

Remembering Arvo Eek and Ilse Lehiste

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Abstract

This paper contains the author's memories of her two late colleagues, compatriots and friends Arvo Eek and Ilse Lehiste from the beginning of the nineties and the following years. They contain mainly episodes, opinions and discussions from the world of phonetics, especially Estonian phonetics.

1. Arvo Eek

After Estonia became independent again in 1991, new possibilities opened up for Estonian scholars to work abroad. In Sweden, funds could be sought from the Swedish Institute in order to invite Baltic scholars to work as visiting researchers in Sweden and create contacts with Swedish colleagues. I made use of this possibility and thus several Estonians could come to Sweden and work here for short periods. One of them was Arvo Eek. He was already known among many Swedish phoneticians through the 11th International Conference of Phonetic Sciences held in Tallinn 1987, where he was one of the organizers. I and several of my Stockholm colleagues had also read his articles in Estonian Papers of Phonetics and appreciated his work.

Arvo Eek worked as a guest researcher at Stockholm University on several occasions during the years 1992-1994. Here he could use modern technology not yet available in Estonia at the time, and this was of course of great use to him in his studies of the acoustics of Estonian speech. However, I myself had maybe even greater use of his stay in Stockholm. I had started my studies in phonetics late in life and there was much in Estonian phonetics that was new to me. We had long talks about the acoustics of Estonian vowels and about the Estonian degrees of quantity, a subjects on which he was very knowledgeable. When he was back in Estonia, we maintained contact by e-mail and sent each other our newest papers.

I also used Arvo Eek as a speaker for my studies of Estonian, especially of spontaneous speech. He could easily keep up a lively monologue for almost an hour, telling stories from his childhood and from his travels in the Soviet Union from Yakutsk to Tajikistan in connection with his activity in the forming of the language laws in the Soviet Union. In a lively narrative, his pitch often moved up and down in wide curves. There was an interesting example of this. I looked at F₀ movements in spontaneous speech with Arvo as one of the subjects. He spoke about how he got a new suit when he was a little boy. He wanted to stress especially the word "riide" (material) in the sentence "riide võiksid kätte saada küll, aga õmblemine..." (you could get the *material*, but the sewing ...). "riide" is a third quantity word, were the F₀ curve is supposed to go down in Estonian. In this case, however, it went up about 65% in the first syllable and then the second syllable vowel started with an additional 32.2 % rise in F₀ – all in all a rise of almost an octave in 180 ms. Ilse Lehiste, when she read about the data in my paper [1], of course thought that something must be wrong: "Be prepared to answer, I'm going ask a question about this at the conference in Lund", she wrote. I sent the recording together with the raw data. There was no question about that detail from Ilse in Lund).

Arvo Eek and I had many discussions concerning Estonian quantity. A large part of his thought and work was directed to this problem. Therefore he showed much interest in the paper Hartmut Trautmüller and I had written on the perception of quantity were we had used Estonian data [2]. Our results showed that only the quantity carrying unit (or units) showed positive correlation to the perceived degree of quantity while all surrounding segments had a contrary effect. There was,

however, a large difference between these surrounding segments due to their position. The preceding consonant in e.g. 'sade' had a weak effect, while that of the vowel 'e' was strong, but not as strong as the positive effect of 'a'. Arvo agreed with us in part, but leaned towards the hierarchic theory where syllables play an important role. What we had shown was against syllabic relations: the segments of the same syllable were very different both in their direction and size of their effect. Moreover, the importance of the quantity carrying segment was so much stronger than that of any other segment. (More about this in connection with Ilse Lehiste.)

However, we did not always disagree. In 2007 Arvo wrote: „I received your paper 'Prepausal prosodic patterns in Swedish-Estonian (...)'. Your data from spontaneous speech on the Q2 and Q3 contours in prepausal position agree with my measurements position seem to agree with my measurements on read dialogues (...). I can confirm that the contour of Q2 and Q3 is strongly dependent on the position of the word in a sentence. I am going to include them in the third part of my book on Estonian Phonetics“[3].

Earlier, when I started my studies on final lengthening in Estonian, he observed that quantities play a role also there. Segments are lengthened in a way that helps quantity perception. Thus in disyllabic Q1 words the final vowel, and in Q3 the quantity carrying segment that is lengthened most. In Q2 words both are lengthened both proportionally. This agreed with my findings.

Arvo had worked in our phonetics lab, but later I was given opportunity to carry out perception tests at the Institute of Cybernetics in Tallinn when I needed Estonian listeners. The Estonians in Sweden might have been influenced by years of speaking and listening to Swedish.

Mostly our letters were about phonetics, but we also wrote about other matters. In a letter from 1993, he told about the building of a house in the country at Raatsiku where he could work in peace. He would live there and continue working in Tallinn with Einar Meister. The house was ready in 1995 and Arvo wrote that he felt very well there. In June 1996, he had a terrible tragedy – his house was robbed and his father murdered. In addition to the sorrow, he had to deal for years with the judicial matters in connection with the crime. I remember that Ilse Lehiste tried hard to get his thoughts away from the tragedy and back on his work.

Arvo's last mail came in the beginning of December 2008 where he wrote that wanted to wish me a happy Christmas, and that he did it so early because he had to undergo a difficult operation, and was not sure if it would be possible for him to write later. "I am full of cancer", he wrote.

2. Ilse Lehiste

I first met Ilse Lehiste in the beginning of the 90-ies. In the following years we met mostly at phonetics conferences in USA and Europe, twice in Estonia, and I also visited her at her home in Columbus, Ohio. However, most of our contacts were through e-mail. I had read many of her papers and appreciated them very much. She had also read my papers on Estonian phonetics and commented on them. I was very glad and grateful about that, especially concerning Estonian phonetics where we had a common interest – the acoustics and perception of the three quantity degrees that are special for Estonian.

Ilse had worked in this field much longer than I and could give me useful advice, directing my attention to details I had not noticed. Especially during the first years of our acquaintance I also had much help from her when I had to make decisions about to whom the little Estonian foundation I was working for was to give economic help in Estonia. She was against helping institutions. Many changes were taking place in the Estonian research institutions after the collapse of the Soviet regime, and she thought they were still very unstable

She also gave me much encouragement in my work, not least just by showing interest in it. In October 1996, she wrote that reading one of my papers, she got an idea she wanted to try out: "Your paper arrived and I read it with great interest", she wrote, "Maybe one day we can crack the problem of this mysterious third quantity". While getting a lot of help from her, I was glad to be able to help her with a perception test she wished done on Swedish listeners and also with arranging

a small part of the financial support for a phonetics conference in Tallinn 1996 which she arranged together with Jaan Ross. The aim of the conference was “to provide an opportunity to scholars interested in Estonian prosody to meet each other and discuss their theories and findings”. And: “(...) to see if it is possible to arrive at some kind of consensus as to what the three- way quantity system really means ...” (From the symposium announcement).

We were not always of the same opinion on everything. In particular, there were differences of opinion in our views on the perception of quantity. As I mentioned earlier, Hartmut Trautmüller – who is an internationally known specialist on speech perception – and I wrote a paper on the perception of Estonian quantity where we proceeded from the assumption that the perception of quantity is segmental, as it has been shown to be in other languages. (We had used words like ‘sade’, ‘saade’, ‘sate’, ‘saate’, etc, with no F0 differences) To take an example, in a word like ‘saade’ only the lengthening of the stressed vowel resulted in more Q3 answers in our perception test. Lengthening the initial ‘s’ had an opposite effect, as did all the other segments of the word. However, the size of the contrary effect varied with the position of the segment: it was very small for the initial consonant and comparatively large for vowel of the following syllable. Concerning syllables: the first syllable lengthens because the increase in the duration of ‘aa’ is much greater than the shortening of the ‘s’. Something similar happens in the second syllable. There is a robust duration relation between the first and second syllable, but that does not mean it is used in perception. It could, however, be used in, for example, automatic classification.

When Ilse Lehiste was asked by the journal *Phonetica* to review our paper, she refused, saying that she did not feel impartial concerning the views expressed in it. She mailed us: “Your manuscript was sent to me for evaluation. I have read it carefully, and I have written to the editor telling him that I prefer not to be involved in the decision whether the article will be published in *Phonetica* or not – I told him that I may not be completely objective. I also told him that I’ll be sending comments directly to the authors.”

She then wrote us a mail which started a long discussion. In her opinion “Foot-initial consonants (...) do not participate in the quantity oppositions“. (Actually it was that opinion of Ilse’s that had started my cooperation with Hartmut on the perception of Estonian quantities. I had told Hartmut about it and he did not believe it could be true – Estonian could not be so different from other languages.) Another of Ilse’s reactions to our paper was the opinion that: “In a disyllabic first quantity word the half long vowel of the second syllable is just as much part of the opposition as the fact that the first vowel is short!” Hartmut’s answer was: “The perceptual weight of the second vowel is high but lower than that of the first. We found the durations of additional segments to contribute to the perception of quantity in the same sense as the second vowel, but no other segments to contribute in the same sense as the first vowel. The status of the two vowels is different.” Which of the surrounding segments has strongest effect is dependent on the listeners’ native language. For Estonian and Finnish listeners it is the second syllable vowel. For Norwegians it is the intervocalic consonant(s). (We had used Norwegian listeners in a follow up paper [4] instead of Swedes because in Swedish the quality of the vowel changes with its quantity).

Our final answer: “Overall, we agree with your description. However, our research question of how listeners evaluate segment durations cannot be answered by phonological analysis alone, but only after a careful analysis of the observational data. There is basically no conflict between your and our phonological interpretation of Estonian utterances.”

Ilse’s answer: “Thank you for your comments on my comments – there is little chance for something like that, since we work in such an esoteric area”; and: “I am enjoying this interaction” she wrote.

To me, this seems very typical of Ilse. She was a good colleague. For example, although she was not always 100% of the same opinion Arvo Eeks work, she respected him very highly as a scholar and defended him when he was attacked. She could criticize but was at the same time ready to help. In her view, tests had to be rigorous, but everyone had a right to his or her own

interpretations. In her opinion, the work done by Arvo Eek and Einar Meister at the Institute of Cybernetics in Tallinn was something we could be proud of.

Another difference of opinion: I wrote a paper comparing syllable time units in Finnish with an earlier study I had done together with Olle Engstrand on Swedish, where we compared speaking styles. (Syllable like units were C'V' – also called 'pseudo syllables' – are without consideration for the phonotax of morpheme structure of a language, and that was one reason Ilse did not like the use of them. Moreover, she was of the opinion that such a study was meaningful only for stress timed and syllable timed languages but not on a mora timed language like Finnish. Comparisons should not be made between a mora based language like Finnish and syllable based languages like Swedish and Spanish

But there were not always differences of opinion. I had written a paper on the production and perception of quantity in whispered words [4]. The results showed a clear darkening of the whispering noise in the first syllable vowels of Q3 words similar to the F0 fall in normal speech. This F0 fall constitutes one of the differences between Q3 and Q2 – in Q2 F0 remains unchanged. Ilse found it interesting that the duration differences clearly were not enough for the speakers. Ilse liked that paper very much, commented on it often and even recommended it to a Japanese colleague who was planning to study Japanese tones in whispered speech.

Reading my papers she sometimes found new angle and how to continue the research. One was especially interesting: in analogy with the acoustic vowel diagram, if a word carries strong stress, then the vowel tends to be more in the periphery of the diagram. Could it be possible to imagine a room of syllabic duration relations where stressed words tend to be more extreme in the space – i.e. 'formant space' vs. 'ratio space'. This could also explain differences between speakers – they could have different degree of stress.

We discussed not only work problems. I once asked about her hobbies in connection with writing a notice in a paper about her in connection with her 75th anniversary. She said her main hobby was travelling. She had travelled on all seven continents, including Antarctica. The most interesting and exotic travels were to Svalbard, Australia/New Zealand, Antarctica, Sinai – difficult to say what to prefer! Some places were more interesting because of their history e.g. Egypt, others for being exotic.

We also had a common interest in music, we both played the piano, and we even found out that we had had the same piano teacher in Estonia. Music was also part of our professional life: I had been composer and music teacher in the earlier part of my life, and Ilse had done research work on Estonian folk music (e.g. [5]). Once she heard about the death of friend. In a mail, she cited an Estonian folk song about death coming nearer and nearer to us all.

Ilse always sent birthday and Christmas greetings. Among the first Christmas greetings every year was card a picture of polar bears with good wishes from Ilse. In December 2010 there was no such card. I missed it and I still miss Ilse Lehiste.

3. References

- [1] Krull D. "Word prosodic features in Estonian conversational speech", Working papers 41, proceedings of an ESCA Workshop on Prosody, September 27-29, 1993, Lund. Lund University, Department of Linguistics.
- [2] Traunmüller H. and Krull D. "The Effect of Local Speaking Rate on the Perception of Quantity in Estonian", *Phonetica* 60:187.207, 2003.
- [3] Krull D "Perception of Estonian word prosody in whispered speech. In : Nordic Prosody: Proceedings of the VIIIth Conference , Trondheim, August 19-21, 2000 (Wim A. van Dommelen and Torstein Fretheim, eds), peter Lang GmbH. Frankfurt/M eds. 153-164, 2001.
- [4] Krull D., Traunmüller H., and Wimmelen W.A. "The effect of the local speaking rate on perceived quantity: a comparison between three languages", Proceedings of the XVIIth ICPhS, Barcelona, August 2003.
- [5] Ross J. and Lehiste I. "The temporal Structure of Estonian Runic Songs", Mouton de Gruyter, 2001.