

# How do Swedish encyclopedia users want pronunciation to be presented?

Michaël Stenberg

Centre for Languages and Literature, Lund University

## Abstract

*This paper about presentation of pronunciation in Swedish encyclopedias is part of a doctoral dissertation in progress. It reports on a panel survey on how users view presentation of pronunciation by transcriptions and recordings, so-called audio pronunciations. The following main issues are dealt with: What system should be used to render stress and segments? For what words should pronunciation be given (only entry headwords or other words as well)? What kind of pronunciation should be presented (standard vs. local, original language vs. sweditized)? How detailed should a phonetic transcription be? How should 'audio pronunciations' be recorded (human vs. synthetic speech, native vs. Swedish speakers, male vs. female speakers)? Results show that a clear majority preferred IPA transcriptions to 're-spelled pronunciation' given in ordinary orthography. An even vaster majority (90%) did not want stress to be marked in entry headwords but in separate IPA transcriptions. Only a small number of subjects would consider using audio pronunciations made up of synthetic speech.*

## Introduction

In spite of phonetic transcriptions having been used for more than 130 years to show pronunciation in Swedish encyclopedias, very little is known about the users' preferences and their opinion of existing methods of presenting pronunciation. I therefore decided to procure information on this. Rather than asking a random sample of more than 1,000 persons, as in customary opinion polls, I chose to consult a smaller panel of persons with a high probability of being experienced users of encyclopedias. This meant a qualitative method and more qualified questions than in a mass survey.

## Method

A questionnaire made up of 24 multiple choice questions was compiled. Besides these, there

were four introductory questions about age and linguistic background. In order to evaluate the questions, a pilot test was first made, with five participants: library and administrative staff, and students of linguistics, though not specializing in phonetics. This pilot test, conducted in March 2009, resulted in some of the questions being revised for the sake of clarity.

The survey proper was carried out in March—April 2009. Fifty-four subjects between 19 and 80 years of age, all of them affiliated to Lund University, were personally approached. No reward was offered for participating. Among them were librarians, administrative staff, professors, researchers and students. Their academic studies comprised Linguistics (including General Linguistics and Phonetics) Logopedics, Audiology, Semiology, Cognitive Science, English, Nordic Languages, German, French, Spanish, Italian, Polish, Russian, Latin, Arabic, Japanese, Translation Program, Comparative Literature, Film Studies, Education, Law, Social Science, Medicine, Biology and Environmental Science. A majority of the subjects had Swedish as their first language; however, the following languages were also represented: Norwegian, Dutch, German, Spanish, Portuguese, Romanian, Russian, Bulgarian and Hebrew.

The average time for filling in the 11-page questionnaire was 20 minutes. Each question had 2—5 answer options. As a rule, only one of them should be marked, but for questions where more than one option was chosen, each subject's score was evenly distributed over the options marked. Some follow-up questions were not to be answered by all subjects. In a small number of cases, questions were mistakenly omitted. The percentage of answers for a certain option has always been based on the actual number of subjects who answered each question. For many of the questions, an opportunity for comments was provided. In a few cases, comments made by subjects have led to reinterpretation of their answers, i.e., if the choice of a given option does not coincide with

a comment on it, the answer has been interpreted in accordance with the comment.

## Questions and results

The initial question concerned the main motive for seeking pronunciation advice in encyclopedias. As might have been expected, a vast majority, 69%, reported that they personally wanted to know the pronunciation of items they were looking up, but, interestingly enough, for 13%, the reason was to resolve disputes about pronunciation. Others used the pronunciation advice to feel more secure in company or to prepare themselves for speaking in public.

When it came to the purpose of the advice given, almost half of the subjects (44%) wanted it to be descriptive (presenting one or more existing pronunciations). The other options were *prescriptive* and *guiding*, the latter principle being adopted by several modern encyclopedias. For entries consisting of personal names, a striking majority, 97%, wanted pronunciation to be given not only for second (family) names, but also for first names, at least for persons who are always referred to by both names. This result is quite contrary to the prevalent tradition in Sweden, where pronunciation is provided exclusively for second names. Somewhat surprisingly, a majority of 69% wanted pronunciation (or stress) only to be given for entry headings, not for scientific terms mentioned later. Of the remaining 31%, however, 76% wanted stress to be marked in scientific terms, e.g., *Calendula officinalis*, mentioned either initially only or also further down in the article text.

## Notation of prosodic features

The next section covered stress and tonal features. 46% considered it sufficient to mark main stress, whereas main plus secondary stress was preferred by 31%. The rest demanded even a third degree of stress to be featured. Such a system has been used in John Wells's Longman Pronunciation Dictionary, but was abandoned with its 3rd edition (2008).

70% of the subjects wanted tonal features to be displayed, and 75% of those thought Swedish accent 1 and 2 and the corresponding Norwegian *tonelag* features would suffice to be shown.

A number of systems for marking stress exist, both within phonetic transcriptions in square brackets and outside these, in words written in normal orthography. In table 1

examples of systems for marking stress in entry headings are given. However, subjects showed a strong tendency to dislike having stress marked in entry headings. As many as 90% favoured a separate IPA transcription instead. According to the comments made, the reason was that they did not want the image of the orthographic word to be disturbed by signs that could possibly be mistaken for diacritics.

Table 1 shows five different ways of marking stress in orthographic words that the panel had to evaluate. The corresponding IPA transcriptions of the four words would be [no'bel], ['mɑŋkəl], ['ram,lø:sa] and [ʃa'mɑ:n].

*Table 1. Examples of systems for marking main stress in orthographic words: (a) IPA system as used by Den Store Danske Encyklopædi, (b) Nationalencyklopedin & Nordisk Familjebok 2nd edn. system, (c) SAOL (Swedish Academy Wordlist), Svensk uppslagsbok & NE:s ordbok system, (d) Bra Böckers lexikon & Lexikon 2000 system, (e) Brockhaus, Meyers & Duden Aussprachewörterbuch system.<sup>1</sup>*

(a)	No'bel	'Mankell	'Ramlösa	scha'man
(b)	Nobe'l	Ma'nkell	Ra'mlösa	schama'n
(c)	Nobel'	Man'kell	Ram'lösa	schama'n
(d)	Nobel	Mankell	Ramlösa	schaman
(e)	Nobel	Mankell	Ramlösa	schaman

In case stress was still to be marked in entry headings, the subjects' preferences for the above systems were as follows:

- (a) : 51 %
- (b) : 11 %
- (c) : 9 %
- (d) : 6 %
- (e) : 20 %

As the figures show, this meant a strong support for IPA, whereas three of the systems widely used in Sweden were largely dismissed. System (e) is a German one, used in works with Max Mangold in the board of editors. It has the same economic advantages as (c), and is well suited for Swedish, where quantity is complementary distributed between vowels and consonants in stressed syllables. System (d), which does not account for quantity, can be seen as a simplification of (e). It seems to have been introduced in Sweden by Bra Böckers Lexikon, a very widespread Swedish encyclopedia, having the Danish work Lademanns Leksikon as its

model, published from 1973 on and now superseded by *Lexikon 2000*. The only Swedish encyclopedia where solely IPA transcriptions in brackets are used appears to be *Respons* (1997—8), a minor work of c. 30,000 entries, which is an adaptation of the Finnish *Studia*, aimed at young people. Its pronunciation system is, however, conceived in Sweden.

It ought to be mentioned that SAOB (*Svenska Akademiens ordbok*), the vast dictionary of the Swedish language, which began to be published in 1898 (sic!) and is still under edition, uses a system of its own. The above examples would be represented as follows: *nåbäl*<sup>3</sup>, *mar*<sup>4</sup>*kel*, *ram*<sup>3</sup>*l*<sup>2</sup>*sa*, *ſama*<sup>4</sup>*n*. The digits 1—4 represent different degrees of stress and are placed in the same way as the stress marks in system (c) above, their position thus denoting quantity, from which the quality of the *a*'s could, in turn, be derived. The digits also express accent 1 (in Mankell) and accent 2 (in Ramlösa). Being complex, this system has not been used in any encyclopedia.

### **Notation of segments**

For showing the pronunciation of segments, there was a strong bias, 80%, in favour of the IPA, possibly with some modifications, whereas the remaining 20% only wanted letters of the Swedish alphabet to be used. Two questions concerned the narrowness of transcriptions. Half of the subjects wanted transcriptions to be as narrow as in a textbook of the language in question, 31% narrow enough for a word to be identified by a native speaker if pronounced in accordance with the transcription. The remaining 19% meant that narrowness should be allowed to vary from language to language. Those who were of this opinion had the following motives for making a more narrow transcription for a certain language: the language is widely studied in Swedish schools (e.g., English, French, German, Spanish), 47%; the language is culturally and geographically close to Sweden, e.g., Danish, Finnish), 29%; the pronunciation of the language is judged to be easy for speakers of Swedish without knowledge of the language in question, (e.g., Italian, Spanish, Greek), 24%. More than one option had often been marked.

### **What pronunciation to present?**

One section dealt with the kinds of pronunciation to present. An important dimension is swediced—foreign, another one standard—

local. Like loanwords, many foreign geographical names, e.g., Hamburg, London, Paris, Barcelona, have obtained a standard, swediced pronunciation, whereas other ones, sometimes—but not always—less well-known, e.g., Bordeaux, Newcastle, Katowice, have not. The panel was asked how to treat the two types of names. A majority, 69% wanted a swediced pronunciation, if established, to be given, otherwise the original pronunciation. However, the remaining 31% would even permit the editors themselves to invent a pronunciation considered easier for speakers of Swedish in ‘difficult’ cases where no established swedifications exist, like Łódź and Poznań. Three subjects commented that they wanted both the original and swediced pronunciation to be given for Paris, Hamburg, etc.

In most of Sweden /r/ + dentals are amalgamated into retroflex sounds, [ʂ], [tʃ], [dʃ] etc. In Finland, however, and in southern Sweden, where /r/ is always realized as [ʁ] or [ʀ], the /r/ and the dentals are pronounced separately. One question put to the panel was whether <rs> etc. should be transcribed as retroflex sounds—as in the recently published *Norstedts svenska uttalsordbok* (a Swedish pronunciation dictionary)—or as sequences of [r] and dentals—as in most encyclopedias. The scores were 44% and 50% respectively, with an additional 6% answering by an option of their own: the local pronunciation of a geographical name should decide. No one in the panel was from Finland, but 71% of those members with Swedish as their first language were speakers of dialects lacking retroflex sounds.

Particularly for geographical names, two different pronunciations often exist side by side: one used by the local population, and another, a so-called reading pronunciation, used by people from outside, and sometimes by the inhabitants when speaking to strangers. The latter could be described as the result of somebody—who has never heard the name pronounced—reading it and making a guess at its pronunciation. Often the reading pronunciation has become some sort of national standard. A Swedish example is the ancient town of Vadstena, on site being pronounced [ˈvas,ste:na], elsewhere mostly [ˈva:d,ste:na]. The reading pronunciation was preferred by 62% of the subjects, the local one by 22%. The remainder also opted for local pronunciation, provided it did not contain any phonetic features alien to speakers of standard Swedish.

For English, Spanish and Portuguese, different standards exist in Europe, the Americas and other parts of the world. The panel was asked whether words in these languages should be transcribed in one standard variety for each language (e.g., Received Pronunciation, Madrid Spanish and Lisbon Portuguese), one European and one American pronunciation for each language, or if the local standard pronunciation (e.g., Australian English) should as far as possible be provided. The scores obtained were 27%, 52% and 21% respectively. Obviously, the panel felt a need to distinguish between European and American pronunciations, which is done in Nationalencyklopedin. It could be objected that native speakers of the languages in question use their own variety, irrespective of topic. On the other hand, it may be controversial to transcribe a living person's name in a way alien to him-/herself. For example, the name Berger is pronounced [ˈbɜːdʒə] in Britain but [ˈbɜːgər] in the U.S.

### **Audio pronunciations**

There were five questions about audio pronunciations, i.e. clickable recordings. The first one was whether such recordings should be read by native speakers in the standard variety of the language in question (as done in the digital versions of Nationalencyklopedin) or by one and the same speaker with a swedized pronunciation. Two thirds chose the first option.

The next question dealt with speaker sex. More than 87% wanted both male and female speakers, evenly distributed, while 4% preferred female and 8% male speakers. One of the subjects opting for male speakers commented that men, or women with voices in the lower frequency range, were preferable since they were easier to perceive for many persons with a hearing loss.

Then subjects were asked if they would like to use a digital encyclopedia where pronunciation was presented by means of synthetic speech recordings. 68% were clearly against, and of the remaining 32%, some expressed reservations like 'Only if extremely natural', 'If I have to' and 'I prefer natural speech'.

In the following question, the panel was asked how it would most frequently act when seeking pronunciation information in a digital encyclopedia with both easily accessible audio pronunciations and phonetic transcriptions. No less than 71% declared that they would use

both possibilities—which seems to be a wise strategy—, 19% would just listen, whereas the remaining 10% would stick to the transcriptions.

This section concluded with a question about the preferred way to describe the speech sounds represented by the signs. Should it be made by means of articulation descriptions like 'voiced bilabial fricative' or example words from languages where the sound appears, as '[β] Spanish *saber*, *jabón*' or by clickable recordings? Or by a combination of these? The scores were approximately 18%, 52% and 31% respectively. Several subjects preferred combinations. In such cases, each subject's score was evenly distributed over the options marked.

### **Familiarity with IPA alphabet**

In order to provide an idea of how familiar the panel members were with the IPA alphabet, they were finally presented with a chart of 36 frequently used IPA signs and asked to mark those they felt sure of how to pronounce. The average number of signs marked turned out to be 17. Of the 54 panel members, 6 did not mark any sign at all. The top scores were [æ]: 44, [ʃ] and [o]: both 41, [u]: 40, [ə]: 39, [a]: 37 and [ʒ]: 35. Somewhat surprising, [ʔ] obtained no less than 17 marks.

### **Discussion**

Apparently, Sweden and Germany are the two countries where pronunciation in encyclopedias are best satisfied. Many important works in other countries either do not supply pronunciation at all (Encyclopædia Britannica), or do so only sparingly (Grand Larousse universel and Den Store Danske Encyklopædi), instead referring their users to specialized pronunciation dictionaries. This solution is unsatisfactory because (i) such works are not readily available (ii) they are difficult for a layman to use (iii) you have to consult several works with different notations (iv) you will be unable to find the pronunciation of many words, proper names in particular.

An issue that pronunciation editors have to consider, but that was not taken up in the survey is how formal—casual the presented pronunciation should be. It is a rather theoretical problem, complicated to explain to panel members if they are not able to listen to any recordings. Normally, citation forms are given, but it can be of importance to have set rules for how

coarticulation and sandhi phenomena should be treated.

Another tricky task for pronunciation editors is to characterize the pronunciation of the phonetic signs. As one subject pointed out in a comment, descriptions like ‘voiced bilabial fricative’ do not tell you much unless you have been through an elementary course of phonetics. Neither do written example words serve their purpose to users without knowledge of the languages in question. It is quite evident that audio recordings of the written example words—in various languages for each sign, thus illustrating the phonetic range of it—would really add something.

The panel favoured original language pronunciation both in transcriptions (69% or more) and in audio recordings (67%). At least in Sweden, learners of foreign languages normally aim at a pronunciation as native-like as possible. However, this might not always be valid for encyclopedia users. When speaking your mother tongue, pronouncing single foreign words in a truly native-like way may appear snobbish or affected. Newsreaders usually do not change their base of articulation when encountering a foreign name. A general solution is hard to find. Since you do not know for what purpose users are seeking pronunciation advice, adopting a fixed level of swedification would not be satisfactory. The Oxford BBC Guide to pronunciation has solved this problem by supplying two pronunciations: an anglicized one, given as ‘respelled pronunciation’, and another one, more close to the original language, transcribed in IPA.

### Interim strategies

One question was an attempt to explore the strategies most frequently used by the subjects when they had run into words they did not know how to pronounce, in other words to find out what was going on in their minds before they began to seek pronunciation advice. The options and their scores were as follows:

- (a) I guess at a pronunciation and then use it silently to myself: 51%
- (b) I imagine the word pronounced in Swedish and then I use that pronunciation silently to myself: 16%
- (c) I can’t relax before I know how to pronounce the word; therefore, I avoid all conjectures and immediately try to find out how the word is pronounced: 22%

- (d) I don’t imagine any pronunciation at all but memorize the image of the written word and link it to the concept it represents: 11%.

It can be doubted whether (d) is a plausible option for people using alphabetical script. One subject commented that it was not. Anyway, it seems that it would be more likely to be used by those brought up in the tradition of iconographic script. Researchers of the reading process might be able to judge.

The outcome is that the panel is rather reluctant to use Swedish pronunciation—even tentatively—for foreign words, like saying for example [ˈʃɑ:kəspe:arə] for Shakespeare or [ˈkɑ:məs] for Camus, pronunciations that are sometimes heard from Swedish children. Rather, they prefer to make guesses like [ˈɡri:nwɪtʃ] for Greenwich, as is frequently done in Sweden.

### Conclusion

Sweden has grand traditions in the field of presenting pronunciation in encyclopedias, but this does not mean that they should be left unchanged. It is quite evident from the panel’s answers that the principle of not giving pronunciation for first names is totally outdated.

The digital revolution provides new possibilities. Not only does it allow for showing more than one pronunciation, e.g., one standard and one regional variety, since there is now space galore. Besides allowing audio recordings of entry headings, it makes for better descriptions of the sounds represented by the various signs, by completing written example words in various languages with sound recordings of them.

IPA transcriptions should be favoured when producing new encyclopedias. The Internet has contributed to an increased use of the IPA, especially on the Wikipedia, but since the authors of those transcriptions do not always have sufficient knowledge of phonetics, the correctness of certain transcriptions ought to be questioned.

The extent to which transcriptions should be used, and how detailed they should be must depend on the kind of reference book and of the group of users aimed at. Nevertheless, account must always be taken of the many erroneous pronunciations that exist and continue to spread, e.g., [ˈnætʃənəl] for the English word *national*, a result of Swedish influence.

## **Acknowledgements**

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## **Notes**

1. *In Bra Böckers Lexikon and Lexikon 2000, system (d)—dots under vowel signs—is used for denoting main stress also in transcriptions within brackets, where segments are rendered in IPA.*

2. *Also available free of charge on the Internet.*

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