Notes on Language Measures in the Templin Longitudinal Project

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Although language tests were in their infancy in 1960-1972, Dr. Templin nevertheless included a large number of language measures. Over the first 5 years of the study these covered syntax and morphology, word usage, sentence completion, word-association, and written composition. A tape-recorded conversation was completed in sessions 3 and 9. In addition, in grade 11, the participants completed a passage that they had to rewrite from simple sentences to more complex ones, generated “ask” and “tell” utterances (which assesses knowledge of indirect speech), completed a cloze passage, and engaged in a recorded conversation, picture-description, and explication of several poems.

Note: The Ammons Full-Range Picture Vocabulary Test (Ammons & Ammons, 1948), described under Measures of Cognition, can also be considered a language measure. The Ammons was administered in Session 3 (Spring 1961, kindergarten).
Recordings/Picture Descriptions/Conversations
Administered in Session 3 (Spring 1961, kindergarten), in Session 9 (Spring 1964, grade 3), and in Session 12 (Spring 1972, grade 11)

Session 3: Reel-to-reel tapes are boxed separately from the data boxes, and there are a few typed transcripts, located in data boxes #37 and #38.

Session 9: The Audographs made for Session 9 are obsolete technology, but the typed transcripts are in data boxes #8, 9, and 10. (The Audograph discs are with the transcripts.)

Session 12: Reel-to-reel tapes are boxed separately from the data boxes, and there are typed transcripts for “Conversation,” located in data boxes #33 and 37. In data boxes #33 and #34 there are separate transcripts labeled “Poems,” and in boxes #27 and #34 there are separate transcripts labeled “Pictures.”

In kindergarten (Session 3), audio recordings were made of the participants’ speech. In this session, pictures from the Children’s Apperception Test (CAT—Bellak & Bellak, 1955) were used as stimuli to obtain at least 50 utterances from each child. The pictures were not administered according to the standard CAT test procedures but were used solely to give the child something to talk about. In this session the recordings were made on a Wollensak reel-to-reel tape recorder. Typescripts were made for perhaps 20% of the participants; however, they have not been checked. Templin’s instructions for making the transcripts were as follows:

1. Use sheet with heading for first page. On all subsequent pages place Case Number and Page Number at the top of the page.
2. Double-space typing. Use no capital letters or other punctuation EXCEPT a series of (……..) to indicate pauses within a flow of speech.
3. Start each comment by child (C) or examiner (E) on a new line. Label comments C or E.
4. Type exactly what each child or examiner says. Include repetitions, partial words, etc.

In Grade 3 (Session 9), recordings were made as part of the Thematic Apperception Test (TAT—Murray, 1943). Seven TAT cards were used. The child’s speech was recorded on Audograph discs, a technology that is now obsolete. However, typed transcripts are available for all of the participants. The Audograph disks are attached to the transcripts. These transcripts have a dual purpose: (1) they can be used to score the TAT, and (2) they can be used for language analysis. I have not found instructions for typing, but Templin’s hand-written notes suggest that there were concerns about not getting good recordings.

In Grade 11 (Session 12), the “Ask-Tell” sequence was recorded on reel-to-reel tape, and usually the conversation was continued on the same tape. The conversation was structured, in that the child was first asked to tell a story about a country scene, a cartoon,
and an Escher-type drawing of men and machines. Then the child heard three poems and was asked questions about each. A conversation then followed with standard questions for the examiner to ask.

Although transcripts are available for all or most participants for Sessions 9 and 12, none of these speech and language samples has been analyzed or entered into the database.

All of the speech-language samples were made in school settings, using tabletop microphones. The quality of the audiotapes for Sessions 3 and 11 is variable, ranging from good to barely adequate for taking a language sample. Although there seems to be no print-through, the quality of these tapes is not routinely adequate for phonetic transcription or for computerized analyses.
Berko Morphology--Nonsense Words (Berko, 1958)
Administered in session 3 (Spring 1961, kindergarten), in session 5 (Spring 1962, grade 1), and in session 7 (Spring 1963, grade 2)
Session 3 raw data are located in data boxes #35 and 38, Session 5 raw data are in data box #13, Session 7 raw data are in box #5. Additional materials are found in data box #38. Related printouts are in box labeled “Box 1 of 4.”

This is the well-known Berko “Wug” Test. Some arbitrary scoring decisions were made to minimize the effects of any misarticulations upon a child’s morphology score. For example, the plural of a word ending in /p t k f θ/ is formed by the addition of /s/ to the stem. Credit was given if the /s/ or any unvoiced sound, any fricative sound, or any sound habitually substituted for the /s/ by a given child was added. The maximum score is the number of acceptable responses (given the above), or 33.
Session 3 data are entered in columns 56-57 on card 1, Session 3.
Session 5 data are entered in columns 59-60 on card 1, Session 5.
Session 7 data are entered in columns 41-42 on card 1, Session 7.
Berko Compound Word Test (also called Definitions—Berko, 1958)
Administered in session 3 (Spring 1961, kindergarten) and in session 5 (Spring 1962, grade 1).
Session 3 raw data are located in data box #22. Session 5 raw data are located in box #13.

This instrument was devised by Berko to determine whether children were aware of morphemes that make up 14 compound words such as airplane. The child’s responses were classified into nine categories, as follows:

0 = Identity—e.g. “A blackboard.”
1 = Object’s salient function or feature—e.g. “you write on it.”
2 = Salient feature or function coincides with part of the name—e.g. “Because it is black.”
3 = Etymological explanation—e.g. “Pilgrims give thanks” (in response to Thanksgiving). This category takes into account both parts of the word.

(In response to fireplace, score 3 when ‘where” or “in there” refers to “place”, e.g. “firetrucks in there” or “where you build a fire.” Do not score 3 for “firemen live in it” or “put fire in it” because “it” has no specific reference.)

4 = Description or definition of word illustrating related activity but salient function or feature of object or event are absent—e.g. “a bloody nose” in response to handkerchief.
5 = Unrelated words, phrases, or sentences
6 = No response
7 = No response due to unintelligible speech

The quantitative score is the sum of responses in categories 1, 2, and 3. The maximum score is 14.

Session 3 data are entered in columns 54-55 on card 1, Session 3.
Session 5 data are entered in columns 57-58 on card 1, Session 5.
Berko Word Usage Test (Brown & Berko, 1960)  
Administered in Session 6 (Fall 1962, grade 2)  
Raw data located in data boxes #20 and #23

This research instrument was devised by Brown and Berko to determine if an attributed meaning of a nonsense word used in a sentence was expressed by the child in the same part of speech as the nonsense word. The 12 sentences include nonsense words representing 2 count nouns, a mass noun, a transitive verb, and intransitive verb, an adjective, and an adverb. The nonsense items were *wug, boff, latt, roog, stog, huft, hass, seb, bik, rik, nare, and pilk*. Here are two examples:

1. This is a picture of a little boy thinking about a (nonsense word). What do you think that could be?  
2. This is a picture of a cat that wants to (nonsense word) something. What do you think that could be?

The order of presentation of the nonsense words appears to have been counterbalanced. There were six parts of speech (count noun, intransitive verb, adjective, mass noun, transitive verb, and adverb), as well as two exemplars for each part of speech. If the child’s response maintained the part of speech, then the response was scored as correct. The maximum score was 12.

Data are entered in columns 27-28 on card 1, Session 6.
Sentence Completion Test (Written)
Constructed by Prindle and Johnson
Administered in Session 8 (Fall 1963, grade 3)
Raw data located in data box #21

Ten open-ended stimulus phrases are used to elicit written sentence completions. The stimulus phrases were constructed to sample attitudes toward a variety of language experiences and were cast so that different language structures would be used in completing them, e.g., “When I have to read _________,” or “Spelling is ________________.”

Scores are (1) the total number of words used in the sentence completions, (2) the number of different words used, and (3) the number of difficult words used (difficult words being defined as words that do not appear in the Dale List of 769 Easy Words). There are many rules about what to count as words.

Data are entered in columns 60-61, 62-63, and 64-65, respectively, on card 1, Session 8. In addition, an evaluation of the handwriting used in this exercise is entered in column 66 on the same card (this scale is described under Perceptual Measures).
**Jenkins-Palermo Word Association Test** (Jenkins & Palermo, 1964; Palermo & Jenkins, 1964, 1966)

Administered in Session 6 (Fall 1962, grade 2) and Session 10 (Fall 1964, grade 3). Session 6 raw data are located in data box #20, and Session 10 raw data are in box #18. Additional information and printouts are located in data box #40 and in box A.

This task requires the participant to say the first response that comes into his/her head when the examiner says a stimulus word. This test, using 100 words, was previously used by Jenkins and Palermo with participants from first grade through college. The “commonality score” is the number of words that are in agreement with the most frequent response of Palermo and Jenkins’ normative sample of the same age, gender, and grade. Scores at Session 6 were based on normative data for second grade boys and girls, while Session 10 scores were based on normative data generated by fourth grade boys and girls. The maximum commonality score is 100. There are many subscores. The scoring system implies that each child’s performance is compared to both boys’ and girls’ norms separately and then combined. Also, some subscores are done on the basis of the test page.

Session 6 data are entered in columns 29-46 in two-digit numbers on card 1, Session 6. Session 10 data are entered in columns 61-78 on card 1, Session 10.
Written Composition
Administered at Session 11 (Spring 1965, grade 4)
Raw data are located in data box #11

All school classes in which the participants were enrolled were given the same writing assignment by their classroom teachers, as part of their language arts work. The assignment was to write for 15 minutes on the topic “The Most Interesting Thing that Happened to Me this Year.”

This task has not been analyzed, although typescripts are available. Of course, a number of analyses are possible, including the same types that have been done for the “Aluminum” passage, and also including mechanics, spelling, and narrative structure.
**Aluminum Passage**

Administered at Session 12 (Spring 1972, grade 11)

Data box #26 contains participants’ original hand-written rewrites. Also in box #26 are Aluminum passage rewrite worksheets 2, 3, and 4, as follows:

- **Worksheet 2:** Marked-up typescript of what the child wrote, leading to the analysis in Worksheet 3. There is also a folder with some of the children’s notes on the copy they were given.

- **Worksheet 3:** Analysis of passage in terms of numbers of words, clauses, T-units, and sentences, and relevant ratios. There is what appears to be a duplicate set in a different hand-writing in box #36.

- **Worksheet 4:** Unadorned typescript of what the child wrote.

Data box #36 contains the spelling analysis worksheets.

Data box #38 contains some word-by-word analysis of spelling in the Aluminum passage rewrite.

Various types of analyses are described in the “Aluminum passage” folder in data box #1.

The “Aluminum Passage” was a typed passage about the process of manufacturing aluminum from bauxite. It was written in short, choppy sentences. The child’s task was to rewrite the passage, making it smoother and easier to read, for example, by using conjunctions and embeddings.

The results of spelling analysis from the Aluminum passage rewrite does not appear to have been entered into the database. Other data from the Aluminum passage are entered as follows on Card 4, Session 12:

Columns 29-31 Number of words
- 32-33 Number of clauses
- 34-35 Number of T-units
- 36-37 Number of sentences
- 38-42 Ratio: words per clauses
- 43-47 Ratio: words per T-unit
- 48-52 Ratio: clauses per T-unit
- 53-57 Ratio: T-units per sentence
- 58-62 Ratio: words per sentence
Ask and Tell Task
Administered in Session 12, (Spring 1972, grade 11)
Raw data are in data box #27 (typed transcripts), and box #32 (typed transcripts arranged by randomization order)
Data box #44 and box C contain printouts and tabulations

This task appears to have been based on grammatical formulations for indirect speech that were first described by Carol Chomsky (1969) in a teenage population and developed by Lois Sanders (1971) using an adult population. It is also a task that can be construed as assessing pragmatics of language use. Using a set of colored blocks, the participant follows instructions given by the examiner, for example:

- Ask me what size this is.
- Tell me the shape of this block.
- Tell me to build a tower.
- Ask me to pick up a block.

There is a total of 32 instructions in 6 different randomized orders. There are four different syntax groups represented, and a total correct is obtained for each. The maximum score for each appears to be 8. In addition, errors of various types are tallied.

The scores for the four syntactic groups as well as a total correct score are entered into columns 9-18 on card 4, Session 12. Error scores are entered into columns 19-28 on the same card.
Cloze Passage (also called *A Bird in the Hand*)
Administered in Session 12 (Spring 1972, grade 11)
Raw data and worksheets are in data box #27

The cloze passage consists of a reading passage called *Bird in the Hand* with every fifth word changed into a blank for the participant to fill in, for a total of 50 blanks. Following Moores (1967) and Fries (1952), the types of words that can appear in the blanks are coded as follows:

**Content words**
- Class 1: Nouns and pronouns
- Class 2: Verbs
- Class 3: Adjectives
- Class 4: Adverbs

**Function words**
- Group A: Determiners, e.g. *a, this, that*
- Group B: Modal verbs, e.g. *may*
- Group D: Adverbs that modify adjectives, e.g. *very*
- Group F: Prepositions and location words
- Group P: Infinitive *to*

There are a number of scores associated with the cloze passage, including verbatim responses (those that agreed with a predetermined best word), substitutions that maintained the classification of the word (as above), and substitutions that did not maintain the classification of the word. Then there is a score called the “verbatim form class score” or the “verbatim given form class” score, which is the ratio of verbatim responses to substitution responses multiplied by 100. (NB: This score makes no mathematical sense. Consider the extreme case of 50 verbatim responses and zero substitutions. ABS) Finally, the number of non-English responses, English responses, and two-word responses are tallied.

The various totals are entered in two-column format in columns 7-24 on card 2, Session 12. On the same card, the “verbatim given form test score,” which has one decimal point, is entered into columns 25-28, and columns 29-34 record the numbers of non-English, English, and two-word responses in two columns each. Finally, the numbers of non-English and English responses are found in columns 65-68 on the same card. (Note: I have not located anything that indicates what constitutes a “Non-English” production.)
References


