

Conclusions, Future Directions, and Implications for Remediation

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Learning Outcomes: As a result of this activity, the participant will be able to (1) identify how the proposed assessment achieved equity between African American English (AAE) and Mainstream American English (MAE) speakers, and (2) identify areas of future research.

The articles in this issue have provided a demonstration that achieving equity in language testing for speakers of different varieties of American English is within our reach. By avoiding areas of the language where dialect differences loom large, it has proven possible to tap children's knowledge of deeper aspects of language where disorder makes itself most apparent. In phonology, we avoid just those distinctive properties that identify a dialect speaker and assess other properties. In morphology, we choose the inflections that remain obligatory for speakers of variants of American English. In syntax, we examine the deep properties of grammar that are fundamental to building a full understanding of language. In semantics, we choose to focus on basic processes and organization, avoiding the problem of different cultural settings. In pragmatics, we choose those aspects that can be evaluated in such a test—those that are neutral across the cultures and essential for schooling and literacy. In every case we find tests that can differentiate solidly and across this wide age range between typically developing children of either language background and those who exhibit language-learning difficulties.

When the project began, we did not know if this would really work. For example, it may have turned out that children described as specific language impaired (SLI) have problems *only* with the superficial morphology, and then the problem would have been a much less tractable one. It might have proved necessary to design subtle tests tapping the particular features of the various dialects of English, such as negative concord or aspectual morphology in African American English, to reveal problems for speakers who have SLI. It is our intention to continue research on that question, but the test would then have become targeted only to speakers of that variant of English. We believe that the reception for a test such as the one described in this issue is strengthened by its dialect-neutral application. Nonetheless, it is vital to have more linguistic work on how the variants of English develop, and the stages that children go through in arriving at the special properties they have. As discussed in the article by Pearson,¹ a small difference in an item such as number agreement or aspect might have widespread ramifications throughout the system that we cannot yet fully imagine. This could have important consequences for how

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the child's language is assessed, and particularly on the direction of clinical intervention.

Despite the success of the field testing, there are several areas that remain essential for the test to contribute to a new era of collaborative work between linguists and specialists in communication disorders. When we designed the tests, we had in mind to use the different items as a way to diagnose truly where a child might have missed a step in building the grammar, or mis-set a parameter, or might be missing a crucial ingredient that permeated several domains. This remains on our current research agenda, and we are making discoveries as we mine the rich dataset. The goal is to examine each item and categorize success or failure on it as a function of its properties—both performance demands, such as *memory* or *attention*, and linguistic, such as *recursion*, *agreement*, or *specification*. If the pattern of failures of a particular child can then be entered into a relational database, it is possible that the nature of the disorder can be revealed by determining what the items have in common. In the future, a clinician may be able to enter a child's pattern of mistakes and the computer would suggest a profile of difficulties. We have alluded to some such examples in our particular articles, but this is an ongoing endeavor, and it will involve deep linguistic insight as well as methodological sensitivity. Previous assessment tests have nothing like this level of detail. The generalizations about a child's language problem found in most tests of language fail to offer solutions to the speech-language pathologist in terms of the practice of remediation. The aim of the present test is higher, but the problems we identify must then be addressed by discussion of remediation.

Contemporary work on language acquisition from a linguistic perspective has been the inspiration of large parts of the current test, but it offers relatively little insight into the process by which children arrive at their rich knowledge. Yet the process is precisely what needs to be understood to offer support for remediation of the children's difficulties. There are two different meanings of *process* that are easily confused. Good psycholinguistic work has revealed the intricate steps a child takes toward adult knowledge, so in this sense we do know the process by

which a child develops. However, we do not know the *experiences* that are crucial, and how the child uses them to change the grammar in the adult direction. In addition, there are many questions remaining for clinical practice.

As an example, suppose it is discovered that the child must master a crucial building block of some domain before he or she can handle more complex forms. Would intense exposure to that simpler form then be the best way to advance the development? Suppose that exposure to the complex form, however rare, is what is necessary to assign the simple form its correct structure. Then any amount of drilling with the simple form alone could in fact fail to help. Such a case might be double *wh*-questions, such as "Who bought what?" We have searched corpora of parent-to-child speech (CHILDES)² and found these to be extremely rare in the input. Is it therefore safe to ignore them? These questions reveal most clearly the property of *wh*-questions as "variables"; that is, as demanding a set answer. To a double *wh*-question, there is no alternative except to give the paired sets: "Martin bought eggs, Aisha bought butter, James bought bread." Elaborate practice at answering *wh*-questions of a simpler sort, which require the child to name one object, might teach nothing about this property. One can imagine other pitfalls of simplification; for example, teaching vocabulary by always ensuring that the item being taught could be pointed at, and so reducing uncertainty. How then would the child ever learn to use context to guess a meaning?

Training studies are a relatively untapped source of important information that would be of immediate utility to clinicians facing these questions. A few such studies have been done, but there is much room for further work in which success at particular structures is the target of inquiry, and different strategies of presenting the components are tried. In our thinking about such matters, we have been influenced by the work of Mary Wilson,³ who designs computer software for language training of children with language disabilities. She has argued that the limited amount of time typically devoted to specialized language therapy cannot possibly suffice to remediate profound language learning difficulties. After all, if the normal language environment has not

sufficed in the 5 years or so of the child's life to date, why would 1 or 2 hours a week more of general language exposure do much good? Of course, there are clinicians who argue that the whole world of the child must be enriched by making increased opportunities for language connections in the classroom and at home. However, such interventions are often framed in very general terms, and the question of what a particular child needs may be overlooked. With luck, somewhere in that rich language surround, the right piece of information, the right insight, or the right encouragement will make its mark. This is a reasonable approach given our uncertainty about the right pieces and how to deliver them, but it is hardly adequate and runs the risk of missing crucial ingredients. Linguistics must be brought to bear on this larger question of how to effect language growth, or these advances in assessment will not fulfill their promise.

CONCLUSION

The results of our studies have revealed that some important and deep properties of

language show up as causing difficulty in children with language disorders, regardless of dialect. We have not yet shown how dialects work, how a disorder might be manifest within the special properties of dialect, or whether young dialect speakers with disorders might show difficulties in learning to code-switch. Cooperation among linguists, dialect experts, and speech therapists is necessary to carry the questions forward. Joint expertise must also be brought to bear on the larger question of how to effect language growth, or these advances in assessment will not fulfill their promise.

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