

4.3 Imitator versus imitations – a quantitative comparison

The 'a'- and 'l'-segments examined above seem to retain the strongest signature of the imitator's F1- and F2-patterns. To obtain a quantitative verification of this behaviour, we calculated landmark-by-landmark spreads (Fig. 3) of the F-patterns with all data pooled together (left panel), and without the Skania-like data (right panel). The left-panel data highlight a large increase of the spread in F1 and F2 for the final 'å'-segment, thus confirming a major contrast with the other dialectal imitations. The persistently smaller spread in F1 and F2 for the two initial segments raises the hope of being able to detect some invariance in professional imitations of "hallå". The relatively larger spreads in F3 and F4 cast some doubt on these formants' potency for de-coupling our imitator's "hallå" from his imitations.

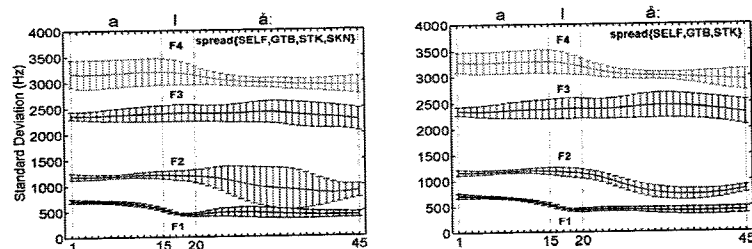


Figure 3. Landmark-by-landmark spreads: (left) all data pooled; (right) Skania-like excluded.

5 Summary and ways ahead

The results of this study are *prima facie* encouraging, at least for the imitations obtained from our professional imitator. It is not yet known whether the near-constancy observed through F1 and F2 of the initial segments of "hallå" will be manifest in other situational tokens, and whether a similar behaviour should be expected with different imitators and phonetic contexts. We have looked at formant-frequencies one at a time but, as shown by Clermont (2004) for Australian English "hello", there are deeper insights to be gained by re-examining these frequencies systemically. The ways ahead will involve exploring all these possibilities.

Acknowledgements

We express our appreciation to Prof. G. Bruce for his auditory evaluation of the imitations. We thank Prof. Bruce and Dr D.J. Broad for their support, and the imitator for his efforts.

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Describing Swedish-accented English

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Abstract

This paper is a presentation of the project Swedish accents of English which is in its initial stages. The project attempts to make a phonetic and phonological description of some varieties of Swedish English, or English spoken in Sweden, depending on the status attributed to English in Sweden. Here I show some curious results from a study of acoustic correlates of vowel quality in the English and Swedish of young L1 Swedish speakers.

1 Introduction

1.1 Background

The aim of the proposed project is to document the phonetic features of an emerging variety of English, i.e. the English spoken by young L1 speakers of Swedish. At a time when the relative positions of Swedish and English in Sweden are the stuff of Government bills (Regeringen, 2005), the developing awareness of the role English has as an international language in Sweden is leading to a rejection of native speaker targets for Swedish speakers of English. Throughout what Kachru (1992) called the expanding circle, learners of English are no longer primarily preparing for communication with native speakers of English but with other non-native speakers. In a recent article, Seidlhofer (2005) called for the systematic study of the features of English as a lingua franca (ELF), that is communication that does not involve any native speakers, in order to free ELF from native-speaker norms imposed upon it. She would prefer to see ELF alongside native speaker varieties rather than constantly being monitored and compared to them. The point is that there are features of the pronunciation of native speaker varieties which impede communication, and features of non-native pronunciation which do not disturb communication, and rather than teaching learners to be as native-like as possible, communication would be optimised by instead concentrating on the non-native listener rather than the native listener.

Some young people are British-oriented in their pronunciation, either from RP/BBC English or another accent, others have general American as a clear influence, while another group is not clearly influenced by any native speaker norm. A full phonetic description of these accents of English does not as yet exist, and is of interest as a documentation of an emerging variety of English, at a time when previously upheld targets for the pronunciation of English by Swedish learners have been abandoned and English is growing in importance (Phillipson, 1992; Skolverket, 2006).

1.2 Previous studies

The distinction between English as a Foreign Language (EFL) and English as an International Language (EIL) or English as a Lingua Franca (ELF) is important here. The number of non-native speakers of English increasingly exceeds the number of native speakers, and the native speaker norm as the "given and standard measure" (Jenkins, 2004) for English learners must be questioned. There is a clear distinction between those learners who aspire to sound as

native-like as possible and those who wish to be as widely understood as possible. McArthur (2003) makes a distinction between English in its own right and English in its global role and argues that the distinction between English as a second language and English as a foreign language is becoming less useful, as people in a range of countries, including those in Scandinavia routinely use the language. Seidlhofer (2005) called for the description of English as a Lingua Franca (a term rejected by some writers because of the associations of lingua franca with pidgins and mixed forms of language). Those who use this term usually want to indicate the same as those who use English as an international language, i.e. a "core" of English stripped of the less useful features of native speaker varieties, such as weak forms of function words, typologically unusual sounds such as the interdental fricatives etc. (e.g. Jenkins, 2004). As corpora of non-native English (both non-native to native and non-native to non native) are being developed, such as the English as a lingua franca in academic settings (ELFA) corpus (Mauranen, 2003) and the general Vienna-Oxford International Corpus of English (VOICE) (Seidlhofer, 2005), this is now possible although few studies have been made of pronunciation.

2 Methodological thoughts

The project aim is to make a thorough study of some phonetic and phonological features of Swedish accents of English in two groups of informants. The first group is young adults (those who are currently at upper secondary or have left upper secondary education in the past 5 years, and are thus 16-24 years of age. These speakers have not usually received any pronunciation teaching. The second group of Swedish speakers of English is university teachers who are over 40 years of age and who have not spent long periods in native English-speaking environments or studied English at university level, but who do use English regularly. Although there is a difference in the stability of a learner variety compared to an established variety of a language (Tarone, 1983), there is certainly a set of features characteristic of a Swedish accent of English. It should be possible to make interesting generalisations.

A first step will be to establish the phoneme inventories of the English of each informant. The acoustic quality of vowels produced in elicited careful speech (reading words in citation form and texts) as well as in spontaneous speech (dialogues between non-native informants) will be investigated. Within-speaker variation is of interest here to capture variable production, as well as between-speaker variation. The realisations of the vowel phonemes of Swedish-English will be charted and examined. There are hypothesised to be some consonant phonemes of native varieties of English that are missing from Swedish English (as any ELF variety c.f. Seidlhofer, 2005) – voiced alveolar and palatoalveolar fricatives and affricates are candidates. The realisation of the English alveolar consonants will also be closely studied as will various kinds of allophonic variation such as dark and light /l/, rhoticism, phonotactic effects, assimilation, vowel reduction, rapid speech phenomena etc.

Flege, Schirru & MacKay (2003) established that the two phonetic systems of Italian-speaking learners of English interact. Their study showed that L2 vowels are either assimilated to L1 vowels or dissimilated from them (i.e. are made more different than the corresponding vowels produced by monolinguals speaking English or Italian), depending on the usage patterns of the individual learners. A similar phenomenon was seen in bilingual speakers of Swedish and English (Cunningham, 2004) where there was a dissimilation in timing. An attempt will be made to detect any similar patterns (i.e. instances of the Swedish accent having greater dissimilation between categories than native varieties in the speech of the Swedish-English speakers being studied).

The differences between Swedish and English timing and the way bilingual individuals do not usually maintain two separate systems for organising the temporal relationship of vowels

and consonants have been the subject of earlier research (Cunningham, 2003). The timing of Swedish-accented English will be studied in the data collected in this project. The way the learners deal with post-vocalic voicing and the relationship between vowel quality and vowel and consonant quantity are particularly interesting as regards their consequences for comprehensibility, as the perceptive weight of quantity appears to be different in Swedish and English (c.f. e.g. McAllister, Flege & Piske, 2002). The consequences of the timing solutions adopted by Swedish speakers of English for their comprehensibility to native speakers of English, Swedish speakers of English and other non-native speakers of English could be investigated at a later stage.

3 Early results

Recordings of sixteen young Swedish speakers (12 female, 4 male), with Swedish as their only home and heritage language) have been made. They were all in their first year of upper secondary education at the time of recording (around 16 years old). Figures 1 and 2 show the relationships between the first and second formant frequencies for high front vowels in elicited citation form words for one of these speakers (known as Sara for the purpose of this study). Sara's English high front vowels appear to be qualitatively dissimilated while her Swedish high front vowels are not clearly qualitatively distinguished using the first two formants. Sara's English high vowels are apparently generally higher than these Swedish high vowels. Notice the fronting found for Sara's English in two instances of /u:/ in the word choose. This particular word has been pronounced with fronting for other speakers too. Might this be a case of a feature of Estuary English making its way into the English spoken in Sweden?

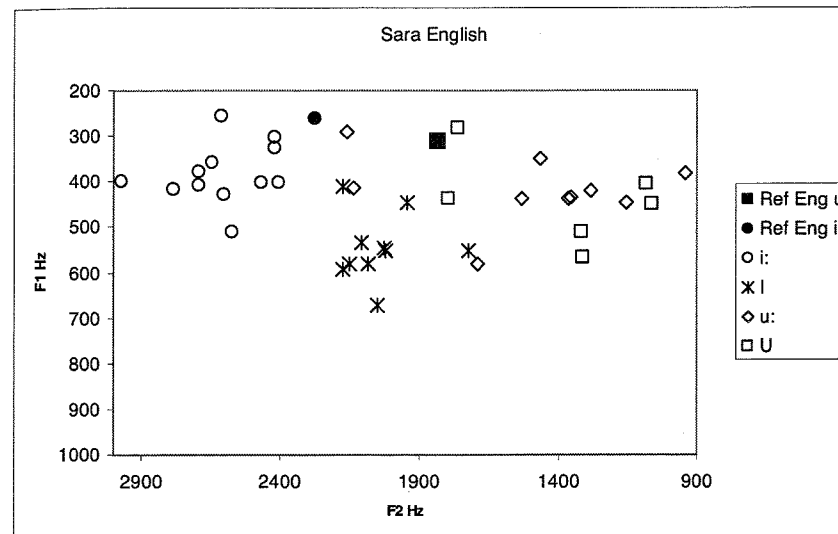


Figure 1. A 16 year-old female Swedish speaker's high vowels from a read list of English words. Reference values from Ladefoged's material <http://hctv.humnet.ucla.edu/departments/linguistics/VowelsandConsonants/vowels/chapter3/english.aiff>.

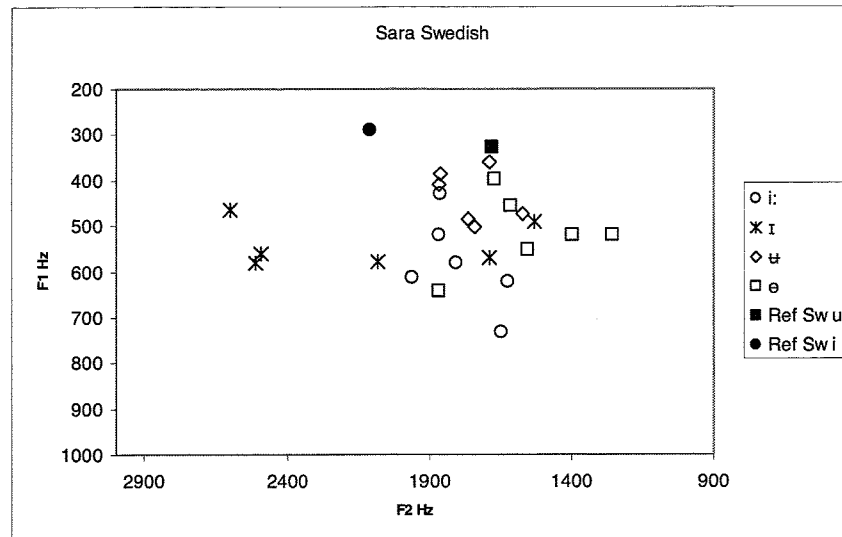


Figure 2. Some of the same speaker's high vowels from a read list of Swedish words. Reference values from Eklund & Traunmüller (1997).

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Quantification of Speech Rhythm in Norwegian as a Second Language

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Abstract

This paper looks into the question of how to quantify rhythm in Norwegian spoken as a second language by speakers from different language backgrounds. The speech material for this study was taken from existing recordings from the Language Encounters project and consisted of sentences read by natives and speakers from six different L1s. Measurements of syllable durations and speech rate were made. Seven different metrics were calculated and used in a discriminant analysis. For the five utterances investigated, statistical classification was to a large degree in congruence with L1 group membership. The results therefore suggest that L2 productions differed rhythmically from Norwegian spoken as L1.

1 Introduction

During the last few years a number of attempts have been made to classify languages according to rhythmical categories using various metrics. To investigate rhythm characteristics of eight languages, Ramus, Nespø & Mehler (1999) calculated the average proportion of vocalic intervals and standard deviation of vocalic and consonantal intervals over sentences. Though their metrics appeared to reflect aspects of rhythmic structure, also considerable overlap was found. Grabe's Pairwise Variability Index (PVI; see section 2.2) is a measure of differences in vowel duration between successive syllables and has been used by, e.g., Grabe & Low (2002), Ramus (2002) and Stockmal, Markus & Bond (2005). In order to achieve more reliable results Barry, Andreeva, Russo, Dimitrova & Kostadinova (2003) proposed to extend existing PVI measures by taking consonant and vowel intervals together. The present paper takes an exploratory look into the question of how to quantify speech rhythm in Norwegian spoken by second language users. Seven metrics will be used, five of which being based on syllable durations. Two metrics are related to speech rate, and the last one is Grabe's normalized Pairwise Variability Index with syllable duration as a measure.

2 Method

2.1 Speech material

The speech material used for this study was chosen from existing recordings made for the Language Encounters project. These recordings were made in the department's sound-insulated studio and stored with a sampling frequency of 44.1 kHz. Five different sentences were selected consisting of 8, 10, 11, 11, and 15 syllables, respectively. There were six second language speaker groups with the following L1s (number of speakers in parentheses): Chinese (7), English (4), French (6), German (4), Persian (6) and Russian (4). Six native speakers of Norwegian served as a control group. The total number of sentences investigated was thus 37 x 5 = 185.