

One Database, Four Monofunctional Dictionaries

Abstract

A dictionary is an information tool. In the last century most dictionaries were constructed as polyfunctional tools following a broad and imprecise understanding: A dictionary is to be used by everyone for every kind of communicative and cognitive problem. But normal tools are not polyfunctional. If you go to a shop and ask for a saw, you have to specify first what you are going to saw: a big tree or a small piece of plywood. After having explained that, you will be offered a monofunctional saw. So it should be too for information tool: A good tool is a tool designed for a certain function and for a certain user group for certain needs. This paper will argue for the need of dictionary designs for monofunctional dictionaries. Doing that, we need to be aware of the fact that a lexicographical database is not a dictionary. A database contains data which can be presented in one or more monofunctional or polyfunctional dictionaries.

The database of the dictionary in question comprises 4.015 (September 30st, 2012) cards with definitions, historical background, synonyms, references and links, pictures etc. Outgoing from this database, four different dictionaries are presented. All of them are dictionaries on musical terms mainly from the world of classical music, but also from commercial music and the so-called world music. The music dictionaries intend to be tools for music students in universities and music schools, for both amateurs and professional musicians and for every interested person who wants aid when reading texts on music or who wishes to get further information on musical terms and topics.

1. Introduction

The language of Western music culture is full of foreign expressions and loan words. Music dictionaries do not only translate these terms, they are expected to explain them more or less elaborately. When the names of instruments and genres of the so-called Third World music culture are taken into consideration too, the texture of a dictionary becomes very complex. Many music dictionaries take in names of composers and other personalities of music. This project does not. Composers and artists are mentioned in the text as part of examples but they are not lemmatized.

The dictionary project started as a printed book back in the 1990s, at a time when secretaries were still writing on typewriters. Hardly anybody was thinking about the internet, not to speak about internet dictionaries. The printed dictionary, *Politikens Musikordbog*, had more than 3.000 entries mainly from the world of Western music culture. It had two functions: reception and knowledge. As a matter of fact it is mentioned in the preface that it is the intention of the author that it be used as a reader. Nevertheless the explanations were designed in a manner that the reader may use the book as a quick reference work. Often the explanations were parted up in two: a short sentence defining the expression mostly followed by a longer text with more background, history, music and genre examples and references to other dictionary entries. Pictures were supplied but for reasons of costs and dimensions they were limited – the publisher only allowed for about 50 pictures. The music examples were made in a primitive notation system and copied as pictures as well. As a supplement to the printed dictionary the back of the book had a systematic part with eight (now reduced to six) paragraphs containing an overview of the most important issues of Western music theory such as scales, chords, intervals and so on.

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Politikens Musikordbog was published 1996. Around the turn of the century, we began thinking about using the material for an internet dictionary very much influenced by other projects at the Centre for Lexicography at the Aarhus School of Business, now the University of Aarhus. In August 2006 this first version of a Danish music dictionary in the internet was introduced on the address www.musikordbogen.dk and it was free of charge, accessible for everybody. We used the same database as for the printed dictionary, but added different new types of items. The printed dictionary and the first version of the electronic dictionary were polyfunctional information tools, but afterwards the latter it underwent many changes. The most important one is the extraction of different monofunctional dictionaries (information tools). In the first version, there were two dictionaries, later three, now four. The systematic part is still there and two of the dictionaries refer to it.

In the first version of the dictionary there were only two search methods, two “buttons” as we called them: *Kort* (Short) and *Lang* (Long), a dictionary for reception of music texts and a dictionary for knowledge about music. The Short-button presented a short explanation of the chosen term. The Long-button presented the whole entry to the term including the short explanation. Very often the longer elaboration was built on the short explanation and just continued the sentence first displayed.

2. The Music Database and the Four Dictionaries

Now to the latest version in the use of the music term database. The items of an article are put into fields which can be connected in several ways:

Fields
Lemma
Equivalent
Examples
Language
Abbreviation
Short explanation
Long explanation
Note
See also
Synonym
Internet link
Systematic paragraph
Picture

Table 1. Fields in the Database

This pattern is the result of a long process connected to the work on all the dictionaries made by the Centre of Lexicography at the University of Aarhus. Not every field is filled in under each lemma. The language specification and the equivalent are only there when it is a foreign word; examples are sometimes constructed, sometimes taken from music texts. The abbreviation field is just there to mark; the meaning of the abbreviation is put into the Short explanation field.

The first music dictionary is meant for reception only and asks for a swift and short answer to a question. The first button under the search frame says *forstå et udtryk* (understand a term). The diagram below shows which fields are used for the first dictionary and how they are displayed for the user.

Searching in fields + sequence	Field	Sequence in showing	Showing in lists
1	Lemma	1	1
	Equivalent		
	Examples		
	Language		
	Abbreviation		
	Short explanation	2	
	Long explanation		
	Note		
	See also		
	Synonym		
	Internet link		
	Systematic paragraph		
	Picture	3	

Table 2. "Reception Dictionary" – Understanding of Musical Terms

In this dictionary the search goes first to the lemma-field. If the search string is a lemma the dictionary will show the lemma with its short explanation and the picture – if there is any. If there are no lemmas comprising the search term or if there are more lemmas corresponding to it, the system will show a list of possible lemmas and the user can now click on the one(s) he wants to see. This sort of searching where the search stops after having searched in the lemma fields is called a minimalizing search.

This dictionary can be illustrated by a fictive user situation: Hearing a radio programme on African music the listener wants to know what an *mbira* is. Here there might be a difficulty in spelling but ordbogen.com offers the possibility of writing a part of the word and getting a list of ten suggestions as to what the user might mean. We now assume that the radio speaker spells out the word and/or that the listener has written the term correctly:

<i>mbira</i> Kort forklaring en lille håndholdt afrikansk idiofon, som består af nogle metallunger, der spilles med tommelfingrene, med en lille kasse som resonator	<i>mbira</i> Short explanation a small hand-held African idiophone with metal tongues on a resonating box which are played with the thumbs
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If we visualize the user situation, he or she will want to go on hearing the radio programme. So a quick answer is needed. You might say that this explanation contains an expression, "idiophone" which might lead to new questions. This is the price of the principle that the definition should be as short as possible. In this case we should say that the short explanation is enough to understand what was meant in the context (you might as well say "a small hand-held thing" or "a small hand-held instrument").

The second music dictionary is meant for knowledge about musical topics, terms, genres, instruments etc. It contains all the short explanations from the first dictionary and furthermore elaborations about history, examples and works, synonyms, links and pictures. And it has references to other entries and to the systematic part if this extends the understanding.

Searching in fields + sequence	Field	Sequence in showing	Showing in lists
1	Lemma	1	1
	Equivalent		
	Examples		
	Language	2	
	Abbreviation		
	Short explanation	3	
	Long explanation	4	
	Note	5	
	See also	7	
	Synonym	6	
	Internet link	9	
	Systematic paragraph	8	
	Picture	10	

Table 3. "Knowledge Dictionary" - Knowledge about Musical Terms

As in the first dictionary, this one searches first (and only) in the lemma-list but it presents much more of the data fields. Why does the sequence of showing not correspond totally with the sequence of the list of fields? It is just due to the fact that the fields are listed like we fill them in in the FileMakerPro program which serves as a framework for the database. And you might imagine a case where you would want another sequence, so the field list is just the basis.

Again an example: My radio listener from above is reading a journal article on African music and encounters the term *mbira*. He can imagine that it must be an instrument but he wants to know more about it. Here are the results of searching the term *mbira* in the second dictionary:

mbira Kort forklaring en lille håndholdt afrikansk idiofon...	mbira Short explanation [see above] a small hand-held African idiophone...
Uddybende forklaring Mbira kaldes også tommelfingerklaver. Tungerne kan også være af træ, og lydkassen, der som regel er af træ eller bambus, kan have mange forskellige former. Det kan også være en kalabas. Mbiraen findes i store dele af Syd- og Østafrika. Den er nationalinstrument i Zimbabwe og bruges af Shonafolket i religiøs sammenhæng. Man finder den også under betegnelsen ikembe, og den ledsages ofte af rasleinstrumentet hosho, en kalabas fyldt med frø. Atter andre betegnelser er sansa og kalimba.	Elaboration Mbira is also called thumb piano. The tongues can consist of wood and the resonating box, mostly of wood or bamboo can have many forms... It is the national instrument of Zimbabwe and is used by the Shonas in religious ceremonies...
Synonymer sansa kalimba Se også idiofon	Synonyms sansa kalimba See also idiophone
Flere oplysninger www.mbira.org powerofpoetry.org	More information www.mbira.org powerofpoetry.org
Billede	Picture

Table 4. Mbira in the knowledge dictionary

The translation of the text is shortened whereas the Danish side is complete. As you see you get much more information from this dictionary. The so-called *Uddybende forklaring* (Elaboration) contains detailed – you might say more technical – information about the instrument, where it is found and how it is used. The synonyms are linked to their entries and you can of course click on the internet addresses. One of them brings the sound of the instrument.

The third music dictionary has as its primary function to be a dictionary of knowledge and secondly it may be used for production. You can see a difference to the other dictionaries in the left part of the table. The search method is maximizing that is to say the search does not stop after the first field. The system searches all text fields in the database, and if a search string happens to be a lemma it appears too.

Searching in fields + sequence	Field	Sequence in showing	Showing in lists
	Lemma	1	1
5	Equivalent		
	Examples		
	Language	2	
	Abbreviation		
1	Short explanation	3	
4	Long explanation	4	
2	Note	5	
	See also	7	
3	Synonym	6	
	Internet link	9	
	Systematic paragraph	8	
	Picture	10	

Table 5. "Find a term" – Find a Musical Term

The user situations of this dictionary will be manifold, the users are the same. If you look for all the entries containing a certain term or word this is the button you should use. It is not to be recommended to write *piano* or *violin* as search string, or you will suffer the so-called information death.

The search strings need not be musical terms; they can be taken from common language such as e.g. the word *African*. If you write that word as search string you will get 23 hits:

afrikansk (African)
 balafon (= balaphone)
 blues
 bue (= bow)
 darbuka
 djembe
 Gnawa
 highlife
 hosho
 ikembe
 jazz
 juju
 kora
 krar
 marimba
 mbira
 minimalisme (= minimalism)
 rabab

rebab
 samba
 sansa
 strygeinstrument (=string instrument)
 work-song
 zanza

What for? – For knowledge about what the dictionary can offer about African instruments, genres, and references to African elements in a context with Western music. For production if you are writing a paper on African music.

The search string *taffelform* (*table form*) shall show 3 hits: *taffelklaver*, *flygel* and *klaver* (*table piano*, *grand piano*, and *piano*). Not more than 10; therefore, all are shown with their full entries, where *taffelform* is marked in yellow. Already the first entry gives you information on the meaning of the word.

The search string *hurtig* (*fast*) – far more than 100 hits!

What for? – Possibly production, e.g. if you want to write the proper term as a header in a composition or arrangement.

In this dictionary the user can look up names as they are part of the text in the explanations. Example: (The composer) *Berlioz* – 14 hits telling a lot about the composer, in which period he lived, what was his main achievements etc.

Last but not least you can make an advanced search in this dictionary like you know it from Google. E.g. *piano + romantic* (period) where you get all the entries on piano music from the romantic period, or *concert + major – flute* where you get what the dictionary offers on concerts in major without flute but with any other instrument.

The fourth music dictionary is the newest one. As very many musical terms are loan words or directly foreign words – mainly from the Italian language – many users will call for translation of a term. Before this dictionary was set up as a dictionary for itself, the translations appeared in the other three just beneath the lemmas. I must admit that it needed some persuasion to make me take out the translation into an independent dictionary. But after all I could not bring in any argument why the translation of a term should appear when the user looked it up to get a quick answer for reception problems. Instead the translation often became a part of the short explanation of the first dictionary.

Sometimes this translation is enough, sometimes it is useful to get an example in order to understand the term. This dictionary is obviously monofunctional.

Searching in fields + sequence	Field	Sequence in showing	Showing in lists
1	Lemma	1	1
2	Equivalent	3	
3	Examples	4	
	Language	2	
	Abbreviation		
	Short explanation		
	Long explanation		
	Note		
	See also		
	Synonym		
	Internet link		
	Systematic paragraph		
	Picture		

Table 6. "Translation Dictionary" – Translation of a musical term

As we said at the beginning a good deal of the terms in the language of Western music are foreign words – especially Italian – and loan words or names taken over from the language where they were first introduced. As we have seen above for instance *mbira* is the name of an instrument for which I cannot just construct a Danish word (you can say *tommelfingerklaver* (= thumb piano) but that is more like an explanation), it is taken over and even inflected as a Danish word. So lemmas like this do not appear in the translation dictionary.

This dictionary becomes a sort of dictionary of foreign language. When it translates a term which is used in common language it sometimes does not make sense for a musician. E.g. the term *highlife* which stands for a musical style from the 1920'ies in Ghana and Sierra Leone; the word itself means “the life of the upper classes”. This translation can contribute to the understanding of the term in its use of the music language and so it is incorporated into the Short explanation of the term, i.e. in the first dictionary. Another example: the French word *serrez* means tighten up but that is not a meaning in itself when used in the language of music. So in the first dictionary it is incorporated into the Short explanation and in the fourth dictionary the translation is supplied with an addition: *stram til, dvs. pres tempoet op* (= tighten up, i.e. make the tempo increase).

3. Conclusion

We have tried to show in this contribution how the music database was used first for a polyfunctional print dictionary and later was transformed into four internet dictionaries, each with its own function and its own appearance. It went through several stages, each time resulting in a more condensed form where the user can be led to get exactly the amount of information he is looking for. Comparing the list showed under the search string *afrikansk* (= African) with the print dictionary with which it all started, we find that 50% of the now found entries were not there at all. Of the ones being in the printed book only one is almost unaltered, the rest have a totally new appearance. We claim that this new appearance has improved this reference work by more than 50%. And if it was to be printed the volume would be increased by 100%.

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