NATIVE AND NON-NATIVE PERCEPTION OF DIALECTAL VARIATION IN SWEDISH

Una Cunningham-Andersson
Dept. of Linguistics, Stockholm University, Sweden

ABSTRACT

This study examines a single aspect of native speaker competence. The questions addressed here are: how well can a given non-native speaker perceive differences between dialects of Swedish? How well can native speakers of Swedish perceive this kind of variation? Does a long period of residence in Sweden and an apparently excellent command of the Swedish language imply that an immigrant's ability to place native speakers geographically approaches native standard? Is there an upper limit for how good non-native listeners can be, or can they approach native standard?

METHOD

Fifteen native speakers and thirty-three non-native speakers served as listeners. The listeners were divided into 5 groups: *NN0-1* (9 individuals) were non-native listeners who had spent one year or less in Sweden; *NN3-9* (9 listeners) had spent between three and nine years in Sweden; *NN12-17* (9), twelve to seventeen years in Sweden; *NN23-25* (6) twenty-three to twenty-five years in Sweden and *native* were the 15 native Swedish speakers.

Their standard of Swedish was judged on three dimensions: how well the listeners could express themselves in Swedish, how well they understood spoken Swedish and how good their pronunciation of Swedish was. Their perception of dialect was tested by having them attempt to discriminate between dialects presented in pairs and identify dialects as a forced choice between Malmö, Gothenburg, Uppsala, Umeå, Falun or Gotland. The collection of the material used as stimuli in these experiments is described in [1]. Comprehension (as measured here) can be seen from figure 1 to be a function of the length of time spent in Sweden, and reaches native standard after 12-17 years, or for some individuals, even earlier. Syntax and pronunciation appear to be much more difficult to learn, with only a few ever reaching native or near native standard. Those who do reach this standard may do so as early as after 6 or 9 years. Tables 1 and 2 show correlation matrices between the measured abilities and properties of the non-native and native listeners respectively. All the - values shown are significant at the 5% level.

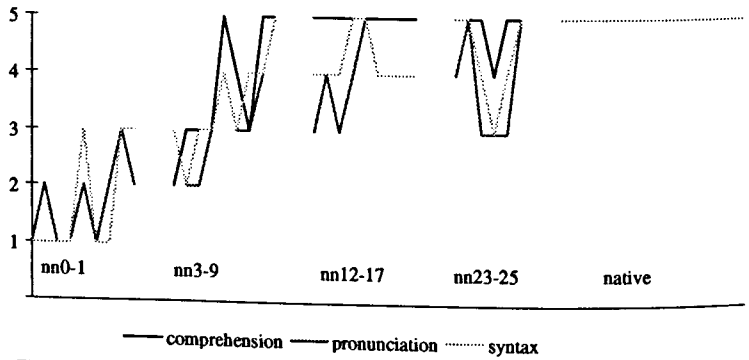

Figure 1.Individual language test results

From table 1 it can be seen that all three tested language skills, syntax, pronunciation and comprehension are strongly correlated with each other and also (somewhat less strongly) with the length of time the speakers had lived in Sweden and with the age of the speakers.

Table 1. Correlations between measured variables and results for all 33 non-native listeners

	age	years in Sweden	compre-hension	pro-nunciation	syntax	true *same*	false *same*
age	1						
years in Sweden	.65	1					
comprehension	.50	.78	1				
pronunciation	.40	.68	.85	1			
syntax	.46	.74	.92	.91	1		
true same	ns	ns	ns	ns	ns	1	
false same	-.36	-.55	-.68	-.48	-.61	ns	1
right dialect	.50	.84	.80	.74	.77	ns	-.60

DIALECT DISCRIMINATION

For the first listening task, dialect discrimination, the informants were to say whether pairs of speech samples were spoken by speakers from the same or different geographical regions. The listeners were told in advance that all the speakers came from one of the six places used in this study: Malmö, Gothenburg, Uppsala, Umeå, Falun or Gotland. The speech material used for this test was semi-spontaneous speech, where all speakers describe the same picture, so no non-phonetic information which may have helped the speakers identify dialects was likely to be present. Each of the six dialects was represented by two speakers. These were those judged as the most authentic by a panel of dialectologists.

Two speakers from each dialect gave twelve stimuli to be presented in 36 pairs. Previous work has shown that this kind of judgement can be made using short speech samples — listeners seem to be able to make up their minds very quickly about speakers (cf. e.g. [2]. Each stimulus was about 15 seconds long, and the two stimuli in a pair were separated by a tone. For each pair the listeners were to circle the words *same* or *different*. Instructions were given both on the answer sheet and orally on the stimulus tape in both Swedish and English.

Table 2. Correlations between measured variables and results for 15 native listeners

	age	true *same*	false *same*	right dialect
age	1			
true same	ns	1		
false same	ns	-.52	1	
right dialect	-.59	ns	-.45	1

There was considerable variation in the accuracy with which individuals in all groups were able to pick out the six pairs of speakers who spoke with the same dialect. The only listener to spot all six pairs had lived in Sweden no more than 4 years. There was overlap between the listener groups, and although the average score was highest for the native listeners, all the non-native listeners performed as well as or better than the worst native listeners. T-tests showed no significant difference between native and non-native listeners.

In many cases the listeners failed to detect dialectal differences between stimuli. Here there was a significant difference between native and non-native listeners ($p(t)>0.0001$): the non-native listeners more often failed to distinguish between dialects, although some of the non-native listeners who had been in Sweden 12 years or more were as skilful as the least skilful native listeners. Table 1 shows that length of residence in Sweden or competence on any of the three linguistic dimensions are not correlated to the ability to detect pairs of speakers of the same dialect. They are, however, significantly ($p(r)>0.01$) negatively correlated to the number of false *same* judgements, with comprehension and syntax skills having the strongest correlation to the ability to hear a difference between dialects when there is one.

For both native and non-native listeners, the Malmö dialect was not often confused with any other; the Umeå dialect was confused with all but the Malmö dialect; the Uppsala dialect was confused with the Gothenburg and Umeå dialects; the Gotland dialect was confused with Falun and Umeå; the Falun dialect was confused with Gothenburg, Umeå and Gotland and the Gotland dialect was confused with Umeå and Falun, although the native listeners had considerably fewer false *same* judgements than the non-native listeners as mentioned above.

DIALECT IDENTIFICATION

The final section of the listening test concerns listeners' ability to identify dialects. Semi-spontaneous speech from the four most authentic speakers of each dialect (as judged by the expert panel of dialectologists) was used for this test. This gave 24 speakers. The stimuli from each speaker were about 60 seconds long this time. The listeners were given a map of Sweden with the six places where the speakers originate marked on it for reference. They were also given an answer sheet for each speaker with the six place names on. They were instructed to circle the name of the place the speaker came from on the answer sheet. If they did not know, they were to guess.

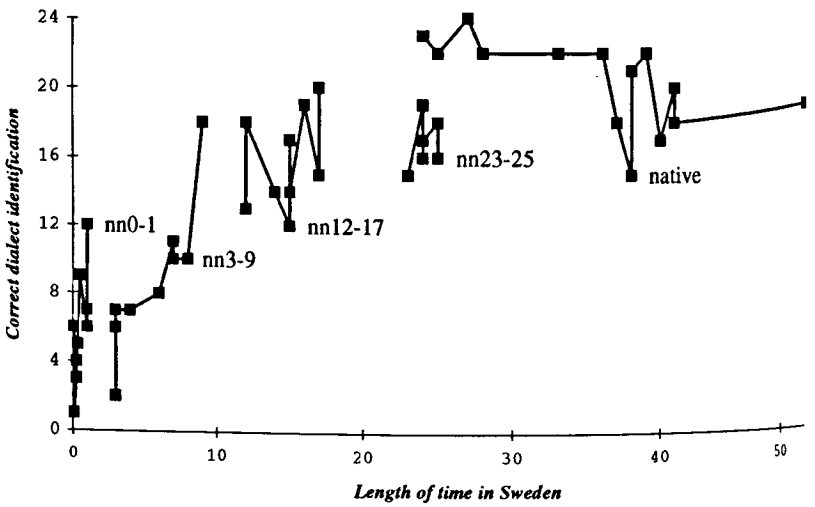

Figure 2. Number of correct dialect identifications for all listeners, plotted against the length of residence in Sweden

Figure 2 shows this to be a task that native listeners generally perform better than non-native listeners. A t-test shows a significant difference between native and non-native listeners here $p(t)<0.0001$, although figure 2 shows that the most accurate non-native listeners performed as well as the least accurate native listeners, one after as little as nine years residence in Sweden. An interesting feature which can be seen in tables 1 and 2 is that the length of time the non-native listeners have lived in Sweden is significantly correlated to their proficiency in the identification of dialects, even more strongly than their linguistic ability in Swedish, while the age of the native listeners is significantly *negatively* correlated to their degree of proficiency in this task.

Figure 3 shows how the different dialects were identified by the different kinds of listeners. Here too, the Malmö dialect seems to be the easiest to place correctly, closely followed by the Gotland dialect. Umeå and Falun seem to be much more difficult to identify accurately .

DISCUSSION

The questions posed at the beginning of this paper can now be answered. The results of the dialect discrimination test showed that many non-native listeners could distinguish between dialects as well as native listeners, even after a very short period of residence in Sweden. Non-native listeners were, however more likely to miss dialectal differences between speakers, and table 1 shows this to have more to do with their syntax and comprehension abilities than their pronunciation or the length of time they had been in Sweden. For both native and non-native

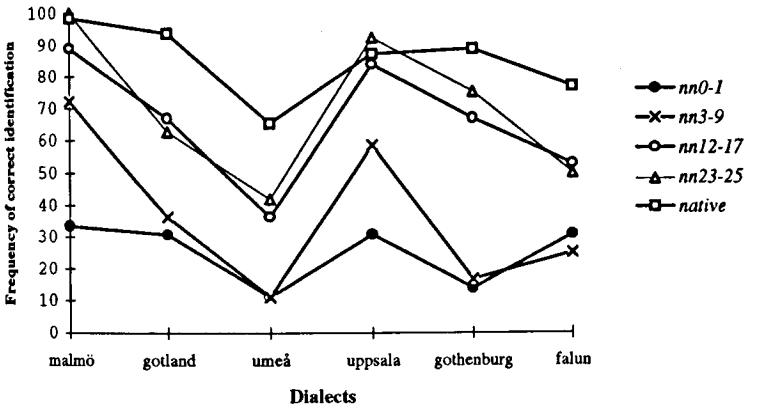

Figure 3. Frequency of correct identification of each dialect by each listener group

listeners there is, of course, a correlation between how many dialect distinctions the listener missed (false *sames*) and the number of speakers for whom they were able to correctly name the dialect.

The native listeners were significantly better than the non-native listeners at naming the six dialects they heard in a forced choice setting, although there was great variation between listeners in all groups. This ability may not have much to do with experience, since the older native listeners did not perform as well as the younger ones, and there were high scores in all but the least experienced listener group, NN0-1.

The conclusion here must be that few absolute differences exist between native and non-native listeners. The individual variation in achieved competence is very large regardless of the length of time spent in Sweden, although the listener's own competence in the Swedish language is related to sociodialectal awareness.

ACKNOWLEDGEMENTS

This work was financed by the Swedish Council for Research in the Humanities and Social Sciences.

REFERENCES

[1] Cunningham-Andersson, U. & Engstrand, O. 1994. "Data collection for a sociodialectal study". In G. Melchers & N.-L. Johannesson (eds.) *Non-standard varieties of language, Papers from the Stockholm symposium 11-13 April 1991*, 11-23. Almqvist & Wiksell International. Stockholm Sweden.

[2] Cunningham-Andersson, U. & Engstrand, O. (1989). "Perceived strength and identity of foreign accent in Swedish". *Phonetica* 46 (4), 138-154.