

Second Language Acquisition and Sociolinguistic Variation

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Abstract

Variation pervades the speech of second language learners. Vietnamese learners of English, for example, sometimes mark verbs for tense and sometimes fail to do so (Wolfram, 1985). Sometimes English speaking learners of French delete *ne*, while at other times they do not (Regan, 1996; Dewaele, 2004). However, despite the promise offered by early variationist studies of second language acquisition (SLA), until recent years relatively few SLA researchers availed themselves of the potential offered by the methodological and analytical tools developed in variationist sociolinguistics. This article outlines the recent contributions of variationist linguistics to SLA and suggests future research that may enhance our understanding both of SLA and of intercultural communication.

The late 1960s and early 1970s witnessed the development of two subfields of linguistics: the quantitative study of linguistic variation pioneered by Labov (1966, 1969) and the systematic investigation of second language acquisition (SLA), exemplified by studies such as Cazden, Cancino, Rosansky, and Schumann (1975) and Hakuta (1976). These two areas of study were motivated by a common concern to understand the underlying systems of language varieties, often socially stigmatized varieties in the case of quantitative sociolinguistics, and learner language in the case of SLA. Moreover, since its emergence as a distinct paradigm, variationism has been concerned with confronting the linguistic stereotypes of non-standard varieties by serious scientific study. Sankoff (1988a), for example, dates the development of variationism as a paradigm distinct from dialectology, ethnolinguistics, and traditional pidgin and creole studies from 1969, with the appearance of Labov's first major publication on the African American Vernacular English (AAVE) copula, rather than from 1966, the publication date of his earlier work on New York City. The variationist paradigm was very quickly extended to speakers of other socially stigmatized language varieties, including American Sign Language (Woodward, 1973), working class British English (Trudgill, 1974), Puerto Rican Spanish (Poplack, 1980), and Guyanese Creole (Rickford, 1987), to name just a few.

Just as in variationist sociolinguistics, several early SLA studies focused on socially marginalized speakers, often working class immigrants from the developing to the developed

world. “Alberto”, the subject of Schumann’s (1978) influential study, *The pidginization process*, is a case in point, as is “Ge”, a Hmong immigrant to Hawaii whose untutored acquisition of English was documented by Huebner (1983). The guest-workers whose acquisition of German was studied by researchers in the Heidelberg project (Heidelberger Forschungsprojekt ‘Pidgin-Deutsch’ 1978) and the Vietnamese refugees studied by Wolfram and Hatfield (1984; Wolfram 1985) provide additional examples. And, even in cases where SLA researchers focused on relatively privileged speakers, as in Dickerson’s (1975) study of the acquisition of English by Japanese university students in the United States, the concern was with discovering the underlying systematicity of variable learner production. Indeed, the concern with the systematicity that underlies variable production was a logical outgrowth of Selinker’s (1972) concept of interlanguage as a learner’s “approximate system,” which shared features of both the learner’s first language and the target language but was fully explainable by neither. Somewhat later, Noyau elaborated the idea of interlanguage and described the task of the SLA researcher as being “to describe ... learner languages, which are to be considered as unknown languages of which the learner is the unique speaker...” (1990, 144-145). If learner varieties are characterized as “unknown languages,” it follows that, like all human languages, they must also be characterized by “orderly heterogeneity” (Weinreich, Labov, and Herzog, 1968). That is, the variability that is clearly evident to even a casual observer is likely to be probabilistically constrained by features of the linguistic and social environments as well as by characteristics of the speaker.

Despite the apparent convergence of interest in understanding variability in language and in the speech of socially marginalized groups and individuals, until recently variationist linguistics has had relatively little influence on SLA research. To be sure, a number of studies conducted in the 1970s and early 1980s employed established methods of variationist analysis. For example, Dickerson (1975) examined the effects of different phonological environments on the pronunciation of /l/ and /r/ by Japanese learners of English and argued that interlanguage consisted of a system of variable rules. To take another example from the same period, Adamson and Kovac (1981) used VARBRUL, a specialized application of logistic regression (Sankoff, 1988b), to reanalyze Schumann’s (1978) data on the acquisition of English negation by an adult L1 Spanish speaker. However, until the late 1980s variationist studies were relatively rare in SLA. The neglect in SLA research of the insights to be gained from variationist linguistics has been attributed three main factors: 1) the dominance of formal models in SLA, as in other areas of linguistics; 2) the reduction of the aims of sociolinguistics to what Preston has referred to as “socially sensitive pragmatics” (1996:25); 3) misunderstandings by SLA researchers of basic concepts and methods of variationist linguistics. These issues are treated at length by Preston (1996). Since the primary goal of this article is to examine the ways that variationist linguistics may enrich our understanding of SLA, I shall focus on the third.

Misunderstandings of Variationist Research

The misunderstanding of basic concepts in variationist linguistics, often by leading scholars in the field, has posed one of the most persistent challenges facing researchers in second language variation. For example, Ellis, in a widely used textbook on SLA, defined a variable rule as follows:

If it is accepted that learners perform differently in different situations, but that it is possible to predict how they will behave in specific situations, then the systematicity

of their behavior can be captured by means of variable rules. These are 'if...then' rules. They state that if x conditions apply then y language forms will occur (1985:9). As Preston (1996) has pointed out, Ellis's definition is simply wrong. Rather than defining a variable rule, Ellis has defined a context-sensitive categorical rule.

A second problem affecting studies of interlanguage variation has been the tendency of many researchers to explain the variation found in learners' language by reference to a single co-occurring contextual factor. Studies by Beebe (1977), Ellis (1987), Selinker and Douglas (1985), and Tarone (1985) provide convenient examples. Beebe attributed the variation that she observed in the spoken Thai of Chinese-Thai bilinguals to the ethnicity of their interlocutor. Ellis attributed variation in the use of the past tense by intermediate learners of English from a variety of backgrounds to the amount of planning time available. Selinker and Douglas found that the variation in discourse organization by a Mexican learner of English could be attributed to the discourse topic, while Tarone sought to explain variation by borrowing Labov's concept of "attention to speech." Remarkably, each of these studies found evidence from interlanguage variation in support of the researchers' theoretical positions: speech accommodation for Beebe, the distinction between planned and unplanned discourse for Ellis, discourse domain for Selinker and Douglas, and attention to speech for Tarone. When we take a step back from these studies and compare them, the question of which is the real cause of variation presents itself. It is speech accommodation, planning time, discourse domain, attention to speech, or perhaps some other factor that has not been examined? Or do these factors affect different groups of learners differently?

Research in the variationist tradition, in contrast to research that seeks a single overarching explanation, assumes that interlanguage variation, like variation in any language, is likely to be subject to the influence of not one but multiple contextual influences. That is, variationist research, whether on native or nonnative languages, adopts what Young and Bayley (1996) have referred to as the principle of multiple causes. The question for the researcher is thus not which single factor is associated with variation, but what the relative strength of the different factors associated with variation is. In order to assess the effects of the multiple factors that may be reasonably hypothesized to condition second language use, SLA researchers, as Tarone (1979) pointed out, must report in detail the nature of the task, the interlocutors, the physical surroundings, and the topic of discussion. All these features of the social and physical context, as well as the features of the linguistic context of the variable form, should be reported and either controlled in a conventional manner or included in the model of variation. To attempt to explain interlanguage variation as a result of a single factor is to ignore the complexities of SLA.

Potential Contributions of Variationist Linguistics to SLA Research

Variationist methods offer a number of potential advantages for SLA research. Here, I shall deal with four potential contributions. First, variationist linguistics offers a clear way to study the effects of language transfer. As long as the speakers' first languages are included as factors in the statistical model of variation, the detailed study of linguistic variation provides a way to test empirically the effect of the first language on speaker performance on a wide range of variables. Second, the detailed analyses of variable forms produced by quantitative sociolinguists in speech communities around the world provide a much more realistic view of how target languages function than do traditional grammars. Empirical studies conducted in the target language community are important for understanding transfer as well as for

understanding acquisition, particularly in communities where learners receive much of their input from speakers of non-standard varieties. Third, variationist analysis provides a means of testing whether SLA involves a process of repeated restructuring, as Huebner (1983) and others have suggested, or whether it proceeds gradually along a multi-dimensional continuum. Fourth, a relatively new strand of research that examines the acquisition of target language patterns of variability offers insights into the process by which learners may move (or fail to move) beyond the formal style that characterizes most classroom instruction.

Language Transfer

The potential utility of variationist methods in accounting for language transfer has been treated extensively by Preston (1996). In conducting multivariate analysis, whether with VARBRUL (Sankoff, 1988b) or commercially available software for performing logistic regression such as SPSS, it is a relatively simple matter to include a factor group for first language in the statistical model. (For details on the use of the VARBRUL programs see Young and Bayley, 1996). Provided that other potential sources of inter-learner variability are conventionally controlled or accounted for, one may then perform several analyses, with groups of learners representing different first languages combined, and with learners separated by first language, to determine if indeed the same factors affect speakers of different first languages in the same way. If speakers of different languages pattern in different ways and if the difference reflects a linguistic difference in their first languages, we might reasonably conclude that the difference is attributable to the effects of the first language.

The Nature of the Target Language

The potential contributions of variationist linguistics to our understanding of language transfer are not limited to such commonsense tests as those described above. Thanks to sociolinguistic studies conducted in many languages around the world, we now have a much clearer idea of the target languages that learners are seeking to acquire. Such understanding can be crucial to judging what constitutes transfer and what does not, as a study by Samar (2000) makes clear. Previous studies of the acquisition of English by native speakers of Persian had attributed the presence of resumptive relative pronouns in Persian-English interlanguage to “transfer” from Persian (Gass, 1979), in which, according to traditional grammars, the resumptive pronoun is underlyingly present under certain circumstances. However, in an empirical study of natural speech by native speakers of Persian, Samar found that only two percent of the relative clauses in the corpus were marked by resumptive pronouns. He concluded that the attribution of learners’ use of resumptive pronouns in English was based on an idealized version of standard Persian rather than on actual native speaker usage.

In addition to providing a basis for distinguishing interlanguage features that may be attributed to transfer from those that may not, variationist studies can also provide a basis for determining what constitutes acquisition. For example, it is well known that third person singular *-s* with verbs is highly variable in African American Vernacular English (AAVE) and other non-standard varieties of English (Fasold, 1972; Godfrey and Tagliamonte, 1999; Poplack and Tagliamonte, 1989). Moreover, research on the acquisition of English dating back to the morpheme studies of the early 1970s has shown that verbal *-s* tends to be acquired very late, well after forms such as plural *-s*, for example (Cazden et al., 1975). SLA researchers have tended to judge acquisition by the percentage of suppliance of a target

language form in obligatory contexts as defined according in the standard language. However, the acquisition criterion of near categorical use in obligatory contexts is inappropriate if the primary native-speaker input learners receive comes from speakers of a variety in which the form under investigation is used variably. In New York City, for example, many Spanish-speaking Puerto Ricans acquiring English receive a great deal of their native-speaker input from speakers of AAVE. Moreover, as shown by Zentella (1997), many migrants from Puerto Rico identify more closely with African Americans than with middle-class speakers of standard English. For such speakers, we cannot assume that the absence of 3 sg -s represents a failure to acquire an obligatory feature of the target language. Rather, it may well reflect acquisition of a feature of the dialect that the second language user has chosen as the target. That is, absence of an inflectional morpheme that is obligatory in the standard language but variable in vernacular dialects may represent a second language speaker's sociolinguistic competence rather than linguistic incompetence. To assess acquisition adequately, we must compare the pattern of variation in learner speech with the pattern of variation in the vernacular dialects with which learners are in contact and which they may select as the target.

Understanding the Nature of SLA Processes

The methods of quantitative sociolinguistics have the potential to provide evidence to enable us to choose between to different models of SLA. I focus on two theoretical assumptions about the relationship between variation in performance and grammatical competence and about the nature of speech communities that are especially relevant to SLA:

- 1) individual speakers may differ in the basic rate of the use of a variable rule, i.e., in their "input probability";
- 2) individuals [who are members of the same speech community] should be similar or identical in the factor values assigned to linguistic constraints on the rule (Guy 1991).

Evidence that linguistic factors have different effects on speaker performance, then, indicates that speakers have different internal grammars. For example, Guy (1980) found that a following pause has a different effect on the likelihood of -t,d deletion in the speech of New Yorkers and Philadelphians. He argued that the different factor weights for the two groups represented a dialectal difference between the two groups of speakers.

Guy, among many others (see Labov, 1989, for a review), also showed in fine detail that linguistic constraints operated in the same way for all speakers of the same variety, regardless of the extent to which they used a particular variant. For example, regardless of their overall rate of -t,d deletion, all speakers were more likely to delete the final consonant from a monomorpheme such as *mist* than from a past-tense form such as *missed*. Hoffman (2004), in a study of /s/ aspiration and deletion by Salvadorean immigrants in Toronto, also found that individual patterns replicated the group pattern. Turning to adult second language learners, Bayley and Langman (2004) examined the acquisition of verbal morphology by Chinese learners of English and Hungarian. Again, the constraint rankings for individuals were identical or highly similar to the group pattern, although the speakers in their study varied greatly in the extent to which they used target language forms.

The principle that speakers who possess substantially identical internal grammars may vary in their frequency of use of a variant, but not in constraint ordering, provides a means to test empirically whether SLA involves repeated restructuring of the grammar or whether it proceeds gradually along a multi-dimensional continuum. If SLA is characterized

by restructuring, the results of multivariate analysis of longitudinal data or of synchronic data from speakers of different levels of L2 proficiency should show that different factors constrain speakers' choices of variants or that the same factors have substantially different effects on the production of learners at different stages of acquisition. On the other hand, if acquisition proceeds gradually along a multi-dimensional continuum, with each factor group representing a single dimension, then once a rule has entered the grammar (e.g. English past-tense marking or /s/-plural marking), both factor groups and individual factors within groups should have very similar effects on the performance of speakers, regardless of their stage of acquisition.

As it turns out, the literature on interlanguage variation offers examples in support of both models. My own work on past-tense marking by adult Chinese learners of English (Bayley, 1994) showed that one factor, whether a verb was perfective or imperfective, had very similar results on learners of widely varying degrees of proficiency. Table 1 on the next page shows the results of VARBRUL analysis for this factor. Proficiency levels are based on scores the Test of English as a Foreign Language (TOEFL).

As Table 1 shows, even though higher proficiency learners marked many more past reference verbs for tense than did lower proficiency learners, the factor values remained unchanged. That is, Chinese learners of English, regardless of their level of proficiency, are far more likely to mark perfective than imperfective past reference verbs. Moreover, as shown in detail in Bayley and Langman (2004), the results for individual learners conform to the group patterns shown in Table 1. The strong effect of perfectivity may be explained by the fact that perfectives are prototypically past (Dahl, 1985), as well as by the fact that in Chinese, the perfective is the marked member of the perfective-imperfective opposition (Ramsey, 1987).

The preceding example shows that some factors are common to learners at different stages of acquisition. At least with respect to the effect of perfectivity on past-tense marking, learners do not restructure their grammars as acquisition proceeds. Other factors, however, do have different effects on learners at different stages of acquisition and thus provide support for a model that views SLA as involving a series of restructurings. Young's (1991) study of /s/-plural marking by Chinese learners of English provides a convenient example of how the same factors may have different effects on low and high proficiency learners. Along with many other factors, including the preceding and following phonological environment and the ethnicity of the interlocutor, Young tested the effect of animacy on adult Chinese learners' use of /s/-plural marking in obligatory contexts. As in the previous example, the division into proficiency levels was based on participants' TOEFL scores. The results by proficiency level are shown in Table 2 on the next page.

Young's results show that for low proficiency learners, animate NPs disfavored /s/-plural marking. For high proficiency learners, they had the opposite effect. When data from the two groups were combined, the results of the low and high proficiency learners neutralized one another and animacy failed to reach statistical significance.

Although studies such as Bayley (1994) and Young (1991) are limited to the acquisition of English by speakers of a single language, the results can provide some guidance as to what types of factors are likely to influence all language learners in the same way, and thus be candidates for universals, and what types are likely to be confined to speakers of a particular language at specific stages of acquisition. Moreover, the differences shown in the

	Lower proficiency			Higher proficiency			Combined		
	VARBRUL weight	%	N	VARBRUL weight	%	N	VARBRUL weight	%	N
Perfective	.67	42	856	.69	73	1,406	.68	61	2,262
Imperfective	.33	15	964	.31	38	1,691	.32	30	2,655

Table 1. Past Tense Marking in Chinese-English Interlanguage by Aspectual Category and Proficiency Level (Source: Bayley, 1994:175)

	Low proficiency			High proficiency			Combined		
	VARBRUL weight	%	N	VARBRUL weight	%	N	VARBRUL weight	%	N
Animate	.36	34	105	.61	75	243	ns	63	348
Inanimate	.53	59	442	.47	70	772	ns	68	1,174

Table 2. /s/-Plural Marking in Chinese-English Interlanguage by Animacy and Proficiency Level (Source: Young, 1991:140, 142)

effect on learners of different proficiency levels of perfectivity on English past-tense marking and animacy on /s/-plural marking suggest that the acquisition of different types of interlanguage features proceeds in different ways. The results for the effect of perfectivity suggest that learner performance at all levels of proficiency is strongly constrained by prototypical aspectual categories such as perfectivity. Young's results for animacy of the NP, on the other hand, indicate that with respect to some factors learners appear to restructure their grammars as they progress from invariant non-usage of the target language form to variable usage and finally to categorical usage in obligatory contexts.

Acquiring Sociolinguistic Competence

The work discussed thus far has dealt with the acquisition of features that are usually considered categorical in the target language, e.g., past-tense and plural marking in English. However, another strand of research has emerged in recent years, one that is perhaps more relevant to the research interests of Jia Yuxin and others who work in intercultural communication: the acquisition of target language patterns of variability.

Successful communication, whether within a culture and between persons of different cultures, requires an understanding of the meaning of speech acts within a community as well as the ability to interpret the meaning of speakers' uses of different linguistic forms, many of which are variable. Within sociolinguistics generally, a substantial amount of recent work has focused on the ways that speakers use variation to perform specific identities and to index certain stances. Kiesling (1997), for example, studied interactions among U.S. college fraternity men and showed in fine detail how the incidence of consonant cluster reduction was related to the type of speech event in which participants were engaged as well as to the image of themselves that speakers wished to present. In another recent study, Benor (2004) showed how newly orthodox Jews made use of a variety of linguistic features to index their orthodox identity.

Second language studies that focus on the acquisition of target language patterns of variation have begun to examine how learners use variable features to mark certain aspects of their identities or to create a new L2 identity. In an early study, Adamson and Regan (1991), for example, examined variation in alveolarization of /ɲ/, in words like *workin'* by Southeast Asian immigrants to the United States. They found that men increased their use of the informal variant, which is associated with masculinity, in more formal styles that required increased attention to speech. In a study of university L2 learners of English, Major (2004) has recently reported similar findings. For the English L2 speakers studied by Adamson and Regan and by Major, the effect of gender appeared to be more important than the effect of style.

The relationship between individual style and use of variable forms is highlighted in a recent study of Hispanic English in North Carolina, the state with the most rapid percentage increase in the Hispanic population during the 1990s (Wolfram, Carter, and Moriello, 2004). Wolfram et al. discuss the different patterns of language use of an 11-year-old girl and her 13-year old brother whose parents are immigrants from Mexico. The boy identifies strongly with the local athletic culture. Unlike the majority of speakers discussed by Wolfram et al., he has adopted monophthongal /ai/ in words like *nice* and *rice*. and other salient features of Southern U.S. English. His sister, on the other hand, is strongly oriented to mainstream institutional values and shows little evidence of accommodating to the Southern vowel system.

Much of the most interesting work on the acquisition of the variable target language

features that speakers use to construct their identities has focused on French, both in Europe and in Canada. Overall, this work has emphasized the crucial role of contact with native speakers in a variety of situations. Regan (1996), for example, studied the acquisition of the deletion of French *ne*, the first particle of negation, by Irish learners before and after a year's study in France. Learners approached native speaker colloquial usage after their time abroad. Recently, Nagy, Blondeau, and Auger (2003) examined subject-doubling in the French of young Anglophone Montrealers. They found that young people who interacted regularly with their francophone counterparts were far more native-like in their use of this variable than those who had few such contacts. Raymond Mougeon and his colleagues have studied the (non-)acquisition of native-like patterns of variation by students in French immersion classes in Toronto (Mougeon and Rehner, 2001; Mougeon, Rehner, and Nadasdi, 2004; Rehner, Mougeon, and Nadasdi, 2003; Uritescu, Mougeon, Rehner, and Nadasdi, 2004). On the basis of an analysis of thirteen variables, Mougeon and his colleagues found that, unlike native speakers of Ontario French, the immersion students rarely or never used marked vernacular variants. The students did, however, make some use of mildly marked variants. Such use was more common among students who had spent time in Quebec. Finally, as might be expected from language learners who have little exposure to the target language outside of the classroom, the immersion students overused formal variants.

As Mougeon and Dewaele (2004) observe, studies of the acquisition of target language patterns of variation have practical as well as theoretical interest because even after years of study, instructed learners often have great difficulty in developing a range of styles and alternating appropriately between them. As Tarone and Swain (1995) observe of Canadian students in French immersion classes, in the typical language classroom students learn a superordinate style that is "fundamentally institutional discourse. The student is not just talking to the teacher; the student is talking to the teacher about institutional and academic business" (168). To communicate across cultures, however, speakers need more than "institutional discourse." Sometimes, as mentioned by one of the students discussed in Tarone and Swain (1995), they need to be able to say "'Well, come on guys, let's go get some burgers' and stuff like that" (172). To interpret this example, at the very least speakers need to understand that the invitation is casual and, at least in vernacular U.S. and Canadian English, "guys" may include both males and females.

Conclusion

The examples discussed above illustrate only some of the ways that variationist linguistics may contribute to SLA, and, to the extent that acquiring as second (or nth) language is necessary for communication between cultures, to intercultural communication. As Bayley and Regan (2004) suggest, several other areas of investigation are particularly promising. Within mainstream sociolinguistics, scholars such as Eckert (2000) and Zhang (2001) have combined ethnographic and variationist methods to examine the relationships between language change and speakers' multifaceted identities. Second language studies that combine variationist and ethnographic methods have the potential to provide a better understanding of the development of learner competence over time. Moreover, to the extent that such studies focus on different contexts of use, they have the potential to document how L2 speakers come to acquire the stylistic resources necessary to function effectively in a variety of social situations with both native and non-native speakers of the second language. Another promising strand of inquiry concerns the role of gender in SLA. Do L2 learners

replicate native-speaker patterns of gendered target language use as Adamson and Regan (1991) and Major (2004) suggest? How do L2 speakers deploy the sometimes limited target language resources at their command to enact gendered identities and how does this affect learning? How do the gendered identities that target language societies present to L2 learners, and L2 learners' acceptance or rejection of those identities, impact on acquisition? Research that examines how speakers acquire and learn to deploy their linguistic resources, including the use of variable linguistic forms, across a range of social situations will expand our understanding of both SLA and intercultural communication.

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Lydia White argues that second language acquisition is constrained by principles and parameters of Universal Grammar. The book focuses on characterizing and explaining the underlying linguistic competence of second language learners in terms of these constraints. Theories as to the role of Universal Grammar and the extent of mother-tongue influence are presented and discussed, with particular consideration given to the nature of the interlanguage grammar at different points in development, from the initial state to the ultimate attainment. Language and society. 1.1 Methods in sociolinguistics 1.2 The development of sociolinguistics. 1.2.1 Sociolinguistic data 1.2.2 The linguistic variable 1.2.3 The question of co-variation 1.2.4 Indicators and markers 1.2.5 Register and hypercorrection 1.3 Sociolinguistics and language change 1.3.1 Social networks 1.3.2 The Belfast investigations 1.4 Types of speech communities 1.4.1 Where do standards come from? However, many aspects of dialectological research are unacceptable to modern sociolinguists. The chief deficiency of dialect investigations in the nineteenth century and early twentieth century is that they were unrepresentative, i.e. their informants consisted of a skewed selection of speakers. Ultrasound imaging applications in second language acquisition. Technologies for prosody in context. Curriculum issues in teaching pronunciation to second language learners. Sociolinguistic and sociocultural theory has had a major impact on work in L2 phonology as well, as researchers attempt to understand how the social context and socio-biological constructs affect language learning. However, it is within the area of variation that sociolinguistics has had the greatest effect on L2 phonology and variation. These concepts are, not surprisingly, central themes in the chapters of this book. Although the chapters cover a wide array of topics, they are nevertheless united in focusing on the most critical aspects of L2 phonology.