

Julian Rauter

High School Science Research

Research Supervisors: Dr. William Birns, Mr. Jeffrey Mann

Literature Survey: “Dialect Acquisition in Downstate Migrants to the Catskills”

I. Language Acquisition in Adults

Acquiring a new language is an activity that often becomes more difficult as a person ages. As second language (L2) acquisition is a major subject in linguistic research, there has been much inquiry into how it is affected by age. The critical period hypothesis says that age has a negative correlation with ability to speak an L2 with native-like pronunciation and that this ability diminishes sharply after a certain age (Oyama 1976). Reports conflict over how long the critical period lasts; liberal estimates place its end somewhere between ages 12 and 15 (Flege 1987, Scovel 1988, Patkowski 1990).

The critical period hypothesis has some exceptions. For example, a group of native Dutch speakers who had studied and taught English at the university level were found to exhibit almost perfect English accents as perceived by English speakers (Bongaerts et al. 1997). However, this can be considered a special case as the only way in which the speakers could master the language was by making it their primary course of academic study, which is not the case for most L2 learners. There are also exceptional learners who can master L2 pronunciation outside of the critical period (Scovel 1988, p. 181, Novoa et al. 1988, p. 295, Ioup et al. 1994, p. 80) but these cases fall vastly in the minority of L2 learners.

Significantly, non-migratory adults' speech systems do tend to change in the direction of their region's vowel shifts, though gradually. This is supported by the non-age-related changes detected in the Queen of England's accent over the course of 50 years of radio broadcasts (Harrington et al. 2000 (1), Harrington et al. 2000 (2)). This change is difficult to quantify but it stands as evidence that changes in pronunciation are possible throughout a lifespan. However, they become more limited as age increases.

Studies on the critical period show a strong correlation between native-like pronunciation of an L2 and speaker's age at the time of learning the L2 (Flege 1987, Scovel 1988, Patkowski 1990). However, this is not the only factor that contributes to a speaker's accent. Amount of L2 use also has a strong effect, with speakers who use their L2 more frequently exhibiting significantly less accent (Flege 1997). Additionally, it has been determined that length of residence (LOR) in the L2-speaking area reduces adults' accent strength to some degree (Flege & Liu 2001). A final important factor in L2 acquisition is sociocultural. It has been pointed out that most studies assume that the goal of an L2 learner is to produce and perceive the L2 in a native fashion despite the fact that this is not always the case (Baker 2008). In some cases, immigrants "retain a slight foreign accent in order to maintain group affiliation with their native language and culture" (Baker 2008, Gatbonton et al. 2004).

II. Dialect Acquisition

Dr. Howard Giles was one of the first researchers to deal with speech accommodation within a language. However, his preliminary studies were more psychological than linguistic. This early form of accommodation study placed emphasis on speakers' accommodation as heard by other speakers, without real phonological analysis (Giles 1973). This topic was further

investigated on a more linguistic level several years later, when researchers took recordings of a desk clerk interacting with several customers of differing classes who spoke in different social dialects. It was shown that the incidence of “lower class” phonetic features was higher in the clerk’s speech when he was talking to a customer with a lower class dialect, and vice versa with higher class customers. In other words, the clerk temporarily adjusted his speech patterns to reflect those of the people with whom he was interacting (Bourhis & Giles 1976).

From these early studies came the concept of convergence. This says that individuals tend to switch their speech styles to be more like those with whom they are interacting, regardless of age. At its inception, this concept primarily applied to short-term accommodation, as that in a brief face-to-face encounter (Giles & Smith 1979).

Trudgill’s 1986 work on dialects in contact grouped studies such as these and derived several conclusions. The most important among these was that speakers accommodate to the speech of those around them on both a short-term and long-term level. However, at this time most understanding of long-term dialect accommodation was purely speculative. Trudgill was aware of the factors affecting accommodation, but did not cite many examples of research on how an individual’s speech patterns shift when moving permanently from one dialect-specific area to another.

The first use of the term “dialect acquisition” comes from Dr. Shana Poplack, who studied the developing speech patterns of bilingual Puerto Rican children. This somewhat limited its contribution to the idea of long-term accommodation. The study dealt with subjects who were in the process of acquiring a new language along with acquiring a dialect of that language. This

provides less information on true dialect acquisition within a language (i.e. uncorrupted by the effects of L2 acquisition) (Poplack 1978).

The rules and concepts of dialect acquisition were not thoroughly investigated until 1992, when Dr. J. K. Chambers published his paper “Dialect Acquisition.” This study investigated the

acquisition of British English by Canadian subjects at various points in childhood and adolescence. This set various principles for dialect acquisition, many of them having to do with age and supporting previous claims about L2 acquisition. Chief among these are that a critical period exists in the acquisition of dialect

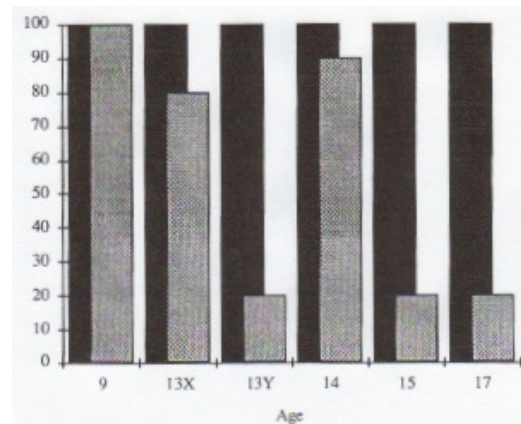


Fig. 1: Graph of acquisition from Chambers (1992)

forms as well as language forms (Chambers 1992).

Chambers’ methodology consisted of collecting speech samples from the immigrant Canadian group and a native British group. The recordings were then analyzed for percentages of specific (British) phonological features in the two groups. Amount of acquisition was quantified by measuring the percentages in the immigrant children’s speech. It was noticed that the older children (ages 15-17) had very low percentages of measurable dialect acquisition, as seen in Fig. 1 (gray bars represent migrants, black bars represent natives). This supports the validity of the critical period hypothesis. However, it was apparent that they had acquired the British dialect to some degree. It was clear that, though they had not acquired the dialect under close linguistic analysis, they still *sounded* like they had acquired it (Chambers 1992).

This concept was refined by a similar study in 2007, which analyzed speech recordings of an even younger group of Canadian children living in Britain to determine level of acquisition at the early language development level. Even this study, dealing with children aged 3-5, found that the subjects were not acquiring the dialect's rules in a totally native-like manner. Nonetheless, they had acquired it sufficiently that any layman would find it nearly impossible to discern between them and a native British child. This was accompanied by the discovery that with D2 acquisition often comes a partial loss of the D1 (Tagliamonte & Molfentner 2007).

These studies enforce the idea that D2 learners often acquire their second dialect enough to be perceived as native by the layman if not by the trained linguist. This supports earlier studies (Trudgill 1986 p. 28) that suggest children can sound like the target dialect but may not acquire it fully.

III. Perceptual Methods

While most knowledge of D2 acquisition focuses on that of children, it is also of linguistic interest how adults acquire a second dialect. However, the issue presented by dialect acquisition studies on children (Chambers 1992, Tagliamonte & Molfentner 2007) is that after the critical period, adults acquire a D2 on a perceptual level more than a close linguistic one.

The solution to this problem is to study adult dialect acquisition with perceptual methods, or through the use of raters. Raters are defined as groups of listeners from a specific area who judge speech samples based on how dialectal or accented they sound. This is an effective method for the study of how speakers begin to *sound* like the target speech form.

The use of raters in linguistic research is more common in the study of L2 acquisition, coming to prominence around the time that early accommodation theory was being developed. It

started when preliminary evidence was found that listeners are capable of accurately detecting geographic differences in the speech patterns of others (Trudgill 1975). One of the first uses of perceptual methods dealt with the accent of Spanish-English bilinguals. Recordings in this study were rated by groups of college students with some basic knowledge of linguistics. This study included the important instruction to “rate the speakers on the basis of their voice cues alone, as if you are speaking with them on the telephone or listening to them on the radio” (Ryan & Carranza 1977). This was followed up by a similar study on the speech of Mexican Americans that instead used trained linguists as raters (Brennan & Brennan 1981). The studies’ results were comparable, suggesting that both trained and untrained ears are capable of reliably perceiving accent difference. These studies used interval scales of various numerical ranges, asking subjects to choose a number that represented the degree of foreign accent they perceived. An example of this is the latter study’s 7-point “Preliminary Accentedness Scale,” with 1 and 7 representing the extremes of native speaker and second language speaker (Brennan & Brennan 1981).

Dr. James Emil Flege further supported the claim that untrained listeners can detect linguistic difference in a study on the detection of French accent by American listeners, stating that “both phonetically trained listeners familiar with French-accented English and unsophisticated listeners were able to accurately detect accent.” This study performed trials on the reliability of accent ratings based on speech samples that were as short as 30 milliseconds long but found that longer samples produced slightly more accurate ratings (Flege 1984).

A later study by Flege used interval scales to investigate current claims about the critical period for speech learning. Listener judgments suggested that speakers who began learning English around the age of 7 had significantly more authentic accents than those with later ages of

learning (AOL). This is evidence that perceptual methods may be capable of providing information about acquisition that other methods do not (Flege et al. 1988). This idea was further investigated by a later study in 1995, which found that subjects with AOLs well within the traditional critical period still spoke with a perceived foreign accent (Flege 1995). Therefore, it may be concluded that there may be a shorter critical period for acquiring a language with zero perceived accent.

Even adults who have begun learning the L2 during early childhood have detectable foreign accents despite being well within the critical period. The factor that prevented native-like speech seems to be frequency of L1 use, as those who use their L1 more frequently exhibit greater perceived foreign accent (Flege et al. 1997).

LOR in the L2 speaking country also has effects on a speaker's degree of perceived accent. A group of L2 English learners who have lived in the country for an average of 14.3 years were perceived as less accented than a group with an average LOR of 0.7 years (Flege & Fletcher 1992). There was also a range effect wherein "the larger the proportion of native (or near-native) speakers included in a set of sentences [speech samples] being evaluated, the more strongly accented listeners judged sentences spoken by non-native speakers to be" (Flege & Fletcher 1992).

The only published study thus far to measure perceived D2 acquisition is Munro et al. (1999), which dealt with Canadian immigrants to Alabama. This study was based at first on anecdotal reports that "adults who move from one dialect area to another begin to acquire some of the speech characteristics of the second dialect" (Munro et al. 1999). This notion was put to an

empirical test using the perceptual methods developed by previous L2 acquisition studies (e.g. Ryan & Carranza 1977, Brennan & Brennan 1981, Flege 1995).

The Munro study is not only important in that it studied D2 acquisition with perceptual methods; it presented another new technique as well. This is the use of two rater groups, one from the migrants' original dialect area and another from the area into which they were migrating. The study had groups of native Canadians and native Alabamans rate speech samples from three groups. The first two groups were made up of other native Canadians and Alabamans and the third of Canadian immigrants to Alabama. This would determine not only if the

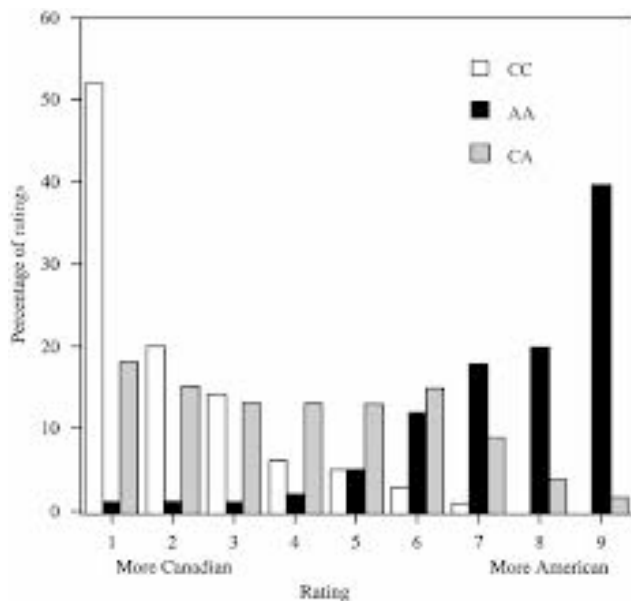


Fig. 2: Perceptual acquisition from Munro (1999)

immigrants had acquired the Alabaman dialect but whether they had lost any of their Canadian dialect (Munro et al. 1999). When ratings were compared, it was determined that both cases were true; the subjects had perceptually acquired the dialect enough to sound somewhere in between fully Canadian and fully American. While the ratings did skew somewhat on the Canadian side, with just under 20% of immigrants being rated as Definitely Canadian, it is clear that the immigrants acquired the dialect to some degree. In Fig. 2, the gray bars represent the Canadian immigrants living in Alabama.

This supports previous claims that though subjects outside the critical period may not acquire the D2 perfectly, they will likely sound like they have acquired it to the untrained ear.

Not only that, but they may be able to fool the trained ear. This was suggested by the last part of the “Canadians in Alabama” study, which had phonetically trained listeners rate certain dialect-variable words from the two subject groups. In fact, the trained listeners rated the immigrants closer to the “American” side of the spectrum than the untrained listeners. While this may be skewed by the use of a coarser rating scale, it still stands as evidence that untrained laymen are capable of detecting speech difference about as well as professional linguists. While this had already been supported, it was not known previously whether this concept applied to D2 acquisition (Munro et al. 1999).

Many previous perceptual studies elicited samples through interviews or prewritten sentences. However, the Munro study used a different method for eliciting spontaneous speech; the researchers presented subjects with an 8-panel cartoon story with no accompanying text and asked them to narrate the events it portrayed. The researchers considered this a short and reliable method for eliciting a sample of the subject’s idiolect as it required them to come up with sentences on the spot and therefore allowed less time to think about how they were saying the words.

Picture stories are not uncommon in linguistic research, as they provide flexibility and allow the subject to feel more natural than if they were simply reading a text. They also provide enough control that the researcher may elicit certain sounds with greater ease than in a sociolinguistic interview setting (Rossiter et al. 2008). For example, the picture story in the “Canadians in Alabama” study was chosen for “the lexical items it was likely to elicit. These included ‘wife,’ ‘house,’ and ‘rifle,’ which contain diphthongs that serve as shibboleths (distinguishing markers) for both Canadian English and Southern US speech” (Munro, personal

correspondence). While specific phonological variables are not directly quantified, dialectal difference may be elicited by using a picture story that will possibly elicit different pronunciations (Munro et al. 1999).

Wolfram and Fasold's 1974 work *The Study of Social Dialects in American English* set down principles of sociolinguistic interview as part of their chapter on field methods. These principles apply mainly to the use of conversation as a method of eliciting data. Firstly, the researcher should use questions that require more than just a yes or no answer. In order to get a subject to talk, they should be asked questions that have to be answered through a story or extended explanation. The second principle is that questions must be relevant and relatable. If the subject is asked about topics that they do not know very much about then they will grow uncomfortable and will not present an example of their normal speech. It is suggested that one should learn about what pastimes or hobbies are popular in the region they are studying in order to receive a fuller picture of their informants' probable interests. Thirdly, the interviewer should pursue any cues the subject gives as to their areas of interest. If the informant mentions a hobby, favorite sports team, or any other subject that seems to interest them they should be further questioned on the topic (Wolfram & Fasold 1974).

One of the important factors in eliciting conversational speech is that subjects feel less like they are being interviewed. Another principle is that the questions should not make the informant self-conscious of their own speech. This can be achieved through bringing up topics with a strong emotional involvement on the part of the subject. The final principle states that the subject must be prevented from growing suspicious of the interview's true intent. It is presented that trivial questions should be used in the beginning in order to make the subject more

comfortable. In connection with this there is the idea that the interviewer should not try to emulate the speech of their informant as this can be construed as offensive, but they should attempt to sound less “formal” in their speech. These methods can be utilized to make a speaker talk how they would in a more casual situation (Wolfram & Fasold 1974).

IV. Catskill Mountains

The dialects of New York State were first investigated in the 1940s by the Linguistic Atlas Project. Hans Kurath (then of Brown University) supervised the creation of a linguistic map that placed a large area of southeastern New York north of the city in the Hudson Valley dialect area (Hawkins 1941). This included the Catskill Mountain region defined by the intersection of Greene, Delaware, Ulster, and Sullivan Counties. However, this claim was later challenged by a study that found incidence of Appalachian grammatical features in the Catskills. This provided evidence that the Catskill Mountains are not only geographically but also linguistically distinct from the Hudson Valley (Birns 1986).

Sociolinguistic studies in the Appalachian region have shown that Appalachian English often carries negative stereotypes, being associated with lower class and uneducated speakers. Dialects that are stereotyped as lower-class can cause interpersonal conflict, as their speakers may be seen as inferior by the speakers of other less stigmatized dialects. This can also cause resistance to accommodation (Luhman 1990).

V. Bibliography

Baker, W. (2008). Social, experiential and psychological factors affecting L2 dialect acquisition. In Selected proceedings of the 2007 Second Language Forum (pp. 187-198).

Birns, H. W. (1986). Dialect in the Catskills: a study in language and culture.

Chambers, J. K. (1992). Dialect acquisition. *Language*, 673-705.

Bongaerts, T. (1999). Ultimate attainment in L2 pronunciation: The case of very advanced late L2 learners. *Second language acquisition and the critical period hypothesis*, 133-159.

Bourhis, R. Y., & Giles, H. (1976). The language of cooperation in Wales: A field study. *Language Sciences*, 42(13-16).

Brennan, E. M., & Brennan, J. S. (1981). Measurements of accent and attitude toward Mexican-American speech. *Journal of Psycholinguistic Research*, 10(5), 487-501.

Dinkin, A. (2009). Dialect boundaries and phonological change in upstate New York. University of Pennsylvania dissertation.

Duff, P. A., Rossiter, M. J., Derwing, T. M., & Jones, V. M. (2008). Is a picture worth a thousand words?. *TESOL Quarterly*, 42(2), 325-329.

Flege, J. E. (1984). The detection of French accent by American listeners. *The Journal of the Acoustical Society of America*, 76(3), 692-707.

Flege, J. E. (1987). A critical period for learning to pronounce foreign languages?. *Applied Linguistics*, 8(2), 162-177.

Flege, J. E. (1988). Factors affecting degree of perceived foreign accent in English sentences. *The Journal of the Acoustical Society of America*, 84(1), 70-79.

Flege, J. E., & Fletcher, K. L. (1992). Talker and listener effects on degree of perceived foreign accent. *The Journal of the Acoustical Society of America*, 91(1), 370-389.

Flege, J. E., Munro, M. J., & MacKay, I. R. (1995). Factors affecting strength of perceived foreign accent in a second language. *The Journal of the Acoustical Society of America*, 97(5), 3125-3134.

Flege, J. E., Frieda, E. M., & Nozawa, T. (1997). Amount of native-language (L1) use affects the pronunciation of an L2. *Journal of Phonetics*, 25(2), 169-186.

Flege, J. E., & Liu, S. (2001). The effect of experience on adults' acquisition of a second language. *Studies in second language acquisition*, 23(04), 527-552.

Gatbonton, E., Trofimovich, P., & Magid, M. (2005). Learners' ethnic group affiliation and L2 pronunciation accuracy: A sociolinguistic investigation. *Tesol Quarterly*, 39(3), 489-511.

Giles, H., Taylor, D. M., & Bourhis, R. (1973). Towards a theory of interpersonal accommodation through language: Some Canadian data. *Language in society*, 2(02), 177-192.

Giles, H., & Smith, P. (1979). Accommodation theory: Optimal levels of convergence.

Harrington, J., Palethorpe, S., & Watson, C. (2000). Monophthongal vowel changes in Received Pronunciation: an acoustic analysis of the Queen's Christmas broadcasts. *Journal of the International Phonetic Association*, 30(1), 63-78.

Harrington, J., Palethorpe, S., & Watson, C. I. (2000). Does the Queen speak the Queen's English?. *Nature*, 408(6815), 927-928.

Hawkins, J. D. (1941). *Speech of the Hudson River Valley*. Diss. Brown Univ, 2, 3.

Ioup, G., Boustagui, E., El Tigi, M., & Moselle, M. (1994). Reexamining the critical period hypothesis. *Studies in second language acquisition*, 16(01), 73-98.

Munro, M. J., Derwing, T. M., & Flege, J. E. (1999). Canadians in Alabama: A perceptual study of dialect acquisition in adults. *Journal of Phonetics*, 27(4), 385-403.

Novoa, L., Fein, D., & Obler, L. K. (1988). Talent in foreign languages: A case study. *The exceptional brain: Neuropsychology of talent and special abilities*, 294-302.

Luhman, R. (1990). Appalachian English stereotypes: language attitudes in Kentucky. *Language in Society*, 19(03), 331-348.

Oyama, S. (1976). A sensitive period for the acquisition of a nonnative phonological system. *Journal of Psycholinguistic Research*, 5(3), 261-283.

Patkowski, M. S. (1990). Age and accent in a second language: A reply to James Emil Flege. *Applied linguistics*, 11(1), 73-89.

Poplack, S. (1978). Dialect acquisition among Puerto Rican bilinguals. *Language in Society*, 7(01), 89-103.

Ryan, E. B., Carranza, M. A., & Moffie, R. W. (1977). Reactions toward varying degrees of accentedness in the speech of Spanish-English bilinguals. *Language and Speech*, 20(3), 267-273.

Scovel, T. (1988). *A time to speak: A psycholinguistic inquiry into the critical period for human speech*. Rowley, MA: Newbury House.

Tagliamonte, S. A., & Molfenter, S. (2007). How'd you get that accent?: Acquiring a second dialect of the same language. *Language in Society*, 36(05), 649-675.

Trudgill, P. (1975). *Accent, dialect and the school*.

Trudgill, P. (1986). *Dialects in contact*.

Wolfram, W., & Fasold, R. W. (1974). *The study of social dialects in American English*. Englewood Cliffs, NJ: Prentice-Hall.