REVIEW ARTICLES

Adrianne Lang (ed). Studies in Psycholinguistics I
University of Papua New Guinea, Department of Language
Occasional Paper No. 4, 1975; and Studies in Psycho-
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Joseph F. Kess
University of Victoria

The papers in these two volumes present the results of research,
both library and experimental, carried out for a course in language
acquisition and development held in 1974 and 1975. The results of
each course are the two corresponding volumes, Studies in
Psycholinguistics I and Studies in Psycholinguistics II (henceforth I
and II respectively). The papers are said to deal with topics of
interest to students of child language in the classes and represent
their attempts at interpretation and criticism of recent ideas in
developmental psycholinguistics. These ideas are held up to critical
review both on the basis of literature search as well as experimental
tasks posed and carried out by members of the classes. According to
the editorial introduction in Volume I, "These papers represent a
first attempt to present work on language acquisition in Papua New
Guinea." It is somewhat disappointing to note that much of the work
presented deals with an elaboration of the same experimental tasks
carried out in English elsewhere and largely represents an extension of
this work in English in Papua New Guinea. One would have been
particularly grateful had the work been carried out for indigenous
languages of Papua New Guinea itself, and one would expect that this
would be the direction for future research. It is in this latter area
of non-Indo-European linguistic structures that the field of
developmental psycholinguistics needs continuing input in terms of data
and new reinterpretations.

One lauds the attempt to engage students so directly into the
most dynamic and most durable of psycholinguistic endeavours, the

study of language acquisition by children. To engage students in direct participation at an early stage in their careers may have the effect of stimulating their interest in the most direct and tangible fashion possible. It must, of course, have its shortcomings, especially in view of the fact that "this was a first course in linguistics for most of the contributors, and their efforts should be viewed as preliminary attempts rather than judged as polished performances" (II:i). Part of the problem with psycholinguistics is that it is an interdisciplinary enterprise and often one practiced more directly by psychologists than by linguists. The lack of linguistic experience or psychological experience is a serious drawback, but introducing current and controversial concepts at early stages may serve to jostle potential participants in the field toward a synthesis of our findings more quickly than has been the case heretofore.

It should be noted at the outset that the titles of some papers in the table of contents are incorrect. This is true for both I and II. Specifically, the articles by Tongia and Easton in I and Craig and Lacey in II are incorrect in terms of the title given in the table of contents and the title given at the head of the article as it appears in the collection. There are also a number of other typographical and stylistic errors, but these need not concern us here. Some errors do, however, present a certain nuisance value. For example, in Craig's article (II:5) reference is made to (Lang, 1975:1); this, however, is missing both at the end of the article and in the bibliography and the reader has no idea where to look.

Turning specifically to the papers presented in I, the first report by Kale on the speech of a 16-month-old-child is a study in the development of infant speech. One child between the ages of 16 and 19 months, growing up in a bilingual situation in English and Tok Pisin is assessed in terms of her general linguistic development. Several main features were kept track of, namely, holophrastic speech, intonation and phonology. Each time the child utilized a 'word',

dates and contexts were noted. As a result, the ways in which words
were first employed and subsequently utilized are presented, making
for an interesting representative inventory of how the development of
speech between these critical months takes place. The information
contained in the appendix also makes for an interesting chronology of
word appearance and the development of concepts attached to their
uses.

The second article, by Tongia, on 'The Phonology of a 3 Year
Old Papua New Guinea Child' essentially replicates an earlier study in
extracting a corpus of 332 utterances and transcribing them. This
represented a tape-recorded segment of 4 hours in duration from the
author's child. The utterances were transcribed more or less
phonemically, though the author shows some hesitation in declaring
the amount of phonetic detail. The study has interesting overtones,
for the subject has English as his first language but also has two
other languages (Kalo and Roro) in his immediate environment and comes
into contact with Motu and Tok Pisin at school. This is exactly the
kind of data that we need so much more of; more emphasis should be
placed on the input derived from these other languages and their
effect on the learner's acquisition of English. Cross-cultural and
cross-linguistic studies which match up English-speaking children who
have such substratum and superstratum input would indeed be a welcome
addition to the current state of developmental phonology. As it is,
despite Tongia's apologia pro transcriptione sua, the data presented
in the appendix is interesting. One finds validation here for
observations that have been made regarding the child's phonological
shapes for words; for example, simplification of consonant clusters,
elimination of final consonants, reduction of unstressed syllables
and so forth. Certainly such data has its uses, if only to service
further generalizations in developmental phonology.

The third article in I is 'The Correction of Errors in the
Speech of a 6 Year Old Child' by Easton. This article is a report
based on observations of a single child's spontaneous speech at home.

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The data was collected over ten weeks with the aim of investigating
the occurrence of so-called errors in the child's speech. The
working hypothesis which forms the basis of the article outlines an
assumption that children exposed to correct adult models of speech
will modify their speech in accord with the reduction or non-
re-occurrence of errors. It is difficult to know exactly what the
point of the exercise is, especially in light of studies by Cazden
regarding expansion, imitation and elaboration.

There can be little question that children at early ages, in
fact even up to the ages of 9 and 10, produce and perceive sentences
in ways different from that of their adult counterparts. In times
past, this may have been considered error but with the development of
interest in stages, syntactic and semantic development has taken a
Piagetian turn. The psycholinguist's attempt to characterize the
linguistic abilities of children at different stages resembles the
way that an anthropologist might describe a distinctive culture in
a distinct fashion. However, in the case of the child the stages are
many and not necessarily sequential; nor do they necessarily overlap.
Of course they do not correlate exactly with that of adult speech,
since they represent sequential milestones of both syntactic and
semantic development. Thinking of them as errors misses the point
entirely.

The author also notes that one child "appeared to have acquired
adult-like speech 'overnight'" (I:36). This is reminiscent of
Piaget's conservation of matter experiments in the finality of their
exchange of one stage for the next. There also seem to be analogies
in the development of semantics; it seems that certain features or
stages appear with the speed and decisiveness of the 'Aha' experience
so that the child simply never returns to the preceding stage. While
one doubts that adult speech characteristics appear in toto
'overnight', it does seem that certain selected characteristics may
have this startling decisiveness in terms of their appearance.

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Easton presents a taxonomic listing of the 'errors' observed and provides a means of classifying them as well. Once again, one would have wished to have these items described as something other than 'error' and while one may agree with the observation that "these could be used as the basis for further research," it is difficult to see how they could be used even "if one was involved in teaching young children" (I:36). It depends on what one means by teaching. If teaching means being aware of what linguistic stages characterize the child's linguistic abilities at different ages, then such observational listings may be handy indeed. If, on the other hand, it means trying to correct the so-called 'errors', there is the danger of believing this to be possible. Evidence to date shows direct tuition of very young children has little or no effect.

The final article in I on 'The Child's Acquisition of English Morphology' by Fenton and Warkurai presents a replication of the classic Berko experiment in 1958. Like Berko, Fenton and Warkurai hypothesize that children at an early age have internalized the working rules of English morphology, at least the inflectional rules and to some degree the derivational rules. Primary school students aged between 6 and 12, speaking English as their first or second language, served as subjects in the experimental replication. The findings, though somewhat limited, show 'no great difference between the scores obtained by first and second speakers of English' (I:54). According to Fenton and Warkurai (ibid.)

> "It would appear that standard 5 and 6 pupils who have acquired English as their second language have nevertheless had enough exposure to English morphology to be able to apply working rules of English grammar as widely and correctly as native English speakers at the same education level."

Papua New Guinean children show little variation in the correct responses as matched to their Australian classmates. This is one of the highlights of this study and is exactly the kind of information that one is grateful to have to flesh out our knowledge of developmental morphology under the possible influence of other languages.

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Findings regarding inflectional morphology seemed fairly straightforward. However, findings regarding derivational morphology, with all the vagaries attached to the seemingly stable patterns in derivational morphology, offered some degree of variety. One would have suggested that some of the items in the Berko test be replaced; for example, Thanksgiving, a North American holiday, might have been replaced in Fenton and Warkurai's adaptation of the test. However, this same criticism can be levelled at Berko's original selection of derivational items; the word Friday might have been eliminated from the New England children's list that Berko originally used. For children from the ethnic enclaves of South Boston, Friday may have in 1958 recalled the liturgical injunction against eating anything but fish on Fridays; for such children Friday was probably a day of fried fish. For children of other ethnic groups and/or social classes, such a derivation would have been a non sequitur and both semantically and derivationally the word may have evoked vacant reactions. For this and other reasons such items might have been usefully eliminated from the original and this subsequent test as well.

Studies in Psycholinguistics II presents a somewhat different set of papers dealing with other topics in the field of child language acquisition. The first of these papers, 'Questioning in Child Language' by Craig, discusses the role of questions for children aged between 2 and 8. It also elaborates the functions such questions fill in the language of the oldest subjects. Craig notes her reliance on linguistic context as well as common sense in attempting to interpret such utterances. This is not a new problem, but one which is encountered at all stages of early linguistic development. It is, of course, the basis for the "rich interpreta-tion" criticism and subsequent modification of our analysis of the two-word stage in child language. Children using the same structures in their formal sense may in fact mean different things and our analysis of these structures has to be reinterpreted on the basis of what we know of the environment, the child's set of working

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strategies, and common sense. Even at that, it has been pointed out by Howe (1976) that we are not always sure exactly what the child intends to mean, for his world may be and often is structured differently from ours.

Craig's work with questions presents its most interesting face when she deals with the functions of such questions in her analysis of the oldest of the four male subjects' questions. She divides such questions into two groups: real questions which make requests for things, ideas, information, and so forth, and repair questions which are conversational gambits. Her analysis is refreshing and provides rich examples of the speech act functions of questions at the early age of 8 to 9 years. One would suggest a complementary reading of Bates' recent (1976) book Language and Context: The Acquisition of Pragmatics. It is unfortunate that it had not appeared to provide some direction in this rapidly burgeoning field; however, Craig has still managed to provide her own working classification for dealing with this area.

The second article, by Lacey, is entitled 'Is a Competence / Performance Contrast the Best Way to Look at the Language of Young Children?' The paper deals with the problem of how children internalize rules for word order in English and investigates the stages by which we can say they actually possess such knowledge of word order rules. Lacey's inclusion of questions raised earlier by Bever (1970), in contrast to the then more popular views presented by psycholinguists like McNeill (1970), is somewhat less clouded now. Most work in psycholinguistics now seems to follow a cognitive path of reasoning. Here it is instructive to note predictions by Maclay (1973) and Reber (1973) which pointed out that it would probably be a cognitive point of view which would take the day in a theoretical and methodological sense. This has been indeed the case and we now consider the development of language as being not separate from but rather tied together with the general cognitive and intellectual development of the child. One sees the development of linguistic

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abilities as simply part of a larger panoply of unfolding abilities which characterize the progress of the maturing human organism on its path to full and complete realization.

Lacey used five subjects, children between the age of 2 and 4, and tested for abilities in several areas: simple active sentences, reversible passives, correct and incorrect word order, and numerical inequalities. The first three types of study each have a fairly lengthy literature associated with them, but the fourth topic chosen, the ability to judge numerical inequalities, does seem an anomaly. It is difficult to judge where we should place the resultant data, for germane to this topic are the by now classic studies by Donaldson and Balfour (1968), Donaldson and Wales (1970), and the recent study by Palermo (1973). These studies found that antonymic opposites like more or less are not treated as antonyms by children at young ages (between 3 and 4) but are instead considered synonyms such that more and less mean much the same thing. Palermo later replicated the experiment with seven-year-olds and discovered that fully 19% of such children did not perceive the difference between more or less in a semantic sense. Thus, one wonders what the results would be when numerical inequalities were chosen as a task and children were to respond to questions like "which row has more?" While the positive (more) was usually correctly assessed in the early studies, the negative (less) was not. On the basis of such previous evidence one hesitates to include the data from this task as being generally informative.

Lacey's general conclusion that "The influences of language and cognition seem to be mutually important in the child, one cannot really be considered without the other" is well taken (II:20). There can be little question but that certain perceptual strategies develop at certain points in time and much of the child's developing set of linguistic abilities really reflects his developing set of perceptual abilities as well. Indeed, the parallel is true for adults and many of our arguments regarding questions of semantic well-formedness

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really revolve around notions of sensibleness and world knowledge. Other questions like text topic, discourse, presupposition, and so forth, revolve partly around world knowledge as well as the ability to referentialize what the ongoing information passed in any set of conversational strategies happens to be.

The paper by Maack, 'A Study of Input', deals with the language used by adults when addressing children. An extremely current topic, work on mother-child interaction and caretaker speech addressed to young children has culminated in a recent volume by Snow and Ferguson (1977; see also Kess, 1978). Maack assumes that adults modify their language in addressing young children; the same seems to have been validated both in English and other linguistic settings (see Snow and Ferguson, 1977). Maack's data is not large, including only 50 utterances, but she does claim to support the notion that parents modify their language to children. Secondly, perhaps even more important, the complexity increases as the age of the child increases. This also reflects some of the considerations presented in the last paper, namely, that as the child's cognitive abilities increase, as his perceptual strategies multiply in number and as his ability to cope with the world grows, so also does the speech addressed to him reflect this fact. Parents and caretakers interested in the communicational aspect of their interaction are well aware of what it is that children do and do not understand at certain stages. It is probably not the case that such simplified scaled-down versions of speech reflect grammar lessons presented by adults at these early stages, but rather simply reflects the pragmatic exigencies of dealing with young children, hoping to have them attend and respond in the appropriate fashion. One other conclusion which derives from this kind of study is that the observation by Chomsky and others that the child is exposed to a deformed corpus, much filled with mistakes and ungrammatical sentences, is not the case. The child is exposed to relatively well-formed grammatical structures at each of the series of points in his linguistic development, but it would seem that the

complexity of the structures involved at each of these points in
fact moves from less complex to increasingly complex, in accord
with the child's general set of perceptual abilities.

The last study in II is 'Phonological Rules in Child Language'.
This describes an examination by Pagotto of a child's phonology at a
particular stage in his phonological development. Much is made of
Jakobson's (1968) work with child language, aphasia and language
universals. Jakobson suggested that phonological development
proceeds by a series of oppositions, much like the notion of
distinctive features in general; and once the child has appreciated
a distinctive feature difference he then applies it in all instances
to his burgeoning set of phonological units. There is support both
for and against Jakobson's notions in terms of the actual oppositions
which do occur and when. Moreover, experimental accounts presented
by Eimas (1975) show the child's discriminatory appreciation of the
phonological opposition of voicing at the infant stage. We are not
quite sure as to what the reading of Eimas' data should be, but the
child does seem to have some kind of discriminatory abilities at an
early stage, which then seems to be passed over as the child progresses
through other phonological stages.

One of Pagotto's goals is observing how the subject produced
both new and familiar words and how the results compare with his
phonemic systems at several stages. Here an interesting corollary
reading is to be found in Smith (1973) who records his own son's
perceptual abilities. It would appear that young children store
their words in phonological shapes very much like that of the adult
shape, or as far as their reflection of the adult shape allows
them to, but when it comes down to producing the actual phonological
item it turns out to be filtered through what the particular stage of
child phonology is that the child is at. Pagotto also presents some
examples of substitution rules by which children simplify adult
words.

In conclusion, one can say that these two volumes present some

data which may serve for future generalizations. Some of the topics
chosen represent either classical problems or problems found at the
very frontiers of present psycholinguistic research, though their
resolution is somewhat tempered by the fact the papers presented are
by students with a minimum of training. Lastly, one waits eagerly
for the application of research efforts to areas promised in the
introduction to the first volume where it is said that "these papers
present a first attempt to present work on language acquisition in
Papua New Guinea," presumably from the Austronesian and Papuan
languages of the country. Much of the work to date unfortunately has
been carried out in English and other closely related Indo-European
languages and the generalizations which we can draw from such studies
are obviously limited by that very fact. The greater the amount of
data forthcoming from non-Indo-European languages, the greater
the security with which we will be able to make meaningful
generalizations about the nature and scope of linguistic development,
and one looks forward to such reports from Papua New Guinea.

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