# LANGUAGE AND COGNITION:

Current Perspectives From Linguistics and Psychology

JOHN B. CARROLL Educational Testing Service Princeton, New Jersey In a series of papers published in the late 1950s and early 1960s, the British sociologist Basil Bernstein (1958, 1962) proposed a distinction between two forms of language that has caught the attention

of educators and educational psychologists on both sides of the Atlantic. One form is what he called "public" language, the other is what he called "formal" language. Later, he renamed these forms as the "restricted" code and the "elaborated" code, respectively. It was not Bernstein's drawing of the distinction between these two forms of language that was of particular moment; it was what Bernstein said about them, namely that the "public" or "restricted" code tended to be limited to short, highly stereotyped utterances whose symbolism is descriptive and concrete; whereas, the "formal" or "elaborated" language is rich in qualification and complexity. The implication was that the user of the "restricted" code is unable to convey any careful, logical analysis of a situation or even to conceive of a situation in any analytic terms; whereas, the user of the "formal" or "elaborated" code is not so handicapped. In a number of empirical studies, Bernstein claimed to have been able to demonstrate the existence of these two types of language and to show their correlation with social-class differentiation.

Actually, Bernstein's views on the difference between these two codes and the effect of the difference on thinking have never been entirely clear and, as has been pointed out by Lawton (1968), these views have undergone certain changes in emphasis over the course of years. Lawton believes that Bernstein did not really mean to say that the linguistic code actually influences the

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form of thought; rather he argued that thought, and the kind of language used to express that thought, is a function of the social situation and the individual's perception of his role in society. Lawton also points out that the alleged correlation between language code and social class is not as great as some of those who quote Bernstein might have us think: on occasion, lowerclass persons can use the "elaborated" code, and even in Bernstein's early presentations of his theory, it was emphasized that middle-class persons use both the "restricted" code and the "elaborated" code, depending upon the social situation.

Be that as it may, Bernstein's ideas have been much discussed. As frequently happens when new ideas are discussed by people who hear about them only second-hand, Bernstein's ideas have been watered down, modified, and oversimplified. It has been assumed that Bernstein's "restricted" code is one in which it is impossible to formulate thought of any high degree of logical complexity, and it has also been assumed that lower-class persons, being limited to the use of a "restricted" code, are unable to formulate logical thought. Bernstein did not make any such simplistic claims. I refer you to Lawton's analysis of Bernstein's writings for a more accurate statement of what Bernstein actually said.

In their book *Teaching Disadcantaged Children in the Pre-School*, Bereiter and Engelmann (1966) cited Bernstein's theories as claiming that "the speech of lower-class people follows a linguistic code . . . that is inadequate for expressing personal or original opinions, for analysis and careful reasoning, for dealing with anything hypothetical or beyond the present, and for explaining anything very complex." According to these writers, Bernstein "sees the [lower-class] child . . . as being trapped by the restrictions of [his] linguistic code and unable to operate at the high conceptual and logical level that is required in formal education." They go on to describe the "language problems of culturally deprived children" (i.e., lower-class black children), making such points as these:

- 1. "The speech of the severely deprived children seems to consist not of distinct words, but rather of whole phrases or sentences that function like giant words . . . . These 'giant word' units cannot be taken apart by the child and recombined . . . . Instead of saying 'He's a big dog,' the deprived child says 'He bih daw.' Instead of saying 'I ain't got no juice,' he says 'Uai-ga-na-ju!'"
- 2. It is not merely a problem of "faulty pronunciation," but of an "inability to deal with sentences as sequences of meaningful parts" (italics in the original). The lower-class black child cannot repeat sentences with any degree of complexity; he tends to "give merely an approximate rendition of the overall sound profile of the sentence."
- 3. The "culturally deprived" child cannot distinguish sentences that differ with respect to structure words or inflections.
- 4. "Many disadvantaged children of preschool age come very close to the total lack of ability to use language as a device for acquiring and processing information."

It is true that Bereiter and Engelmann acknowledge that "studies by Loban and others have been cited as evidence that culturally deprived children do possess all the necessary elements of English grammar and syntax, even though they make scanty use of some of them." But, they continue, "what is crucial . . . is not the extent to which their language is technically capable of conveying thoughts and information but the extent to which the children themselves are able to use language in this way."

It is worthy to note that Bereiter and Engelmann apply Bernstein's notion of a "restricted" code to the language of lower-class black children who speak a form of English that is a distinct, nonstandard dialect. While there are dialect differences in England between middle-class and lower-class speech, Bernstein was thinking not so much of dialect differences as of differences in speech styles and modes of formulating thought. Thus, it is easy to gain the false impression, from Bereiter and Engelmann's

statements, that lower-class black English is what Bernstein would call a "restricted" code, whereas standard English is an "elaborated" code. The fact of the matter is that if there is any validity in Bernstein's distinction between "restricted" and "elaborated" codes, it could operate just as well in standard English as in some nonstandard form of English such as what is loosely called "lower-class black English." We all use a "restricted" code when we are in casual social situations in which there is quick interchange of simple information, feelings, and opinions that we do not have to formulate carefully.

I have quoted extensively from Bereiter and Engelmann only because they give the most explicit statement available of a view that seems to be widespread: that lower-class black English is "a basically nonlogical mode of expressive behavior which lacks the formal properties necessary for the organization of thought" (Bereiter, et al., 1966, pp. 112-13). It may be that Bereiter and Engelmann no longer hold to this view, but the impression that it has made is sufficiently common among educators to deserve comment and rebuttal. Also, this view reflects social attitudes toward nonstandard languages that linguists feel are misguided and wrong. There are, in fact, many myths about language that are commonly believed and repeated: that simple folk have exceedingly small vocabularies, that the languages of "primitive" tribes are extremely simple and incapable of expressing thought, and that when a person does not speak "grammatically," he is not thinking correctly. The widespread acceptance of such ideas is alarming to linguists, not only because they are scientifically untenable but also because they reflect social attitudes that are rightly to be regarded as snobbish, undemocratic, and antithetical to social progress.

It was for this reason that the Linguistic Society of America last year appointed a Committee on Language and Cognitive Development, of which I am chairman, to prepare materials that would seek to inform educators and the public at large concerning linguists' knowledge about the nature of language, the adequacy of different languages or forms of language for formulating

thought, and the nature of language development in the individual. The present address is a brief summary of some of the facts, principles, and views that linguists hope to have made more widely known. These include not only things that linguists as linguists know but also some facts and conclusions that have been reached in the psychology of language.

Let me lay down some general principles that will guide our later consideration of the particular problems of nonstandard dialects:

1. Language is a complex human phenomenon that takes the same general form wherever it is found. It permits the expression of a certain very wide range of information, experiences, feelings, and thoughts, and it does so in somewhat the same way regardless of the particular form of the language or the culture of the user, as long as the language is a so-called "natural language" that is used from childhood on as a native language by its users. This is true whether the language is one such as English, Russian, Chinese, or Indonesian used by a highly developed culture, or one such as Bantu, Navaho, or Fijian, used by a less technically advanced culture. (There are, of course, certain modes of expression, such as music or higher mathematics, that are outside the province of language, but they are equally excluded from all natural languages.)

2. In saying that all languages have the same general form, we mean that all languages possess units for expressing particular concepts and rules whereby utterances are constructed to indicate the social purpose of the utterance and the particular relationships among concepts that are to be communicated. Languages do, of course, differ somewhat in the concepts they select for use in expression, and they vary widely in the particular rules they employ for constructing utterances. Nevertheless, all languages have ways of referring to all the kinds of beings, objects, substances, events, and relationships encountered in common human experience. They all have ways of communicating ideas of space, time, number, negation, condition, opposition, specificity, class membership, quality, and the like, many of these ideas

being of a highly abstract nature. In general, it is true that anything that can be said in one language can be said in any other language, if one ignores the special connotations and conceptual references that may attach to the utterances of a given language, and if one excludes the problem of translating advanced technical ideas from one language to another.

3. Language systems are neutral with respect to truth or logic; a language system does not force its speakers to make true or logical statements as opposed to untrue or illogical statements.

4. Except for languages with very small numbers of speakers living in close association, it is common to find minor or even major variations in the pronunciation, vocabulary, or grammar of a language across the various groups using it. Different forms of a language are technically known as dialects, and to say that a person speaks a dialect has no derogatory or pejorative force. Dialect variation occurs both in the languages of advanced civilization (witness all the dialects of English) and in those of aboriginal groups. It is often the case, too, that one or more dialects of a language acquire higher status than others; highstatus dialects are generally called standard dialects, while dialects of lesser status are often regarded as nonstandard. This is not at all because a high-status form of a language is necessarily any better equipped to communicate ideas or formulate thoughts, but simply because the speakers of that dialect have attained generally higher social status and power (and often more education) than the speakers of other dialects through the operation of political, economic, and other social forces. The phenomenon of standard vs. nonstandard dialects is found throughout the world. even in the case of aboriginal languages like Bantu or Fijian, and speakers of nonstandard dialects are generally well aware of the low status accorded their dialects, regardless of their actual social status.

5. Speakers of any language, or dialect, use that language in many different styles, depending upon the particular social situation in which they find themselves on a given occasion. These styles or registers vary in many ways, generally along a dimen-

sion of formality vs. informality. For example, Martin Joos in his essay *The Five Clocks* (1967) distinguishes five styles that speakers and writers of standard English may affect: frozen, formal, consultative, casual, and intimate. But he also notes that styles vary in the dimensions of age, "breadth," and "responsibility" (with some overtones of relations with the standard-nonstandard dimension mentioned above). Speakers of nonstandard dialects are capable of similar variation in styles of speech.

6. It is usually the case that the various dialects of a language, whether standard or nonstandard, are mutually intelligible at least to some extent. The more similar the dialects are in their pronunciation, vocabulary, and grammar, the more they are mutually intelligible. Depending upon the amount of exposure to them, and other factors, speakers can learn to understand a number of different dialects better than would otherwise be normal for them. Some speakers can speak and be understood in two or more dialects, often in different levels or registers of these dialects.

7. Within the speakers of a given dialect there will be certain variations in competence, that is, knowledge of the system of the language and the rules by which the system is put together, so to speak. In the main, this variation occurs in the individual's knowledge of vocabulary. That is, some speakers know more words, and more about the different uses of words, than others. There may be some variation also in competence with respect to grammatical rules and even some variation with respect to basic pronunciation rules. These variations in competence depend to an unknown extent on differences in basic mental capacities, in amount of education, or in amount of exposure to other speakers of the language. Through appropriate education or training, individuals can be helped to reach higher levels of competence, but we do not necessarily know what the best training methods are to achieve this goal, nor do we know how to predict the maximum level of competence that an individual can achieve after such training.

8. In addition, even among speakers who have the same degree of competence (technically defined as above), there will be

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variation in what we may call performance characteristics, that is, in verbal fluency and creativeness, in reasoning power, in social perception, and other individual traits that affect the individual's use of language, whether in speaking, understanding, reading, or writing. Of course, the more the individual knows about the language, the more likely it is that he will be able to use it fluently, creatively, and intelligently, but it remains true that skill in language use is not only a matter of language competence but of many other factors in the individual's makeup.

9. The course of a child's acquisition of his native language, whatever that language may be, is normally regular and predictable. While there are individual differences in rate of development that may be associated with some combination of hereditary and environmental factors, every child passes through certain distinct stages of development in his learning of the phonological, lexical, and grammatical characteristics of his language. Furthermore, he learns whatever language or variety of language he is exposed to. (Sometimes he learns several languages, or varieties of language, at the same time.) By the time he is about five, the normal child has learned most of the characteristics of his language that enable him to use it in ordinary communication with peers and with adults, although he will learn much more about his language as he grows older and is exposed to more advanced uses of it.

10. The developmental stages through which a child passes in learning his language are quite possibly correlated with the child's mental development. Frankly, we do not know much, as yet, about this correlation or how it operates. There are those who believe that language development leads and guides mental development, and there are those who believe that, on the contrary, mental development leads language development. There is no *a priori* way of resolving this question, and it is difficult even to interpret the few empirical studies that bear on it. On the basis of several lines of reasoning and the available evidence, I incline to the belief that mental development tends to lead and

proceed in advance of language development—that a given stage of language development cannot be attained until the appropriate mental capacity for that development has matured. I believe also that the adequate development of mental maturity is only a *necessary* condition, not a *sufficient* condition, for language development. Obviously, the child must be exposed to language in situations that are meaningful to him before he can learn it. If this view is correct, the absence of a given phase of language development cannot be taken necessarily as evidence of a deficit in mental maturity; it could equally well be evidence of a deficiency in the environmental conditions in which the child is placed.

Armed with these general propositions and principles, we may now re-examine some of the views that have been put forth by such writers as Bernstein, Bereiter and Engelmann, and others.

To say that there exists a "restricted" code in no sense implies that the basic form of a speaker's language is incapable of allowing him to formulate thought of any degree of logical complexity. If one takes the total range of linguistic devices available to the speaker of any natural language, and in fact usually within the competence of that speaker, one finds that these devices would permit the expression of any thought or relationship that one might desire to express (except, of course, for highly technical discourse for which vocabulary might be lacking). Neither British lower-class English, nor lower-class black English is incapable of expressing complex thought. The linguist William Labov (1970) has given a number of examples of lower-class black English in which quite complex thoughts are expressed, for example, one in which a youngster tells a slightly older black interviewer that there can't be a heaven because it could only have been made by a God, but since nobody really knows what God is like, he doesn't exist and therefore couldn't have made a heaven.

Note, however, that this youngster was speaking in a social situation in which he felt perfectly free to talk. If Bereiter's

slum children appeared to speak in "grunts" or "giant words," it may have been because they found themselves in a situation which inhibited their speech in certain ways.

Bernstein's "restricted" code is properly to be interpreted as a style or mode of speaking in which the speaker finds no need to formulate thoughts carefully with adequate qualification. It has little or nothing to do with the basic language system in which the speech is couched, and it is merely an accident if the particular speech patterns used under such conditions appear to be less complex on the average.

Bereiter and Engelmann's notion that their slum children speak in "giant words" and are unable to perceive speech as a sequence of meaningful sounds is patently wrong, as it violates the second proposition I have enunciated above-that all languages have a certain form, with rules for constructing utterances out of basic elements. No language has any provision for constructing "giant words" that are not analyzable in terms of simpler elements and that would convey what might otherwise be conveyed by a sentence. Neither the famous compound words of German nor the polysynthetic words of a language like Eskimo can be conceived of as "giant words" constructed out of whole cloth, independent of other elements in the language. Bereiter and Engelmann's very examples belie their allegations: The child who said "Uaiga-nu-ju" (for "I ain't got no juice") constructed his utterance from basic elements according to a fairly complex set of rules; he could have said "I ain't got no milk" or "I got some juice" or "If vou don't give me no juice, I ain't got none" or literally hundreds of other utterances on this general pattern.

Since all languages are neutral with respect to truth or logic, it cannot be the case that nonstandard forms of English are illogical. Under certain conditions, black English omits the copula to be, as in the utterance "He sick," a fact from which it is sometimes concluded that black English is "illogical." As it happens, standard Russian also omits the copula in sentences of this type, but I hope nobody would argue that Russian is "illogical." The same goes for the argument that languages that use the double

negative are illogical. Black English is similar to French, Spanish, and Old English in using the double negative.

Lower-class black English is admittedly a nonstandard dialect of English, but I believe the status in which it is regarded, like the status of many other nonstandard dialects, would be improved if the public realized that it is just as highly structured and just as capable of communicating thought as a standard dialect. Even if Bernstein's distinction between "restricted" and "elaborated" codes is accepted, there can be both "restricted" and "elaborated" codes, or modes of speaking, in nonstandard dialects as well as in standard ones.

Also, just as standard dialects can be used in various styles, so also can nonstandard dialects be used in various styles. It is possible to reinterpret Bereiter and Engelmann's reports of the speech of their slum children by saying that these children were speaking in a special style—a style adopted whenever the children found themselves in a minority position.

Children speaking a nonstandard dialect cannot be expected necessarily to comprehend standard English, although the evidence says that they understand standard English better than speakers of standard English understand their dialect. This fact is not adequately taken into account in a variety of psychological tests. For example, children who speak nonstandard dialects get unfairly low scores on certain subtests of the widely used Illinois Test of Psycholinguistic Abilities (Paraskevopoulos and Kirk, 1969) that require the child to follow the grammatical distinctions observed by standard English. It is a grave mistake, often made, to interpret these low scores as indicating a retarded state of language development, or worse still, a retarded state of mental development. The manual of the ITPA fails to recognize this problem or to warn against such misinterpretations. A fairer test would be one that is designed in terms of the nonstandard dialect in question.

There may be some justice in the claims of Bereiter and Engelmann, and others who have prepared programs of language improvement for speakers of nonstandard English, that some of

these children have not learned the words for certain concepts, even in their own dialects, because one can expect differences in the extent to which children have learned such words. The mistake that is often made, however, is to assume that the nonstandard dialect in question lacks these words or has no way of expressing these concepts. Programs of language "improvement," i.e., programs in which children are taught the standard dialect, should be based on careful analyses of what stock of words and concepts is possessed by the nonstandard dialect. It will frequently turn out that a child who seems not to possess a particular feature of a standard dialect already knows a corresponding feature in his nonstandard dialect.

From the proposition that language acquisition is a natural and regular course of development, we can draw the inference that the child who learns a nonstandard dialect learns it in much the same way as do children who acquire standard dialects. If the child's acquisition of a nonstandard dialect is viewed in its own terms rather than in terms of the extent to which he acquires the standard dialect, it will not appear as distorted and unusual as it is often thought to be.

To sum up the argument of this paper, I would emphasize the incorrectness and fallaciousness of the apparently widespread belief that speaking a nonstandard dialect is somehow a sign of a deficiency in thought or in mental development. There may be some connection between language and thought, but it is not exhibited in nonstandard speech. Our children who are speakers of nonstandard dialects—whether they be blacks, Puerto Ricans, or Chicanos, are not the victims of undeveloped language codes. Their languages have principles and rules similar to those that govern any language.

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