

Swedish phonetics 1939-1969

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Abstract

The aim of the current project ("Swedish Phonetics '39-'69") is to provide an account of the historical, social, discursive, and rhetoric conditions that determined the emergence of phonetic science in Sweden between 1939 and 1969. The inquiry is based on a investigation in four areas: how empirical phonetic data were analysed in the period, how the discipline gained new knowledge about phonetic facts through improvements in experimental settings, how technological equipment specially adapted to phonetic research was developed, and how diverging phonetic explanations became competing paradigms. Understanding of the development of phonetic knowledge may be synthesised in the persona of particularly emblematic phoneticians: Bertil Malmberg embodied the boom that happened in the field of Swedish phonetics during this period. The emergence of internationally recognized Swedish research in phonetics was largely his work. This investigation is based on two different corpora. The first corpus is the set of 216 contributions, the full authorship of Malmberg published between 1939 and 1969. The second corpus is his archive, owned by Lund University. It includes semi-official and official letters, administrative correspondence, funding applications (...). The two are complementary. The study of both is necessary for achieving a systematic description of the development of phonetic knowledge in Sweden.

Research in progress

The aim of the current project ("Swedish Phonetics '39-'69") is to provide an account of the historical, social, discursive, and rhetoric conditions that determined the emergence of phonetic science in Sweden during a thirty year period, situated between 1939 and 1969 (see Touati 2009; Touati forthcoming). The inquiry is based on a systematic investigation essentially in four areas: how empirical phonetic data were analysed in the period, how the discipline gained new knowledge about phonetic facts through improvements in experimental settings,

how technological equipment specially adapted to phonetic research was developed, and how diverging phonetic explanations became competing paradigms.

The claim sustaining this investigation is that knowledge is a product of continually renewed and adjusted interactions between a series of instances, such as: fundamental research, institutional strategies and the ambition of individual researchers. In this perspective, the inquiry will demonstrate that phonetic knowledge was grounded first by discussions on the validity of questions to be asked, then by an evaluation in which results were "proposed, negotiated, modified, rejected or ratified in and through discursive processes" (Mondada 1995) and finally became facts when used in scientific articles. Therefore, in order to understand the construction of this knowledge, it seems important to undertake both a study of the phonetic content and of the rhetoric and the discursive form used in articles explaining and propagating phonetic facts. A part of this research is in this way related to studies on textuality (Bronckart 1996), especially those devoted to "academic writing" (Berge 2003; Bondi & Hyland 2006; Del Lungo Camiciotti 2005; Fløttum & Rastier 2003; Ravelli & Ellis 2004; Tognini - Bonelli) and to studies on metadiscourse and interactional resources (Hyland 2005; Hyland & Tse 2006; Kerbrat-Orecchioni 2005; Ådel 2006).

Understanding of the development of phonetic knowledge may be synthesised in the persona of particularly emblematic phoneticians. Among these, none has better than Bertil Malmberg¹ [1913-1994] embodied the boom that happened in the field of Swedish phonetics. The emergence of internationally recognized Swedish research in phonetics was largely his work. As Rossi (1996: 99) wrote: "Today, all phoneticians identify with this modern concept of phonetics that I will hereafter refer to, following Saussure, as speech linguistics. The much admired and respected B. Malmberg significantly contributed to the development of this concept in Europe".

The starting date, “the terminus a quo” chosen for the study is set in 1939, the year of the first publication by Malmberg, entitled “Vad är fonologi?” (What is phonology?). The “terminus ad quem” is fixed to 1969 when Malmberg left phonetics for the newly created chair in general linguistics at the University of Lund.

Corpora

Malmberg's authorship continued in an unbroken flow until the end of his life. The list of his publications, compiled as “Bertil Malmberg Bibliography” by Gullberg (1993), amounts to 315 titles (articles, monographs, manuals, reports).

The first corpus on which I propose to conduct my analysis is the set of 216 contributions, the full authorship of Bertil Malmberg published between 1939 and 1969. The second corpus is his archive, owned by Lund University (“Lunds universitetsarkiv, Inst. f. Lingvistik, Prefektens korrespondens, B. Malmberg”) It includes semi-official and official letters, administrative correspondence, inventories, funding applications, administrative orders, transcripts of meetings. In its totality, this corpus reflects the complexity of the social and scientific life at the Institute of Phonetics. Malmberg enjoyed writing. He sent and received considerable numbers of letters. Among his correspondents were the greatest linguists of his time (Benveniste, Delattre, Dumezil, Fant, Halle, Hjelmslev, Jakobson, Martinet), as well as colleagues, students, and representatives of the non-scientific public. Malmberg was a perfect polyglot. He took pleasure in using the language of his correspondent. The letters are in Swedish, German, English, Spanish, Italian, and in French, the latter obviously the language for which he had a predilection.

The first corpus consists of texts in phonetics. They will be analysed primarily in terms of their scientific content (content-oriented analysis). The second corpus will be used to describe the social and institutional context (context-oriented analysis). The two are complementary. The study of both is necessary for achieving a systematic description of the development of phonetic knowledge. While the articles published in scientific journals are meant to ensure the validity of the obtained knowledge by following strict research and writing procedures, the merit of the correspondence is to unveil in a unique, often friendly, sometimes astonishing

way that, on the contrary, knowledge is unstable and highly subject to negotiation.

The phonetician

Bertil Malmberg was born on April 22, 1913 in the city of Helsingborg, situated in Scania in southern Sweden (see also Sigurd 1995). In the autumn of 1932, then aged nineteen, he began to study at the University of Lund. He obtained his BA in 1935. During the following academic year (1936-1937), he went to Paris to study phonetics with Pierre Fouché [1891-1967]. That same year he discovered phonology through the teaching of André Martinet [1908-1999]. Back in Lund, he completed his higher education on October 5, 1940 when he defended a doctoral dissertation focused on a traditional topic of philology. He was appointed “docent” in Romance languages on December 6, 1940.

After a decade of research, in November 24, 1950, Malmberg finally reached the goal of his ambitions, both personal and institutional. Phonetic sciences was proposed as the first chair in phonetics in Sweden and established at the University of Lund, at the disposal of Malmberg. Phonetics had thus become an academic discipline and received its institutional recognition. Letters of congratulation came from far and wide. Two of them deserve special mention. They are addressed to Malmberg by two major representatives of contemporary linguistics, André Martinet and Roman Jakobson. Martinet's letter is sent from Columbia University: « Cher Monsieur, / Permettez-moi tout d'abord de vous féliciter de votre nomination. C'est le couronnement bien mérité de votre belle activité scientifique au cours des années 40. Je suis heureux d'apprendre que vous allez pouvoir continuer dans de meilleures conditions l'excellent travail que vous faites en Suède.» Jakobson's letter, sent from Harvard University early in 1951, highlights the fact that the appointment of Malmberg meant the establishment of a research centre in phonetics and phonology in Sweden: “[...] our warmest congratulations to your appointment. Finally phonetics and phonemics have an adequate center in Sweden”. As can be seen, both are delighted not only by Malmberg's personal success but also by the success of phonetics as an academic discipline.

A point of departure: Two articles

Malmberg started his prolific authorship in 1939 with an article dedicated to the new Prague phonology. For this inaugural article, Malmberg set the objective to inform Swedish language teachers about a series of fundamental phonological concepts such as function, phoneme, opposition and correlation, concepts advanced by the three Russian linguists R. Jakobson [1896-1982], S. Karcevskij [1884-1995] and N.S. Trubetzkoy [1890-1938]. To emphasize the revolutionary aspects of Prague phonology, Malmberg started off by clarifying the difference between phonetics and phonology:

« Alors que la phonétique se préoccupe des faits sonores à caractère langagier et qu'elle se propose de décrire de manière objective, voire expérimentale, les différentes phases de la production de la parole et ce faisant du rôle des organes phonatoires, la phonologie fixe son attention uniquement sur la description des propriétés de la parole qui ont un rôle fonctionnel » (Malmberg, 1939 : 204.)

He praised Prague phonology in its effort to identify and systematize functional linguistic forms, but did not hesitate to pronounce severe criticism against Trubetzkoy and his followers when they advocated phonology as a science strictly separate from phonetics. Malmberg sustained the idea that phonology, if claimed to be a new science, must engage in the search for relationships between functional aspects of sounds and their purely phonetic properties within a given system – a particular language. His article includes examples borrowed from French, German, Italian, Swedish and Welsh. For Malmberg, there is no doubt that « la phonologie et la phonétique ne sont pas des sciences différentes mais deux points de vue sur un même objet, à savoir les formes sonores du langage » (Malmberg 1939 : 210).

The first article in experimental phonetics was published the following year (Malmberg 1940) but was based on research conducted during his stay in Paris 1937-1938. Advised and encouraged by Fouché, Malmberg tackles, in this first experimental work, an important problem of Swedish phonetics, namely the description of musical accents. In the resulting article, he presents the experimental protocol as follows:

« On prononce le mot ou la phrase en question dans une embouchure reliée par un tube élastique à un diaphragme phonographique pourvu

d'un style inscripteur et placé devant un cylindre enregistreur. Le mouvement vibratoire de la colonne d'air s'inscrit sur un papier noirci sous la forme d'une ligne sinueuse. » (Malmberg 1940: 63)

The first analysed words *anden* vs. *anden* ('soul' vs. 'duck') revealed a difference in tonal manifestation. More examples of minimal pairs of word accents, displayed in figures and curves confirmed the observation. Malmberg closed his article by putting emphasis on the significance of word accents as an important research area in experimental phonetics:

« Il y aurait ici un vaste champ de travail pour la phonétique expérimentale, surtout si on considère toutes les variations dialectales et individuelles qui existent dans le domaine des langues suédoise et norvégienne. » (Malmberg 1940: 76)

Final year in phonetics (1968)

Malmberg's correspondence during the year 1968 is particularly interesting. It contains abundant information, not least about the variety of people writing to Malmberg, of issues raised, and about how Malmberg introduced events of his private life, health, social and institutional activities in his letters. Some examples will demonstrate the rich contents of the letters, here presented chronologically (while in the archive, the correspondence is in alphabetical order (based on the initial of the surname of the correspondent):

January: The year 1968 began as it should! On January 4, representatives of students sent a questionnaire concerning the Vietnam War to Professor Malmberg. They emphasized that, they particularly desired answers from the group of faculty professors. Malmberg apparently neglected to answer. Hence a reminder was dispatched on January 12. A few days later, Malmberg received a prestigious invitation to participate in a "table ronde", a panel discussion on structuralism and sociology. The invitation particularly stressed the presence to be of Lévi-Strauss and other eminent professors of sociology and law. We learn from Malmberg's response, dated February 12, that he had declined the invitation for reasons of poor health. January also saw the beginning of an important correspondence between Malmberg and Max Wajskop [1932-1993]. In this correspondence, some of Malmberg's letters were

going to play a decisive role for the genesis of phonetics in Belgium, and subsequently also in the francophone world at large (see Touati, forthcoming).

February: On February 8, Sture Allen [born 1928] invites Malmberg to participate in a radio program on "Vad är allmän språkvetenskap?" (What is general linguistics?). Once more, he had to decline for reasons of health (letter of February 12). On February 19, the university administration informs that there were three applicants for the post as lecturer in phonetics at the University of Lund: C.-C. Elert, E. Gårding and K. Hadding-Kock.

March: The school specialized in education of deaf children in Lund asks Malmberg to help reflect on new structures for its future functioning.

April: Malmberg gives a lecture on "Fonetiska aspekter på uttalsundervisningen i skolor för hörande och hörselskadade" (Phonetic aspects in the teaching of pronunciation in schools for the deaf and hearing disabled).

September: The student union informs Malmberg that a Day's Work for the benefit of the students in Hanoi will be organised during the week of September 21 to 29.

October: A letter of thanks is sent to Hans Vogt, professor at the University of Oslo, for the assessment done in view of Malmberg's appointment to the chair of general linguistics in Lund. That same month he received a rather amusing letter from a young man from Sundsvall who asks for his autograph as well as a signed photograph. The young man expands on that his vast collection already boasts the autograph of the king of Sweden. Malmberg grants the wishes of his young correspondent on November 4.

November: A "docent" at the University of Uppsala who disagrees with his colleagues about the realization of schwa asks Malmberg to serve as expert and make a judgment in the matter. In late November, Malmberg has to go to Uppsala to attend lectures given by applicants for two new Swedish professorships in phonetics, at the University of Uppsala and the University of Umeå, respectively. Candidates who will all become renowned professors in phonetics are Claes-Christian Elert, Kerstin Hadding-Koch, Björn Lindblom and Sven Öhman (In 1968 and 1969, there is a strong process of institutionalization of phonetics taking place in Sweden).

A theoretical dead-end

In an article just three pages long, Malmberg (1968) traces a brief history of phonemes. The argument opens on a structuralist credo « On est d'accord pour voir dans les éléments du langage humain de toute grandeur et à tous les niveaux de la description scientifique (contenu, expression, différentes fonctions, etc...), des éléments discrets. » Malmberg continues with a summary of the efforts of classical phoneticians to produce that monument of phonetic knowledge - the International Alphabet - created with the ambition to reflect a universal and physiological (articulatory according to Malmberg) description of phonemes. The authorities quoted here are Passy, Sweet, Sievers, Forchhammer and Jones. He continues by referring to « l'idée ingénieuse [qui] surgira de décomposer les dits phonèmes [...] en unités plus petites et par là même plus générales et de voir chaque phonème comme une combinaison [...] de traits distinctifs ». In other words, he refers to "Preliminaries to Speech Analysis" by Jakobson, Fant and Halle (1952), a publication which may be considered a turning point in phonetics. Indeed, later in his presentation, Malmberg somehow refutes his own argument about the ability of acoustic properties to be used as an elegant, simple and unitary way for modelling sounds of language. He highlights the fact that spectrographic analysis reveals the need for an appeal to a notion such as the locus in order to describe, in its complexity and variation, the acoustic structure of consonants. Malmberg completed his presentation by emphasizing the following:

« Mais rien n'est stable dans le monde des sciences. En phonétique l'intérêt est en train de se déplacer dans la direction des rapports stimulus et perception [...] Si dans mon travail sur le classement des sons du langage de 1952, j'avais espéré retrouver dans les faits acoustiques cet ordre qui s'était perdu en cours de route avec l'avancement des méthodes physiologiques, je deviens maintenant de plus en plus enclin à chercher cet ordre non plus dans les spectres qui les spécifient mais sur le niveau perceptuel. Ma conclusion avait été fondée sur une fausse idée des rapports entre son et impression auditive. Je crois avoir découvert, en travaillant par exemple sur différents problèmes de la prosodie, que ces rapports sont bien plus compliqués que je l'avais pensé au début » (Malmberg 1968 : 165)

As can be seen from reading these lines, Malmberg had the courage to recognize that he had underestimated the difficulties pertaining to the relationship between sound and auditory impression. It seems that Malmberg had the premonition of the cognitive and central role played by the perception of sounds but he was not able to recognise it properly since he was captive in his structural paradigm.

To conclude

In a letter, dated October 30, 1968, addressed to his friend and fellow, the Spanish linguist A. Quilis, Malmberg says that he suffers from a limitation: “Tengo miedo un poco del aspecto muy técnico y matemático de la fonética moderna. A mi edad estas cosas se aprenden difícilmente.” By the end of 1968, Malmberg is thus well aware of the evolution of phonetics and thereby of what had become his own scientific limitations. Empirical phonetic research had taken a radical technological orientation (see Grossetti & Boë 2008). It is undoubtedly with some relief that he joined his new assignment as professor of general linguistics.

Notes

1. *And of course Gunnar Fant, the other grand old man of Swedish phonetics.*

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