

From Guide to Analysis of Language Transcripts - 2nd Ed

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OBTAINING LANGUAGE SAMPLES

The first step in analyzing language production transcripts is to obtain samples of the child's productive language. When collected appropriately, the language sample may be the best picture of the child's production abilities. In fact, Gallagher (1983) contends that "spontaneous language sampling is the centerpiece of child language assessment" (p. 2). However, the communicative interaction often is contrived to such an extent that the resulting sample is anything but representative of the child's usual productive language.

The term *representative* has been used in various ways in the literature. Miller (1981) supports the notion that a representative sample is one that is reliable and valid. McLean and Snyder-McLean (1978) suggest that a representative sample reflects the child's optimal performance. And Gallagher (1983) reports that throughout the years, a sample has been considered to be representative if it portrays the child's usual performance. In *Guide*, the term *representative* has been used to describe a child's usual productive language abilities, including performance that may be somewhat below or somewhat above usual abilities.

Nature of the Interaction

Miller (1981) contends that a number of aspects of the communication interaction affect sample representativeness, and that each aspect can be controlled to ensure representativeness. The first variable, nature of the interaction, refers to with whom the child is interacting and to whether the other participant asks questions or engages in conversation during interactive play. Miller supports the notion of obtaining a number of language samples with the child interacting with a variety of people, including the speech-language clinician, a parent, and a sibling or peer. While the general assumption has been that a child will produce language that is most representative when interacting with his mother, studies comparing mother-child and clinician-child interaction have been inconclusive. Olswang and Carpenter (1978) found that the only variable of 21 lexical, grammatical, and semantic measures that was significantly different in the two interactions was the total number of utterances. Children produced significantly more utterances when interacting with their mothers than they did with familiar clinicians, but other length and complexity measures were not significantly different. Other studies comparing mother-child interactions obtained at home and clinician-child interactions obtained in the clinic have found that some children produce longer utterances with the clinician, other children produce longer utterances with the mother, and still other children produce utterances of equal length with each conversational co-participant (Scott and Taylor, 1978; Kramer, James, and

Saxman, 1979). Gallagher (1983) suggests that the numerous research design differences between these studies may have contributed to the differences in results.

Studies comparing fathers to mothers as interactive partners also are fraught with inconsistencies in conclusions. Gallagher's (1983) sampling of relevant studies found some that indicated no significant differences between the interactive style of mothers and fathers (Smith and Daglish, 1977; Golinkoff and Ames, 1979; Wilkinson, Hiebert, and Rembold, 1981). Gallagher also found studies supporting the contention that fathers' language to children was different from the language mothers used with children. She supports the contention that the "most facilitating communication partner" may be one or the other of the parents, or neither. None of the studies cited by Gallagher compared fathers interacting with children to clinicians interacting with the same children.

Peer and/or sibling interaction may result in some language differences; however, the exact differences are not easy to predict. For example, some studies document length and complexity adjustments when children are interacting with a younger child (Shatz and Gelman, 1973; Sachs and Devin, 1976). Other studies emphasize differences in conversational acts, including more responses to adults' questions (Martlew, Connolly, and McCleod, 1978) and more repetitions, attention holders, and directives with peers than with adults (Wilkinson, Hiebert, and Rembold, 1981). Gallagher (1983) has concluded that "child-child communicative behavior" has not been described sufficiently with regard to a single variable to predict the effects on communicative interaction (p. 9).

Overall, results of various studies comparing children interacting with various conversational partners reveal a variety of differences. Although it may be possible to predict that a range of possible differences will occur, apparently it is not possible to predict which differences will occur with a particular child and a particular conversational co-participant. Therefore, instead of pairing the child with only one conversational co-participant to obtain a language sample, it is prudent to obtain samples with the child interacting with

various partners. Differences in samples add to the picture of the child's overall communication abilities.

Miller (1981) includes conversational act variables, such as questioning and responding, as aspects of the nature of the interaction. He suggests that in attempting to obtain a representative sample, clinicians should keep question asking to a minimum. The assumption is that children will produce larger and more complex utterances when spontaneously conversing than when responding to questions. However, in a study in which children were asked to retell a story as they acted it out with toys, to tell what they were doing while playing with toys, and to respond to questions about toys as they played with them, Stalnaker and Craighead (1982) found inconclusive results. General group trends followed the order mentioned above for language complexity, but these authors concluded that none of the methods of language sampling was superior to the others.

Overall, it is apparent that a conversation in which one partner only asks questions and the other responds is not a natural interaction. As conversational partners, clinicians should make efforts to reduce the number of questions asked and to permit the child to take the lead in the interaction. However, complete absence of questions on the part of the clinician would be impossible to attain and may not result in a representative sampling of the child's productive abilities.

Setting

The second variable that Miller (1981) indicates may affect sample representativeness is setting. Miller specifies a number of possible alternatives to the therapy room and asserts that using more than one setting is optimal. He suggests that samples could be obtained in a variety of locations at home, at school, in a residential facility, or at a clinic; and although he contends that "representative samples can be collected almost anywhere," differences may arise in the language of the child because of the setting (p. 11). For example, the differences found in the mother-child versus clinician-child studies previously mentioned (Scott and Taylor, 1978; Kramer, James, and Saxman, 1979) may have been due primarily to the differences in

setting. The mother-child samples were obtained in the home and the clinician-child samples were obtained in the clinic. In two other studies, the effects of two settings on the language use of 3- to 4-year-old children were compared (Dore, 1978; Hall and Cole, 1978). Results indicated that a supermarket setting did not elicit more complex language than the classroom and that differences, again, were related more to the interactive style of participants than the setting (Dore, 1978).

While it may not be possible to predict which setting will result in more complex language for a particular child, obtaining samples in more than one setting is optimal. The resulting differences, if any, add to the description of the child's communication abilities.

Materials

The third variable that Miller (1981) suggests may affect sample representativeness is the materials that are present. He reports that children with language disorders talk more about new and unique toys, but Nisswandt (1983) reports the opposite for language-normal children. Various other authors have found that different types of materials result in different language behaviors. Longhurst and File (1977) examined the effect of single-object pictures, multi-object pictures, toys, and no materials present on the language complexity of 4- to 5-year-old children. While group data supported increases in complexity in the order above, individual data indicated that increases in complexity could occur in any ordering of the stimulus conditions. Cook-Gumperz and Corsaro (1977) reported differences in the communication demands placed on 3- and 4-year-old children with three different sets of materials: playhouse, sandbox, and adult-directed arts and crafts activity. Results indicated language differences across conditions, with very few initiative turns in the arts and crafts activity, adherence to role-play conventions in the playhouse, and unpredictable fantasy interactions in the sandbox. Cook-Gumperz and Corsaro concluded that the sandbox was the most difficult of the three settings in terms of interactive demands and resulted in an increased use of repetition and expansion, semantic typing, and verbal descriptions of behaviors.

Once again, different materials may result in differences in language frequency and complexity. The differences, however, appear not to be predictable for children. Therefore, it is wise to provide a variety of developmentally appropriate materials and to encourage the child to interact with as many materials as possible. Differences, again, will contribute to the overall picture of the child's communication abilities.

Sample Size

Another variable that Miller (1981) indicates will affect sample representativeness is sample size. He contends that sample size can be determined in two ways. The first is to obtain a specific number of utterances from the child (or transcribe that number from a sample containing a larger number). For example, various authors have suggested numbers of utterances ranging from 50–200 for the sample to be representative (Lee, 1974; Tyack and Gottsleben, 1974; Crystal, Fletcher, and Garman, 1976, 1991; Miller, 1981). The other alternative is to obtain utterances during a particular period of time, for example, 30 minutes, regardless of how many utterances occur during that time frame. This 30-minute period is likely to result in 100–200 utterances for children functioning at a 24-month level or older (Miller, 1981). Longer periods of time will be necessary to obtain 100 utterances from children younger than 2 years of age, and it may be prudent to supplement a sample with diary accounts from parents. The obvious conclusion may be that the more utterances, the better, but in an effort to be realistic, practical, and efficient, 100 utterances gathered under various conditions typically results in a respectably diverse sample.

Method of Recording

The final two variables that Miller (1981) contends will affect sample representativeness are really variables affecting the overall quality of the resulting transcription. The first of these is the method of recording. The optimum is videotape recording, because it permits the clinician either to interact freely with the child or to watch undistracted as others interact with the child. Transcription from videotape recordings is considered to be the most reliable

method and permits detailed delineation of changes in nonverbal context.

The second method of recording is audio tape recording. Again, the clinician is free to interact with the child, but making notes about the child's activities during the taping is important for providing the nonverbal context for transcription. In addition, audio tape recorders are readily available in most clinical settings, and battery-operated recorders can be taken anywhere the sample is being collected.

The third method of recording suggested by Miller (1981) is on-line transcription. This method of recording is useful in settings where audio and/or videotape recording is not practical. This author has found on-line transcription to be particularly useful in recording a child's productions on field trips or other outings away from the clinical setting. The major criticism of on-line transcription is that it results in transcriptions that under-represent or over-represent the child's actual productions. However, Miller (1981) reports a high reliability for MLU computations based on on-line transcriptions and transcriptions from tape recordings. The key to obtaining reliable on-line transcriptions may be to use one of the procedures suggested by Miller: time sampling. Using this procedure, the clinician transcribes for a few minutes, then rests for a few minutes before continuing with transcribing. This method maximizes attention during transcription. The alternative, writing down everything the child says, can be cumbersome and exhausting. As in audio tape recording, nonverbal context notes should be made to complete the transcription process.

Regardless of the method of recording the interaction, quality transcripts can be obtained. Each method has its own problems and advantages, and each relies on accurate representation of the child's productions for valid and reliable transcripts.

Specification of Context

The final variable affecting the quality of the obtained language transcript is the specification of context. This includes the utterances of the other conversational co-participant as well as the nonverbal or situational context. The utterances preceding and following a child's

utterances may dramatically affect the interpretation of the child's utterance. In addition, the objects that are present and the events that are taking place as the child produces an utterance greatly influence interpretation of the child's utterance. It will become obvious in the chapters which follow that semantic and pragmatic analyses require the specification of nonverbal context; it also is very helpful with syntactic analysis. Overall, a quality transcription must include a detailed account of both the linguistic and nonlinguistic context.

Guidelines for Interaction

The preceding discussion highlights numerous variables that are important to consider when obtaining representative language samples and producing quality transcripts. The following guidelines for interacting with a child to obtain a representative sample of the child's productive language are offered as a synthesis of the preceding discussion. Guidelines 1-3 should be adhered to in sequence to establish the conversational interaction. Guidelines 4-9 are general guidelines to be followed throughout the interaction.

1. Begin with parallel play and parallel talk. With a young child at the one-word stage, imitate his verbalizations and use many animal sounds and vehicle noises. With a child older than 2 years, talk about what you are doing as you play and use role-playing dialogue (e.g., "I'm gonna make my guy drive. Here's the tractor for him. 'Wow, what a big tractor. I'm gonna go fast!'").
2. Move into interactive conversation. With the young child, use some routine questions (e.g., "What's a doggie say?") and elicit finger plays (e.g., "Let's play Patty Cake"). With the older child, invite him to participate in play (e.g., "Hey, you be the gas station guy. I'll bring my car in. It needs fixing"). Continue in role-playing dialogue, unless establishing rules for play. Encourage the child to participate in plans for play, including what toy people/animals will be doing (e.g., "Hey, how about having a picnic?").
3. Continue the child's topic. If he is role playing, stay in role. If he shifts out of role,

follow his lead. Respond to questions, acknowledge comments, solicit more information about a topic.

4. Attempt to restrict your use of questions to approximately one question for every four speaking turns. Eliminating use of questions is unnatural, but too many questions may reduce the length of the child's utterances. The often-suggested "Tell me about this" can also break down the conversation and result in descriptive strings from the child. Instead, carry on a conversation with the child at the child's level.
5. Give the child options that are presented as alternative questions (e.g., "Should we play gas station or have a picnic?"). While children under 3 years of age may not comprehend the alternate question form (Reilin, 1975), pointing to each option provides contextual support for the choice prior to full comprehension of the question form. By using alternate question forms, the shy or uncooperative child does not have the option of saying no, but can feel in control by choosing one of your options.
6. Use utterances that are, on the average, slightly longer than the child's utterances. Keep the number of utterances per speaking turn to approximately the same number as the child's.
7. Learn to be comfortable with pauses in the conversation. If you are too quick to take a speaking turn in order to fill a pause, you deny the child the opportunity to take a turn. In addition, the child may come to expect you to fill pauses and thus feel no obligation toward continuing the conversation. If a pause becomes too long (longer than eight seconds), continue with parallel play and parallel talk until the child moves back into interactive conversation.
8. Have a variety of materials available to keep the child's motivation high, but do not move abruptly from activity to activity. Offer the child the option of changing activities and follow his interests. A diverse combination of materials might include role-playing toys like cars, trucks, and people, farm sets, and kitchen sets as

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well as manipulative materials like clay, paints, paper, pens, markers, and items for making a snack.

9. Do not be afraid to be silly and have fun. Many a shy child has been brought into the interaction by asking silly, obvious questions (e.g., "Those are great shoes. Can I wear them?") or by making silly comments (e.g., "There's a mouse in your pocket!"). Enjoy the child and he will enjoy the interaction.