The Threshold Hypothesis, Semilingualism, and Other Contributions to a Deficit View of Linguistic Minorities

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Although some educational researchers have appealed to "semilingualism" or "limited bilingualism" to explain differences in student achievement among language minority students, in this article the author argues that the construct contributes much more to the malady than the remedy in the education of linguistic minorities. The author reviews four kinds of reputed evidence for semilingualism (from studies of language variation, linguistic structure, school performances, and language loss) and concludes that all of it is either spurious or irrelevant. The author argues that semilingualism is essentially indistinguishable from classical prescriptivism and that Cummins's Threshold Hypothesis, which incorporates the semilingualism thesis, should be abandoned on empirical, theoretical, and moral grounds. An alternative account of the descriptive facts Cummins sought to explain is presented, and implications for education are discussed.

Districts reported about 3.5 million limited-English proficient (LEP) students enrolled in the nation's schools in the 1996-1997 academic year (7.4% of the total reported enrollment), an annual growth of nearly 10% each year for the last decade. In Alaska, California, Texas, and New Mexico, nearly 1 in 4 enrolled children was an English language learner. In Arizona and Florida the figure was nearly 1 in 10. Of these, approximately 75% were Spanish-speaking children (Donly et al., 1995; Macías et al., 1998). Given the composition of the student population in the United States, continued research on the nature of bilingualism and the conditions for academic success for bilingual children is a matter of great importance.

Indeed, perhaps unlike many other domains of educational research, research on bilingual education has had an important effect on curriculum and teaching practices for language minority children. However, the conclusions and recommendations of researchers, if misguided, may lead to negative educational decisions. The fact that bilingual programs are generally more effective than common alternatives for many LEP children has been

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fairly well established in the professional literature (August & Hakuta, 1998; Greene, 1998; Ramirez, Pasta, Yuen, Billings, & Ramey, 1991; Willig, 1985). However, our understanding of the causes of school success and failure for these children has lagged behind the descriptive literature.

Unfortunately, discussion of the causes of school failure for LEP children has rested primarily on deficit psychology. In this article, I argue that a climate for school failure for language minority children arises from two specific intellectual dogmas that are still very much a part of some of the most influential work on bilingualism, dogmas I will refer to as *prescriptivism* and *semilingualism*. The former is the notion that some varieties of language are of inherently higher value than others, and the latter postulates that certain populations of learners know no language at all, or speak all languages in their repertoire with only limited ability. Rather than challenging prescriptivism and semilingualism, which have the potential to harm children by tacitly tracking them, many researchers in bilingual education have openly embraced these notions as a way of explaining achievement differences among language minority children in all-English programs.

Below, I outline a theoretical framework in which teachers' beliefs about students, sometimes based on the conclusions of researchers, may be analyzed as playing a sociopolitical role that places concrete limitations upon language minority children. I then turn to a discussion of prescriptivism, underscoring some of the ways in which varieties of language and their associations with particular social classes have served as a basis for constructing social hierarchies around myths of "intelligence" and "cognitive skills." Some of the ways that the purification program of the prescriptivists was carried over to work on bilingualism, constructing myths of cognitive and linguistic deficits for some bilingual children, are then addressed. This leads to a discussion of semilingualism as the doctrine arises in influential work on bilingual education and the nature of native language acquisition. Some concluding remarks express caution for language education researchers and explore implications of the discussion here for bilingual teacher education programs, educational policy, teaching, and native language assessment of language minority children.

But first, two notes on terminology. Cummins, whose work will be the main focus of this review, repudiated the term semilingualism early in his career (1979a), perhaps in response to mounting criticism, after using it extensively in early work (Cummins, 1976, 1979b). In Cummins's (1981) later work, the term was replaced with "limited bilingualism," but there was no corresponding change in the definition of the construct. More recently, Cummins (1994) explicitly recognized that the term semilingual-

ism has taken on a pejorative connotation and, as a label, may have negative consequences for children's learning. However, in that same piece it is insisted that although the term should not be used, the condition denoted by the term itself does indeed exist. In this article, I will use the term semilingualism throughout, despite Cummins's preference for the more benign-sounding "limited bilingualism," because I believe that the attribution of the condition serves as a tracking mechanism for language minority children, as will be argued in the next section, and that using less pejorative terminology plays a complicitous role in setting up some language minority children for academic failure. Whether such children are referred to as semilinguals or limited bilinguals makes little difference to them; the central issue, as Spolsky (1984) noted, is our attribution of the causes of these children's success or failure and how this translates into educational policy, curriculum, and instruction.

Also, something should be said at the outset about the terms "competence" and "proficiency." Chomsky (1965) introduced "linguistic competence" to refer to an individual's internal knowledge of language structure, and contrasted it with "linguistic performance," which is one's knowledge of language use that interacts with a host of other cognitive and external factors. In early work, Cummins (1976, 1979b) uses "linguistic competence" and "language proficiency" interchangeably, but later, following Canale and Swain (1980), defines "language proficiency" to include linguistic competence and other aspects of language use, including, in particular, school literacy. For expository convenience, I use these terms interchangeably when discussing works in which the distinction is not made; however, where differences in school literacy are addressed, the distinction is maintained. I will argue that with specific regard to the Threshold Hypothesis and related constructs, the distinction does not matter: Regardless of where one searches for evidence of semilingualism, it is either spurious (linguistic competence) or beside the point (school literacy).

Schooling, Propaganda, and Social Class

Although the link between educational research and school practices is often weak, research on bilingual education has had a strong effect on the curriculum of teacher education programs, and for good reason. In *Lau v. Nichols* (1974), the U.S. Supreme Court interpreted Title VI of the Civil Rights Act to prohibit discrimination against language minority children through schools failing to provide for their special language needs. The Court argued that "students who do not know English are effectively foreclosed

from any meaningful education" (also see Teitelbaum & Hiller, 1977). As a result, all states must provide for the educational needs of language minority children, and this frequently involves special training for teachers. Nationwide, the U.S. Department of Education reports that 86.7% of teachers with classes made up of more than 50% LEP students have received such training (U.S. Department of Education, 1997). To the extent that teacher education programs are successful, then, teachers may develop beliefs about language minority children that are essentially consistent with the conclusions of the researchers they have come to accept in teacher education programs.

Of course, teachers' beliefs about children and their abilities are known to strongly affect students' success in school. In Rosenthal and Jacobson's (1968) classic study, teachers were given false information that some students in their classes were "intellectual bloomers," and results showed that children in some grades who were identified this way performed much higher on a year-end test. In a comprehensive summary of research on teachers' thought processes, Clark and Peterson (1986) point to ongoing psychological research that suggests "the most important beliefs that teachers have about students are those that deal with teachers' perceptions of the causes of students' behavior or, in other words, teachers' attributions for the causes of students' performance." (Also see Pajares, 1996.) An important influence on children's beliefs about their academic capabilities derives from the way teachers, in accord with their beliefs about students, differentially treat them in their classrooms (Wigfield & Harold, 1992).

In some cases, teachers have been known to point to students' "low language abilities" as a cause for poor academic performance. For instance, Ramirez and Milk (1986) found that teachers differentiated standard American English from three stigmatized varieties, with "Hispanicized English" (Chicano English) rated somewhat more favorably than both ungrammatical English constructions and code switching (the alternative use of two languages). Of the four varieties of language differentiated in Ramirez and Milk's (1986) study, code switching was consistently ranked the "least acceptable" by teachers. In an early study involving Caucasian and African American students, Crowl and MacGinitie (1974) tape-recorded two groups of ninth-grade boys speaking identically worded answers to typical school questions that differed only in pronunciation. They found that experienced teachers assigned significantly higher grades for the exact same answers spoken by White students than for African Americans and interpreted the result as indicating the operation of a "vocal stereotype." If teachers believe that some children have low language ability in both languages, then this belief may have a strongly negative effect on their expectations for these children and the curricular content and teaching practices students receive.

The institutional role of teachers' beliefs may be analyzed in sociopolitical terms, following an approach pursued by a number of educational researchers who study curriculum from the perspective that schools, as the result of many social and historical forces, serve primarily to reproduce an existing social order in which people are divided, often ruthlessly, along the lines of class, race, and gender (Bourdieu & Passeron, 1977; Giroux, 1983; Macedo, 1994; McLaren, 1994; McNeil, 1988; Oakes, 1985; Parsons, 1959; Willis, 1981). According to Gramsci (1971) and Takaki (1979), modes of discrimination based on race and gender derive from a deeper socioeconomic need in capitalist societies to create social classes. From this perspective, schools "process children into roles for economic production" (McNeil, 1988) and sustain class structure by using, among other devices, ideological constructs regarding the status of languages and language varieties that mark disenfranchised groups as inadequate or inferior to the dominant social class. Thus, language attitudes may be a factor in the construction of a social arrangement of the sort Bakunin (1883/1970) described as promoting "the advantage of a dominant minority of exploiters against the interests of the immense majority in subjection to them."

This view of the role of schools in democratic societies is analogous to Chomsky's view of the role of the media. Within Chomsky's (1989) Propaganda Model, the media is analyzed as systematically distorting the news in favor of ruling elites in the United States. In curriculum, too, a particular view of the role of the United States in world affairs is constructed, one that favors elite groups. In history classes, for example, Columbus is portrayed as an adventurous explorer in search of new lands, whereas a casual look at his own notebooks reveals him to be a murderous mercenary in search of gold and capital to repay the investment of the Queen of Spain (Zinn, 1980). Scores of examples of this sort may be given, historical portraits that have been wildly reconstructed to conceal relationships between capitalist ventures and social injustices, or that present U.S. corporate interventionism as heroic self-sacrifice in the interest of spreading genuine democracy (for discussion, see Chomsky, 1993b).

This perspective on education entails that the teaching function of schools, in general, is highly constrained by their control function, as McNeil (1988) and Macedo (1994) have also argued. Indeed, concerned with curbing the "excess of democracy" in the modern world, the Trilateral Commission approvingly analyzed the role of schools as consisting of "the indoctrination of the young" that prevents the erosion of "inequalities in authority and distinctions in function," or hinders the development of a society that is "impatient with the distinctions of class and rank" (Trilateral Commission, 1975, pp. 113, 162).[1] For institutional reasons, then, schools may often play a role in

the system of control and coercion, stratifying society into hierarchies of privilege and convincing people of the merits of such a system.

Prescriptivist values and negative views of particular language varieties may also be viewed as serving a control function in schools by raising expectations for children viewed in a positive light (who have speech characteristics of the privileged classes) and lowering them for those viewed negatively (who have speech characteristics of the lower classes), thus placing children of elites in a position to succeed in school.

Prescriptivism and semilingualism are both doctrines that attribute a linguistic deficit to some population of children, creating a climate for academic failure by assigning these students to "low ability groups." Such ability labels have been widely used to stigmatize African American English (or Ebonics) as "improper" or "grammatically incorrect." Just as negative ability labels may be attached to entire speech communities in this way, they may also be attached to individuals who are said to be semilingual. In the next section, I review aspects of prescriptivist dogma as a way of setting the stage for a discussion of this slightly different sort of attributed linguistic deficit.

Prescriptivism and the Status of Languages

Prescriptivism, in its most general sense, is the view that one or another language or variety of language has an inherently higher value than others and that it ought to be imposed on the whole of the speech community to maintain standards of communication (Crystal, 1986; Pinker, 1994). Prescriptivists have often characterized minority languages (or dialects) as inexpressive, primitive, or lacking complexity in comparison to their own language. Language academies employed with the task of "purifying" the regional linguistic descendants of Latin were set up as early as 1582 in Italy, 1635 in France, and 1713 in Spain. Proposals for a language academy in England were also popular in the 17th century (Jonathan Swift's, among them), but the suggestion lost support as it became evident that the continental academies could not halt the tide of language change (for further discussion, see Crystal, 1986; Pinker, 1994).

The prohibitions regarding English usage that are most familiar from U.S. high school curricula, found in influential prescriptive grammars, typically turn on Latinate analyses advanced in the late-19th and early-20th centuries and used to validate varieties of speech associated with the educated classes in England and the United States. (Baugh & Cable, 1978; Nunberg, 1983). In the thick of this tradition, the structuralist linguists in the United States had undertaken an empirical project, following Bloomfield's (1933) lead, in

which all languages were analyzed using the same taxonomy, leading to the conclusion that all languages, even "primitive languages," were equally complex. This research agenda ultimately had serious consequences that threatened sacred distinctions that kept privilege and social prestige in the hands of the educated classes. As Newmeyer (1986) noted,

> As long as American structuralists confined their campaign to the languages of remote tribes, they did little to upset their colleagues in departments of modern and classical languages—in which almost all linguists were situated in the interwar years. But such was certainly not the case when they began crusading for the linguistic equality of all dialects of English and other literary languages, no matter how "substandard" they were regarded. This egalitarian view came in direct conflict with the long-seated tradition in the humanities that values a language variety in direct proportion to its literary output. (p. 42)

While much of 17th-century Europe was preoccupied with the special languages of the elite, the *Port Royale Grammar* of 1660 advanced a very different view of language and of the human condition. Written in French, the *Port Royale Grammar* formed part of the movement to displace Latin as an outdated mode of academic discourse. However, what marked this text as deeply distinct from contemporaneous approaches was its devotion to philosophical and universal properties of human language in descriptive terms (Chomsky, 1968; Newmeyer, 1988; Robins, 1967). As in modern approaches in linguistic science, the *Port Royale* grammarians worked on the Cartesian assumption that normal human intelligence is capable of acquiring knowledge through its own internal resources, making use of the data of experience but moving on to construct a cognitive system in terms of concepts and principles that are developed on independent grounds.

The fear that languages might decay in the process of change, or the notion that groups from different cultural backgrounds speak "diminished" or "simplified" languages when compared to Europeans, is incompatible with these assumptions because languages are held to grow in virtue of common human resources (for some interesting discussion, see Bracken, 1984) Indeed, in the early 20th century, Boas (1911) and others painstakingly showed that non-Western languages were every bit as linguistically sophisticated and rich as their European counterparts represented in the universities.

In contrast, early work in the sociology of language followed in the tradition that viewed culturally distinct languages as related hierarchically, with the languages of the dominant social classes at the top of the intellectual scale. According to Dittmar (1976), Schatzmann and Strauss (1955) were the first to formulate what he terms "the deficit hypothesis," the view that the lin-

guistic abilities of particular social groups are deficient or restricted in some way. Schatzmann and Strauss (1955) interviewed members of the lower and middle classes about their impressions and experiences after the occurrence of a disaster and found that the former used a lot of emotional language that reputedly gave rise to "elliptical syntax." Accordingly, Schatzmann and Strauss (1955) concluded that the lower classes only conveyed their meaning "implicitly," whereas the educated classes conveyed their meaning "explicitly."

This and other work led Bernstein (1971) to formulate a distinction between "public language" and "formal language," later termed *restricted* and *elaborated* code. Bernstein studied speakers of a stigmatized dialect in London and characterized their speech as accessing restricted code but not elaborated code. According to Bernstein, public language is characterized by "fragmentation and logical simplicity." By contrast, formal language or elaborated code may be used to express "universal meaning." For Bernstein, the restricted code expresses meanings that form a proper subset of the range of meanings expressed in the elaborated code. The appropriate remediation, then, "would seem to be to preserve *public* language usage but also to create for the individual the possibility of using a *formal* language" (Bernstein, 1971, p. 54).

Numerous commentators (Bennett & LeCompte, 1990; Boocock, 1980; Dittmar, 1976; Trudgill, 1974) have portrayed Bernstein as positioned squarely within the camp of the deficit theorists, as I do here, whereas others have come to his defense (Atkinson, Davies, & Delamont, 1995; Danzig, 1995; Halliday, 1995; Sadovnik, 1995). However, as Dittmar (1976) points out, what makes Bernstein's view a species of the Deficit Hypothesis is his perspective that the speech of the educated classes is in some way greater (more expressive, less elliptical, etc.) than the speech of poor people; that is, the characteristics of "better speech" are taken to be precisely those characteristics that poor people lack. Also see Stubbs (1980), Hurn (1990), and Winch (1990) on verbal deficit theories.

The deficit approach to the sociology of language was vehemently challenged in the 1970s by numerous educational researchers and sociolinguists, most notably Wolfram (1969) and Labov (1970, 1972) in their excellent work on Ebonics. Despite these and other insights, however, much influential work in bilingual education proceeds in the spirit of deficit views about low-achieving children, confusing linguistic *differences* with *degrees* or ability levels of linguistic competence.

Minority Languages and the Ideology of Cognitive Deficits

Languages differ at the level of both communities and individuals, but they also possess well-studied universal properties that might be said to constitute a common linguistic core (e.g., Chomsky, 1995; Comrie, 1981). It is by virtue of these common, characteristically human features of our languages that prescriptivism and semilingualism become empirical claims about people's linguistic competence. Early 20th-century linguists refuted the prescriptivist idea that the languages of some communities are impoverished by showing that this claim is put forth in the absence of evidence and that comparable richness and complexity in such languages may be readily exhibited. Semilingualism is a claim about individuals who reputedly do not know the language of their community, rather than a claim about a socially definable community of speakers. As much, it has the same political force as prescriptivism and, as I will argue in the remainder of this section, may be dismissed on similar grounds: It is put forth in the absence of relevant evidence, and the richness and complexity of the language of those deemed semilingual may be readily shown.

Semilingualism and the Threshold Hypothesis

Although versions of the semilingualism thesis have been endorsed by a number of educational researchers (Cummins, 1976; Dunn, 1987; Hansegård, 1968; Ringbom, 1962; Skutnabb-Kangas, 1981; Toukomaa & Skutnabb-Kangas, 1977), there remains no cogent reason to believe that any such state exists for language minority children. Although the doctrine has been strongly criticized in the past (Edelsky et al., 1983; Genesee, 1984; Martin-Jones & Romaine, 1986; Spolsky, 1984; Troike, 1984), it is still integral to the literature on the education of language minority children and therefore warrants additional discussion. In particular, I will attempt to show that under careful examination, the evidence advanced to date by supporters of the semilingualism thesis is either mythical or beside the point, and I will additionally argue that the doctrine does not differ in essential respects from prescriptivist dogma, which has long been recognized as a deficit view of the language of highly marginalized groups.

Semilingualism was first introduced in a 1962 radio talk show by the Swedish philologist Nils Erik Hansegård (who called it *halvspråkighet*), and it was later picked up by Ringbom (1962), who conjectured that "a period of 'double semilingualism' " occurs when an individual abandons her native

language altogether in favor of a second language (p. 267). Hansegård (1968, 1975) characterized semilingualism in the absence of any theory of language, creating "a confused grab-bag of prescriptive and descriptive components," as Edelsky and her colleagues (1983, p. 2) have put it. For Hansegård, the term denoted a lack of competence in all languages an individual knows in any of six areas: (a) the size of the repertoire of words and phrases that are understood or actively available in speech; (b) linguistic correctness; (c) degree of automatism; (d) the ability to create or neologize; (e) mastery of the cognitive, emotive, and volitional function of language; or (f) a richness or poorness in individual meanings (whether reading or listening to a particular linguistic system "evokes lively and reverberating semantic images") (Hansegård, 1975, p. 8, as cited in Skutnabb-Kangas, 1981, p. 253).

However, the popularity of the semilingualism thesis in the United States is due not so much to Hansegård's writings as to the well-intentioned work of Cummins (1976), particularly in the form of his Threshold Hypothesis, although an essay by Troike (1978) independently noted and discussed Scandinavian semilingualism. Cummins's Threshold Hypothesis claimed that the level of linguistic competence attained by a bilingual child in first and second language may affect his or her cognitive growth in other domains. In early work, Cummins (1976) believed that there were two thresholds and that attainment beyond the lower threshold "would be sufficient to avoid retardation, but the attainment of a second, higher level of bilingual competence might be necessary to lead to accelerated cognitive growth" (p. 24). For him, children with low levels of proficiency in both their first language (L1) and second language (L2) may suffer "negative cognitive effects." Once mastery in one language has been obtained, the child has moved beyond the first threshold and will suffer neither positive nor negative effects. Finally, "positive cognitive effects" result when a child develops high proficiency in both languages. These ideas were represented graphically as in Figure 1, which is taken from Cummins (1979b, p. 230).

Cummins's (1976) original concern around which he developed the Threshold Hypothesis was a conflict in research findings regarding the cognitive benefits of bilingualism. Earlier studies had concluded that bilingualism adversely affects cognitive and scholastic progress, whereas more recent work showed positive cognitive consequences for bilinguals. Cummins pointed out that the studies that found a negative effect were associated with linguistic minorities, where the minority language was being replaced by the socially dominant one, whereas the studies that found a positive effect were associated with "additive bilingualism," a situation in which majority-language children acquire an L2. Cummins hypothesized that linguistic minorities undergo native language loss, and that "the level of linguistic com-

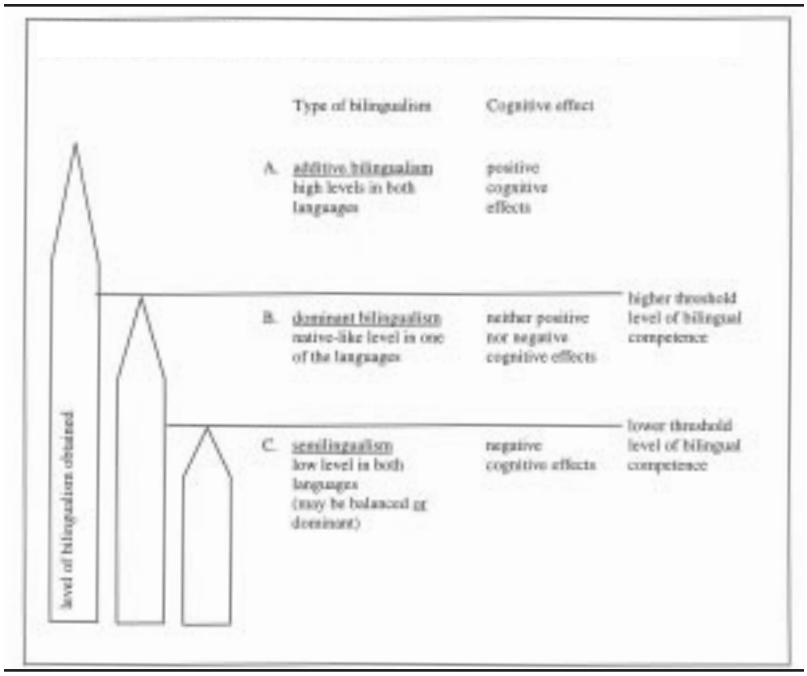

Figure 1. Cognitive effects of different types of bilingualism (Cummins, 1979b, p. 230).

petence attained by a bilingual child may mediate the effects of his bilingual learning experiences on cognitive growth." In other words, he sought to explain the reports of negative effects of bilingualism on cognitive and scholastic progress by proposing that the subject population had a low level of linguistic proficiency in its L1 as a consequence of acquiring an L2, whereas children in the additive bilingual programs benefited from continued support of their L1 at school and in society. As Cummins (1976) wrote,

> Subtractive bilingualism, where L1 is being replaced by L2, implies that as a bilingual in a language minority group develops skills in L2, his competence in L1 will decrease. It seems likely that, under these circumstances, many bilingual children in subtractive bilingual learning situations may not develop native-like competence in either of their two languages. (p. 20)

In later work, Cummins (1979b) extended his analysis to another, similar problem. Swain (1978) and others had argued that despite superficial similarities, immersion programs, in which language majority children are immersed in an L2, differ in substantial respects from submersion programs, in which

language minority children are immersed in a majority language, and there was mounting evidence to support this view (Cohen & Swain, 1976; Swain, 1978). Today, considerable work on program effectiveness suggests that this picture is essentially correct, with LEP children in bilingual programs generally outperforming those in all-English programs in the United States (August & Hakuta, 1998; Greene, 1998; Ramirez et al., 1991; Willig, 1985).

Cummins (1979b) proposed "a theoretical framework which assigns a central role to the interaction between socio-cultural, linguistic and school program factors" (p. 223) to explain these differences, where "the level of competence bilingual children achieve in their two languages acts as an intervening variable in mediating the effects of their bilingual learning experiences" (Cummins, 1976, p. 229). The basic idea appears to be a model in which semilingualism is one link in a causal chain. Background characteristics (the nature of the child's linguistic interaction, and community and parental attitudes toward participation in L2 culture and maintenance of L1) affect "child input variables" (conceptual-linguistic knowledge, and motivation to learn L2 and maintain L1) and reciprocally affect educational treatment variables (patterns of program language usage, teacher attitudes and expectations). In turn, these variables act together to influence "child process variables," which include a child's resulting competence in L1 and L2 and his or her motivation to learn L1 and L2. Finally, Cummins related process variables to educational outcomes (cognitive, academic, linguistic, and affective).

In Cummins's model, then, semilingualism is a link in a causal chain posited to explain academic failure among language minority children and an integral component of his framework. Put in terms of his Threshold Hypothesis,

> negative cognitive and academic effects are hypothesized to result from low levels of competence in both languages or what Scandinavian researchers (e.g. Hansegård, 1967; Skutnabb-Kangas & Toukomaa, 1976) have termed "semilingualism" or "double semilingualism". . . . Essentially, the lower threshold level of bilingual competence proposes that bilingual children's competence in a language may be sufficiently weak as to impair the quality of their interaction with the educational environment through that language. (Cummins, 1979b, p. 230)

It is important to note that for Cummins's argument to go through, semilingualism can only be an attribute of language minority children in the United States but not of majority language children. It is to this that Cummins attributes minority children's academic failure. For other children, in an additive situation, semilingualism does not occur, and hence their interaction with

the educational environment generally leads to success. Because the treatment variable is the same in both instances (instruction in the target language), the child's "input linguistic knowledge" takes on special importance in Cummins's model as "deficient levels of L1 and L2 competence" (Cummins, 1979b, p. 240) are constructed within the child.

Cummins's (1979a, 1981, in press) related distinction between Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language (CALP) has frequently been discussed as though it were identical to semilingualism, a component of the Threshold Hypothesis (Edelsky, 1996; Edelsky et al., 1983; Martin-Jones & Romaine, 1986; Wiley, 1996), but in many respects it is rather different (though perhaps also flawed). Thus, although it may be argued that conversational (BICS) and academic (CALP) kinds of language were not intended to be rank ordered (Cummins, in press), this claim is much harder to make with respect to the Threshold Hypothesis, in which children are said to proceed upward through levels of linguistic proficiency (from a "low level in both," to a "native-like level" in one, finally to gain "high levels in both languages"; see Figure 1).

The suggestion that a child (or group of children) has deficient levels of L1 is an empirical claim that can be evaluated by a consideration of the available evidence. In the next section, I review proposed evidence for the semilingual condition.

Purported Evidence for Semilingualism

Recall that semilingualism is said to be a condition in which individuals have limited or nonnative ability in the language or languages they speak. Below, I will review four types of evidence that have been advanced to support semilingualism, and will argue in each case that the data are either spurious or irrelevant to the semilingualism thesis. To show that semilingualism does not exist, it is sufficient to find that in a reasonable sampling of cases, all normal children acquire the language of their speech community with some minor but ordinary degree of variation. Whether and to what extent a child also knows an L2 is not relevant. Furthermore, to show that Cummins's framework is ill-conceived, it will be sufficient to show that whatever is said to characterize semilingualism (whether the condition exists or not) does not uniquely characterize language minority children in the United States.

For expository convenience, I begin my review with Cummins's (1994) argument on language variation, then turn to a critique of purported evidence from language structure, school performances (where literacy will be discussed), and language shift.

Evidence From Language Variation

Cummins (1994) concludes a recent piece on semilingualism by explicitly equating *variation* in language with *ability level* in language:

> if one admits that variation in language and literacy abilities exists among monolingual populations, then there is no reason to deny the existence of such variations among bilingual populations in their two languages. It is clear that there are major individual differences in literacy skills and in certain aspects of oral language skills among the general population in their L1s (or first languages). . . .
>
> There appears to be little justification for continued use of the term "semilingualism" in that it has no theoretical value and confuses rather than clarifies the issue. However, those who claim that "semilingualism does not exist," appear to be endorsing the untenable positions that (a) variation in educationally-relevant aspects of language does not exist, and that (b) there are no bilinguals whose formal language skills are developed only to a relatively limited level in both L1 and L2. (pp. 3813-3814)

Although again repudiating the term semilingualism, Cummins argues that the claim that semilingualism does not exist implies the "untenable" position that there is no variation in language. Because he also asserts, quite correctly, that there do exist clear individual differences in both literacy and aspects of oral language, he also claims, by logical implication, that semilingualism does indeed exist. This constitutes an argument for semilingualism, the condition of "inadequate development of both first and second languages" (Cummins, 1994, p. 3812), from evidence of language variation. Because Cummins views literacy as a subcomponent of language proficiency, he rarely distinguishes between language and literacy in his discussions of these issues (Cummins, 1979b, 1981). I will turn to a discussion of variation in literacy below, in connection with other purported evidence from school performances, and here limit myself to the issue of variation in oral language.

From one perspective, the assertion that variation implies semilingualism appears strikingly similar to the basic claims of classical prescriptivism, where linguistic differences are construed as related hierarchically, and the speech of the educated classes is regarded as better or more developed in certain respects than the speech of the poor (or, in the case of Cummins's theory, linguistic minorities in the United States). As with prescriptivism, the characteristics of "better speech" are taken to be precisely those characteristics that so-called semilinguals lack.

However, the existence of language variation does not imply semilingualism, contrary to Cummins's assertion. It is well known that languages vary, even at the level of individuals (Fillmore, Kempler, & Wang, 1979). Given

the nature of experience, it makes very good sense to think of a language as a state of the human language faculty that is "some accidental product of varied experience" (Chomsky, 1995, p. 7). In this respect, it is conceivable—in fact, quite likely—that each of us differs in some respect in terms of our knowledge of language or linguistic competence. As Chomsky (1993a) has noted,

> If my granddaughter were to say "I brang the book," we would not hesitate to say she is following the rule for "sing-sang-sung," contrary to "common agreement." True, her internal language may change, replacing "brang" with "brought." If it does not, she'll be speaking a language that differs from mine in this among many other respects, and speaking it "correctly," insofar as the word means anything. (p. 20)

Thus, if the idea that someone has deficient levels of linguistic competence is simply equated with a difference in linguistic competence (different as compared to other members of the community), then it will likely be true that each of us has deficient levels of language in some respect. Group and individual variation, then, cannot be used to define some groups of speakers as deficient and others as proficient, because these differences abound both within and between groups.[2]

Citing Kalantzis, Cope, and Slade (1989), who refer to academic discourse as "the pinnacle of mainstream language," Cummins (1994) further charges that academic researchers "should not view as unproblematic the fact that a disproportionate number of minority students fail to realize the full range of options in their two languages" (p. 3813). Here, as elsewhere, we find the assumption that the particular linguistic register (or way of talking) that academics use has special qualities. It is said to be the pinnacle of mainstream language, and children who do not have this particular register "fail to realize the full range of options" in their linguistic repertoires. However, we can no more reasonably say that the poor or unschooled lack language proficiency because they do not speak our particular speech registers than they could say that we lack proficiency because we do not speak theirs. It is a mistake, then, to claim as Cummins (1994) does that such children have "relatively limited repertoires in certain aspects of their two languages" (p. 3814) because they do not know academic registers. Place a Harvard professor on a farm in Central Mexico, the way a Spanish-speaking child from Oaxaca might be placed in an academic environment in the United States, and you will find the academic at a considerable loss for relevant vocabulary and speech registers.

Like Hansegård, Cummins thought that the size of linguistic repertoire (vocabulary knowledge) ought to factor into the estimation of relative linguistic competence. However, attempts to calculate how many words a per-

son knows are invariably plagued by complications of individual and cultural differences (Bryson, 1994; Cooper, 1997), turning on differences in interest and facility in talking about particular topics. Once again, we might imagine a farmer or a skilled boatbuilder, neither of whom has ever been to school. Both will know many concepts and words utterly foreign to academics, just as academics will know words foreign to them. That is no surprise: we naturally expect these differences, given the differences in experiences.

In this respect, the claim that poor children lack language proficiency in comparison with the children of the educated classes is not different from the claim that African Americans speak a deficient language or lack language proficiency in comparison with majority children, or that speakers of Akan have a deficient language or lack language proficiency in comparison with speakers of Zulu, French, or Hebrew. If true, then schooling does not make one's language special in the sense that it is "better" or "more developed," because our linguistic development is a process that is inwardly directed and accomplished effortlessly and unerringly by all normal children. Individual and group differences in language reflect different experiences but not different *levels* of language development.

Nonetheless, when features of literary discourse (peculiar vocabulary, impersonal author, distant setting, special order of events, etc.) are present in the oral language of children, as has been found even among very young middle-class children (Scollon & Scollon, 1982), then achievement in school literacy becomes a much easier task because considerably much of the enterprise has been accomplished outside of school. This middle-class advantage relates not to some presumed superior quality of the oral language of middle-class children, but to the special alignment of their particular home experiences and speech registers with those encountered at school.

Finally, language may be said to vary developmentally also, as may be seen clearly among preschool children. As human beings, we acquire languages by virtue of our biological makeup (Chomsky, 1959), and the task of acquisition is essentially complete by the time we reach school for the first time (Pinker, 1994; Tager-Flusberg, 1997). Nonetheless, there are peripheral aspects of language that children continue to develop into the school years, manifested in the use of creative errors like "goed" (for "went") or Spanish *sabo* (for *sé*, "I know") and sometimes more subtle aspects of syntax (Chomsky, 1969). However, such forms, which disappear naturally in time, are characteristic of all young children regardless of what language they speak. School, too, like other new experiences, may lead to the development of new vocabulary and new ways of talking for children, much of which may be highly specific to the cultural environment of the school. But age-related differences in vocabulary and peripheral aspects of grammatical development

should never be mistaken as symptoms of semilingualism. Semilingualism, or limited bilingualism, is about language subtraction at the individual level in linguistic minorities. Very important, because age-related differences are characteristic of all developing children, these factors do not select Cummins's population of interest, suggesting that even if we understood age-related differences as evidence of semilingualism, the Threshold Hypothesis would fail on empirical grounds.

In sum, simple facts of variation in community and individual language do not suggest qualitative differences in the linguistic abilities of children, such that language minority children in the United States are semilingual as a result of a situation of subtractive bilingualism and that language majority children are not. Rather, much more convincing evidence for the existence of semilingualism would come from actual speech samples of reputed semilinguals indicating that such children fail to acquire the language of their speech communities. However, as I will now demonstrate, this type of evidence has not been presented, contrary to suggestions in the literature on semilingualism.

Linguistic Evidence

Cummins (1979b) pointed out that

> several investigators have drawn attention to the fact that some bilingual children who have been exposed to both languages in an unsystematic way prior to school, come to school with less than native-like command of the vocabulary and syntactic structures of both L1 and L2. (p. 238)

He cited Gonzalez (1977) and Kaminsky (1976) as examples of such investigators.

The assertion that reputed semilinguals lack knowledge of the syntactic structures of their native language bears a certain burden of proof that one would hope to find met in Gonzalez (1977), Kaminsky (1976), or elsewhere. Specifically, we expect to be told which syntactic constructions semilinguals lack and to be provided with evidence indicating that their knowledge of such constructions is absent or imperfect. However, although Gonzalez (1977) presents an interesting overview of urgent research questions (among them, the question of relative language proficiency), no data are presented regarding the linguistic characteristics of bilingual children's speech (and it does not appear to have been his aim to do so). Kaminsky (1976) is concerned with the relation between reading and knowledge of language in bilingual children, and asserts, like Cummins, that for the bilingual child, "control over either of [the] two languages may be only partial" (p. 155). However, once

again, no actual evidence is presented regarding bilingual children's knowledge of syntax or vocabulary. Similarly, Paulston (1983) reviewed numerous Scandinavian studies that sought linguistic evidence for the existence of semilingualism in Sweden and concluded that "there is no empirical evidence to support the existence of such a language development hiatus as [semilingualism]" (p. 42).

Other supposed evidence regarding children's native language ability comes from L1 assessment instruments. The results of such tests have often been taken as evidence for the existence of semilingualism because they assess large numbers of children as "non-non"—that is, as bilinguals who have little or no competence in either their native language or English. The *Los Angeles Times* recently reported the existence of 6,800 "non-nons" in Los Angeles Unified School District who were determined to be "nonverbal in both English and their native language" based on language proficiency tests (Pyle, 1996). According to Pyle (personal communication), the instrument used by the district to identify these children as nonverbal in their native language was the Language Assessment Scales (LAS) Español (De Avila & Duncan, 1990, 1994; Duncan & De Avila, 1986), a Spanish version of the most widely used language assessment instrument in public schools (De George, 1988; Williams & Gross, 1990). The LAS Español, which assesses a child's oral language ability but not literacy, is used with children in Grades pre-K through 12. There are three interpretive scoring categories for students' results that echo Cummins's three levels of bilingual proficiency in Figure 1. These are fluent Spanish speaker, limited Spanish speaker, and non-Spanish speaker.

However, a casual look at the LAS Español reveals that the test is so poorly designed that literally no conclusions regarding a child's linguistic abilities may be drawn from a low score on the test. The test allows very little opportunity for children to demonstrate their linguistic abilities; worst of all, children may be assigned a score that ranks them as non-Spanish speakers simply if they do not respond to some parts of the test, a method of language testing used among African American children and extensively criticized by Labov (1970, 1972) in the 1960s and 1970s.

Consider, for example, the final section of the LAS Español, in which the child is asked to answer questions about a Spanish-language story she is told. This section is weighted at 30% of the total score for the Pre-LAS Español (Grades pre-K through 1) and at 50% of the total score for LAS-Oral Español (Grades 1 through 12). If a child answers *no sé* ("I don't know"), or shyly gives no response at all, the scoring manual directs the tester to enter a score of zero into the child's profile (De Avila & Duncan, 1990, p. 5; 1994, p. 5; Duncan & De Avila, 1986, pp. 3, 14). Because there is only an 11-point spread

between fluent-Spanish speaker and non-Spanish speaker for the Pre-LAS Español and only a 21-point spread for the LAS-Oral Español, a zero for this section of the test will make a perfectly competent Spanish-speaking child falsely appear to be nonverbal. This, of course, is an egregious error in design, constituting an inference from the absence of evidence that can tell us nothing at all about a child's linguistic abilities.

Consider in addition some actual responses of a child whom the Pre-LAS Español identified as a non-Spanish speaker because she did not respond to questions in the last section of the test. Gabriela, as I will call her, is 5 years old, speaks Spanish at home, and came to the United States from Latin America. On part of the test, Gabriela was asked to orally complete five sentences, which are reproduced below with her contributions in italics, followed by her score for each item (scored 0 to 3) and my translation in parentheses. (Note that *hicieron* is misspelled as *hizieron* in number (2) by the examiner, not by Gabriela.)

1. Si me levanto temprano *como* (3)
   (If I get up early I *eat*)
2. Los niños tenían hambre así que *hizieron sopa* (3)
   (The children were hungry so *they made soup*]
3. Fuimos a la fiesta y luego *compramos un pastel* (3)
   (We went to a party and then *we bought a cake*)
4. Antes de vestirme *fui a una fiesta* (2)
   (Before getting dressed *I went to a party*)
5. Después de jugar un rato *me siento* (3)
   (After playing a while *I sit down*)

Gabriela's total score for this part of the test was 14/15. She was marked down for her response on number 4, presumably because one usually gets dressed up *before* going to a party. The same logic should lower Gabriela's score in number 3, because one would usually buy a cake before going to a party. Notice that the response in number 4 is primed by the prompt in number 3 and is a perfectly reasonable thing to say given an appropriate real-life context (for instance, you might go to a casual party before dressing up for an evening church service).

It is important to note that none of Gabriela's responses in this section or any other part of the test are ill-formed in any way. In fact, she shows knowledge of conditional and complex clauses, syntactic recursion, appropriate use of tenses, the morphological shape of regular and irregular verbs, use of reflexives, proper number and gender agreement on nouns and determiners, and much more. Yet, none of this is sufficient to classify Gabriela as a competent speaker of Spanish for purposes of the Pre-LAS Español because she did

not respond to questions regarding the story in the final section of the test. Thus, the LAS Español results, which labeled Gabriela and children like her as non-Spanish speakers, are seriously misleading. The finding that a large population of children have been identified as non-Spanish, non-English may be regarded as an artifact of an extremely poorly designed assessment instrument and in no way reflects the true linguistic capabilities of these children.

Largely due to the influence of the semilingualism thesis, the practice of assessing Spanish-speaking children's native language competence has become extremely widespread. For instance, the Council of Chief State School Officers (1991) reported that five states (California, Texas, Arizona, New Jersey, and Hawaii) require and four states (Illinois, Oklahoma, Indiana, New Hampshire) recommend that districts assess the native language competence of language minority children. Districts in other states also assess minority children's L1 ability upon entry to school and periodically throughout their school years. Of course, no similar requirement exists for majority students.

Although there remains no evidence for semilingualism based on the linguistic characteristics of children's speech, there is good evidence that reputed semilinguals are actually perfectly competent speakers of their native languages. For instance, Valadez, MacSwan, and Martínez (1997) studied three low-achieving Spanish-speaking children who had been assessed as having "clinical disfluency," a variety of semilingualism, and compared their Spanish with that of a control group in terms of grammatical richness (defined in terms of variety of grammatical structures), error rates, and vocabulary. Vocabulary was tested using a subtest of the Clinical Evaluation of Language Functions (CELF) (Semel and Wiig, 1986). Using an adaptation of the linguistic coding and analysis system detailed in Curtiss, Schaeffer, Sano, MacSwan, and Masilon (1996), this study found that the experimental group was empirically indistinguishable from the control group, with all children using a rich variety of grammatical constructions with an error rate below 3% and performing about equally well on all vocabulary tasks.[3] The results strongly support the claim that children identified by official school mechanisms as semilingual in fact differ in no linguistically interesting way from other children (cf. Commins & Miramontes, 1989).

Invariably, proponents of the semilingualism thesis place much greater emphasis on evidence from school performances, including literacy, than they place on evidence from linguistic structure. Indeed, Cummins (1981) appears to have refined his views about the locus of semilingualism (there called "limited bilingualism") shortly after his initial publications on the topic:

> The development of language proficiency can be considered in two very different ways. First is the acquisition of what Bruner (1975) has termed the "species minimum" involving the phonological, syntactic, and semantic skills that most native speakers have acquired by age six. . . . However, in contrast to the acquisition of this "species minimum" competence, other aspects of language proficiency continue to develop throughout the school years and beyond. Obvious examples are literacy-related language skills such as reading comprehension, writing ability, and vocabulary/concept knowledge. (p. 8)

Let us now turn to the question of the relevance of evidence of differences in school performances for determining whether some children have deficient levels of linguistic competence. I will argue that confounding literacy and language in this way forces a number of disastrous conclusions.

Evidence From School Performances

One of the most important premises of early 20th-century linguistics in breaking away from philology and traditional prescriptivist grammar was the observation that a human language is independent of the system invented to represent it graphically. As Postal (1972) noted,

> Prescriptivist grammar tends to view writing as the primary aspect of language, and speech, or the vocal aspect of language, as a kind of unstable derivation from writing. But this view is completely erroneous. Writing systems are without exception parasitic on language; they are attempts (often rather bad attempts) to represent certain aspects of linguistic structure, usually phonological aspects. (pp. 115-116)

On this view, writing is to language much as a photograph is to an object. It represents it, but it could not be regarded as being the thing it represents. In rejecting prescriptivism, linguists developed a conceptual framework, which I adopt here, that took language to reflect a grammatical system consisting of the rules and principles that govern discourse, pragmatics, semantics, syntax, morphology, and phonology. This theoretical move in structuralist linguistics followed from the observation that the unwritten primitive languages of the New World were as linguistically rich and rule-governed as Greek, English, or any other literary language in the world (Crystal, 1986; Newmeyer, 1986). When taken seriously, this view had important consequences for the ideologies of cultural and linguistic deficits.

Working in a similar vein, sociolinguists concerned with issues of equity in education have more recently analyzed patterns of language use inside and outside the classroom that sometimes privilege children of the educated classes. For example, Mehan (1980) extended Chomsky's (1965) notion of

grammatical competence to "competence for interaction," the units of analysis of which he defined as consisting of "socially assembled situations" derived by people acting in concert with one another. Mehan dissected school practices into the separate components of academic competence, which represents genuine understanding of content, and student competence, which is the knowledge of particular social strategies that define acceptable student interactions. Bloome, Puro, and Theodorou (1989) similarly defined procedural display in the classroom as "display by teacher and students, to each other, of a set of academic and interactional procedures that themselves count as the accomplishment of the lesson" (p. 272). Heath (1983) studied literate practices in three communities and located key differences that translated into special advantages for middle-class children. Thus, discussion of differences in the way communities use language often leads to important insights that might help explain differences in school achievement.

However, in breaking with a long-standing tradition in the study of language, Cummins (1981) asserted that literacy is "one aspect of communicative proficiency" (p. 14). One finds this idea throughout discussions of the semilingualism thesis in Toukomaa and Skutnabb-Kangas (1977) and Cummins (1976, 1979a, 1981, 1994). The identification of literacy with knowledge of language would not be disturbing if it were not for an important underlying assumption—namely, that literacy consists in reading, writing, and other school-valued aspects of language use. Martin-Jones and Romaine (1986) similarly remarked, "The type of literacy-related skills described by Cummins are, in fact, quite culture-specific: that is, they are specific to the cultural setting of the school. In this setting, only a narrow range of prescribed uses and functions of literacy is seen as legitimate" (p. 30). Because it is so widely maintained that the specific literate practices learned at school (the use of print media, in particular) constitute a more developed stage of linguistic proficiency, it may be worthwhile to consider some specific reasons for believing that this is not so.

To begin with, writing systems are very recent human inventions, dating back to about the fourth millennium B.C.E., and are not used universally even today. Indeed, most of the world's languages do not even have writing systems (Gaur, 1992; Postal, 1972). Furthermore, writing did not become a practical technology until the invention of moveable type thousands of years later when Gutenberg produced his famous Latin Bible in 1455 as the first printed book. Indeed, many societies for whom writing is irrelevant or unimportant have rejected it upon contact with it (Gaur, 1992). By contrast, language existed long before these technological developments and exists in all human societies today, whether they use orthographic systems or not.

Given Cummins's conception of language proficiency, however, we are led inescapably to the conclusion that members of societies that do not use writing systems have relatively low language proficiency, whether they are monolingual or bilingual, in contrast to the "highly proficient" speakers of languages of Western cultures. Nonliterates in Western societies, too, lack language proficiency in comparison to the literate members of the educated classes. There are numerous literate practices that are not normally taught in school, such as storytelling, text recital, rapping, songwriting, Morse Code, and Braille, to name a few. Why should an inability to read and write correspond to deficient levels of linguistic competence in a way that inabilities in these other literate practices do not?

Notice, too, that children do not normally learn to read and write in the same way that they learn a first language, a fact that would not be expected if school literacy were a further stage in our linguistic development, analogous, say, to Brown's (1973) stages of acquisition. In contrast to the way in which children learn to read and write, a native language is acquired effortlessly and without instruction by all normal children. Success in reading and writing, however, is dependent upon direct or tacit instruction, practice, and effort, like success in other academic endeavors (Gough & Hillinger, 1980; Perfetti, 1985), and, very often, upon what McQuillan (1998) has termed "metalinguistic and elaborative assistance."

In addition, literacy relies upon a wide variety of cognitive faculties, including knowledge of language, visual processing, shape recognition, motor control, systems of reasoning, and general knowledge of the world (Perfetti, 1985, 1994; Smith, 1973). Why should it be regarded as a component of our knowledge of language any more than a component of our visual system? Placing literacy strictly inside any one of these domains seems essentially arbitrary. Rather, a more credible psychological theory of school literacy would take reading and writing to be independent of special-purpose mental faculties, recruiting information as needed from relevant cognitive systems. Here, school literacy is viewed as one among many ways that language may be used to satisfy human purposes but is itself not useful in assessing a person's knowledge of language, per se.

Other data Cummins (1979b) considers are from Skutnabb-Kangas and Toukomaa (1976) and consist of measurements of "cognitive aspects of the language, understanding of the meanings of abstract concepts, synonyms, etc. as well as vocabulary" (Skutnabb-Kangas & Toukomaa, 1976, p. 21). Unfortunately, these authors do not define what they mean by "abstract concepts," so we do not know why they would expect language minority children not to have them as a simple consequence of being unschooled. Certainly, however, doing well on tests of synonyms requires a special kind of training

and experience that one is likely to find at school. As Edelsky and colleagues (1983) have pointed out, defining semilingualism as an inability to do well on such tests makes the Threshold Hypothesis tautological, or trivially true: Differences in student achievement, defined as differences in test performance, are explained by pointing to differences in test performance.

Cummins and Swain (1983) responded to this criticism, arguing that "it is no more a tautology to say that pre-school CALP or graphic sense predicts later reading achievement than to say that rate of cognitive development or achievement at time one predicts rate at time two" (p. 31). True, but it is important not to lose sight of the particular range of facts that the Threshold Hypothesis was intended to explain. Cummins (1976, 1979b) was interested in explaining achievement differences between minority and majority children in an all-L2 instructional setting. To do so, he constructed a framework in which "negative cognitive and academic effects are hypothesized to result from low levels of competence in both languages" (Cummins, 1979b, p. 230) in the case of the low achievers (i.e., minority children in the United States). When we understand semilingualism or limited bilingualism in terms of low test scores (on meanings of abstract concepts, synonyms, and academic vocabulary), then indeed the Threshold Hypothesis may be viewed as attempting to explain the correlation of negative academic effects, defined as poor performance on academic tests, with language-minority semilingualism, also defined as poor performance on academic tests. Because both variables have the same definition (test performance), the claim cannot be false and is therefore tautological. Although it may independently be the case that early test measures tend to correlate with later test measures, this fact is not transparently related to the Threshold Hypothesis.

In sum, evidence from school performance is not relevant to the question of semilingualism. Attempting to make it relevant requires that we understand literacy as a measure of ability in language proper, and this assumption leads inescapably to the conclusion that nonliterates (and nonliterate societies) have deficient language relative to our own. Whether and to what extent children may be expected to have deficient levels of L1 and L2 can be no more meaningfully informed by the extent to which they can read, write, or do well on tests of synonyms than it can be informed by the extent to which they know Morse Code, can recite the words of ancestors, or are good at writing rap songs.

Let us now consider reputed evidence for semilingualism from studies of language shift, cases in which a family's heritage language is displaced by a more socially dominant one.

Evidence From Studies of Language Shift

It has been suggested that situations of language loss are relevant to the semilingualism thesis. Language loss occurs when, under certain conditions of language contact, a family's heritage language dies out and is replaced by a socially dominant one. This may occur as a result of immigration or colonization. Although it is admittedly a sad occurrence when social and political events lead to heritage language loss (sometimes even language extinction, as in the case of some indigenous languages in the United States and Mexico), the phenomenon does not provide evidence for semilingualism.

We may think of language loss as either an event in the life of a society or an individual. With respect to societal bilingualism, it may be conceptualized as the result of language shift, a process that involves a generational switch in language use. Here, a family or community begins life as monolingual speakers of a minority language, then some members become bilingual over the course of time, generally in the second or third generation. In situations where use of the minority language is highly stigmatized, some community members may become "covert bilinguals" who deny knowledge of their heritage language, or find it progressively less useful in the larger society as most topics in daily life become more familiar in the socially dominant language. Thus, members of subsequent generations often become monolingual again, this time in the majority language.

Wong Fillmore (1991) surveyed 1,001 families with LEP children, and found that parents reported that language of instruction had a significant effect on home language use. In this study, 64.4% of parents of children in English-only programs indicated "more use of English" at home. Whereas Wong Fillmore's data indicate a trend toward generational language shift for families whose children were in English-only programs, they should not be interpreted as indicating that children in these programs underwent native language loss as individuals, or became semilingual. Rather, survey participants indicated trends in language choice for members of their families, with no indication of relative proficiency in either language.

In another study, Hakuta and D'Andrea (1992) investigated Spanish and English proficiency in a group of 308 high school students of Mexican background. In their study, language proficiency of each subject in both languages was measured by written tests of productive vocabulary, recognition of grammatical errors, and a cloze test. This study found high proficiency in Spanish or English for all subjects (in both, for some), with Spanish language proficiency decreasing with the age at which exposure to English was reportedly started. Furthermore, in considering whether language shift is best defined as

a change in language choice or a loss of language proficiency, Hakuta and D'Andrea characterize their findings in the following way:

> Defined as proficiency loss, that loss is best described as occurring most sharply across generations, especially between the cohort whose parents were born in Mexico (Depth 4) and whose parents were born in the United States (Depth 5). Defined as a shift in choice, however, this process is observed to begin immediately and in a progressive manner both across and within depth cohorts. (pp. 93-94)

Boyd (1986), Davies (1986), Dorian (1989), and Prokop (1990) also studied L1 attrition in second generation bilinguals, but these studies also bear on situations of intergenerational language shift, not individual native language loss.

Indeed, our knowledge of an L1 appears to be remarkably robust and is only marginally affected even by years of disuse. For instance, Hakuta and D'Andrea (1992) administered a response latency task for vocabulary production and recognition to a small subset of subjects in their study to determine the nature of the attrition of Spanish in some of the bilinguals. An analysis of the results led to the conclusion that "attrition in Spanish is best characterized as difficulty in retrieval rather than total loss." Similar to this, in a study of native language vocabulary attrition in adult English and Hebrew speakers who had learned an L2, Olshtain and Barzilay (1991) found "retrieval difficulties" to be limited to "infrequent, specific, nouns" (p. 140). (See also Kenny, 1996, who studied the frequency of "silent" and "filled" pauses as supposed indicators of L1 loss, and also likely indicators of retrieval difficulties.) Thus, although less frequent use of our native language may sometimes lead to difficulty in recalling specific words, this effect is highly restricted. It is much like the common "tip-of-my-tongue" phenomenon that plagues us all when we attempt to discuss forgotten matters.

With respect to knowledge of grammar, studies have found no attrition of L1 abilities. De Bot, Gommans, and Rossing (1991) studied adult speakers of Dutch who emigrated to France after the age of 17 and remained for at least 10 years. Although raters using the impressionistic Foreign Service Interview detected small differences for subjects who had few contacts with other Dutch speakers (perhaps similarly attributable to issues of vocabulary retrieval), no significant differences were found between the emigrant group and the control group on a measure of grammaticality judgments in Dutch. Similarly, in a study of two adult German speakers who had learned English and remained in the United States for more than 40 years, Altenberg (1991) found grammaticality judgments in German to be unaffected.

Kaufman and Aronoff (1991) studied a young child who came to the United States at the age of 2 years and 7 months as a monolingual speaker of Hebrew. By the age of 3, the child became bilingual in English and Hebrew with equal ability, and became resistant to speaking Hebrew at home. By the age of 3 years and 6 months, Kaufman and Aronoff report that the morpho-syntax of the child's L1 verbal system began to disintegrate, leaving her with native ability in English and nonnative ability in Hebrew. To the extent that such results are generalizable, it appears that language loss may occur at the individual level in some very young children, apparently limited to children in the preschool years who are still in the process of developing their native language. However, for purposes of the present discussion, it is essential to note that Kaufman and Aronoff's subject spoke English natively, even though her exposure to it did not begin until her second year of life.[4]

Kirschner (1996) studied attrition of Spanish proficiency in 32 (Caribbean) Spanish-English bilinguals. Although nothing is said about the group's proficiency in English, Kirschner describes the subjects as English-dominant. After reporting that subjects "possess intuitive linguistic knowledge of Spanish," the author reaches the surprising conclusion that his subjects were "semi-speakers" of Spanish because writing samples exhibited (a) many examples of the use of optional pronouns (although this is an areal characteristic of many Caribbean varieties of Spanish [Morales, 1986]), (b) an avoidance of free inversion (*Han llegado las muchachas*); (although a follow-up questionnaire showed that all subjects correctly identified grammatical and ungrammatical examples of free inversion), and (c) sentence embedding was more typical of "a person who has not mastered formal written-language styles" (Kirschner, 1996, p. 126). This evidence suggests that the subjects in Kirschner's study were perfectly proficient speakers of Spanish who had not learned academic discourse strategies in Spanish. They may have also lacked an ability to talk about sports and heavy machinery in Spanish, but we would never suggest that these inabilities provide evidence of L1 attrition. Given their reported English language dominance, Kirschner's subjects were quite likely native bilinguals, proficient in both languages.

In sum, when language loss is understood as a change in language use across generations, it is not relevant to the semilingualism thesis, because semilingualism is a claim about individual language proficiency, not intergenerational language shift. There appear to be cases in which very young children still in the stages of language development may lose a native language after acquiring another native language, as in the case of Kaufman and Aronoff's (1991) subject. However, cases such as these also fail to provide

evidence for semilingualism, because semilingualism asserts that some children have deficient levels (or less than nativelike command) of both languages. Finally, it was observed that in the case of school-age children and adults, our knowledge of our native language is remarkably robust, such that even years of disuse have only marginal effects, essentially restricted to performance limitations (recall of infrequent vocabulary items). Likewise, other kinds of evidence reviewed in this section, including language variation, linguistic form, and school performances, have been found either wanting or irrelevant to the claim that language minority children in the United States characteristically have "deficient levels of L1 and L2" competence.

Finally, it should be pointed out that Cummins (1994) and Cummins and Swain (1983) strongly rejected the characterization of the semilingualism thesis as a deficit theory of language minority children, contrary to portrayals of the construct by Edelsky and colleagues (1983) and Martin-Jones and Romaine (1986). In their response to Edelsky and colleagues (1983), Cummins and Swain (1983) defined a deficit theory as an explanation that appeals to "inherent deficiencies within the child rather than to sociopolitical or educational conditions" (p. 23). Valencia (1997) similarly defines a deficit model as a theory that posits "that the student who fails in school does so because of internal deficits or deficiencies" manifested "in limited intellectual abilities, linguistic shortcomings, lack of motivation to learn and immoral behavior" (p. 2). The transmitters of these deficits, according to Valencia (1997), have typically been located in genetics, culture, class, and familial socialization. Proponents of the semilingualism thesis believe that the construct is not a deficit theory because the condition is hypothesized to result from a social situation that facilitates language loss in individuals (Cummins, 1984; Cummins & Swain, 1983). The child's L1 is reputedly "gradually being replaced by a more prestigious L2" such that "the bilingual's competence in two languages at any point in time is likely to reflect some stage in the 'subtraction' of L1 and its replacement by L2" (Cummins, 1979b, p. 229).

However, what makes Cummins's model a deficit theory is not so much the explanation for the causes of semilingualism, but rather the conception of the relative levels of proficiency in the populations of interest. Just as prescriptivists viewed linguistic differences as degrees or ability levels in language, identifying the characteristics of better speech as precisely those characteristics that poor people lack, so too Cummins persistently confuses individual and group differences with "levels" of language proficiency, as previously discussed.

Certainly, people differ with respect to reading and writing abilities, just as they differ in terms of their mastery of other kinds of literate practices that are not especially valued at school. Cummins's view that school-based

knowledge is an integral part of native language proficiency so that those who lack it also lack linguistic competence phenomenally privileges the cultural and literate practices of the educated classes. Unlike the acquisition of an L2, the successful attainment of which varies drastically in the general population, all normal children effortlessly acquire the language of their own speech community (Bley-Vroman, 1989). It is perhaps because our native language is such an integral part of our identities as human beings, encompassing aspects of our biology, culture, class, and socialization, that many view semilingualism as a deficit theory, as I do here.

If we reject both semilingualism and the Threshold Hypothesis, as I have argued we should, then an alternative account of the data Cummins sought to explain will be needed. I will explore some possibilities presently.

An Alternative Account

The Threshold Hypothesis was intended to explain conflicting research findings in bilingual education. Although Canadian immersion programs have been quite successful at teaching majority language children a new language, linguistic minorities in the United States tend not to do well in all-English classes. In terms of more recent issues, we seek to explain achievement differences in language minority children in bilingual education programs and those in all-English instructional programs (August & Hakuta, 1998; Greene, 1998; Ramirez et al., 1991; Willig, 1985).

Alternative explanations to the puzzle Cummins attempted to solve have been proposed, and some of these have been posed in terms altogether independent of any consideration of children's linguistic threshold. For example, Paulston (1975) noted that "in every single study where monolingual children did as well as or better in L2 instruction than did native speakers, those children came from upper or middle class homes" (p. 9). The U.S. Commission on Civil Rights (1975) similarly observed, "Those individuals who are commonly designated 'bilingual' . . . in this country are also those who, bearing the brunt of many forms of discrimination, tend to be of a low socioeconomic status such as Mexican Americans, Native Americans, Puerto Ricans, and many immigrant groups" (p. 68). Edelsky and her colleagues (1983) also discuss socioeconomic status (SES) as the relevant variable affecting language minority children in the United States. Cummins (1976), too, pays some attention to the suggestion that lower SES is responsible for the poor academic performance of linguistic minorities but concludes that "the linguistic competence attained by bilingual children" is nonetheless one of the "intervening variables in the causal chain whose influence needs to be specified" (p. 19).

SES has been shown to be a consistent predictor of academic success both in the general population and among language minority children (Berliner & Biddle, 1995; Genesee, 1984; Rosenthal, Milne, Ellman, Ginsburg, & Baker, 1983). This is not a surprising finding. The language and literate practices of the middle and upper classes are valued at school in ways that put children of other cultural backgrounds at a decided disadvantage (Heath, 1983), and schools that service the poor and working classes tend to have inadequate resources (Kozol, 1991) and to be much more focused on obedience to authority, punctuality, and other forms of social control (Willis, 1981). By contrast, children from high SES backgrounds generally have caregivers who are more educated, better prepared to assist with school work, and have the time and bureaucratic know-how to interact with the school (Berliner & Biddle, 1995). For these children, education in school literacy and academic discourse begins at home and remains in place as a continual support throughout the school years.

Language minority children have two objectives that they must meet to become academically successful in the United States. Like mainstream children, they must master academic content, but unlike mainstream children, they must also learn English at school. In programs in which all instruction is in English, language minority children of low SES tend to fall further and further behind by the end of elementary school (Ramirez et al., 1991), showing the cumulative effects of only partially understanding the language of instruction. By contrast, children of higher SES, who either immigrated to the United States with prior educational experience or have parents who are better prepared to assist with schoolwork at home, do well even in the absence of native language instruction because their caregivers and their own past experience provide content-area assistance, or what Krashen (1996) has referred to as "SES as de facto bilingual education." Indeed, years of formal schooling in L1 have been identified as an important predictor affecting school achievement for language minority children, whether the schooling takes place in the home country or the United States (Collier, 1992; Krashen, 1996; Thomas & Collier, 1997; Turner, Laria, Shapiro, & Perez, 1993). On this view, language minority children benefit from native language instruction not because they suffer from semilingualism, but because it allows them to keep up academically while learning English.

If low SES and other instruments of disempowerment are at the heart of the poor performance of linguistic minorities, then pointing to semilingualism as an intervening cause of failure can only contribute to a child's poor performance in school. Although he has not abandoned the semilingualism construct, in more recent work, Cummins has placed considerably more focus upon the role of sociocultural factors in the education of language

minority children. For instance, Cummins (1986) proposes a framework in which

> the educational failure of minority students is analyzed as a function of the extent to which individual educators become advocates for the promotion of students' linguistic talents, actively encourage community participation in developing students' academic and cultural resources, and implement pedagogical approaches that succeed in liberating students from instructional dependence. (p. 386)

Rolstad (1998) used the term "sociolinguistic status" to refer to the collection of social factors that ascribe status to particular communities of language users and, as such, play a role "in determining relative rank in the system of social stratification and in constraining social relations" (p. 16). (For a discussion of related issues, see also Cummins, 1996.)

When children are socialized to believe that their language, and hence their community, identifies them as socially and intellectually inferior, informal ability groups emerge both as the result of children's negative beliefs about themselves as well as teachers' low expectations for them. Because the Threshold Hypothesis embodies a deficit construal of the language of minority children in the United States, or so I have argued, explicitly rejecting it and the associated doctrine of semilingualism is very much in keeping with the goal of promoting students' linguistic talents and diverse resources. This will not directly affect the social causes underlying a child's low sociolinguistic status, but it may play a positive role in disabusing teachers of erroneous assumptions about the children they teach. Rejecting the term itself while retaining the construct is of no help.

Conclusions

The four types of evidence presented in support of semilingualism, the conjecture that some children have less than nativelike ability in both languages, may each be regarded as spurious or irrelevant. If we reject the assumption that the speech of the educated classes is inherently superior to the speech of the poor and of minority groups, as we should, then Cummins's argument from language variation as well evidence from school performances have no relevance to the semilingualism debate. To be relevant, it must be shown that the language and cultural practices of reputed semilinguals is deficient, not different, and this has not been done. Similarly, no evidence has been presented to support the claim that reputed semilinguals do not know the linguistic principles that govern their language. Thus, reputed evidence for semilingualism based on a linguistic analysis of children's speech may be

said to be spurious, or simply unavailable. Likewise, evidence from studies of language shift is irrelevant to the semilingualism debate, because language shift involves language loss across generations, reflecting changing patterns of language choice, not reduced individual proficiency. Some evidence exists that suggests that children who are initially native bilinguals may lose their heritage language, but there is no evidence of a corresponding lack of competence in the language that is retained, and hence no evidence of semilingualism.

Also recall that even if evidence existed for semilingualism, and we have seen that it does not, such evidence must be shown to be a unique attribute of language minority children for the Threshold Hypothesis to be correct, because Cummins invokes this condition to define the special circumstances of these children. Clearly, where there is evidence of low native language abilities, however understood, it does not select Cummins's population of interest. If semilingualism does not exist and, if it did, could not be expected to uniquely characterize language minority children in the United States, then it should be rejected on empirical grounds.

Cummins defines school literacy as one component of language proficiency. Taking literacy and related school knowledge to be the locus of the deficiency in L1, rather than language itself, makes the Threshold Hypothesis tautological, or trivially true, and it may therefore be said to have no empirical content. This observation, due to Edelsky and colleagues (1983), suggests that the Threshold Hypothesis should also be rejected on theoretical grounds.

Finally, putting aside the question of how language proficiency is defined, Cummins's model obscures the problem faced by language minority children in the United States with talk of "deficient levels of L1 and L2 competence" if, in fact, the relevant language-related factor is school literacy rather than strictly linguistic aspects of their knowledge. If nothing more, it is in the interest of clarity to speak of the learning situation of language minority children in terms of the literate practices that they bring to school, rather than in terms of their native-language "linguistic competence" (Cummins, 1976, 1979a) or "language proficiency" (Cummins, 1981), both very misleading constructs given the nature of the data presented. Furthermore, because ability labels have been clearly linked to negative academic outcomes (Oakes, 1985), there are also moral grounds for rejecting the Threshold Hypothesis and its associated doctrine of semilingualism.

A new framework, due largely to Krashen (1996), that looks to differences in SES and associated formal instruction in L1 to explain achievement differences in language minority children has several advantages over Cummins's Threshold Hypothesis. There is the obvious advantage that it does not depend upon the unattested construct of semilingualism nor offer a tautological

account that explains school failure in terms of school failure. Rather, school failure, measured in terms of standard assessments, is explained by pointing to an absence of comprehensible instruction in school content-area knowledge. Although L1 literacy and knowledge of academic discourse and vocabulary are certainly relevant to *academic* achievement, they are not relevant to *linguistic* achievement. All normal children achieve linguistically.

An additional factor that is perhaps of greater importance is the role of low sociolinguistic status for language minority children (Rolstad, 1998, 1999) in constructing negative beliefs about their own abilities and low expectations from teachers. This formation of informal ability groups can be expected to contribute to academic failure in language minority children, potentially at the same rate as submersion.

Furthermore, because it has no empirical support and is potentially harmful, semilingualism may be regarded as an ideological construct, like prescriptivism before it, serving to promote the interests of elites contributing to the formation of low expectations for linguistic minorities and high expectations for certain majority children. The view that language minority children have a deficit by any name, cognitive or linguistic, can no more be sustained than the 19th-century view that African and Native American languages are impoverished in comparison with European languages: It is advanced in the absence of relevant evidence, and the linguistic capabilities of these individuals may readily be shown. Edelsky and colleagues (1983) and Wiley (1996) have also observed the conspicuous absence in Cummins's work of any attempt to reconcile the semilingualism thesis with prescriptivist dogma.

I have suggested that teachers may form deficit beliefs about linguistic minorities under the influence of ill-conceived theoretical frameworks such as the Threshold Hypothesis and that these beliefs, in turn, may have an effect on student achievement. If this is correct, then changes are in order for both the research agenda of theoretical work in bilingual education and for the curriculum of training programs for teachers who will work with language minority children.

With respect to bilingual education, it is not enough to focus progressively more on socially mediated variables that affect school performance and that call upon individual educators to promote students' linguistic talent, or to rename presumed deficits with more benign terminology. It is necessary to discuss these talents empirically and to abandon explicitly those notions that mislead educators into thinking that some children do not know the language of their community. We should begin by abandoning the Threshold Hypothesis because it is disconfirmed by the sort of evidence discussed here, and move on to the formation of new ideas that characterize the learning needs of linguistic minorities. Although it may be worthwhile to present the Threshold

Hypothesis to teachers in training as a historical artifact of research on bilingualism, it should always be accompanied by relevant critique.

There are also important implications of this discussion for policy and practice. For instance, Tikunoff (1987) maintains that students who are assessed as equally limited in both languages should simply be taught in English, whereas others at the district and school level believe that it does not matter whether such children are placed in the bilingual program or the English-only program. If these faulty test results are taken seriously, this is a very reasonable conclusion. It does not follow from bad judgment on the part of policy makers, but from bad tests predicated on bad theories. Because language minority children tend to experience academic failure in the absence of L1 support (at home or at school), monolingual Spanish-speaking children assigned to all-English programs are likely to do poorly. Here, semilingualism is very closely related to negative consequences for the education of linguistic minorities. Abandoning it in research and teacher education programs may help ameliorate these negative consequences.

Policy certainly affects practice as well. I have suggested that teachers may form informal ability groups consisting of students with varying degrees of attributed native language proficiency. As found in studies by Rosenthal and Jacobson (1968) and many others, children identified as having high ability are likely to enjoy a higher quality of teacher interaction and expectations, whereas those classified as limited bilinguals and non-nons are likely to be asked to do little and be given unchallenging and alienating remedial work focusing on basic properties of their linguistic systems of which they are already very much aware. By repudiating the *concept* of semilingualism and not just the label, we may help teachers focus on the intrinsic linguistic talents of all children equally.

Although it is important to identify the native language of children in bilingual programs (e.g. as a home language survey would do), the large-scale and routine assessment of native language proficiency of linguistic minorities is a waste of resources, time, and effort, all the more so when tests of extremely poor design (such as the LAS Español) are used for this purpose. Such testing will often lead to informal ability grouping and misplacement of perfectly competent speakers of Spanish in all-English programs. In addition, schools do not regularly assess the linguistic abilities of language majority children to see if they know English well enough to succeed in school, nor do they test children from the African American community to determine whether their English proficiency is adequate for the regular instructional program. These children are assumed to speak whatever language their communities speak, as is common among all members of our species. Why

should different assumptions be made about Spanish-speaking children entering school?

There are, of course, some circumstances in which testing of language and literacy is appropriate. For instance, it is appropriate to determine the degree to which a child has mastered English, when learned as a second language, as one factor in determining whether the child should be placed in (or transitioned into) an all-English environment.[5] Also, some language minority children, even in the higher grades, may come to the United States without having basic literacy in their home language. Knowing a child's instructional level in literacy and other school subjects, regardless of the language of instruction, can be beneficial to children if met with appropriate instructional objectives. However, characterizing low reading ability as low language ability is a phenomenal mistake.

There are rare instances of genuine linguistic impairments in children, and these cases should be identified so that these children may benefit from assistance available in special education programs. Referral of such cases for linguistic minorities should be done in the same way as for majority language children: On a case-by-case basis, when teachers or parents suspect that children may have special learning disabilities of whatever kind, they refer them to special education specialists for evaluation. Otherwise, the routine and largescale assessment of the native oral language abilities of linguistic minorities is a potentially harmful and unnecessary enterprise that should be abandoned, as it is likely to produce meaningless results, given flaws such as those of the LAS Español, and will more typically have a negative effect upon children's educational experiences.

Although I have levied some very strong criticisms against the work of honest and extremely well-intentioned colleagues who are genuinely concerned with the education of language minority children, I hope that these criticisms will be understood as being made in the interest of scholarly and moral progress aimed at improving the lives of children in school. Jim Cummins, in particular, is a giant among us in his tireless defense of language minority children and is responsible for much progress in creating policies and practices that have benefited language minority children in the United States in the last quarter of the 20th century. It seems that further progress could be made by rejecting not only the term semilingualism, but also the concept it represents, along with the many tacit tracking mechanisms that have developed around it.

Research in the domain of bilingual education has an unusually strong capacity to influence practice. When discussions of educational treatments for children point to a linguistic deficit, we as researchers are obliged to thor-

oughly consider the ways in which the institutional effects of our labels may contribute more to the malady than to the proposed remedy of the learners.

Notes

1. The Trilateral Commission is an elite think tank formed in 1973 by David Rockefeller, chairman of the Chase Manhattan Bank, to "shape governmental and nongovernmental action." For detailed discussion, see Sklar (1980).

2. We limit our discussion here to nonpathological cases of language acquisition. Brain damage, genetic factors, and sometimes very extreme cases of social deprivation in childhood may lead to cases of language impairment that evidence severely retarded language growth (Curtiss, 1977; Curtiss & Schaeffer, 1997; Mayberry, 1993; Rice, Wexler, & Cleave, 1995; Schaller, 1991; Watkins & Rice, 1994).

3. Some error rate (less than 10%) is expected in normals due to the interference of performance factors. See Brown (1973) and Goodluck (1991).

4. It is also not clear in Kaufman and Aronoff's (1991) discussion that the child's Hebrew had disintegrated. Like other chapters in Seliger and Vago's (1991) collection, the attrition of the child's L1 is characterized by calques, constructions in which grammatical resources from the L2 are used in the L1, a phenomenon that others have characterized as a kind of grammatical borrowing, or perhaps grammatical code switching (Appel & Muysken, 1987; MacSwan, 1999). Language contact also sometimes results in the creation of new forms in bilingual communities, as when Spanish developed clitic doubling (found in Greek and Romanian) in contact situations with English and Quechua (Lujan & Parodi, 1996). These are cases in which languages appear to have undergone diachronic change as a result of contact, a phenomenon that surely begins at the individual level.

5. It is, of course, of great importance to find English language assessment instruments that do not suffer from the sort of weaknesses that the Spanish assessment instruments discussed in this article have.

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