

University of Groningen

An Acoustic Analysis of Vowel Pronunciation in Swedish Dialects

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Document Version

Publisher's PDF, also known as Version of record

Publication date:

2010

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Leinonen, T. (2010). *An Acoustic Analysis of Vowel Pronunciation in Swedish Dialects*. s.n.

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Chapter 1

Introduction

1.1 General motivation

In the work on this thesis I have been connected to two larger projects: *The Determinants of Dialectal Variation* at the University of Groningen to which I have been formally affiliated as a PhD student, and to *SweDia*—a collaboration between three Swedish universities with the more revealing subtitle *Phonetics and phonology of the Swedish dialects in the year 2000*.

An aim for the research group in Groningen has been to develop dialectometric techniques that can be used to characterize linguistic variation in the aggregate. The goal is to be able to make conclusions about what determines linguistic variation by developing quantitative methodology for exploring data which can be used for analyzing large amounts of dialect data. Techniques for visualizing results in high quality maps have also been developed by the researchers in Groningen. In this thesis, I have wanted to contribute to this work by using both aggregate analysis for exploring dialectal variation in Swedish vowel pronunciation and detailed analysis of separate variables. The latter method corresponds to what has traditionally been done by dialectologists. By comparing the two different methodological approaches I have wanted to explore what kind of variation is accounted for in an aggregate analysis, and, in addition, show how the two methods can support each other and reveal different aspects of dialectal variation. I have also applied mapping techniques to specifically visualize pronunciation of vowels.

For my research I have free access to data from the SweDia database. This dialect database is a joint effort by the phonetics departments of the universities in Lund, Stockholm and Umeå. The aim of the SweDia project was to document the dialectal variation in rural varieties of Swedish around year 2000. The Swedish dialects have gone through massive leveling in the latter half of the 20th century. In this leveling process especially morphological, syntactical and lexical variation has decreased profoundly. Phonetic and prosodic features are assumed to have been preserved to a larger degree. A large number of descriptions of phonetic and phonological con-

ditions in Swedish dialects as documented in the first decades of the 20th century exist. But there are not many studies dealing with the phonetics and phonology of modern non-standard varieties of Swedish. The SweDia database was compiled in order to make this kind of research possible.

In the SweDia database not only geographic variation is accounted for but also social. At all of the more than one hundred sites included in the database, recordings were made with both men and women and with both older and younger speakers. In dialectometry, the perspective has usually been purely geolinguistic. Relations between sites have been analyzed, without accounting for sociolinguistic variation within sites. The SweDia data makes it possible to include sociolinguistic dimensions in dialectometric work and to study the amount of variation also within sites.

General aims of the SweDia project which are also applicable to this thesis were to investigate what the distribution of dialectal features in the Swedish language area are, what the differences in dialect use are between different age groups, and if there are dialect areas where the leveling has not been as far-reaching as elsewhere.

In the research team in Groningen as well as in the SweDia project a general goal has been to study theoretical aspects of language systems. This has been done by investigating associations between linguistic levels and setting up linguistic typologies. I hope that my work can contribute to these theoretical considerations as well.

1.2 Terminology

The term “dialect” is used in this thesis to refer to the varieties that were recorded for the SweDia database. These are modern rural varieties of Swedish, which have a variable degree of dialectality on a scale between traditional rural dialect and regional standard language. The use of the term does therefore not in all cases agree with how the term has traditionally been used by Swedish dialectologist, who usually have reserved the term “dialect” for local varieties which have not been heavily affected by the large-scale convergence towards Standard Swedish of the last decades.

In a number of analyses differences between men and women are studied. The term “sex” is used when describing properties related to strictly anatomical/physiological differences between men and women, which are a consequence of women having two X chromosomes and men having a Y chromosome. This is the case when discussing differences in vowel spectra related to anatomical/physiological differences in the vocal tract. Whenever discussing expressions of human culture and social interactions, of which language use is considered to be a part, the term “gender” is used.

1.3 Overview of the thesis

In the next chapter the background for this thesis is given. The Swedish linguistic situation is described and an overview of variation in Swedish vowel pronunciation based on previous literature is given. Different approaches to acoustic analysis of vowels are discussed, and a short introduction to the dialectometric research tradition in relation to traditional dialect geography is given.

In Chapter 3 the aims and research questions for this study are specified, and in Chapter 4 the data set is described. A detailed description of the acoustic method used for assessing vowel quality is given in Chapter 5.

A number of analyses of dialectal variation in Swedish vowel pronunciation are reported in Chapters 6 and 7. Detailed analyses of the different variables and of co-occurring vowel features are described in Chapter 6. In conjunction with the analysis of the variables, maps were created that display the variation in each vowel across sites and across age groups. These maps are found in Appendix C, which can be seen as a small atlas of Swedish vowel pronunciation. The results of a number of aggregate analyses are presented in Chapter 7.

In Chapter 8 the results of all analyses are brought together and discussed, and the most important results are summarized in Chapter 9.

Some of the maps in the thesis might seem small especially for readers who are interested in a specific region and would like to get a clearer view of that specific area. I found it more important to display related maps next to each other (for example maps of older and younger speakers) than to make full-page figures of every map. An electronic version of the thesis has been made available via the library of the University of Groningen (<<http://dissertations.ub.rug.nl/>>). A full-text PDF file can be downloaded which allows zooming in on the maps on the computer display.

