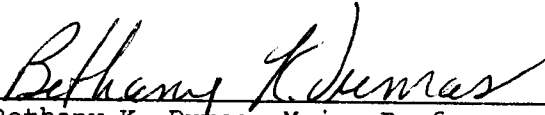
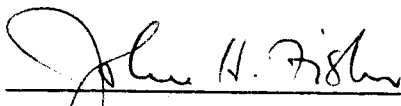
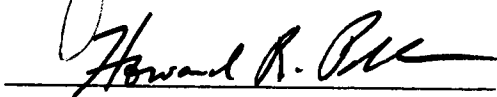
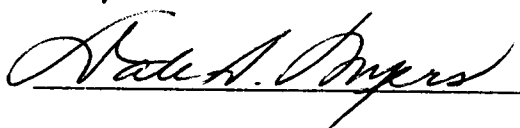


To the Graduate Council:

I am submitting herewith a dissertation written by Guy H. Bailey III entitled "Folk Speech on the Cumberland Plateau: A Phonological Analysis." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in English.


Bethany K. Dumas, Major Professor

We have read this dissertation
and recommend its acceptance:

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FOLK SPEECH ON THE CUMBERLAND PLATEAU:
A PHONOLOGICAL ANALYSIS

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Guy H. Bailey III

August 1979

1398025

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ABSTRACT

The purpose of this dissertation is to provide a baseline phonology of the folk speech of the northern Cumberland Plateau area in Tennessee. The northern part of the Cumberland Plateau (Campbell, Claiborne, Cumberland, Fentress, Morgan, and Scott Counties) is a particularly fruitful area for linguistic study because, since its initial settlement, the region has remained a distinct socio-cultural unit. Settled primarily by Englishmen, Scotch-Irish, and Germans, the northern part of the plateau has always been relatively isolated, relatively self-sufficient, and poor. Furthermore, during the last thirty years the population of the area has steadily declined because of outmigration. The northern part of the Cumberland Plateau, then, provides a situation in which one can study a variety of English which has developed with a minimum of outside influence.

The phonology is based on field records and protocols made for the Linguistic Atlas of the Gulf States, and the study is limited to folk speech--the speech of those who are classified Type IA in American linguistic geography. The phonology outlines the segmental phonemic structure of the area, describes the processes which delete, add, substitute, and rearrange phonemes, and, whenever possible, offers phonetic, contextual or historical explanations.

The folk speech of the northern part of the Cumberland Plateau is essentially a westward extension of the South Midland dialect. There are, however, several features which seem to be especially characteristic:

1. /a/ and /æ/ serve as checked analogues of the free diphthongs /ai/ and /au/ respectively;

2. an excrement /t/ frequently follows word-final continuants;
3. an intrusive /r/ frequently appears not only in wash but also

in ought to;

4. final obstruents are often unvoiced;
5. /au/ is usually realized as [ʌʊ] or [ʌo];
6. /ʌ/ is sometimes realized as [ʌ^h] before velars and nasals;
7. /ai/ is often monophthongal before voiceless as well as voiced obstruents.

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CHAPTER I

INTRODUCTION

1.1 Statement of Purpose

The purpose of this study is to provide a baseline phonology of the folk speech of the northern Cumberland Plateau area in Tennessee.¹ Given that aim, the study has been limited to word-level, segmental phonology,² and out of necessity it is to some extent inventorial. The goal here, then, is to outline the segmental phonemic structure of the speech of the area, to describe the processes which delete, add, substitute, and rearrange phonemes, and to offer phonetic, contextual, or historical explanations for those processes. The data from

¹ A baseline phonology cannot, of course, solve every phonological problem which might possibly arise; rather, it provides a phonological frame of reference, a baseline for detailed historical and sociolinguistic study. Baseline phonological study assumes no prior work in the area, and it logically precedes detailed quantitative study of selected features. For a discussion of baseline or "inventorial" research, see Lee Pederson, "Toward a Description of Southern Speech," in Papers in Language Variation: SAMLA/ADS Collection, ed. David L. Shores and Carole P. Hines (Univ., Al.: Univ. of Alabama Press, 1977), pp. 25-31. For a detailed quantitative study which makes use of such research, see William Labov, "The Social Motivation of a Sound Change," Word, 19(1963), pp. 273-309.

² Noam Chomsky and Morris Halle, in The Sound Pattern of English (New York: Harper and Row, 1968), pp. 163-235, define word-level phonology as non-cyclical phonology: word-level rules do not "reapply at successive stages of the transformational cycle. . . ." However, Stampe notes that processes "seem to apply whenever the configurations they would eliminate arise." See David Stampe, "How I Spent My Summer Vacation," Diss. Univ. of Chicago 1972, pp. 56-57 and section 1.7 below.

which phonological generalizations are drawn are the relevant field records and protocols made for the Linguistic Atlas of the Gulf States.³

Folk speech is defined here in the same way that it was first defined by Kurath: it is the speech of those who have "little formal education, little reading, and restricted social contacts."⁴ In other words, it is the speech of those who are classified Type IA in American linguistic geography.⁵

For the purposes of this study, the northern Cumberland Plateau area (see Figure 1) includes the following Tennessee counties: Campbell, Claiborne, Cumberland, Fentress, Morgan, and Scott. Although the plateau itself extends into parts of a number of other Tennessee counties (and in fact into some Alabama and Kentucky counties), the six counties mentioned above form a historical, economic, and socio-cultural as well as a physiographic unit. As a result, these counties are likely to form a linguistic unit too, one which will allow for the

³ "The LAGS FIELD RECORD is the tape-recorded interview, a conversation between the field worker and the informant, based on the work sheets. As such, it is by definition of the facts a record made in the field. All notations in any of the four graphic systems are analogues, derived from that record. What is called a FIELD RECORD in earlier American atlas projects is called a PROTOCOL in LAGS." Lee Pederson, A Compositional Guide to the LAGS Project (Atlanta, Ga.: Emory University, 1977), p. 9.

⁴ Hans Kurath et al., Handbook of the Linguistic Geography of New England (Providence, R.I.: Brown University Press, 1939), p. 44.

⁵ Classification procedures have been refined for the LAGS project. In that project, LANE Types I-III correspond solely to educational level; Types A and B correspond to social experience. Additional designations have been introduced for the identification of social class and ethnic group. See Pederson, A Compositional Guide to the LAGS Project, pp. 6-8. Because of its narrow scope, this study does not really do justice to the refined classification procedures.

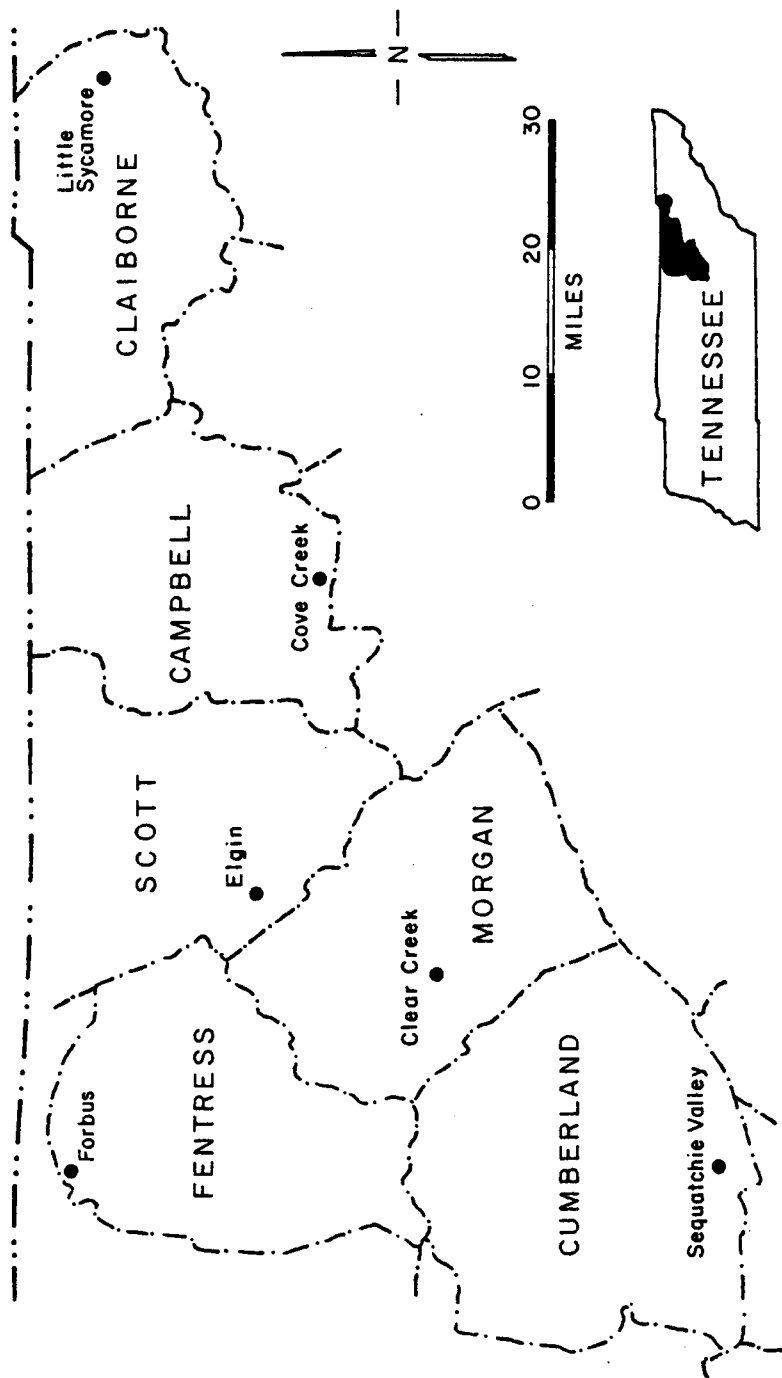


Figure 1. The Northern Part of the Cumberland Plateau.

construction of a phonology with minimal reference to regional and social variants.

1.2 Rationale and Previous Research

The rationale for a baseline phonology of the folk speech of the Northern Cumberland Plateau area of Tennessee lies in the intrinsic importance of Tennessee in general and the Cumberland Plateau in particular for dialect study in the American South and in the state of research in the area. First, Tennessee is the oldest area of secondary settlement in the South, and in that state one finds the earliest westward extension (and of course possible modification) of dialects spoken in the South Atlantic coastal states. Because of the peculiar lines of migration into Tennessee (i.e., down from Pennsylvania as well as across from North Carolina and Virginia), the odd size and shape of the state, and its subsequent social and cultural history, one might expect considerable linguistic variation within the state.⁶ Secondly, Tennessee was a primary source of population for the other Southern states. Large numbers of Tennesseans carried their speech patterns with them into Alabama, Mississippi, Florida, Arkansas, Texas, and Missouri.

The Cumberland Plateau, like the rest of Tennessee, was both a source and feeder area. Unlike the rest of Tennessee, however, the Cumberland Plateau, since its initial settlement, has remained

⁶ Raven I. McDavid, Jr., "What Happens In Tennessee," in Dialectology: Problems and Perspectives, ed. Lorraine Hall Burghardt (Knoxville, Tn.: Univ. of Tennessee Press, 1971), pp. 119-129.

relatively isolated. Outmigration has far exceeded immigration, educational and economic levels have always been proportionately low, and only recently have many parts of the area been readily accessible.⁷ In short, the Cumberland Plateau has the socio-cultural characteristics of a relic area and hence is of paramount importance in the study of the history of American English in the South.

In spite of the pivotal position of both Tennessee and the Cumberland Plateau in the development of American English in the South, baseline phonological, grammatical, and even lexical information is not yet available for either area. The early interpretive works of American linguistic geography do not cover Tennessee,⁸ and while fieldwork for both the Linguistic Atlas of the Gulf States and the Dictionary of American Regional English has been completed, neither the data nor interpretations of the data have been published.⁹ Although James B. McMillan's bibliography¹⁰ lists a large number of items dealing with

⁷ For example, the area had almost no railroad mileage until the twentieth century, and Highway 62, a principal state highway through Morgan County, was not paved until this decade.

⁸ Those works include E. Bagby Atwood, A Survey of Verb Forms in the Eastern United States (Ann Arbor, Michigan: Univ. of Michigan Press, 1953); Hans Kurath, A Word Geography of the Eastern United States (Ann Arbor, Michigan: Univ. of Michigan Press, 1949); and Hans Kurath and Raven I. McDavid, Jr., The Pronunciation of English in the Atlantic States (Ann Arbor, Michigan: Univ. of Michigan Press, 1961).

⁹ Data from the LAGS project should be available in 1980, with interpretive volumes by 1990. With the publication of that material, a complete linguistic baseline will have been established.

¹⁰ Annotated Bibliography of Southern American English (Coral Gables, Florida: Univ. of Miami Press, 1972).

English in Tennessee, most of these are word lists,¹¹ studies of surviving archaisms,¹² folklore studies or linguistic studies made for folklore purposes,¹³ studies of naming practices,¹⁴ or proposals for

¹¹ E.g., Calvin S. Brown, "Tennessee," Dialect Notes, 4(1916), pp. 345-346; J. D. Bruce, "Terms from Tennessee," Dialect Notes, 4(1913), p. 58; Josiah H. Combs, "A Word List from the South," Dialect Notes, 5(1918), pp. 31-40; "A Word-List from the Southern Highlands," PADS, 2(1944), pp. 17-23; L. R. Dingus, "Appalachian Mountain Words," Dialect Notes, 5(1927), pp. 468-471; Rev. H. A. Edson and Edith M. Fairchild, "Tennessee Mountains" in "Word Lists," Dialect Notes, 1(1895), pp. 570-577; T. J. Farr, "The Language of the Tennessee Mountain Regions," AS, 14(1939), pp. 89-92; "Folk Speech of Middle Tennessee," AS, 11(1936), pp. 275-276; "More Tennessee Expressions," AS, 15(1940), pp. 446-448; Kelsie B. Harder, "The Baby's 'Dinnel'," AS, 32(1957), p. 158; "The Jake Leg," Tenn. Folklore Society Bulletin, 27(1961), pp. 45-47; "Musseling Terms from Tennessee," AS, 30(1955), pp. 74-76; "The Vocabulary of Hog-Killing," Tenn. Folklore Society Bulletin, 25(1959), pp. 111-115; "Vocabulary of Wagon Parts," Tenn. Folklore Society Bulletin, 28(1962), pp. 12-20; Horace Kephart, "A Word List from the Tennessee Mountains," Dialect Notes, 1(1895), pp. 370-377; Stuart Neitzel, "Tennessee Expressions," AS, 11(1936), p. 373; and Mary O. Pollard, "Terms from the Tennessee Mountains," Dialect Notes, 4(1915), pp. 242-243.

¹² E.g., Calvin S. Brown, "Dialectal Survivals from Chaucer," Dial, 22(1897), pp. 139-141; "Dialectal Survivals from Spenser," Dial, 16(1894), p. 40; "Dialectal Survivals in Tennessee," Modern Language Notes, 4(1889), pp. 205-299; "Other Dialectal Forms in Tennessee," PMLA, 6(1891), pp. 171-175; Josiah H. Combs, "Old, Early, and Elizabethan English in the Southern Mountains," Dialect Notes, 4(1916), pp. 283-297; and Floyd Watkins, "The Southern Mountaineers' Archaic English," Georgia Review, 3(1949), pp. 219-225.

¹³ E.g., Irene Bewley, "Picturesque Speech," Tenn. Folklore Society Bulletin, 9(1943), pp. 4-10; Frances Boshears, "Proverbial Comparisons from an East Tennessee County," Tenn. Folklore Society Bulletin, 20(1954), pp. 27-41; Paul M. Fink, Bits of Mountain Speech: Gathered Between 1910 and 1965 Along the Mountains Bordering North Carolina and Tennessee (Boone, N.C.: Appalachian Consortium Press, 1974); Herbert Halpert, "Some Wellerisms from Kentucky and Tennessee," Journal of American Folklore, 69(1956), pp. 115-122; Kelsie B. Harder, "Euphemistic Dilemmas in Tennessee," AS, 27(1952), pp. 156-157; "Jingle Lore of Pigtails, Pals, and Puppy Love," Tenn. Folklore Society Bulletin, 22(1956), pp. 1-9; "Let it go it," AS, 32(1957), p. 240; "The Mannary 'Weed'," AS, 28(1953), pp. 236-237; "Pert Nigh Almost: Folk Measurement," Tenn. Folklore Society Bulletin, 23(1957), pp. 6-12;

research projects.¹⁵ None of them provides systematic, baseline research. There are, in addition, general studies of English in Appalachia such as those by Berrey, Carpenter, and Wolfram and Christian, but these are either cursory and suggestive, rather than definitive,

"A 'Tub' of Corn," AS, 30(1955), pp. 76-77; Elmer Hinton, "Some More Examples of Southern Folk Idioms," Tenn. Folklore Society Bulletin, 27(1961), pp. 35-56; Ruth D. Mitchell, "A Study of Smoky Mountain Regional Speech as Used in Lanier's Tiger Lillies," Thesis Univ. of South Carolina 1963; Adeline Moffat, "The Mountaineer of Middle Tennessee," Journal of American Folklore, 4(1891), pp. 314-320; E. G. Rogers, "Some East Tennessee Figurative Exaggerations," Tenn. Folklore Society Bulletin, 19(1953), pp. 36-40; Raphy S. Walker, "A Mountaineer Looks at His Own Speech," Tenn. Folklore Society Bulletin, 5(1939), pp. 1-13; John F. West, "Dialect of the Southern Mountains," North Carolina Folklore, 14(1966), pp. 31-34; Hutson J. Westover, "Highland Language of the Cumberland Coal Country," Mountain Life and Work, 36 (Fall 1960), pp. 18-21; Cratis D. Williams, "The Content of Mountain Speech," Mountain Life and Work, 37 (Winter 1961), pp. 13-17; "Metaphor in Mountain Speech," Mountain Life and Work, 38 (Winter 1962), pp. 9 and 11-12; "Metaphor in Mountain Speech," Mountain Life and Work, 39 (Spring 1963), pp. 50-53; "Mountaineers Mind Their Manners," Mountain Life and Work, 38 (Summer 1962), pp. 19-25; Gordon Wilson, "Studying Folklore in a Small Region - V: Pronunciation," Tenn. Folklore Society Bulletin, 30(1964), pp. 119-126; "Studying Folklore in a Small Region - IV: Regional Words," Tenn. Folklore Society Bulletin, 29(1963), pp. 79-86; and "Studying Folklore in a Small Region: Some Folk Grammar," Tenn. Folklore Society Bulletin, 33(1967), pp. 27-35.

¹⁴ E.g., Paul M. Fink, "Some East Tennessee Place Names," Tenn. Folklore Society Bulletin, 7(1941), pp. 40-50; Paul M. Fink and Mylon H. Avery, "The Nomenclature of the Great Smoky Mountains," East Tenn. Historical Society Publications, 9(1937), pp. 53-64; George C. Grise, "Patterns of Child Naming in Tennessee During the Depression Years," Southern Folklore Quarterly, 23(1959), pp. 150-154; Kelsie B. Harder, "Rhyming Names in Tennessee," Southern Folklore Quarterly, 19(1955), pp. 101-103; A. W. McWhorter, "Classical Place Names in Tennessee," Word Study, 9(1933), pp. 7-8; James A. Still, "Christian Names in the Cumberlands," AS, 5(1930), pp. 306-307; and "Place Names in the Cumberland Mountains," AS, 4(1929), p. 113.

¹⁵ E.g., Bethany K. Dumas, "Research Needs in Tennessee English," in Shores and Hines, pp. 201-208; and "Suggestions for Investigating Tennessee English: A Sociolinguistic Approach to Dialect Study" (ERIC ED 097807). The Tennessee Language Survey has developed into the Southeastern Regional Survey. See Dumas and Bailey, in progress.

or deal with other areas of Appalachia.¹⁶ The only works, then, which are relevant to the present study are those by Gordon Wood, whose lexical study provides a preliminary delimitation of the dialect areas of the Gulf States,¹⁷ Joseph Hall, who outlines the pronunciation of

¹⁶ E.g., Lester B. Berrey, "Southern Mountain Dialect," AS, 15(1940), pp. 45-54; Carolyn Bolarsky, "Consistency of Spelling and Pronunciation Deviations in Appalachian Students," Modern Language Journal, 53(1969), pp. 347-350; George Foot Bond, "A Study of An Appalachian Dialect," Thesis Univ. of Florida 1939; Robert E. Callary, "Indications of Regular Sound Shifting in an Appalachian Dialect," Appalachian Journal, 1(1972), pp. 338-340; John C. Campbell, The Southern Highlander and His Homeland (New York: Russell Sage Foundation, 1921), pp. 144-146; Charles Carpenter, "Variations in Southern Mountain Dialect," AS, 8(1933), pp. 22-25; Maristan Chapman, "American Speech as Practiced in the Southern Highlands," Century, 117(1929), pp. 617-623; Josiah Combs, "The Language of the Southern Highlanders," PMLA, 41(1931), pp. 1302-1322; Alberta Harris, "Southern Mountain Dialect," Thesis Louisiana State Univ. 1948; Horace Kephart, Our Southern Highlanders (New York: Macmillan, 1922), pp. 350-378; H. L. Mencken, The American Language: An Inquiry into the Development of English in the United States, Supplement II (New York: Alfred H. Knopp, 1948), pp. 216-217; Rebecca W. Smith, "A Tennessean's Pronunciation in 1841," AS, 9(1934), pp. 262-263; C. K. Thomas, An Introduction to the Phonetics of American English, 2nd ed. (New York: The Ronald Press, 1958); Cratis D. Williams, "Mountain Speech," in Language and Culture: A Reader, ed. Patrick Gleason and Nancy Wakefield (Columbus, Ohio: Charles E. Merrill, 1968), pp. 151-160; "Prepositions in Mountain Speech," Mountain Life and Work, 40(Spring 1964), pp. 53-55; "The 'r' in Mountain Speech," Mountain Life and Work, 37(Spring 1961), pp. 5-8; "Rhythm and Melody in Mountain Speech," Mountain Life and Work, 37(Fall 1961), pp. 7-10; "Subtlety in Mountain Speech," Mountain Life and Work, 43(Spring 1967), pp. 14-16; "Verbs in Mountain Speech," Mountain Life and Work, 38(Spring 1962), pp. 15-19; "Vowels and Diphthongs in Mountain Speech," Mountain Life and Work, 37(Summer 1961), pp. 8-11; C. M. Wise, Applied Phonetics (Englewood Cliffs, N.J.: Prentice Hall, 1957); Walt Wolfram and Donna Christian, Sociolinguistic Variables in Appalachian Dialects, Unpub. NIE Final Report, Research Project No. NIE-G-74-0026; and Walt Wolfram and Donna Christian, Appalachian Speech (Arlington, VA.: Center for Applied Linguistics, 1976).

¹⁷ "Dialect Contours in the Southern States," AS, 38(1963), pp. 243-256; "A list of Words from Tennessee," PADS, 29(1958), pp. 3-18; "Heard in the South: Of Interest to Tennessee," Tenn. Folklore Society Bulletin, 23(1957), pp. 33-38; Vocabulary Change: A Study in Regional Words in Eight of the Southern States (Carbondale and Edwardsville, Ill.: Southern Illinois Univ. Press, 1971); "Word Distribution

English in the Great Smoky Mountains,¹⁸ C. K. Thomas, who provides a phonetic transcription from Knox County, Tennessee,¹⁹ Tracy R. Miller, who treats phonological, morphological and lexical features of Unicoi County, Tennessee,²⁰ M. Jean Jones, who does the same for the speech of the former inhabitants of Cades Cove in the Great Smoky Mountains,²¹ and James Robert Reese, who does the same for Greene, Hawkins, Unicoi, and Washington counties in Upper East Tennessee.²² In addition to the fact that none of these is an intensive study of the area in question, all of them are less useful than they might be because of limitations in their design. Wood, of course, treats only vocabulary, and while Thomas' study is purely phonetic, it does not provide as much phonetic detail in the transcriptions as one would like. Furthermore, he does not analyze the data. Although there is a great deal of useful information in Hall's work, his failure to use systematic sampling and

in the Interior South," PADS, 35(1961), pp. 1-16; "Word Mapping in the South," South Atlantic Bulletin, 27(1962), pp. 1-4; and "Word Patterns of the South," Round Table of the South Central Modern Language Association, 3(1962), pp. 1-2.

¹⁸ The Phonetics of Great Smoky Mountain Speech, American Speech Reprints and Monographs, No. 4 (New York: Columbia Univ. Press, 1942).

¹⁹ "A Composite Transcription from Knox County, Tenn.," AS, 14(1939), pp. 125-126; 15(1940), p. 85.

²⁰ "An Investigation of the Regional English of Unicoi County, Tennessee," Diss. Univ. of Tenn. 1973. This study and the two that follow developed out of the work of the late Harold B. Orton.

²¹ "The Regional English of the Former Inhabitants of Cades Cove in the Great Smoky Mountains," Diss. Univ. of Tenn. 1973.

²² "Variation in Appalachian English: A Study of the Speech of Elderly Rural Natives in East Tennessee," Diss. Univ. of Tenn. 1977.

investigative procedures (and his failure to specify the procedures which he did use) prevents his study from being a base for later, comparable studies.²³ The studies by Miller, Jones, and Reese likewise contain much valuable information, but their use of Daniel Jones' cardinal vowel system rather than the one developed by Kurath for the Linguistic Atlas of New England makes them less comparable not only with the results of American atlas projects, but also with other works on American pronunciation.²⁴ In addition, their use of a questionnaire composed of framed questions limits both the responses and styles which occur. The northern Cumberland Plateau area of Tennessee, then, is a virgin as well as a pivotal area for the study of English in the American South.²⁵

1.3 Physiographic Sketch

The Cumberland Plateau is one of eight physiographic regions into which Tennessee is divided. Bounded by the Great Valley (which separates it from the Unaka Mountains) on the east and the Highland Rim on the west, the plateau lies partly in East Tennessee, partly in Middle Tennessee, thus straddling two of Tennessee's "grand" political divisions. Although the plateau actually constitutes the southern

²³ See Raven I. McDavid, Jr., "Review of Joseph S. Hall's The Phonetics of Great Smoky Mountain Speech," Lang., 19(1943), pp. 184-195.

²⁴ E.G., J. S. Kenyon and T. A. Knott, A Pronouncing Dictionary of American English (Springfield, Mass.: G. C. Merriam, 1944).

²⁵ There has recently been much discussion of dialect questionnaires. See fn. 53, p. 35.

portion of the Appalachian Plateaus province of the Appalachian Highlands (which extend from central Alabama northeastward to New York), the name Cumberland Plateau is usually applied only to the area from northern Alabama to southern Kentucky. "In Tennessee the Cumberland Plateau has an area of about 5,400 square miles and varies from fifty to seventy miles in width. The elevation ranges from 1,800 to 2,000 feet except in the northeast corner, where the Cumberland Mountains rise to an elevation of about 3,500 feet. . . ." ²⁶ The surface and soil of the plateau is less varied than in other areas of Tennessee. ²⁷ The mountains are made up of sandstone and limestone for the most part, and the soil is primarily coarse sand, though some of it has a "reddish, yellow, clayey subsoil." ²⁸ Only those areas which have such a subsoil can be made productive. Poor soils, rugged terrain and

²⁶ Folmsbee, p. 8. The Cumberland Plateau embraces all or parts of the following Tennessee Counties: Anderson, Bledsoe, Campbell, Claiborne, Coffee, Cumberland, Fentress, Franklin, Grundy, Hamilton, Marion, Morgan, Overton, Picket, Putnam, Rhea, Scott, Sequatchie, Van Buren, Warren. The counties treated in this dissertation all lie entirely on the Cumberland Plateau except for Claiborne, the eastern half of which lies in the Great Valley. The six counties treated here are a physiographic, historical, and socio-cultural subdivision of the plateau. Anderson and Picket counties could conceivably have been treated, but much of the population of Anderson County is from other areas of the country, having come to Anderson County in order to work at Oak Ridge, and Picket County actually lies on the western base of the Plateau. Claiborne County is included in the study because in addition to the fact that it is historically and culturally similar to the other counties, Cumberland Gap, the principal gateway to the area west of the Appalachians, is located there.

²⁷ Harry L. Law, A Brief Geography of Tennessee (Clarksville, Tenn.: Queen City Book Publishers, 1949), p. 16.

²⁸ Law, p. 17.

a short growing season of only 171 days make agriculture much less profitable than in other areas of the state.²⁹ The sandstones and limestones, however, are quarried and used in the construction of buildings and roads, and coal, oil, natural gas, and iron ore have been discovered on the plateau. In fact, "practically all of the plateau area is underlain with coal beds of various thickness."³⁰ Nevertheless, until recently these mineral resources were not exploited because of transportation difficulties which, along with the limited possibilities for cultivation, led early settlers to call the area "The Wilderness."³¹ The vast stands of trees which cover "The Wilderness" are also a valuable resource. Most of the timber is oak, hickory, walnut, maple, or pine. A final physiographic feature of the Cumberland Plateau is its climate: average temperatures are from two to five degrees lower than in other areas of Tennessee, a difference especially notable at night, and annual rainfall is about five inches more than in other areas.³²

The northern part of the Cumberland Plateau differs from the southern part in two ways. First, the northern part is much rougher and more rugged than the southern portion; it "is made up almost entirely of sharp pointed ridges and deep narrow valleys running in

²⁹ Law, p. 18. The figure given here is for the growing season in the northern Cumberland Plateau area. In the southernmost counties, the growing season averages 201 days.

³⁰ Law, p. 18.

³¹ Folmsbee, p. 9.

³² J. B. Killebrew, Introduction to the Resources of Tennessee (Nashville, Tenn.: Travel, Eastman, and Howell, 1875), p. 13; and Law, p. 18.

various directions."³³ Secondly, the southern part of the plateau is bisected by the Sequatchie Valley, the floor of which "averages about five miles in width [and which] lies about 1,000 feet below the surface of the adjoining Plateau."³⁴ The Sequatchie Valley extends from the Alabama line to Crab Orchard Mountain in the southernmost part of Cumberland County. The physiographic differences between the northern and southern parts of the Cumberland Plateau have important socio-economic consequences. First, the population in the southern part of the plateau is concentrated in the Sequatchie Valley. Secondly, agriculture is much more profitable in the southern part of the plateau. The soils are more productive, and a great deal of corn is grown there. The Valley as a whole is renowned for its hogs and cattle.³⁵ The population in the northern part of the Cumberland Plateau, on the other hand, is scattered throughout the mountains and valleys, and the resources of the mountains themselves are the primary source of income.

1.4 Historical Sketch

Although hunting parties had regularly visited the Cumberland Plateau area from 1750 onward and white men had begun settling Upper East Tennessee by 1770, the Cumberland Plateau was not begun to be settled until the years between 1790 and 1815, a decade or more after

³³ Law, p. 15.

³⁴ Folmsbee, p. 9.

³⁵ Killebrew, p. 485.

the Nashville Basin had been settled.³⁶ There were two reasons for the late settlement of the area. First, much of the area was Indian territory until the beginning of the nineteenth century. The Treaty of Hopewell (1785) secured for whites all lands draining into the Cumberland River from the south, but that treaty primarily affected the area west of the Cumberlands. The Third Treaty of Tellico (1805) finally secured the Cumberland Plateau for white settlement.³⁷ Secondly, the terrain of the plateau was quite rugged, and much of it was inaccessible.

The earliest settlers in Upper East Tennessee seem to have come by three routes: from Virginia via the Great Indian War Path, from North Carolina via the Yadkin and Watauga Rivers, and from South Carolina and Georgia "around the southern slope of the Smokies."³⁸ Immigrants from Virginia

crossed New River at Inglis's Ferry, not far from Old Fort Chissel. They reached the Holston (North Branch) at Seven Mile Ford, crossed it near the Long Island and were then soon in Carter's Valley. . . .

The War Path continuing Southwest passed close to Rogersville, Tennessee, which may be counted as the eastern

³⁶ Material for this sketch was gathered from Folmsbee, pp. 48-62 and 146-147; Austin P. Foster, Counties of Tennessee (State of Tenn.: Dept. of Education, 1923); Albert Ross Hogue, One Hundred Years in the Cumberland Mountains Along the Continental Line (McMinnville, Tenn.: Standard Printing Co., 1933); McDavid, pp. 126-127; Tennessee State Planning Commission, Population Report, 1935; U.S. Department of Commerce, Bureau of the Census, Third-Nineteenth Censuses of the United States, 1810-1970; and Stephen B. Weeks, "Tennessee: A Discussion on the Sources of Its Population and Lines of Immigration," Tenn. Historical Monthly, 2(1916), pp. 245-253. The sketch presented here is a general sketch of the whole area in question; for sketches of individual counties, as well as of the communities in which informants live, see Appendix A.

³⁷ Folmsbee, p. 147 and Hogue, pp. 6-7.

³⁸ McDavid, pp. 126-127 and Weeks, pp. 250-251.

terminus of the road laid out by Daniel Boone later known as the Wilderness Road. This road turned westward, passed through Cumberland Gap and into the new Promised Land of Kentucky. Toward Cumberland Gap all southern roads looking into the unknown converged. . . .

But while the Wilderness Road was one of the oldest into the western country and one of the best known, it remained a mere trail till 1795, when it was widened into a wagon track.³⁹

Immigrants from North Carolina

followed up the Yadkin towards its source, passed by or near the site of the present Wilkesboro, went through some of the passes of the Blue Ridge into what is now Watauga County, struck the head waters of Watauga River perhaps near the present Boone, North Carolina, and following it westward passed through the Iron Mountain range and descended upon the fertile Valley of the Watauga. . . .⁴⁰

The Watauga settlements became the starting point for later westward movement, especially to the Nashville Basin area.⁴¹ Although two of the primary routes of westward migration (the river route and Robertson's route) bypassed the Cumberland Plateau, detouring instead through Kentucky, three primary routes did indeed cross the plateau. The East and West Trail, following an old Indian path, began on the Tennessee River near the mouth of the Holston and continued across the Cumberland Mountains and Wolf River to the Cumberland River near the mouth of the Obed. It went through Morgan, Scott, and Fentress Counties. The Cumberland Trace, again an old Indian Trail, began at Rockwood and continued to Cookeville and Sparta by way of Crab Orchard, Crossville, Mayland, Monterey, and Algood, crossing both Morgan and Cumberland

³⁹ Weeks, p. 250.

⁴⁰ Weeks, p. 251.

⁴¹ The discussion which follows is based on Weeks, pp. 250-252.

Counties. The Wilderness Road, mentioned above, went through Claiborne County. Taverns and inns sprung up at irregular intervals along these routes of migration, and a number of early settlements in the Cumberland Plateau grew up around inns and taverns. By 1815, there were settlements in all six counties of the northern Cumberland Plateau (Table 1).⁴²

Table 1. Date of Earliest Settlement in the Counties
Comprising the Northern Cumberland Plateau
Area

County	Date
Campbell	1796
Claiborne	1794 - 1795
Cumberland	1795 - 1800
Fentress	1806 - 1815
Morgan	1807
Scott	ca. 1800

Source: Counties of Tennessee

In spite of the fact that there were settlements in every county by 1815, the northern Cumberland Plateau area remained a wilderness until after 1840.⁴³ As Tables 2 and 3 suggest, large-scale settlement of the area did not take place until between 1840 and 1860--until after

⁴² Data for the table is taken from Foster and Hogue.

⁴³ See the map of the population density of the U.S. in 1840 in the Ninth Census of the United States, Population, 1880.

Table 2. Development of the Population in the Northern Cumberland Plateau Area

Date	Counties					
	Campbell	Claiborne	Cumberland	Fentress	Morgan	Scott
1810	2,668	4,798	--	--	--	--
1820	4,244	5,508	--	--	1,676	--
1830	5,110	8,470	--	2,748	2,582	--
1840	6,149	9,474	--	3,550	2,660	--
1850	6,068	9,369	--	4,454	3,430	1,905
1860	6,712	9,643	3,460	5,054	3,353	3,519
1870	7,445	9,321	3,461	4,717	2,969	4,054
1880	10,005	13,373	4,538	5,941	5,165	6,021
1890	13,486	15,103	5,376	5,226	7,639	9,794
1900	17,317	20,696	8,311	6,106	9,587	11,077
1910	27,387	23,504	9,327	7,446	11,458	12,947
1920	28,265	23,286	10,094	10,435	13,285	13,411
1930	26,827	24,313	11,440	11,036	13,603	14,080
1940	31,131	24,657	15,592	14,262	15,242	15,966
1950	34,369	24,788	18,877	14,917	15,727	17,362
1960	27,936	19,067	19,135	13,280	14,304	15,413
1970	26,045	19,420	20,733	12,593	13,619	14,726

Sources: United States Censuses; Tennessee State Planning Commission, Population Report, 1935.

Table 3. Population Density (Per Square Mile) of the Northern Cumberland Plateau Area

Date	Counties					
	Campbell (7)	Claiborne (13)	Cumberland (18)	Fentress (25)	Morgan (65)	Scott (76)
1810	4.0	7.9	--	--	--	--
1820	6.7	12.6	--	--	1.6	--
1830	8.6	13.4	--	--	3.4	--
1840	8.1	15.6	--	5.8	2.6	--
1850	12.8	21.1	--	7.6	3.3	3.7
1860	21.6	24.5	5.9	9.8	6.3	8.4
1870	23.4	25.5	5.7	9.4	4.8	9.5
1880	25.0	39.3	6.7	11.9	12.9	9.4
1890	27.6	32.0	9.3	10.2	17.1	15.8
1900	36.3	44.6	15.2	13.7	17.8	18.6
1910	59.0	50.2	14.2	15.3	21.7	23.5
1920	61.6	49.8	15.4	21.5	25.1	24.4
1930	58.4	52.0	17.5	22.7	25.7	25.6
1940	69.6	55.4	23.0	28.6	28.3	29.1
1950	77.0	56.0	28.0	30.0	29.0	32.0
1960	63.0	43.0	28.0	27.0	27.0	28.0
1970	57.8	43.7	30.6	25.3	25.3	27.1

Sources: United States Censuses; Tennessee State Planning Commission, Population Report, 1935.

all the better land in the state had been taken. For the most part, settlers were from Upper East Tennessee, North Carolina, Virginia, Kentucky, and Pennsylvania. The only foreign element to settle on the plateau in anything like large numbers was the Germans. Given these sources of settlement, it seems safe to assume that almost all the settlers on the Cumberland Plateau were of English, Scotch-Irish or German extraction.

The War Between the States came just after the large-scale settlement of the northern plateau area. Although the area voted strongly to remain in the Union--in fact Scott County withdrew from the State of Tennessee--fighting was mostly between bands of marauders such as Tinker's Men and Ferguson's Raiders, Union and Confederate sympathizers respectively. Most of the marauders were nothing but bush-whackers, and their activities resulted only in destruction and bitterness. With the advent of the war, immigration, which had begun to be more than a trickle, slowed to almost nothing; just as before and in fact during the war, the area remained in relative isolation. About 1890, however, the coming of railroads and coal mines ushered in a period of fairly rapid growth which lasted until about 1920. The growth rate slowed dramatically after 1920, and since World War II the population in the northern plateau has been declining. Tables 2, 3, and 4 chart the development of the population.

1.5 Socio-Cultural Sketch

From its very beginning the Cumberland Plateau has been a socio-cultural unit. Walter E. Martin, Jr., has shown that as early

Table 4. Population Change (Percent of Gain or Loss) in the Northern Cumberland Plateau Area

Date	Counties					
	Campbell	Claiborne	Cumberland	Fentress	Morgan	Scott
1890	28.4	37.0	54.6	16.8	25.5	13.1
1900	58.2	13.6	12.2	21.9	19.5	16.9
1910	3.2	-0.9	8.2	40.1	15.9	3.6
1920	-5.1	4.4	13.3	5.8	2.4	5.0
1930	16.0	1.4	36.3	29.2	12.0	13.4
1940	10.4	0.5	21.1	4.6	3.2	8.7
1950	-18.7	-23.1	1.4	-10.9	-9.0	-11.2
1960	-6.8	1.9	8.4	-5.2	-4.8	-4.2

Sources: United States Censuses; Tennessee State Planning Commission, Population Report, 1935.

as the mid-nineteenth century--that is, just after the initial large-scale settlement--the plateau was part of a distinct socio-cultural area.⁴⁴ In order to identify patterns of regional culture in Tennessee, Martin, using census data, examined for each county the origins of its population, the percent of slaves in the total population, the strength of the secessionist vote, per capita production of ginned cotton, per capita production of wheat, per capita value of home manufacture, and ratio of horses to mules. He found that in the mid-nineteenth century the state of Tennessee consisted of five cultural regions: a core region of Upper Southern culture; an area dominated by Upper Southern culture but less intense than the core; a core region of Lower Southern culture; an area dominated by Lower Southern culture but less intense than the core; and an area the cultural affiliation of which could not be determined (see Figure 2). The Cumberland Plateau was part of the Upper Southern Domain: it was dominated by the Upper Southern core area, from whence it was settled, but its cultural affiliation was less intense. On the basis of Martin's study, a profile of the Cumberland Plateau as it was in the mid-nineteenth century can be drawn. First, most of the residents of the plateau came from North Carolina, Kentucky, Pennsylvania, and other areas of Tennessee. Secondly, the population was almost entirely white and free. Thirdly, the plantation system did not exist in the area; most farming was subsistence farming. Lastly the plateau (and

⁴⁴ "Culture Regions of Mid-Nineteenth Century Tennessee (paper presented at the Southeastern Division, American Association of Geographers, Knoxville, Tenn., Nov. 22, 1977).

CULTURE REGIONS OF TENNESSEE - 1850

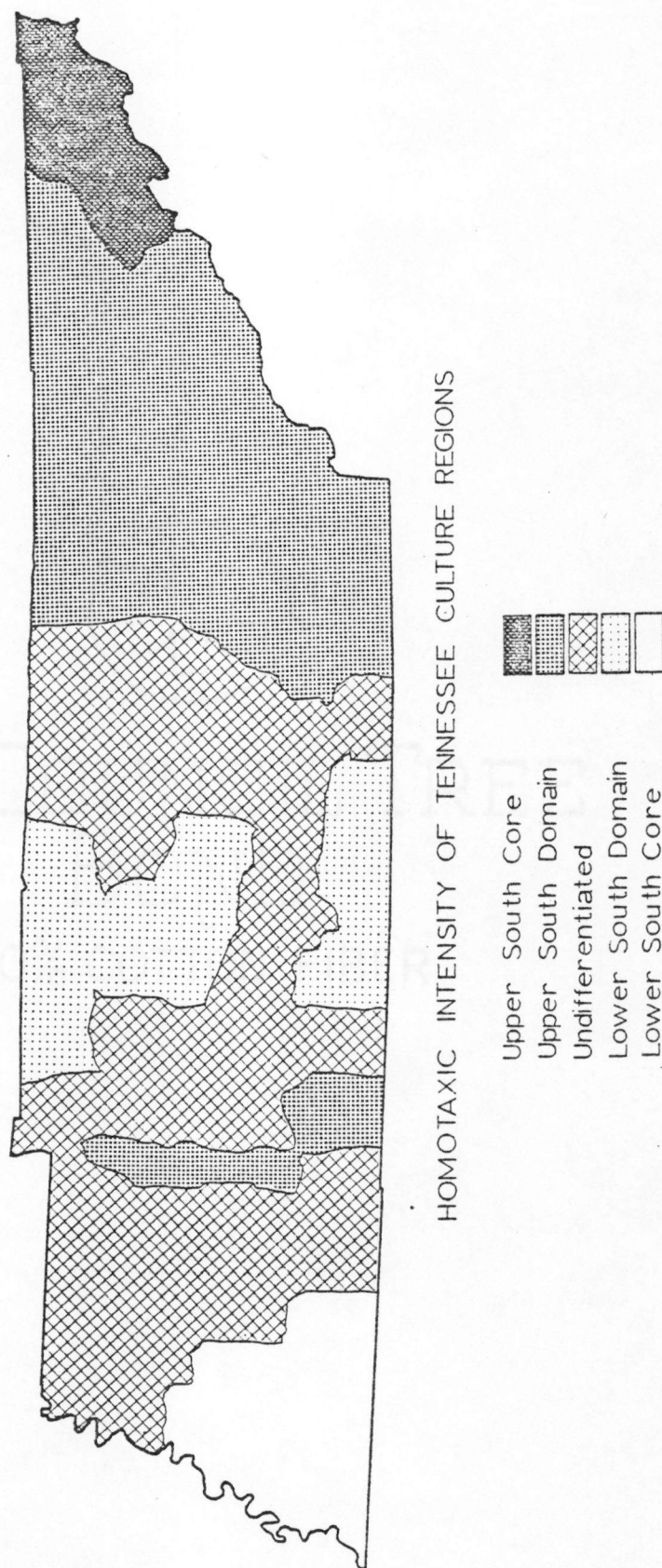


Figure 2. Martin's Division of Tennessee into Cultural Regions.

especially the northern part of the plateau) was strongly pro-Union.

The socio-cultural distinctiveness of the Cumberland Plateau has, of course, continued into the twentieth century. Howard W. Odum, using geography, agriculture, and soil type as criteria, makes the plateau one of twenty-seven subregions in the Southeast and distinguishes it from the Blue Ridge and Ozark Mountains.⁴⁵ Charles S. Johnson et al., however, provide evidence which suggests that even the Cumberland Plateau may be further subdivided.⁴⁶ Using both an agricultural and an industrial-urban scale, Johnson and his associates developed a tripartite classification system which they applied to 1,104 Southern counties. Counties were classified first on the basis of major crop type, secondly on the basis of crop subtype, and thirdly on the basis of urban-industrial type. All six counties in the northern Cumberland Plateau area were classified first as type C (agriculturally self-sufficient, with more than 50 percent of the total value of farm products being used by the family), secondly as type 2 or 3 (characterized by either a dual system of major crops or a multiple crop system), and thirdly, with the exception of Campbell and Scott counties, as type 7 (rural industrial.) Campbell County was classified as type 5 (small town industrial), while Scott County was classified as type 8 (rural non-industrial). Table 5 gives Johnson's classifications. His evidence, when considered

⁴⁵ Southern Regions of the United States (Chapel Hill, N.C.: Univ. of North Carolina Press, 1936), p. 158.

⁴⁶ Statistical Atlas of Southern Counties (Chapel Hill, N.C.: Univ. of North Carolina Press, 1941).

Table 5. Classification of Counties of the Northern Cumberland Plateau Area

County	Major Crop Type	Crop Subtype	Urban-Industrial Type
Campbell	C	3	5
Claiborne	C	3	7
Cumberland	C	3	7
Fentress	C	2	7
Morgan	C	2	7
Scott	C	2	8

Source: Statistical Atlas of Southern Counties.

in conjunction with the physiography, history, and socio-economic structure of the region, seems to indicate that the northern part of the Cumberland Plateau is itself a discrete socio-cultural region.

The makeup of the population, educational levels, personal and family income, and economic structure of the northern part of the Cumberland Plateau suggest that it is a socio-economic unit.⁴⁷ The population of the area has always been relatively homogeneous. Only three national stocks, English, Scotch-Irish, and German, contributed to the population significantly, and while there never were many blacks on the plateau, the number of blacks has declined greatly in the last thirty years

⁴⁷ The profile presented here was constructed from Mary G. Currence, ed. Tennessee Statistical Abstract (3rd ed.; Knoxville, Tenn.: Center for Business and Economic Research, 1974) and Tennessee Office of Local Government, County Profile, 1974. Walter E. Martin, Jr., kindly helped select the indices used in constructing the profile.

(see Table 6). In addition, the population of the plateau is still primarily rural (see Table 7) and as Table 8 indicates, lags behind other areas in education. Only two towns in the area had as many as 500 people in 1970; no town had as many as 10,000. However, the most notable characteristic of the population of the northern Cumberland Plateau is its steady decline over the last twenty years (see Tables 2, 3, and 4, pages 17, 18, and 20 respectively). As Table 9 indicates, migration has largely been away from the area.

The northern Cumberland Plateau is a poor area. Both personal and family incomes (see Tables 10 and 11) tend to be rather low, and as late as 1969 well over a third of the families were below poverty level. Nearly a third of the homes in the area lacked telephones, and about 40 percent did not have indoor plumbing in 1970 (see Tables 12 and 13). In addition, medical and transportation facilities lag behind those in other areas of the state (see Table 14 and 15).

The primary sources of income are subsistence farming, and mining. The northern Cumberland Plateau is the primary coal mining area of the state, and as Table 16 shows, the amount of coal mined is substantial. As Table 17 indicates, there is a small amount of manufacturing in the area. Nevertheless, the new capital expenditures in the area (Table 18) suggest that the economy is relatively stagnant.

The northern part of the Cumberland Plateau, then, constitutes a discrete socio-cultural subregion characterized by a distinct physiography, history, and socio-economic structure. Settled later than more fertile areas, it is rugged and isolated, homogeneous in population,

Table 6. Development of the Black Population in the Northern
Cumberland Plateau Area

Date	Counties					
	Campbell	Claiborne	Cumberland	Fentress	Morgan	Scott
1840	278(4.5%)	509(5.4%)	--	85(2.4%)	106(4.0%)	--
1850	303(5.0%)	702(7.5%)	--	149(3.3%)	164(4.8%)	7(0.4%)
1860	335(5.0%)	919(9.5%)	139(4.0%)	189(3.7%)	161(4.8%)	28(0.8%)
1870	423(5.7%)	781(8.1%)	98(2.8%)	170(3.6%)	101(3.4%)	39(1.0%)
1880	432(4.3%)	789(5.9%)	42(0.9%)	107(1.7%)	289(5.6%)	157(2.6%)
1890	559(4.1%)	518(3.4%)	51(0.9%)	46(0.9%)	553(7.0%)	336(3.7%)
1900	616(3.6%)	729(3.2%)	572(6.9%)	25(0.4%)	600(6.3%)	335(3.0%)
1910	1887(6.9%)	819(3.5%)	63(0.7%)	98(1.3%)	691(6.0%)	97(0.7%)
1920	1272(4.5%)	563(2.4%)	25(0.2%)	42(0.4%)	497(3.7%)	16(0.1%)
1930	606(2.3%)	573(2.4%)	70(0.6%)	53(0.5%)	478(3.5%)	15(0.1%)
1940	505(1.6%)	515(2.1%)	--	--	414(2.7%)	--
1950	412(1.2%)	341(1.4%)	18(0.1%)	--	345(2.2%)	17(0.1%)
1960	251(0.9%)	305(1.6%)	--	--	314(2.2%)	--
1970	158(0.6%)	272(1.4%)	2(.009%)	--	211(1.5%)	1(.006%)

Sources: U.S. Censuses; Tennessee State Planning Commission,
Population Report, 1935.

Table 7. Rural Population in the Northern Cumberland Plateau Area (1970)

County	Percent
Campbell	73.5
Claiborne	100.0
Cumberland	74.0
Fentress	100.0
Morgan	99.8
Scott	82.4

Source: County Profile

Table 8. Median Years of Education of Those Over 25 in the Northern Cumberland Plateau Area (1970)

County	Median Years of Education
Campbell	8.3
Claiborne	8.4
Cumberland	8.7
Fentress	8.1
Morgan	8.8
Scott	8.3

Source: County Profile

Table 9. Net Migration in the Northern Cumberland Plateau Area

County	1950-1960	1960-1970
Campbell	-11,752	-4,587
Claiborne	-8,910	-1,253
Cumberland	-3,301	-697
Fentress	-4,422	-2,441
Morgan	-3,652	-1,943
Scott	-5,018	-2,790

Source: Tennessee Statistical Abstract.

Table 10. Per Capita Income (in Dollars) in the Northern Cumberland Plateau Area (1970)

County	Per Capita Income
Campbell	\$2,019
Claiborne	1,723
Cumberland	1,976
Fentress	1,492
Morgan	1,907
Scott	1,755

Source: Tennessee Statistical Abstract.

Table 11. Family Income in the Northern Cumberland Plateau Area (1969)

County	Median (in Dollars)	Percent Below Poverty Line	Percent Less than \$2,000	Percent Over \$15,000
Campbell	4,384	36.2	22.2	3.5
Claiborne	4,266	38.7	24.1	4.3
Cumberland	5,476	29.0	15.9	4.9
Fentress	3,937	42.4	22.9	2.3
Morgan	5,363	27.3	14.6	3.9
Scott	4,172	42.1	22.1	4.2

Source: Tennessee Statistical Abstract.

Table 12. Percent of Households with Telephones in the Northern Cumberland Plateau Area (1970)

County	Percent
Campbell	65
Claiborne	63
Cumberland	65
Fentress	54
Morgan	66
Scott	66

Source: Tennessee Statistical Abstract.

Table 13. Percent of Households Lacking Plumbing in the Northern Cumberland Plateau Area (1970)

County	Percent
Campbell	37
Claiborne	44
Cumberland	30
Fentress	50
Morgan	36
Scott	47

Source: Tennessee Statistical Abstract.

Table 14. Medical Facilities in the Northern Cumberland Plateau Area

County	No. of Hospitals (1971)	No. of Beds (1971)	No. of Physicians (1972)	No. of Dentists (1972)
Campbell	2	132	13	4
Claiborne	1	61	8	2
Cumberland	1	127	18	3
Fentress	1	70	4	2
Morgan	--	--	1	1
Scott	1	61	5	2

Source: Tennessee Statistical Abstract

Table 15. Transportation Facilities in the Northern Cumberland Plateau Area (1972)

County	Miles of Interstate Highways	Miles of State Roads
Campbell	31.67	61.28
Claiborne	0.00	71.30
Cumberland	36.65	94.63
Fentress	0.00	97.76
Morgan	0.00	82.40
Scott	0.00	46.84

Source: County Profile.

Table 16. Value of Production of Coal (in Thousands of Dollars) in the Northern Cumberland Plateau Area (1971)

County	Value of Production of Coal
Campbell	15,437
Claiborne	12,826
Cumberland	1,942
Fentress	1,032
Morgan	2,820
Scott	4,510

Source: Tennessee Statistical Abstract.

Table 17. Value Added by Manufacture (in Millions of Dollars) in the Northern Cumberland Plateau Area (1967)

County	Manufacture Value
Campbell	11.5
Claiborne	6.3
Cumberland	23.1
Fentress	4.3
Morgan	1.8
Scott	12.0

Source: Tennessee Statistical Abstract.

Table 18. New Capital Expenditures (in Millions of Dollars) in the Northern Cumberland Plateau Area (1967)

County	New Capital Expenditures
Campbell	0.4
Claiborne	0.3
Cumberland	2.3
Fentress	0.2
Morgan	less than 50,000
Scott	0.7

Source:

poor, and economically stagnant. Furthermore, the population is steadily declining. These factors perhaps account for the fact that the area has always lacked the rigid class and caste distinctions which outsiders often associate with the South. Rupert Vance's description of the Southern Highlands, in contrast to the Delta, is especially relevant to the northern part of the Cumberland Plateau:

Both the Delta and the Highlands are rural and southern, and both have been subjected to missionary influence of outside culture. Otherwise, the contrasts are startling. From an all staple cash economy to the self-contained domestic economy of the true frontier farm, from supervised tenant labor in a pseudo-feudal organization to an area of freeholds of patriarchal families, from overwhelming ratios of Negroes to no Negroes at all, from population density to isolation comprise some of the transitions from Delta to Highlands. River towns and mountain courthouses, rich soil and poor soil . . . , level flood plains and rugged mountains, river transportation and horseback trails epitomize these differences. The Delta followed the sectionalism of Calhoun and Davis, the Highlands knew no politics more recent than Washington and fought for the Union or not at all. From the same stock they came to follow diverse trails. If the flood menace of the Mississippi presents the South's greatest study in social incidence, the Highlands present its outstanding study in isolation.⁴⁸

Its physiography, history, and socio-cultural makeup all suggest that the northern part of the Cumberland Plateau is the cultural analogue of a linguistic relic area.⁴⁹

⁴⁸ Human Geography of the South (2nd ed.; New York: Russell and Russell, 1968), p. 240-41.

⁴⁹ This conclusion is drawn on the basis of Walter E. Martin, Jr.'s work on cultural relic areas.

1.6 Collection of Data

The data used here are the field records made for the Linguistic Atlas of the Gulf States.⁵⁰ "The Linguistic Atlas of the Gulf States (LAGS) Project is a survey of regional and social dialects in eight southern states. This investigation of native American English aims to gather systematically contrastive data to complement research already finished in the Atlantic and North Central States and to provide the foundations for a coherent description of colloquial speech in that area of the Lower South dominated by the Gulf Coastal

⁵⁰ The LAGS project is directed by Lee A. Pederson, of Emory University, and is funded by the National Endowment for the Humanities and Emory University. For a general introduction to the LAGS project, its basic aims, its field procedures, some of its potential uses, and a compilation of the work sheets, see Lee Pederson, et al., A Manual for Dialect Research in the Southern States (University, Al.: Univ. of Alabama Press, 1974). For additions to those work sheets, see Charles E. Billiard and Lee Pederson, "The Composition of the LAGS Urban Work Sheets," and "The LAGS Urban Work Sheets," Orbis (in press). For an extensive discussion of scribal procedures, editorial procedures, and plans for dissemination of results, see Lee Pederson, A LAGS Guide. The history of the LAGS project is detailed in Lee Pederson, "The Linguistic Atlas of the Gulf States: An Interim Report," AS, 44 (1969), pp. 279-86; "Southern Speech and the LAGS Project," Orbis 20 (1971), pp. 79-89; "The Linguistic Atlas of the Gulf States: Interim Report Two," AS, 49 (1974), pp. 216-23; and "The Linguistic Atlas of the Gulf States: Interim Report Three," AS (in press). The theoretical assumptions underlying LAGS are discussed in Lee Pederson, "Structural Description in Linguistic Geography," in Shores and Hines, pp. 19-24; "Tape/Text and Analogues," AS, 49 (1974), pp. 5-23; "Toward a Description of Southern Speech," in Shores and Hines, pp. 25-31. Some indication of the information contained in a field record can be gleaned from Lee Pederson, "Grassroots Grammar in the Gulf States," in James B. McMillan: Essays in Linguistics by His Friends and Colleagues, ed. by James C. Raymond and I. Willis Russell (University, Al.: Univ. of Alabama Press, 1977), pp. 91-112; A LAGS Guide; "Tape/Text and Analogues"; and Susan Leas, "LAGS Urban Supplement Word List," 1978. (Manuscript.) A LAGS Guide contains a complete inventory of the information present in a single protocol.

Plains."⁵¹ Based on the concept of inventorial research which underlies traditional linguistic geography as developed by Gilliéron, Jaberg and Jud, and Kurath, the LAGS Project has four interrelated goals: "(1) to provide an inventory of the dominant and recessive patterns of usage in the eight-state region, (2) to describe these varieties of Southern speech in a global fashion, (3) to offer an abstract of regional phonology, grammar, and lexicon, and (4) to identify areas of linguistic complexity that will require additional and more intensive study."⁵² "As an extension of the LAMSAS by affiliation, the LAGS Project [uses] the empirical methods developed by Kurath and his associates over the past 40 years . . ."⁵³ to achieve these aims. However, "as the first fullscale extension of American linguistic geography since LANE (1943), LAGS incorporates some recent developments

⁵¹ Pederson, "An Introduction to the LAGS Project," in A Manual for Dialect Research in the Southern States, p. 3.

⁵² Pederson, "Toward A Description of Southern Speech," p. 28.

⁵³ Pederson, "An Introduction to the LAGS Project," p. 15. Recent criticisms of linguistic geography fail on three accounts. First they fail to recognize that linguistic geography is essentially an historical discipline. Sampling procedures, questionnaires, and descriptive practices are geared to that fact. Secondly, they fail to understand the nature of inventorial (or baseline) research. Such research does not attempt to provide exhaustive structural analysis; rather, it indicates the range of variants, dominant and recessive patterns of usage, and areas of linguistic complexity which require additional research, and it provides baseline phonology, grammar, and lexicon on which future research can be built. Thirdly, criticisms of linguistic geography fail to take recent modifications into account. For example, they fail to realize that the tape recorder makes extensive structural and quantitative analysis possible.

in the collection, analysis, and description of linguistic data and, accordingly, revises the traditional vocabulary."⁵⁴

In order to facilitate coverage of the Gulf States, the LAGS territory was divided into zones, sectors, and grids (see Figure. 3). "The zone and sector divisions were introduced to determine responsibilities for participants in the survey and to simplify the editorial tasks. . . ."⁵⁵ Grids, however, are units of counties which were grouped on the basis of socio-cultural structure, settlement patterns, and population distribution. "The [168] grids of the LAGS Project, which diminish in number from east to west, include [665] counties and parishes in the eight-state region, each of which [was] regarded [as] a tentative target community but only one of which in each grid [was] an obligatory target community."⁵⁶ Ultimately, the target community in each grid was selected on the basis of the social history of the grid. The completed sample includes over 1000 interviews in almost 700 communities; each interview is a conversational record of the speech of a single informant. "Unlike subjects in other American atlas projects, each LAGS informant represents a discrete unit in the sample, and every LAGS informant is a native of the grid that marks the field record. No linguistic information offered by others present during the interview is included in the description of the idiolect, and all information

⁵⁴ Pederson, A LAGS Guide, p. 1

⁵⁵ Pederson, "An Introduction to the LAGS Project," p. 16.

⁵⁶ Pederson, "An Introduction to the LAGS PROJECT," p. 17.

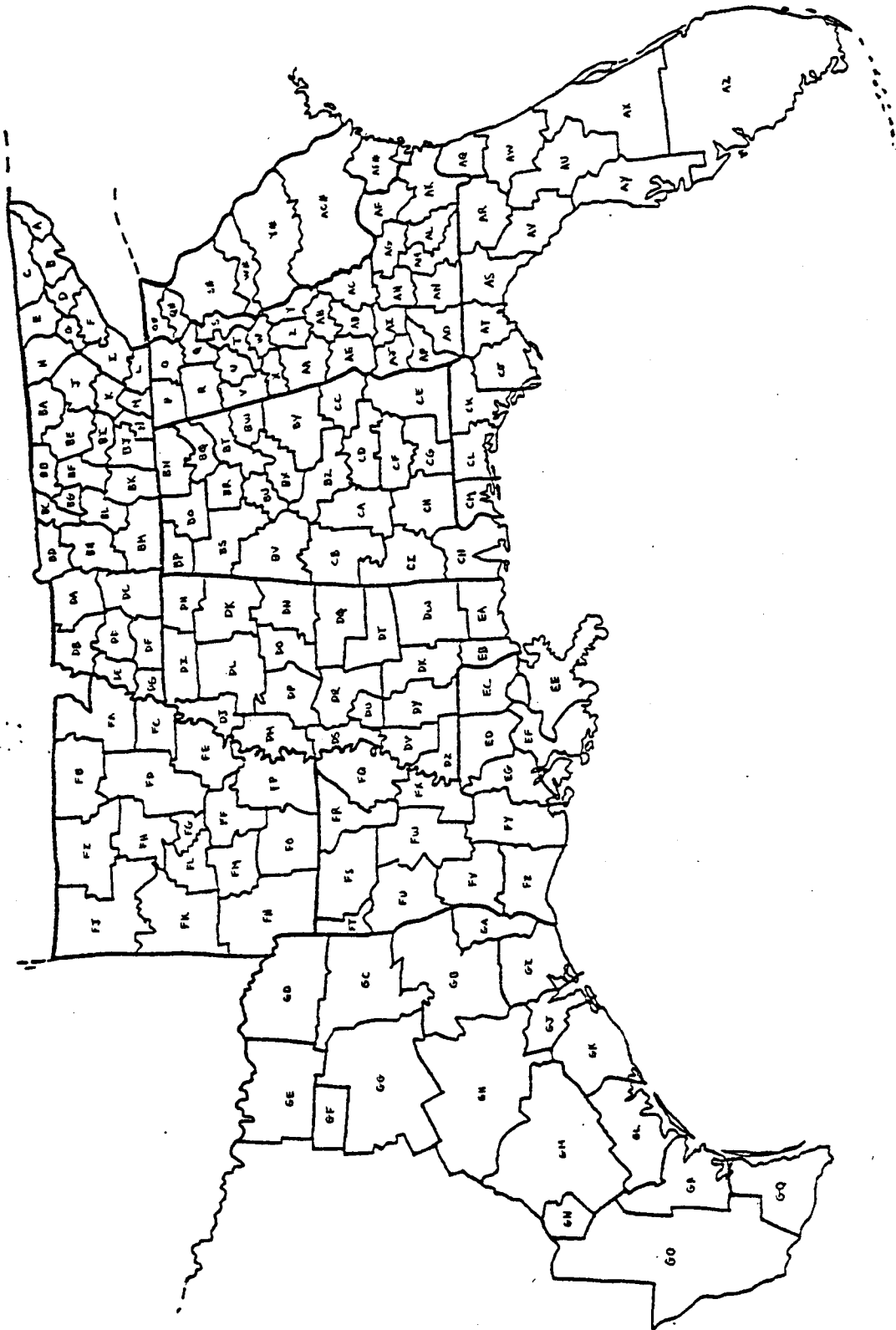


Figure 3. The LAGS Territory (Grid Divisions).

suggested by either fieldworker or other members of the interview audience is clearly designated as such in the protocol, provided the response is subsequently uttered by the informant."⁵⁷

Informants are classified by age, sex, ethnic caste, social class, education, and social experience. "In accordance with the basic plan of the survey, a native Caucasian informant over age 65 and another under age 50 [were] interviewed in each grid."⁵⁸ (In eleven urban areas, however, four generations of speech were systematically investigated.) In addition, the LAGS sample includes approximately the same number of women as men, and all statistically significant ethnic minority groups in the area (Afros, Cajuns, and Latinos) are represented. The type designations established in the Linguistic Atlas of New England are reserved in LAGS for educational levels: Type I indicates no more than elementary school education, Type II no more than a high school education, and Type III some form of higher education. "In the selection of informants, LAGS fieldworkers invariably chose a Type I informant in each grid, usually the basic representative of old-fashioned speech, and regularly chose a Type II informant in these same communities to represent a more nearly modern variety of the local regional dialect. Apart from the urban communities . . . , where at least two (and sometimes four) Type III informants [were] interviewed, the usual selection

⁵⁷ Pederson, A LAGS Guide, p. 6. The use of information only from the informant (i.e., the decision not to use auxiliary informants) and the decision to use only information on tape makes a structural dialectology possible. Cf. Robert P. Stockwell, "Structural Dialectology: A Proposal," AS, 34(1959), pp. 258-268.

⁵⁸ Pederson, The LAGS Guide, p. 6.

procedure provided an informant of this type in every fifth field record."⁵⁹ Distinctions of social class (LAGS recognizes five) and social experience (the LANE Types A and B) were not used in informant selection but provide additional scales for more refined sociolinguistic analysis.

The field instrument used in all LAGS interviews was the LAGS work sheets. "Although LAGS preserves the essential form and basic contents of the LANE and LAMSAS work sheets, it differs from its predecessors in three important ways. LAGS makes no distinction between REGULAR and SHORT work sheets. LAGS includes the LAMSAS base form and adds a substantial number of forms derived in this and other surveys of Southern speech. Finally, LAGS developed an urban supplement as a reflex of the early field experience, and this was used without exception in the urban centers."⁶⁰ The basic LAGS work sheets include 1052 words and phrases organized into 794 numbered items (or lines) on 108 pages. (The urban supplement, which is not relevant here, includes another 200 words and phrases.)

"Unlike other American atlas projects, LAGS divides the traditional labor of field work between interviewer and scribe. The interviewer is the LAGS fieldworker, who travels to the community, selects the informant, conducts the interview, and records the entire conversation on magnetic tape."⁶¹

⁵⁹ Pederson, A LAGS Guide, p. 7.

⁶⁰ Pederson, A LAGS Guide, p. 8.

⁶¹ Pederson, A LAGS Guide, p. 4.

The tape recorded interview, based on the worksheets, is the LAGS field record. It is the task of the scribe to evaluate the field record as a contribution to LAGS, to compose a text (a phonetic transcription) of that record equivalent to the field records of earlier atlases, and to index conversational information in the record.⁶² The text, in narrow phonetics, which is derived from the field record is called a protocol. The protocol functions as "(1) the first written draft of an event or transaction, the tape-recorded interview, (2) a preliminary memorandum prepared to assist auditors of the tapes, and (3) the formal account of the information included in the tapes."⁶³ Each protocol contains four kinds of entries: primary entries, or responses to items investigated in the work sheets; secondary entries, or additional linguistic or cultural information which might be of interest; marginalia, or elaborations, explanations, and cross references of primary and secondary entries; and a tape index, which specifies the location of each item entered in the field record. However useful it may be, the protocol is not inviolate. "Only the field record is inviolate; the protocol is a set of working papers, subject to addition and revision until publication."⁶⁴ (Appendix B presents sample protocol pages.)

A system of narrow phonetic notation based on the International Phonetic Alphabet as modified by Kurath for LANE is the primary system

⁶² Pederson, A LAGS Guide, p. 9.

⁶³ Pederson, A LAGS Guide, p. 9.

⁶⁴ Pederson, A LAGS Guide, p. 9.

used by LAGS scribes for reducing speech to writing in the protocols.

(LAGS does use a few additional symbols, however, See Appendix C.)

Phonetic notation "attempts to identify all observable [i.e., perceivable] and relevant phonetic evidence within the conventions of

articulatory designation. . . ." ⁶⁵ Phonetic notation, then, is "ETIC

(substantive or material)" as opposed to phonemic notation, which is

"EMIC (formal or abstract)." ⁶⁶ A phonetic transcription describes

sounds without reference to linguistic phenomena, catalogues raw pho-

netic data without reference to phonological systems. In spite of the

fact that sounds are described in articulatory terms, LAGS transcrip-

tions are impressionistic rather than strictly articulatory: they are

⁶⁵ Pederson, A LAGS Guide, p. 25. LAGS scribes undergo an extensive phonetic training session. The last of these sessions, held during the fall of 1977, lasted ten weeks and involved both extensive reading in phonetics and intensive ear training. In addition to A LAGS Guide, the basic texts included R-M. S. Heffner, General Phonetics (Madison, Wis.: Univ. of Wisconsin Press, 1950); Daniel Jones, An Outline of English Phonetics (9th ed.; Cambridge: Heffer, 1962); Peter Ladefoged A Course in Phonetics (New York: Harcourt, Brace, Jovanovich, 1975); Eunice Pike, Dictation Exercises in Phonetics (Glendale, Cal.: Summer Institute of Linguistics, 1946), accompanied by a tape recording made by Norman McQuown; Kenneth L. Pike, Phonemics: A Technique for Reducing Language to Writing (Ann Arbor, Mich.: Univ. of Michigan Press, 1947); and Phonetics: A Critical Analysis of Phonetic Theory and A Technic for the Practical Description of Sounds (Ann Arbor, Mich.: Univ. of Michigan Press, 1943). Ear training involved not only transcription from the McQuown tape, but also from a LAGS training tape which included specimens of both black and white speech from several different areas in the South. Transcriptions of the LAGS training tape by Lee Pederson and Raven I. McDavid, Jr., served as a model. Finally, all LAGS scribes have their own idiolects analyzed by the director of the project in order to enable them to anticipate possible interference. Phonetic problems are continually discussed in staff meetings. For an account of a LAGS training session, see Lee Pederson, "The Linguistics Atlas of the Gulf States: Interim Report Two."

⁶⁶ Pederson, A LAGS Guide, p. 25.

perceptual records of a neuromuscular, physiological, aerodynamic, acoustic and auditory event. As Kurath notes

The symbols of the phonetic alphabet . . . are to be understood as representing primarily sounds as heard. The field workers, in transcribing a sound, usually thought also in terms of articulation, and tried, so far as they were able, to refer their acoustic [i.e., auditory] impression to the configuration of the vocal organs which produced it. But in the last analysis, it is the sound itself which governed the field workers' choice of symbols.⁶⁷

The system of phonetic notation used by LAGS, like that of the International Phonetic Alphabet, assumes a set of "idealized forms, called TARGETS (Ladefoged's term), and these comprise the segmental baseline against which all modifications are measured, i.e., compared and contrasted."⁶⁸ The target sounds, or "normative base," of LAGS are those of the Inland Northern dialect--specifically those of Chicago, the cultural center of the area.⁶⁹

Contoids and vocoids are specified by both segmental and diacritical notation. The transcription of contoids is based on the 153 symbols in Figure 4. The basic types of articulation recognized by

⁶⁷ Hans Kurath, et al., Handbook of the Linguistic Geography of New England (Providence, R.I.: Brown Univ. Press, 1939), p. 122, quoted in Lee Pederson, A LAGS Guide, p. 33.

⁶⁸ Pederson, A LAGS Guide, p. 30. Peter Ladefoged, "The Value of Phonetic Statements," Language 36(1960), pp. 387-396, indicates the usefulness and accuracy of impressionistic phonetics; J. C. Catford, Fundamental Problems in Phonetics (Bloomington, Ind.: Indiana Univ. Press, 1977), p. 246 indicates the necessity for impressionistic phonetics even when instrumental means are available; Chomsky and Halle is a tacit admission of the necessity of articulatory description for phonology.

⁶⁹ Pederson, A LAGS Guide, p. 33. The usefulness of this normative base is discussed above.

LABIAL/DENTAL ALVEOLAR/RETROFLEX PREPALATAL/PALATAL VELAR/POSTVELAR GLOTTAL															
	OBSTRUENTS														
	BILABIAL	LABIO-DENTAL	DENTAL	ADVANCED ALVEOLAR	MEDIAL ALVEOLAR	RETRACTED ALVEOLAR	RETROFLEX ALVEOLAR	PRE-PALATAL	MEDIAL PALATAL	POSTPALATAL	PREVELAR	MEDIAL VELAR	POSTVELAR	SUPRAGLOTTAL	GLOTTAL
FULL ORAL STOPS	p b	p b	t d	t d	t d	t d	t d	t d	t d	c t c j	k g	k g	k g		ʔ
	p											k		(ʔktp)	ʔ
SUPRAGLOTTAL SUCTION STOPS															
INTERMITTENT ORAL STOPS	p b	p b	t d	t d	t d	t d	t d						r		
ORAL FRICATIVE CONTINUANTS	ɸ β h f v		θ ð	ʃ ʒ	ʃ ʒ	ʃ ʒ	ʃ ʒ	ʃ ʒ	ʃ ʒ	ʃ ʒ	ʃ ʒ	ʃ ʒ	ʃ ʒ	ɸ y ɥ	
NASAL CONTINUANTS	m	m	n	n	n	n	n	ɸ	ɸ	ɸ	ɸ	ɸ	ɸ		
ORAL-CENTRAL CONTINUANTS	j w	f v							ɸ	ɸ	ɸ	ɸ	ɸ		
ORAL-LATERAL CONTINUANTS	l	l	l	l	l	l	l	l	l	l	l	l	l		
ORAL-RETACIZED CONTINUANTS	r		r	r	r	r	r								

Figure 4. Basic Contoids in LAGS

Source: A LAGS GUIDE, p. 36.

LANE are also recognized by LAGS; some additional symbols and categories have been added, however (see Appendix C). The transcription of vocoids is based on the thirty symbols in Figure 5, and again LAGS recognizes the same phones which LANE recognizes, with a few exceptions. (These exceptions are treated in Appendix C, but it should be pointed out here that the most important difference between the notational systems of LANE and LAGS is that while LANE treats [ɹ] and [ɻ] as vocoids, LAGS treats them as contoids.) All of the vocoid and contoid symbols may be modified by various diacritics (see Figure 6).

In addition to identifying phones and modifications of those phones, the LAGS scribe must deal with at least four other problems in order to compose an adequate phonetic analogue of the field record. First, he must deal with problems of segmentation, of extracting discrete segments and syllables from the speech continuum. While LAGS recognizes the inadequacy of both acoustic and physiological definitions of segment and syllable, it also recognizes their perceptual reality and necessity in all descriptive schemes. As a result, LAGS makes use of the system of segmentation and syllabification developed by Kenneth Pike. Pike's method, which makes reference only to features observable in the speech continuum, systematizes perception for the purpose of phonetic description.⁷⁰

Sequences of sounds (i.e., combinations of vocoids, contoids and contoids) are the second problem with which LAGS scribes must deal. Physically, all vocoids are far from being steady-

⁷⁰ Phonetics, pp. 107-120.

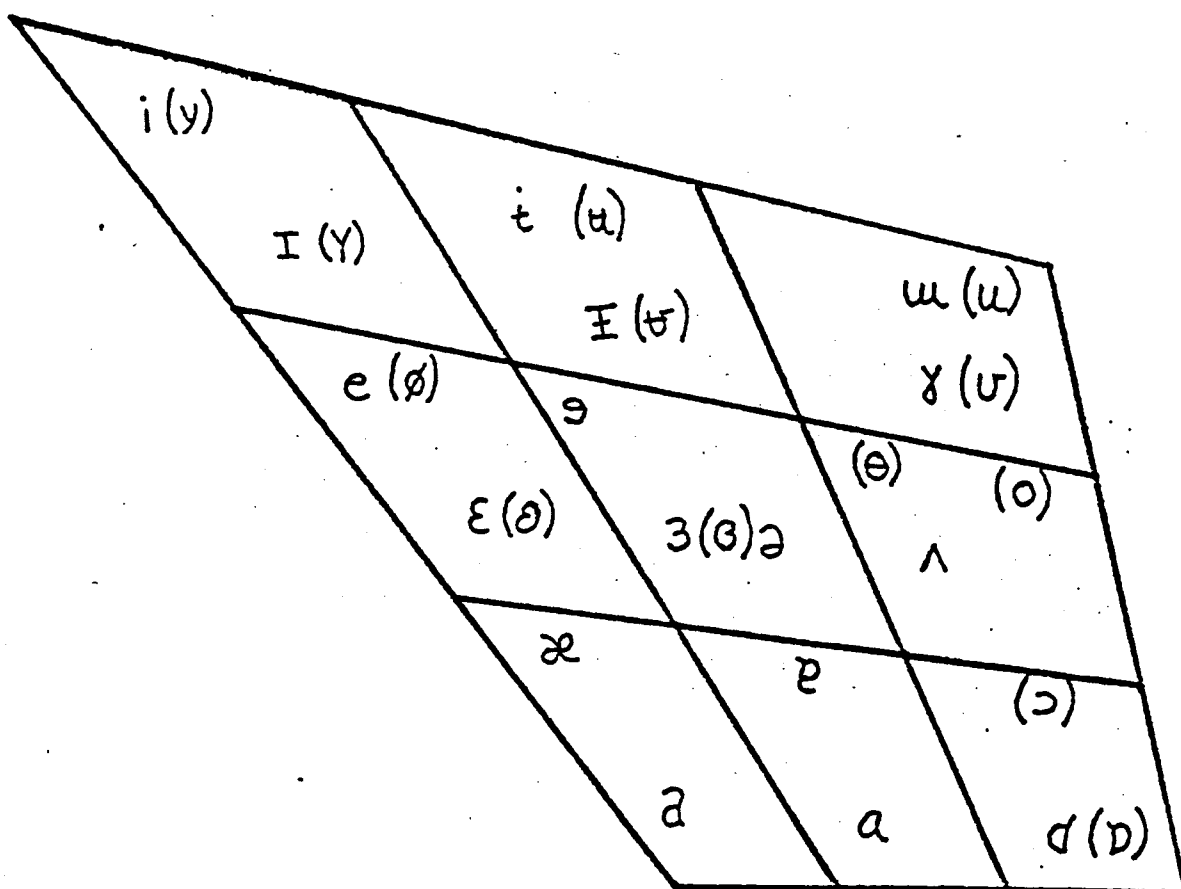


Figure 5. Basic Vacoids in LAGS

Source: A LAGS GUIDE, p. 50.

I. Diacritics of Length

- A. [C.] / [V.] = a long continuant
- B. [C:] / [V:] = a continuant of even greater duration
- C. [CC] / [VV] = a continuant of still greater duration
- D. $\overset{\sim}{[C]}$ / $\overset{\sim}{[V]}$ = a remarkably short continuant

II. Positional Diacritics

- A. $\underset{<}{[C]}$ / [V<] = fronted articulation
- B. $\underset{>}{[C]}$ / [V>] = retracted articulation
- C. [V_Λ] = raised position of articulation
- D. [V_ν] = lowered position of articulation
- E. $\underset{\wedge}{[C]}$ = dental articulation

III. Diacritics of Secondary Modification

- A. $\underset{\smile}{[C]}$ / $\underset{\smile}{[V]}$ = rounding of an unrounded phone or over-rounding of a rounded phone
- B. $\underset{\frown}{[C]}$ / $\underset{\frown}{[V]}$ = unrounding of a rounded phone or unrounded phone with remarkably wide lip spread
- C. $\underset{\cdot}{[C]}$ / $\underset{\cdot}{[V]}$ = retroflexion
- D. $\widetilde{[C]}$ / $\widetilde{[V]}$ = nasalization
- E. [C̣] = palatalization
- F. $\underset{\sim}{[C]}$ / $\underset{\sim}{[V]}$ = velarization or pharyngealization (noted marginally)

IV. Diacritics of Phonation

- A. $\underset{\circ}{[C]}$ / $\underset{\circ}{[V]}$ = unvoicing of a voiced sound (i.e., voiceless and lax)
- B. $\underset{v}{[C]}$ = voicing of a voiceless consonant (i.e., voiced and tense)

Figure 6. Summary of LAGS Diacritics

- C. [C'] = strong aspiration of a stop
- D. [C^h] = remarkably strong aspiration of a complete stop
- E. [C~] = unreleased stop
- F. [C̥] = False Voice, Whisper, False Whisper, Glottalization, or Laryngealization (noted marginally)

V. Diacritics of Tension of Superglottal Musculature

- A. [C̠] / [V̠] = remarkably tense, with forceful articulation
- B. [C̡] / [V̡] = remarkably lax, with weak or released articulation

VI. Syllabic Diacritic

- [C̩] = syllabic consonant

Figure 6. (Continued)

state phenomena, "and hardly any two adjacent periods of a vocoidal sound wave [have] exactly the same curve-form. But if the auditory impression of the same sound is conserved, these slight variations of sound structure have no real importance,"⁷¹ and the perceptually single phone may be termed a monophthong. If a sequence of vocoids is characterized by a perceivable gradual change (or glide) which is not interrupted by a pause or syllable boundary, the perceptually dual phones form a diphthong (which functions as a single vowel). Sequences of contoids and vocoids characterized by gradual, as opposed to abrupt, transitions may also be diphthongs. Diphthongs are written with two (or sometimes three) symbols; superior characters indicate weakly realized phones, irrespective of other factors. It should be noted, however, that "a sequence of two or more successive [vocoids] in the same syllable may or may not indicate a diphthong. . . . The complex is a diphthong only if the members are in some way distinguished by mandible or labial action...."⁷² Otherwise, the sequence of symbols represents an over-long monophthong. Contiguous contoids may retain their normal forms, "be grouped into an arresting or a releasing cluster by the dynamic displacement of one of them, . . . be fused by various adaptive changes, or . . . be separated by a glide."⁷³ While the scribe

⁷¹ L. F. Brosnahan and Bertil Malmberg, Introduction to Phonetics (Cambridge: Cambridge Univ. Press, 1970), p. 126.

⁷² Pederson, A LAGS Guide, pp. 54-55.

⁷³ Heffner, pp. 184-185. Heffner's discussion of speech sounds in context (pp. 163-230) is the basis for LAGS' notation of contoid sequences.

must be alert to these phonological processes, he is not involved in their phonemic interpretation (i.e., the grouping of contoid sequences into phonemes or their separation into clusters); he merely records each phone and any modification of it.

Prosodic notation is the third problem with which the LAGS' scribes must deal. "All LAGS notation of more than one syllable must indicate stress for every syllable. . . . All LAGS notation of more than one suprafix must indicate the terminal junctures that define those units. Pitch, however, is recorded only incidentally, when a distinctive pattern is observed. . . ." ⁷⁴ Stress, then is used to determine the syllabic composition of an utterance, pitch to designate abberant tonal patterns, and juncture to identify suprafixes. ⁷⁵

Prosodic notation, which is based on the system developed by Trager and Smith supplemented by conventions used by Gleason and Pike, is the only kind of EMIC notation which regularly appears in the protocols.

Finally, the scribe must recognize the provence of shift signs in LAGS. Rather than suggesting direction, shift signs in LAGS indicate specific positions, specific regions in the vowel quadrant or specific areas along the roof of the mouth. Figure 7 indicates how shift signs relate to space in the vowel quadrant.

All of the theoretical assumptions, field methods, and descriptive procedures detailed above are followed closely in this dissertation. The only departures from LAGS methodology involve the delimitation

⁷⁴ Pederson, A LAGS Guide, p. 56.

⁷⁵ Pederson, A LAGS Guide, p. 58.

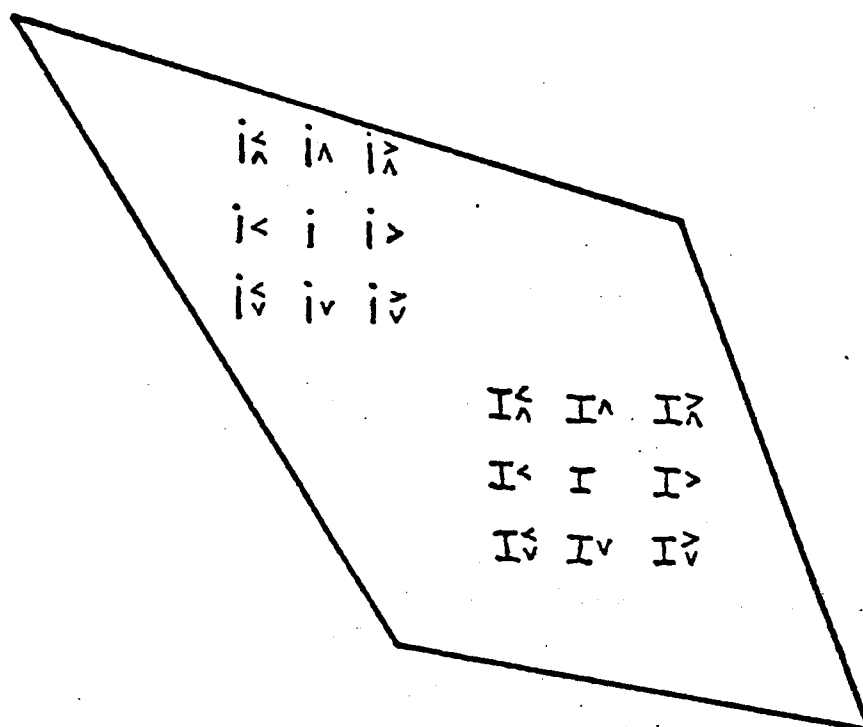


Figure 7. Specific Regions Indicated by Shift Signs in LAGS

Source: A LAGS GUIDE, p. 50

of the area and the density and type of coverage. The area treated here corresponds to no LAGS grid or combination of grids; rather, it covers portions of three grids--H, J, and BA (see Figure 3, page 37). The difference in area boundaries is the result of two things: differences in the socio-cultural and historical criteria used for delimitation and the differences in the aims of LAGS and this study. The purpose of this study, unlike that of LAGS, is not to study regional and social variation, but to construct a baseline phonology of the speech of a homogeneous group in a homogeneous area. Differences in purpose and in scope also account for the fact that the sample used here and the density of coverage vary from that in LAGS. Whereas LAGS seeks to gather information about the English of natives of all ages and social groups in an eight-state region, this study deals only with white Type IA informants over 65 in a six-county area. There are six LAGS field records of Type IA informants--one from each county--from the area under consideration. The six-county area includes 11,892 people (in 1970) over 65, but no figures on how many of these are natives or have less than an eight-grade education are available. However, a conservative estimate of the density of coverage is about one interview per 1500 people. The use of six informants from a limited population, then, allows for comprehensive phonological analysis without sacrificing density of coverage.

1.7 Phonological Framework

The analysis which follows is based on David Stampe's natural phonology,⁷⁶ the central tenet of which is his distinction between phonological processes and phonological rules. According to Stampe, a process is a "mental operation that applies in speech to substitute, for a class of sounds or sound sequences presenting a specific common difficulty to the speech capacity of the individual, an alternative class identical but lacking the difficult property."⁷⁷ Although these operations are mental, they are motivated by the physical character of sounds: substitutions involve sounds with physically definable connections. Rules are also operations which substitute one sound or sound sequence for another, but rules, unlike processes, are learned operations--conventions which are historically motivated. Processes are reflexes of restrictions on the vocal tract; rules, on the other hand, are acquired

⁷⁶ The most complete account of natural phonology is Stampe's dissertation, "How I Spent My Summer Vacation." Stampe's "The Acquisition of Phonetic Representation," CLS, 5 (1969), pp. 443-454, details the relationships between natural phonology and language acquisition and provides a concise theoretical summary of natural phonology. Peter Christian Bjarkman's "Toward a Proper Conception of Processes in Natural Phonology," CLS, 11 (1975), pp. 60-72 clarifies the terms process and rule and the relationships between the various kinds of processes. For an account of some paradigmatic processes, see Patricia D. Miller, "Bleaching and Coloring," CLS, 9 (1973), pp. 386-397, and "Some Context-Free Processes Affecting Vowels," Ohio State University Working Papers in Linguistics, 2 (1972). A number of papers dealing with various aspects of natural phonology have been collected in Anthony Bruck, Robert A. Fox, and Michael W. LaGaly, eds., Papers from the Parasession on Natural Phonology (Chicago: Chicago Linguistic Society, 1974). Although working within a different theoretical framework, Neilson V. Smith, in The Acquisition of Phonology: A Case Study (Cambridge: Cambridge Univ. Press, 1973), arrives at a number of conclusions similar to those of Stampe.

⁷⁷ Stampe, "How I Spent My Summer Vacation," p. 1.

behavior. Because of their physical motivation, processes always have phonetic environments and are constraints on pronounceability.⁷⁸

Likewise, because of their physical motivation processes operate on classes of sounds, and while optional, they apply more generally when the sounds involved are physically difficult. Finally, processes apply most frequently in informal contexts. Rules, unlike processes, have abstract environments, do not constrain pronounceability, and serve grammatical or morphological functions. In addition, rules may make radical substitutions--ones which involve sounds with no physically definable connection--and are never optional once they are learned. The distinction between processes and rules, then, is "a distinction between constraints which the speaker brings to the language and constraints which the language brings to the speaker. . . ."⁷⁹

Some examples should clarify the distinction between rules and processes. The vowel alternation in sane/sanity and the consonant alternation in electric/electricity are examples of phonological rules. The substitutions are learned, not phonetically motivated, and they are never optional once they are learned. The nasalization of vowels before nasal consonants and the deletion of /d/ and assimilation of /n/ to /m/ in sandwich are examples of processes. All three changes are phonetically motivated: they serve to simplify a difficult series of articulatory movements. All three processes are optional and are optimal in informal speech.

⁷⁸ See Bjarkman, pp. 63-68.

⁷⁹ Stampe, "How I Spent My Summer Vacation," p. 45.

Processes are of two types, distinguished according to function. Paradigmatic processes are context-free. They are responses "to the inner complexities of single segments"⁸⁰ and apply without regard to the environments in which segments occur. Syntagmatic processes, on the other hand, are context-sensitive--responses to "complexities of sequences of segments."⁸¹ Dissimilative processes and processes which serve to maximize the perceptual distinctiveness of vowel systems are examples of paradigmatic processes. Assimilation and consonant reduction--processes which simplify the difficulties of sound sequences--are examples of syntagmatic processes. Because they apply to individual segments without regard to sequences of sounds, paradigmatic processes usually govern underlying representations, whereas syntagmatic processes most often govern surface (or phonetic) representations. As a result, paradigmatic processes are usually ordered prior to syntagmatic ones.

As a consequence of the characteristic ordering of processes, "the underlying representations [in natural phonology] are basically phonemic, with 'morphophonemes' . . . included in individual morphemes whose alternants require them."⁸² Phonemes are taken to be identical

⁸⁰ Stampe, "How I Spent My Summer Vacation," p. 20.

⁸¹ Stampe, "How I Spent My Summer Vacation," p. 21.

⁸² Stampe, "How I Spent My Summer Vacation," p. 28. Stampe's view of underlying representation differs markedly from the view of generative phonologists, who argue for an abstract level of underlying representative. See, for example, Stephen R. Anderson, The Organization of Phonology (New York: Academic Press, 1974); Chomsky and Halle; and Michael Kenstowicz and Charles Kisseberth, Topics In Phonological Theory (New York: Academic Press, 1977). However, Joan B. Hooper, in An Introduction to Natural Generative Phonology (New York: Academic Press, 1976), argues for a more concrete level of underlying representation.

with surface forms unless prevented from underlying representation by "their alternants or by a general process. . . . This means that all underlying segments are fully specified as to their underlying phonetic features."⁸³ Phonemes "are ontologically of the same status as any segment in surface representation: they are mental representations of sounds which are, at least in principle, pronounceable."⁸⁴ Every language, then, has an inventory of phonemes available to its speakers.

While paradigmatic processes precede phonemic representation, syntagmatic processes may apply prior to or after phonemic representation.⁸⁵ Syntagmatic processes which occur prior to phonemic representation are called morphophonemic processes. Morphophonemic processes serve to neutralize underlying (or phonemic) distinctions. Syntagmatic processes which occur after phonemic representation are called allophonic processes. Unlike morphophonemic processes, allophonic processes do not neutralize underlying distinctions; rather, they create sounds which do not occur in underlying representations. The substitution of /d/ for /z/ in isn't and wasn't is a morphophonemic process since an underlying distinction is neutralized. The nasalization of vowels

⁸³ Stampe, "How I Spent My Summer Vacation," p. 36.

⁸⁴ Stampe, "How I Spent My Summer Vacation," p. 33. Stampe's view of the phoneme, and the one I assume in the rest of the dissertation, is mentalistic. Edward Sapir provides evidence for this view in "Sound Patterns in Language," Lang., 1 (1925), pp. 37-51, and in "The Psychological Reality of Phonemes," in Selected Writings of Edward Sapir, ed. D. G. Mandelbaum (Berkeley, Calif.: Univ. of California Press, 1949), pp. 46-60.

⁸⁵ Bjorkman, p. 64.

before nasal consonants is an allophonic process: because nasalized vowels are not phonemic, no underlying distinction is neutralized.

Just as paradigmatic processes are typically ordered prior to syntagmatic processes, rules are usually ordered before processes. Although paradigmatic processes apply prior to syntagmatic ones, processes do not apply in a fixed linear order. "Rather they seem to apply whenever the configurations they would eliminate arise."⁸⁶ Further, processes may apply iteratively--more than once in the same derivation. Nevertheless, processes do occur sequentially rather than simultaneously. Figure 8 summarizes the relationships between rules, the various types of processes, and the various levels of representation.

There are a number of advantages to using natural phonology as a model in the analysis of dialects. First, because it is a process model (unlike taxonomic phonemics), natural phonology is capable of handling allophonic overlap in phonemes. For example, Grace S. Rueter has pointed out that vowel nasality may function as an allophone of /m/, /n/ and /ŋ/ and as a sandhi form of certain auxiliary verbs as well as a non-distinctive modification of vowels.⁸⁷ As a result, taxonomic phonemic systems cannot deal with vowel nasality: nasality would have to be posited as an allophone of several phonemes, and the distributional criteria for phonemes would be violated. Because natural phonology does not view substitutions as primitive, the various

⁸⁶ Stampe, "How I Spent My Summer Vacation," p. 57.

⁸⁷ "Vowel Nasality in the Speech of Rural Middle Georgia," Diss. Emory University, 1975, pp. 27-33.

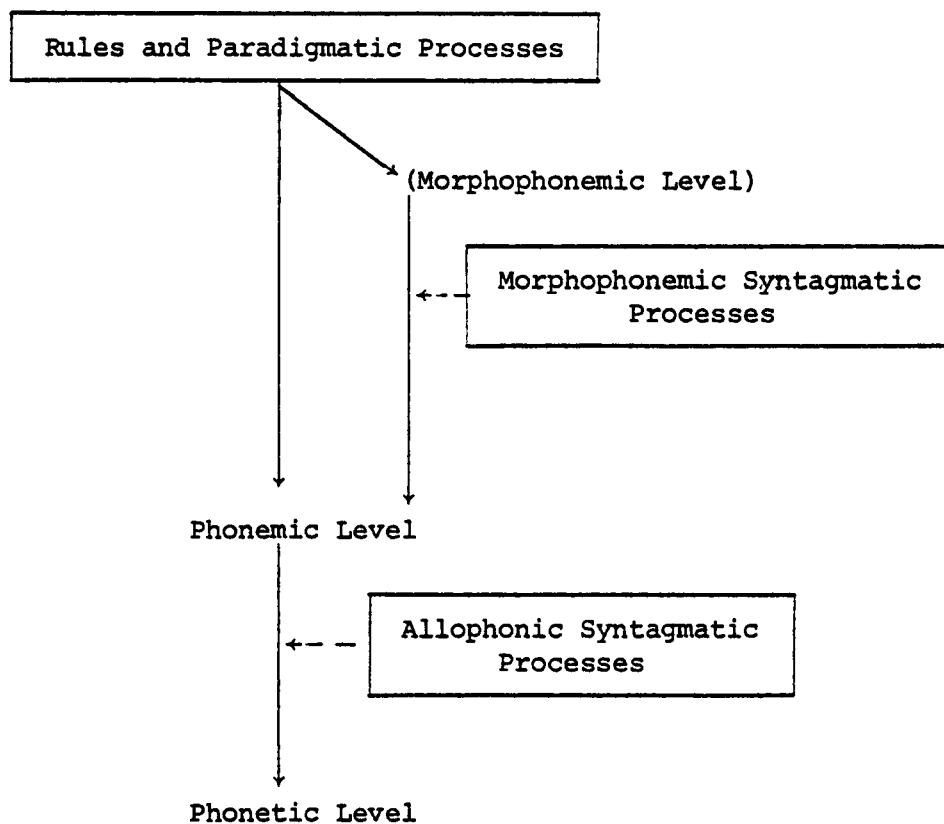


Figure 8. Schematic Representation of Natural Phonology. Levels of representation which are not necessary for every word are placed in parentheses.

types of vowel nasality would be treated as reflexes of the interrelations of different processes. Hence there would be no allophonic overlap in phonemes. Secondly, natural phonology is useful in the analysis of dialects because its emphasis on the phonetic motivation of processes allows for the explanation of sound patterns.⁸⁸ Thirdly, because it recognizes the phonemic rather than an abstract level as the usual level of underlying representation (unlike generative phonology), natural phonology posits underlying forms which are psychologically real (or at least forms whose psychological reality can be tested). As Stampe points out, the evidence from language acquisition, slips of the tongue, and the formation of alphabets suggests that the phonemic level is psychologically real. On the other hand, there is no evidence which suggests that abstract phonemes are anything more than artifacts of phonological analyses.⁸⁹ Finally, because of its insistence on a phonemic (rather than an abstract) level of underlying representation, its insistence on an inventory of phonemes, and its insistence on the distinction between morphophonemic and allophonic syntagmatic processes, natural phonology allows for studies which are comparable with existing studies in linguistic geography.

There are, however, some disadvantages to using natural phonology as a model in the analysis of dialects. First, it offers no apparatus for dealing with the large range of allophones of some phonemes which

⁸⁸ For a discussion of phonological explanation, see John J. Ohala, "Phonetic Explanation in Phonology," in Bruck, Fox, and LaGaly, pp. 251-274.

⁸⁹ See Stampe, "How I Spent My Summer Vacation," pp. 36-37.

either have no apparent phonetic explanation or have non-linguistic motivations. For example, Pederson has noted that vowel nasality, in addition to its other roles, may function as a paralinguistic feature occurring in the following stylistic contexts: "1) intimacy, 2) playful humor, 3) doubt or uncertainty, 4) emphasis, 5) sarcasm and 6) mild disapproval or disgust."⁹⁰ Natural phonology has no way of dealing with substitutions which have paralinguistic functions. Secondly, some terms used in natural phonology need clarification. For instance, Ohala asks what it means "to 'order' one innate physiological constraint after another."⁹¹ Clearly, physiological constraints would not be ordered in the same way as neurological instructions. However, the sense in which physiological constraints are ordered is not at all clear.

In spite of these weaknesses, natural phonology seems to be a most useful phonological model for the analysis of a dialect. It accounts for a larger part of the data than other models do, it offers explanations for many of the sound patterns, it posits underlying levels of representation which have psychological reality, and it permits studies which are comparable with other work in linguistic geography.

⁹⁰ "Structural Description in Linguistic Geography," p. 22.

⁹¹ Ohala, p. 271.

1.8 Scope and Organization of the Phonological Analysis

The phonology which follows has been restricted in three ways. First, suprasegmentals and phonological units larger than the word have not been dealt with: the phonology is a word-level, segmental phonology. Secondly, the phonotactics have been limited to the phonotactics of monosyllables. Thirdly, rules and paradigmatic processes have not been treated: the discussion of processes has been limited to syntagmatic processes.

The phonological analysis is divided into three parts. The first part, Chapter II of the dissertation, summarizes the phonetic data. The second part, Chapter III, outlines the phonemic structure of the dialect. Chapter III is in the form of a routine technical statement and consists of three parts: an inventory of the phonemes, an account of the phonotactics of monosyllables, and an account of the incidence of phonemes. The third part of the phonology, Chapter IV, is an account of the syntagmatic processes.

The phonemes were established through comparison of the data in the idiolect synopses which make up Chapter II. The procedures in Pike's Phonemics were followed as closely as possible. The method of establishing phonemes used in this dissertation points up the chief weakness of using linguistic atlas findings in phonological analysis: atlas worksheets are not constructed to elicit minimal pairs. Nevertheless, the abundance of comparable phonetic data makes phonological analysis quite feasible.

Finally, a unitary interpretation of the vowel phonemes has been adopted here. Binary interpretations require fewer vowel phonemes and

provide pattern congruity; however, they run counter to phonetic facts.⁹² Lehisle has provided experimental evidence which shows that the offglides in complex nuclei cannot be identified with /j, w, h/.⁹³ In addition, as Kurath has noted, in binary interpretations the identification of vowels in complex nuclei is highly arbitrary, monophthongal vowels in words such as beat and goat receive inadequate treatment, and the semi-vowels posited as the second segments in complex nuclei sometimes violate principles of co-articulation and fail to show patterns of distribution of separate phonemes.⁹⁴ Furthermore, Pike provides psycholinguistic evidence which suggests that the complex nuclei [ɪⁱ], [ʊ^u], [e^ɪ], and [o^ʊ] are not parallel to the true diphthongs /ai/, /au/, and /ɔi/.⁹⁵ There are two additional reasons for adopting a unitary interpretation of vowel phonemes here. First, the presence of monophthongal /ai/ in the folk speech of the northern part of the Cumberland Plateau would require the introduction of an additional phoneme and hence destroy the pattern congruity of a binary interpretation

⁹² The most influential binary interpretations are those of George L. Trager and Henry Lee Smith, An Outline of English Structure (Norman, Okla.: Studies in Linguistics, Occasional Papers 3, 1951) and Bernard Bloch and Trager, Outline of Linguistic Analysis (Baltimore: Linguistic Society of America, 1942).

⁹³ Ilse Lehisle, Acoustical Characteristics of Selected English Consonants, Publication 34 of the Indian University Research Center in Anthropology, Folklore, and Linguistics (Bloomington, Ind.: Indiana University Press, 1964).

⁹⁴ Hans Kurath, "The Binary Interpretation of English Vowels," Lang., 33 (1957), pp. 111-122.

⁹⁵ Kenneth Pike, "On the Phonemic Status of English Diphthongs," Lang., 23 (1947), pp. 151-159.

such as that of Trager and Smith.⁹⁶ Secondly, because natural phonology emphasizes phonetic motivation and underlying forms which are as close to surface realization as possible, a unitary interpretation of vowel phonemes seems to be better motivated theoretically.

⁹⁶ Cf. James H. Sledd, "Review of George L. Trager and Henry Lee Smith's *An Outline of English Structure*," Lang., 31 (1955), pp. 312-335.

CHAPTER II

THE PHONETIC DATA

2.1 Rationale and Plan for the Idiolect Synopses

The purpose of this chapter is to summarize the phonetic data used in the phonological analysis in Chapters III and IV. In accordance with that aim, the data summary which follows attempts to illustrate the phoneme inventory, the range of allophones for each phoneme, the phonotactics of monosyllables, and the syntagmatic processes affecting phonemes in the folk speech of the northern part of the Cumberland Plateau.

In order to insure a summary which is systematic and representative but which does not obscure idiolectal structure, the data is presented in the form of idiolect synopses constructed for each informant. The synopses are presented in full and in the same order in which the counties are listed in the tables in Chapter I. (That is, the synopsis of the Campbell County informant is listed first, the synopsis of the Claiborne County informant second, and so on.) Each synopsis is divided into five sections. The first section identifies the informant, the informant's place of residence, sex and age, the field-worker and the scribe, and the length of the interview. The second section is a vowel synopsis which gives target words with examples of each vowel phoneme in five environments: before a voiceless obstruent, before a voiced obstruent, before a nasal, before an oral-lateral continuant, and before an oral-rhotacized continuant. The following

criteria were used in the selection of target words for the vowel synopsis. First, the words had to be LAGS worksheet items. Secondly, place names, animal calls, animal noises, and grunts of affirmation, negation, and hesitation were eliminated from consideration. Thirdly, target words had to have stable phonemic structures: words with known regional, social, or idiolectal variants were avoided. Furthermore, when any target word had a variant stressed vowel (that is, when it did not illustrate the phoneme which it was supposed to illustrate), another word was substituted for it. Fourthly, in the case of multiple pronunciations (that is, of pronunciations with different allophones of the stressed vowels), forms which illustrated allophones not recorded elsewhere were used. Finally, monosyllabic words were given preference over those with more than one syllable. When the above criteria had been met, preference was given to words which illustrated consonant phonemes not present in other words in the synopsis, and when that criterion had been met, preference was given to words which illustrated initial and final consonant clusters. As a result, most of the vowel synopses contain all of the consonants except /ð/, and while the number of consonant clusters present varies, there are typically a dozen or so. Whenever a target word was not recorded in either the protocol or the field record, another word was substituted for it in the vowel synopsis. Every effort was made to illustrate all of the vowel phonemes in each of the five environments. Both the target words and the substitutions are given in Appendix D.

Consonant phonemes and allophones of consonant phonemes which are present in the protocol but not recorded in the vowel synopsis are

listed and illustrated in the third section of the idiolect synopses. Likewise, initial and final consonant clusters not recorded in either the vowel synopsis or the list of additional consonants but present in the protocol are listed and illustrated in a fourth section. Finally the fifth section of the idiolect synopses records phoneme alternations present in the protocol but not recorded elsewhere. Each alternation is listed under one of four rubrics: deletions, epentheses, substitutions, and metatheses. The lists of alternations are comprehensive (at least in terms of the alternations present in the protocols), but in the cases of the substitution of /n/ for /ŋ/ in unstressed -ing forms and the deletion of the final consonant in contractions such as wouldn't and don't, only representative examples are given. These alternations are so common in the folk speech of the northern part of the Cumberland Plateau that to list every example would be uneconomical and would provide no additional phonological information. In a few cases pronunciations involve more than one kind of alternation--usually deletion and either substitution or metathesis. In these cases, the pronunciations are listed under either substitution or metathesis.

Although the idiolect synopses are designed to summarize the data used in the phonological analysis, the synopses, of course, cannot include all of the phonetic evidence used in the analysis. The data are almost thirty hours of tape-recorded speech; the synopses are abstracts of that data, each synopsis being an abstract of an idiolect. Furthermore, although the idiolect synopses make use of phoneme symbols, the synopses are not phonological analyses of idiolects; rather, they are presentations of data which make no phonological assumptions. The phoneme symbols are simply convenient rubrics used in the organizing

of the data. My procedure was to adopt the phoneme symbols used in Kurath's and McDavid's The Pronunciation of English in the Atlantic States and use them to label categories of similar phones. The phonemic interpretation of these categories is undertaken in Chapter III.

The field records of which the idiolect synopses are abstracts were made by three different fieldworkers and transcribed by two different scribes. As a result, there are some differences in the ways in which the data were obtained, and there are slight differences in scribal practices. Two of the field records were made by Barbara Rutledge, the principal LAGS fieldworker, two of them were made by Lee Pederson, director of the LAGS project, and two of them were made by the author, also a LAGS fieldworker. Both Rutledge and Pederson follow the work sheets closely, and most items recorded in the protocols of their field records are elicited responses. Bailey's records contain more free conversation, and as a result, many of the items recorded in the protocols of his field records occur in free conversation.

All of the field records were transcribed by either Pederson or Bailey. Although Bailey is a LAGS scribe and was trained by Pederson, there are still slight differences in their transcriptions. These differences result from differences in the experience of the scribes and in the phonetic norms of the scribes. Pederson is by far the more experienced scribe; as a result, his transcriptions include more phonetic detail and show a finer discrimination of sounds. Bailey's phonetic norms are a half a step higher than Pederson's, and Bailey's back vowels--especially his high back vowels--tend to be more centralized. Thus Bailey's transcriptions are occasionally a shift sign

lower and, in the case of back vowels, a shift sign further back than Pederson's. Usually, the differences in phonetic norms are obvious only in the transcription of /au/. For example, what Pederson transcribes as [æ^{vo}<], Bailey transcribes as [a^ʷ]. The differences which result from fieldwork and scribal practices are not significant enough to cause problems in phonemic interpretation, and any lack of internal consistency in the data is more than compensated for by the fact that similar data from different fieldworkers and scribes suggests that regularities in the data are not merely artifacts of the methodology or of the perceptual skills of the author.

2.2 The Idiolect Synopses

Each target item in the vowel synopses was recorded under primary stress [ˈ] unless otherwise indicated. A line drawn in place of a target word means that no example of the phoneme in that environment was found in the protocol. Finally, additional consonants and consonant clusters are listed alphabetically; phoneme alternations are listed in the order in which they occur in the protocols.

Informant 1: Cove Creek, Campbell Co.; Male; 80
Fieldworker: Pederson; Scribe: Pederson; 4 hours

	<u>Vl.</u> <u>Obstruent</u>	<u>Vd.</u> <u>Obstruent</u>	<u>Nasal</u>	<u>/l/</u>	<u>/r/</u>
/i/	$\text{p}_{\text{I}} > i > st$	$si > i > d$	$griz > i > nbiz > n$	$fi > \cdot \partial \chi d$	
/ɪ/	$s_{\text{I}} > ks$	$k_{\text{r}} > \text{I} > \cdot \partial b$	$p'_{\text{I}} > \tilde{n}$	$hi > \cdot \partial \chi$	$b_{\text{I}} > \cdot \partial d$
/e/	$e > \text{I} t$	$re > \text{I} zd$	$stre > \text{I} n \tilde{a} n$	$re > \text{I} \partial \chi$	
/ɛ/	$n \epsilon \wedge \partial k$	$re > \partial d \equiv f$	$t' \epsilon \tilde{s} \partial n$	$tw \epsilon > \partial v$	$s k \epsilon > \partial s$
/æ/	$q \tilde{x} \wedge \cdot \epsilon s \tilde{e} z$	$k' \tilde{x} \wedge \cdot \epsilon b \tilde{e} dz$	$h \tilde{x} \wedge \cdot \epsilon n$	$v \tilde{x} \wedge \cdot \epsilon / \tilde{e} \tilde{n}$	$m \tilde{x} \tilde{s} \cdot \epsilon \partial z$
/a/	$k_{\text{r}} a > \partial p$	$ga > \cdot \partial d$	$va > \cdot \partial m \tilde{a} k$	$k' a > \cdot \partial / \tilde{e} dz$	$k' d < \cdot \partial$
/ɜ/	$t f \partial \cdot t f$	$\theta \partial \cdot d$	$re \wedge \partial d w \partial \cdot m z$	$q \partial \cdot \partial \chi$	$w \partial \cdot \partial r \tilde{e}$
/u/	$t' \tilde{u} \theta$	$d_{\text{I}} \tilde{u} z$	$w \tilde{u} > \partial n^d$	$m_{\text{I}} \tilde{u} \chi z$	
/ʊ/	$p' \tilde{u} < \partial f$	$w \tilde{u} < \partial d$		$p' \tilde{u} < \partial \chi$	$p' \tilde{u} \cdot \partial \chi$
/ʌ/	$m \tilde{u} < \partial f$	$h \tilde{u} < \partial z b \tilde{n}$	$w \tilde{u} < \partial n$	$h \tilde{u} \tilde{s} \partial \chi$	
/o/	$k' o < \partial t$	$ro < \partial d$	$ho < \partial m$	$k' o < \partial \chi d$	$h o \cdot \partial s$

/b/ /bʊ.ɔɪs buʌʔdɔɪɔŋ /bɔ.ɔŋ sbʌʔʔt hɔʌɪs.
 /aɪ/ hwa>ɛt fa>ɛv na>ɛn ma>ɛʔz fa>ɛɪ
 /au/ hæ>ɛs klaʌ.ɛdz da>ɛn skriʔkæ>ɛʔt flaʌ.wɪ
 /ɔi/ hɔɪɛst pʔɔʌzɪŋ dʒɔɪnts ɔɪ.ɔʌʔ

Additional Consonant Phonemes and Allophones:

/d/ stɛʌdʔɪ

/f/ fɔʌʔqɛ

/l/ bɔʌvɛstɪ

/r/ rɛ>ɔd

/s/ sɔʔspeɛndɪz

/t/ θɪʔtɛ ; qɛʔtʔɪ ; qɪʔtɪɪz ; kʌʔtɛɪdz

/z/ hɛʔzɪz

/ʃ/ ʃɪ>s ; ʃɪ>ɪ

/ŋ/ drɪŋk

Additional Consonant Clusters:

<u>Initial</u>	<u>Final</u>
/b/ b) ʌ t̃ ɛ f ʃ	/bd/ st a > bd
/bl/ bl o < ʊ d	/bz/ na > ʌ bz
/br/ br ʊ m z	/dz/ ʃ e > ɛ dz
/f/ f) ɪ < ʌ r ʃ	/fs/ k l ɪ > ʌ fs
/fr/ fr ʊ o v st	/ft/ l ʊ > ʌ ft
/g/ g) a > ʌ d i > n	/gz/ h ʊ > ʌ gz
/k/ k) ʌ < ʌ t̃ ʃ	/kt/ ʃ a > kt
/kw/ kw ʌ < ʌ t̃ ʃ	/lb/ b ɪ > ʌ lb
/n/ n ɛ t̃	/lk/ m ɪ > ʌ lk
/p/ p) ʌ < n ɛ	/lp/ h ɛ > ʌ lp
/pl/ pl ʌ < ʌ z	/lvz/ ʃ ɛ < ʌ s ɛ < ʌ ʃ v z

/pr/ pɾaɪ̯ɸd

/md/ Klaɪ̯ɛmd

/sl/ slaɪ̯.əp

/nt/ eɪ̯ɛnt

/sm/ smouɪ̯.ɸk

/nz/ bɔɪ̯nz

/sn/ sneɪ̯ɛkǎn

/nč/ bæɪ̯ɛntʃ

/spl/ draɪ̯ɛspeɪ̯.əɸ

/ps/ tʰɔɪ̯.nɛps

/spl/ splɪ̯ɪ̯t

/pt/ hɛɪ̯.əpt

/spr/ spreɪ̯ɛŋkɪ̯

/sk/ hɪ̯ɪ̯.əsk

/str/ straɪ̯.əp

/ts/ ɣouɪ̯ɸts

/sw/ swɪ̯ɪ̯.ŋ

/vz/ dɛɪ̯ɪ̯.vz

/ʃr/ ʃrɪ̯ɪ̯.ŋk

/jɔ̯/ blaɪ̯.ɛdʒd

/tɪ/ tʰɛɪ̯b

/ʃt/ θræɪ̯ɛʃt

/θr/ θrɪ̯ɪ̯.iɪ̯

Phoneme Alternations:

Deletions

twε' ñ

θa^·əzñ

fr·s

e>Ép̃

ɔεó'q̃s

sε>əpté'm̃

sɛ·'ɛd̃t̃

wn<t

æ'εt̃

o<·t̃

ɟæ·r̃

lɔ·ɔ^f

Substitutions

sε>'əbm̃

ə|ε>'əbm̃

sε>'əṽñd̃

f_I>'əf^t

sε>'əṽñt̃

na>'n^t

s_I>'ək^t̃

mɔ^·ɛñēn

b̃h̃a>'ēnñēdóṽ

I>'n n_I>'ə̃s

be>'εk̃ñ

ɟæ'εnñ

e>ɛ̃n ʒe>ɛ̃ʒ

p'o<ɤst

ɲæ'ɛ̃ñ

do<ɤn

grɑ>:ɛ̃ñ

wn'əz̃ñ

ɔ̃ɔ̃ʔw̃e>ɛ̃

ɑ̃rɑ̃'ɤ̃ñ

læ'ɛ̃ñ

fɪ>əʔz̃

sæ'ɛ̃ñ

nn'əθ̃ñ

ba'ɤ̃t̃

o<ɤp̃m̃

p̃ate>ɛ̃d̃z̃

dε>əst

æ'ɛ̃st̃

Epentheses

twɑ>ɛ̃st̃

wn'ənt̃st̃

hɛ'ə̃mb̃ərẽṽl̃ə̃

k'æ'ɛ̃st̃ərə̃>ɛ̃t̃ɛ̃d̃

hɪ>t̃ (it̃)

ba>ɛ̃j̃ñ

ɔ̃ʔt̃ə̃

dʒɛ'ə̃ñər̃ʔ̃

āk'ā'ʰn

nɛɪ græzʰn

sɛ>ak̃

ʃɛ>ɪsɛ>əvz

hɪ>əz sɛ>əf

p'æzʰnz

p'æzʰn

p'n<əgk̃z

mɔv⁰z

græ^'ɛnpæ^'ɛr̃z

æ'ɛmāl̃ts

æ^ɛst (pret.)

θɔo<ʰw̃ɪ n<əp

le>ɛj̃ɪ æzʰt

Metatheses

hn<nd̃ɪt

hn<ənd̃ɪd

p'ɪt̃ɛ

Informant 2: Little Sycamore, Claiborne Co.; Male; 80
Fieldworker: Pederson; Scribe: Pederson; 5 hours

	<u>Vl.</u> <u>Obstruent</u>	<u>Vd.</u> <u>Obstruent</u>	<u>Nasal</u>	<u>/l/</u>	<u>/r/</u>
/i/	ɪˈɪst	sɪˈɪd	ɡɾɪˈɪnbɪˈɪnz	fɪv.ɪˈɪ/dz	
/ɪ/	hwɪːp	kɾɪb	tˈɪˈɪn	hɪˈɪʔ	bɪˈɪ.ɾd
/e/	eɪt	reɪz	streɪˈɪnən	pˈeɪ/ɪz	
/ɛ/	nɛˈk	ɾɛdɛʃɛz	tˈɛˈɪn	tweɪv	skˈɛsɾs
/æ/	ɡlæˈɛs	bæˈɛɡ	hæˈɛn	væˈɛʃɛˈɪ	mæˈɛ.ɾ
/a/	kɾaːp	ɡaːd	pˈaːˈɪm	kˈaːʃɛdʒ	kˈaː.ɾ
/ɜ/	tʃnˌɪtʃ	θɾd	ɾɛˈdʷɪˌmz	ɡɾɪʔ	wɪˈɪ
/u/	tˈuθ	fʊˌuˌd	wɾɛusɪn	mɪʔɪz	
/ʊ/	pˈʊˌf	wʊˌd		pˈʊˌʔ	ʃʊˌɾ
/ɪ/	mɪˈɪʃ	hɪˈɪzɪbɪ	wɪˈɪn	hɪˈɪʔ	
/o/	kˈoˌuˌt	ɾoˌuˌd	hʊˌvɪˌm	kˈoˌʔ	hʊˌvɪˌs

/b/ bɔːns dɔːŋ gɒn sɒkt hɔːrs

/aɪ/ raɪt faɪv naɪn maɪ

/aʊ/ hæʊs k/aʊdɪ/ dæʊn æʊl

/ɔɪ/ ɔːstɔːz p'ɔːzɪ dʒɔːnts ɔːt

Additional Consonant Phonemes and Allophones:

/l/ bʊˈɪfrəːgz ; dræˈspɛʃl

/r/ ~ /ɹ/ θɹi ; ɹɪˈsɪʃ ; frɪˈz ; stɹəp

/t/ dɒˈstɹ ; mæˈntɪʃ

/θ/ sθɪˈtiːn

/ŋ/ swɪŋ

Additional Consonant Clusters:

Initial

/b/ bɪˈrɔːz

Final

/bd/ stæˈbdɪt

/b/ blɛu

/bz/ kɾo' dæ'bz

/br/ brʊ'ɔ̃m

/ft/ bɔ'ɔ̃n lɔ'ft

/d/ dɛɛz

/ks/ sɪks

/h/ hɟu'mə̃

/ld/ sɪ'ild

/k/ p'ə̃kɟu'ɔ̃l,ɔ̃

/lk/ mɪ'ə̃ɣklə'ɔ̃t

/kw/ kwæɔ̃.ɔ̃

/lks/ sɪ'ə̃ɣks

/ŋ/ nɛɛ

/lm/ k'a'ə̃lm dæ'ɔ̃n

/p/ pɟu'ɔ̃nɪ̃

/lts/ kwɪ'ə̃lts

/pl/ pɟn'ɔ̃ndɔ̃

/lɟd/ bɪ'vɣdɟdæ'ɔ̃t

/pr/ pɾɪ'tɛ̃gɪ'ɔ̃d

/mpl/ pɾɪ'ə̃mpɾ'ɔ̃p

/skr/ skwa'ɔ̃.ɔ̃

/ns/ p'ɛ'ɔ̃'ɲs

/sl/ sɫa'p bɪ'ɔ̃kɛ̃t

/nt/ eɛnt

/sm/ smɛ'ə̃ɣz

/nθ/ nɔ̃.nθ

/sn/ sneɪkt

/nj/ tʃeɪndʒɪm

/spr/ sprɛɪŋhæʊs

/nʃ/ bræʊntʃ

/sr/ sɪrɪŋk

/ps/ tʃɪʌps

/tj/ tʃeɪzdi

/pt/ hɛʌpt mæsɛʌf

/tr/ træʊzɪz

/sk/ dɪʌsk

/ʃr/ ʃɪrɪŋk

/ts/ blæʊk pʌʌts

/vz/ ʃæʊz

/zd/ ɡɪʌzɪt

/ʃt/ wɔʌstæʌtpʌɛs

/ʃt/ pʌʌtʃt

/ŋks/ θɪŋks

/ŋkt/ blɪŋkt

Phoneme Alternations:

Deletions

/ε'ṽ/

wəz̃m'izi>

p'o<v<st (pl.)

θ~~u~~

bɹ'<ñ/z

p'æo<n

fɪʔs (sing.)

jæ'εñ

fjū'ñx

æ'εst (pret.)

mɔʊs (pl.)

səp'ε'ndʒz

Substitutions

sε'>b̃m̃

twε'nñisε'ṽ

sε'>b̃ñt̃ɪ'

sε'k̃ñt

dεʔst (sing.)

dεʔst (pl.)

fɪʔf

sε'b̃m̃f

ʃp'ε's̃fā.ān

b'nñk'a>b

bæ'ε'b̃d̃ɛs

nɹ'θ̃

tʃɪldɛ̃n

draːˌɔ̃n ræˌɛg

wɔːvɪn

Epentheses

hɪˌɔ̃z sɛˌɔ̃f

wɪˌnɪst

ʒɛˌɔ̃z sɛˌɔ̃vz

twɔˌst

sɛkʏ k'ɪˌɔ̃tɪ

heɪˌnɪtɪ

hɛˌɔ̃p, ɔ̃sɛˌɔ̃f

ɪtˌt'æˌɛnt

wɪˌdɪ k'ɪˌɔ̃z

tɪˌbɔft

swɪˌɔ̃nɪʃ

kæˌɛstɛrɛˌɛtɔ̃m

bɛˌɔ̃s mæˌɛn

rɔvˌsɪ ɪˌɔ̃z

bɛˌɔ̃s lɛˌɛdɪʃ

ɔˌɔ̃fɪt

bæˌɛkɔ̃ (tobacco)

aˌθɛrɔ̃ˌtɛs

vɛˌdʒbɪˌz

sɪˌmɪt

fɔvɪ (before)

mɪˌnɪnɛ

má'kñ (American)

w d > x f

pè'ndēsá.dēs

b'x f a

x^εst (pret.)

Metatheses

lā'bxē

/ɔ/ dɔɔɔtʃ dɔɔɔg ɡɔɔvɔn sɔɔɔtʃt hɔɔɔs

/aɪ/ rɑ.t fɑ.v nɑ̃.n a.ɪ

/aʊ/ hæ.ɔs kʌɔɔdz dɔɔɔn skrɪˈtʃɔɔtʃ

/ɔɪ/ ɔˈɪstʃɔɔz pˈɔɪzɔɔn dʒɔɔvɔntʃ ɔɪ.ɔk

Additional Consonant Phonemes and Allophones:

/d/ ɡʊdˈnɑ.t

/h/ ˈhʊɔfs

/l/ skɪˈlɛt ; kˈoʊˈwɒnɛkɛt

/r/ ɡrɪˈɔts ; θɪoɔvɛt

/t/ sɪtˈɪrɪʊm ; dɪˈɔn ; kˈɑːtʃɛdʒ ; wɑːtʃɪmɛˈɪn

/w/ sˈwɛɪk

/z/ ɛˈntrɪz

/s/ sˈræɪk

/z/ me'ɛ̃zũ<ɾ

/ʒ/ ʒɪs̃jɪ̃<ɾ

Additional Consonant Clusters:

Initial

/b/ b, ʔu'dɛf̃

/bl/ blo<ɾ<d

/br/ brñz̃ɛ̃z̃

/d/ dɛu

/dr/ drã

/f/ f, ʔu'r̃ãl̃

/fr/ frɔ̃ɾɪst

/g/ g'ɪɾz̃

/h/ h, ʔu'ɛ̃m̃ɾ̃

/kw/ kwɔ̃ɛ̃ɾ̃t̃ɾ̃

Final

/bd/ ba>ɾbdwà<ɛ̃ɾ

/gd/ dræ̃^egd

/lk/ sɪz̃^ah̃k

/lts/ kwɪz̃^a/ts

/lj/ bɪz̃^ah̃dz̃^at̃

/md/ k|ã.md

/mpl/ l̃æ̃^em̃p̃b̃ɪ̃<ab

/mps/ swa>̃^amps

/nd/ bæ̃^end

/ndz/ h̃æ̃^endz

/n/ nɛu

/ns/ p'ɪˈkɛt fɛˈns

/p/ p'ɪˈɹtʃ

/nt/ sɛˈkənt

/pl/ p|æː

/ntst/ k'əməˈntst

/pr/ pɹɪˈvɪz

/nθ/ t'ɛsnθ

/skw/ skwɹːz

/nʃ/ bræˈntʃ

/sl/ sɫap-p'ɛzɪ

/ps/ stɛps

/sm/ smɛːz

/pt/ rɛːpt

/sn/ snæˈpɛ

/sk/ dɪˈsk

/spl/ spɛn

/skt/ æˈskt

/spr/ bɛdˈsprɛd

/sp/ wɔːvɪsp

/sr/ sɛˈŋksəm

/vd/ mɪˈuːvd

/st/ stɛˈf

/vz/ nɔːˈvz

/sw/ swɪˈŋz

/ʃt/ p'ɔːtʃt

/t/ t'ɛb

/θr/ θrɛɪ>i>

/ŋd/ hæ^eŋd/ŋks/ s^srɛɪŋks

/ŋz/ swɛɪŋz

Phoneme Alternations:

Deletions

/ɛ'vñ

dōvñ

pæən

gɔ'ñ

bræ^hen nɛɛ

səpéɪndɔɪ

fæ.əs

bɛ'tɔñ (better than)

ʒɛ>ʒsɛ.əvɔ

Substitutions

twɛnt'ñ

b^h.gəss

gɔ'tmɔɪnɛɪ

gɔ'tbá.

k'æ't|bɔɪt

t'əbæ^ekɔbɔv^hs sá.ɛdz

vɛ'tɔɪ

)a>nñɔ

hɪˈz sɛ̃əf

hɛːəp

dʒɛs (just)

gɪ̃ə mɪ̃i

mʊ<ʊs

dʒɛ̃<ɹnr̃ə

dɪpθɪ̃ˈɹɪ̃

pʰɛ̃ndɛ̃sɔ̃.dɛ̃s

θʊ̃<ə̃nɪ̃əp

a>.dɛ̃ˈt

dʒɪ̃nr̃ə (generally)

Metatheses

hɛ̃ˈndɔ̃t

tʃɪ̃ˈədrɛ̃ŋ

wɪ̃<dʒ kʊ̃<ʊts

bæ̃ˈɛbdɛ̃s

Epentheses

fɪ̃əft

twɑ̃.st

hæ̃ˈmm̃ə

ɪ̃nnɔ̃tʰɛ̃b

hɪ̃t (it)

klæ̃ˈbɔ̃t

ʒæ̃ˈɛtəwɛ̃>ɛ

mɪ̃<ʃɛ̃rɪ̃n

ɔ̃rʰtɔ̃

p'ŕt̃ɛ f/æ̃.ʒz

e'ɛ p̃ɔn

dɛf̃ɔnt tr̃ã.bz

mɪs̃ɔz (Mrs.)

p'ɔ̃r̃p̃ɔ̃

a>θ̃ɛr̃ã.t̃ɛs

Informant 4: Forbus, Fentress Co.; Female; 65

Fieldworker: Rutledge; Scribe: Pederson; 8 hours

	<u>Vl.</u> <u>Obstruent</u>	<u>Vd.</u> <u>Obstruent</u>	<u>Nasal</u>	<u>/l/</u>	<u>/r/</u>
/i/	Izist ⁻	ʒi>d	bɪ>ʔ̃bi>nɪ	fi>ə/d	
/I/	hwɪ>p	kɪɪ^əbɪ	t'ɪ^ən	hɪɪ>ə/	bɪɪ^əɔ
/e/	e>ɛt	re>ɛɪd	stre>n	p'e>ɛ/	
/ɛ/	nɛ>.k	rɛ>dɛʒ	t'ɛɪn	twɛ>ə/v	mɛ>ə'tɪd
/æ/	glæ^s	p'e>ɛpəbæ^s	hæ^nd	p'æ^/ɛt	mæ^s
/a/	kra>p	ga>d	p'a>m	k'a^/ɛdʒ	k'a>ɔ
/ɜ/	tʃəʔtʃ	ʔ̃əʔdgrɛ>d	rɛd wəʔmɪ	gəʔlɪ	wəʔrɪ
/u/	t'ʊɛtt ^θ	dɛuɪ	wʊɛtɪn	mɪu<ɪɪ	
/ʊ/	p'ʊɪʃ	wʊ<d		p'ʊ</	
/ɪ/	ʃɪ<t	hɪɪ>ɪbɪ	wɛ^əɪn	hɪɪ>ɪ	
/o/	k'o<v<t	ro<v<d	hō>ɛm	k'o<v<d	hōv.ɪs

/b/ dɒ'tɪ̃ dɒ'ɔŋ ɡɒ'ɔŋ sɒ'ɔŋ hɒ'ɔŋ

/aɪ/ rɑ.ɛt fɑ.v nɑ.n mɑ.ə/

/aʊ/ hæ'ɔs prɑ'ɔd dæ'ɔn æ.ə/

/bɪ/ ɪ'ɛstɪ̃z p'ɔ'ɛzɪ̃ dzɒ'ɛnts ɪ'ə/

Additional Consonant Phonemes and Allophones:

/h/ xhɑ'ɔ (harrow)

/k/ æ'ɛtɪ̃?

/l/ k|æ'ɔdz ; skɪ'ɛt ; p'ɔ'vɪkæ'ɛt

/r/ dɪ'ɛsɪ̃ ; ɛzɪ̃pɪ̃

/t/ mæ'ɔ'ntɪ̃ ; k'a>ɪ̃ɛdzɪ̃

/ʃ/ sɪ'ɛrɪ̃k

/ʒ/ ʒɪ'ɛsɪ̃

/ŋ/ swɪ'ɛŋ

Additional Consonant Clusters:

<u>Initial</u>	<u>Final</u>
/b/ b l o c t	/bd/ ba'bdwà<.r
/br/ br n z ə f	/fs/ h t f s
/d/ d t t	/ft/ l o z o f t
/f/ f j t n ē l	/qz/ a<ə'ndɔ'vəgz
/fr/ fr d z o s t	/ks/ s I > ks
/h/ h' t > d	/kt/ k'v < kt
/k/ w b t' s k' ε z t j	/ldz/ f i > ə ldz
/kw/ k w b' t' t ē l f o' v r	/lf/ æ' s f b' > t t
/n/ n t t	/lks/ s I > ə lks
/p/ p j t k	/ls/ ε > ls
/pl/ t' t' n ē n p l' a' v <	/md/ s w I > md
/skr/ sk r n z b	/mpl/ l æ' m p

/skw/ skwɔ/

/sk/ s/æɛt

/sm/ smɛɛʔ/

/sn/ sne>ɛkɪ>t

/sp/ spɜ<u<nz

/spl/ splæɛf

/spr/ spreɛŋ

/sr/ ssrɛŋk

/st/ stɛ>ɔps

/t/ t'ɛɛb

/tr/ trɒ^ɔft

/θr/ θri>

/mps/ gri>s/æɛmps

/mpt/ dʒɛ<mpt

/ndz/ hæɛndz

/ns/ sɪ>ns

/nt/ si>mɛnt

/ntst/ k'ə̃mɛ>n⁺st

/nj/ tʃæ>ɛndʒp'ɔs

/nč/ bræɛntʃ

/ps/ stɛ>ɔps

/pt/ hɛɔpt hɪ>mɛɛ>ɔf

/sk/ dɪsk

/ts/ ɡɔts

/vz/ bɪ<ɡɡɪstɛ>ɛvɔz

/ʃt/ w b̃ ʔ t a' o < t

Phoneme Alternations:

Deletions

/ɛ > ṽ ñ

θ a' o < z̃ ñ

mɪ' / j̃ E (million)

fɹ s' mæ' n

sɛ' > k̃ ñ

e > E θ

sɛ' > b̃ m̃ (seventh)

æ' f̃ r̃ ñ t̃ ã n

θ r̃ i' > j̃ Ĩ z̃ r̃ z̃ o' < ʃ /

sæ' o' < θ w̃ e' > s

f r̃ ñ < ñ p' o' < r̃ t̃ f̃

Substitutions

t w̃ e' ñ ñ t̃

t w̃ e' ñ E s̃ e' > b̃ m̃

sɪ > k s' t̃

fɪ > ə f t̃

də' s w̃ a' m p̃

s b̃ i' > ʃ E d̃ (sausage)

ṽ e' > t̃ f̃ t̃ ã b̃ / z̃

t̃ ã m̃ e' > E d̃ ã z̃

m̃ o' > ɔ' s̃ b̃ o' > ʔ k̃ z̃

g r̃ æ' s̃ w̃ Ĩ > d̃ r̃ z̃

sɪ < ʔ m̃ p̃ m̃ l̃ a' > E k̃

bāhā·n ǎ do'·x

fɪ·ə'f gré'z d

dʒ ɪ < s

dɪ·d̃h' hɪ·z'x

Epentheses

na'ɛ n θ'

hæ'ɛ ñ a/

ɛ' t w ɛ n s t

hɪ·t' hɛ·n (it ain't)

twa·s t

he·ɛ n

b d·x n d (barn)

fa·n (find)

w b·x f

mā'x'ɛ s t̃

hæ'ɛ m m̃ a

b n·ə b

ɪ' n ñ x t̃ ɛ b

grā'ɛ n s t̃ o'·x n

ə k r̃ o' s t

g o' ṽ ñ a

k l̃ ɪ·z' f t

θ o'·x d

t̃ a r̃ o' ṽ f t (trough)

hɪ·t̃ a d b i' x̃ a x̃

k' x̃ ɛ s t̃ x̃ ɛ t̃ ɛ d

ʃɛ > ʃsɛ > vʒ

hɪ > əmsɛrəf

bɛz kɲɛ > nɪz

hɛ > əp

drá · lɛ́n fɪ́ · ʃ

wov̄ · n̄ d̄ū ɛ̄t

mdʌ ɔʌz (pl.)

grɛ́n mɔb

sɛz kɛ́tɔ́ · ʃ

hɛ́n

lɛ́ · fɪ́zɔ

p'ɛ́ · nd̄ɛ́sá · d̄ɛ́s

bɔrʌ́ frɛ́ · n

ʃɛ́ · t̄əwɛ́ · ɛ

mɪ́ · ʃɛ́ r̄ūnɪz

ɔ́ · ʃ · t̄ə

á · θ̄ɛ́ r̄á · t̄ɛ́s

Metatheses

h̄ɪ́ · n̄ d̄ɔ́ · p'ɛ́ · nɪz

p'ɔ́ · t̄ɛ́ · ʃ

ɛ́ · p'ɔ́ · n

t̄ɛ́ · ʃ · d̄ɔ́ · n

k'vō^hs tã m'ĩ-tʃ

æ^ɛst (pret.)

Informant 5: Clear Creek, Morgan County; Male; 81
 Fieldworker: Bailey; Scribe: Bailey; 1½ hours

	<u>Vl.</u> <u>Obstruent</u>	<u>Vd.</u> <u>Obstruent</u>	<u>Nasal</u>	<u>/l/</u>	<u>/r/</u>
/i/	i>t	fri>z	grĩ>nbĩ>nz	fi>əʔz	
/ɪ/	sɪ>əks	k'ɪ>dɪz	bɪ>ə̃n	hi>əʔ	,ɪ>ə
/e/	e>ɛt	re>ɛzɔ	k'e>ɛ̃nt	kwe>əʔz	
/ɛ/	nɛ>fjũ<	dʒæ'k ɛ<əg	t'ɛ>ə̃n	hɛ>əʔtθ	ʒkɛ>əd
/æ/	p'æ>tʃ	k'æ'ɛ̃bɛ̃dʒ	hæ>ɛ̃n	p'æ>ɟɛts	ʒæ>ɪ
/a/	stɑ>əʔk	ga>əd	bɛ̃>ɟā>ə̃n	k'a'ɛ̃dʒ	k'a>ɪ
/ɜ/	tʃɜ>əʔf	hɜ>d	dɜ>n	qɜ>əʔ	
/u/	,u<stũ<u<	hũ<u<z	bɛ>ə̃drũ<u<·mz	mju<ʔz	
/ʊ/	fʊ>t	ʃʊ>d̃ñ			
/ɪ/	t'ɪ>əʔsk	dʒɪ>ə̃dʒ	wɪ>ə̃n		
/o/	p'o>ɛst̃	ro>ɛd	ho>ɛ̃m	p'o>ɛʔ	fɔ>ɪ

/ɔ/ ǎk_oɔ́ɔ́stɛt dɔɔ́ɔ́ɔ́z ɡɔ́ɔ́ɔ́n ɔɔ́ɔ́ɔ́ hɔɔ́ɔ́s
 /aɪ/ hwɔɔ́ɔ́t fɔɔ́ɔ́v nɔ́ɔ́ɔ́ɛn mɔɔ́ɔ́ɔ́ɔ́
 /aʊ/ hɔ́ɔ́ɔ́s p/ɔ́ɔ́ɔ́z dɔ́ɔ́ɔ́n ʃɔ́ɔ́ɔ́
 /ɔi/ ɔɔ́ɔ́ɔ́ɔ́

Additional Consonant Phonemes and Allophones:

/ŋ/ ɔɔ́ɔ́ɔ́ɔ́

/r/ θɛɔ́ɔ́

Additional Consonant Clusters:

<u>Initial</u>	<u>Final</u>
/br/ brɔ́ɔ́ɔ́ɔ́ɔ́	/fs/ wɔɔ́ɔ́ɔ́ɔ́
/dr/ drɔ́ɔ́ɔ́ɔ́ɔ́	/lp/ hɔ́ɔ́ɔ́ɔ́ɔ́p
/fl/ flɔ́ɔ́ɔ́ɔ́ɔ́	/lt/ ɡɔ́ɔ́ɔ́ɔ́ɔ́t
/kl/ k/ɔ́ɔ́ɔ́ɔ́ɔ́	/md/ tɔ́ɔ́ɔ́ɔ́ɔ́md

/sk/ skvuch/mz/ k' $\widetilde{n}$ < m z/sm/ smo' $\check{u}$ k h a' $\check{u}$ s/nts/ m $\check{n}$ < $\check{a}$ n' s/spl/ spe $\check{z}$ $\check{z}$ $\check{z}$ k t/ntθ/ t' $\check{e}$ $\check{a}$ $\check{n}$ $\check{t}$ θ

/sw/ swi > t

/ps/ k' $\check{a}$ $\check{e}$ $\check{n}$ $\check{a}$ $\check{u}$ < $\check{u}$ p s/tr/ t_o $\check{r}$ $\check{z}$ > $\check{a}$ m d/kt/ $\check{e}$ > $\check{z}$ $\check{t}$ θ d $\check{z}$ > $\check{a}$ s t r $\check{z}$ k t/tw/ t w $\check{z}$ > $\check{a}$ n z/vz/ $\check{z}$ > $\check{a}$ v z/ŋkt/ spe $\check{z}$ $\check{z}$ $\check{z}$ k t

Phoneme Alternations:

Deletionss $\check{a}$ > $\check{a}$ d $\check{z}$ $\check{z}$ n $\check{a}$ > $\check{z}$ tl $\check{e}$ > k t r $\check{z}$ k l $\check{a}$ > $\check{z}$ t sn < v $\check{m}$ (of them)x $\check{e}$ > $\check{a}$ z (they was)d $\check{z}$ > d $\check{n}$ Substitutionss $\check{e}$ > b $\check{m}$ t' $\check{e}$ $\check{a}$ n' s $\check{a}$ l $\check{e}$ > b $\check{m}$ t w $\check{z}$ > n $\check{z}$ $\check{z}$ $\check{z}$ $\check{z}$ $\check{z}$ m $\check{z}$ > $\check{a}$ n $\check{z}$ $\check{z}$

$\theta_{I \sim \tilde{a} m \tilde{h}}$

Metatheses

 $h_{I \sim \tilde{a} n d \tilde{h} d}$

Epentheses

 $w \sim \tilde{a} \int$
 $h_{I \sim t_s} (i t_s)$
 $t_{I \sim \tilde{a} t m \tilde{a} s}$
 $m_{I \sim \tilde{a} d \tilde{h}}$
 $b_{I \sim \tilde{a} n \tilde{h} s}$
 $s_{I \sim \tilde{a} m p m}$

Informant 6: Elgin, Scott Co.; Male; 87
 Fieldworker: Bailey; Scribe: Bailey; 1 hour

	<u>Vl.</u> <u>Obstruent</u>	<u>Vd.</u> <u>Obstruent</u>	<u>Nasal</u>	<u>/l/</u>	<u>/r/</u>
/i/	i>.t	wi>.d	si>. [~] n		
/I/	sI>.ks	k _g I>. ^a b	swI>. ^a g	mi>. ^a ʔ	ʝI>. ^a ʔz
/e/	e>. [~] ɪt	re>ɪz ^d	p'e>. [~] ɪnt	me>. ^a ʔ	
/ɛ/	k'ɛ>.tʃ	ɛ<. ^a gʔz	t'ɛ>. ^a n	twɛ>. ^a ʔv	tʃɛ>. ^a ʔz
/æ/	hæ>. [~] f	k'æ>. ^a vz	hæ>. [~] ɛn		mæ>. ^a ʔ
/a/	st _a >. ^a k	gəra>. ^a dʒ	t _a >. ^a mɛ>. ^a tō>. ^a ʔz		k'a>. ^a ʔ
/ɜ/	tʃɜ>.tʃ		wɜ>.mz	gɜ>. ^a ʔz	fɜ>. ^a ʔ
/u/	t'v<u.<θ	t'v<u.<	dʒv<u.<n	mɲu<. ^a /z	
/ʊ/	fʊ<t	gʊ<. ^a d		bʊ<. ^a ʔ	
/ʌ/	n<. ^a pʂæ>. ^a ʔ	ʃkrɪ<. ^a b	wɪ<. ^a n	k'ɪ<. ^a /tɛv<. ^a ɛtʂ>. ^a ʔz	
/o/	p'o<. ^a ʊstʂ	ro<. ^a ʊd	sto<. ^a ʊn	o<. ^a ʊʔ	fo<. ^a ʊʔ

/ɔ/ ɔv.ɔf dɔv.ɔgz stɔv.ɔkz hɔv.ɔs
 /ai/ hwaɔ.t faɔ.v nã.n ma.əʔ
 /au/ ha.ʔs k'a.ʔz dæ̃.n skwi.tʃa.ʔkz
 /ɔi/ fo.ʔbɔ̃.ɛz bɔv.əʔd

Additional Consonant Phonemes and Allophones:

/ʃ/ ʃɛ̃.əd

Additional Consonant Clusters:

/b/ bɛ̃.ɛk wɔ̃.ɔknãt /dz/ fa.ʔɔ̃dz
 /br/ skrɛ̃.əb brɔ̃.ɔm
 /dr/ drã.ṽn /k/ sɛ̃.k
 /fl/ flã.ɛ̃n dzɛ̃.ñt̃ /mpl/ hɛ̃.əmp
 /gr/ grɛ̃.s sɛ̃.ɛk /nts/ sɛ̃.ənts

/kw/ stó·ŋ̃ kwè·z̃x̃

/nz/ p'ā·ŋ̃nz

/pl/ t'íñn p'ā·ŋ̃

/ts/ ʃo·ŋ̃ts

/spl/ spe·ŋ̃

/ŋks/ skn·ŋ̃ks

/tr/ træ·ŋ̃ktr̃z

/θr/ θri·ŋ̃

Phoneme Alternations:

Deletions

f·ŋ̃s

e·ŋ̃n sī·ŋ̃

hæ·ŋ̃n t'æ·ŋ̃z

wn·ŋ̃dñ

fa·ŋ̃n (find)

sī·ŋ̃māntr̃i·ŋ̃z

ju·ŋ̃sā (used to)

Substitutions

sē·ŋ̃bm̃

twē·ŋ̃n t'

sē·ŋ̃bm̃tī·ŋ̃n

sē·ŋ̃bm̃dē·ŋ̃

fa·ŋ̃d̃r̃

k'a·ŋ̃p̃m̃tr̃ē·ŋ̃

sē·ŋ̃p̃m̃tē·ŋ̃nānt

документ 10.2р

$$b_I > d n_{\pm s}$$

Metatheses

$$h\tilde{n} < n\tilde{x}_d$$

$p' \cdot \tilde{x} \cdot \tilde{f} \cdot \tilde{E} \cdot \tilde{g} \cdot \tilde{v} \cdot \tilde{z} \cdot \tilde{d}$

Epentheses

commitment

CHAPTER III

PHONEMIC STRUCTURE

3.1 Inventory of Segmental Phonemes

The inventory of phonemes is organized in the following way. First, all phonemes are classified as nonsyllabics, stressed syllabics, or unstressed syllabics. Then each phoneme is listed along with a phonetic description and a statement of the distribution of its primary allophones. In assigning phones to phonemes and in dealing with sequences of phones, the procedures in Pike's Phonemics have been followed.

Nonsyllabic Phonemes

There are twenty-four nonsyllabics in the folk speech of the northern part of the Cumberland Plateau. They are as follows: /p, b, t, d, k, g, f, v, θ, ð, s, z, ʃ, ʒ, ʧ, ʤ, m, n, ŋ, l, r, w, j, h/.

/p/ - tense, voiceless, bilabial stop. An aspirated allophone [p^h] usually occurs when the phoneme is syllable-initial and precedes a vocoid. An unaspirated, released allophone [p] occurs when the phoneme follows initial /s/, is medial, or is word-final. An unreleased allophone [p̚] occurs when /p/ precedes another stop and sometimes when the phoneme is word-final.

/b/ - lax, voiced, bilabial stop. In all environments [b] is the usual allophone. A tense allophone [b̥] is recorded as the initial nonsyllabic in beechnut in the speech of #1; a palatal offglide [b_j] occurs in his pronunciation of beard.

/t/ - tense, voiceless, apico-alveolar stop. An aspirated allophone [t^h] usually occurs when the phoneme is syllable-initial and precedes a vocoid, while an unaspirated, released allophone [t] appears when the phoneme is word-final or follows initial /s/. The unreleased allophone [t̚] is recorded only when the phoneme is word-final, and the dental allophone [t̪] occurs only before /θ/ in the speech of #5. Voiced allophones [t̪, t̪^h, t̪̚] usually occur between vocoids, between a vocoid and /l/, and between a vocoid and [ʁ], while the glottalized allophone [tʔ] occurs before [n] in the speech of # 1, 2, 3 and 4. The flapped allophones [t̪^h, t̪^h, t̪̚, t̪̚] occur in the speech of the same four informants, but the phonemic status of these flaps is open to question. In [ɡa^hə^ht̪^hʒ] and [wa^ht̪^hʁmɛ^hl̪^h] the flap is simply a secondary modification of /t/, comparable to lip-rounding, palatalization, or glottalization. In [k'a^ht̪^hɛ^hdʒ] the flap is best analyzed as an allophone of /r/ (see the discussion of that phoneme below). In [k'a^hʁɛ^hdʒ] and [k'a^hl̪^hɛ^hdʒ], however, the flap is a phonetic reflex of /tr/, and its phonemic membership is not at all clear. The simple flap [t̪] is tentatively analyzed as an allophone of /r/ here, but an alternative analysis is suggested in Chapter IV. (Compare the treatment of the nasal flap in the discussion of /n/ below.) Two allophones, [t̪̚] and [t̪̚^h], occur only in the speech of #4. The first of these appears medially in cartridges, while the second appears finally in tooth. The simple glottal stop occurs only in didn't [dɪ^hˈn̩t̪̚] in the speech of #3.

/d/ - lax, voiced, apico-alveolar stop. In all environments [d] is the usual allophone, but the unvoiced allophone [d̥] sometimes occurs when the phoneme is word-final. A retracted allophone [d̠] is recorded before /r/ in the speech of #5 and 6, while [dʰ] and [dʲ] occur only in the speech of #3 and 1 respectively.

Informant three has [dʰ] as the final nonsyllabic in good; informant one has [dʲ] medially in student.

/k/ - tense, voiceless, dorso-velar stop. The aspirated allophone [kʰ] usually occurs when the phoneme is syllable-initial and precedes a vocoid, while the unaspirated, released allophone [k] occurs medially, finally, and when the phoneme follows /s/.

An unreleased allophone [k̚] sometimes occurs when the phoneme is word-final or precedes a stop. In the speech of #1, 2, 3, and 4 (the records transcribed by Pederson), the phoneme often has a palatal offglide [k̟, kʰ̟] before checked front syllabics which are followed by alveolar nonsyllabics. In the speech of #4, [ʔ] is the final nonsyllabic in attic.

/g/ - lax, voiced, dorso-velar stop. In all environments [g] is the usual allophone, but in the speech of #1, the phoneme has a palatal offglide in guardian [g̟aːˈʃdiːən] and in the speech of #4, there is a palatal offglide in gear [gʰiːr].

/f/ - tense, voiceless, labio-dental fricative. In all environments [f] is the usual allophone, but the remarkably tense allophone [f̟] occurs in foggy in the speech of #1.

/v/ - lax, voiced, labio-dental fricative. In all environments [v] is the usual allophone, but an unvoiced allophone [v̥] occurs

the same word in the speech of #4. In the speech of #3, [ʃ̥] is the initial nonsyllabic in shrank.

/z̥/ - lax, voiced, blade-prepalatal groove fricative. There are only two instances of /z̥/ (phonetically [ʒ]) in the data. In both instances the phoneme occurs medially: #1 has /z̥/ in Hoosiers and #2 has /z̥/ in measure.¹

/t̥/ - tense, voiceless, apico-alveolar stop with tense, voiceless, blade-prepalatal, groove fricative release. In all environments [t̥] is the usual allophone, but a glottalized allophone [t̥ʔ] occurs in vegetables in the speech of #1.

/d̥/ - lax, voiced, apico-alveolar stop with lax, voiced, blade-prepalatal groove fricative release. In all environments [d̥] is the usual allophone, but an unvoiced allophone [d̥̥] sometimes occurs when the phoneme is word final.

/m/ - lax, voiced, bilabial, nasal continuant. In all environments [m] is the usual allophone, but a syllabic allophone [m̥] often

¹ The phonemic status of /z̥/ is not at all clear. The phoneme occurs very rarely, and its occurrence is limited to medial position. Structural pressure suggests that /z̥/ is phonemic--that it serves as the voiced counterpart to /s̥/ just as /v/, /ʒ/, and /z/ are voiced counterparts of /f/, /θ/, and /s/. However, while the other three pairs of fricatives are in contrastive distribution, it is difficult to think of minimal pairs which contrast /z̥/ and /s̥/ and which are likely to occur in the dialect in question: delusion-dilution, allusion-Aleutian, and confusion-Confucian are improbable pairs in the folk speech of the northern part of the Cumberland Plateau. It is also difficult to come up with minimal pairs which contrast /z̥/ and /z/, although confusion and confusing may well be one in the dialect in question. Nevertheless, /z̥/ is tentatively given phonemic status here. The phonemic status of /z̥/ is a question which deserves intensive phonological and sociolinguistic study.

occurs as the phonetic reflex of /ə/ + /m/.²

/n/ - lax, voiced, apico-alveolar nasal continuant. In all environments [n] is the usual allophone, but a syllabic allophone [n̩] usually occurs as the phonetic reflex of /ə/ + /n/. In the speech of #5, a dental allophone [n̪] occurs in tenth. A nasalized flap [ɫ̃] often replaces /nt/ in such words as twenty. The nasalized flap is analyzed as an allophone of /n/ here, but as Kruse notes, the nasal flap is actually a phonetic reflex of /nt/ and contrasts

² The phonemic status of syllabic contoids is one of the more difficult problems in English phonology. There are two ways in which syllabic contoids can be analyzed. First, they can be interpreted as separate phonemes, in which case /r, l, m, n, ŋ/ become phonemic. Secondly, they can be interpreted as sequences of /r/ + /l/ and /ə/ + /r, l, m, n, ŋ/. As Lehisle (pp. 29-32 and 61-64) notes, there is little phonetic justification either for interpreting syllabic contoids as sequences of phonemes or for positing syllabic contoids as separate phonemes. While the interpretation of syllabic contoids as sequences of phonemes requires the positing of segments which are infrequently realized, it does have a number of advantages. First, it allows phonetically similar phones (i.e., syllabic and nonsyllabic counterparts) to be grouped together. Secondly, it simplifies the phoneme inventory. Thirdly, it simplifies the phonology. In some cases sequences of phonemes do occur in lieu of syllabic contoids. Such realizations are no problem if syllabic contoids are interpreted phonemically as sequences of phonemes, and the absence of the unstressed vowel in other cases can easily be explained by a common process which deletes vowels in unstressed syllables as long as English phonotactic principles are not violated (see Chapter IV). If syllabic contoids are treated as separate phonemes, the occasional presence of an unstressed vowel must be explained as epenthesis. While epenthesis occurs in the dialect in question, epenthetic vowels always occur between two nonsyllabics. Thus an ad hoc rule would have to be introduced to explain a sequence of phonemes occurring in lieu of a syllabic contoid.

with both [n] and [t].³ An alternative analysis is suggested in Chapter IV.

- /ŋ/ - lax, voiced, dorso-velar nasal continuant. The phoneme occurs only before velars and in word-final position. In both positions [ŋ] is the usual allophone, but a syllabic allophone [ŋ̩] occurs as the phonetic reflex of either /ə/ or /ɛ/ + /ŋ/.⁴
- /l/ - lax, voiced, apico-alveolar lateral continuant. Allophones with neutral timbre [l, l̥, l̥̥] occur in all environments, sometimes fronted or retracted in anticipation of a following sound. An allophone with "clear" timbre [l̥̥̥] occurs between front and central vowels, and in the speech of #1 and 2, it appears in gully. Allophones with "dark" timbre [ɫ, ɫ̥] occur in word-final position, before voiceless velars, and after back vowels.

³ Vernon David Kruse, "The Pronunciation of English in Kentucky, Based on the Records of the Linguistic Atlas of the North-Central States," Diss. Illinois Institute of Technology 1972, p. 22.

⁴ Stampe (in "How I Spent My Summer Vacation," p. 30), suggests that /ŋ/ is not a separate phoneme: he claims that "the substitution of [ŋ] for /n/ is allophonic, since [ŋ] occurs only where it arises by assimilation." According to this view, [ŋ] is a phonetic reflex of /ng/ just as [ɫ̥] is a phonetic reflex of /nt/. Such a view, however, does not account for all of the occurrences of /ŋ/ in the folk speech of the northern part of the Cumberland Plateau. For example, in words such as children and mountain an inorganic [ŋ] sometimes occurs as the final nonsyllabic. Inorganic [ŋ] is clearly not the phonetic reflex of underlying /ng/; since [ŋ] is the result of the application of two syntagmatic processes, there is no way to explain its occurrence in children and mountain. Furthermore, the positing of [ŋ] as an allophone of /n/ (i.e., the phonetic reflex of /ng/) requires underlying segments which, unlike the unstressed syllabics which precede /l, m, n, ŋ, r/, are never realized phonetically. From the synchronic point of view, there seems to be little motivation for analyzing /ŋ/ as an allophone of /n/.

A vocalized allophone [ʷ] alternates with [ɰ] before voiceless velars and after back vowels. Unvoiced allophones [l̥, l̥̥] often occur after syllable-initial voiceless stops, and rounded allophones [l̥̥, l̥̥̥] occur after labials. Syllabic allophones [l̥̥̥, l̥̥̥̥] occur as the phonetic reflexes of /ə/ + /l/.

/r/ - lax-tense, voiced, apico-alveolar retroflex frictionless continuant. In word-initial position, [r] is the usual allophone, while [ɾ] is the usual allophone in after vocoids. Both [r] and [ɾ] occur medially. Occasionally, a weakly retroflex allophone [ɻ] alternates with [ɾ] (see the discussion of post-vocalic /r/ in Section 3.3). An unvoiced allophone [r̥] frequently follows voiceless stops in initial nonsyllabic clusters. The rounded allophone [ɹ] occurs only in red in the speech of #1 and the unvoiced fricative [ɻ̥] only in strap in the speech of #2. There are no labial allophones in the data. Flapped allophones [ɾ, ɾ̥], however, occur in the speech of #2, 3, 4, and 5. The retroflex flap [ɻ] appears after /k/ in the speech of #2, after /g/ in the speech of #3, and after /d/ in the speech of #4. A simple alveolar flap [ɾ, ɾ̥] follows /θ/ in the speech of #2, 3, and 5. As was pointed out above, the simple alveolar flap is also a phonetic reflex of /tr/, but since [ɾ] must be posited as an allophone of /r/ in the basis of its occurrence after /θ/, the medial flap in words such as cartridge [kʰaːɾ̥ɪdʒ] is tentatively analyzed as an allophone of /r/.

/w/ - lax, voiced, labio-dorso-velar frictionless continuant. The phoneme does not appear in word-final position; [w] is the usual

allophone in all other environments. Informant three has [w^r] in shrank [s^hw^rɛŋk].

/j/ - lax-tense, voiced, fronto-palatal frictionless continuant. The phoneme does not occur in word-final position, but [j] is the usual allophone in all other environments.

/h/ - lax-tense, voiceless, reduced laryngeal fricative. The phoneme does not occur in word-final position; [h] is the usual allophone in all other positions. An allophone with a velar fricative onset [xh] occurs in harrow and homing in the speech of #4; [ʁh] appears in hoofs in the speech of #3.

Stressed Syllabics

There are fourteen stressed syllabics in the folk speech of the northern part of the Cumberland Plateau. There are as follows: /i, I, e, ɛ, æ, a, ɔ, ʌ, o, ʊ, u, ai, au, ɔi/.

/i/ - higher, high-front, unrounded vocoid. There are four primary types of allophones: centralized diphthongs [i²ɪ>ɪ>, I·i, I^hi, Iɛi>, Iɛiɛ, I>ɪ>, ɛ^hi, I>ɪ, Iɛi], close diphthongs [iɪi, iɛi>, iɛ·i>], ingliding diphthongs [i>·ə, i>ə, i·və], and monophthongs [i>, i>·, I>, I>·]. Centralized diphthongs are common before both voiceless and voiced obstruents but occur only twice before nasals (in the speech of #2 and 3) and once before /l/ (in the speech of #2). Centralized diphthongs are also common in open syllables; the remarkably centralized [ɛ^hi] occurs in an open syllable (in the speech of #3). Close diphthongs occur in all environments except before /l/, but they are

Table 19. Allophones of /i/

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/	/r/
1	$?I > . i >$	$i > i >$ $i > . i >$ $i > .$	$i > i >$ $i > .$	$i > . \partial$	
2	$I ^ i$	$I ^ i$ $I > i >$	$I > i$ $i v$	$i v i . \partial$ $I ^ i$	
3	$i v i$ $I ^ i$	$I > i >$ $I > i >$ $I ^ i$	$I > i >$	$i v \partial$	
4	$I \lambda i$ $i > .$ $i >$	$i > .$ $i >$	$i >$	$i > \partial$	
5	$i > .$ $i >$	$i > .$ $i >$	$\tilde{i} > .$ $\bar{i} >$	$i > . \partial$	
6	$i > .$	$i > .$	$\tilde{i} > .$		

except #5. Ingliding diphthongs are usual before /l/, common before both voiceless and voiced obstruents, less common before nasals, and occur only once before /r/ (in the speech of #5). Nasalized allophones occur in the speech of #1, 3, 5, and 6. The phoneme has a palatal onglide [$\tilde{j}l$] in inner tube in the speech of #3. Table 20 presents the distribution of allophones by informant and environment.

/e/ - higher, mid-front, unrounded vocoid. There are three primary types of allophones: upgliding diphthongs [$e\epsilon$, $e>\epsilon$, $e>\cdot\epsilon$, $e\cdot\epsilon$, $e>\epsilon$, $e^{\vee}\epsilon$, $e\tilde{z}\epsilon$, $e\tilde{z}\epsilon$, $\gamma e>\epsilon$], ingliding diphthongs [$e>\epsilon^{\partial}$], and monophthongs [e , $e>$, $e\tilde{z}$, γe]. Upgliding diphthongs are prevalent in all environments; before nasals the first element is frequently lowered and retracted. Ingliding diphthongs (and the triphthong [$e>\epsilon^{\partial}$] which occurs in the speech of #1) appear only before /l/. Monophthongs occur in all environments except before /l/, but they are infrequent except in the speech of informant four, where they compete with upgliding allophones. Monophthongs are most frequent under tertiary stress. Nasalized allophones occur only in the speech of #5, and 6 (the records transcribed by Bailey), and allophones with glottal stop onsets occur only in the speech of #1 and 2. There are no fronted or raised allophones in the data. Table 21 presents the distribution of allophones by informant and environment.

/ɛ/ - lower, mid-front, unrounded vocoid. There are three primary types of allophones: monophthongs [$\epsilon^{\wedge}$, $\epsilon^{\vee}$, $\epsilon>$, ϵ , $\epsilon\cdot$, $\epsilon\tilde{z}$, $\epsilon>\cdot$, $\epsilon^{\wedge}$, $\tilde{\epsilon}^{\wedge}$, $\tilde{\epsilon}^{\vee}$, $\tilde{\epsilon}>$], ingliding diphthongs [ϵ^{∂} , $\epsilon>\epsilon^{\partial}$, $\epsilon^{\wedge}\epsilon^{\partial}$, $\epsilon^{\vee}\epsilon^{\partial}$, $\epsilon\tilde{z}\epsilon^{\partial}$, $\epsilon<\epsilon^{\partial}$],

Table 20. Allophones of /I/

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/	/r/
1	I I > ^ə	I > . ^ə	<u>I</u> > I > _λ I ^	I ^ . ^ə	I ^ . I >
2	I > I I ^ ^ə I ^ə	I	I ^ ^ə I ^ I > I ^ə	I ^ ^ə I	I > . I ^
3	I . ^ə I ^ə I > ^ə I I ^	I ^ ^ə I	I > I > I <u>I</u>	I ^ ^ə I > ^ə I ^	I > . I ^
4	I > I I > I > ^ə	I ^ ^ə	I ^ ^ə I > I	I > ^ə I > ^ə I ^ I	I ^ I >
5	I > . ^ə I	I > I > ^ə	<u>I</u> > ^ə	I ^ ^ə	I ^ . I ^ ^ə
6	I > .		<u>I</u> ^ ^ə <u>I</u> > <u>I</u> ^	I ^ ^ə	I >

Table 21. Allophones of /e/

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/	/r/
1	e > ɛ ʔe > ɛ	e > ɛ	e > ɛ e > ɛ	e > ɛ ^ə	
2	e ɛ ʔe	e ɛ e	e ɛ	e ɛ	
3	e > ɛ e > ɛ	e ɛ e. ɛ.	e > ɛ	e > ɛ	
4	e > ɛ e > ɛ e e >	e > ɛ e ɛ e >	e > e > ɛ	e > ɛ	
5	e > ɛ	e > ɛ e >	e > ɛ	e > ɛ ^ə	
6	e > ɛ e > ɛ	e > ɛ	e > ɛ	e > ɛ ^ə	

ε° , $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$], and upgliding diphthongs [$\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$]. Monophthongs are prevalent in all environments except before /l/, and they are not uncommon there. Ingliding diphthongs are prevalent before /l/, common before both voiceless and voiced obstruents, less common before nasals, and rare before /r/, where they occur only in the speech of #2. Upgliding diphthongs occur only in the speech of #3. Before nasals /ɛ/ is frequently lowered and retracted or fronted and raised. Nasalized allophones appear only in the speech of #3, 5, and 6. Table 22 presents the distribution of allophones by informant and environment.

/æ/ - higher, mid-front, unrounded vocoid. There are four primary types of allophones: monophthongs [ε , ε° , $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$], diphthongs with short glides [ε° , $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$], diphthongs with long glides [ε° , $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$, $\varepsilon^{\circ\circ}$] and diphthongs with tense glides [ε° , ε° , ε°]. Diphthongs with short glides predominate in all environments except before /r/, and they are not uncommon there. Monophthongs predominate before /r/, occur sometimes before /l/ (especially heterosyllabic /l/), and occur on occasion before nasals. Diphthongs with long glides occur before both voiced and voiceless obstruents; they are especially common before velars, sibilants and /nt/. Diphthongs with tense glides usually occur before velars and /nt/. Diphthongs with long glides and diphthongs with tense glides are not recorded before either /l/ or /r/. Nasalized allophones occur in the speech of all informants except #2. Fronted, lowered, and retracted allophones are uncommon.

Table 22. Allophones of /ɛ/

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/	/r/
1	ɛ [^] ə	ɛ>ə	ɛ _λ ^ə	ɛ>ə	ɛ>
	ɛ [^]	ɛ [^] ə	ɛ _λ [^]	ɛ _λ ^ə	ɛ [^]
	ɛ>ə		ɛ _λ [^]	ɛ [^]	
			ɛ>		
			ɛ [^]		
			ɛ [^] ə		
2	ɛ [^]	ɛ	ɛ [^] ə	ɛ [^]	ɛ _λ [^]
	ɛ ^ə	ɛ [^]	ɛ _λ ^ə	ɛ ^ə	ɛ ^ə
	ɛ	ɛ>	ɛ ^ə	ɛ [^] ə	
		ɛ ^ə	ɛ [^]		
			ɛ [^]		
			ɛ [^] ə		
3	ɛ _λ [^] ə	ɛ ^ə	ɛ _λ [^] ə	ɛ _λ [^] ə	ɛ [^]
	ɛ ^ə	ɛ	ɛ	ɛ [^]	ɛ
	ɛ [^]	ɛ>ə	ɛ [^]	ɛ [^] ə	ɛ _λ [^]
	ɛ _λ [^]	ɛ [^]	ɛ _λ [^]	ɛ [^]	
	ɛ	ɛ _λ [^] ə	ɛ [^]	ɛ ^ə	
			ɛ _λ [^]		
4	ɛ _λ [^]	ɛ>	ɛ _λ [^]	ɛ>ə	ɛ>
	ɛ>	ɛ	ɛ>	ɛ>	
	ɛ>ə	ɛ _λ [^]	ɛ	ɛ _λ [^] ə	
	ɛ ^ə		ɛ [^]		
	ɛ [^] ə				

Table 22 (con't)

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/	/r/
5	$\xi >$	$\xi <^{\cdot} \partial$	$\widetilde{\xi >^{\cdot} \partial}$	$\xi >^{\cdot} \partial$	$\xi^{\wedge}$
		$\xi >^{\cdot} \partial$	$\widetilde{\xi^{\wedge} \partial}$		
		$\xi >$	$\xi^{\wedge}$		
			$\widetilde{\xi >}$		
6	$\xi >^{\cdot}$ $\xi >$	$\xi <^{\cdot} \partial$	$\widetilde{\xi >^{\cdot} \partial}$	$\xi >^{\cdot} \partial$	$\xi >^{\cdot}$ $\xi >$
		$\xi >^{\cdot} \partial$	$\widetilde{\xi >^{\cdot} \partial}$		
			$\widetilde{\xi^{\wedge} \partial}$		
			$\widetilde{\xi^{\wedge}}$		

Table 23. Allophones of /ʁ/

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/	/r/
1	ʁ ^h · ^ε	ʁ ^h · ^ε	ʁ ^h · ^ε	ʁ ^h · ^ε	ʁ ^h · ^ε
	ʁ ^h · ^ε		ʁ ^h · ^ε		ʁ ^h · ^ε
	ʁ ^ε		ʁ ^ε		ʁ ^h · ^ε
	ʁ ^h · ^ε		ʁ ^h · ^ε		
	ʁ ^ε		ʁ ^h · ^ε		
2	ʁ ^ε	ʁ ^h · ^ε	ʁ ^ε	ʁ ^ε	ʁ ^h · ^ε
		ʁ ^ε	ʁ ^h · ^ε		ʁ ^h · ^ε
			ʁ ^h · ^ε		ʁ ^h · ^ε
3	ʁ ^h · ^ε	ʁ ^h · ^ε	ʁ ^ε	ʁ ^h · ^ε	ʁ ^ε
	ʁ ^ε	ʁ ^h · ^ε	ʁ ^h · ^ε		ʁ
	ʁ ^h · ^ε	ʁ ^ε	ʁ ^h · ^ε		
4	ʁ ^ε	ʁ ^h · ^ε	ʁ ^ε	ʁ ^ε	ʁ ^h · ^ε
			ʁ ^h · ^ε		ʁ
			ʁ ^h · ^ε		
			ʁ ^h · ^ε		
5	ʁ ^ε	ʁ ^ε	ʁ ^h · ^ε	ʁ ^h · ^ε	ʁ
			ʁ ^h · ^ε		
6	ʁ ^h · ^ε	ʁ ^h · ^ε	ʁ ^h · ^ε		ʁ
	ʁ ^ε				

Table 24. Allophones of /a/

#	Vl. Obstruents	Vd. Obstruents	Nasal	/l/	/r/
1	a> ^ə a>. ^ə a>.	a>. ^ə a>	a>. ^ə	a>. ^ə	d<.
2	a>. a. a>	a>. a. a>	a> ^ə	a<	a<. d>
3	a> ₁ ^ə a>.	a>. ^ə	$\widetilde{a}$. a>. ^ə a>	a> ₁ .	a>. ^ə a> a<E
4	a>	a>.	a> a.	a.	a> a<. a< ^ə d.
5	a. ^ə	a. ^ə	$\widetilde{a}$. ^ə	a.	a a<
6	$\underline{a}$ >. ^ə a.	$\underline{a}$ ^ə	$\widetilde{a}$.		a $\underline{a}$.

Table 25. Allophones of /ɔ/

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/	/r/
1	ɔ ^v . ɔ ^h	ɔ ^v ɔ ^h	ɔ ^v ɔ ^h	ɔ ^h ɔ ^h	ɔ ^h
	ɔ ^v ɔ ^v	ɔ ^v ɔ ^v	ɔ ^h ɔ ^h	ɔ ^v ɔ ^v	
	ɔ ^v ɔ ^h	ɔ ^v : ɔ			
		ɔ ɔ ^v			
2	ɔ ^h ɔ ^h	ɔ ^h ɔ ^h	b ɔ	b	ɔ ^v
	b ɔ ^h	b ^h			b ^h .
	ɔ ^v				b
	b ɔ				ɔ ^h
3	ɔ ^v ɔ ^h	b ^h ɔ ^h	ɔ ^h ɔ ^h	ɔ ^h ɔ ^h	ɔ ^h
	b ^h ɔ ^h	b ^h .	ɔ ^h	ɔ ^h ɔ ^h	b ^h .
	ɔ ^v ɔ ^h				ɔ ^v
					ɔ ^h
4	b ^h	b ^h ɔ ^v	ɔ ^v ɔ ^h	b ^h ɔ ^h	ɔ ^v .
	d ^h ɔ ^h	ɔ ^v ɔ	ɔ ^v ɔ	b ^h ɔ ^h	ɔ
	ɔ ɔ ^h	d b ^h			b ^h
	b ^h ɔ ^h				b ^h .
	ɔ ^v ɔ ^h				ɔ ^v
	ɔ ɔ ^v				
	b ^h ɔ ^h				
	d ^h ɔ ^h				
	ɔ ^v ɔ ^h				

Table 25 con't

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/	/r/
5	ɔ ^v ɔ [^]	ɔ ^v ɔ [^]	$\widetilde{\text{ɔ}^{\wedge} \cdot \text{ɛ}}$ $\widetilde{\text{ɔ}^{\wedge} \text{ɔ}^{\wedge}}$	ɔ ^v ɔ [^]	ɔ ^v
6	ɔ ^v . 0 ^v	ɔ ^v . 0 ^v		$\text{ɔ}^{\wedge} \text{ɔ}^{\wedge}$ $\text{ɔ}^{\wedge} \text{ɔ}^{\wedge}$	$\text{ɔ}^{\wedge}$ $\text{ɔ}^{\wedge}$

except before /l/, where ingliding diphthongs prevail. Ingliding diphthongs are also common before nasals, and they sometimes occur before voiceless and voiced obstruents. Upgliding diphthongs occur primarily before velars; [Λ^V] appears once before /l/ in the speech of #2. Low-central allophones occur sporadically in all environments except before /l/; they are not recorded in the speech of #5 and 6 (the two records transcribed by Bailey). The high back allophone [ʌ] appears only in guts in the speech of #4 and in hull in the speech of #3. Table 26 presents the distribution of allophones other than phonetic reflexes of / Λ / + /r/ by informant and environment. These phonetic reflexes are, of course, structurally parallel to the phonetic reflexes of /nt/ and /tr/. They are tentatively analyzed as allophones of / Λ /, but an alternative analysis is suggested in Chapter IV. In the speech of #6, there is no constriction in squirrel; a mid-central allophone [ɜ^3] occurs as the stressed vowel. Table 27 presents the phonetic reflexes of / Λ / + /r/ by informant and environment.

/o/ - higher, mid-back, rounded vocoid. There are three primary types of allophones: upgliding back diphthongs [$\text{O} < \text{ʊ}$, $\text{O} < \text{ʊ}^V$, $\text{O} < \text{ʊ}^<$, $\text{O} \text{ʊ}^<$, $\text{O} \text{ʊ}^< \text{ʊ}^<$, $\text{O} \text{ʊ}^< \text{ʊ}^<$, $\text{O} < \text{ʊ}^<$, $\text{O} \text{ʊ}^<$, $\text{O} \text{ʊ}^< \text{ʊ}^<$, $\text{O} \text{ʊ}^< \text{ʊ}^<$], monophthongs [O , $\text{O}^<$, $\text{O} <$, O^V , $\text{O}^<$], and upgliding central diphthongs [$\text{O} \text{ʊ}$, $\text{O} > \text{ʊ}$, $\text{O} \text{ʊ}^<$]. Upgliding back diphthongs predominate in all

[ʌ] and its variants do not occur as allophones of / ʊ / and do not contrast with allophones / Λ /. As a result, [ʌ] is also tentatively interpreted as an allophone of / Λ /. Additional data might require reinterpretation of [ɜ] and [ʌ].

Table 26. Allophones of /ʌ/

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/
1	ʌ< ^ə	ʌ< ^ə	ʌ< ^ə	ʌ< ^ə
	ʌ<		ʌ<	ʌ< ^ə
			ʌ< ^ə	
			ʌ< ^ə	
2	ʌ< [̃]	ʌ<	ʌ< ^ə	ʌ<
	ʌ< ^ʰ	ʌ<	ʌ<	ʌ< ^ʰ
	ʌ<			
	ʌ<			
3	ʌ< ^ə	ʌ<	ʌ< ^ə	ʌ<
	ʌ<		ʌ< ^ə	
	ʌ<			
	ʌ< ^ʰ			
	ʌ< ^ə			
	ʌ<			
4	ʌ<	ʌ<	ʌ< ^ə	
	ʌ<	ʌ<	ʌ<	
	ʌ< ^ə	ʌ< ^ə	ʌ<	
	ʌ<		ʌ<	
			ʌ<	
			ʌ<	

Table 26 (con't)

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/
5	$\Lambda < \cdot \partial$ $\Lambda <$	$\Lambda < \partial$ $\Lambda < \cdot$	$\Lambda < \cdot \partial$ $\widetilde{\Lambda <}$ $\widetilde{\Lambda < \cdot \partial}$	
6	$\Lambda < \partial$	$\Lambda < \partial$	$\widetilde{\Lambda < \cdot \partial}$ $\widetilde{\Lambda < \cdot \partial}$ $\widetilde{\Lambda <}$	$\Lambda < \partial$

Table 27. Phonetic Reflexes of /l/ + /r/

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/
1	ʃ.	ʃ.	ʃ. ʃ	ʃ ^ə
2		ʃ	ʃ< ʃ	ʃ ₂
3		ʃ _v	ʃ ^ə	ʃ< ʃ _v
4	ʃ ʃ	ʃ	ʃ ʃ	ʃ
5	ʃ. ^ə	ʃ.	ʃ.	ʃ. ^ə
6	ʃ.		ʃ.	ʃ. ^ə ʒ ^ə

environments except before /r/, where only monophthongs occur. Monophthongs are rare in other environments. Central diphthongs occur only in the speech of #3 and 4, both of whom are women. Nasalized allophones occur in the speech of all six informants. No raised or retracted allophones are recorded. Table 28 presents the distribution of allophones by informant and environment.

/ʊ/ - lower, high-back, rounded vocoid. There are three primary types of allophones: back monophthongs [ʊ, ʊ[◌], ʊ[^], ʊ[◌], ʊ[◌]], central monophthongs [ʊ, ʊ[◌]], and diphthongs [ʊ[◌], ʊ[◌], ʊ[◌], ʊ[◌]]. Monophthongs are prevalent in all environments; diphthongs appear only in the speech of #1, 2, and 6. Central monophthongs occur twice before /r/--once each in the speech of #1 and 3. A nasalized allophone occurs only in the speech of #2, but the phoneme is rare before nasals. Lowered and retracted allophones are rare; no retracted allophones are recorded. Table 29 presents the distribution of allophones by informant and environment.

/u/ - higher, high-back, rounded vocoid. There are three primary types of allophones: upgliding diphthongs [ʊ[◌]u[◌], ʊ[◌]u[◌], ʊ[◌]u[◌]], monophthongs [u[◌], u[◌], u[◌], u[◌], u[◌], u[◌]], and ingliding diphthongs [u[◌]].⁶ Upgliding

⁶ Sequences of segments such as [ɛu], [ɛ[◌]u], and [ɛ[◌]u] are interpreted phonemically as /ju/. Such an interpretation is necessary in order to preserve phonemically the phonetic contrast between due and do in the dialect. Words such as due, new, and Tuesday have [ɛu] after the alveolar nonsyllabic, while words such as do have [u] or [ʊ[◌]u[◌]]. Hence due and do form minimal pairs. The only other alternative to phonemicizing [ɛu] as /ju/ is to posit a phoneme which occurs only after alveolars. Such an alternative is uneconomical and ignores the obvious relationships between [ɛu] and [ɛu].

Table 28. Allophones of /o/

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/	/r/
1	0 < ʈ	0 < ʈ	$\widetilde{0 < \cdot \text{ʈ}}$	0 < \cdot ʈ	0 ^v .
	0 < \cdot ʈ		0 < ʈ	0 < ʊ <	0 ^v
2	0 < ʊ <	0 < ʊ	$\widetilde{0 \leq \text{ʊ} <}$	0 <	0 ^v .
	0 ʊ <	0 ^v .			0.
					0 ^v
3	θ > ʈ	0 < ʈ	θ ʈ	0 ʈ	0 ^v .
	0 ≤ ʊ ≤	0 < ʊ <	$\widetilde{0 \text{ʊ}}$	0 < ʈ	0
	0 ^v ʊ <	0 ʊ <			
	0 < ʈ				
4	0 < ʊ <	0 < ʊ <	$\widetilde{\theta > \text{ʈ}}$	0 < ʊ <	0 ^v .
		0 < ʈ	0 ^v ʊ <	0 < ʊ	0 <
5	0 < ʈ	0 < ʈ	$\widetilde{0 < \text{ʈ}}$	0 < ʈ	0 <
		0 < \cdot ʈ			
6	0 < \cdot ʈ	0 < \cdot ʈ	$\widetilde{0 < \text{ʈ}}$	0 < \cdot ʈ	0 <
	0 < ʈ	0 < ʈ			
	0 < ʈ				

Table 29. Allophones of /v/

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/	/r/
1	$v^{\leq \partial}$	$v^{\leq \partial}$		$v^{\leq \partial}$ $v^{\wedge}$	$\underline{v}^{\cdot}$
2	$v^{\leq}$	$v^{\leq}$	$\widetilde{v^{\leq \partial}}$	$v^{\leq}$	$v^{\leq}$
3	$v^{\leq}$ v	$v^{\leq}$ v	$v^{\leq}$	$v^{\leq}$	$\underline{v}^{\cdot}$
4	$v^{\leq}_{\wedge}$	$v^{\leq}$		$v^{\leq}$	
5	$v^{\leq}$	$v^{\leq}$			
6	$v^{\leq}$	$v^{\leq \cdot \partial}$		$\underline{v^{\leq \cdot \partial}}$	

diphthongs, often centralized, are prevalent in all environments except before /l/. Monophthongs, again often centralized, predominate before /l/ and after /j/ and occur occasionally in other environments. The only ingliding diphthong in the data appears before /l/ in the speech of #3. Nasalized allophones occur in the speech of #3, 4, 5, and 6. Lowered and raised allophones are rare; retracted allophones do not occur in the data. Table 30 presents the distribution of allophones by informant and environment.

/ai/ - lower, low-front, unrounded vocoid gliding toward a higher-central unrounded vocoid. There are three primary types of allophones: upgliding diphthongs [a^ɛ, a^ɪ, a^ɨ], monophthongs and upgliding diphthongs with short glides [a^{ɪ̯}, a^{ɛ̯}, a^{ɨ̯}, a^{ɪ̯}, a^{ɛ̯}, a^{ɨ̯}, a^{ɪ̯}, a^{ɛ̯}, a^{ɨ̯}], and ingliding diphthongs [a^{ɪ̯}, a^{ɨ̯}]. Monophthongs and upgliding diphthongs with short glides are prevalent in all environments. Monophthongs are almost always lengthened. Upgliding diphthongs are rare, occurring only in the speech of #1 (before a voiceless obstruent), #3 (before a voiced obstruent), and #4 (before voiceless obstruents and before a nasal). Inggliding diphthongs are common before /l/ but rare elsewhere. Nasalized allophones appear in the speech of #3, 5, and 6. Retracted allophones are quite common, but fronted, lowered and raised allophones are infrequent. Before /r/, /a/ usually occurs in lieu of /ai/; /ai/ occurs before /r/ only in the speech of #1 and 5. Table 31 presents the distribution of allophones by informant and environment.

Table 30. Allophones of /u/

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/	/r/
1	ʋt	ʋt	$\text{ʋ} > \text{t}$ ʋt	ʋt	
2	ʋt	$\text{ʋ} < \text{u} <$ ʋt	$\text{ʋ} \leq \text{u} \leq$ $\text{u} <$ $\widetilde{\text{u}}$	t $\text{u} <$	
3	ʋt	$\text{ʋ} < \text{u} <$	$\widetilde{\text{ʋ} \leq \text{u} <}$ $\widetilde{\text{t}}$ $\text{u} <$ $\text{t} \cdot$	$\text{t} \cdot \text{ə}$	
4	$\text{ʋ} \leq \text{t}$ t ʋt		$\text{ʋ} \leq \text{t}$ $\widetilde{\text{u}}$ $\text{ʋ} < \text{u}$ ʋt	$\text{u} <$	
5	$\text{u} <$	$\text{ʋ} < \text{u} <$ $\text{u} <$	$\widetilde{\text{ʋ} < \text{u} <}$	$\text{u} <$ $\text{ʋ} < \text{u} <$	
6	$\text{ʋ} < \text{u} <$ $\text{u} <$	$\text{ʋ} < \text{u} <$	$\widetilde{\text{ʋ} < \text{u} <}$	$\text{u} < \cdot$	

Table 31. Allophones of /ai/

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/	/r/
1	a ^{>} ^ɛ a ^{>} ^ɛ	a ^{>} ^ɛ a ^{>} ^ɛ	a ^{>} ^ɛ a [^] ^ɛ a ^{>} ^ɛ	a ^{>} ^ɛ	a ^{>} ^ɛ
2	a [·]	a [·]	a [·] ^ə	a [·]	
3	a [·] a [·] ^ə	a [·] a [·] ^ɛ	[~] a [·] a [·]	a [·]	
4	a [·] ^ɛ a ^{>} ^ɛ a [·]	a [·]	a [·] a [·] ^ɛ	a [·] ^ə a [·]	
5	a ^{>} ^ə a ^{>} [·]	a ^{>} [·]	[~] a ^{>} [·] ^ɛ	a ^{>} ^ə	
6	a ^{>} [·]	a ^{>} [·]	[~] a ^{>} [·] ^ɛ a ^{>} [·]	a [·] ^ə	

/au/ - lower, low-front, unrounded vocoid gliding toward a high-back

rounded vocoid. There are three primary types of allophones:

upgliding diphthongs [a^h·ʊ, a^hʊ, a^hɪ̯, a^h·ʊ, a^ho^h, æ̃·ʊ, æ̃o^h, æ̃o^h, a^h·ʊ, æ̃·ʊ, æ̃·ʊ, æ̃·ʊ, æ̃·ʊ, æ̃·ʊ], ingliding diphthongs [æ̃ə, æ̃·ə, æ̃·ə, æ̃·ə, æ̃·ə, æ̃·ə], and monophthongs [a^h].

Upgliding diphthongs are prevalent in all environments except before /l/, where ingliding diphthongs prevail. Ingling diphthongs occasionally occur in other environments. They are especially common in the speech of #3. Monophthongs occur only before /r/. They are of two types: lower low-front vocoids [a^h] and higher low-front vocoids [æ̃]. The later phones are indistinguishable from allophones of /æ̃/ and have been analyzed as allophones of that phoneme (see the discussion of the relationship between /æ̃/ and /au/ in section 3.2). The lower low-front vocoid appears only in the speech of #5. The onset of /au/ is a feature which deserves intensive sociolinguistic study. Higher low-front onsets predominate in the speech of #2, 3, and 4; they alternate with lower low-front onsets in the speech of #1, 5, and 6. Nasalized allophones occur only in the speech of 5 and 6 (the records transcribed by Bailey); fronted, retracted, and lowered allophones are rare. Table 32 presents the distribution of allophones by informant and environment.

/ɔi/ - higher, low-back, rounded vocoid gliding toward a high-central, unrounded vocoid. There are three primary types of allophones:

upgliding diphthongs [ɔ^hɪ̯, ɔ^hɪ̯], ingliding diphthongs [ɔ^hə, ɔ^hə, ɔ^h·ə, ɔ^hə, ɔ^h·ə, ɔ^h·ə, ɔ^h·ə], and diphthongs with retroflex offglides [ɔ^hʂ, ɔʂ]. Ingling

diphthongs are prevalent in all environments and occur exclusively before /l/. Upgliding diphthongs occur occasionally before voiceless and voiced obstruents and nasals. Diphthongs with retroflex offglides occur in the speech of #3 in oysters and #6 in ointment. Fronted allophones are rare, and retracted and nasal allophones are not recorded. The phoneme is not recorded before /r/. Table 33 presents the distribution of allophones by informant and environment.

Unstressed Syllabics

There are two unstressed syllabics in the folk speech of the northern part of the Cumberland Plateau. They are /ə/ and /ɛ/.⁷ /ə/ - mid-central, unrounded voicoid. In all environments [ə] is the usual allophone, but [ɻ] occurs as the phonetic reflex of /ə/ + /r/. Although [ɻ] is tentatively analyzed as an allophone of /ə/ here, an alternative analysis is suggested in Chapter IV.

⁷ The number of phonemes could actually be reduced by two if /ə/ and /ɛ/ were phonemicized as /ʌ/ and /ɪ/ respectively. Such a scheme of phonemicization, however, would actually increase the complexity of the phonology because it ignores the phonotactic distinction between free and checked syllabics, a distinction which has important phonological consequences and which, as Sapir has suggested in "The Psychological Reality of Phonemes" (pp. 58-60), is psychologically real. Although /ʌ/ and /ɪ/ are checked vowels, they must be reclassified as free vowels if /ə/ and /ɛ/ are not treated as separate phonemes. If /ʌ/ and /ɪ/ are reclassified as free syllabics, there is no principled basis for accounting for such phenomena as the influence of post-vocalic /r/ on the vowel system. The unstressed syllabics /ə/ and /ɛ/ are here given separate phonemic status in order to preserve an important phonotactic distinction.

Table 33. Allophones of /ɔi/

#	Vl. Obstruent	Vd. Obstruent	Nasal	/l/	/r/
1	ɔ ^h ɛ ^v	ɔ ^h ɔ	ɔ ^h ɛ	ɔ ^v :ɔ ^h	
2	ɔ ^h ɔ	ɔ ^h ɔ	ɔ ^h ɔ	ɔ ^h ɔ	
3	ɔ ^h ʔ	ɔ ^v . ɔ	ɔ ^v ɔ ^h	ɔ ^v :ɔ ^h	
4	ɔ ^h ɛ	ɔ ^v ɔ ^h	ɔ ^h ɔ ^h	ɔ ^v ɔ	
	ɔ ^v ɔ				
5				ɔ ^v . ɔ ^h	
6		ɔ ^v ɛ	ɔ ^v ʔ	ɔ ^v ɔ	

/ɛ/ - lower, high-central, unrounded vocoid. In medial position lower high-central allophones [ɛ, ɛ^h] predominate. In final position lower high-central allophones compete with higher high-central allophones [ɛ̃, ɛ̃^h].

3.2 Phonotactics of Monosyllables⁸

Single Nonsyllabics

All nonsyllabics occur both initially and finally in monosyllables with the following exceptions: /ŋ/ does not occur initially, /h, w, j/ do not occur finally, and /z/ is not recorded in monosyllables. As was indicated above, /z/ only occurs medially in measure and Hoosiers in the data used here. Nonsyllabics do not occur medially in monosyllables.

Clusters of Nonsyllabics

Initial clusters of two and three nonsyllabics are permitted, but there are severe restrictions on the make-up of such clusters. Initial clusters of two nonsyllabics must have one of the following as the first nonsyllabic: /p, b, t, d, k, g, f, θ, s, ʃ, m, n, h/. Except when the first nonsyllabic is /s/, the second nonsyllabic is always one of the following: /r, l, w, j/. If the first nonsyllabic is /s/, one of the following may also be the second nonsyllabic:

⁸ The most useful discussions of English phonotactics are in Hans Kurath, A Phonology and Prosody of Modern English (Ann Arbor: Univ. of Michigan Press, 1964); James B. McMillan, "Phonology of the Standard English of East Central Alabama," Diss. Univ. of Chicago 1946; and Bohumil Trnka, A Phonological Analysis of Present-Day Standard English (Univ., Al.: Univ. of Alabama Press, 1968).

/p, t, k, m, n/. In initial clusters of three nonsyllabics, /s/ must be the first nonsyllabic, /p/, /t/, or /k/ the second, and /r/, /l/, /w/, or /j/ the third. Not all nonsyllabics which enter into clusters, however, may occur together. Figure 9 presents all of the initial nonsyllabic clusters which occur in the data. Note that the cluster /vj/ does not occur. In spite of the fact that /vj/ does not occur in the data, it seems unlikely that the informants do not have the cluster. The absence of /vj/ is probably due to the fact that it only occurs in a few words--view, its derivatives, and compounds in which view is an element. In all likelihood, then, there are 44, rather than 43, initial nonsyllabic clusters in the folk speech of the northern part of the Cumberland Plateau. As Figure 9 indicates, the dialect is one of those which does permit /j/ after apico-alveolar nonsyllabics.

Final clusters of two, three, and four nonsyllabics are permitted, but again there are restrictions on the make-up of such clusters. All nonsyllabics which occur word-finally except /θ/ and /ʃ/ may be followed by a single nonsyllabic. Six nonsyllabics /l, k, n, m, ŋ, s/ may be followed by two nonsyllabics, and /n/ may be followed by three nonsyllabics. The only nonsyllabics which occur finally in final nonsyllabic clusters are /p, b, t, d, k, f, v, θ, s, z, ʃ, j, m/. Only /p, t, d, k, v, s, j/ may be the second member of a final cluster of three nonsyllabics. The only final cluster consisting of four nonsyllabics is /ntst/. Again, not all nonsyllabics which enter into final clusters occur together. Figure 10 presents all of the final nonsyllabic clusters which occur in the data. Note that no clusters which have /r/ as the initial nonsyllabic are listed.

Initial Nonsyllabic

	p	b	t	d	k	q	f	θ	s	sp	st	sk	^v s	m	n	h
Final Nonsyllabic	r	pr	br	tr	dr	kr	qr	fr	θr	sr	spr	str	skr	^v sr		
l	pl	bl			kl	gl	fl		sl	spl						
w			tw		kw				sw			skw				hw
j	pj	bj	tj	dj	kj	gj	fj			spj	stj	skj		mj	nj	hj
p									sp							
t									st							
k									sk							
m									sm							
n									sn							

Figure 9. Initial Nonsyllabic Clusters

Initial Nonsyllabic		b	d	f	g	k	l	m	n	p	s	t	v	z	j	c	s	η
Final Nonsyllabic	b	bd					lb	md	nd				vd	zd	j'd			ηd
	d				gd		ld	mf										
	f						lf											ηk
	k						lk				sk							
	m						lm	mp			sp							
	p						lp		ns	ps		ts						
	s			fs		ks	ls		nt	pt	st						st	
	t			ft		kt	lt										ct	
	v						lv											
	z	bz	dz		gz		lz	mz	nz				vz					ηz
	j						l'		n'									
	c						l')		nc									
	θ						lθ		nθ			tθ						
	dz						ldz		ndz									
	ks						lks											ηks
	kt										skt							ηkt
	ps							mps										
	pt							mpt										
	st					kst			nst									
	ts					kts	lts		nts									
	tst								ntst									
	tθ						ltθ		ntθ									
	vz						lvz											
	j'd						l'd											

Figure 10. Final Nonsyllabic Clusters

Since post-vocalic /r/ is always realized as a retroflex vocoid, there are no phonetic clusters of nonsyllabics with /r/ in them in word-final position. The absence of clusters beginning with /ʁ/ may be an artifact of the data. There are no monomorphemic clusters with /ʁ/, and the phoneme does not often occur word-finally. Hence clusters with /ʁ/ as the initial nonsyllabic are not common. The absence of clusters beginning with /θ/ is probably not an artifact of the data: moths is a LAGS worksheet item and is regularly elicited. In words such as moths, /θ/ is invariably deleted in the folk speech of the northern part of the Cumberland Plateau.

Stressed Syllabics

All of the stressed syllabics occur as syllable nuclei in monosyllables, all of them occur before both single nonsyllabics and clusters of nonsyllabics, and all of them except /u/ and /ʊ/ may be syllable-initial. Three stressed syllabics /e, o, ai/ may occur without either a preceding or a following nonsyllabic. There are, however, a number of restrictions on the occurrence of stressed syllabics.

First, certain of the stressed syllabics may not be syllable-final. These syllabics, which Kurath has termed checked syllabics, must be followed by a nonsyllabic. In the folk speech of the northern part of the Cumberland Plateau, there are six checked syllabics. They are as follows:

i	ʊ
ɛ	ʌ
æ	
a	

Kurath uses the term free vowels to refer to the syllabics which may be syllable-final. There are eight free syllabics in the folk speech of the northern part of the Cumberland Plateau. They are as follows:

i		u		
e		o		ai
				ɔi
		ɔ		au

The distribution of stressed syllabics before /r/ parallels the distinction between free and checked vowels in many ways. Except for /ɔ/ and /o/, only checked syllabics occur before /r/. Although /ai/ and /au/ appear before /r/ in some dialects of English, they almost always become /a/ and /æ/ respectively in the folk speech of the northern part of the Cumberland Plateau.

Their behavior before /r/ suggests that /ai/ and /a/ and /au/ and /æ/ stand in a relationship similar to that between /i/ and /I/ and /e/ and /ɛ/: they form a free syllabic-checked syllabic pair. The fact that /ai/ and /au/ are often monophthongal simply reinforces the contention that they form free syllabic-checked syllabic pairs with /a/ and /æ/ respectively. In light of the behavior of /ai/ and /au/, the free syllabic chart might be revised as follows and contrasted with the chart of checked syllabics:

Free Syllabics

i		u
e		o
au	ɔ	ɔi
ai		

Checked Syllabics

I		ʊ
ɛ		ʌ
æ		
a		

Each free syllabic, except for /ɔ/, can be paired with a checked syllabic. (There is, of course, no checked analogue of /ɔi/; however, /ɔi/ is a recent borrowing from French, and its phonological behavior and limited occurrence require that it be treated separately. In other words, /ɔi/ does not fit into the English vowel system.)⁹ In light of the above revision of the system of free syllabics, the statement of the distribution of stressed syllabics before /r/ can be revised: when there are free syllabic-checked syllabic pairs, only the checked syllabic, with the exception of /o/, occurs before /r/. When a free syllabic has no checked syllabic analogue, the free syllabic occurs before /r/.

The occurrence of stressed syllabics before /ŋ/ is even more limited than their occurrence before /r/. Only six stressed syllabics /I, e, ɛ, æ, ɔ, ʌ/ appear before /ŋ/.

Unstressed Syllabics

In monosyllables, unstressed syllabics may be syllable-initial or syllable-final, may precede or follow a nonsyllabic, or may occur alone. The incidence of unstressed syllabics is discussed in Section 3.3.

Canonical Forms of Monosyllables

There are four types of monosyllables in the folk speech of the northern part of the Cumberland Plateau. They are as follows:

⁹ Kurath, A Phonology and Prosody of Modern English, p. 20.

1. A stressed or an unstressed syllabic occurring alone;
2. A stressed or an unstressed syllabic preceded by one, two, or three nonsyllabics;
3. A stressed or an unstressed syllabic followed by one, two, or three nonsyllabics;
4. A stressed or an unstressed syllabic preceded by one, two, or three nonsyllabics and followed by one, two, three, or four nonsyllabics.

Not all of the possible combinations of Type 4 occur. Figure 11 presents the different types of monosyllables found in the data.

3.3 Incidence of Segmental Phonemes

Two principles govern the treatment of incidence here. First, the items either serve as regional or social markers or are examples of variation within the dialect. Secondly, except for the incidence of /j/ after alveolars, the items cannot be explained by phonotactic principles or as syntagmatic processes. Differences in the incidence of segmental phonemes are of two types: systematic differences, or differences which are either confined to specific phonological environments or which are the results of historical development, and individual differences, or differences which are explainable neither by phonological context nor historical development.¹⁰

¹⁰ Lee A. Pederson, "The Pronunciation of English in Metropolitan Chicago," *PADS*, 44(1965), p. 41. Reference to historical antecedents is, strictly speaking, outside the realm of synchronic phonological study. Such reference, however, often enables one to make phonological generalizations about classes of items rather than lists of pronunciations of individual words. Historical references, then, do not mean that this is an historical study; rather, reference to historical antecedents is simply a convenient descriptive device.

		Initial Nonsyllabics				
		0	1	2	3	4
Final Nonsyllabics	0	v	cv	ccv	cccv	
	1	vc	cvc	ccvc	cccv	
	2	vcc	cvcc	ccvcc	cccvcc	
	3	vccc	cvccc	ccvccc		
	4		cvcccc			

Figure 11. Canonical Forms of Monosyllables

Systematic Differences Among Syllabics

In most cases /ɛ/ and /I/ are distinguished before nasals in words such as ten, tin, pen, pin, sents, since, fence, rinse, chimney, and cemetery. Twice, however, /I/ occurs instead of /ɛ/ in pen (once each in the speech of #3 and 4). There are three instances of /ɛ/ for expected /I/: once in the speech of #2 (in rinse) and twice in the speech of #6 (in chimney and swing).

There is a great deal of variation in the incidence of syllabics before tautosyllabic /r/ in words such as care, careless, hair, mare, pair, scare, scared, and stairs. In care the syllabic is usually /I/, but /ɛ/ occurs in the speech of #3. However, in the three occurrences of careless in the data, /ɛ/ occurs as the syllabic in the speech of #1, /æ/ as the syllabic in the speech of #2, and /ʌ/ as the syllabic in the speech of #4. The usual syllabic in chair is also /I/, but #6 has /ɛ/ while #4 has /ʌ/. In the speech of #2 /ɛ/ and /ʌ/ + /r/ (phonetically [ɹ]) occur in addition to /I/. The usual syllabic in scarce and scared is /ɛ/, but /I/ occurs in scarce in the speech of #2 and in scared in the speech of #4, while /e/ occurs in scarce in the speech of #4. The usual syllabic in hair is /æ/, but #3 has /ɛ/ in addition to /æ/, and #1 and 2 have only /ʌ/ and /ai/ respectively. The only syllabic which occurs in stairs, pair, and mare is /æ/.

There is also a great deal of variation in the incidence of syllabics before heterosyllabic /r/ in words such as cherry, dairy, married, Mary, merry, and Sara. The usual syllabic in cherry, dairy, Mary, and Sara is /ɛ/, but other syllabics do occur. Informant four has /ʌ/ + /r/ (phonetically [ɹ]) in cherry, dairy, and Mary and both

/e/ and /ɛ/ in Sara, while #1 has /e/ in Mary. In married /æ/ and /ɛ/ occur three times each--/æ/ in the speech of #1, 5, and 6 and /ɛ/ in the speech of #1, 3, and 4. In addition to having both /æ/ and /ɛ/, #1 also has /a/ in married; #4 has /ʌ/ + /r/ (phonetically [ɹ]) in addition to /ɛ/. There are only three instances of merry in the data, and a different stressed syllabic occurs in each instance: /ʌ/ in the speech of #1, /æ/ in the speech of #2, and [ɹ] in the speech of #4. While there is little consistency within idiolects in the incidence of syllabics before tautosyllabic /r/, there is some consistency in the incidence of syllabics before heterosyllabic /r/. In the speech of #3, /ɛ/ is the usual syllabic, while /ʌ/ + /r/ (i.e., [ɹ]) normally occurs in the speech of #4. There is less consistency in the speech of the other informants.

The only stressed syllabic which occurs in barrow, harrow, and the second syllable of wheelbarrow is /a/. In the six instances of barrel, however, five different stressed syllabics occur: /æ/, in the speech of #2 and 6, /ɛ/, in the speech of #4, /a/, in the speech of #1, and both /ʌ/ and [ɹ], in the speech of #3.

There is considerable variation between /a/ and /æ/ in such words as tassel, strap, wrapped, and unwrapped. In strap, /a/ predominates (only #3 has /æ/), but /a/ and /æ/ occur with almost equal frequency in wrapped and unwrapped: #1 has /æ/ in both, #2 has /a/ in both, and #4 has /a/ in wrapped but /æ/ in unwrapped. In wrapped, #3 has /ɛ/, but unwrapped does not occur in her field record. In tassel /ɔ/ alternates with /a/ and /æ/: #1 has /a/, #2 and 4 have /ɔ/, and #3 has /æ/. There is little consistency within idiolects in the

incidence of stressed syllabics in strap, tassel, wrapped, and unwrapped. Only #2 (who has /ɔ/ in tassel, /ɑ/ elsewhere) shows any consistency.

In such words an answer, aunt, chance, and dance, /æ/ is the usual stressed syllabic. In can't, however, all informants have /e/; #5 also has /æ/. In addition, /e/ occurs twice in chance (in the speech of #3 and 4), once in dance (in the speech of #3, where it alternates with /æ/), twice in aunt (in the speech of #2 and 3, where it again alternates with /æ/), and once in answer (in the speech of #3). Only in the speech of #3 does /e/ occur with any consistency; even there it often alternates with /æ/.

The only syllabic which occurs in leg is /æ/, but /æ/ rarely occurs in egg and keg. In egg /e/ is the usual syllabic; /ɛ/ occurs in the speech of #1 and 5. There is considerable variation in the syllabic in keg: #1 and 3 have /ɛ/, #2 has /e/, and #4 has /æ/.

Much of the variation in the incidence of phonemes results from modern developments of Middle English /ō/. Before voiceless fricatives in words such as coffee, costs, frost, loss, moth, off, and often, the reflex of ME /ō/ is /ɔ/. Before voiced velars in words such as dog, fog, foggy, frog, hog, log, and strong, /ɔ/ is the usual syllabic. In the speech of #5, /ɔ/ alternates with /ɑ/ in log; in hog, #6 has both /ɑ/ and /ɔ/. In fog, #1 and 3 have /ɔ/, while #2 and 4 have /ɑ/. In foggy, however, #1 and 4 have /ɔ/, while #2 and 3 have /ɑ/. Only in the speech of #1 is /ɔ/ exclusive in frog. In the speech of #3 and 4, /ɔ/ and /ɑ/ alternate, while only /ɑ/ occurs in the speech of #2.

Before stops and nasals other than voiced velars and before heterosyllabic /r/, the reflex of ME /ō/ is invariably /ɑ/. No other

stressed syllabic occurs in words such as borrow, crop, God, pot, rock, tomorrow, and vomit. Before tautosyllabic /r/, however, /ɔ/, /o/ or /a/ may occur. Only /ɔ/ occurs in morning, but in corn /ɔ/ appears in the speech of #2, 5, and 6, while /o/ appears in the speech of #1 and 3 (alternating with /a/ in the speech of the latter). In forehead, /ɔ/ appears only in the speech of #1; #2 and 3 have /a/, while #4 has /o/.

There are two exceptions to the generalizations about the incidence of the reflexes of ME /õ/. Although the following nonsyllabic in hospital is a voiceless fricative, the stressed syllabic is invariably /a/. Likewise, the syllabic in on is /ɔ/ even though it precedes a nonvelar nasal.

Modern developments of Middle English /wa/ are also a source of variation in the incidence of phonemes. Before /r/, /l/, and /s̺/, /ɔ/ occurs exclusively in the speech of #2, 4, 5, and 6. Before /l/, #1 and 3 also have /ɔ/, but #3 has /a/ in war, wash, and Washington. While #1 has /ɔ/ in war, he has /a/ in wash. There is considerable variation between /a/ and /ɔ/ before other consonants. In watch, only /a/ occurs, but /ɔ/ predominates in want and wasp. However, #2 has both /a/ and /ɔ/ in want and #4 has only /a/ in wasp. In swamp, /ɔ/ occurs in the speech of #1 and 2, while /a/ occurs in the speech of #3 and 4. In water, #2 and 4 have /ɔ/, #1 and 6 have /a/, and #3 has /ɛ/.

In words such as sausage, sauce, faucet, jaundice, and haunted, there are three reflexes of Middle English /au/: /ɔ/, /a/, and /æ/. In sausage, the stressed syllabic is always /ɔ/, and /ɔ/ occurs in the only instance of sauce in the data (in the speech of #3). The stressed

syllabic in faucet is always /a/, and only /x/ appears in jaundice.

Only /x/ appears in haunted except in the speech of #3, who has /ɔ/.

Before labials and labiodentals the reflexes of Middle English / $\bar{o}$ / are /u/ and /ʊ/. Before /m/, /u/ is usual, /ʊ/ occurring only in broom in the speech of #2. Before /p/ (as in hoops and cooper), only /ʊ/ occurs. While /u/ is the usual form before labiodentals, #1 has /ʊ/ in hoof (but /u/ in hoofs) and #3 has /ʊ/ in hoofs (but /u/ in hoof).

Before tautosyllabic /r/, /o/ and /ɔ/ alternate in hoarse and mourning. While #1 has /o/ in both hoarse and mourning, #3 has /ɔ/ in both. Informants two and four have /o/ in hoarse and /ɔ/ in mourning. Thus hoarse and horse contrast in the speech of #1, 2, and 4. Morning and mourning contrast only in the speech of #1.

The incidence of /ai/ for expected /ɔi/ has long served as a stereotype of mountain speech. In the data used here, however, /ai/ occurs instead of /ɔi/ only once--in joints in the speech of #1, who also has /ɔi/ in that word.

There is considerable variation in the incidence of unstressed syllabics. While /ɛ/ usually occurs before all obstruents in final unstressed syllables, /ə/ occurs twice in vomit (in the speech of #1 and 3) and once in careless (in the speech of #1), and [ɾ] (phonemically /ə/ + /r/) occurs in jaundice and grasswidows in the speech of #4. In bucket, houses, sausage, skillet, and stomach, only /ɛ/ occurs. Likewise, only /ɛ/ appears in the medial unstressed syllables of appendicitis, beautiful, hospital, rheumatism, and sycamore. In final, unstressed, open syllables, the syllabic may be /ə/, /ə/ + /r/

(phonetically [ʀ]), or /ɛ/. Except in borrow, orthographic ow is realized as /ə/ or [ʀ]. In barrow, harrow, and wheelbarrow, the unstressed syllabic is /ə/, but in borrow /ɛ/ occurs except in the speech of #2, who has /ə/. The usual unstressed syllabic in yellow is also /ə/, but [ʀ] and /ə/ alternate in the speech of #2. In swallow and widow, however, [ʀ] predominates. Only #4 has /ə/ in widow (and she has [ʀ] in grasswidows.) The final unstressed syllabic in mosquito, tomato, and potato is usually /ə/, but [ʀ] does occur with some frequency. Thus #4 has [ʀ] in mosquito and #6 has [ʀ] in tomato. In potato, #1, 2, 4, and 6 have both /ə/ and [ʀ], and #4 also has both /ə/ and [ʀ] in tomato. Orthographic a is usually realized as /ɛ/; no other unstressed syllabic occurs in okra and soda. In Martha, /ə/ occurs in the speech of #1, while /ə/ and /ɛ/ alternate in Sara in the speech of #4. Orthographic a is always realized as /ə/ in umbrella, however. In unstressed syllables, orthographic y, ee, and ey are realized as /ɛ/.

Systematic Differences Among Nonsyllabics

The folk speech of the northern part of the Cumberland Plateau is one of those varieties of English which permits /j/ after alveolars. Thus /j/ follows the initial nonsyllabic in due, dues, tube, Tuesday, and new with one exception: in the speech of #2, tube is pronounced [tʰuɐb].

The cluster /hw/ almost always occurs in words such as wheat, wheelbarrow, and whip. Initial aspiration is lost only twice in the data--in the speech of #1 (in what) and #2 (also in what).

There is a great deal of variation in the incidence of /s^v/ and /s/ before /r/ in shrimp, shrink, shrank, and shrunk. Thus #1 has only /s^v/ in such words, while #3 has only /s/. In shrimp and shrink, #2 has /s/, but he has /s^v/ in shrunk. However, #4 has /s^v/ in shrink and shrimp but /s/ in shrunk.

Postvocalic /r/ is usually realized as [r̥] in both stressed and unstressed syllables. Occasionally, post-vocalic /r/ is realized as [ə] in unstressed syllables, and in a few instances post-vocalic /r/ becomes [ə] in stressed syllables. Thus /r/ is realized as [ə] in four in the speech of #1 and 2, in sycamore in the speech of #2 and 3, and in squirrel in the speech of #6.

Individual Differences Among Syllabics

The syllabic in deaf is usually /ɛ/. In the speech of #3, /æ/ alternates with /ɛ/; /i/ does not occur in deaf in the data.

The usual syllabic in drain is /i/. In the speech of #3, /e/ alternates with /i/.

In the final syllables of genuine, quinine, and iodine, the usual syllabic is /ai/. In the speech of #2 /i/ occurs in the final syllable in iodine.

Guardian is usually disyllabic in the folk speech of the northern part of the Cumberland Plateau; the second syllable is stressed and the final syllabic is /i/. However, guardian is trisyllabic in the speech of #2, the last two syllables being unstressed.

Both /ɛ/ and /I/ occur as stressed syllabics in kettle. In the speech of #1 and 4, /ɛ/ occurs; /I/ occurs in the speech of #2 and 3.

Although loam occurs only three times in the data, it has a different syllabic in each instance. The syllabic is /u/ in the speech of #1, /o/ in the speech of #2, and /ɔ/ in the speech of #3.

In queer, /æ/, /I/, and /a/ occur as syllabics, with /æ/ being most frequent. Thus #1, 2, 3, and 4 all have /æ/ as the syllabic. However, /I/ and /æ/ alternate in the speech of #3, while /a/ and /æ/ alternate in the speech of #4.

The usual syllabic in soot is /ʊ/. Only #3 has /ʌ/.

The stressed syllabic in syrup is usually [ʀ] (phonemically /ʌ/ + /r/). Only #2 has /I/ as the stressed syllabic.

Both /æ/ and /ɛ/ occur as stressed syllabics in yellow. While #1 has /æ/, #3 has /ɛ/. Both /æ/ and /ɛ/ occur in the speech of #2 and 4.

In yesterday, both /I/ and /ɛ/ occur as stressed syllabics. Thus #2, 3, and 5 have /ɛ/, while #1 and 4 have /I/.

Individual Differences Among Nonsyllabics

Greasy occurs only three times in the data--in the speech of #1, 3, and 4. In each instance the medial nonsyllabic is /z/.

Humor almost always begins with a nonsyllabic cluster /hj/. However, #4 has /j/ as the initial sound.

In mushroom, /m/ and /n/ both occur as final nonsyllabics. While /m/ occurs in the speech of #1 and 2, /n/ occurs in the speech of #3 and 4.

In the data used here, /c̥/ is the only phoneme which occurs word-finally in rinse.

The final nonsyllabic in vomit is almost always /k/, but both /k/ and /t/ appear medially in turtle. While #1 has /t/ medially in turtle, #2 has /k/, and #3 and 4 have both /t/ and /k/.

In tusks, /s^h/ occurs instead of expected /sk/ in the speech of all informants except #5. He has the /sk/ cluster.

Intrusive /r/ appears in wash in the speech of #2, 4, and 5. Intrusive /r/ appears in ought to in the speech of #1, 2, 3, and 4, in pauper in the speech of #3, and in ointment in the speech of #6.

Only in the speech of #3 does /j/ appear initially in yeast. Elsewhere, the initial phoneme is /i/.

CHAPTER IV

SYNTAGMATIC PROCESSES

4.1 Morphophonemic Processes

The morphophonemic syntagmatic processes in the folk speech of the northern part of the Cumberland Plateau are of four types: deletion, epenthesis, substitution, and metathesis.

Deletions

Deletions are of two types: reductions and omissions.¹ There are, in turn, four types of reduction (simplification of final nonsyllabic clusters, reduction of contiguous homorganic nonsyllabics, loss of /r/ in syllable-initial clusters which have /r/ as the final nonsyllabic, and reduction of a sequence of two sounds to a single sound which has features of both) and four types of omission (apheresis, syncope, apocope, and haplology).

Although not as prevalent in the folk speech of the northern part of the Cumberland Plateau as in some other dialects, simplification of final nonsyllabic clusters is, nevertheless, a common process.² Cluster simplification, however, is much more complex than other

¹ Except where otherwise indicated, I am using the scheme of classification and the terminology used by Heffner, pp. 163-230.

² Comparable protocols and field records suggest that white speakers in the lower South and black speakers are far more likely to reduce final nonsyllabic clusters.

analyses might suggest.³ First, final clusters of two nonsyllabics must be differentiated from clusters of three nonsyllabics. Secondly, a number of types of both double and triple clusters must be recognized. There are three types of clusters of two nonsyllabics: clusters of nonsyllabics which have the same voicing, clusters of nonsyllabics which consist of a nasal followed by a voiceless obstruent, and clusters of nonsyllabics which consist of a lateral followed by a voiceless obstruent. When a cluster of two nonsyllabics with the same voicing is simplified, the final nonsyllabic is usually lost. Thus pound becomes [p'æ:ʊn] in the speech of #1, best becomes [bɛʔs] in the speech of #2, and loft becomes [lɔʔʊf] in the speech of #6. Although simplification affects voiced and voiceless clusters in the same way, voiced clusters (especially /nd/ and /ld/) are simplified more frequently. All six informants occasionally simplify clusters of nonsyllabics with the same voicing, but no examples of simplified voiceless clusters were recorded in the protocol of #5.⁴

³ For example, see the analyses in William Labov, "Some Sources of Reading Problems for Speakers of the Black English Vernacular," in Language in the Inner City (Philadelphia: Univ. of Penn. Press, 1973), pp. 3-35; "The Quantitative Study of Linguistic Structure," Pennsylvania Working Papers on Linguistic Change and Variation, 1, no. 3 (1975); Gregory Guy, "Variation in the Group and the Individual: The Case of Final Stop Deletion," Pennsylvania Working Papers on Linguistic Change and Variation, 1, no. 4 (1975); and Walt Wolfram and Ralph W. Fasold, The Study of Social Dialects in American English (Englewood Cliffs, N.J.: Prentice Hall, 1974), pp. 129-134.

⁴ All distributional statements are based on the summaries in Chapter II, which contains detailed evidence for each idiolect.

Cluster simplification applies similarly to final clusters which consist of a nasal followed by a voiceless obstruent: the final nonsyllabic is lost. Thus didn't becomes [dɪˈd̥n̩] in the speech of #5, don't becomes [dɔ̃n̩] in the speech of #3, and account becomes [əkˈaʊ̃n̩] in the speech of #1.⁵ In morphemic /nt/ clusters in unstressed syllables, the final stop is almost always lost in the speech of all six informants. The loss of the final obstruent in morphemic clusters in stressed syllables is not so common, but all of the informants except #5 occasionally do lose the final stop in words such as ain't, don't, and won't. The final obstruent in seventh is lost in the speech of #4. In monomorphemic words, clusters which consist of a nasal followed by a voiceless obstruent are rarely simplified. In fact, these are only two examples of the simplification of such clusters in the data: account is [əkˈaʊ̃n̩] in the speech of #1, and front porch is [frʌˈn pʰɔɹt] in the speech of #4. In the latter case, the loss of final /t/ is partially due to the following stop.

Final clusters which consist of a lateral followed by a voiceless obstruent are affected differently by cluster simplification. In words such as help, himself, and myself, /l/ is frequently lost. Clusters of a lateral followed by a voiceless obstruent are simplified by all informants except #5 and 6.

There are four types of final clusters of three nonsyllabics: clusters consisting of three voiced nonsyllabics, clusters consisting

⁵ It should be noted that the sandhi variant of don't [dɔ̃n̩], a variant common in the lower South, was not recorded in any of the six protocols.

of three voiceless nonsyllabics, clusters consisting of a nasal followed by two voiceless nonsyllabics, and clusters consisting of a lateral followed by two voiceless nonsyllabics. Only one type of cluster, a nasal followed by two voiceless nonsyllabics, is not simplified in the data used here. When simplification applies to a cluster of three voiced nonsyllabics, the middle nonsyllabic is lost. Thus pounds is [pʰæʔvɳz] in the speech of #1, ends is [ɛʔnz] in the speech of #4, and fields is [fiʔ³z] in the speech of #5. Clusters of three voiced nonsyllabics are occasionally simplified in the speech of all informants except #2 and 3. When a cluster of three voiceless nonsyllabics is simplified, one of three things happens: the middle nonsyllabic is lost, the final nonsyllabic is lost, or both the middle and final nonsyllabics are lost. Thus asked is [æʰst] in the speech of #4, posts is [pʰoʔst] in the speech of #1, and fists is [fɪʔs] in the speech of #2. Simplification of clusters of three voiceless nonsyllabics is not especially common; simplified clusters are recorded only in the protocols for #1, 2, 4, and 5. Clusters of three voiceless nonsyllabics are more often broken up by an epenthetic syllabic occurring between the second and third nonsyllabic. When a lateral is followed by two voiceless obstruents, the lateral is sometimes lost. Thus /l/ is lost in helped in the speech of #1, 2, and 4. Figure 12 summarizes the types of final nonsyllabic clusters and the ways in which they may be simplified.

Although cluster type is the most important factor in the simplification of final nonsyllabic clusters, the acoustic structure of the nonsyllabics in the cluster may affect simplification. For example,

Number of Nonsyllabics Cluster Type	Two Nonsyllabics	Three Nonsyllabics
Same Voicing -- -voiced	final nonsyllabic lost	middle nonsyllabic lost
-voiceless	final nonsyllabic lost	1. middle nonsyllabic lost 2. final nonsyllabic lost 3. middle and final non- syllabic lost
Nasal and Voiceless Obstruents	final nonsyllabic lost	_____
Lateral and Voiceless Obstruents	lateral is lost	lateral is lost

Figure 12. Summary of Final Nonsyllabic Cluster Simplification

although the final nonsyllabic is usually lost in clusters of two nonsyllabics with the same voicing, in moths either nonsyllabic may be lost. Thus moths is [mɔ̃⁰z] in the speech of #1, [mɔ̃s] in the speech of #2, [mɔ̃⁴z] in the speech of #4, but [mɔ̃⁴θ] in the speech of #3. The exceptional behavior of /θs/ and /ʒz/ is probably the result of their acoustic make-up: /θ/ and /ʒ/ have relatively little acoustic intensity; /s/ and /z/, on the other hand, have relatively large acoustic intensity.⁶ In the speech of #1, 2, and 4, the less intense sound is completely assimilated.

There are two examples of cluster simplification in the data which cannot be accounted for by the generalizations presented above: in bulb and themselves, /l/ is often lost even though it precedes a voiced obstruent. It should be noted, however, that both /lb/ and /lvz/ clusters are extremely rare, perhaps occurring only in bulb, shelves, and themselves in the dialect in question.⁷ On the basis of the data used here, it seems that /lb/ and /lvz/ probably do not occur in some idiolects. (In fact, only #1 has those clusters.) In idiolects in which /lb/ and /lvz/ do not occur, there is, of course, no deletion of /l/: /lb/ and /lvz/ are prevented from underlying representation by phonotactic principles. However, /l/ is clearly deleted in /lvz/ by #1: in one instance #1 preserves /l/ in themselves,

⁶ See Ladefoged, p. 183 and p. 179.

⁷ The words in which /lb/ and /lv/ are possible are presented in Trnka. However, they are scattered throughout pp. 43-138.

but he loses it in another. In addition, he loses /l/ in twelve. Here the deletion of /l/ is simply an exception to the usual principles of cluster simplification.

Another common type of reduction is the reduction of contiguous homorganic nonsyllabics. Contiguous homorganic nonsyllabics are reduced in two ways. When a word-final nonsyllabic precedes a homorganic nonsyllabic, the first nonsyllabic is lost. However, when a syllable-final nonsyllabic precedes a homorganic nonsyllabic in the same word, the second nonsyllabic is lost. Thus give me the apple is [gɪ^ˈmɪ^ˈi^ˈðə^ˈp^ˈl] in the speech of #3, sat down is [sə^ˈdə^ˈv^ˈn] in the speech of #4, September is [sɛ^ˈptɛ^ˈm^ˈɹ] in the speech of #1, and twenty is [twɛ^ˈn^ˈtɪ] in the speech of #6. Deleted word-final nonsyllabics are recorded in the protocols for #2, 3, and 4. Medial homorganic nonsyllabics are reduced in the speech of all six informants.

A third type of reduction is the loss of /r/ in syllable-initial nonsyllabic clusters which have /r/ as the final nonsyllabic. Thus April is [e^ˈp^ˈrɪ] in the speech of #1, throwing up is [θə^ˈv^ˈɪŋ^ˈʌ^ˈp] in the speech of #3, and secretary is [sɛ^ˈk^ˈɪt^ˈɹɪ] in the speech of #4. Post-consonantal /r/ is lost most frequently after dental obstruents, less frequently after labials and velar obstruents, and rarely after alveolars. There are no instances of the loss of post-consonantal /r/ in the protocols for #5 and 6, but the absence of such deletions is probably an artifact of the data.

All of the types of reduction discussed so far involve the loss of a member (or occasionally two members) of a sequence of sounds. Sometimes, however, a sequence of two sounds is replaced by a single sound which has properties of both members of the sequence. For example,

in the speech of #1, the /nt/ sequence in twenty is replaced by a nasal flap [ɱ̃]. Likewise, in the speech of #1 and 4 a flap [ɱ̃] replaces the /tr/ sequence in cartridge. Sequences of a vocoid followed by a resonant may also be replaced by a single sound. Thus in the speech of #1 and #4, sequences of a vocoid followed by a nasal are replaced by nasalized vocoids in funeral. The sequences which are most frequently replaced by a single sound are, of course, /ʌ/ + /r/ and /ə/ + /r/. All informants usually have [ɾ] for both sequences.⁸

Apheresis is perhaps the most common type of omission. There are two types of apheresis, both of which affect unstressed syllables. First, an initial nonsyllabic may be lost. Thus all the way is [ʌ̃ˈveɪ] in the speech of #1, better than is [bɛ̃ˈtɜːn] in the speech of #3, and they was is [ðẽˈwɜːz] in the speech of #5. Secondly, in words of more than one syllable, initial unstressed syllables may be lost. For example, tobacco is [bæ̃ˈkə] in the speech of #2, apendicitis is [pɛ̃ˈndɪsəˈdɪs] in the speech of #4, and persimmon trees is [sɪ̃ˈmənˈtriːz] in the speech of #6. Apheresis is fairly common in the speech of all six informants.

Syncope, a second type of omission, also affects unstressed syllables. In syncope, an unstressed syllabic which follows and precedes a nonsyllabic is lost. The most common type of syncope is the deletion of /ə/ and /ɜː/ between an obstruent and either /l/, /m/, /n/, or /ŋ/. As a result of the loss of the unstressed syllabic, the resonant becomes syllabic. Thus second is [sɛ̃ˈkɒn] in the speech of #4 and thimble is

⁸ The analysis presented here eliminates the problems of phonemic overlap discussed in Chapter III: [ɱ̃], [ɱ̃], and [ɾ] are simply the results of phonetic processes.

[θɹ̥^ˈɹ̥^ˈmɪ^ˈ] in the speech of #5. Syncope is prohibited when its occurrence would result in a nonsyllabic cluster not permitted by the phonotactics of the dialect. Syncope is common in the speech of all informants.

Apocope is a third type of omission. There are two types of apocope in the data used here: the loss of word-final nonsyllabics in unstressed syllables and the loss of word-final unstressed syllables. Thus head of horses is [hɛ^ˈdə^ˈhɔ^ˈsɪz] in the speech of #6, million is [mɪ^ˈlɪ^ˈz] in the speech of #4, and idea is [a^ˈdɪ^ˈə] in the speech of #3. Apocope, like apheresis and syncope, is fairly common in the speech of all six informants.

Haplology, the final type of omission, is not so common, occurring only in the speech of #2 and 3.⁹ There are two types of haplology in the data used here: the loss of the second of two identical nonsyllabics separated by an unstressed syllabic and the loss of one of two contiguous unstressed syllables. The first type of haplology occurs twice in the data: suspenders is [sə^ˈpɛ^ˈndɪz] in the speech of #2 and [sə^ˈpɛ^ˈndɪz] in the speech of #3. The second type of haplology likewise occurs twice: vegetables is [vɛ^ˈdʒbɪz] in the speech of #2, while generally is [dʒɪ^ˈnɪz] in the speech of #3.

The principles outlined above account for all instances of deletion in the data except for three: #4 deletes /f/ in afternoon and #1

⁹ In my use of term haplology I am following Otto Jespersen rather than Heffner. In A Modern English Grammar on Historical Principles, Part I (London: George Allen and Unwin, 1954), p. 229. Jespersen says that "haplology consists in pronouncing once instead of twice some sound or group of sounds."

deletes /t/ in Saturday and /b/ in ambulance. The loss of /f/ in afternoon is probably analagous to the loss of /θ/ and /ð/ in moths: /f/ has little acoustic intensity and hence becomes completely assimilated.¹⁰ The loss of /t/ in Saturday and the loss of /b/ in ambulance are simply exceptions.

Although there are a number of types of deletion, most of them serve the same purpose: they simplify a difficult series of articulatory movements. The only exceptions involve the loss of /θ/, /ð/, and /f/. The deletion of these sounds probably results from their relative lack of acoustic intensity.

Epenthesis

Epenthesis is probably more frequent in the folk speech of the northern part of the Cumberland Plateau than in most other varieties of American English. The various instances of epenthesis almost always involve the addition of one of the following: an excrescent nonsyllabic, a svarabhakti syllabic, an intervocalic glide, a doubled nonsyllabic, or an intrusive /r/.

The most common type of epenthesis involves the development of excrescent nonsyllabics. Excrescent nonsyllabics usually develop after a word-final continuant or before a word-initial syllabic. An inorganic /t/ may develop after any word-final continuant. Thus twice is [twa>'st] in the speech of #1, sermon is [sɹ̥m̩nt̩] in the speech of #2, clabber is [klɛ>'bɹ̩t̩] in the speech of #3, cliff is [klɪ>ft̩] in the speech of #4, and across it is [əkr̥>'st̩t̩] in the speech of #5. Excrescent /t/

¹⁰ Ladefoged, p. 179.

appears in the speech of all informants except #6. The development of excrescent /t/ is probably the result of a lack of synchronization of various vocal organs in the release of the word-final continuant. In twice, cliff, and across it, the articulatory constriction is reduced before the exhaustion of the breath pulse energy, while in clabber and sermon both the reduction of the articulatory constriction and the opening of the vocal bands precede the cessation of the air flow.¹¹ In the speech of #4, an excrescent /d/ appears in barn [bd·ʔnd]. Here the opening of the vocal bands does not precede the cessation of the air flow. Just as there is sometimes a lack of synchronization of articulatory movements in the endings of word-final continuants, there is occasionally a lack of synchronization in the beginnings of word-initial syllabics. In some cases "the breath stream is driven through the throat and mouth before the vocal bands have been brought closely enough together to begin their voice vibrations. When a vowel is thus produced, it may be said to be pre-aspirated."¹² Pre-aspirated syllabics are common in the speech of all informants except #6. For example, in the speech of #1 umbrella becomes [hɛʔ³mbɔ̃rɛʔ³/ə], in the speech of #2 aint it becomes [hɛɪntɪt], and in the speech of #5 its becomes [hrʔts].

Another common form of epenthesis involves the development of svarabhakti syllabics. Svarabhakti syllabics, which serve to break up clusters of nonsyllabics, result from "asynchronism in the articulation of successive elements in consonant groups. . . ."¹³ Thus umbrella

¹¹ Heffner, p. 170.

¹² Heffner, p. 166.

¹³ Heffner, p. 185.

becomes [hɛ̃^ʰmbārɛ̃^ʰ] in the speech of #1, castrate them becomes [kʰ^ʰst̃rɛ̃^ʰt̃m] in the speech of #3, mushrooms becomes [mʌ^ʰʃ̃r̃ṽanz] in the speech of #4, and nests become [nɛ̃^ʰst̃ɛ̃] in the speech of #6. The absence of svarabhakti syllabics in the speech of #5 is probably an artifact of the data.

Just as svarabhakti syllabics often develop between successive nonsyllabics, inorganic glides sometimes develop between successive syllabics separated only by a syllable boundary. Normally, the syllable boundary between two syllabics is marked by a cessation of sound, or hiatus, but "two types of glide may replace the cessation of voice and break the hiatus in English. . . . The [j] glide is developed when the chest arrest of the syllable having the final vowel is weak, and the glide may be a part of the arresting movement, or it may become, by a subsequent dynamic displacement, the releasing movement of the next syllable. The [w] glide is also most likely to appear when the chest arrest is weak, but asynchronism of lip movement may result in a late removal of vowel rounding which will cause the glide [w] even when the chest arrest is not notably lax."¹⁴ Usually, [j] appears after front, unrounded vocoids, while [w] tends to appear after back, rounded vocoids. There are three examples of such inorganic glides in the data used here, all of them in the speech of #1. Buying become [ba^ʰɛ̃^ʰj̃ñ], laying out becomes [lẽ^ʰɛ̃^ʰj̃ñɛ̃^ʰt̃], and throwing up becomes [θ̃rõ^ʰṽwn ʌ^ʰɛ̃^ʰp̃] epenthetic [j] sometimes develops as a transition between an initial nonsyllabic and a following front syllabic. Epenthetic [j] most frequently

¹⁴ Heffner, p. 184.

speech of #6. Although intrusive /r/ serves as a transition between a syllabic and a nonsyllabic, the reasons for its development are not at all clear. In wash, /r/ probably develops in anticipation of the final obstruent. Heffner notes that "for the usual English [ʃ] sound a narrow slit-shaped constriction is formed between the very front of the upper surface of the tongue and the roof of the mouth at the top of the alveolar ridge. In some cases the constriction is between the margin of the apex of the tongue and the alveolar or supra-alveolar region. Indeed there are forms of [ʃ] in English which might even be called retroflex, since the constriction involves not only the margin but the underside of the apex of the tongue."¹⁶ In wash, then, intrusive /r/ seems to be a response to the physiological requirements of the following nonsyllabic. The reasons for intrusive /r/ in other environments are not clear.

Substitutions

In the folk speech of the northern part of the Cumberland Plateau, there are two types of substitutions: substitutions which result from various types of assimilation and substitutions which are the result of velic release.¹⁷ There are, in turn, three types of assimilation: assimilation of manner of articulation, assimilation of voicing, and assimilation of place of articulation.

¹⁶ Heffner, p. 156.

¹⁷ My use of the term velic release differs from Heffner's. By velic release, I simply mean the lowering of the velum without a simultaneous change in oral constriction.

Assimilations of manner almost always involve a change from fricative to stop. When a medial fricative precedes a stop, the fricative is sometimes replaced by a homorganic (or relatively homorganic) stop. Thus seventy is [sɛˈbnt̪ɹ̥ʰ] in the speech of #2 and business is [br̥ˈdnɪs] in the speech of #5. Two fricatives, /θ/ and /ð/ are often replaced by stops in other environments. For example, sixth is [sɪˈks̪ʰ] in the speech of #2, the swamp is [d̪ə swaˈmp] in the speech of #4, and father is [faˈd̪ɹ̥] in the speech of #6. Assimilations of manner are the result of a lack of synchronization of articulatory movements. The airstream is completely stopped in anticipation of a following stop rather than forced through a partially obstructed passageway. The substitution of stops for fricatives in other cases is apparently the result of the physiological difficulty in the production of fricatives. Fricatives require far more delicate neuromuscular control than stops.¹⁸ There is additional motivation for the assimilation of /θ/ and /ð/ to homorganic stops. As was noted above, both /θ/ and /ð/ have relatively little acoustic intensity. The substitution of homorganic stops for fricatives occurs in the speech of all informants.

Assimilation of voicing usually involves the intervocalic voicing of voiceless stops. Intervocalic voicing occurs in the speech of all six informants. For example, potatoes is [pəteˈɪd̪ɹ̥z] in the speech of #1, Baptist is [bæˈbd̪ɪs] in the speech of #2, 3, and 5, tomatoes is [təmeˈɪd̪ɹ̥z] in the speech of #4, and seventy is [sɛˈbnd̪ɹ̥ʰ] in the speech of #6. Like assimilation of manner, intervocalic voicing results

¹⁸ W. J. Hardcastle, Physiology of Speech Production (New York: Academic Press, 1976), p. 130.

from a lack of synchronization of articulatory movements: the vocal bands are never completely opened to allow for the cessation of voice. The unvoicing of obstruents might also be mentioned here. Unvoicing takes place in two environments. First, obstruents are sometimes unvoiced when they are word-final. For example, hundred is [hʌˈndr̥t] in the speech of #1, second is [sɛˈknt̥] in the speech of #2, and good morning is [gʊˈt mɔːnɪŋ] in the speech of #3. Secondly, medial obstruents are occasionally unvoiced when they precede a voiceless obstruent. For example, vegetables is [vɛˈtʃt̥əblz] in the speech of #4. Unvoicing also results from the asynchronism of articulatory movements: the vocal bands are opened before the cessation of air flow. Morphophonemic unvoicing does not occur in the field records for #5 and 6.

Assimilation of place is likewise the result of a lack of synchronization of articulatory movements. In assimilation of place, there is a change in the place where oral constriction occurs due to the influence of a following or a preceding sound. There are only three examples of assimilation of place in the data used here: ask is [æˈst̥] and desk is [dɛˈst̥] in the speech of #1 and desk is [dɛˈst̥] in the speech of #2.

The substitution of /m/ for /n/ in seven and /ŋ/ for /n/ in bacon might also be called assimilation of place. However, they are here called velic release. In words in which there is the nasal release of a stop so that a syllabic nasal results, the velum is often lowered without any change in articulatory constriction. As a result, the nasal becomes homorganic with the preceding stop. Some examples of velic release include [oˈvpm̩] for open in the speech of #1, [sɛˈbm̩] for seven in the speech of #2, [sʌˈmpm̩] for something in the speech of #4,

[əˈlɛv̩bm̩] for eleven in the speech of #5, and [sɪˈpmt̩ɛˈnənt] for superintendent in the speech of #6. There are no examples of velic releases in the protocol for #3. Velic release is common with labials, rare with velars.

There are a number of substitutions in the data which are not the result of syntagmatic processes. These substitutions are of two types: interchanges of acoustically similar sounds and interchanges which seem to be historically motivated. The interchange of acoustically similar sounds almost always involves the substitution of /f/ or /t/ for /θ/ and the interchange of /s/ and /s̺/.¹⁹ Thus fifth becomes [fɪ^əf] in the speech of #2, ninth becomes [nɪ^əˈn̩⁺] in the speech of #1, sausage becomes [sɒ^əˈs̺ɪd] in the speech of #4, and specifying becomes [sp̩^əˈs̺ɪf̩əˈɪn̩] in the speech of #2. The substitution of /f/ for /θ/ occurs in the speech of #1, 2, and 4, the substitution of /t/ for /θ/ in the speech of #1, and the interchange of /s/ and /s̺/ in the speech of #2 and 4. Historically motivated substitutions usually involve the occurrence of /n/ for expected /ŋ/ or the occurrence of /ŋ/ for expected /n/. The occurrence of /n/ for expected /ŋ/ is quite common in the speech of all six informants. For example, morning is [mɔː^əˈn̩n̩] in the speech of #1, straining is [streɪ^ən̩n̩] in the speech of #2, and nothing is [nʌ^əˈθ̩n̩] in the speech of #5. The occurrence of /ŋ/ for expected /n/ is rare; it is found only in children [tʃɪ^əˈdr̩z̩ŋ] in the speech of #2.

¹⁹ On the acoustic similarity of /s/ and /s̺/, see Ladefoged, p. 179.

Metathesis

In the data used here, metathesis always involves the transposition of /r/ and either /ə/, /ɛ/, /ɪ/, or /ε/. For example, hundred is [hʌ[~]ɹ[~]dɹɪ[~]] in the speech of #5, different is [dɪf[~]ɹ[~]nt] in the speech of #3, pretty is [pɹ[~]tɪ[~]] in the speech of #4, and library is [lɪ[~]b[~]ɹ[~]] in the speech of #2. Metathesis is fairly common in the speech of all informants, but the transposition of /r/ and /ε/ is rare, occurring only in the speech of #2 and 4. The motivation for metathesis is not clear, but Brosnahan and Malmberg suggest that it may result from perceptual confusion. They note that

careful recording and analysis of liquids as [r] . . . preceded or followed by other contoids often shows the presence of a vocoid element between the two units, a transition of strictly vocalic character. . . . Normally this element forms part of the phonetic substance of the liquid and is not perceived as independent by the ear. On the other hand its length and intensity sometimes seem to be so important that the ear hesitates how to interpret it and therefore may take it as the expression of an independent vowel. . . .²⁰

Apparently, then, in words such as pretty /r/ is interpreted as [ɹ] because of the slight vocalic glide between /p/ and /r/. The following syllabic is lost via syncope. Thus, whereas deletions simplify sequences of segments and epenthesis and substitutions result from the asynchronism of articulatory movements, metathesis seems to result from perceptual confusion.

²⁰ Brosnahan and Malmberg, p. 136.

4.2 Allophonic Processes

The allophonic syntagmatic processes in the folk speech of the northern part of the Cumberland Plateau may be classified under four rubrics: assimilation, the release of stops, syllabic and nonsyllabic beginnings, and transitions between sounds.

Allophonic assimilative processes, like morphophonemic assimilative processes, are of three types: assimilation of manner, assimilation of voicing, and assimilation of place. There are two types of assimilation of manner in the data used here: rounding and nasalization. Vocoids and resonants are sometimes rounded after labial obstruents. For example, bulb is [bʊ²l²b] in the speech of #1, blew is [bl²u²] in the speech of #2, and forwards is [f¹ɔ¹·r²ɔdz] in the speech of #6. Syllabics are frequently nasalized before nasal nonsyllabics. Thus vomit is [v²ɑ̃·mæk] in the speech of #3, home is [h²õ·vm] in the speech of #4 and ten is [t¹ɛ̃·n] in the speech of #5. Rounding and nasalization occur in the speech of all informants.

The most common type of assimilation of voicing is the intervocalic voicing of voiceless stops. Unlike morphophonemic voicing, allophonic voicing does not involve the substitution of a phoneme: although the voiceless stop becomes voiced, it remains tense, and hence distinct from its voiced counterpart. For example, intervocalic /t/ may become [t̪], but because it is tense, it remains distinct from /d/. Thus thirty is [θ¹ɹ·t̪²ɪ̃] in the speech of #1, daughter is [d²ɔ²·t̪²ɹ̃] in the speech of #2, and butterbeans is [b¹ʌ·t̪²ɹ̃·bĩ·nz] in the speech of #4. Voiceless alveolar stops are voiced far more often than voiceless

labial and velar stops. Allophonic unvoicing likewise does not involve the substitution of a phoneme: word-final voiced obstruents become unvoiced, but they remain lax, and hence distinct from their voiceless counterparts. Thus tin cans is [t'ɪ̃ːn k'æ̃ːnz] in the speech of #3, cabbage is [k'æ̃ːbʌ̃dʒ] in the speech of #5, and third grade is [t'θɹ̃ːd grẽːd] in the speech of #4. In some instances both members of a final nonsyllabic cluster are unvoiced. For example, shafts is [ʃ'æ̃ːvz̥] in the speech of #2 and buggy staves is [bʌ̃ːggɪ̃ː stẽːvz̥] in the speech of #4. Both intervocalic voicing and the unvoicing of word-final obstruents are common in the speech of all six informants.

Allophonic assimilation of place usually involves the fronting or retracting of lingual nonsyllabics, and occasionally of syllabics, in anticipation of a following sound. For example, scarce is [skæ̃ːr̥ːs̥] in the speech of #1, cattle barn is [k'æ̃ːt̥l̥ bʌ̃ːr̥n] in the speech of #3, pallet is [p'æ̃ːl̥ɛ̃ːt̥] in the speech of #4, and driving is [d̥ræ̃ːv̥n̥] in the speech of #6. The clear /l/ which often occurs between vowels develops as a result of assimilation of place. Like other types of assimilation, assimilation of place occurs in the speech of all six informants. Allophonic assimilation, like morphophonemic assimilation, results from asynchronism in articulatory movements.

Release of Stops

The various ways in which stops are released account for a number of allophones of various phonemes. The way in which a stop is released usually depends on what follows the stop and on whether the stop is voiced or voiceless. When an initial voiceless stop precedes

a syllabic, the stop almost always has an aspirated release. That is, after the release of the stop, there is a brief period of voicelessness before the onset of voicing for the syllabic.²¹ Aspirated voiceless stops, of course, are usual in the speech of all informants. If an initial voiced stop precedes a syllabic, the vocal bands begin vibrating before the release of the stop, and hence there is an even release of the stop.²² When a stop precedes a nasal or a lateral, the stop may have nasal or lateral release. Syllabic nasals and laterals, quite common in the speech of all informants, often result from nasal and lateral release respectively. Resonants which follow initial voiceless stops often form the releases of those stops. In such cases, the resonants are unvoiced. For example, crop is [kra^hp] in the speech of #1, quilts is [kwɪ^hts] in the speech of #2, and plows is [plə^hz] in the speech of #5. Resonant release, and hence unvoiced resonants, are fairly common in the speech of all informants. All informants also have fricative release of stops. When a fricative follows a stop, the fricative becomes part of the release of the stop. In the cases of /č/ and /j/, of course, stops with fricative release have become separate phonemes, but phonetically, /č/ and /j/ are analogous to /ts/, /dz/, /ps/, and /bz/. Voiceless stops are sometimes unreleased when they precede other stops or are word-final. For example, yeast is [rɪst⁻] in the speech of #4 and post is [po^hst⁻] in the speech of #5. Figure 13 summarizes the various ways in which stops are released.

²¹ Ladefoged, pp. 124-127.

²² Even release is Heffner's term. See Heffner, p. 171.

Following Environment Type of Stop	Syllabic	Resonant	Fricative	Stop	#
Voiceless stops	Aspirated Release	Resonant Release	Fricative Release	Unreleased	(Unreleased)
Voiced stops	Even Release	Resonant Release	Fricative Release	Unreleased	Even release

Figure 13. Manner of Release of Stops (items in parentheses are optional).

The variety of ways in which stops are released is really an artifact of speech production. In speech

there are no obvious or inherent breaks in the articulatory activity . . . , no points at which all the organs are motionless, or at which they are, so to speak, in phase--all at the same relative point along the cycles of their particular articulations. [A] stretch of sound . . . is produced by a continually changing, unbroken, complex of movements, often overlapping and interlocking with one another physically and temporally. . . . There is an important consequence of the overlapping and interlocking of articulatory movements: the nature of the articulation at any point or during any short segment of time is dependent on the nature of the articulation during a preceding period of time, and conversely, the articulation at any point or during any short segment of time will influence the articulation during the succeeding period of time. . . . This state of affairs, the temporal overlapping, the physical interlocking and the consequential reciprocal influencing of articulations during adjacent periods of sound production is termed coarticulation.²³

The various types of release, and many times assimilation and substitution, are the results of coarticulation.

Syllabic and Nonsyllabic Beginnings

The beginning of any one syllabic or nonsyllabic may vary depending on "the synchronization achieved between the movements which force the breath stream through the vocal channel, the movements of the vocal bands, and the movements of the other articulatory organs, notably the tongue, the velum, and the lips."²⁴ Normally, these movements are well-synchronized, and both syllabics and nonsyllabics have even beginnings. Occasionally, however, the vocal bands are closed

²³ Brosnahan and Malmberg, pp. 72-73.

²⁴ Heffner, p. 166.

before the airstream moves through the glottis, and as a result, a continuant has a stopped beginning. Initial syllabics have stopped beginnings in yeast [^ʔɪɪst] in the speech of #1 and in April [^ʔɛprɪʔ] in the speech of #2. A fricative has a stopped beginning in suspenders [sə^ʔspɛndɪz] in the speech of #1. Sometimes, especially in the production of fricatives, the airstream begins before the articulators are completely in place. The result is a shift either in manner or place of articulation during the sound. There is a shift in manner of articulation in three [^tθri], third grade [^tθɹ̥d^gɡrɛd], and tooth [^tʊ^ʔtuθ] in the speech of #4. There are changes in place of articulation in thirteen [^ʃθɹ̥tiːn], shrink [^ʃsɹɪŋk], and shrunk [^ʃsɹɪŋk] in the speech of #2; in shrinks [s^ʃsɹɪŋks] in the speech of #3; and in shrunk [s^ʃsɹ̃ŋk], harrow [^xhɑɹɔ], and hominy [^xhɑːmənɪ] in the speech of #4.

Transitions Between Sounds

Asynchronism of articulatory movements may also cause a transitional sound to develop between two sounds. In the discussion of morphophonemic processes it was noted that epenthetic glides often develop as transitions between nonsyllabics. Sometimes, "instead of producing a continuant glide sound during the transition between two consonant articulations an asynchronism in the mechanism of one of them may result in the introduction of an intrusive stop between the two articulations."²⁵ Thus an epenthetic flap develops between [t] and [ʔ] in gutters [ɡɪ^ttɹ̥z] in the speech of #1.

²⁵ Heffner, p. 185.

CHAPTER V

CONCLUSION

5.1 Relation to Dialects Along the East Coast

Based on the information in Kurath and McDavid's The Pronunciation of English in the Atlantic States and McDavid's "The Dialects of American English," it seems safe to conclude that the folk speech of the northern part of the Cumberland Plateau is a westward extension of the South Midland dialect.¹ However, the exact relationships between the folk speech of the northern part of the Cumberland Plateau and speech areas along the Atlantic Coast cannot be determined until the data from the Linguistic Atlas of the Middle and South Atlantic States is published. It is possible, nevertheless, to list a set of features which, while not unique to the folk speech of the northern part of the Cumberland Plateau, serve to characterize that dialect when taken together.

Phonemic Features

The phonemic system, like that of the South Midland, includes twenty-four nonsyllabics /p, b, t, d, k, q, f, v, θ, ð, s, z, ʃ, ʒ, č, ȝ, m, n, ŋ, l, r, w, j, h/, fourteen stressed syllabics /i, I, e, ε, æ, ɛ, ɔ, ʌ, o, ʊ, u, ai, au, ɔi/, and two unstressed syllabics /ə, ɪ/.²

¹ See especially Raven I. McDavid, Jr., "The Dialects of American English," in W. Nelson Francis, ed., The Structure of American English (New York: The Ronald Press, 1954), pp. 480-543. All statements about the relationships of the folk speech of the northern part of the Cumberland Plateau to speech areas along the Atlantic Coast are based on the material in PEAS and "The Dialects of American English."

² The phonemic system is identical to that which Kurath, in PEAS, labels Type I. However, my scheme of phonemicization differs from Kurath's: he interprets [ɹ] in stressed syllables as /ɜ/; I interpret it as /ʌ/ + /r/. Hence, he posits one more phoneme than I do.

Unlike the south, the dialect has no /ʒ/ and /d/ phonemes.

Phonotactic Features

1. Two diphthongs, /ai/ and /au/, function as free analogues of checked /a/ and /æ/ respectively. Thus before /r/, /a/ usually occurs instead of /ai/, while /æ/ usually occurs instead of /au/.

2. As in both the South and South Midland, /j/ occurs after alveolar stops in such words as due, dues, new, tube, and Tuesday.

3. As in most of the Eastern states, /h/ is preserved before /w/ in words such as wheat, whip, and wheelbarrow.

Characteristic Processes

1. Final clusters of nonsyllabics are sometimes simplified.

2. As in both the South and the Midland (especially the South Midland), an excrescent /t/ frequently appears after word-final continuants.

3. As in most of the Midland, an intrusive /r/ often appears in wash and ought to.

4. As in some areas of the Midland and the South, svarabhakti syllabics sometimes develop between contiguous nonsyllabics.

5. Fricatives sometimes become stops before medial stops.

6. Syllabic nasals often become homorganic with a preceding oral stop.

7. Final voiced obstruents are sometimes unvoiced.

8. As a result of metathesis, /r/ followed by /I/, /ə/, /ɛ/, and occasionally /ɛ/ sometimes becomes [ɹ].

Phonic Features

1. As in the Midland and the Inland North, post-vocalic /r/ is usually realized as [ɹ].
2. As in the South Midland, /ai/ is often monophthongal before both voiceless and voiced nonsyllabics.
3. As in the South and South Midland, /au/ is often realized as [æʊ] or [æo̯].
4. As in the South, /æ/ is often realized as [æ̟] before velars and nasals.

Incidental Features

1. There is considerable variation in the incidence of checked front syllabics before tautosyllabic /r/. As in much of the South and South Midland, /ɪ/ is common in care and chair; however, the usual syllabic in scared and scarce is /ɛ/. As in most of the South Midland, the usual syllabic in stairs, pair, and mare is /æ/.
2. As in the Midland, the usual stressed syllabic in barrow, harrow, and wheelbarrow is /ɑ/.
3. As in most of the Midland except for Western Pennsylvania, the reflex of ME /ō̆/ is /ɔ/ before voiceless fricatives and before velars.
4. As in most of the Eastern states, the syllabic in on is /ɔ/.
5. As in the Upper South and South Midland, the reflex of ME /ō̄/ is /u/ before /m/ and labiodentals.
6. As in the South and South Midland, the reflex of ME /ō̄/ is /ʊ/ before /p/.
7. As in the South (but not the Midland), the usual syllabic in

final, closed unstressed syllables and in medial unstressed syllables is /ɛ/.

8. As in the folk speech of the Upper South, West Virginia, and northern New England, the unstressed syllabic in words such as soda and Martha is often /ɛ/.

9. As in the folk speech of the South and South Midland, the unstressed syllabic in borrow is /ɛ/.

10. As in the folk speech of much of the Southern mountain area, the final unstressed syllabic in words such as tomato, widow, and yellow is often [ɹ].

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APPENDICES

APPENDIX A

COUNTY, COMMUNITY, AND INFORMANT SKETCHES

Each county sketch is followed immediately by the sketch of the community in which the informant lives and a sketch of the informant himself. County sketches are based on the county histories listed in the bibliography and in U.S. Census records. Community sketches are based on the sketches in the LAGS protocols and any other information which could be garnered. The informant sketches are based on those in the LAGS protocols. Material quoted from the scribe's sketch is enclosed in quotation marks and followed by the scribe's initials. All of the informants are, of course, Type IA's: that is, they are natives of their communities, have no more than a grade school education, and have restricted travel and social contacts. In addition, the families of all informants have been in their respective counties for at least three generations. Finally, because of the racial makeup of the area, all of the informants are white.

I. CAMPBELL COUNTY

Campbell County was created from parts of Anderson and Claiborne Counties in 1806. As early as 1740, however, the area had been visited by traders, and beginning in 1754 hunting parties regularly visited the area. The first permanent settlement was made in 1796. During the 1820's and during the period from about 1870-1880, many people left the area because of economic difficulties. The discovery of coal and the

coming of the railroads brought about an economic boom in the 1890's. By the 1920's, however, the boom had ended, and since 1950 the population has steadily decreased. The western part of Campbell County is very mountainous, but Powell's Valley, in the eastern part of the county, has some fertile land, and corn, oats, and grasses are grown there. Coal, however, is the principal economic resource. Jacksboro, the oldest settlement, is the county seat, but Lafollette is the largest town in the county.

Cove Creek

Cove Creek is a rural community located about three miles south of Jacksboro. It was the site of an early bloomery established by the informant's ancestors.

Informant 1

The informant is an 80 (in 1972) year old Caucasian male. He has a grade school education and has worked as a farmer, carpenter, and section hand for the railroad. He has traveled very little--only to Kentucky and Saint Louis. The informant's ancestors were among the first in the county, coming from England by way of Pennsylvania. The informant is hard of hearing but has no trouble understanding the fieldworker. He is a good example of the folk speech of the area--there are many relic forms in his speech.

II. CLAIBORNE COUNTY

Claiborne County was created from portions of Hawkins and Grainger Counties. The first settlement in the county was at Big

Springs, near Sycamore Creek, in 1794-95. Tazewell is the county seat and largest town. The county was important in the early settlement of the areas west of the Appalachians because Cumberland Gap is located along the middle of the county's northern border. Although wheat, corn, oats, and grasses are all grown in the less mountainous areas of the county, coal is the primary economic resource. Now that Cumberland Gap has been made a national park, there is some tourist trade in the area.

Little Sycamore

Little Sycamore, a community of 50-100 people, is located on Little Sycamore Creek. Most of the residents are middle class farmers. The population of the community, which is located 14 miles east of Tazewell and 14 miles south of the Virginia line, has declined by one half since the informant's childhood.

Informant 2

The informant is an 80 (in 1972) year old Caucasian male who has an eighth grade education and has farmed all of his life. He moved to Oregon once but returned after eight months. "The informant is intelligent, candid, and good-natured. [He] seems little affected by formally educated and highly cultivated relatives. A thoroughly authoritative folk informant. Slight problems with his willingness to acknowledge suggestions later in the interview. . . . Phonology: considerable variation between forms, especially under weak stress, in conversation and one-word responses. Observe /// forms in this record closely. Retroflex /// especially after velars; devocalized ///

after voiceless stops; labialized // after labials, but not in hotel and hospital. Many relic forms, but not ourn, yourn, etc." [LP]

III. CUMBERLAND COUNTY

Cumberland County was created in 1856 from parts of White, Van Buren, Bledsoe, Rhea, Roane, Morgan, and Putnam Counties. The earliest settlements in the area were "stands" and taverns which were built along the roads across the mountains. The tavern at Crab Orchard, built between 1795 and 1800, was among the first of these. There was no large-scale settlement until about 1830 and no real growth until the economic boom of 1900. Cumberland County is almost entirely mountainous, and only fruit and potatoes grow well there. Coal is a principal resource, and there is a fair amount of tourism in the area. Crosville, the largest town, is the county seat.

Sequatchie Valley

Sequatchie Valley is at the northern tip of the Sequatchie Valley, which bisects the Cumberland Plateau south of Hensch Mountain.

Informant 3

The informant is an 86 (in 1972) year old Caucasian female. She received an eighth grade education in rural three-month schools. Her husband died in 1918, and she has supported herself by working as a seamstress. She has never been out of the state of Tennessee. "Avid newspaper reader, has taken a paper since age 15 and reads two or three a day. A model IA, extremely verbal and perceptive, totally uninhibited by rules of grammar, but possessing interesting insights into etymology." [LP]

IV. FENTRESS COUNTY

Fentress County was created in 1823 out of Overton and Morgan Counties. The county was first settled some time between 1806 and 1815, the first settler being Alvin York's great-great-grandfather. John M. Clemens, Mark Twain's father, was the first circuit court clerk and the largest landowner in Jamestown, the county seat. Fentress County has always been one of the poorest counties in the state; in fact, its growth and development were so slow that from 1859 to 1919 there were no new buildings built in Jamestown, the largest town in the country. In 1881 the northern part of Fentress County was made a separate county--Pickett County.

Forbus

Forbus is a small rural community in the northwestern part of Fentress County. It lies on the Pickett County line.

Informant 4

The informant is a 65 (in 1973) year old Caucasian female who has a third grade education and has always been a housewife. Her husband, who died in 1969, was a farmer. She has only been out of the area twice--once to visit Indiana and once to visit Kentucky. An authoritative example of folk speech, she has many relic forms, including yourn, in her speech. "Very friendly, relaxed during interview. Sensitive about not having had an education. Poor, but respected. . . . Member of old Fentress County family; her birth just over the border in Pickett County was the result of her family living there for a few years. They returned to Fentress when she was three." [LP]

V. MORGAN COUNTY

Morgan County was erected in 1812 from Roane County. It was first settled in 1807; in the 1840's a number of Germans came to the area around Wartburg, the county seat, and about forty years later a group of English aristocrats started an unsuccessful settlement at Rugby. Due to its mountainous terrain, Morgan County has always been sparsely populated. Coal and building stone are the primary economic resources in the area, and some oil is produced there.

Clear Creek

Clear Creek is a community of a half a dozen or so homes. It is an isolated mountain community located about eight miles southwest of Lansing. State highway 62, the principal highway through the area, was paved only about five years ago. Most people in the area farm, work in the coal mines, or work in the stone quarries.

Informant 5

The informant is an 81 (in 1978) year old Caucasian male. He has an eighth grade education and has farmed and worked in a stone quarry most of his life. "Although the informant worked in Indiana for seven years, he is an excellent example of the folk speech of the area. He is completely open and honest about himself, his feelings and attitudes. . . . He is usually cooperative, but he disliked having to sit still for the interview and thus would not finish it. The informant is very alert and in excellent health. Note the strong post-vocalic /r/, a-prefixes, and positive anymore. . . ." [GB]

"Although nearly deaf, the informant is both cooperative and relaxed. As a result, many worksheet items occur in spite of the difficulties of direct elicitation. Because the interview is just directed conversation, a number of interesting features (e.g., a-prefixes, of a night, etc.) occur." [GB] The informant is knowledgeable about all aspects of rural life and is a good example of the folk speech of the area. Note that he occasionally loses post-vocalic /r/ in stressed as well as unstressed syllables.

VI. SCOTT COUNTY

Scott County was created in 1849 out of parts of Anderson, Campbell, Fentress, and Morgan Counties. Although at least one settler was in the area as early as 1776, large-scale settlement did not begin until after 1800. During the War Between the States, Scott County seceded from the state of Tennessee and formed the Independent State of Scott. After the war Jesse James (under the alias Dave Moore) owned a grocery store in Huntsville, the county seat, as a cover for his illegal activities in the midwest. About 1890 there was an economic boom in the area, just as there was in other counties in the region. Recently, however, the population has steadily declined. Because of its mountainous terrain, corn and grasses are Scott County's primary crops. Coal, though, is the most important economic resource in the county, and some oil is produced there. There is some light industry in Oneida, the largest town in the county.

Elgin

Elgin is a small community in the southwestern part of Scott County--less than five miles from both the Morgan and Fentress County lines. Farming, mining, and quarrying are the primary sources of income.

Informant 6

The informant is an 87 year old (in 1978) Caucasian male. He has only a third grade education and has traveled very little, but he is an important member of the community. He has been a blacksmith, farmer, logger, carpenter, and superintendent of a stone quarry.

APPENDIX B

SAMPLE PROTOCOL PAGES

The sample protocol pages which follow are meant to illustrate LAGS protocol composition. The first page from each of the protocols used in this dissertation is included; the pages are presented in the same order as the idiolect synopses.

Each numbered line on a protocol page is used for recording the item on the same page and line in the worksheets. Thus on page one of the protocols, the following information is recorded: on line one, the pronunciation of the numbers one and two; on line two, the pronunciation of three and four; on line three, the pronunciation of seven and eight; on line five, the pronunciation of nine and ten; on line six, the pronunciation of eleven and twelve; on line seven, the thirteen and fourteen; and on line eight, the pronunciation of twenty pronunciation of thirteen and fourteen; and on line eight, the pronunciation of twenty and twenty-seven. Line nine is used for recording the pronunciation of additional numbers. For a full discussion of protocol composition (the contents of the protocols, selection procedures for secondary entries, the composition of entries, the use of spare lines, and a list of organizational abbreviations), see Chapter Three of A LAGS Guide.

MMY 1 80 1 1 ET L SYCAMOR
-E 14.01 ;

	WΛ ² n	
	f'vuc	
2	θ ¹ Tr ¹	
	forn	c) for ^u fair ^u
3	felv	(= four or five)
	SIKs	c) SI ^u /Ks
4	sz·vn	c) sz ^u ·b ^u m
	c- ~~z~~ t	c) c ^u -t
5	rd ² n	
	f'evn	
6	/ε·vn	
	tw ^u lv	
7	θ ^u ti ^u n	
	for ^u t ^u i ^u n	c) for ^u .ti ^u n
8	tw ^u z ^u n ^u fi ^u v	
9	tw ^u z ^u n ^u ni sz ^u vn	

FLY 86 1/

ET SEQTCHIE
J 026. 01

1	WA ² n	wp. ² n
2	f ¹ ET ²	
3	c) faiv	fo ² x
4	SIKs	
5	nā ² n	e ² ET
6	1 ² / ² EV ² n	
7	0 ² ET ² n	tw ² ET ² /v ²
8	tw ² ET ² n ²	fo ² ET ² n
9	tw ² ET ² n ² SE ² v ² n	

FLY 65 1/	1	MT FORBUS BA 185.01
1	w. 185.01	w. p. 2.0
2	f'v-u	1A.2 1A.1
3	f'v-u	1A.1 w. 6.5
4	S F > K S	1A.2
5	f'v-u	1A.1
6	f'v-u	whistle
7	f'v-u	
8	f'v-u	A. 5.1 f'v-u
9		

MMY 87 1A

ET ELGIN
H 020.01

1	c.) t'v < u twē > nē t'v < u = mā. 24 = wā < 3	< 1A.1 1A.7
2	θ r i > j ε > 2 f o < 2 b > 2 z	1A.7
3	f a > v	1A.7
	c.) n a > ε n t i > n s i > k s c.) f a > v a s i > k s j i > 2	1A.3 2 1A.3
4	c.) s s > b m c.) e > ε t i s s > b m c.) e > ε t j i > 2	1A.7
5	c.) n a > ε n c.) t'ε > n	(konkat
6	c.) t w ε > 2 4 v	
7	f o < ε t i > n	
8	c.) t w ε > n t v c.) t w ε n ē s s > b m	1A.10
9	c.) s s > b m t i > n	1A.3

APPENDIX C

LAGS MODIFICATIONS OF THE LANE SYSTEM

OF PHONETIC NOTATION

In Chapter Two of A LAGS Guide, Lee Pederson recognizes the following differences between LANE and LAGS phonetic notation.

1. Differences in Contoid notation:

While the six consonant types of LANE are preserved, LAGS adds a series of supraglottal suction stops, treats [ʂ, ʐ, ʐʰ] as contoids and adds a category for rhotacized continuants, changes the labels of some categories, and reorders all categories into two broad classes, obstruents and resonants. The following table illustrates the relationship between LAGS and LANE consonant notation.

	<u>LAGS Consonant Classification</u>	<u>LANE Consonant Classification</u>
Obstruents {	Full Oral Stops	Stops
	Supraglottal Suction Stops	-----
	Intermittent Oral Stops	Flaps
	Oral Fricative Continuants	Fricatives
Resonants {	Nasal Continuants	Nasals
	Oral-Central Continuants	Frictionless Continuants
	Oral-Lateral Continuants	Laterals
	Oral-Rhotacized Continuants	[treated as either fricatives or voicoids]

LAGS also adds four additional categories for place of articulation (retracted and advanced alveolar, retracted velar and uvular), adds a

set of labial resonant continuants [L, R, H, J, W, F, V], reinstitutes the IPA symbols [ɸ , β , $ʔ$], and marks all retroflex consonants with a subordinate point and all advanced and retracted consonants with a subordinate shift sign.

2. Differences in Vocoid Notation:

LAGS vocoid symbols differ from those of LANE in that /ʌ/ has a slightly higher designation than in LANE, /ɤ/ and /ɯ/ are frequently tense and lax respectively and all mid vowels are ordered on two lines on the vowel chart; /ɪ/ and /ə/, of course, are treated as contoids.

APPENDIX D

TARGET WORDS AND SUBSTITUTES USED IN THE VOWEL SYNOPSES

In each category, the first word listed is the target word;
substitute words are listed immediately below the target word.

	<u>Vl. Obstruent</u>	<u>Vd. Obstruent</u>	<u>Nasal</u>	<u>/l/</u>	<u>/r/</u>
/i/	yeast eat	seed freeze weed	greenbeans butterbeans seen	field	
/I/	whip six	crib kid	tin been swing pin	hill mill	beard year
/e/	eight	raised	strain can't paint	pails quails male rail	
/ɛ/	neck nephew catch	radishes jackleg eggs	ten	twelve health	scarce care married scared chairs
/æ/	glass patch half	bag cabbage calves	hand	valley pallet	mare there
/ɑ/	crop shocks stock	god garage	palm vomit beyond tommytoes	college	car
/ɜ/	church	third heard	redworms darn	girl	worry worried furrow
/u/	tooth used to	food dues whose two	wound bedrooms June	mules	

	<u>Vl. Obstruent</u>	<u>Vd. Obstruent</u>	<u>Nasal</u>	<u>/l/</u>	<u>/r/</u>
/v/	push foot	wood shouldn't good		pull bull	sure furniture poor
/ʌ/	mush shut tusk up there	husband judge scrub	one	hull cultivators	
/o/	coat post	road	home stone	cold pole old	hoarse core four
/ɔ/	loss daughter across loft	dog	gone	salt all stalls	horse
/aɪ/	write white	five	nine	miles I'll	wire
/aʊ/	house	{cloudy} clouds proud plow cows	down	owl	flowers shower
/ɔɪ/	oysters hoist	poison boys	joints	oil boiled	

VITA

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