This book has all the advantages and disadvantages of any "state of the art" collection. In its favour is that it allows imaginative authors to escape the stylistic and formal constraints of a journal article to say something in a distinctive and "unbuttoned" way. Perhaps only Marks, Potts et al. and Restle fully grasp the opportunities offered. On the negative side, it is hard for anyone, let alone the authors, to say how much of the thinking contained here will turn out to be significant and lasting. The intellectual rigour of this type of work is impressive, but one sometimes wishes that the authors felt more of a duty to sell this kind of research to the wider psychological community. It is sometimes all too easy to believe that they inhabit an encapsulated and self-perpetuating universe of discourse.

JOHN SLOBODA


The problem with attempts to improve communication between basic researchers and practitioners "in the field" is that practitioners want facts; but what basic researchers have to offer is theories. Nevertheless, in 1976 the U.S. National Institute of Child Health and Human Development bravely sponsored a conference on speech and language which was designed to bring together those engaged in basic research in this area, and those in a position to apply research results in the school and the clinic. This volume reports the conference proceedings and is the latest and by no means the least in a series of admirable NICHD conference reports (see e.g. Kavanagh and Mattingly, 1972; Kavanagh and Cutting, 1975). The specific aim in this instance was "to summarize the current status of knowledge resulting from basic research in speech and language in a form that would be intelligible to clinical practitioners and classroom teachers" (p. 466). Thus the book contains nine state-of-the-art reports by leading researchers, most of which conclude with "implications for the school and clinic"; each report is followed by a discussion paper prepared by a specialist in a somewhat more applied line of work.

In a post-mortem Chapter 3 of the conference organisers, Jenkins, Liberman and Curtis, announce a change of mind about the conference's purpose. During the conference they realised that (i) basic researchers and clinicians are not in fact different people; (ii) the research methodology in basic and applied research is essentially identical; and (iii) clinicians are in any case well clued up on basic research—certainly better than basic researchers are informed of clinical developments. But their particular sample from the clinical population is hardly representative; most of the discussants—Labov! Zurif!—have made notable contributions in "basic" research. What Jenkins et al. really want to announce, although not in so many words, is that their original goal of a cookbook of techniques for practical application is and always will be impossible to achieve.

In its place they offer the present volume as a handbook which will be of use to clinical researchers and teachers of practitioners. I think that this is an unnecessarily modest claim. The book should still be of interest to the practitioner despite its lack of instantly applicable recipes. It is certainly accessible—the contributions are in most cases exception­ally well-written (Bransford and Nitsch explain how mentioning an example which was used to teach a particular concept can facilitate understanding when that concept comes up in another context, and conscientiously follow their own advice), and are still pretty much up to date four years after the conference (Crowder's discussion of phonologic: recoding in reading presents it as an optional strategy, a view which has become generally accepted in the past couple of years—see Coltheart, 1978). Furthermore, the book should be valuable to students and to all for whom authoritative reviews of research in this field can be of use.

Crowder's chapter (Language and memory), for instance, or Bransford and Nitsch's (The role of context in understanding), though they report work easily accessible elsewhere, are
comprehensive and cogent summaries. They also typify the scale of topic, which is the
sub-area; thus Harris presents a thorough discussion of the physiological aspects of speech
production; Cutting and Pisoni offer an eloquent plea for an information-processing approach
to speech perception. Only one participant chose, or was stuck with, a topic of markedly
larger scope than the others; it is no surprise that Bloom's attempt to cover the greater part
of the field of language development is at a rather more superficial level than the other
contributions. A certain amount of theoretical bias is of course apparent throughout—
Stevens, in an otherwise excellent discussion of speech acoustics and their relation to produc­
tion and perception, does not mention speech rhythm or the considerable body of research
on stress-timing; Miller on lexical meaning strives to cover every approach but gives rather
shorter shrift to opponents of semantic decomposition than to its advocates. However, the
very eminence of the contributors ensures that their contributions are not only certain to be
well-informed, but also highly likely to be right. In short, this is a very useful book for all
engaged in work, whether pure or applied, in speech and language.

Anne Cutler

References

Kavanagh, J. F. and Cutting, J. (1975). The Role of Speech in Language. Cambridge,
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Copeland, R. W. How Children Learn Mathematics: Teaching Implications of Piaget's
0 02 978690 8.

This book is intended by the author to provide, in his own words, "at least a beginning"
for "a program of mathematics instruction that implements the research of Piaget". From
the point of view of teachers, two major difficulties in making use of this research are the
great volume of publications in which the research findings are presented, and the difficulty
of understanding them. A number of authors have undertaken the task of presenting
Piaget's ideas and results in a form suitable for use by the teaching profession. In the field
of mathematics, the present book is the best of this kind which I have yet read.

It keeps closely to the Piagetian position, and thus embodies most of the strengths and
weaknesses of its source. I am not myself a Piagetian: but a short book review is no place
to embark on a discussion of points of disagreement with his theoretical formulations. This
needs to be done thoroughly or not at all: so here let us concentrate on the strengths. These
include the insights which Piaget has given us about the differences between children's and
adults' thinking, and the stages through which concepts develop to the forms which they
take in the culturally shared body of adult knowledge. This is very important for mathe­
matics teaching, in view of the particularly abstract and hierarchical nature of mathematical
ideas. Even more important are the many experiments, often of a classic simplicity, by
which the nature of children's conceptual structures may be inferred from their verbal and
other behaviour. These stages (as formulated by Piaget) are fully and clearly described by
Copeland; and so are a large number of experiments, which the reader is encouraged to try
for himself.

This recommendation I fully endorse; though not quite for the same reasons as Copeland,
who writes (p. 13): "The psychological training so necessary to primary-grade teachers
cannot be obtained unless the students have the opportunity to engage in research themselves.
One cannot learn child psychology without participating in research...." If by research
is meant the discovery of new facts or the achievement of totally new knowledge and under­
standing, this (as all researchers know) is very timetaking, and is not the best way to make