Determining the Sociolinguistic Status of the (r, ʊ, u) Variables in Ezikeqba Igbo

Chris Uchenna Agbedq
Department of Linguistics Igbo & Nigerian Languages
University of Nigeria, Nsukka Nigeria
christopher.agbedo@unn.edu.ng ntaeshe06@yahoo.co.uk
+2348(0)36868498
URL: http://www.linguisticsafrikana.com

Abstract
This paper examines language variation occasioned by social differences of individual speakers of Ezikeoba Igbo, a variety of Igbo language spoken in Elugwu Ezikeoba speech community, Enugu State, southeast Nigeria. Working with the hypothesis that there is direct link between the linguistic variables of (r, u, u) and the social factors of region and contact, we tape-recorded randomly selected speakers from Ihelugwu and Imelugwu regions (further categorized into three different contact groups) during unstructured interviews. The data elicited showed that in the use of the (r) variable, speakers of Ihelugwu region recorded more frequency output for the [d] variant while the speakers of Imelugwu region used more of the [r] variant than the [d] variant. The statistically significant difference in the realization of the (r) variable as observed in the speech behaviour of Ihelugwu and Imelugwu speakers suggests that the (r) is a sociolinguistic marker in Elugwu Ezike speech community. The same cannot be said of the (u) and (u) variables given that the difference in the use of their binary variants between the three contact groups studied is not statistically significant.

Key Words*: sociolinguistic variable, linguistic variable, social variable, region, contact, constraints, variability*

Introduction
The primary focus of this paper is observation and analysis of language in its social context. The importance of this study is underscored by the fact that language variation is a universal phenomenon. As Sapir (1921) in Wolfram (n. d) puts it, "Everyone knows that language is variable." In other words, every language exhibits considerable internal variations and speakers, who are aware of their social significance, make use of the many possibilities offered to them. Variability is everywhere in language, from the unique details in each production of a sound or sign to the auditory or visual processing of the linguistic signal. In fact, one of the amazing facts about human communication is the demonstrated ability to normalize the inherent variation within every spoken or signed message in processing the linguistic signal. Perhaps, it is in recognition of this social fact that Labov (1970b: 13) asserts, "…one of the fundamental sociolinguistic principles is that there are no single-style speakers…" The implication of Labov's assertion, according to Wolfram and Fasold (1974; 24) is that "…every speaker will show some variation in phonological and grammatical rules according to the immediate context he is

speaking…" In spite of its pervasive nature, variability in language, as Wolfram observes, "…has often been disregarded or dismissed as tangential to the description of structural patterning and irrelevant to the study of linguistic competence. In fact, in traditional linguistic description, continues Wolfram, the notion of variation within structural units has often been acknowledged under labels such as "free fluctuation," "optional rules," and "free variants." Even when it had long been recognized as a linguistic fact, the phenomenon of variability, according to Crystal (2003: 189) quoted in Wolfram, "…has nonetheless been considered to be an area of little importance, a kind of garbage heap for variants that could not be predicted invariably within the categorical framework assumed under most models of linguistic description. In fact, it was not until the advent of sociolinguistics a half-century ago that the recognition of language variation became more than a footnote to linguistic description. Although the study of language variation is now one of the most rapidly expanding subfields of linguistics, Wolfram believes that its status is still somewhat marginal within theoretical linguistics, notwithstanding the insistence of Labov (1966; 2001) that the study of language variation is central to the solution of fundamental problems in linguistic theory.

However, in keeping with the axiom that "one person's garbage is another person's treasure," the examination of such variation, notes Wolfram, has become the cornerstone of sociolinguistics, with established cohorts of researchers, several professional journals dealing regularly with issues of language variation, including one dedicated exclusively to this issue (*Language Variation and Change*), and prominent sociolinguistics conferences that routinely feature presentations on language variation. This includes perhaps the three decade-old most influential sociolinguistics conference in the world, that is, the New Ways of Analyzing Variation (NWAV) annual Conference. Therefore, this paper is in tandem with furthering the cause of variation studies. In this connection, we shall be investigating the relative significance of the social factors of region and contact in influencing variation in the speech of Ezikeoba Igbo speakers. Here, we adopt a perspective distinct from the tradition of Chomskyan linguistics, whose asocial orientation predisposes it to a linguistic framework based on the notion of language as a homogenous, monolithic, and invariable entity, whose speaker controls only a single style. Our social orientation requires us to view language as inherently variable, heterogeneous and therefore susceptible to various attacks by social viruses. In order to ascertain the dynamics of language, we observe and analyze its practical use in social contexts by the speakers. In this regard, this paper focuses on Ezikeoba Igbo, a variety of the Igbo language, spoken in Elugwu-Ezike speech community in Enugu State southeast Nigeria. In her study, Nwaozuzu (2008) categorized Ezikeoba Igbo as belonging to the Northern Igbo Dialect group. The mode of study is by collection and analysis of data collected from randomly selected respondents during unstructured interviews. The data elicited is transcribed and quantitatively studied, the results of which are interpreted by subjecting them to statistical method of students' t-test. To determine the sociolinguistic status of the (r) variable in Ezikeoba Igbo, we shall test the following hypotheses:

1. The frequency output of (r):[d] is more in the speech of the Ihelugwu region speakers than the (r) : [d]
2. The frequency output (r):[r] is more in the speech of the Imelugwu region speakers than the (r):[d].
3. The use of (u) and (u) variables is determined by the contact variable.

We draw conclusions based on the results of the statistical analysis.

Framework

The quantitative study of speech to ascertain the mechanisms of variability within a given linguistic context has, according to Wardhaugh (1986: 132), "…required the development of an array of techniques many of which derive from the pioneering work of William Labov…who attempted to identify how language varies in the community and to draw conclusions…" One of the most useful contributions of the variationists, who followed the Labovian tradition, has been the development of the use of 'linguistic variable', the basic conceptual tool necessary for the quantitative study of speech. Linguistic variable, as defined by Wardhaugh (135), "…is a linguistic item, which has identifiable variants. Hudson (1980: 157) posits that the linguistic variables "…are those where the meaning remains constant but the form varies." For Lehman (1976: 280), linguistic variable is, "…any feature of a language that is represented in differing forms in the speech of one person or a social group…" Wolfram (n.d) has it as "…a structural unit that includes a set of fluctuating variants showing meaningful co-variation with an independent set of variables." In operational terms, he observes that the linguistic variable has been used to encompass a wide range of fluctuating variants. The set may be a structural type, such as grammatical category or a natural class of items in a specific linguistic context. It may also be defined in terms of the application of a general process, such as the use of a particular type of contraction or in terms of a syntactic relationship, such as concord or phrasal constituency. Variants are usually established apart from theoretical models of language description and can be accommodated within any syntactic model (e.g. Principles and Parameters, Minimalism, Head-Driven Phrase Structure Grammar, Lexical Functional Grammar, and Construction Grammar) or phonological model (e.g. Generative Phonology, Lexical Phonology, Optimality Theory, Exemplar Theory), though there are significant implications for how such variation may be accommodated within a particular model of language. Finally, the linguistic variable may be defined as a simple lexical choice or even in terms of a speech act.

Perhaps, it is in the light of these differing views of linguistic variable that Hudson suggests that the notion, *linguistic variable*, is not meant to be taken as a part of general theory of language, but rather as an analytical tool in the sociolinguist's tool chest, which sociolinguists themselves have not made any rigorous attempt to define. In any case, the obvious fact deducible from these definitions is t hat linguistic variables; do not bring about semantic change in its context of occurrence. On the bases for selecting linguistic variables, Dittmar (1976: 198), following Labov 's (1966a: 166) four criteria, notes that the variable should (i) have a high frequency of occurrence, (ii) be as immune as possible to conscious suppression; (iii) be an integrated component of a larger structure, and (iv) be easily quantifiable on a linear scale. Sociolinguists have equally identified various types of linguistic variables. These include phonological, morphological, syntactic, lexical, connected speech process (CSP), social indicators, social markers, stereotypes, etc. Labov, according to Wardhaugh (137) distinguished among what he calls indicators, markers, and stereotypes. A social indicator, as he puts it, "…is a linguistic variable to which little or no social import is attached and only a linguistically trained observer is aware of indicators. A social marker carries with it social significance. People are aware of them and their distribution is clearly related to social groupings and style of speaking.

A stereotype is a popular and conscious characterization of the speech of a particular group. In this paper, we shall focus on three phonological variables of (r), (ʊ), and (u) to account for the social and linguistic factors that determine their variable realizations and frequency of occurrence in the speech patterns of the Ezikeqba Igbo. As Wolfram (n.d) observes, factors that correlate with higher and lower frequency levels of a given variant are referred to as CONSTRAINTS ON VARIABILITY, where the term "constraint" is used to refer to a factor that systematically correlates with increased likelihood that a given variant will occur. Factors that correlate with the increased frequency of a variant are said to FAVOR the occurrence of a variant whereas those that correlate with reduced frequency DISFAVOR or INHIBIT the occurrence of the variant. Independent variables that co-vary with systematic differences in the relative frequency of a variant are of two primary types, structural linguistic factors related to the linguistic system itself, so-called INTERNAL CONSTRAINTS, and social or socio-psychological factors of various types that exist apart from the linguistic system, so-called EXTERNAL CONSTRAINTS. Independent linguistic constraints seem to align closely with traditional types of structural units considered relevant in linguistic description. Thus, for systematic phonological variation, the feature composition of the variant (e.g. voicing, sonorancy), phonetic environment (e.g. preceding and following segments, stress patterns), hierarchical status (e.g. syllable position), and grammatical status (e.g. type of morpheme) may be factors that constrain variability. There may also be other factors, such as the lexical condition that high-frequency words favor a variable process over low-frequency words (Myers & Guy 1997)

The correlation of linguistic variables with social variables, according to Wolfram & Fasold (1974: 73), is at the foundation of the study of social dialects. Social variables, continue Wolfram & Fasold, refer to the behavioural factor(s) that may be isolated to correlate with linguistic diversity. Such factors include region, social status (class), style, age, sex, contact, ethnicity, etc. in this paper, we shall explore the relative significance of region and contact as social variables in influencing variation in the speech behaviour of Ezikeoba Igbo speakers. With regards to the region variable, Elugwu-Ezike speech community is geographically categorized into two sub-regions: Imelugwu and Ihelugwu. Imelugwu region comprises those autonomous communities situated at the northern part of Elugwu-Ezike, some of which share boundaries with Amaka, Qfante, Akpanya communities in Kogi State. Ihelugwu region comprises the autonomous communities that have contiguous boundaries with Iheakpx-Qka, Ihunowere, Iheeka (in Igbo-Eze South Council Area), and Ubolo (in Udenu Council Area). According to Milroy (1976: 113), "areal differences play quite a large part in variations observable in Belfast working-class speech." Again, region was important in explaining the distribution of the (h) variable in the Norwich speech community of Belfast. Part of the objective of (phonological usually in practice) which co-varies not only with other linguistic elements but also with a number of extra-linguistic variables such as social class, age, sex, ethnic group or contextual style…" Labov (1972a: 237) sees it as "one, which is correlated with some non-linguistic variable of the social context: of the speaker, the addressee, the audience, the setting etc.

The importance of sociolinguistic variable as a tool in the study of language variation is underscored by the fact that it permits quantification of language use. This was demonstrated in the study of the distribution of the (r) variable in the New York speech community study by Labov. The main thrust of the study is to ascertain when a speaker

pronounces or deletes the consonant /r/ in final post-vocalic and pre this paper is to determine the extent to which the region variable influences variation in Ezikeqba Igbo. Contact as a social variable in this paper, refers to the particular type of contact, which members of a particular speech community have with the outside communities. The factor of contact as an important social variable that influence variation has been demonstrated by Wolfram's (1969) study of Detroit Black population and the study of the English used by second generation Puerto-Ricans in East Harlem by Wolfram et. al. (1971, 1973). In this paper, we shall also account for the relative importance of contact as a social variable in influencing the variable realizations of the three phonological variables. A sociolinguistic variable, notes Milroy (1980: 10), "…is a linguistic element - consonantal positions as in *far*, *farm*, *car*. In so doing, speaker A's use of the variable can be compared with speaker B's, since /r/ is a discrete variable, amenable to quantification of some sort. In this paper, we shall explore the possibility of correlating the identified phonological variables with social variables of region and contact and also the tenability of treating the (r, ʊ, u) variables as sociolinguistic markers in Ezikeqba Igbo.

Variation Studies: An Overview

Variation studies have witnessed phenomenal growth since Labov's classical studies of Martha Vineyard, a small island off the New England in 1961 and the New York City in 1966. In his Martha Vineyard study, Labov clearly demonstrated the existence of systematic differences between the speakers in their use of certain linguistic variables. He observed linguistic change in progress by focusing on the realizations of the diphthongs /ay/ and /aw/ and noted that a movement seemed to be taking place away from the Standard English realizations of the vowels towards a centralized pronunciation of the second element of the diphthongs associated with the conservatives and characteristically Vineyard speakers. Other similar studies that followed suit were Trudgill (1974), Cheshire (1978), Milroy (1976; 1980) Wolfram et. al. (1974), Wolfram (1969), Macaulay (1977), Jahangiri & Hudson (1977), Akere (1982), Uchendu (1990), Agbedo (1991, 1997), Labov (2002), Okwo (2004), Iheanacho (2004), Akaan (2006). More recently, a number of scholars have carried out empirical studies in different linguistic contexts that provide more useful insights into the mechanisms and dynamics of language variation and change. For instance, Labov (2002) deals with triggering events, driving forces and rising levels in linguistic change. Zilles (2005) studies the Portuguese NP *a gente*, (the people), which is undergoing grammaticalization and is acquiring characteristics of a personal pronoun, increasingly replacing first-person plural *nós*, meaning "we," in speech. In Brazilian Portuguese, this process seems to be correlated with a number of other ongoing morphosyntactic changes. Zilles compares data from Southern Brazil on the use of *a gente* in the 1970s and the 1990s and conducts quantitative analyses in terms of two methodological approaches: apparent-time and real-time studies. In the real-time analysis, two kinds of studies are discussed: a trend study, with two comparable groups of speakers, and a panel study, with the same speakers compared longitudinally. Finally, he examines the linguistic and social embedding of this process following the Labovian classification of changes as being "from above" or "from below."

Based on the *Corpus of Early English Correspondence* (CEEC) and the *Helsinki Corpus of English Texts* (HC), Raumolin-Brunberg (2005), describes how the second-person object form YOU diffused among the population of England during the late middle

and early modern period (1350–1710). The picture that emerges from the analysis shows that this was a change from below in terms of social awareness, because YOU was preferred in oral genres and informal registers in the earliest stages of its use. The study suggests that the social origin of YOU was among the middle ranks, and women led the change in its critical period of diffusion. No specific region has been found as the origin of this change, but London and the Court adopted it before the North and East Anglia. Tagliamonte et. al. (2005) conduct a quantitative analysis of the markers used to introduce relative clauses in three vernacular varieties of English in Britain. In each variety there is a surprisingly low frequency of WH words in subject relatives and negligible use in nonsubject relatives, suggesting that the WH forms have not yet penetrated the respective vernaculars. Variable rule analyses of the multiple factors conditioning *that* and *zero* relative markers reveal that the varieties pattern quite similarly with respect to significance of factors. For the *zero* variant, there is a favoring effect of (1) sentence structure and (2) indefinite antecedents; however there are dialect specific differences in some nuances of the constraint ranking of factors. On the other hand, the use of *zero* is also highly correlated with contextual constraints relating to surface level processing, that is, clause length, as well as clause complexity, across all communities. Taken together, these findings provide evidence for both dialect specific and universal constraints on relative marker use, which can be used to further elucidate the task of conducting broad cross-community comparisons. The results also provide support for an important distinction in linguistic change – those changes that are imposed from the outside (like the WH relative markers) and those that arise from within (like *that* and *zero* relative markers) proceed very differently in mainstream as compared to peripheral varieties. Walker (2005) examines the constraints on *not*-contraction in three varieties argued to be representative of Early AAE. Although the analysis is complicated by the ever-narrowing variable context of *ain't* and by the competition of *not*-contraction with auxiliary contraction, results are largely parallel across the three varieties, pointing to a common origin. The parallels between *ain't* and *not*-contraction provide evidence that *ain't* is the extension of more general processes of contraction. The most consistent effect, the presence of negative concord, is argued to reflect a recurrent process of reinforcement in the history of English negation.

In their own study, van Herk & Walter (2005) investigate nonstandard verbal *-s* and its conditioning by linguistic and social factors, including each writer's regional origin in the United States. Results show that, despite differences in overall rates across regions, the linguistic conditioning largely remains constant. These results suggest that subtle regional distinctions in Early AAE existed when specific settlement and population ecologies encouraged them, but that the shared history and circumstances of language contact and development led to an overall identity of forms and conditioning factors across regional varieties. Wolford (2006) examines the variation in the expression of possession by Latino children. In this study, data was used from 126 Latinos, and a comparison group of 28 African American and 28 white children to study their use of 3rd person possessive pronouns, periphrastic *of* possessives, and attributive *-s* possessives. It was found that Latino children confused *his* for *her* and *her* for *his*; used more periphrastic *of* constructions; and omitted the attributive *-s* marker in *noun + -s + noun* constructions. Multivariate analyses revealed that beyond Spanish influence, speaker sex, language origin, and grade also affected the expression of possession. Most striking are

the differences according to speaker sex, and between Mexican and Puerto Rico origin children, which are considered in light of the closer relationship between Puerto Ricans and African Americans in Philadelphia. Against the backdrop of a change involving some phonetic, morphological, and lexical habits, especially among speakers taught in Catalan as a first language, Carrera-Sabate's (2006) study shows a linguistic change process observed in Northwestern Catalan linguistic communities. Its focus is the study of absolute initial prestressed vowels spelled [left angle bracket]*e*[right angle bracket] which have traditionally been uttered with solution [a] in forms such as *encara* 'yet' or *estudi* 'study'. The population analyzed is the one that is receiving or has received the biggest influence from written language: speakers between 3 and 20 years of age. The data obtained makes room for observing a phonetic change directly connected to writing.

Dunlap (2006) examines dialectal variation in mood choice in journalistic prose after the adverbials *después de que* 'after' and *luego de que* 'after' in subordinate clauses of past temporal complex sentences in Spanish. Because the matrix clause of sentences of this type contains a verb in a past tense, indicating that an action has certainly taken place, the event of the verb in the subordinate clause headed by *después de que* or *luego de que* is anterior to this completed event and is also a necessarily completed event that therefore is in a prescriptively indicative context. However, data collected from an on-line corpus of Spanish texts from Spanish-speaking countries and from on-line periodicals show that journalistic prose from Spain universally opts for the subjunctive mood in these contexts, whereas Mexico tends to use the indicative. Other Spanish-speaking countries show varying degrees of frequency of choice for these moods. Previous approaches to explaining mood choice have maintained that variation in mood choice in the complement clause is determined by the intentions of the speaker. The data in this study refute these claims by demonstrating that the use of the indicative or the subjunctive mood is well established in Mexico and Spain, respectively, and variable in the other Spanish-speaking countries. As a follow-up to earlier studies of the deletion of word-internal alveolar stops in spontaneous English speech, Raymond et. al. (2006) in their study quantify internal deletion statistically using a range of linguistic and extra-linguistic variables, and interprets the results within a model of speech production. Effects were found for speech rate and fluency, word form and word predictability, prominence, and aspects of the local phonological context. Results of the study are compared to results from the numerous studies of word-final alveolar stop deletion, internal deletion in laboratory speech, and also to another internal alveolar stop process, flapping. Their findings suggest that word-internal alveolar stop deletion is not a unitary phenomenon, but two different processes that arise at different points during speech production. In syllable codas, deletion results from cluster simplification to achieve gestural economy and is introduced during segment planning. In syllable onsets, deletion is one outcome of gradient lenition that results from gestural reduction during articulation. Kochetov (2006) presents results of a sociolinguistic study of a Northern Russian dialect as spoken in a small rural community of Pokcha in the Western Urals, Russia. Because of a number of social influences, the dialect has been undergoing a rapid shift towards Standard Russian. The study examines two sound changes in progress: (1) a merger of unstressed mid back vowels and (2) a split of a post-alveolar fricative into two phonemes. The focus of the study is on the role of social factors—age, mobility, education, and sex—in determining the dynamics of the two rather different phonological

processes. Hinskens (2006) presents a good number of original studies of variation in languages representing the three main European language families, as well as in varieties of Greek and Hungarian. The studies concern variation in or across dialects or dialect groups, in standard varieties or in emerging regional varieties of the standard. Several studies investigate a specific linguistic element or structure, while others focus on areas of tension between variation and prescriptive standard norms, on regional standard varieties and regiolects, on problems of linguistic classification (from folk linguistic or dialect geographical perspectives) and the classification of speakers. Language acquisition plays a main role in three studies. The studies in this volume represent a range of methods, including ethnographic and 'interpretative' approaches, conversation analysis, analyses of the internal and geographical distribution of dialect features, the classification and quantitative analyses of socio-demographic speaker background data, quantitative analyses of both diachronic and synchronic language data, phonetic measurements, as well as (quasi-)experimental perception studies. The volume, as Hinskens notes, "offers a microcosmic reflection of the macrocosmos of world-wide research on variability in (originally) European languages at the beginning of the 21th century and the linguistic expression of cultural diversity." Notable among them include Bergmann (2006), Campmany (2006), Moisl *et. al.* (2006), Pappas (2006), Poplack & Malvar (2006), Slobada (2006) Targersn, *et. al.* (2006)

In their paper, Labov and Baranowski (2006) investigate the overlapping of descending /e/ and fronting /o/ in the course of the Northern Cities Shift. The question is whether or not this overlap in F1/F2 measurements is accompanied by some other feature that distinguishes them. Duration is the most likely candidate, since /o/ may have acquired phonemic length in its merger with /ah/ in *father, spa,* etc. There is only a 50 msec mean difference in the durations of /e/ and /o/ in this area, but experimental results show that such a small difference can change category assignment. This is consistent with changes in apparent time, which show a continuing lowering of /e/ especially among women. Travis (2007) investigates the process of structural priming, that is, the use of a syntactic structure in an utterance functioning as a prime on a subsequent utterance, such that that same structure is repeated. This article examines this phenomenon from the perspective of first-person singular subject expression in Spanish. Two dialects and two genres of spoken Spanish are studied: New Mexican narratives and Colombian Spanish conversation. An analysis of 2,000 verbs occurring with first-person singular subjects reveals that subject expression undergoes a priming effect in both data sets, but that the effect is more short-lived in the Colombian data. This is found to be attributable to the interactional nature of these data, showing that the need to deal with interactional concerns weakens the priming effect. As the first study to compare priming of subject expression across distinct genres, this article makes an important contribution to our understanding of this effect, and in particular, of factors that play a role in its maintenance or dissipation in discourse. In pursuance of the need to provide greater understanding of the mechanisms of the diffusion of the low back vowel merger in American English, Irons (2007) presents a detailed acoustic analysis of low back vowel systems in the speech of 114 native nonurban Kentucky speakers of English. The study reveals unexpected instances of merger in areas of the state that cannot be explained by current theories of merger. In this respect, it argues that these instances of low back vowel merger, while they may be an expansion of an existing merger, result from a

distinct mechanism of merger, that is, merger by glide loss. It is predicted that as elements of traditional Southern phonology recede, similar merger will be widespread across the South. Labov's (2007a) paper develops a general characterization of sequences of linguistic changes: triggering events, governing principles, forks in the road and driving forces. The major developments in the dialects of North America are linked in a single sequence, where diversity is the product of successions of bidirectional and unidirectional changes.

Roberts' (2007) study comprises an exploration of the speech of 19 Vermonters, aged 9 to 90. Tokens of /ai/ and /au/ were analyzed acoustically. Results reveal that although centralized /au/ and /ai/ were reported to be disappearing by Kurath (1939a; 1939b), they were still present in the oldest of the speakers but were differentially undergoing change. Raised /au/ was used by older men, but had all but disappeared in younger speakers and all of the women in the study except the oldest speaker (age 90). Instead, speakers used a front low onset. /ai/ presented a more complex pattern: centralization occurred in all speakers, but a back, somewhat rounded onset was restricted primarily to older men. In addition, men and older speakers demonstrated centralized onsets in all environments, whereas younger speakers showed more of a "Canadian Raising" pattern. Implications, when results and settlement history of Vermont were examined, included the suggestion that, in Vermont, the raised variants are the older, base forms and that the "Canadian Raising" pattern of younger speakers and women may be the result of an overall leveling from changing socioeconomic conditions in the area. Labov's (2007b) paper proposes to integrate the family tree model of language change with the wave model into a general framework based on changes in language learning ability across the lifespan. The general argument is that the divergence of branches of the family tree is based on the transmission of language structure from adults to children, and the incrementatiaon of changes in progress by children. The diffusion of language contact across branches of the tree is primarily the work of adults who do not preserve structural conditions with the same fidelity, which accounts for the limitations on structural borrowing. The paper studies in detail the diffusion of the NYC short-a system to four other cities, and the diffusion of the Northern Cities Shift to St. Louis along Route I-55.

In their study, Tagliamonte & D'Arcy (2007) undertake a quantitative analysis of verbs of quotation in a cohesive speech community. The incoming form *be like* overshadows all other quotative verbs among speakers under 30. This telescoped rate of change provides an opportunity to investigate the actuation problem as well as to probe the underlying mechanism of change in the contrasting variable grammars across generations. Multivariate analyses of factors conditioning *be like* (content of the quote, grammatical person, sex) reveal stability in the significance of constraints, however the rankings and relative strengths reveal subtle ongoing changes in the system. In interpreting these in sociocultural context, they suggest that *be like* is an innovation that arose out of a preexisting niche in the grammar. It accelerated during the 1980s due to its preppy associations, later specializing as a marker of narrative present. In accounting for these findings, the authors are led to contrast generational and communal change and to question what it means to 'participate' in linguistic change. Kearns (2007) explores syntactic and regional variation in the choice between declarative (nonrelativizer) *that* and zero complementizer. Using a corpus of contemporary prose from New Zealand, Australian, American, and British newspapers, the study examines complementizer

choice in complements to verbs and adjectives, extraposed complements to verbs, *it*-subject constructions (*It is obvious* (*that*)), and copula constructions (*The trouble is* (*that*), *It could be* (*that*), *What matters is* (*that*), *It was only later* (*that*)). The form of the embedded subject (pronoun, short NP (noun phrase), long NP) is also taken into account. It is shown that significant regional differences in zero rates are to some extent syntactic. The New Zealand and Australian data show less inhibition of zero in clauses that are not adjacent to the clause-selecting lexical head than the American and British data. Charity (2007) highlights quantitative regional differences in the speech produced by African-American children from three U.S. cities in an academic setting. In this analysis, 157 5- to 8-year-old African-American children in New Orleans, LA, Washington, DC, and Cleveland, OH imitated the sentences of a story presented in Standard American English (SAE) by teachers. The 15 sentences included many items that were possible mismatches between the child's vernacular and SAE. Afterwards, the children retold the story in their own words. Children's use of SAE and AAVE features in both tasks was analyzed. Higher rates of AAVE feature use occurred in New Orleans than in Cleveland or Washington, DC. Auer, P. *et. al.* (2008) comprises a volume, which examines variation as well as change at the speech community level (Labovian sociolinguistics); leveling between standard and regional varieties and between regional varieties; dialect supralocalisation the loss of distinctiveness at the local level; dialect contact causes; linguistic effects, such as koineisation; dialect divergence; language variation and identity; social psychology and variation; empirical basis for speech community models, e.g., standard/regional standard/dialect, and changes in these alignments; variation and change in standard varieties; varieties and social styles making use of nonstandard variants; standardization / destandardization; typological differences between related language varieties.

The foregoing review is by no means exhaustive; rather, it shows how productive and robust researches in this aspect of sociolinguistic study have been in recent times. The present study therefore represents one of such steps aimed at deepening our understanding of the phenomenon of language variation and possible change. What appears to be a fundamental departure from the well-known Labovian tradition as evident in the studies reviewed above is that this study represents the first attempt at examining language variation in a rural speech community of Africa from the theoretical prism of Labov's quantitative paradigm. Perhaps, the study would provide an opportunity to explore the universal applicability of Labov's paradigm in the light of the sociolinguistic peculiarities of typical rural speech communities of Africa.

Methodology

The aim of research into language variation, as Dittmar (1976: 104-5) puts it, "…is to describe and explain the entire social network of speech practice and the complex competence that speakers have at their disposal for communication in correlation with the social norms and parameters…" In this regard, scholars have come up with two basic approaches – dialectological and sociolinguistic. As Milroy (1980: 3) observes, "the general aim [of the dialectologists] is a *geographical* account of linguistic features (usually lexical or phonological) chosen for study." In the sociolinguistic tradition, much work is dominated by the influence of William Labov, whose interest borders on discovering the directions of linguistic change. As Milroy (7) notes, "Labov's work is all

strongly slanted to the direct observation of linguistic change in the community, to working out its (social) mechanisms and isolating those social groups who are most directly responsible for introducing and spreading linguistic innovations." All sociolinguistic studies cast in this mould are usually carried out in a number of stages, which Hudson (1980) in Agbedo (1991: 42) outlines as follows: (i) selection of speakers and linguistic variables; (ii) collection of texts; (iii) identification of linguistic variables and their variants; (iv) processing the figures; (v) interpreting the results. This study was carried out in line with the standard procedure, which we shall henceforth examine.

In line with our earlier stated hypotheses, twelve speakers, representing all the possible combinations of the social factors of region and contact were selected. Six respondents each were selected from Imelugwu and Ihelugwu regions. The twelve respondents cut across the three contact groups on the basis of proportional representation. In other words, the extensive contact group, average contact group, and limited contact group have four respondents respectively. The list of linguistic variables and their variants include the following:

i. (r) : [r], [d] as in / piee(r)e n'ime ʊlɔ/ - 'enter the house'

ii. (ʊ) : [ʊ], [a] '' /hanəf(ʊ) - 'like that'

iii. (u) : [u], [e] '' /eenəf(u) - 'that person'

The collection of texts was achieved by isolating the twelve respondents and tape-recording them during series of unstructured interviews. Thereafter, the texts were transcribed, using broad (phonemic) transcription method and the variables identified. We examined the linguistic as well as the social contexts that influenced the distribution of these variables. In processing the scores, we took note of the frequency output of each variable and its binary variants in each texts and compared the figures with other texts. For easier comparison, the raw figures were reduced to percentages on the basis of which significant differences between the texts were ascertained. In order to test the significance of the figures, we computed the sample means, variance and standard deviation of each set of scores. The results were subjected to students' t-distribution. The outcome of this analysis would provide the basis for drawing conclusions regarding the status of the linguistic variables in Ezikeoba Igbo.

Constraints on Variability

According to Wolfram (5), factors that correlate with higher and lower frequency levels of a given variant are referred to as CONSTRAINTS ON VARIABILITY, where the term "constraint" is used to refer to a factor that systematically correlates with increased likelihood that a given variant will occur. As he further observes, factors that correlate with the increased frequency of a variant are said to FAVOR the occurrence of a variant whereas those that correlate with reduced frequency DISFAVOR or INHIBIT the occurrence of the variant. Independent variables that co-vary with systematic differences in the relative frequency of a variant are of two primary types, structural linguistic factors related to the linguistic system itself, so-called INTERNAL CONSTRAINTS, and social or socio-psychological factors of various types that exist apart from the linguistic system, so-called EXTERNAL CONSTRAINTS. For systematic phonological variation, the feature composition of the variant (e.g. voicing, sonorancy), phonetic environment (e.g. preceding and following segments, stress patterns), hierarchical status (e.g. syllable

position), and grammatical status (e.g. type of morpheme) may be factors that constrain variability. In this study, the phonetic environment appears to be the most significant factor that constrains variability. As is the case with the three variants of the (r) variable - [r], [ø], [ɹ] in three linguistic contexts in Edinburgh based on Romaine (1978: 149), which showed that the influence of sound following a word potentially ending in /r/ made a variant more likely to occur in some contexts than others, variability involving the (ʊ) and (u) variables used in this study suggests that the selection of the variants is most often determined by the nature of the first vocalic sound segment of the following word in the context. For instance, the presence of /ɔ/ and /ə/ phonemes in word-initial position and preceded by a demonstrative with the /ʊ/ variable favours the [a] variant and disfavours its [ʊ] counterpart. The /ɔ/ sound of preceded words in the context also favours the /a/ variant just as /a/ in word initial position in preceding words constrains the variability involving [a]. For the [ʊ] variant, its high frequency is largely constrained by the /i/, /ɔ/, /ɜ/ sounds occurring word-initial in the preceding word. In the case of the (u) variable, the high frequency of [u] variant is largely favoured by the /i/, /a/, /e/ sounds occurring word-initial in the preceded words. While the frequency of the binary variants of the (ʊ) and (u) variables are to a large extent constrained by certain vocalic sound segments, there is no particular set of consonantal sounds that can be said to be the exclusive internal constraints. In other words, all consonantal sound segments are of equal significance in constraining variability. Like the (ʊ) and (u) variables, the (r) variable has fixed context of occurrence, that is, [vv-v]. They occur in the environment of two vowel harmony sets referred to as lax and tense by Carroll (1970) and Emenanjo (1978). While the variants [r] and [d] appear to occur in both vowel harmony set on equal basis, the situation is different when the lengthened vowel in the intervocalic environment is the unrounded central vowel /ə/. Here, the frequency of the [r] shows some measure of regularity. In specific terms, the phonetic environment [vv-v] where vv is [əə] is the internal constraint, which favours the high frequency of [r] but disfavours [d] variant.

Given Bailey's (2000: 118) "principle of multiple causes," which, as Wolfram observes, holds that no single contextual factor can satisfactorily describe the variability observed in natural language, it becomes pertinent to examine the external constraints such as region and contact and how they combine with the linguistic factors to constrain the frequency of phonological variables that are involved in the variability process. In this regard, we shall employ the statistical method of t-test to ascertain their relative significance in constraining variation in Ezikeoba Igbo.

Data Analysis

The total frequency output of the (r) variable in the entire texts collected is 1228 or 55.56%. Out of this, the (r):[r] variant has a total of 642 or 52.25% for both Ihelugwu and Imelugwu regions while the (r):[d] occurred 586 times or 47.72% for both regions. The [r] output for the Imelugwu region is 479 or 72.83% while its output for the Ihelugwu region is 163 or 27.17%. For the [d] variant, the frequency output for the Ihelugwu is 410 or 69.97% while the output for Imelugwu is 176 or 30.03%. The (ʊ) variable has a total

of 662 or 29.95% in the whole texts with the [ʊ] and [a] variants scoring 338 (51.06%) and 324 (48.94%) respectively. For group average scores, the ECG scores 244 (77.97%) for the [ʊ] variant and 75 (22.03%) for the [a] variant. The ACG scores 65 (42.90%) for the [ʊ] variant and 87 (57.1%) for the [a] variant. Finally, the LCG has an average score of 29 (13.97%) for the [ʊ] and 162 (86.03%) for the [a] variant. The (u) variable records a total instances of 320 representing 14.49% out of which [u] occurs 151 times (47.18%) and [e] records 169 instances representing 52.82%. in terms of group mean scores, ECG records a total of 112 for the (u) or 35% whereby the [u] has 79 (73.47%) and [e] has 33 (26.53%). The ACG records 100 for (u) variable or 31.25%. The [u] variant has 41 or 40.87% while [e] has 59 or 59.13%. LCG's total score for the variable is 108 or 33.75% out of which the [u] variant records 31 or 27.95% while the [e]e variant has 77 (72.04%).

From the foregoing, it is evident that the mean differences between the Imelugwu and Ihelugwu regions for the variable are statistically significant. Also, there is significant difference between the ECG, ACG, and LCG in the variable realizations of the (ʊ) and (u) variables. The tendency would be to treat the (r) variable as a regional marker as well as the (ʊ, u) variables as contact markers in Ezikeoba Igbo. However, we cannot do until the exact degree of significant difference is ascertained. This brings us to the issue of subjecting the three hypotheses to test, using the t-test technique.

Hypotheses Testing

There are roughly seven major steps in hypothesis testing as a statistical method of data analysis. These include (i) formulation of null hypothesis (Ho) and alternate hypothesis (Ha); (ii) choice of an appropriate level of significance; (iii) computation of the test statistic; (iv) determining the critical or table value of test statistic; (v) stating the decision rule, (vi) drawing inference about the Ho; (vii) conclusion by stating the proposition of either the Ho or Ha. The hypotheses to be tested are stated thus:

1. The frequency output of (r): [d] is more in the speech of the Ihelugwu speakers than the (r): [r].
2. The frequency output of (r): [r] is more in the speech of the Imelugwu speakers than (r): [d].
3. The use of (ʊ) and (u) variables is determined by the extent of contact, which speakers of Ezikeqba Igbo have speakers of more mutually intelligible dialects of Igbo.

We followed the steps in testing hypothesis (refer to Appendix) and drew the following inferences regarding the linguistic and social variables:

That there is significant difference in the frequency output of (r): [r] and (r): [d] in the speech patterns of Ihelugwu and Imelugwu speakers, thus justifying the alternate hypothesis which states that the frequency output of the [d] variant is more than the [r] variant in the speech of the Ihelugwu speakers.

That the difference between the frequency output of (r): [r] and (r): [d] variants in the speech of Imelugwu speakers is 95% significant, thus upholding the proposition of the Ha that the frequency output of (r): [r] is greater than (r): [d] in the speech patterns of Imelugwu speakers.

That the differences between the three contact groups in their use of (ʊ) and (u) variables are not statistically significant, thus suggesting that the probability that the observed differences resulted from sampling errors is high (i.e. ≥ 0.01 and 0.05).

Conclusions

The results of a quantitative analysis of the data elicited from respondents showed that there is direct correlation between the phonological variables of (r, ʊ, u) and the social factors of region and contact. This seems to confirm the major hypotheses of this paper, which state that there is difference in the use of binary variants of (r) variable between Ihelugwu and Imelugwu speakers and that the use of (ʊ) and (u) variables is determined by the degree of contact, which members of Elugwu-Ezike speech community have with speakers of the more mutually intelligible dialects of Igbo. Based on the results of the analysis, the next seemingly reasonable step would be to conclude that the (r, ʊ, u) variables can be considered as regional and contact markers in Ezikeoba Igbo. In other words, region and contact are external constraints that correlate with higher and lower frequency levels (binary variants) of the phonological variables. However, we chose to determine the reliability and verifiability of the hypotheses by testing them, using the statistical method of students' t-distribution (t-test). Whereas the hypotheses formulated in respect of the (r) variable were proved, the one concerning the (ʊ) and (u) variables was disproved. It is in the light of the foregoing that we draw the following conclusions. Since there is significant difference in the use of the [r] and [d] variants of the (r) variable between the Ihelugwu and Imelugwu speakers, it becomes tenable to aver that the (r) variable functions as a linguistic marker in Ezikeoba Igbo. The fact that the (r) variable is a linguistic correlate of the social factor of region justifies its status as a sociolinguistic variable in Ezikeoba Igbo. By implication, region as a social factor serves as an external constraint, which co-varies with systematic differences in the relative frequency of the binary variants of the (r) variable. With regards to structural linguistic factors related to the linguistic system itself, so-called INTERNAL CONSTRAINTS, the factor that constrains variability in the observed systematic phonological variation is the phonetic environment. Again, even when there are contact differences involved in the distribution of the (ʊ) and (u) variables in the speech patterns of the respondents, the statistical method employed to confirm this apparent sociolinguistic fact proved otherwise. The implication of this is that while there is enough evidence to treat the (ʊ) and (u) variables as linguistic correlates of the contact variable, the t-test has proved that the differences in their variable realizations are not statistically significant. This development necessitates more critical examination of the (ʊ) and (u) variables to determine their sociolinguistic status as phonological variables, whose alternate realizations in the speech patterns of Ezikeoba Igbo speakers, are influenced by a particular social variable such as contact or another variable or set of social variables. However, this would take us beyond the scope of this paper. Consequently, we recommend further research in this regard to determine the sociolinguistic status of the (ʊ) and (u) variables and also the extent to which contact as an independent variable constrains variability in Ezikeoba Igbo.

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