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FINAL STOPS OR NOT? THE IMPORTANCE OF FINAL CONSONANTS FOR AN INTELLIGIBLE ACCENT.

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To have a chance for integration in a new society as an immigrant you have to learn the language; it's a key to assimilation. A group of Karen speakers have lived in Sweden for some years but, unfortunately, it appears that they have great difficulties learning the pronunciation of Swedish in an intelligible way. There are phonetic and phonological differences between the Sgaw Karen language and Swedish. Sgaw Karen is described as having a three-way contrast for plosives in word-initial and word-final positions. There is also a monosyllabic structure and final stops or nasals are not pronounced. This causes problems when learning Swedish with a two-way contrast for initial plosives and heavy consonant clusters. A training program was constructed with sentences and minimal pairs of words ending with final consonants. Four learners imitated recordings of Swedish native speakers and recorded themselves in order to be aware of their own pronunciation. After six weeks of training they still had some problems with the final stops, but there was also some progression in their pronunciation, or at least an awareness of the problem.

INTRODUCTION

How well and how easy it is to acquire a new language often depends on many different things, both on an individual level as well as on a linguistic level, e.g., similarities and differences between the first and second language. For this study, second language learners of Swedish with a first language from Burma were recorded and analyzed. The two languages – Swedish and Sgaw Karen – are different in many ways, both concerning pronunciation and the alphabet. It appears that, still after eight years, these learners have great difficulties learning Swedish with an intelligible pronunciation and therefore have problems gaining access to the Swedish society. The Karen people in Sweden had been living in refugee camps in Thailand before arriving to Sweden. It is hard to tell if their experiences have any kind of impact on their ability to learn the new language.

Karen people in Sweden

Karen people are an ethnic group living in South East Asia, mostly in Burma (or Myanmar), southern China and the northern part of Thailand. Approximately 6 million Karen people live in Burma, but more than 100,000 live in refugee camps in Thailand. Since 2004, many Karen refugees have been resettled in Western countries, e.g., Sweden and USA, and families are spread all over the world. About 1,000 Karen people live in Sweden in small cities in the central and southern part of the country. Many of them, chiefly those middle-aged or older, have great difficulties learning Swedish at an intelligible level. That means that it is hard for them to get a job and access to the Swedish society. When arriving to Sweden they all have to study at SFI (Swedish for immigrants) but many of them do not manage to learn Swedish and after some semesters they often fail in their exams. Still after eight years in Sweden most of the adults cannot speak Swedish with an intelligible pronunciation. Therefore, it is a challenge to find out if there are specific problems related to their native language and to figure out how to teach them to speak Swedish. All of the Karen people, with few exceptions,

knowledge about, English. There has not been, until recently, any Swedish-Karen dictionary (http://karenschwedishcommunity.org/Image/Information/Files/Swedish_Karendictionary.pdf). Those who have some knowledge about English often use both a Swedish-English dictionary and an English-Karen dictionary in order to try to learn Swedish. This is not an easy way to learn a new language. However, most of the young Karen speakers, ages 25 and below, have acquired the Swedish language and some are taking courses at Swedish universities. A few years ago the Karen people in Sweden established The Karen Swedish Community and one of the aims is to promote assimilation into Swedish society.

Karen languages

The Karen languages are a Tibeto-Burman branch from the Sino-Tibetan phylum consisting of many different dialects with influences from Burmese and other nearby languages. The number of Karen languages is not known, but there are probably 20-30 different languages, many of them not well documented. Languages spoken in the mountains usually have numerous dialects, some difficult to understand even for other Karen speakers (Manson, 2011). The languages are classified into three main groups; namely Northern, Central and Southern (Bradley, 1997). The two major dialects are called Sgaw and Pwo, both mainly spoken in the southern part of Burma with more than 1 million speakers of each of the two dialects. Sgaw Karen is a lingua franca among Karens (Naw, 2011). The letters of the alphabet derive from the Burmese characters with some modifications. The word order is SVO, which is uncommon among (mostly SOV) Tibeto-Burman languages (Naw, 2011).

The phonology of Sgaw Karen

The syllable structure in Karen languages is CV or C1(C2)V^T. C1 is any consonant, C2 is either a voiced velar fricative [ɣ], voiced bilabial approximant [w], voiced alveolar approximant [l] or a voiced alveolar trill [r]. V is a vowel and ^T is a tone. No words start with a vowel as a clear glottal stop always precedes a single vowel (Naw, 2011). Two varieties of the Sgaw dialect have been described by Jones (1961), the Moulmein Sgaw Karen and the Bassein Sgaw Karen. The phonological system is almost the same with 9 vowels and 27 or 23 consonants respectively (Jones, 1961), see Table 1 and Table 2. All consonants can occur in initial position, but syllable final consonants are not pronounced in Sgaw Karen due to historical developments (Manson, 2011). There are both aspirated and non-aspirated initial plosives [p^h p b, t^h t d k^h k], but no velar voiced plosive (Abramson, 1995; Jones, 1961). Moulmein Sgaw Karen has 6 different tones, two high, two mid and two low, three of which have a glottal closure. Bassein Sgaw Karen has five tones. The tone system is based on voice quality, f0 and duration. Tone 1 is a slightly rising tone, while the other five tones are moderately falling. Voice quality, together with duration, seem to be the most important identification cues for listeners (Brunelle & Finkeldey, 2011).

Table 1
Sgaw Karen vowel inventory (Jones, 1961:62).

	Front	Central	Back
<i>Close</i>	i	ɨ	u
<i>Mid</i>	e	ə	o
<i>Open</i>	ɛ	a	ɔ

Table 2

Sgaw Karen consonant inventory, consonants only in Moulmein Karen in parentheses (Jones, 1961:62).

	Bilabial	Dental	Alveolar	Postalveolar	Palatal	Velar	Glottal
<i>Plosive</i>	p ^h		t ^h		(c ^h)	k ^h	
	p		t		(c)	k	ʔ
	b		d				
<i>Fricative</i>			s ^h				
		θ	s	ʃ		x	h/f
			(z)			ɣ	
<i>Nasal</i>	m		n		ɲ	(ŋ)	
<i>Lateral approximant</i>			l				
<i>Trill</i>	w		r		j		
<i>Approximant</i>							

The phonology of Swedish

A brief description of Swedish phonology will highlight some areas of difference. For further information, see Bruce (2010) and Riad (2013). The syllable can consist of three initial and three final consonants at most, CCCVCCC. If so, the first consonant has to be an /s/ followed by a voiceless plosive and either of /l j r v/ in the beginning of a word. Any consonant can be in a final position. The vowel system consists of nine vowels (Table 3), each with a phonological distinction in quantity and variation in quality, which makes 18 distinct vowels in all. The duration is complementary which means that a syllable can only have one long segment, (V:C) or (VC:). There are 18 consonant phonemes, see Table 4. (Bruce, 2010).

Table 3

Swedish vowel inventory (Bruce, 2010).

	Front		Back
	Unrounded	Rounded	
<i>Close</i>	i	y	u
<i>Mid</i>	e	ɤ	o
<i>Open</i>	ɛ	ø	ɒ

Table 4

Swedish consonant inventory (Bruce, 2010).

	Bilabial	Dental	Alveolar	Postalveolar	Palatal	Velar	Glottal
<i>Plosive</i>	p		t			k	
	b		d			g	
<i>Fricative</i>		f	s		ç	ŋ	h
		v			j		
<i>Nasal</i>	m		n			ŋ	
<i>Lateral approximant</i>			l				
<i>Trill</i>			r				

A comparison of the two phonological systems of the languages show that there are differences concerning the phonemes which might be a problem for L2-learners of Swedish, e.g., the front rounded vowels and non-aspirated plosives; but the difference in the syllable structure indicate that epenthetic vowels or reductions will be used when learning to pronounce the Swedish consonant clusters and the last consonants. This is in accordance with earlier research about learning Swedish as a second language (e.g. Bannert, 2004).

Identified pronunciation problems for Sgaw Karen L1-speakers

The most obvious and general problem for Sgaw Karen speakers is the lack of pronunciation of the last consonant in Swedish words. For a native listener it is hard to hear word boundaries and it can change some words' meanings in Swedish. E.g., the word *tvål* [tvo:l] (soap) is pronounced *två* [tvo:] (two), *tåg* [to:g] (train) is pronounced *tå* [to:] (toe), *vit* [vi:t] (white) is pronounced *vi* [vi:] (we), *ljus* [ju:s] (light) is pronounced *ju* [jʊ] (of course). Another perceptual problem is that the voiceless plosives without aspiration are often confused with a voiced plosive, /p-b, t-d/, e.g. *par* [p^ha:r] (a couple) – *bar* [ba:r] (bar), *tagg* [t^hag] (thorn) – *dagg* [dag] (dew). The meaning of the word changes if there is no aspiration on the initial voiceless plosive. All voiceless plosives are aspirated in stressed syllables in Swedish with one exception, namely if the plosive is preceded by an /s/.

THE STUDY

After identifying these specific pronunciation problems, a training session was constructed. The aim was to focus on final consonants and make the learners more conscious about the importance of the pronunciation in Swedish for a more intelligible accent. For this study, four speakers were selected from a database with recordings of Karen speakers at different places in Sweden. They had great difficulties and were willing to do study at home during the research. They received training sentences and two Swedish songs (details below) for exercising. They were recorded before and after the six weeks of training. There are also recordings, made by themselves, during the six weeks of training. The recordings were analyzed both with auditory and acoustic analyses using the program Praat.

The material for and instructions to the participants

Training sentences were constructed using words ending with a consonant some of which were linked together with the next word starting with a vowel or placed at the end of the sentence. The participants were told to practice by reading the sentences aloud, listening to two (one male and one female) Swedish native speakers and imitating and recording themselves using the program Praat (<http://www.fon.hum.uva.nl/praat>). They received basic instructions about how to do the recordings and listen to them. Some minimal pairs consisting of words ending with the plosives [g k] and different nasals [m n ŋ] were also constructed for practice, and were recorded by two native speakers for listening and imitation. In addition, they received two Swedish songs to learn. The two songs were chosen because they contained many common words ending with a consonant. The melodies were easy to learn and they had recordings to use for sing-a-long. If possible, they were requested to do the training together with each other, with Swedish friends or with help from their own children. Some of the Swedish friends got information and instructions about the study as well. The training sessions were not like a teaching situation, but more like self-study. They were also

All four participants were recorded when chatting to the research leader in order to get some spontaneous speech; when reading the sentences; and also when describing some pictures (a phoneme test) in the initial phase of the study and again after six weeks of training. To get an idea of the progression they were told to do recordings of their speech at least once a week. Some of them did that more often. They used Praat and a headset on their own computer at home.

To get an idea about the training sentences one example and a short explanation will be given: In the sentence: *Att åka tåg är kul* [ato:ka'to:gækʉ:l] (going by train is fun) the aim is to link the last consonant in the first word /t/ and pronounce it like an initial consonant of the second word [to:ka] and the final consonant in the third word will be pronounced as an initial consonant of the next word [gær:r]. The two 'new' words do not mean anything in Swedish but were meant to remind the speaker of the importance of the speech sound in Swedish.

The distinction between final consonants is of importance in some minimal pairs in the test and here are a few examples where tonal and non-tonal plosives as well as different nasals are in focus: *trygg* [tryg] (safe) – *tryck* [tryk] (press), *kam* [kam] (crest) – *kan* [kan] (be able to), *tunn* [tʉn] (thin) – *tung* [tʉŋ] (heavy).

Participants

Two male and two female Karen speakers, 45-55 years old, participated in this study. They were all born in Myanmar, had lived in refugee camps in Thailand for many years and in Sweden for eight years. They spoke the Sgaw Karen language, Burmese and some English. Even though they had lived in Thailand for many years they did not speak Thai. Their educational backgrounds differed a lot. One of the female speakers had been in school for 12 years, one of the male speakers only for three years as a child in Burma. All of them could read and write in the Karen language.

Analyses

The auditory analyses confirm that the pattern concerning the lack of pronunciation of the last consonants is a general problem for all speakers, e.g., *gaffel* [gafəl] (fork) is pronounced [gafə]. Figure 1 is an example of a female speaker's first try, to the left, and after instructions from a Swedish speaker and imitation, to the right. This is a clear pattern especially in the spontaneous speech and the phoneme test. When reading the sentences all informants sometimes pronounced the consonants and perhaps the spelling was a clue to remember to do so. In the spontaneous speech they often add an epenthetic final vowel after the consonant in order to end with a vowel and get close to the CV-structure of their first language. E.g. *stol* [stu:l] (chair) is pronounced [stu:lə], *näbb* [nɛb] (beak) is pronounced [nɛbɛ], *bok* [bu:k] (book) is pronounced [bu:kə].

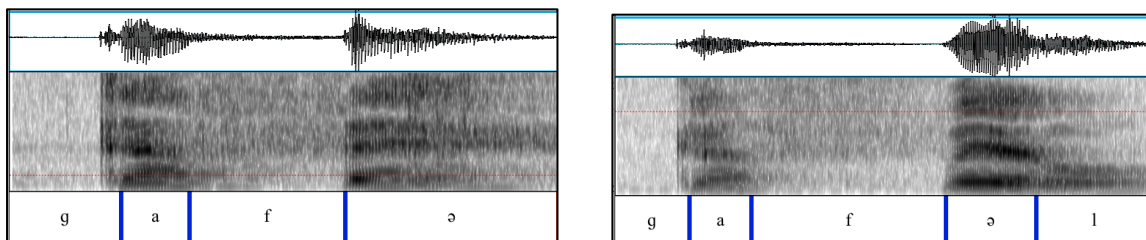


Figure 1. The word *gaffel* [gafəl] (fork) is pronounced [gafə] to the left and correctly to the right.

Voiceless aspirated plosives between voiced segments, e.g., vowels, are often pronounced without aspiration and sound like a voiced plosive for a native listener, e.g. *apa* [p:p^ha] (ape) is pronounced like [p:ba]. Another observation in the training session and in some of the recordings is when one of the male speakers exaggerated the final plosives to make a distinction between a voiced and a voiceless final consonant in a minimal pair, *vig* [vi:g] (lithe) and *vik* [vi:k^h] (bay). But, as seen in Figure 2, he exaggerated the pronunciation and made the consonant voiceless in both words. The difference is chiefly in the duration, especially the vowel duration.

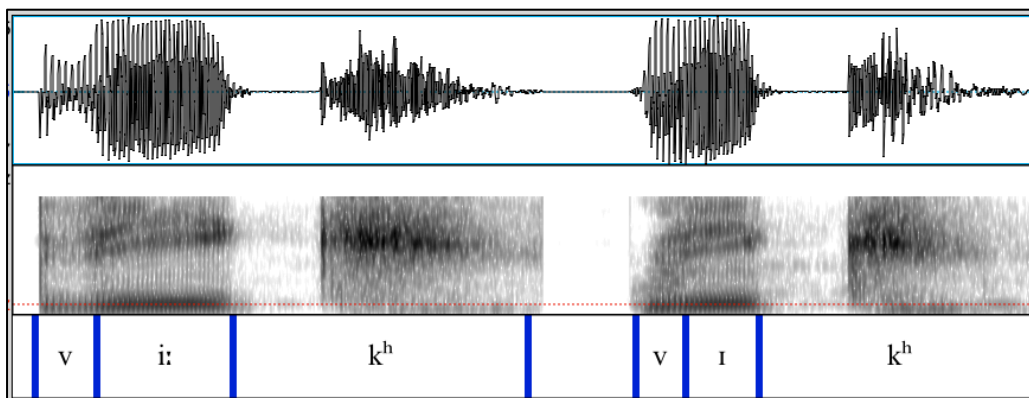


Figure 2. The minimal pairs *vig* [vi:g] (lithe) to the left and *vik* [vi:k^h] (bay) to the right.

However, there were some differences in the recordings before, during and after the training for all speakers though in general they still had problems with the final consonants. One female speaker did not pronounce the final consonants in the words like *mjölk* [mjølk] (milk), *nål* [no:l] (needle), *rädd* [rød] (afraid) even after several trials in the recording after training. The other female speaker was quite successful and the two figures, 3 and 4, are examples of her progression in the pronunciation after six weeks of training. She is eager to learn Swedish and can discuss the language at a metalinguistic level. Unfortunately, all of the participants were not that successful.

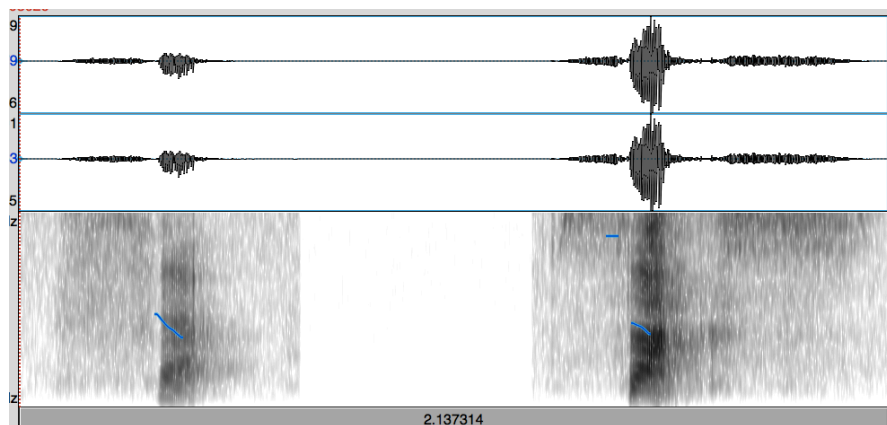


Figure 3. The word *sax* [saks] (scissor) before (to the left) and after (to the right) training.

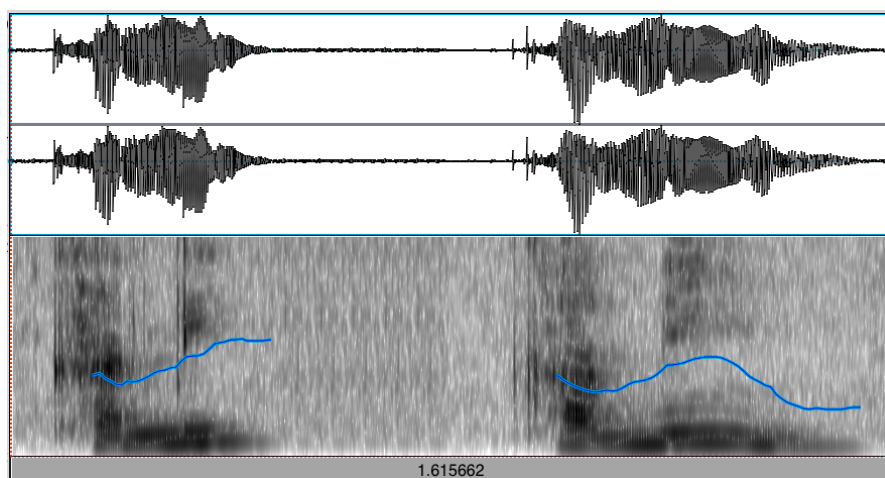


Figure 4. The word *kanin* [kani:n] (rabbit) before (to the left) and after (to the right) training.

CONCLUDING REMARKS

After six weeks of training the speakers still had some problems with their pronunciation in Swedish. They reported that their Swedish friends had been very helpful and had pushed them to do their training sessions and recordings. The participants' training schedules and recordings confirmed that they had been diligent and serious in their aim to learn and imitate the Swedish speakers.

Even though the participants still did not pronounce the final consonants in every word, it seemed that they were more aware of the problem. They were eager to learn Swedish, seemed to have a metalinguistic awareness and were able to discuss this phenomenon. To hear the sounds and correct pronunciation when listening to native speakers and to be aware of specific difficulties when learning a new language was a good starting point. The next step must be training, individual as well as together with someone who is able to give feedback. To do recordings of oneself, and listen to it, was another useful way to learn the pronunciation of a language. The results of this study show that the idea of training with linking words and minimal pairs can be successful for speakers who have an open syllable structure, CV, in their first language and have to learn a language with another more complicated syllable structure with final consonant clusters.

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