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TRACING ERRORS TO THEIR SOURCES: A STUDY OF THE ENCODING PROCESSES OF ADULT BASIC WRITERS

To select approaches which will be predictably effective in reducing errors in writing, it is clearly important for teachers to know *why* their students make specific errors. Mina Shaughnessy, of course, was driven by this insight as she probed for the roots of students' problems with the written language; and the patterns of error which she found in her large sample of basic writing texts have certainly convinced us that error is not random. But precisely how specific errors relate to specific sources of error for specific writers remains a complicated question, as a number of investigations have shown. Bartholomae has found that errors that look identical on the page can have very different causes, depending on the writer,[1] and recent studies in reading suggest that the presumed correlation between spelling errors and deficient reading skills does not hold up in individual cases.[2]

My own early interest in the question had been focused almost exclusively on dialect influence, that is, the ways in which oral language

[1] David Bartholomae, "The Study of Error," *College Composition and Communication*, 31 (1980), 253-269.

[2] See Linnea Ehri, "The Role of Orthographic Images in Learning Printed Words," in *Orthography, Reading, and Dyslexia*, ed. James Kavanaugh and R. L. Venezky (Baltimore: University Park Press, 1980), pp. 155-170; Charles Read, "Writing Is Not the Inverse of Reading," in *Writing: The Nature, Development, and Teaching of Written Communication*, ed. Carl H. Fredrickson and Joseph F. Dominic (Hillsdale, NJ: Lawrence Erhlbaum Associates, 1981) II, pp. 105-115.

patterns seem to account for particular deviations from the linguistic norms of standard written English. As I became familiar with recent research in this area, I realized I must also consider the possibility that other influences might be at work in producing errors which I had been uncritically ascribing to writers' speech patterns. Whiteman, in her study of the writing of black and white working class American children, had noted a "non-dialect-specific tendency to omit certain inflectional suffixes."[3] Investigations by Kirschner and Poteet and by Sternglass had demonstrated that the pattern of errors of college remedial groups, assumed to have different speech patterns, did *not* show substantial qualitative differences.[4] Hartwell had asserted bluntly that "'dialect interference in writing,' in and of itself, does not exist," postulating instead a single cause for errors, namely, unfamiliarity with the print code.[5]

While I was reading these reports, I was simultaneously experimenting with a variety of instructional approaches, noting which ones worked best with whom, and speculating on their relative success in reducing different kinds of error. By degrees, it became clear to me that the precise parameters of dialect influence on error could not be determined except in the context of a study which considered not only dialect but other possible causes of error as well. My colleagues at York College/CUNY, Carolyn Kirkpatrick and Michael Southwell, joined with me in these speculations and together we came up with some strong hunches about the various sources of error in the cognitive, perceptual, and linguistic processes which underlie writing. Even as we struggled with the complexity of the question, we remained convinced that spoken language, in one way or another, is a major, if not *the* major source of problems with the written language. This interest led to the research I am reporting here, a recently completed case-study investigation of the encoding process, with emphasis on sources of error. (My work was supported by the National Endowment for the Humanities under a College Teachers Fellowship award, 1982-83.) In the course of this study, I wanted to resolve, if I could, some of the existing disputes and ambiguities about the sources of common errors, and in the process to develop some diagnostic procedures which would be not only reliable but also simple enough for classroom teachers to use as part of their normal assessment of students' writing skills.

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[3] Marcia Farr Whiteman, "Dialect Influence and the Writing of Black and White Americans," Diss., Georgetown University 1976, p. 68.

[4] Samuel A. Kirschner and G. Howard Poteet, "Non-Standard English Usage in the Writing of Black, White and Hispanic Remedial English Students in an Urban Community College," *Research in the Teaching of English*, 7 (1973), 351-355; Marilyn S. Sternglass, "Close Similarities in the Dialect Features of Black and White College Students in Remedial Composition Classes," *TESOL Quarterly*, 8 (1974), 271-283.

[5] Patrick Hartwell, "Dialect Interference in Writing: A Critical View," *Research in the Teaching of English*, 14 (1980), 101-118.

DEFINITIONS

A few definitions at this point may head off confusion about the goals and design of my study. The distinction between *composing* (controlling meaning in writing) and *encoding* (controlling the visual symbols which represent meaning on the page) is basic to this study's design and method of analysis. As a skill, encoding includes control over all the *norms* of the written language—the norms relating both to its *visual* forms (spelling, punctuation, capitalization, indentation, etc.) and to its *linguistic* forms (denoting tense, number, case, word-class, etc.). Encoding is distinct from composing inasmuch as it is concerned with the *givens* of the written *code*, whereas composing is concerned with the *options* of the written *language* which that code represents, the almost infinitely various ways of conveying meaning in writing. However, insofar as encoding has to do with linguistic forms, it has a crucial area of overlap with composing. This is one of the reasons why error analysis is so complex. And it's a point to which I shall return in the interpretation of my findings.

For the purposes of this investigation, I define *error* narrowly as any clear deviation from the norms of standard written English. This definition places error in the domain of right/wrong, not of better/worse. So defined, errors manifest weaknesses in encoding skills, not in composing skills.

A further distinction seems important to make—that between *dialect* and *grapholect*, two terms which help to define each other, and which also suggest what I mean when I use the terms *standard* and *nonstandard* to describe language patterns. Dialect, as I use the term here, refers to varieties of the vernacular, the spoken as distinct from the written language. In contrast, the grapholect is both written and, to a large extent, standardized.[6] Indeed, in this connection, my colleagues and I would argue that the term *standard* is used most accurately to describe the written (not spoken) language. However, a certain dialect may approximate the linguistic forms which characterize the grapholect, and can in this way (rather loosely, but without distortion) be called *standard*. And a dialect which does not approximate these forms is in the same way called *nonstandard*. As these definitions imply, I consider that "error" is not an appropriate term to apply to speech-form variants, but is an entirely appropriate one to apply to deviations from the established norms of the written language.

DESIGN

It was my hypothesis, then, that spoken language has a strong direct influence on the encoding process, and that speakers of nonstandard dialect have a different set of problems with the written language and make identifiably different errors than do speakers of standard dialect. Additionally, I suspected that dialect influence interacts with other sources of error, still further differentiating these two groups as writers. This hypothesis, clearly, was basic to my thinking about error, and therefore

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[6] See E. D. Hirsch's enlightening discussion in *The Philosophy of Composition* (Chicago: University of Chicago Press, 1977), Chaps. 1-3.

basic to the design of my study. It required that I study two types of error-prone writers, speakers of standard dialect, and speakers of nonstandard dialect, and that I also try to identify other factors which might be contributing to the patterns of error observed, such as variations in composing ability, reading proficiency, and level of cognitive skills. I decided to choose subjects in such a way as to control, insofar as possible, the presence of still other potential influences on kind and quantity of error. My task in trying to sort out multiple variables would certainly be easier if my subjects were all individuals with approximately the same level of post-secondary education, similar amounts of writing experience, and similarly strong motivation to overcome serious problems with the written language, but with identifiably different speech backgrounds and diverse reading, cognitive, and composing skills.

Further, I wanted to work exclusively with mature adult learners. For one thing, the persistence of their problems points to deep-seated processes at work. Also, because many older basic writers have been struggling to master the written language for years, their frustrations have made them aware of their difficulties with encoding. I had already learned that adult learners could sometimes analyze the reasons for their encoding problems with remarkable insight.

SUBJECTS

It was my original intention to observe six individuals, or cases, in close detail. In my search for subjects who were both alike and different in the various ways I have described, I drew on populations of adult basic writers at two sites well known to me. At the first site, Elizabeth Seton College in Yonkers (where I had previously taught), I collected specimens of student writing, primarily from weekend college, practical nursing, and evening school students. I identified the writers with the most serious encoding problems and then interviewed about twenty. At the other site, the Bronx Psychiatric Center Staff Education Program, I had the advantage of having recently worked closely with the students, all hospital staff members (clerical workers, mental health aides, and nurses), for whom I had set up a totally self-instructional model of the COMP-LAB Program, the experimental basic writing course which I had helped to initiate at York College. Most of the thirty error-prone writers I chose to interview at this site were native speakers of nonstandard English who had been taking college and other postsecondary education courses for several years. Because they were required to write daily reports on the job, they were highly motivated to improve their writing skills both for their career advancement and for their ongoing course work.

During the preliminary screening, which included extensive taped interviews and a brief reading test, I became aware of a wide range of variation in prospective subjects' oral language forms, reading skills, and the kinds and quantities of errors they made. I then realized I must enlarge the number of case studies I had originally planned to investigate, for I feared that I might be led astray by the idiosyncratic behaviors of a few individuals, and so miss the patterns which might cut across all these individual

differences. Additionally, in working with a larger number of subjects, I could combine the case-study method of investigation-in-depth with at least some of the advantages of a quantified study. Although the size of the sample must still necessarily be small, it would be large enough to suggest significant trends. At the same time, I would not be limited to heaps of faceless errors. That is, when I interpreted the statistical outcomes of my study, it would be in the light of the more personal knowledge (in Polanyi's sense of the term[7]) that I had gained from my sustained acquaintance with the real live authors of the texts in which these errors occurred.

For these reasons, I went from the six case studies of my research proposal—three standard dialect (SD) speakers and three nonstandard dialect (NSD) speakers—to twenty-six, or thirteen of each, chosen from a pool of fifty I had interviewed and tested. I chose subjects who seemed likeliest to meet the varied criteria explained above.

The most fundamental of these criteria related to language patterns. My task was to select from my pool of potential subjects, representing a spectrum of spoken dialect, two groups from the two ends of this spectrum such that each could be said to use identifiably standard or nonstandard grammatical forms.[8] (As it happened, individuals from both sites were included in each group.) So identified, the SD group consisted of thirteen subjects (all native speakers, mostly middle class, and mostly white) who consistently used the inflectional forms of standard English. The NSD group consisted of thirteen subjects (all native speakers and all black except one) who had in common variability in their use of grammatical inflections. Six subjects habitually used NSD forms but none exclusively characteristic of Black English Vernacular, and seven habitually used BEV as well as other NSD forms. In identifying subjects as SD or NSD speakers, I was guided by my reading of the sociolinguists—Fasold, Labov, Shuy, Stewart, Wolfram, and others—and by an ear for dialect forms educated over two decades of working closely with urban and inner city students.

Language patterns, as indicated above, were not my only criteria for my choice of subjects. The students selected for both groups were, so far as I could judge, all mature and highly motivated individuals with similar amounts of writing experience. Most had already completed one to four semesters of college course work, and all but one in each group were in their twenties or older. And, of course, all had problems with error

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[7] Michael Polanyi, *Personal Knowledge* (Chicago: University of Chicago Press, 1958). See especially Chap. 1.

[8] I considered mainly grammatical features in identifying subjects as speakers of standard or nonstandard dialect. Although linguists distinguish dialects by describing variations in phonological and lexical as well as grammatical features, they identify populations largely on the basis of grammatical features. See Walt Wolfram and R. W. Fasold, *The Study of Social Dialects in American English* (Englewood Cliffs, NJ: Prentice-Hall, 1974).

ranging from serious to acute. At the same time, subjects within each group varied, apparently rather widely, in reading proficiency, level of cognitive skills, and composing abilities. However, I had good reason to believe, despite these necessary individual variations, that further testing would show that my two speech groups were similar in their *range* of differences. Under these circumstances, group comparisons in respect to error could be made more readily without fear that factors other than dialect were at the root of differences.

PROCEDURES

My primary measure was to count and categorize the errors in subjects' own writing (error categories are discussed below in connection with my predictions about the outcome of the count). As a control on the kinds of errors likely to be made by each subject, I assigned identical writing tasks to all, in a variety of modes. In completing these papers, most subjects generated about 2000 words.

As a possible check on my primary error count, I designed an additional "measure of encoding skills" in which subjects were asked to write a 416-word passage from dictation, mostly narrative with low-level vocabulary but rich in forms and structures likely to induce common errors. I recorded my own voice (by then familiar to subjects), reading the passage slowly and distinctly in standard English with suitable pauses to give subjects time to turn off the tape and write what they had heard. As an error measure, such an exercise has an advantage over freely composed writing in that it requires individual writers to use specific forms and conventions which might not happen to occur in samples of their own writing, or which they might avoid using. I planned to test the instrument's reliability by comparing the distribution of errors in the dictation exercise to the distribution of errors that occurred in subjects' own writing. (For those who are curious, or who may wish to use the dictation instrument themselves as a possible alternative to the time-consuming process of counting errors in students' own writing, the full text is given in Appendix A.)

Next, I designed instruments and mapped out procedures which would enable me to measure the relationship of subjects' errors not only to their speech patterns, but also to other possible influences on error: level of reading comprehension, of cognitive skills, and of composing ability. I also planned to question them about their reading habits and perceptions of the written code.

Reading specialists at CUNY recommended the College Board Degrees of Reading Power as the most suitable reading measure for my sample and in view of my purposes. The DRP assigns scores according to readers' ability to comprehend texts of gradually increasing difficulty, rather than by comparing their ability to that of average readers on various grade levels. Its norming method overcomes the drawbacks of conventional reading tests which cannot be used for comparing readers, like those in my study, with widely diverse skills. Another advantage of the DRP is that, in contrast to traditional reading tests, it measures skills *specific* to reading as a mental task, not those cognitive skills which can develop independently of

reading experience. Cloze procedures are used to measure readers' control of a passage's vocabulary, syntax, and basic meaning; the test does not ask them, as most other reading tasks do, to reason further about the passage (for example, to select the best title for it or to identify its main idea), thus calling on skills which are not peculiar to reading.

Two of the writing tasks used in the error count were designed to measure composing skills. One of these was in the expressive and the other in the extensive mode (in Emig's sense of those terms[9]). In a blind reading, we (an experienced basic writing teacher and I) rated these papers on a holistic scale of 1-5, using a simplified version of the Wilkinson model of writing maturity[10] as a primary trait scoring guide. Because I wanted to separate out composing from encoding skills, ratings ignored errors as much as possible. The scores assigned by each rater to a given subject were added together and the results, on a scale of 2-10, are referred to as subjects' "composing scores."

Because I also wanted to get an idea of my subjects' reasoning abilities, I devised a task which required them to analyze a 1200-word piece of expository prose, an abbreviated version of an article from a magazine for educated adults[11]—relatively uncomplicated in its syntax and vocabulary, but complex in its ideas—and then in their own words to write a brief summary (150 words or less), including only the author's main point and her most important supporting ideas. The DRP score assigned to this article by the College Board staff placed it well within the reading competency (as also measured on the DRP scale) of all but a few of my subjects. For these, the vocabulary (not the syntax) was too difficult, so I let them use a dictionary. Although success on this summarizing task is conditioned somewhat by reading and writing skills, it calls more on the ability to analyze and synthesize than the other reading and writing tasks which the subjects performed. Evidence of these abilities was the primary consideration in assigning scores. The resulting "summary scores" (obtained by following procedures similar to those used for obtaining the composing scores) confirmed my impressions (gathered in interviews with subjects, in conferences with their instructors, and in reading all the other written work in their folders) of the levels of cognitive skills which individual subjects brought to academic tasks. It's my belief that the summary score is a fairly accurate indication of cognitive skills for the subjects in my study. (Analysis showed that the interrater reliability coefficient for both scores was high—.88 for the summary scores and .80 for the composing scores.)

Finally, I spent many fruitful hours with subjects, applying the more exploratory procedures of the case-study approach to writing research.

[9] Janet A. Emig, *The Composing Processes of Twelfth Graders*, Research Report No. 13 (Urbana, IL: National Council of Teachers of English, 1971).

[10] See Marilyn Sternglass, "Applications of the Wilkinson Model of Writing Maturity to College Writing," *College Composition and Communication*, 33 (1982), 167-175.

[11] Katherine Davis Fishman, "The Joyful Elite," *New York Magazine*, 18 Jan. 1982, pp. 43-48.

These included reading protocols, editing protocols, and interviews, or, more accurately, informal and spontaneous questioning of subjects during protocol sessions. I also made limited use of composing protocols.

To produce reading protocols, I taped subjects reading samples of their own writing and other texts characterized by both standard and non-standard English forms. Using the insights of miscue analysis, I examined these tapes for evidence of differences between subjects' spoken language forms as reflected in their oral performance and the language forms appearing in the texts. For the editing protocols, subjects tried to correct errors, and as they did so, explained why they were making specific corrections. These protocols gave me a clear idea of subjects' ability to detect differences between their oral reading and the text they were editing, and whether or not the rules they applied (if any) in making corrections were appropriate.[12]

PREDICTIONS

My predictions about the kinds and quantities of errors which would appear in the writing of each speech group in my study were based on my hypotheses about the sources of error. I counted the most common, serious, and systematic errors that occurred in the writing of my sample. Most basic writing teachers would no doubt find the list of errors counted, as it appears below, entirely familiar, but the specification of some of the items and their order might strike them as a bit strange. The format of my list, however, is far from random; my hypotheses dictated these specifications and shaped that sequence as I shall explain shortly.

These are the categories of errors counted in subjects' writing (for a fuller description and example of each category, see Appendix B):

A 1. Errors in sentence punctuation
   2. Basic errors in pronouns and adverbs
   3. Subject-verb agreement errors which involve intervening words

B 4. Errors in writing conventions, that is, the visual conventions of the written code (like capitalization, use of apostrophes, etc.)
   5. Spelling errors
   6. "Wrong words," including homophone confusions

C 7. Omitted words, including copulae
   8. Omitted inflectional suffixes

D 9. Inflectional suffixes added inappropriately
   10. Wrong whole-word verb forms

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[12] Elaine O. Lees of Pittsburgh University is currently doing some interesting research using editing protocols, but mostly with SD speakers.

The list is sequenced in four clusters: (A) errors which I intended to count but not try to trace to their sources (categories 1-3), (B) errors which I speculated were not traceable to spoken language habits (phonological or grammatical), but rather might reflect unfamiliarity with print-code conventions, or alternatively, be perceptual in origin (categories 4-6), (C) errors which might be traceable to spoken language habits (phonological or grammatical), or perhaps to some other sources (categories 7-8), and (D) errors which I hypothesized have their origins unambiguously in the grammatical patterns of spoken language (categories 9-10). Errors were counted in the first category in which they might be placed. This insured a bias *against* my hypothesis: If a way of accounting for an error apart from spoken language habits were possible, it would be accepted.

Categories 1-3 were of peripheral interest to my study because too little is clearly understood about their causes to make their occurrence or nonoccurrence as specific error types susceptible to interpretation. However, such errors are too common to exclude from the overall error count. Category 3 is inserted where it is on the list to make sure that errors in verb agreement which occur in complicated constructions (common enough even among English teachers) are not included in categories 8 or 10 where they may occur for very different reasons. About the remaining categories, my reasoning was as follows: Errors in categories 4-6 ought to be non-dialect-related since they involve visual symbolization, not linguistic forms. (I believed that these problems could be traced to some failure to adequately control the learned visual code, stemming perhaps from simple ignorance of its norms or from faulty visual discrimination skills, that is, difficulties in fully *seeing* the symbols on the page.) On the other hand, errors in group 10, I reasoned, must be linguistically based. A person might omit the -s ending in *he dance* for any one of several reasons, as Whiteman, Bartholomae, and others[13] have pointed out. But it's hard to see any reason why a writer would produce a whole-word verb form as in the phrase *she have* except that it occurs in his dialect. Similarly, it appeared that errors in category 9 (hypercorrections, like *she droved*) are most likely also to be linguistically-based, although less directly—arising perhaps from the conflict which writers experience between their acquired nonstandard speech patterns and those demanded by standard written English. Errors in categories 7-8 (omitted words and omitted suffixes) were ambiguous; they might or might not be linguistically-based.

In the light of this reasoning, I made the following predictions about the kinds and quantities of errors which would occur in the writing of the two speech groups in my study. Since I was convinced that errors in categories 4-6 were due to deficient mastery of the print code and not to the influence of nonstandard dialect, and since I had done all that I could to insure that the range of factors related to literacy (level of formal schooling, reading proficiency, etc.) was the same for both speech groups, I predicted that these errors would occur in equal quantities in the writing of

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[13] Whiteman, pp. 68ff.; Bartholomae, pp. 262-264.

both groups. And since I attributed the errors in categories 9 and 10 exclusively to the influence of nonstandard dialect, I predicted that these errors would occur only in the writing of subjects who spoke NSD. Further, since errors in categories 7 and 8 might occur for either reason, I predicted that they would occur for both reasons and so be more frequent in the writing of the NSD group. Finally, because of the large number of errors likely to be traceable exclusively to nonstandard dialect, I predicted that the NSD speakers would make more errors overall than the SD group.

FINDINGS

Since this study was designed most basically to provide the opportunity to observe individual behavior, the quantity of data collected was limited. In some but not all instances, it turned out to be adequate for statistical reliability. Keeping in mind the relatively small amount of data available for analysis, I will indicate in my discussion the confidence that can be placed in particular findings.

As Table 1 shows, NSD speakers' total error rates, both in their own writing and in the dictation exercise, are, as hypothesized, indeed significantly higher than those of the SD speakers. The quantity of errors counted and the consistency of the distribution of errors in the two measures used (a finding to be discussed below) give confidence that the error rates do in fact accurately reflect the quantities of errors which subjects normally make in their writing.

TABLE 1

Comparison of Standard and Nonstandard Dialect
Speakers' Error Rates
(Based on errors per 100 words)

	SD Speakers N=13	NSD Speakers N=13	
	Mean	Mean	t-value
Own writing	5.03	8.61	2.691 *
Dictation	9.61	15.01	2.713 *

* p < .05

As noted, an effort was made to match the two groups of subjects in ways considered most relevant to literacy skills. It's necessary to consider whether this attempt was successful before concluding that speech differences account for the differences in quantity of error. Table 2 presents data bearing on this question. T-tests applied to composing and summary scores show that the two speech groups are not significantly different in their performance on these two measures. As a further check on the relationship of summary and composing scores to quantity of errors, all subjects' individual scores on the measures were compared to

their individual error rates. Analysis showed a zero-order correlation between composing scores and error rates both in subjects' own writing, and in the dictation exercise; that is, no relationship whatsoever was found between composing scores and error rates. Also, no significant relationship between summary scores and error rates in subjects' own writing ($r=.27$), nor in the dictation exercise ($r=.36$) was found. So it seems that the two groups are equivalent in cognitive and composing abilities, and that neither differences in these skills between the two groups as a whole nor differences among individual subjects account for their differences in error rates.

TABLE 2

Comparison of Standard and Nonstandard Dialect Speakers' Summary and Composing Scores

	SD Speakers N = 13	NSD Speakers N = 13	
	Mean	Mean	t-value
Summary Scores	5.54	5.33	.265
Composing Scores	6.45	5.70	.834

This outcome corresponds with my own impressions that some of the best composers and clearest thinkers among my subjects, and indeed among my students over the years, were among the poorest encoders, and vice versa. Because of the absence of validated instruments for measuring adults' ability to reason in verbal terms apart from reading, and for measuring their composing skills apart from encoding, the measures and procedures I used for these purposes are necessarily experimental and exploratory. Still, the caution I'm inclined to feel about the above findings is tempered when I consider how consistent they are with my sustained impressions of subjects' cognitive and composing competencies.

Despite efforts to match the two groups for reading level, Table 3 reveals that they belong to significantly different populations of readers. Mean scores of the two groups are 13.9 points apart and are significantly different at the .01 confidence level. Furthermore, the NSD group's speed of reading is significantly lower than that of the SD group (the test has no time limit, but sixty minutes to complete the test, according to the DRP manual, is average). Here, we may suspect, is a clue other than dialect to the differences in error rates between the two groups (particularly if we recall the research indicating that deficient reading skills generally predict poor writing skills[14]). But this is not so: further analysis shows no

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[14] Walter Loban, *The Language of Elementary School Children*, Research Report No. 1 (Urbana, IL: National Council of Teachers of English, 1963).

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significant correlations between subjects' DRP scores and their correspond-
ing error rates across the groups, both in their own writing ($r=-.36$) and
in the dictation exercise ($r=-.27$). And within the groups, analysis shows
zero-order correlations between error rates and reading scores. In other
words, no significant relationships were found between the number of
errors individual subjects made in writing and how well they performed on
the reading test.[15] This finding invites confidence since it is based on a
comparison between the reading scores of a substantial number of subjects
(26) on an exhaustively tested instrument and on error rates derived from
two sizable counts. (Although I was surprised at the large difference in the
range of the reading scores of the two groups, which I had tried to match
with one another in that respect, I had anticipated that error rates and
reading scores for individuals would not correlate, for I had observed that
some of the best readers in both groups made many more encoding errors
than some of the poorest readers did.)

TABLE 3

Comparison of Standard and Nonstandard Dialect Speakers'
Reading Scores

	SD Speakers N = 13	NSD Speakers N = 13	
	Mean	Mean	t-value
DRP (Reading)	76.00	62.15	3.419 * *
Time (in minutes)	77.69	108.46	2.310 *

** p < .01
* p < .05

The negative evidence, then, is that differences in cognitive, composing,
and reading skills do not seem to account for the differences in the error
rates of the two groups. At the same time, Tables 4 and 5 below provide
evidence that dialect differences do in fact account for the differences
observed.

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[15] A significant relationship was found between reading scores and composing scores
for the SD group only ($r=.83$; $p<.01$). This finding together with the one just cited
(that reading ability and encoding skills do *not* correlate) underscore the importance
of the distinction between composing and encoding to research on reading/writing
relationships. Attention to this distinction could help unravel some of the apparent
contradictions and also address some of the gaps Sandra Stotsky finds in this body of
research: see her article, "Research on Reading/Writing Relationships: A Synthesis
and Suggested Directions for Future Research," *Language Arts*, 60 (1983), 627-642.

TABLE 4

Mean Number of Errors per Error Type for Standard and Nonstandard
Dialect Speakers in Own Writing and in Dictation

Error Categories	SD N=13	NSD N=13	SD N=13	NSD N=13
	Own Writing		Dictation	
Sentence punctuation	10.8	12.8	1.8	2.8
Sub-vb agr/pronoun/adverb	6.2	7.5	0.0	0.0
Writing conventions	30.8	37.3	18.0	22.8
Spelling	27.9	25.3	9.8	12.8
Wrong words	13.6	18.8	7.8	9.5
Omitted words	1.6	2.2	0.7	2.0
Suffixes omitted	6.4	29.2	1.7	8.4
Suffixes added	0.0	4.5	0.0	1.8
Wrong whole-word verb forms	0.0	5.6	0.0	0.9

TABLE 5

Distribution of Error Types by Percentages:
Standard vs. Nonstandard Dialect Speakers

Error Categories	SD N=13	NSD N=13	SD N=13	NSD N=13
	Own Writing		Dictation	
Sentence punctuation	11.1%	9.1%	4.5%	4.6%
Sub-vb agr/pronoun/adverb	6.4	5.3	0.0	0.0
Writing conventions	31.6	26.6	45.2	37.3
Spelling	28.7	18.1	24.6	21.0
Wrong words	14.0	11.3	19.6	15.5
Omitted words	1.6	1.6	1.8	3.3
Suffixes omitted	6.6	20.8	4.3	13.8
Suffixes added	0.0	3.2	0.0	3.0
Wrong whole-word verb forms	0.0	4.0	0.0	1.5
Totals	100.0%	100.0%	100.0%	100.0%

As seen in Table 4, NSD speakers make more errors in almost every category than SD speakers do, including categories 4-6, where I had expected no differences. But, as I had hypothesized, NSD speakers make many more errors in the categories for which a dialect-related differential was predicted (8-10). Indeed, "suffixes added" (hypercorrect linguistic forms) and "wrong whole-word verb forms" occur *only* in the writing of

NSD speakers. As Table 5 demonstrates, 7.2% of all the errors committed by this group in their own writing occur in these categories, and up to 28% of their total errors (depending on the attribution of omitted suffixes) may have their source in NSD. Just as revealing is the fact that, if we exclude all categories of error which could be rooted in grammatical differences between the two groups, the distribution of error in the remaining categories presents an essentially consistent picture, as shown in Table 6. In sum, the two speech groups make errors in roughly the same proportions except for the categories where there is the possibility of nonstandard grammatical influence.

TABLE 6

Distribution of Error Types When Errors of Possible Grammatical Origin Are Excluded: Standard vs. Nonstandard Dialect Speakers

	SD N = 13	NSD N = 13
Error Categories	Own Writing	
Sentence punctuation	11.9%	12.8%
Sub-vb agr/pronoun/adverb	6.8	7.4
Writing conventions	33.9	37.0
Spelling	30.7	25.0
Wrong words	14.9	15.6
Omitted words	1.8	2.2
Totals	100.0%	100.0%

To test whether the observed differences in quantities of errors made by the two speech groups are statistically significant, the numbers of errors each group made in particular categories were compared. Analysis of the number of errors in categories 8-10 (suffixes omitted, suffixes added, and wrong whole-word verb forms), those posited to be possibly or definitely grammar-based, suggests that the two groups are fundamentally different in respect to these errors. The obtained F-ratio was found to be 21.1 for grammatical error in their own writing and 15.31 for grammatical error in the dictation exercise. Since two different populations exist, further comparison is unwarranted. In an analysis of the number of errors in categories 4-6, those posited to be nonlinguistically based (writing conventions, spelling, and wrong words), the two groups were found to be significantly different (t-value = 2.169; $p < .05$). In the dictation exercise, however, no significant difference was found between the two groups in numbers of errors in these categories (t-value = 1.101). In statistical terms, then, in respect to errors posited to be grammar-based, the study

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sample has been drawn from two different populations. In respect to other errors, the difference between the two groups is measurable, but not dramatic.

Table 5 allows us to compare the distribution of errors in the dictation exercise and in subjects' own writing. In the first three categories, the dictation exercise fails as a predictor of error. But when we compare the percentage of errors which each speech group commits in the remaining categories in their own writing to the percentage in the dictation, the amounts are found to be approximately the same. This consistency suggests that the dictation exercise could be a fairly reliable alternative to counting most types of errors in subjects' own writing, at least all those types with which this study is concerned.

To test further for possible connections between reading skills and error, subjects' numbers of errors in category clusters 8-10 and 4-6 were compared to reading scores. Since SD and NSD groups belong to different populations of readers, the difference was controlled by analyzing the scores of SD and NSD speakers separately. In both groups, for both types of errors (those hypothesized to be dialect-related and those not dialect-related), in their own writing and in the dictation exercise, zero-order correlations were found between reading scores and numbers of errors. In other words, in both speech groups, no relationships whatsoever were found between quantities of specific types of errors committed and reading scores.

CONCLUSIONS

Although (as previously noted) from a statistical perspective the scope of this study is limited, the quantity of data examined is not negligible, and the investigation analyzes variables and relationships among them not previously considered. Moreover, the findings discussed so far are entirely consistent with my case-study observations. It would seem, then, that the following conclusions can be drawn from these findings with considerable confidence: 1. Among adult basic writers,[16] differences in reading comprehension skills seem not to account for differences in total quantities of errors, nor for differences in types of errors committed. 2. Among adult basic writers, such is the overriding influence of nonstandard dialect on encoding behavior, that even when composing and cognitive skills are on the same level, nonstandard dialect speakers are likely to produce many more errors than standard dialect speakers. 3. Among adult basic writers, nonstandard speech patterns apparently account entirely for two highly stigmatized categories of errors, hypercorrect linguistic forms and wrong whole-word verb forms, and also for a substantial portion of omitted inflectional suffixes.

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[16] It is important to stress that this study's sample is composed entirely of adults, that is, students of at least college age, and mostly older. Teachers who may wish to make extrapolations to instruction should keep this limitation in mind.

CASE-STUDY FINDINGS

The results of the above quantitative analyses are clear, but cast no light on *why* nonstandard dialect is a source of error, or on the causes of error not based in NSD, or on how to distinguish one cause from another in ambiguous cases. Closer examination into the patterns of error for each group and the results of reading and editing protocols help provide some of the answers.

A composite picture of errors typically committed by each group in writing from dictation gives an illuminating overview. Italics indicate the types of errors which are common to both groups; bold face indicates those types of error which are limited to NSD speakers. To indicate misspellings, which tended to be highly idiosyncratic, the most common or a representative misspelling is given. It is revealing that there are no types of errors peculiar to the SD group. (Refer to Appendix A for the original passage.)

Standard Dialect Speakers' Transcription

Some people have strange fears. For example, after a shower of *mediors* passed over New Mexico a *women* in Vermont refused to leave her house for five years. A man who has a *violant* fear of *lightening* swears that he's going to find a place to live where rain never falls. Several *woman* who live in an ideal *enviorment* in *Arizonia* are so *frighten* of germs that they *receantly* bought *sergical* masks which they wear night and day *weather* at home or at work. Even though people with these *fobias* are often *quit inteligant*, *there to terified* to listen to reason. *Its* no use telling them that *their* being silly. *There* minds are *parilized* by fear and they just *cant* hear what *your* saying. On the other hand some *peoples* fears are based on personal experience. A friend of mine is *frighten* of elevators, but she certainly has a good reason. *When ever* she gets on a *crowed* elevator, this shocking memory always comes back to haunt her. It all began in Georgia where my friend *usaly* spends her vacation with her cousins. Once she *when* to stay with them in *a* old *manshion* which they had leased for the summer. The first night she slept *their* around midnight *their where* strange noises under her window. She jumped up and looked out, *in* the moonlight she saw a coach....

Nonstandard Dialect Speakers' Transcription

Some people **has** strange fears, *for* example, after a shower of *medior* **pass** over New Mexico a *women* in *Vermount refuse* to leave her house for five years. A man who **have** a *vilent* fear of *lighting* **swear** that **he** going to find a place to live *were* rain never falls. *Sevral woman* who *lived* in **a idea** *enviorment* in *Arziona* are so *frighten* of germs that they *reasonly brought sugrical* **masses** which they wear night and day *weather* at home or at work. Even *thought* people with these **fobia** are *offten quiet intelegent there to terify* to *lisson* to **reasons**. *Its know* use telling them that *there* being silly. *There* **mines** are **parilize** by **fears** *an* they just **can** hear what *your*

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saying. On the other hand some **people fear** are **base** on *personnel experiance*. A friend of **mines** is *frighten* of *elavators* but she *certenly* **have** a good reason. *When ever* she gets on a *crowed elavator* this shocking memory **alway come** back to *hunt* her. It all began in Georgia where my friend *usally* spends her vacation with her *cousin*. Once she went to stay with them in *a* old *mantion* which they had *lease* for the summer. The *frist* night she slept *their* around midnight *their* **was** strange noises under her window. She *jump* up and *look* out, *in* the moonlight she saw a coach....

The differences here clearly dramatize my finding that these two speech groups represent two different populations of basic writers. Perhaps the most remarkable feature of the NSD transcription is the transformation of whole-word verb forms (dictated in standard English) into nonstandard forms, as in the phrases "people *has*...", "A man who *have*...", and "their *was* strange noises..." Subjects literally heard one word and wrote an entirely different word. These category 10 errors naturally do not occur in the dictation exercise as often as they do in subjects' own writing, but the fact that they occur at all attests to the strength of these forms as vehicles of meaning for NSD speakers. Such manifestations of the working of deep inner linguistic processes have been well-documented in reading[17] and in speech.[18] Here we see a dramatic instance of this transformational process at work in writing, as standard forms, spoken slowly and distinctly into subjects' intently listening ears, emerge from their pens in what are to them more meaningful and familiar nonstandard shapes.

In editing sessions with SD speakers reading NSD texts, I saw the same process at work in reverse. For example, the sentence, "Two clients on Ward 14 was moving chairs" was read aloud by an SD speaker, a proficient reader, as "The client on Ward 14 was moving chairs"—so powerfully does the form *was* signal the singular for SD speakers![19] (If, gentle SD reader, you're confused, read the sentences again, slowly.) This phenomenon illustrates a truth that some critics of the theory of nonstandard dialect influence on writing seem to have missed: Spoken language is not just a string of sounds any more than a text is just a string of symbols; both are manifestations of underlying language patterns. As a consequence, writers who speak a somewhat different language from the one they must encode

[17] See Kenneth S. Goodman and Catherine Buck, "Dialect Barriers to Reading Comprehension Revisited," *The Reading Teacher*, 27 (October 1973), 6-12; see also Yetta Goodman and Carolyn Burke, "Do They Read What They Speak?" in *Language and the Language Arts*, ed. Johanna S. Destefano and Sharon E. Fox (Boston: Little Brown, 1974), pp. 244-250.

[18] See Courtney B. Cazden, "Suggestions from Early Language Acquisition," in *Language and the Language Arts*, pp. 42-48; see also William Labov, "The Logic of Nonstandard English," *The Florida FL Reporter*, 7 (Spring/Summer 1969), 60-74, 169.

[19] See Frank Smith, *Writing and the Writer* (New York: Holt, Rinehart and Winston, 1982), Chapter 5, for an explanation of one theory accounting for this process.

have more to learn than the differences between the sound of isolated lexical items and the way they look in writing.

Subjects in my SD group, though error-prone writers themselves, found the NSD verb forms in the reading protocols highly distracting. (One of them, who five minutes before had been complaining with some asperity about his teacher's obsession with his own mistakes, exclaimed with horror as he read a report containing NSD verb forms.) The contrary was true for the NSD group: the editing protocols showed that NSD verb forms are precisely the errors which the NSD speakers are least able to detect. They might notice lapses in writing conventions like a missing apostrophe in a *he don't*, but they tended to read over and past grammar-based errors both in their own writing and in the writing of others. I found that ignorance of standard written English was usually not the problem. When I underlined several verbs at random and asked subjects which ones were wrong, most could not only identify the errors but could tell me why they were wrong and how to fix them. But in reading for meaning, and even in reading for correctness, they tended not to notice such errors if they were left unmarked. Perl also documents this phenomenon when she reports that of the 550 "editizing" changes made by her subjects (all apparently nonstandard dialect speakers), only 26 were verbs. She reports, on the other hand, that 191 were spelling changes.[20] The data resulting from analysis of editing and composing protocols in the course of the current study support Perl's data and suggest that conventions peculiar to writing, like spelling and punctuation, are much easier to objectify than features which are common to speech and writing, particularly grammatical forms.

Because their natural language forms happen to be unacceptable in writing does not make it any easier for NSD speakers to see, much less to avoid them. It appears, not only from their performance on the dictation exercise and in the reading protocols, but also from their own introspective reports, that these forms are basic components of the language in which they *think*, and therefore in which they compose—and so in which they inevitably encode. As one subject remarked, "Whatever you think is just what you write down. And that's the way I was thinking" (when she wrote *was* instead of *were*). It follows that the more that she and all NSD speakers are urged to compose in standard English, the more they experience this area of overlap between the composing and encoding processes as an area of conflict. I will say more later about the pedagogical implications of this fact.

Hypercorrections (category 9) are almost as much of a problem for NSD speakers as incorrect whole-word verb forms. Examples in the dictation passage are "lisson [listen] to reasons" and "a friend of mines." Instances which occurred further on in the exercise are "gaved up," "droved off," and "doesn't seems." Subjects used two-part carbonless forms and had been instructed when finished to read over their transcriptions while listening to

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[20] Sondra Perl, "Five Writers Writing: Case Studies of the Composing Processes of Unskilled College Writers," Diss., New York University 1978, p. 320.

a replay of the tape and to make corrections as necessary on the second copy. Errors in whole-word verb forms almost always appeared on the original copy and were mostly left uncorrected, but hypercorrections were usually introduced as corrections on the second copy. Some of these errors (like "a friend of mines"), I discovered from the protocols, are carryovers from spoken language habits and so can be accounted for in the same way as category 10 errors. But when I asked subjects to explain hypercorrections that they did not use in speech, they only occasionally were able to do so in terms of an understandable misapplication of the rules of standard English (as in constructions like "it makes her looks better"). Much more often subjects expressed only a vague fear that the form they had originally written wasn't quite right. As I looked at some of these timid emendations, added in an uncertain hand, I felt, regretfully, that these writers related to the written language as to Simon Legree. But in certain cases, these hypercorrect forms, often from the same writer, seemed to be confidently written and completely spontaneous, such as, typically, a -d or -s on the infinitive form. I never heard this hypercorrection uttered in conversation, but it did turn up on several reading protocols. In other words, this hypercorrect form had apparently become an established part of some subjects' formal usage in reading and writing.

For this group of writers, multiple hypercorrect forms may be the clearest indicators both of their struggle to resolve the conflict between their spoken language and the one they're trying to write, as well as of the linguistic insecurity which grips them as soon as they pick up a pen. Over the years when they should and could be growing in literacy skills, this insecurity apparently becomes for many a generalized malaise which affects every aspect of their experience as writers, and, unfortunately, their overall self-image as learners. As one of them mourned, "There's a root word and a ending to it, basically, and if I connect these two.... I can understand it while I'm doing it, but then I put the book down and that's it.... A paper just terrifies me."

In respect to omitted suffixes (category 8), researchers have noted their occurrence in the writing of both speech groups. This study found that they occurred about five times more frequently in the writing of the NSD group. However, this was a frequent error for SD speakers as well. Why should an SD speaker make such an error? As the transcription composite shows, many SD speakers omitted the suffix on the participial form *frighten(ed)*; and later in the exercise some SD speakers dropped the ending on the past-tense verbs *jump*, *look*, *pack*, and *ask*. Omissions like these sometimes suggest the influence of pronunciation patterns, where the -ed has been reduced, or assimilated to a following consonant. However, phonological structure or environment in no way explains dozens of other instances of omitted suffixes, including -ing omissions, which turned up in the SD group's own writing. One thing is clear: for the SD group missing inflections did not reflect underlying grammatical patterns. The literature on miscue analysis shows that when subjects read for meaning, their underlying grammatical patterns prevail in their oral performance, regardless of the forms, standard or nonstandard, which characterize the text. So

I relied on subjects' reading protocols to reveal such grammar-based patterns. If the forms used in writing matched oral patterns (for example, if a subject wrote "he walk" and then read it aloud as "he walk"), I could be reasonably sure that the error was grammar-based. However, when SD speakers would read their writing aloud, they would consistently pronounce endings which they had omitted on the page. Under these circumstances, some other influence must be at work producing the error, perhaps weakness in perceptual skills, for example, or Whiteman's "non-dialect-specific tendency to omit inflectional endings."

The fact that dialect manifestly does not seem to account for SD speakers' omission of inflectional endings means that we cannot assume that dialect will always explain their omission by NSD speakers. For one thing, they make many of the same types of nonlinguistic errors as the SD group, like omitted *-ings*. More important, I found that I could not dependably extrapolate from a generalized impression of a subject's language patterns to specific errors in her writing. Neither did the quantity of NSD forms in speech reliably predict the quantity which characterized the speaker's writing, for a subject often added endings in speech which he omitted in writing, and *vice versa*. Moreover, the pattern of these discrepancies differed with different NSD speakers.

Analysis of subjects' reading and editing protocols suggests that more than half of my NSD subjects' missing *-ed* suffixes in writing reflect their language patterns (with wide variance from subject to subject), whereas missing *-ed* inflections in the writing of SD speakers are unrelated to spoken forms, except for an occasional truncated participle or a finite verb ending in a consonant cluster as in the verb *asked.* The *-s* endings seem to be a much less separable inflection than *-ed* endings for SD speakers, since they much less seldom omitted them, or if they did, rarely failed to correct them in editing. The same, actually, seems to be true for the NSD speakers; they omitted the *-s* less often than the *-ed* inflections, and when they did, the omission appeared to be almost always a reflection of their individual speech patterns. The most common omissions in writing for both groups in order of diminishing frequency were the *-ed* on participles, the *-ed* on past tense verbs, *-s* endings on present tense verbs, and *-s* endings on nouns.

Too few errors occurred in category 7 (omitted words) to learn much about it. But it is interesting to note that the larger number of words omitted by NSD speakers, in comparison to SD, on the dictation exercise is accounted for mostly by omitted copulae, a dominant feature of Black English Vernacular. This outcome suggests that this category should be divided into two categories in future studies.

"Wrong words" (error category 6) mark the frontier of the domain of the print code, the written language in its learned and visual aspect. Although I had hypothesized that the number of errors in this category would be equal for both groups, the NSD group made more "wrong word" errors than the SD group. Nevertheless, after close examination of specific errors committed in this category, I concluded that both groups made them for the same reason. This is clearly the case for homophones like

your/you're, or near homophones like *than/then*.[21] Since these pairs of words are pronounced alike or almost alike by all native speakers, regardless of dialect differences, writers must confuse them for reasons that are equally relevant to both speech groups in my study.

How then to account for the difference in quantity of errors in category 6? Here we must examine one sub-category of wrong words which raises thorny questions, questions which must be clarified at this point because failure to do so in the past has resulted in continuing confusion about the whole issue of dialect influence on writing.[22] This sub-category is composed of errors like *when* for *went*, *cause* for *cost*, and *mines* for *minds*, which some error-analysts attribute to dialect differences.[23] These errors may indeed be dialect-related inasmuch as there is a tendency in nonstandard dialects like BEV to reduce final consonant clusters, producing many more homonyms or near-homonyms in nonstandard spoken language than exist in standard dialects. But we cannot infer from that fact that dialect differences are the root cause of any category 6 errors. Reliance on sound/letter correspondences tricks all speakers into "wrong word" errors, SD and NSD alike. But it is important to note that these are of an entirely different order from the errors produced by the grammatical influence of NSD. Phonologically influenced error is common when children are learning to write. When an NSD-speaking child writes *mouf* for *mouth* and an SD-speaking child writes *hafto* for *have to*, we have two manifestations of the same phenomenon. These errors underscore the differences between the sounds of lexical items in speech and their representation in writing, differences which all learners must cope with regardless of differences in their dialects. And both errors are susceptible to the same remedy: mastery of the print-code equivalents for these spoken words. On the other hand, if one child writes *they hafto* and another writes *she have to*, we are dealing with errors which are traceable to different sources—one to the sounds of speech and the other to underlying grammatical patterns; one to erroneous symbolization of language (a print-code error), the other to the use of an alternate grammatical form correctly symbolized.

Research on spelling has shown that the influence of the sounds of speech on error for both SD and NSD speakers tends to diminish radically as young learners become more literate, but not so the grammatical influence of NSD. For example, errors like *nes* for *nest* occur much less often among sixth graders than among second graders, but BEV-speaking

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[21] For a brilliant commentary by one of the few students of the grapholect on this feature of written English and the problem it creates for writers, see Henry Bradley, "On the Relations between Spoken and Written Language, with Special Reference to English," in *Proceedings of the British Academy*, 1913-1914 (London: Oxford University Press, 1915).

[22] See in particular Hartwell, pp. 101-118, and Gary N. Underwood, "Bidialectal Freshman Handbooks—The Next Flim-Flam," *The Florida FL Reporter*, 12 (Spring/Fall 1974), 45-48.

[23] See James L. Funkhouser, "Black English: From Speech to Writing," Diss. (St. Louis University 1976).

sixth graders, unlike their SD-speaking counterparts, continue to write the uninflected form *nest* for the inflected form *nests*.[24] That is, as children gain experience with and control over the print code, phonetic spellings tend to decrease rapidly, whereas the stronger persistence of uninflected forms reflects the overriding influence of much deeper grammatical habits.

In fact, among my NSD speakers the direct encoding of distinctive pronunciations to sound/letter correspondence which results in misspellings like *nes* for *nest* was rare. Much more common were so-called wrong words reflecting the *dual* influence of distinctive pronunciation patterns and of the print code *interacting* to produce errors like *hole* (but never *hol*) for *hold*.[25] This phenomenon accounts for the fact that the NSD speakers as a group made more errors in category 6 (wrong words, including homophones) than did SD speakers. I do not believe that the NSD group overall had weaker control of the print code; indeed, NSD speakers in my sample spelled other kinds of words somewhat more correctly in their own writing than the SD group. But, probably because their pronunciation patterns were more at variance with the sound/letter correspondences of many common English spellings, a few BEV-speaking subjects made an excessively large number of "wrong word" errors, far more than did equally weak encoders in the SD group, and drove up the group error rate in this category. Only subjects with very high error rates made many of these phonologically based errors: To the extent that an NSD-speaking subject was conversant with the print code (as indicated, for example, by her control over other spelling and writing conventions), to that extent she did not tend to make errors in this category. Her control of the print code, however, bore no relationship to the number of grammar-based errors she made. In sum, phonologically based errors were observed to be in proportion to other print-code errors and diminished with increased literacy, but grammar-based errors (categories 8-10) persisted in the writing of NSD speakers who otherwise had largely achieved control over the code.

With this apparent exception noted, errors in writing conventions, spelling, and wrong words (categories 4-6), along with most of the errors in omitted words (7), and some of those in omitted suffixes (8), are presumably print-code territory where errors should be attributed to some failure to control the visual code rather than to the overriding influence of acquired language habits.

In studying their shared difficulties with the print code, I tested individual subjects in both groups on the norms which they most frequently

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[24] Patrick Groff, "Children's Spelling of Features of BE," *Research in the Teaching of English*, 12 (1978), 21-28; see also Bruce Cronnell, "Black English and Spelling," *Research in the Teaching of English*, 13 (1979), 81-90.

[25] Although errors like these, I found, usually reflect the writer's pronunciation patterns, there seem to be occasional exceptions indicating that an error of this kind is not necessarily phonologically based (note *when* for *went* in the SD speakers' transcription). Subjects in both groups pronounced some of the final consonants which they omitted in writing. See Bartholomae, p. 264, on this phenomenon.

violated. I found, for a few individuals, that ignorance of these norms accounted for most of their errors. When these subjects read their own writing and texts produced by other basic writers, I found that they were able to pick out almost all the errors that they knew how to correct. If they passed over an error, it was because they did not know that it was an error. The opposite, however, was true of other individuals. Despite exhortations to read for correctness, they read past their errors, even when they understood the "rule" in question. As they read aloud, these subjects supplied missing endings, even missing words, stumbled over only the most outrageous misspellings, and showed no awareness of the differences between their oral performance and the texts before them.

For the majority of the subjects, however, print-code errors seemed to stem from both sources: ignorance of the rule in some cases, inability to detect errors in context in other cases. But problems of perception were well in the ascendancy over ignorance. Most of my subjects were aware of the difficulty they had in finding their errors but were unable to make the shift from the role of writer, already in possession of the meaning intended by the symbols on the page, to that of reader, getting meaning not from their heads but from those symbols. One student was able to explain lucidly what was demanded by this shift of perception even though he was not often able to meet these demands:

> In my head I was saying "bringing up my son," but when I wrote it down I wrote *bring*, b-r-i-n-g. But then when I went over it I still be saying what the thought was in my mind, 'I was bringing up my son.' I read *bringing* but it wasn't on the paper.... But if I put what I'm writing down, and walk away somewhere and come back five minutes later, and pick it up and read it again, I can find my mistakes.... Because by that time, what I've written is out of my mind, and then I can come back—it's like I'm a new person reading it over again. Then I can say comma missing there, period here.

Reasoning from behavioral clues, I have tentatively concluded that the difficulty which this young man and most basic writers have in trying to shift their attention from meaning to code may be the key to the finding that quantity of error and level of reading comprehension do not correlate for these writers. Proficient writers, as they read a text, give *focal* attention to meaning, but characterstically reserve a certain amount of *subsidiary* attention for the code (to borrow Polanyi's useful terminology[26]). Typographical errors in the text catch their eye even when they're preoccupied with meaning and the code is of no concern to them whatsoever. In editing, they easily reverse the emphasis. Basic writers, in contrast, seem to read almost exclusively for meaning and objectify the code with difficulty. To read at all, of course, they must perceive the code, or at least as much of it as they need to perceive in order to grasp the meaning. These perceptions, however, operate below the level of conscious awareness, and

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[26] Polanyi, pp. 55-57.

support comprehension while failing to influence the more overt process of editing. Their habit of reading exclusively for meaning is reinforced when they read their own writing, since they already know what they mean without benefit of the written symbols.

While most of the subjects in my study manifested difficulties in objectifying the code, I found this problem to be particularly severe among the NSD speakers. I derived a strong clue to the reason for this from the anomalous writing behavior of three SD-speaking subjects; they omitted -ed endings in writing four times as frequently as the others in the SD group. It turned out that all three had spoken NSD as children. Conversations with these subjects and observation of their reading behavior suggested to me that in learning to read, most NSD-speaking children may form the habit of ignoring in particular those details of the code which, for them, are irrelevant and not especially helpful to comprehension. The habit of not only skipping over but even actively suppressing many details of the code as they read (at least insofar as these features are superfluous and even disruptive to comprehension) may make the acquisition of perceptual skills even harder for NSD speakers than for SD. For it has been observed that the habit of inaccurate reading, that is, on the level of *form*, may affect the ability to write with formal accuracy.[27] And even among those whose acquired nonstandard grammatical patterns are no longer perceptible in speech, like these three subjects, the habit of decoding with little attention to detail apparently persists. While this habit does not affect reading comprehension, it is a serious liability in writing, especially in editing, which is essentially a process of reading one's own writing.

In yet another way, I observed, the distance between their dialect forms and the forms demanded by the code affected the visual discrimination skills of my NSD-speaking subjects. While SD speakers derived positive if not consistently reliable support from their spoken language in remedying inadvertent lacunae and inaccuracies in their writing, NSD speakers groped for this support in editing and were frustrated by its absence, or worse, by the error traps into which reliance on speech patterns led them. Some had apparently compensated for this lack by developing a strong visual sense of how words appear on the page, unconnected to the way they sound, but the majority had not. In any case, I observed that the NSD speakers in editing seemed not to connect the sounds of words as they pronounced them to their visual configurations as readily as SD speakers did. The two senses, sight and hearing, were less coordinated as they searched for errors during oral editing sessions.[28]

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[27] See Edmund H. Henderson, *Learning to Read and Spell* (DeKalb, IL: Northern University Press, 1981), pp. 7-8.

[28] For an effort to study this apparent handicap for NSD speakers in the acquisition of literacy, see Sylvia Farnham-Diggory, "How to Study Reading: Some Language Information Processing Ways," in *The Acquisition of Reading*, ed. Frank B. Murray and John J. Pikulski (Baltimore: University Park Press, 1978), pp. 61-89.

In respect to this complex problem, the remarks of the NSD speakers who had worked on the self-instructional exercises in the COMP-LAB were illuminating. All were in agreement that it was an immense help to *hear* on the audiotapes, a component of the program, the inflectional endings not pronounced in their dialect in order to *visualize* these lexical items with their endings when they had to write them. They did not necessarily feel the need to use these pronunciations in their own speech. Instead, as one of them put it, "When I was writing that word [*task*] with a -*s* on it, I just had to hear the sound of it in my *head.*"

An alternate, or perhaps concomitant explanation for the editing problems I've been discussing was brought to my attention by some of the NSD speakers who were working hard to learn how to "speak right," as they put it. In conversation they had succeeded in avoiding some of their acquired nonstandard forms, but reported that, when they were involved in composing, they tended to "slip back" and use "bad English" in their writing. This happened, I speculated, because this usage was still part of their inner speech patterns, that is, the language in which the mind speaks to itself. One, for example, had almost beaten her difficulty with the *was/were* distinction, and used the "right word" fairly spontaneously in speech. When she came across the phrase "there was several patients" in one of her own reports, she said, "There I go again. I don't say that no more. It's out of my past. That only happens when I'm thinking about what I'm trying to write." This kind of remark was so common among my subjects, including those mentioned above whose speech patterns are now fully standard, that I've tentatively concluded that the influence of NSD is even stronger and more lasting on inner speech than it is on spoken language patterns. Inner speech habits, then, may reinforce faulty perceptual habits to produce errors in the writing of those whose present spoken language would suggest little influence from NSD in respect to specific errors. In communing with themselves, particularly in the difficult act of composing, they tend to revert to their earliest acquired language patterns, those with which they feel most comfortable, and which effectively reduce the tension created by writing.

I'll conclude these speculations with comments on another quite different problem adding to the NSD speakers' insecurity about writing. This stumbling block to growth in literacy has not, to my knowledge, been explored at all, perhaps because researchers rarely follow handicapped writers into academic settings beyond the remedial classroom. In any case, it's commonly asserted that nonstandard forms don't impede the comprehensibility of writing. And for most of the writing produced in the basic writing classroom, this is certainly true. However, to communicate intelligibly in the more complex and tightly organized sentence patterns characterstic of mature prose, it is necessary to control the inflections of standard English. My NSD-speaking subjects had gained receptive control over these constructions in the reading they had to do for their college course work, but some were at a loss when they had to produce them in writing for college courses or on the job. One of them was as puzzled as I was when she tried to read this sentence aloud from her own notes on a

mental patient, "The doctor she assign to feel this client is highly suicidal." But when I deciphered her meaning and wrote in the missing letters as follows, "The doctor she's assigned to feels this client is highly suicidal," the writer too saw what she had meant, and understood her errors (with a groan). She remarked, "That's what happens. That's why I get F's on my papers. My teachers don't know what I'm trying to say." It's no wonder that profoundly insecure but intelligent writers like this young woman often deliberately avoid complex constructions, and, in consequence, simplify their ideas, projecting the impression in their writing of immature, childlike thinkers.

Thus, in a variety of ways, nonstandard dialect appears to extend its influence beyond simply introducing errors rooted in speech patterns into writing, actually creating problems of perception and insecurity which make mastery of the print code harder for them than it is for SD speakers. This indirect influence may account for the larger amounts of print-code error in the writing of the NSD group as compared with the SD.

SUMMARY OF INSIGHTS FROM CASE STUDIES

My case-study observations have led me to two conclusions about sources of error as they apply generally to adult basic writers, regardless of speech patterns: (1) Weaknesses in perceptual skills prevent the writers' detection of many of their own omitted inflectional suffixes and other errors in writing. Such weaknesses may even be the most comprehensive single source of encoding error for these writers. (2) Phonological influence (the influence of the sounds of speech, not of the grammatical structures of language) operates for both standard and nonstandard dialect speakers, can be much more readily remedied by reading and writing practice than NSD grammatical influence is likely to be, and is strongly symptomatic of inadequate mastery of the print code.

The findings of my case-study analysis confirm my general hypothesis that there are peculiarly linguistic (as distinct from sociological and psychological) reasons for the severe problems with the written language almost universally experienced by nonstandard dialect speakers. Specifically, in this connection, I have concluded that: (1) Nonstandard whole-word verb forms, hypercorrections, and, more often than not, omitted suffixes have deep roots in underlying language patterns, and writers who produce these forms cannot detect or correct them nearly so easily as they can detect and correct errors in the learned visual conventions of the print code. (2) Because NSD speakers must write a language which is in certain ways in conflict with the language they speak, they are more subject than SD speakers to an insecurity which can have a highly adverse effect on their development as learners and writers. (3) Although the distinctive pronunciation patterns of Black English Vernacular are a weaker source of error than grammatical influence, and yield more readily to the counter-influence of increased mastery of the print code, nevertheless phonological influence is an added handicap for BEV-speakers in learning the written language. (4) For a variety of reasons traceable to nonstandard speech patterns, NSD speakers do not develop the perceptual skills necessary to

control some aspects of the written code at the same pace that SD speakers generally do.

IMPLICATIONS FOR FURTHER RESEARCH

Additional intensive case-study investigations would be useful to gain a more precise understanding of the sources of error this study has defined and explored, and to test the extent to which its findings apply to younger learners. Also, further empirical research along the lines initiated by this study—using a similar design but a larger sample—is clearly needed to confirm and refine the basic conclusions drawn from the quantitative measures. An important component of this effort would be to develop and validate instruments to measure adults' cognitive and composing abilities.

Beyond sources of error in writing, this study points up the need to reopen the long and currently inconclusive controversy over whether or not NSD interferes with reading.[29] For it is certainly anomalous that when cognitive skills, composing ability, motivation to succeed academically, personal maturity, and level of formal schooling are similar, NSD speakers fail to demonstrate the same level of reading proficiency as SD speakers. My speculations about NSD speakers' reading behavior and its possible impact on encoding reinforce the suggestion that continued research in this area is needed.

This study suggests possible new directions in the diagnosis of error. Further research refining the diagnostic instruments used—the error category list, the dictation exercise, and reading and editing protocols— might facilitate their use by classroom teachers as a basis for selecting appropriate pedagogies.

Finally, the implications of this study for teaching basic writing must be examined. Different teaching strategies from those commonly advocated are surely indicated in the light of its major conclusions. Its implications for basic writing courses which concentrate on reading/writing immersion are most obvious. If level of reading comprehension does not correlate with quantity of error in writing, then it is hardly likely that improving students' reading proficiency (helpful though this may be in developing their composing skills) will reduce their error in writing. Nor will writing practice for improved fluency, in and of itself, have any impact (except possibly a negative one) on what this study identifies as an overwhelming problem for error-prone writers, the inability to perceive errors on the page. To address this particular difficulty, instructional activities designed to develop perceptual skills in transcribing and editing are of paramount importance to basic writers.

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[29] For an excellent summation of the status of the issue, which has moved forward little in the intervening decade, see Joan C. Baratz, "The Relationship of Black English to Reading: A Review of Research," in *Language Differences: Do They Interfere?*, ed. James L. Laffey and Roger Shuy (Newark, DE: International Reading Association, 1973), pp. 101-113.

The findings also clearly suggest that grammar instruction cannot be dismissed (as it so often is) as useless. If the influence of nonstandard dialect on writing is not less than but even greater than has been assumed, then direct instruction in the grammar of standard written English is essential for NSD speakers. (In this matter, their needs may be quite different from those of SD speakers, for whom grammar instruction is perhaps a waste of time.) *Not* to teach grammar to NSD speakers is inadvisable, but of course how to teach it without derailing the composing process is a knotty problem. For if composing takes place naturally and spontaneously in the language of one's nurture, a language which for NSD speakers is in conflict with the norms of the written code, then stress on these norms is likely to exacerbate these students' conflicts between composing and encoding.

As many have suggested, the way out of this dilemma is to teach NSD-speaking students (and indeed all basic writing students) to treat composing and editing for correctness as two completely different stages in the writing process, postponing attention to grammar and other aspects of encoding until they have finished drafting. However, simple exhortation to do this does not show basic writers *how* to do this, nor does writing theorists' lamentation over "premature preoccupation with matters of correctness" show teachers *how* to show basic writers how to do this. For starts, teachers must begin to underscore the separation of encoding from composing in their response to student writings. For example, they can distinguish between remarks on composing problems and those on encoding problems, instead of confronting students with a jumble of AWK, AGR, REP, DEV, and CAP, shuttling them back and forth between two very different kinds of writing processes. But even more important, the separation of encoding from composing activities in *instruction* must become a major concern in research on basic writing pedagogy.[30]

Last, my findings invite reconsideration of many exit tests in writing courses. NSD speakers are severely handicapped by any test that does not recognize their need for adequate time to edit their writing for grammatical error. Most testmakers and indeed most members of our profession find it easier to recognize the special needs of ESL students than those of nonstandard-dialect-speakers. My hope is that this study will contribute something toward a better understanding of those needs.

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[30] The most significant advances in developing encoding skills apart from composing have been achieved on the sentence level by the research on sentence-combining (although such research has not been formulated in those terms by most of its proponents); for work on the level of morphological and print-code error, see Mary Epes, Carolyn Kirkpatrick, and Michael Southwell, "The COMP-LAB Project: An Experimental Basic Writing Course," *Journal of Basic Writing*, 2 (Spring/Summer 1979), 19-37.

APPENDIX A

Dictation Exercise

NOTE: Slashes indicate a signal to stop the tape and write what has been heard.

Some people have strange fears./ For example,/ after a shower of meteors passed over New Mexico,/ a woman in Vermont/ refused to leave her house for five years./ A man who has a violent fear of lightning/ swears that he's going to find a place to live/ where rain never falls./ Several women/ who live in an ideal environment in Arizona/ are so frightened of germs/ that they recently bought surgical masks/ which they wear night and day,/ whether at home or at work./ Even though people with these phobias/ are often quite intelligent,/ they're too terrified to listen to reason./ It's no use telling them/ that they're being silly./ Their minds are paralyzed by fear,/ and they just can't hear what you're saying./

On the other hand,/ some people's fears are based on personal experience./ A friend of mine is frightened of elevators,/ but she certainly has a good reason./ Whenever she gets on a crowded elevator,/ this shocking memory always comes back to haunt her./ It all began in Georgia/ where my friend usually spends her vacation/ with her cousins./ Once she went to stay with them/ in an old mansion/ which they had leased for the summer./ The first night she slept there,/ around midnight/ there were strange noises under her window./ She jumped up and looked out./ In the moonlight,/ she saw a coach and four horses./ A coachman with a big hooked nose/ said in a harsh voice,/ "There's room for one more."/ And then he cracked his whip/ and drove off./ My friend tried to laugh it off/ as a bad dream,/ but the same thing happened the next two nights./ Finally, she gave up,/ packed all her bags,/ and flew home to Chicago./ She was so worried that she went straight to a psychiatrist./ As she rode up in the elevator,/ she asked herself/ if she was losing her mind./ But the psychiatrist told her/ that she was taking the whole thing too seriously./ As she walked back toward the elevator,/ she began to feel a lot better./ When the doors opened,/ the operator, who had a big hooked nose, announced,/ "There is room for one more."/ My friend stepped back out of the elevator in terror,/ and, as the doors shut in her face,/ she heard screams./ The elevator had plunged straight down forty floors./

So it doesn't seem at all strange/ that my friend begins to tremble/ every time an elevator stops/ and someone says,/ "There is room for one more!"

Error Category List

1. ERRORS IN SENTENCE PUNCTUATION: misused or omitted periods, commas, and semicolons resulting in run-together sentences, comma splices, and sentence fragments.

2. ERRORS IN PRONOUNS AND ADVERBS: incorrect forms (e.g.: *Her* and *me* are just alike; They treat *theirselfs* well; She goes too *quick* for me).

3. SUBJECT-VERB AGREEMENT ERRORS INVOLVING INTERVENING WORDS (e.g.: One of the keys *were* missing).

4. ERRORS IN WRITING CONVENTIONS: (1) Failure to indent paragraphs; blank space on a line not followed by paragraph indentation on the next line (2) Writing two words or more as one, or one word as two or more (e.g.: *alot, never the less*) (3) Failure to use capital letters appropriately (e.g.: *new york city*, my *High School*) (4) A comma used in a manifestly inappropriate way (e.g.: Too many people, are out of work) (5) Omission or misuse of apostrophes in contractions or possessive forms (e.g.: That *cant* be *her's.*) (6) Misuse of quotation marks or omission of quotation marks in a context that demands them (e.g.: He yelled stop "*thief*).

5. SPELLING ERRORS: word spellings which are not listed in a dictionary (e.g.: *thier, enviorment*).

6. "WRONG WORDS": confusion in the use of common homophones (e.g.: *their/there/they're*); or in the use of words which are similarly pronounced or look alike in print (e.g.: *than/then, when/went, quit/quite, since/sense*). These words are listed in the dictionary but have meanings obviously different from the one intended by the writer.

7. OMITTED WORDS, including omitted copulae (e.g.: She reached into her and took out five dollars; He working).

8. SUFFIXES OMITTED where they belong: *-s, -es, -d, -ed, -t* and *-ing* suffixes missing from nouns, verbs, and participial forms (e.g.: The *follow* is about a friend of mine who got *marry* two *year* ago; Now she *say* she *hate* her *husband* mother; The key *belong* to me). Also included in this category are these two common errors: *sometime* for sometimes, and *alway* for always. Note: Errors like "One of the keys *belong* to me" which may appear to belong in this category have already been counted in #2 above.

9. SUFFIXES ADDED where they don't belong (e.g.: The *childrens* didn't *seemed upsetted* even though the money they had *losted* was *mines*). Note: Errors are counted in this category only if the word is correct when the inappropriate suffix is removed (e.g.: "Yesterday she *droved*" belongs here, but "Yesterday she *drived*" belongs in category #10 below).

10. WHOLE-WORD VERB FORMS used in a way which is plainly wrong in standard written English. These are forms which are not inflected by adding a suffix like those in #8 (e.g.: The keys *was* missing; She *don't* care; He *be* working; She *seen* the doctor yesterday; Last year she *run* away twice).