Consonant Cluster Reduction Observed in the Anglophone Community of Japan

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1. Introduction

This paper investigates the consequences of frequent interaction with non-native English speakers on the English usage of native English speakers living in Japan. Isolation from native speakers of English and frequent contact with non-native speakers, including Japanese people, may result in a change of linguistic environment for the native speakers of English. This change is likely to influence their way of speaking English while they are in Japan.

Since English is the first foreign language studied at most schools in Japan, there is a strong demand for native-speaker English teachers. For example, the JET Programme sponsored by Japanese ministries invites young university graduates from overseas to teach in junior and senior high schools throughout Japan. Native speakers of English who come to Japan as language teachers are expected by the public to speak more standardized English, especially when they are in a classroom. They are also expected to speak slowly and clearly when talking to language learners. They, therefore, become conscious and cautious about the way they speak at school.

For the purpose of exploring this influence, the use of /-t, d/ deletion is examined among native speakers of English who are working as English teachers in Japan. In English the word-final alveolar stops, /t/ and /d/, in consonant clusters (e.g., *best, cold, stuffed, opened, left, kept*, etc.) are subject to deletion particularly in casual speech. When the deletion takes place, '*best friend*' [bɛst frɛnd] is pronounced [bɛs frɛn], '*opened cans*' [oʊpənd kænz] is [oʊpən kænz], and '*kept busy*' [kɛpt bɪzi] is [kɛp bɪzi]. This type of consonant cluster reduction is recognized as a well-established characteristic of any English speaker, although the frequency of /-t, d/ deletion differs depending on the individual speaker or on the region or ethnicity to which the speaker belongs (Bayley 1994; Guy 1980; Guy and Boyd 1990; Labov 1989; Neu 1980; Santa Ana 1996).

This paper considers the results of a real-time study which compares data collected immediately after the speakers' arrival in Japan with data collected a year later. This comparison can demonstrate whether there are any changes in the use and the rate of /-t, d/ deletion among the native speakers of English, and whether

the changes are caused by contact with non-native speakers of English or by the standardizing effect of teaching in a school.

Hypotheses for the present study are:

1. Native speakers of English who come in contact with non-native speakers of English tend to reduce the use of the connected speech process, that is /-t, d/ deletion, during the course of their stay in Japan; and

2. Native speakers of English who have strong social networks with non-native speakers of English tend to reduce the use of /-t, d/ deletion more than those who have weak social networks with non-native speakers of English.

2. METHODOLOGY

2.1. Informants and data

A total of 39 native speakers of English participated in the present study, including 15 British, 11 Americans and 13 New Zealanders who had arrived in Japan in 2000. They were aged between 21 and 34 years at the time of the first data collection. The data used for this study were collected in 2000 and 2001. In both sessions, casual conversations between two native speakers of English from the same country were tape-recorded. Each speaker was paired with a person from the same country to reduce any possibility of short-term accommodation which might have occurred if they had been paired with someone from a different country who had a different English dialect.

The data used for the present study totalled approximately 34 hours of speech. A total of 9735 tokens were analyzed. SPSS was used to analyze the data. All the figures presented in the results for this paper are based on each speaker's percentage of /-t, d/ deletion on the two different occasions, calculated from the number of tokens in question.

2.2. Informants' social networks

While native speakers of English are in Japan, they have many opportunities for interaction with Japanese people. Many prefer to spend some of their spare time after work or on the weekend with local Japanese people. Others, however, feel more relaxed being with other native speakers of English in their free time. Each person, therefore, creates their own social network according to their preference and their living environment while they are in Japan. Milroy's Belfast study (1980) demonstrated that the social networks of a speaker have a strong correlation with the speaker's linguistic behaviour. It is, therefore, useful to investigate the social networks of the informants of the present study, to distinguish the strength of networks with Japanese people or non-native speakers of English, and to attempt to find correlations between the strength of the networks and the speakers' linguistic behaviour.

After recording the conversation, each speaker had a short interview with the researcher and eleven questions were asked to extract information about his or her

social networks. In order to measure the network strength, the number of members of each network and the strength of individual connections were considered. The degree of closeness and the frequency of contact were used to calculate the strength of individual relationships. Scores for five sub-networks were tested in the present study as follows: (1) non-native speakers of English, (2) Japanese teachers of English, (3) teachers of English, (4) Japanese people, and (5) Japanese who use English as a main language with the informant.

3. RESULTS

Table 1 shows the mean percentage use of /-t, d/ deletion for UK, US and NZ speakers on the two separate occasions. The results indicate a significant difference between the first and second datasets for the UK and the NZ speakers. It is reasonable to assume that, at least with the UK and NZ speakers, a change in their linguistic environment has caused them to change their linguistic behaviour over the course of their year in Japan.

TABLE 1

Change in the mean percentage use of /-t, d/ deletion by UK, US and NZ speakers

Time after arrival	UK	US	NZ
immediately after arrival	64.0	67.3	68.1
one year after arrival	59.8	67.0	62.2
Paired-samples T test (two-tailed)	$t = 2.540,$ $df = 14$ $p = 0.024$	$t = 0.107,$ $df = 10$ $p = 0.917$	$t = 2.446,$ $df = 12$ $p = 0.031$

As far as the deletion rate of individual speakers is concerned, about 80% of the speakers either decreased their frequency of deletion or retained it after a year in Japan, and only about 20% of the speakers increased it. However, apart from the direction of the change, there are individual differences in the extent of the change. It is worthwhile, therefore, to examine from a different perspective why the direction and extent of change differ from person to person.

The percentage change score in the use of /-t, d/ deletion of individual speakers between the first and second data sets were statistically tested with network scores of the five social networks that are relevant to contact with non-native speakers of English, as mentioned earlier. Using multiple regression, one can predict which network is influencing levels of /-t, d/ deletion. It was found that the network with Japanese teachers of English is the strongest influencing factor for UK (Beta = $-0.552, p = 0.033$) and US speakers (Beta = $-0.697, p = 0.025$).[1] This means that

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[1] Because of one male speaker who has a deviant score, this network is not a statistically significant predictor. If his score is excluded from the US data, the multiple regression analysis identifies network with Japanese English teachers as a significant influencing factor, as

the greater the informant's contact with Japanese teachers of English, the greater the negative effect on the use of the deletion. It was also found that the network with Japanese who use English as a main language in speaking with the informant is the strongest influencing factor for NZ speakers (Beta $= -0.580$, $p = 0.038$). This implies that the greater the respondent's contact with Japanese who use English as a main language in speaking with the informant, the more they reduce the use of /-t, d/ deletion.

The statistics clearly show that speakers' social networks significantly influence their linguistic behaviour. In this case, contact with non-native speakers of English influences the use by native speakers of English of connected speech processes.

Since most Japanese people are not fluent English speakers, they are unaccustomed to listening to conversational English at its usual speed. If a native English speaker deletes a word-final consonant more frequently — as they usually do when talking to another native speaker — then non-native speakers who are not used to this are likely to have difficulty listening to and understanding what is said. In order to avoid such problems when speaking to non-native speakers of English, the native speakers presumably try to pronounce each word and phrase in a style more associated with slow and careful speech, reducing the high deletion rate of consonant clusters.

After doing so repeatedly throughout a year in Japan, this change may well be retained in conversation with other native speakers. As a consequence, levels of deletion as a whole may gradually decrease. Such linguistic circumstances could account for the significant decrease in the /-t, d/ deletion rate among the speakers in the present study.

4. CONCLUSION

The results presented here support the first and the second hypotheses mentioned above, and lead us to conclude that speakers' linguistic surroundings and their social network have considerable influence on their linguistic behaviour.

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