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Implications of New Vocabulary Assessments for Minority Children

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1.0 Introduction

The goal of this chapter is to discuss the ramifications of the status of the child's home language for the study of vocabulary and reading. The researchers at this conference have extensive data on how vocabulary and grammar prepare the way for the child's first experiences with literacy and reading. But what are the implications for this process if the vocabulary and grammar of the child are not the ones encountered in the school setting? In the case of the child whose parents speak a language other than English, the assumption is that the child is a competent speaker of that particular language, and must therefore be transitioned as quickly as possible to English if reading and writing English is the desired goal. The case of the African American child has created more perplexity, because English is the language being spoken, but educators do not think it is being spoken *correctly*. Mainstream American English (MAE) is the language of instruction, and the African American child's English often departs in significant ways from that dialect. Furthermore, it often displays features that educators associate with much younger children, such as dropped tenses, and so those parts that are like MAE superficially resemble the kind of speech that children have when they have

language delays or disabilities (Craig & Washington, 1994; Wyatt, 1995). And to make matters worse, when the children are given standard tests for language, the scores they receive can fall into the dubious range, both on inflectional morphology (tenses, plurals, copulas, etc.) and in known vocabulary (Stockman, 1999; 2001). Thus the African American child, unlike the child raised by parents who come from another country, is suspected of being a less than competent speaker of his native language. Many educators have a ready-made explanation for this failure in what they perceive as the material conditions of too many African American families: undereducated parents, a high frequency of single parents with insufficient support for child rearing, a lack of stimulating materials in the home, and inadequate child care (National Institute of Education Statistics, 2001; Washington, 2001)). The child's home life is regarded as the cause of the *deficit* seen in primary language skills (Bereiter & Englemann, 1966; Hart & Risley, 1995).

It would be dangerous to assert that there is no such problem. However, we offer in this chapter a different perspective on the issue. In the course of doing so, we hope to reveal the strengths of the African American child's language competence that are too often squandered in the early school years. The *differences* are there, but considering them *deficits* can blind us to the possibilities for a more successful transition to schooling.

As Catherine Snow (2004) remarked, African American children do not enter kindergarten with a bias against reading. They arrive eager as any child to begin to learn and are excited to become competent in this grown-up skill. What discourages them? By fourth grade, an estimated 60% have failed to reach appropriate competence, and the gap between African American and White children continues through 8th and 11th grade (National Assessment of Educational progress, 1997; National Center for Education

Statistics, 2001; Washington, 2001). Everyone agrees that this is a situation not to be tolerated, but then the different accounts of the process begin to part company. In this chapter we consider the "language factor" and speculate that its ramifications have the potential to extend into other domains, such as student motivation, and student and teacher attitudes.

2.0 The Language Factor

Minority children in the U.S., especially those with African American heritage, often speak languages or dialects other than MAE. African American English (AAE) is a dialect defined by a commonality of speech spoken primarily by African Americans, but not by all. AAE is less geographically defined than other dialects of English, and historical evidence suggests it originated in the language used by slaves and then spread with the major migrations to the large urban centers. Because of continued segregation in work, community and schooling, it gained a certain separation from the speech of White Americans (Baugh, 1983; Dillard, 1972; Green, 2002; Labov, 1972; Rickford, 1999). AAE may be defined in terms of the features that distinguish a pattern of morphology, semantics, syntax, and phonology in the speech used by *culturally identified* African Americans. Several decades of careful linguistic work have revealed that it is a language dialect of English as rich and complex as any other variety, though it is frequently considered to be a degenerate form of English by non-linguists (Vaughn-Cooke, 1999; Wolfram, 1999). Though regional dialects are often considered quaint, or even heralded as resources reflecting our linguistic heritage, this has not been the common attitude towards AAE.

Since at least the 1970s, the American Speech-Language-Hearing Association

(ASHA) has recognized these negative attitudes towards AAE as creating a risk for children when they face language assessment. Most tests of English language are normed for MAE. The problem takes two forms: (1) content bias, in which MAE target forms are the standard, with departures from that often considered as mistakes, and (2) sampling bias, in that too few AAE speakers are sampled in the norms for existing tests. Even when African American children are represented in the sampling norms, their data are often not considered separately, so if they happen to constitute a disproportionate share of the lowest quartile it is not considered to be test bias.

Although speaking AAE is not a disorder it can be misinterpreted as one on such tests. The over-identification of African American children in caseloads of speech-language pathologists is only one symptom. Because of the centrality of language testing (especially of vocabulary) to the diagnosis of special education categories, it is probable that some over-representation there is also caused by the unsuitability of existing language tests (Seymour, 2003).

In 1998, a research group at the University of Massachusetts headed by Harry Seymour received a contract from the National Institutes of Health (NIDCD) to develop norms, and ultimately a new kind of language test, for children speaking non-Standard English i.e. African American English (*webpage:www.umass.edu/aae).

Our goals were ambitious:

1. To develop a comprehensive language assessment of syntax, semantics, pragmatics, and phonology between ages 4 and 9 years.

2. To be able to determine whether language variation in children is due to development, dialect, or disorder.

3. To create a test that is not biased against dialect speakers, especially AAE-speakers.

In order to do this successfully, it became obvious that such a test needed to avoid some surface aspects of language, because focusing on morpho-syntactic elements such as plural, past tenses and copula verbs only highlights the grammatical differences between MAE and AAE. Selection of such items places AAE speakers who are normally developing language learners in the same category as MAE speakers with specific language impairment (SLI) (de Villiers, 2002, 2003; Seymour, Bland & Green, 1998). Instead the focus should be on those aspects of language that do not contrast between AAE and MAE, i.e. the deeper principles on which all languages are based and which connect to the concepts of Universal Grammar. This is tantamount to making a test that is harder and more challenging than existing tests.

The ideal items for such a test must have the following properties:

a) Show a clear developmental progression from age 4 to 9 years,

b) Show no bias against AAE speakers, and

c) Show a clear differentiation of a priori identified "impaired" children in each dialect. The astute reader may realize that c) is not easily achieved if we doubt the ability of existing tests to reliably identify "impaired" children who speak AAE! However, there are two ways to ameliorate the difficulty. First, we can see how successful we are at identifying MAE-speakers using our test versus traditional tests. If we trust the traditional tests with MAE-speakers (and we may still be doubtful), at least our test should identify most of the same children despite its theoretically different content. Second, we can use a variety of indices to identify impaired AAE-speakers: not just the traditional tests, but parental report, teacher report, seasoned clinicians familiar with the population etc. That

is, converging indicators allow more secure determination even if the "Gold Standard" here is more like "Tin" (de Villiers, 2003)!

The test that Seymour and colleagues developed, the Diagnostic Evaluation of Language Variation (DELV; 2003) is discussed in detail in Seymour and Pearson (2004). The DELV does seem to meet the requirements outlined above, in that when socio-economic class is carefully matched, the child who speaks AAE is not differentially successful compared to the child who speaks MAE. That meets the requirements by ASHA (1983) that speech-language pathologists should not treat dialect variations as a speech and/or language disorder. Of course, such a result would be trivial if the test failed to also identify children in need of services, regardless of the dialect they spoke. The test fulfils that requirement too, though as expected, the convergence between its identification and that of existing tests is not perfect, especially for AAE speakers. It will take some years of clinical practice to determine if the test has merit in identifying the right children who can benefit from services. Before describing the way that the DELV tests semantic development, it is first necessary to introduce the general problem of vocabulary assessment in African American youngsters.

3.0 Why is vocabulary assessment a challenge?

Current standardized tests of receptive vocabulary such as the Peabody Picture Vocabulary Test-III (PPVT-III; Dunn & Dunn, 1998) and the Receptive One-Word Picture Vocabulary Test (ROWPVT; Gardner, 1985) measure a child's performance in matching the meaning of a word to a corresponding list of possible referents, with one being the best match. However, children for whom certain experiences may not be common or may be different because of diverse cultural and linguistic backgrounds can be at a decided disadvantage when taking such tests.

This disadvantage appears to be reflected in the poorer performance of African American English (AAE) speaking children when compared to their Mainstream American English (MAE) speaking peers (Stockman, 2000, Washington & Craig, 1992, 1999) on some tests. One likely factor in lower performance on word learning is differences in input. As de Villiers (2004) points out, word learning is dependent on frequency of input; however, children grow up in various conditions and may develop vocabularies that differ from each other.

Although the source of poor performance scores by AAE speaking children on various standardized tests remains controversial (Seymour & Bland, 1991, Washington & Craig, 1999), Stockman (1999, 2000) argues that the popular and commonly used index of receptive vocabulary is likely to be the most vulnerable to bias when assessing culturally and linguistically diverse populations. Most picture-based vocabulary tests rely heavily on nouns due to difficulty of capturing verb meaning in a picture format (de Villiers, 2004). Blake (1984) contended that verbs may be a more salient part of the vocabulary for AAE-speaking children, as they are in other cultures (Choi & Gopnik, 1995). Children who come from families with different vocabularies, or who may not emphasize object labeling (Heath, 1983; 1989; Peña, 1996) may be at a disadvantage on noun-laden vocabulary tests. Thus, there is the need for developing more culturally and linguistically fair ways of assessing children's semantic competency.

One potential method for assessing lexical learning that does not depend so much on prior knowledge or experience, regardless of linguistic background, is fast mapping (Carey & Bartlett, 1978). Fast mapping consists of quickly inferring a preliminary idea of a novel word's meaning. Carey and Bartlett (1978) argue that this process involves a

restructuring of the lexicon and of the underlying conceptual domain that can be achieved by a single exposure to the novel word. For example, fast mapping of nouns requires establishing an association between the word and the entity and this process plays a major role in early lexical acquisition. However, in the fast mapping of verbs, such a direct association is inadequate (Tomasello, 1995) Additional information for fast mapping of verbs is needed because actions indirectly involve either an object undergoing change or two or more objects with dynamic relationships (Slobin, 1978). As a result, often the action is over before the verb is heard, or is still impending (Tomasello, 1995; Gleitman, 1990), making ostensive reference much more difficult than for nouns. Instead, syntactic frames play a more significant role in verb learning (Gleitman, 1990; Gleitman & Gleitman, 2002). During fast mapping of verbs, children can learn meaning by noticing the range of syntactic frames in which the word appears. In other words, children use relations among nouns and verbs to support mapping by using each syntactic frame or argument to narrow the choice of possible interpretations for the verb.

4.0 Experiments on fast mapping

In an early study of the role of syntax in fast mapping, Brown (1958) found that preschool children, 3 to 5 years of age, were sensitive to the sentence context in choosing different word meanings for the novel word *sib*. The pictures contained a character doing a strange action to a mass substance with an unknown implement. For example:

Look, a sib! (child picks out implement)

Look, sibbing! (child picks out action)

Look, some sib! (child picks out mass substance)

More recently, Klibanoff and Waxman (2000) showed children could differentiate adjectives from nouns using linguistic context, as in the following examples:

Look, a sib! (child notices object)

Look, a sib one! (child notices attribute)

Researchers have shown that for verbs, sentence context, namely the argument frame, is crucial (e.g., Naigles, 1990; Gleitman, 1990; Fisher, 1996). They demonstrated that young children can guess the kind of event that is being referred to in an utterance based on the sentence context. For example, in work conducted by Fisher (1996) children between the ages of 3-5 were shown a video of Person B sitting on a swivel stool, being spun by Person A pulling off a scarf wrapped around the waist of Person B. This action was labeled with either a transitive (a), or intransitive (b) argument frame:

a) She's mooping her over there.

b) She's mooping over there.

For a), mooping was associated with the actor A. For b) , mooping was more often considered to be the action of actor B, though not exclusively, just as with adult judgments.

Johnson (2001) extended Fisher's work to include more complex forms, with the goal of investigating whether such a procedure could be used for the fairer assessment of semantic knowledge in children speaking AAE or MAE. It was reasoned that such a procedure, involving the readiness to learn new verbs, might level the playing field for children who come from different backgrounds and so have different preparation for standard vocabulary tests.

Thirty AAE-speaking children and 30 MAE speaking children were included in this study, ten children from each group at ages 4, 5, and 6 years. The AAE-speaking

group was recruited from working-class communities in central Connecticut where the neighborhoods included primarily African American families. The MAE-speaking group was recruited from working-class communities in western Massachusetts where the neighborhoods consisted of primarily Caucasian families. The teachers provided background demographic and educational information for each student. All children were reported to be performing at expected levels for their age and grade level.

Fast mapping of verbs was the measure of semantic knowledge examined in this study; however, the PPVT-III (Dunn & Dunn, 1997) was also administered to all children to compare against the novel test. In order to study fast mapping in detail, four argument structures judged to be the same across the two dialects were included: intransitive, transitive, transfer and infinitival complement structures (See Table 1). Naigles (1990), Fisher (1996) and Gleitman and colleagues (1990, 1992) have conducted studies that demonstrated children can bootstrap verb meaning from *intransitive* and *transitive* argument structures, and had argued that *complement* structures were important sources of verb meaning. However, complement structures had not been investigated experimentally with children.

In Johnson's study, a design was used similar to that of Naigles (1990) and Fisher (1996) by pairing the argument structures with the same pictured stimuli: intransitive with transitive; *to-* complement with transfer. The study utilized sequential picture sets to simulate a "movie" of the main event to be presented to the participants (See Figures 1 and 2). For example, a participant would see a strange event (Figure 1) in which a boy was performing some novel action on his own, and a woman was performing some other novel action to the boy, over a set of three pictures in sequence. The participant then heard: (a) The woman is *temming* the boy or (b) The boy is *temming*. The participant hearing (a) would likely associate the novel verb "temming" with the woman's action on the boy and hearing (b) with the boy's own action.

To see which meaning the child mapped to each verb, questions that included the novel verb were presented to each participant (Table 2). To test this, participants were shown a set of four pictures (e.g., the boy, the woman, an instrument from the picture and another incidental object) to chose from when asked: (1) Which one was the temmer? and (2) Which one got temmed?

Participants were randomly assigned to be administered Form A or its counterbalanced version, Form B, in which the alternate argument structure was used, as in Fisher (1996). By this design, the child's choice of an agent could not be attributed to the picture alone, but instead had to be based on the argument structure heard. A total of eight novel verbs were presented to each participant (two novel verbs per argument structure). Each participant had the opportunity to fast map two novel verbs per argument structure. For more details of the design of materials, see Johnson, 2001; in preparation).

Figures 1 and 2 here

Tables 2 and 3 here

The six question types and examples using novel verbs are classified in Table 3. Notice that not all questions are equally appropriate for all verb types. Question types five and six did not contain any bound or derivational morphology because they were designed to assess whether the child could determine the object of the complement and subject of the complement in the complement argument structure (See Figure 2). The child has to use the full argument structure to answer questions regarding the subject and object of the complement. Of course, a child could fail on the questions because of the morphology or syntax of those questions, not because of a failure to map the novel verb meaning. To control for that possibility, the test was introduced and modeled first with real verbs that the children were likely to know, and they were asked parallel questions about those verbs. This ensured that they had practice with the task with familiar verbs

first, and also determined whether the questions caused difficulty with familiar verbs.

Johnson's results suggested a promising future for the tasks. Children aged four through six years could glean meaning about the verbs from the argument structures, as shown by their differential answers to the probe questions. Some of the questions proved hard for this age group even with the novel verbs, for example, the "-able" morpheme was often misinterpreted as an agent marker: the actor was considered "handable" if he handed something to someone (see also Roeper, 1987)! Furthermore, complement structures were difficult for this age group compared to transitive argument structures. Most importantly, only minor differences were found in performance between AAE-speaking children and MAE speaking children, who did equally well in mapping novel verb meanings. This is significant in the light of their performance on the PPVT-III: despite attempts to match SES, the MAE speakers averaged 13 points higher than the AAE speakers (Johnson, 2001; in preparation).

But the important question then becomes, is this equality of performance a sign that the playing field has been leveled, or might it mean that important differences in ability have been ignored by the test? The acid test is whether the test distinguishes typically developing children from children with language impairment.

In the preparation for the new test, the DELV (Seymour et al., 2003), Johnson's thesis idea was adapted to study how children aged 4-9 years from various dialects of English including AAE could fast-map verbs from argument structures. The task held the promise of being non-biased, though it was untried with clinical populations. We reasoned that the case of verbs might prove especially vulnerable in language impairment given the work of Rice and Bode (1990) on the insufficiency of early verb lexicons in language -impaired children.

The general characteristics of the tryout or field testing of the DELV are

contained in Table 4. The sample was a large one, and contained a larger than usual proportion of children diagnosed as having language impairments (33%). In addition, the sample contained 60% AAE-speakers, which is a much greater sampling of those children than the usual standardization procedure that matches USA census proportions. Both dialect grouping and language impairment status were categorized by testing clinicians based on their experience with the children as well as a variety of standardized testing that they had carried out. Confirmation of these categorizations was then sought from the DELV-screener (Seymour, Roeper & de Villiers, 2003).

Table 4 here

Because this was field testing of a test, not an experiment, it was not possible to balance the stimuli as in Johnson's (2001) study, so one half of the children received one kind of prompt for a given picture sequence and one half the alternative prompt. However, Johnson's work had provided the background we needed to show that the pictures were balanced, and that the sentences were what led the child to one answer or another. The stimuli were adapted from Johnson's work and contained the same kinds of exemplars, representing four kinds of argument structures (Table 1) and six kinds of questions (Table 2) to allow the examiner to determine which action the child had associated the novel verb with. From the large amount of data this generated, a selection was made for inclusion on the final DELV. For example, everyone found the intransitive forms too easy, so they were dropped. The point was to find items that showed steady changes with age. The amount of information gleaned from the "real verb" use was less useful than the novel verbs in discriminating impaired children from typically developing children so that section was also truncated so that it served merely as an introduction to the procedure for the child.

The graph in Figure 3 shows the results from the field testing. Recall that ideal items would have the properties of a) steady developmental growth, and b) no bias

against AAE speakers. The graphs show that promise was met. But as before, such item sets would only be useful if they also discriminated language-impaired children from typically developing children. Figure 4 shows that the fast-mapping test also has that characteristic. Hence, the verb fast mapping test has some desirable properties for assessing how much children can begin to establish a meaning from a new verb, regardless of the dialect they speak. This is to be distinguished from standard acquired vocabulary tests that assess what the child has learned but not what they *can* learn, possibly confounding experience and potential.

<div align="center">Figures 3 and 4 here</div>

The results of these investigations suggest that children can fast map a novel verb at least partially from a single exposure to it in intransitive, transitive, transfer, and complement syntactic structures, as long as there are supporting pictures. However, multiple exposures, across multiple frames, are likely needed to fix it more firmly (Gleitman, 1990). Pinker (1995) has argued that the structures themselves allow a kind of zooming in on the right domain of meaning, but contextual support is necessary for more specific mapping of the meaning. Gleitman (1990) has argued that converging evidence across a variety of sentence structures might be necessary to delimit the meaning further.

5.0 What are the implications for reading?

These can be divided into several kinds of considerations, first:

a) How might "fast-mapping" relate to reading, as opposed to vocabulary knowledge?

The source of new vocabulary lies in the conversation with adults in school or home environments, where ostensive definition of new words is not the norm for any

child. Instead, meanings are picked up from their sentence contexts, categorized by part of speech, and then their meanings are gradually filled out by repeated exposures. This means that a child needs the skills that are tapped by the fast-mapping assessments in order to acquire vocabulary past the baby stage. These skills increase as the child masters more syntactic varieties, and also as a function of the other words that he knows that allow anchors to bridge to the new words, and also serve as clues to the potential semantic domain. So, a child hearing a conversation about firemen, hoses and burning might hear a new word "extinguish," and pragmatic inferences as well as syntax might allow the meaning of "put an end to" to emerge. Ideally, early texts or readers are made up of highly frequent words that are in every child's experience. Once the basic word attack skills are mastered, then reading actually promotes vocabulary development (Nagy, Anderson & Herman, 1987). A major source of new vocabulary words once a child learns to read is from written material, and the skills of fast-mapping are needed in a parallel way to glean meaning from text, make provisional guesses about word meaning, and then pick up clues to narrow meanings (de Villiers & Pomeranz, 1992). As education proceeds, we become adept at reading materials where virtually nothing is familiar, but we know how to play the game and answer the questions. An example of this process is often provided in cognitive psychology texts (Table 5).

Table 5 here

It is rather frightening to consider how much of student learning takes this form. However, in abstract domains (e.g. microscopic science, abstract philosophy) this is how words are first learned, and the networks of such uses constitute their "meaning". So fast mapping via syntactic bootstrapping is not just one of the major ways that vocabulary is acquired, but also an essential component of skilled reading (Sternberg & Powell, 1983; de Villiers & Pomeranz, 1992). Nevertheless, it is also clear that prior domain knowledge plays a large role in helping this process of making words meaningful (Drum &

Konopak, 1987). A child with more experience in the domain, say biology, will have more chance to connect the new words to established networks.

However, we also have evidence that the grammar may be a significant variable here. In a follow-up study, Johnson, de Villiers, Deschamps, D'Amato, and Huneke (2002) explored the role of the concrete nouns in helping the child to fast-map novel verbs. That is, could the argument structure stand alone as a reliable clue to verb meaning if the concrete nouns were absent? In this study, 55 MAE-speaking children heard sentences with "empty" nouns such as in Table 6, i.e. with the same pictured support and argument structures as before, and also the same probe questions. Real verbs were used as an introduction to the task and to test whether children could answer the probe questions, as in Johnson (2001).

Table 6 here

The results suggest the children's success depended on the particular argument structure used. A single exposure to a novel verb in a *transitive* or *transfer* structure permitted successful mapping-even with empty nouns. However, a single exposure to a novel verb in an *intransitive* structure was not successful with empty nouns: the meaning was ambiguous (as in Fisher, 1996). A single exposure to a novel verb in a *complement* structure was not successful with empty nouns, and even adults had difficulty. These results are important for delineating which aspect of the stimulus context is providing the crucial information for the child to map a preliminary meaning. At least with spoken exposure, sometimes surrounding words are necessary for fast mapping, and sometimes they are not.

A second question is:

b) Are these dynamic assessments of vocabulary better indicators than acquired vocabulary tests of the child's school readiness?

If we successfully assess whether a child CAN learn new words from context, how can that help? First, it may help describe the source of difficulty:

1. The child cannot use context to learn new words. This child needs help in basic structures of sentences and inferences, i.e. is a *language-impaired* child.

2. The child can learn easily from context but has not had much opportunity to do so, so the child's vocabulary is low, i.e. is a *vocabulary-deprived* child.

3. The child can learn easily from context and has had the opportunity to do so but the words he knows are not in the texts he encounters i.e. is a *culturally mismatched* child.

Depending on the outcome, different educational strategies would be called for.

We argued that because of cultural variation, the vocabulary a child knows may be underestimated on standard tests. However, their capacity to acquire words through discourse may be developing normally. The question is: which is more important for reading success? Clearly the answer to this depends on how well matched the reading texts are to the language of the child. If the reading texts contain much vocabulary that the child does not know, then the child who has a different acquired lexicon will be disadvantaged, and will need to use fast mapping and inferencing strategies much more than the child who encounters familiar vocabulary. The child with a different lexicon would have to work harder for the same understanding. In this sense, acquired vocabulary tests do assess the child's upcoming workload if school texts are biased to represent one cultural norm.

We have shown that AAE-speaking and MAE speaking children alike have fast-mapping skills needed to infer new word meaning from sentence context in spoken discourse. Might differences show up if the task involved reading? If a child's vocabulary does not match that of the text, then more inferencing work will be needed than for a

child for whom most of the words are familiar. Second, there is the risk that a child might "guess" a word from its first sound, a strategy that Labov (1998) found to be common in AAE speakers in which the phonics curriculum taught first letter matches too thoroughly at the expense of other code-cracking skills. A child who guesses at an unknown word without reading it thoroughly may then go astray in recognizing its morphological variant. Imagine, to return to the exaggerated example in Table 5, that the word encountered was "flegpolation". If a reader skims-reads it as "flagellation", then he will be bewildered by questions about flegpols. For reasons of both different vocabulary and inadequate phonics training, the transition to fast mapping in reading may impact AAE speakers and MAE speakers differentially. But knowing exactly how would lead to potential solutions.

6.0 The larger framework

The bigger questions emerge at this juncture. If AAE-speaking children enter school eager and able to learn vocabulary, eager and able to learn to read, then why do AAE-speaking children in reading assessments continue to differ from their MAE counterparts with grade-level? The claim is that as reading requires higher-level skills, the problems expand (Craig et al., 2003). As a result, it appears unlikely that this is directly dialectal in origin, i.e. phonology and morphology mismatched to orthography. (Hart, Guthrie & Winfield, 1983; Labov, 1998). However, Labov (1995; 1998) argued for a restructuring of phonics-based reading programs to take into account the differences between written forms and the surface realization of words in AAE speech.

We have suggested the increasing strains that might develop in the child who encounters vocabulary mismatch between home and school environments. There are

several solutions: use vocabulary that is culturally familiar and neutral, so the children all have the same aid from known words, or use texts with vocabulary tailored to the child's cultural background (LeMoine, 1999; Rickford & Rickford, 1999).The latter solution seems very sensible except that the broader bias issues emerge, in which African American lives and circumstances are considered unsuitable reading material (Gilyard, 1999; Rickford, 1999) or African American parents worry that they promote stereotypes, as with the case of the book *Nappy Hair* (Herron, 1998). The impact is likely to be most effective if it is two-way: preschool programs that boost vocabulary skills in children from different backgrounds towards a more traditional school-ready vocabulary (Craig, Connor & Washington 2003), and concerted efforts by educators to make schools a better match to the skills that AAE speaking children bring (LeMoine, 1999; Adger, Christian & Taylor, 1999; Boykin & Allen, 2003; Vernon-Feagans et al, 2001).

What are some other sources of the problems for AAE speakers learning to read? As material becomes more difficult and more and more inferencing is required, it is probable that motivation becomes much more significant than ability. The danger is that the child who is AAE speaking is accumulating experiences that tell her that her native language and speech are degenerate, and that she is not speaking "right" by the school's standards. Those children who take that lesson to heart and/or begin to see the value in bi-dialectalism, begin code-switching in school environments. A recent report suggests that code-switchers, i.e. children who manifest fewer dialect features in their speech, achieve higher standardized test scores and reading scores than children who retain more features (Craig & Washington, 2004). Given Labov's findings (1998), this is probably not just because the languages are in increasing synchrony at the superficial level.

Possibly, it is because some children have adopted school norms and are assimilating into the more powerful mainstream school culture. Gilyard (1991) movingly describes this tension in his own schooling, where he also cites Hudson (1980) about a child's choices:

"…he will probably model his speech largely on that of the others in the group he has chosen. In other words, at each act of utterance his speech can be seen as an ACT OF IDENTITY in a multi-dimensional space" (p14).

Washington (2001) clearly describes some of the pressures that AAE-speaking children are subject to in the classroom.

a) Teachers judge reading by read-aloud, and constantly "correct" dialectal pronunciations, sometimes at the cost of attention to the child's understanding of the text. Yet, in order to switch from the written MAE into spoken AAE, the child is demonstrating bi-dialectal competence with the language of the text (Washington, 2001).

b) It is well documented that many teachers are biased against dialect speakers. Studies have taken the same text and read it with the voice quality associated with Black or Whiter speakers and judges give higher ratings to the White speech qualities (Washington, 2001). In numerous small ways, teachers can indicate their distaste for and misunderstanding of features of dialect (Cazden, 1999; Washington, 2001) These are the reasons that educators such as LeMoine (1999, 2001) Baugh (1997) and Wolfram (1999) argue that teachers need linguistic knowledge about AAE before they can teach AAE-speakers effectively.

c) Because texts are written in MAE, children who speak AAE do not feel represented. Many school texts do not portray African-American characters or things of interest/familiarity to them (Barrera, 1992; Harris, 1995). A major stimulus in the educational history of Professor Keith Gilyard (Gilyard, 1991) occurs when his teacher suggests a poetry book written by an African American, Langston Hughes. Rickford &

Rickford (1995) call for a reconsideration of the idea of dialect readers as a bridge to reading for AAE speakers.

d) Stories are structured in a way counter to the cultural practices of African American story-telling. This latter fact is a controversial one, as some earlier work suggested that African American story telling has a unique "topic-associating" style associated with oral cultures (Michaels, 1981; Gee, 1991). However, more recently Champion (2002) finds that grade school AAE-speaking children are capable of a wide range of styles in story-telling, including the linear story grammar type (see also Hyon & Sulzby,1994). Nevertheless, the ethnographic work of Heath (1983; 1989) and others (Vernon-Feagans et al., 2001) reminds us that there are different ways that different cultural groups have to "make meaning", and at least at first, children might be better off with a match than a mismatch (Boykin & Allen, 2003; Le Moine, 1999). In particular, several studies have found differences in the style and quantity of questioning that African American mothers use to engage the child compared to White mothers reading to their children (Washington, 2001; Vernon-Feagans et al., 2001).

7.0 Remaining Research Questions.

Given the larger issues of culture fairness in school reading instruction and assessment, the following research questions remain.

a.   Do "fast mapping" measures of semantic knowledge correlate at all with standard reading comprehension measures? How do they compare with acquired vocabulary tests? Do the two types predict differently for AAE than for MAE?

b.   Suppose these fast mapping measures do not correlate with *standard*

measures of reading comprehension. Is it that the tests of reading comprehension rely more on nets of familiar (to some) words than on syntactic decoding? A test of fast mapping in reading could be devised along the same lines as the materials for spoken language to see when and if children benefit from the skills they have in oral vocabulary learning.

c. If not, can we improve the "fit" of the text in the fast mapping to the child's dialect, and see if reading improves? That is, would children benefit from using their fast-mapping skills on a passage of culturally familiar or interesting material?

These are some of the important directions future work might take.

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Figure Captions

Figure 1: A sample Transitive/Intransitive picture sequence for the sentence "The woman is temming the boy"

Figure 2: A sample Transfer/Complement picture sequence for the sentence "The woman is ganning the waiter to send the coffee"
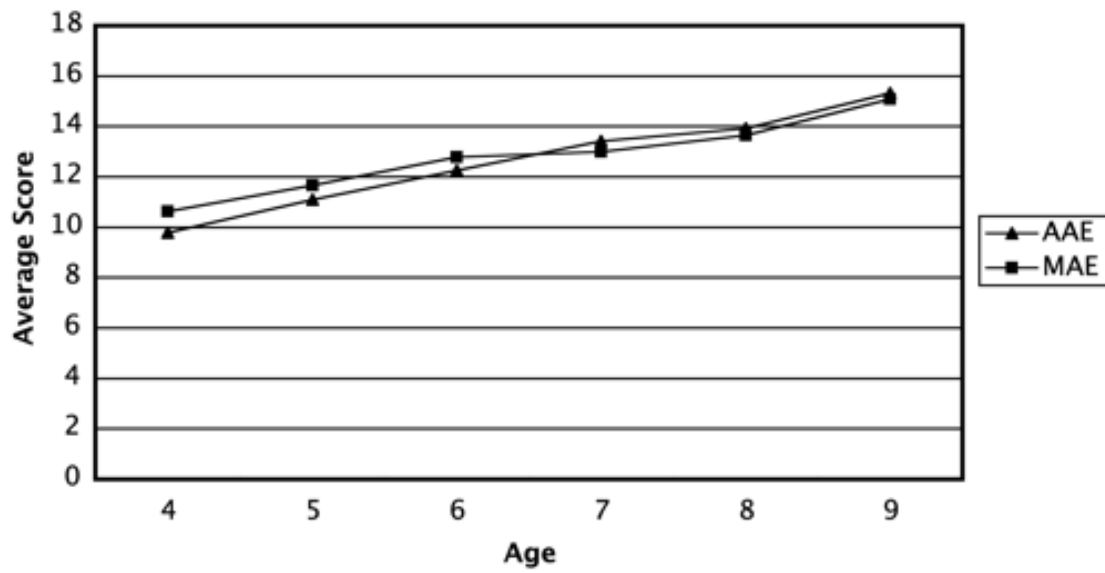
Figure 3: Results from the DELV –CR: dialect groups compared by age.

Figure 4: Results from the DELV-CR: clinical status groups by age.

Fast Mapping by Age and Diale

Average Score vs *Age*

Legend: AAE, MAE
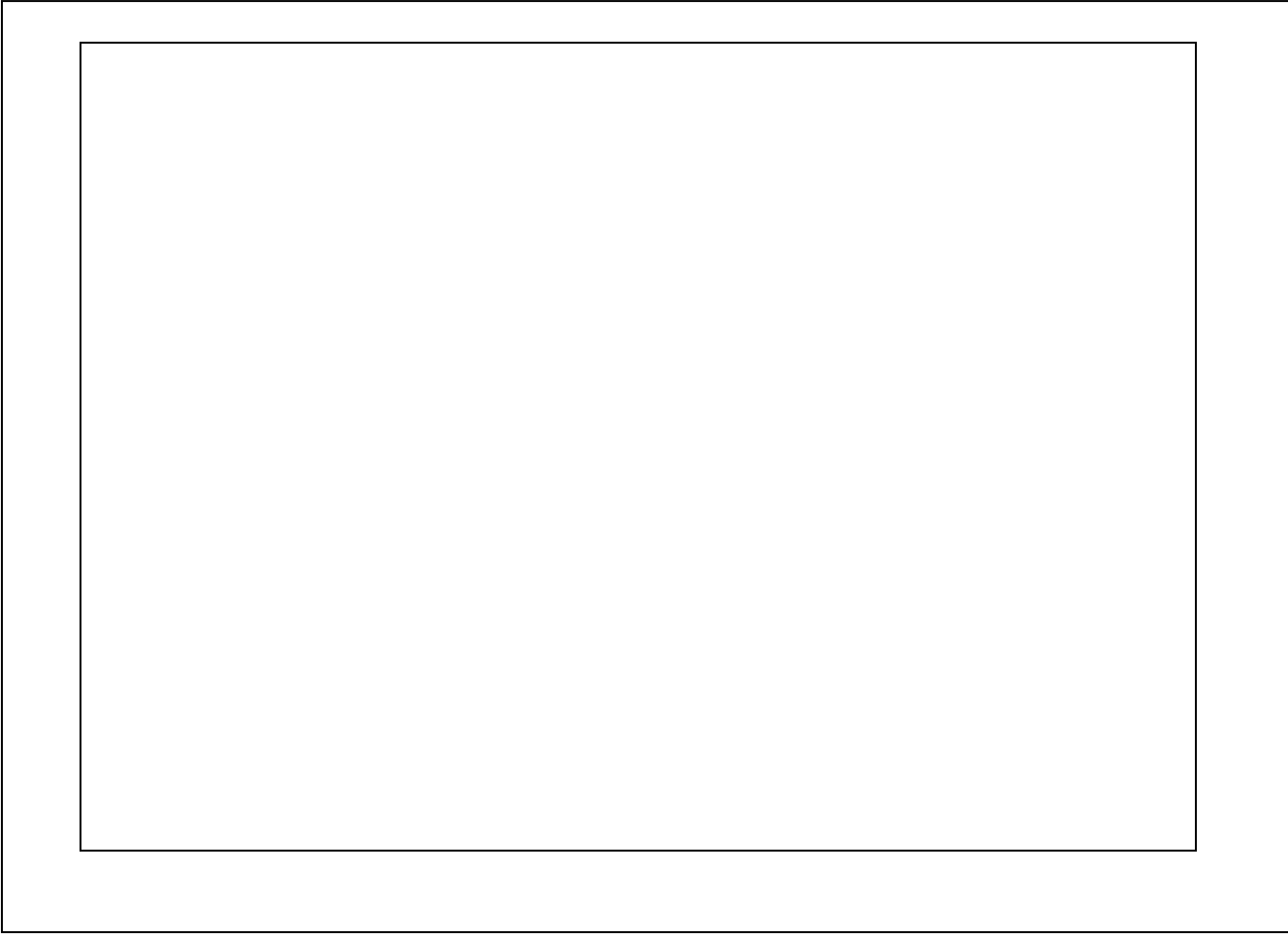
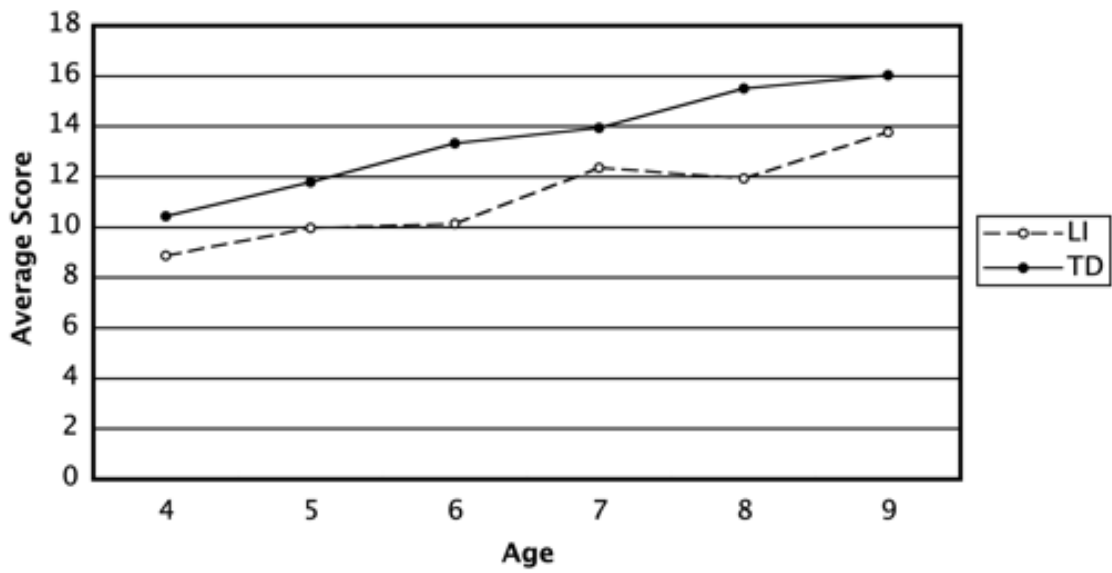Fast Mapping by Age and Clinical Stat

Table 1: Argument Structures and Examples (Johnson, 2001)

Intransitive: **The boy** is sneezing.

Transitive: **The girl** is pushing **the wagon**.

Transfer: **The woman** is handing **the letter** to **the man**.

Infinitival Complement: **The man** is asking **the girl** to throw **the ball**

Table 2. Question Types and Examples (Johnson, 2001).

Question Type One: Included derivational morpheme –er

Which one was the temmer?

Question Type Two: Included bound morpheme present progressive –ing

Which one was temming?

Question Type Three: Included bound morpheme –ed in a passive construction (-ed$_{passive}$:))

Which one got temmed?

Question Type Four: Included bound derivational morpheme –able

Which one was temmable?

Question Type Five: Designed to address the object of the complement (OC)

Which one did the woman gan the waiter to send?

Question Type Six: Designed to address the subject of the complement (SC)

Which one did the woman gan to send the coffee?

Table 3. Matrix of argument structures and question types presented to the participants to test the comprehension of real and novel verbs.

	Real and Novel Verbs			
Question Types	Intransitive	Transitive	Transfer	Complement
1 (-er)	X	X	X	X
2 (-ing)	X	X	X	X
3 (-ed $_{passive}$)		X	X	
4 (-able)		X	X	
5 (OC)				X
6 (SC)				X

Table 4: Composition of the DELV try-out sample (Seymour, de Villiers & Roeper, 2003)

- N = 1014

- Ages: 4;0 – 9;11

- Working-class background, matched Parent Education levels as High school or below

- From all regions of US

- 60% AAE-speakers

- 40% MAE-speakers

- AAE and MAE speakers matched for parental education level

- Approximately 33% diagnosed as language impaired at each age-level in each dialect group.

Table 5: The information in text when reading new words.

A phlogian can enterporate for many minicols if it is not depertoned. In order to depertone a phlogian, one should first ciphirate it into smaller flegpols. After this depertoning, phlogians should not enterporate.

So, how do you depertone a phlogian?

What if it isn't depertoned?

What can a phlogian be ciphirated into?

How can you protect a phlogian from enterporation?

Are flegpols parts of phlogians?

Table 6: Empty nouns in argument positions (Johnson et al, 2001)
Intransitive: Someone is meeping
Transitive: Someone is meeping someone
Transfer: Someone is meeping something to someone
Infinitival complement: Someone is meeping someone to send something.