ABSTRACT

        Mongoloid children appear to be useful candidates for
studying difficult methodological problems found in developmental
research. They represent a subpopulation in which general development
is markedly slower than in the normal child and in which language
development appears to be more dependent on age than general
intellectual development. This report discusses some important
considerations for studying a child with a restricted linguistic
system, including data collecting, segmentation and glossing of
utterances, and speech style. The subject of this study was a
five-and-a-half-year-old mongoloid boy who was studied over a two-day
period, and from whom 270 utterances were collected. Forty percent of
the child's utterances were intelligible and could be segmented by
intonational contours, pauses, change of speakers, and mean length of
utterance. Establishing new criteria for glossing unintelligible
utterances enabled most of the rest of the corpus to be glossed. An
analysis of the glossable utterances classified as conversation
showed that the child's style was characterized by: (1) volume
changes, (2) phonetic changes relating to the other person's speech,
(3) rephrasing when misunderstood, (4) vocal and gestural annoyance,
and (5) gestures complementing the conversational context. A summary
of the phonological analysis is provided. (Author/LG)

THE PHONOLOGICAL SYSTEM OF A FIVE YEAR
OLD MONGOLOID BOY

Ann Bodine*

Mongoloid children appear to be useful candidates for studying difficult methodological problems found in developmental research. They represent a subpopulation in which general development is markedly slower than the normal child with some areas of development arresting in early childhood. The development of language in mongoloid children appears more dependent upon age than general intellectual development (Lenneberg, Nichols & Rosenberger, 1964). This report by Bodine[1] discusses some important consideration for studying a child with a restricted linguistic system. The topics discussed include data collection, segmentation and glossing of utterances, and considerations of speech style.

Two hundred and seventy utterances were collected from Tommy, a five and a half year old mongoloid child (Downs Syndrome) over a two day period. A wireless microphone was used to improve the quality of the recordings and to avoid restricting the child's activity. In addition, contextual and linguistic information was recorded by hand to supplement the tape recordings. This supplementary information included the phonetic transcription of all utterances spoken by or to the child.

The tapes were transcribed using a loop tape. Forty per cent (108) of the utterances were reasonably intelligible and could be segmented by 1) intonational contours, 2) pauses, and 3) change of speakers. These criteria were not totally adequate and, as a result, mean length of utterance was also used. The remaining sixty per cent of the utterances were generally unintelligible to an adult speaker of English unfamiliar with Tommy's linguistic system. To gloss the remaining corpus it was necessary for the experimenter to spend considerable time with the child and to establish new criteria for glossing unintelligible utterances. Unintelligible utterances were glossed according to the following criteria:

1) Utterances which were only partially intelligible were considered as a glossable utterance.

2) Utterances which consistently occurred in the same extra-linguistic context were considered glossable utterances.

3) Utterances which were spoken with insistence by Tommy indicating communicative determination and content were considered glossable utterances.

The above criteria allowed most of the corpus to be glossed although some utterances remained unglossable.

Summarized by Donald M. Morehead

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The corpus was also analyzed according to the use of different types of linguistic style. Approximately eighty-five per cent of Tommy's glossable utterances could be classified as conversation. The conversational style was characterized by 1) volume changes, 2) phonetic changes relating to other person's speech, 3) rephrasing when misunderstood, 4) vocal and gestural annoyance, and 5) gestures which complemented the conversational context. Almost all of the remaining utterances could be classified as self speech, imitation, or restricted style. Restricted style refers to using a style that is neither language nor culture bound but rather reflects individual or family styles. For example, Tommy's "tea party" style consists of rocking and saying p -p -p while drinking tea with his father. The exact frequency and length of utterance for the speech styles is given below in Table I. Self speech was found to be considerably longer in syllable length than conversation or imitation. This difference either reflects a segmentation problem or suggests that "gibberish" is sequentially rather than hierarchically arranged, resulting in a reduction on memory load.

Table I

	Utterances	Syllable Utterance	Syllable Range Utterance
Conversation	220	1.43	1 to 12
Self Speech	26	2.42	1 to 15
Imitation	14	1.93	1 to 4

A phonological inventory derived from the glossed utterances in the corpus is listed below. The inventory provides a general rather than a detailed phonological analysis.

Consonants

Utterance Initial

/m/	/n/
/b/	/d/
	/š/
/h/	/y/
/w/	

Utterance Initial - Syllable Final

/m/	/n/		
/b/	/d/	/ʒ/	/g/
	/š/		
	/y/		

Utterance Medial - Syllable Final

/m/	/n/
/b/	/d/
	/š/

Utterance Final

| /b/ | /d/ | /ʒ/ | /g/ |
| | /š/ | | |

Consonant Clusters

Within Syllable	Across Syllable
št___	n-d
___ šk	š-m
___ nč	š-x
___ kč	ŋ-č

Vowels

(i, I)

     (ü,   ɨu, IƱ   u,Ʊ)

(e, E, ɛ)

             (Ʊ, o, ʌ, ɔ)

       (ɜ, ə, a   ɔ, ɒ)

(æ)

      (eḭ)

NOTE

[1] A study completed during a special program on Language, Society and the Child at the University of California, Berkeley, 1968.

BIBLIOGRAPHY

Lenneberg, E., Nichols, I., and Rosenberger, E., Primitive states of language development in mongolism, in D. McK Roich and E. Weinstein (Eds.), Disorders of Communication, Baltimore: Williams and Wilkins Company, 1964.

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