Dr. H. K. Beller and Dr. B. Schaeffer for permission to use their unpublished data, which appears in Figure 1 of the Posner paper.

Some of Dr. Kolers's remarks were first developed at Project Zero, Harvard Graduate School of Education. Their preparation was aided by a grant from the National Research Council of Canada. Dr. Kolers also acknowledges the permission given him by the American Psychological Association to reproduce the material which appears in Table 1 of his paper.

Dr. Mattingly wishes to acknowledge support from the National Institute of Child Health and Human Development (NIH), Office of Naval Research, Veterans Administration, and the Provost and Fellows of King's College, Cambridge. He also wishes to acknowledge permission from Holt, Rinehart and Winston, Inc. to quote a passage from *Linguistics and Reading* by C. C. Fries.

Preparation of Dr. Gough's paper, and some of the research reported therein, was supported by NSF-USDP Grant GU-1598 and NSF Grant

GU-3285 to the University of Texas at Austin. Dr. Gough also wishes to express his gratitude to Jack Lumbley for his assistance in combing the literature on reading acquisition, and to Dennis McFadden for valuable hours of discussion of the "second of reading" under consideration.

Preparation of Dr. Klima's paper was supported in part by the National Science Foundation under Grant GS-2982. Dr. Savin is especially indebted to his colleague Paul Rozin both for useful discussions about a dozen children they worked with together and for his further observations of other children. The work reported by Dr. Shankweiler was supported in part by a grant to the University of Connecticut from the U.S. Office of Education (principal investigator, I. Y. Liberman) and in part by a grant to Haskins Laboratories from the National Institute of Child Health and Human Development. Many of the ideas expressed in the Shankweiler presentation were contributed by colleagues at Haskins Laboratories in the course of many discussions. A. M. Liberman and L. Lisker read a draft of the paper and made many valuable comments. Their help is gratefully acknowledged.

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Finally, the editors would like to thank Miss Betty Barton and Mrs. Meryom Lebowitz for their help in planning and arranging the conference, Mrs. Mary Ellen Elwell for her careful typing of parts of the manuscript of this volume, Mrs. Christine Donnelly and Mr. Gary Kuhn for technical assistance in editing the manuscript, and above all, Mrs. Marian Young for her invaluable help in the preparation both for the conference and for this book.

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