
Editing and Presenting Complex Source Material in an Online Dictionary: The Case of ONP

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Abstract

Ordbog over det norrøne prosasprog/A Dictionary of Old Norse Prose (ONP) is a dictionary project that aims at bringing to light the vocabulary of medieval West Scandinavian prose texts, with a large number of examples of word use and various kinds of supplementary secondary information. In this paper, we give a brief overview of the project, discuss its background and approach to the source material and some of the related problematic aspects. We account for the way collected data has been treated and presented in dictionary entries and discuss the editing system that ONP has developed to suit its specialized needs. The dictionary has gone through the transformation from a printed publication to a digital online version, in the middle of a multi-volume publication process. We discuss how this has affected the editing work and how editorial procedures have evolved to better accommodate the lexicographic information through an online medium. We give some examples of how complex information is presented to the user in ONP Online and share our ideas about further development and improvement of the online version.

Keywords: dictionary making; editing principles; online dictionary; editing system; user interface

1 Introduction

Ordbog over det norrøne prosasprog/A Dictionary of Old Norse Prose (ONP) was established in 1939. In the beginning, the project was primarily intended to supplement the extensive Old Norse dictionary of Johan Fritzner's *Ordbog over det gamle norske Sprog* (1886, 1891, 1896)¹ and build on the lexicographic work of other 19th century dictionaries, such as the one by Cleasby and Vigfusson (1874). However, as the lexicographic work progressed, it became clear that Fritzner's work had various limitations, both in terms of the scope of the material and the application of editorial principles. Furthermore, in the period that had passed since the publication of these dictionaries, interest in Old Norse literature had increased and many new scholarly text editions had appeared. The conclusion was that an original lexical description of Old Norse was essential and the project evolved into a new, historical, scholarly dictionary. The focus was to be on the vocabulary of prose texts, as the poetic language had recently been thoroughly accounted for with a new edition of the *Lexicon Poeticum* (Jónsson 1931). From the start, the project has been funded by the *Arnarnagnæan Commission* and hosted by the University of Copenhagen and is today part of the *Department of Nordic Research* (in Danish *Nordisk Forskningsinstitut*).

The source material, which serves as the basis for the dictionary work consists of Icelandic and Norwegian medieval texts, from about 1150 to 1370 (for Norway) and from 1150 to 1540 (for

¹ English translation of the title of this dictionary: *Dictionary of the Old Norwegian Language*.

Iceland). All texts are from the pre-printing era and are thus preserved in manuscripts of various qualities, many of which have been edited and published in scholarly editions.

2 Excerption and Publication

In the decades following the establishment of the dictionary, the staff was mostly concerned with building the foundation for an eventual printed publication. This meant excerpting texts, which covered the vocabulary from all known Old Norse prose genres by collecting examples of word use. Citations were copied onto slips, which were then filed under a particular lemma in alphabetical order. The collection of dictionary citations was intended to be very thorough and to elucidate the range of meaning of every word. A few key works were comprehensively excerpted, i.e. every single word in those texts was written down in context on a slip and filed in the citation archive. As the decades passed and the availability of text editions increased, the citation collection grew. The final result was an archive consisting of around 750.000 handwritten slips, organized under ca. 75.000 lemmas.

After a long period of collecting citations, plans were conceived to begin publication in book form. According to the initial schedule for the print dictionary multiple volumes were to be published over a period of 25 years, with the first volume to appear in the mid-sixties (Widding 1964: 21). However, the work was delayed for various reasons and the actual publication of the dictionary did not commence until 1989 with a volume of indices (ONP *Registre*). The print publication continued with three more volumes (ONP 1-3, covering the alphabet from *a* to *em*), the latest of which came out in 2004. The rate of publication indicated that it would take many decades to publish all the estimated twelve volumes and the final one would not see the light of day until around 2050. At the same time, electronic publication of dictionary material was starting to take off and therefore, in 2005, the print publication was put on hold and plans were drawn for a different publishing strategy. Instead of printed volumes, future publication of the dictionary was to be on an electronic platform and available online.

Immediately after the print publication had been put on hold, the work began to prepare the dictionary material for digitalization and eventual electronic publication. In 2010, the first version of ONP Online was published on the web (for a more detailed historic overview see Battista & Johannsson 2014). The online version of the dictionary is dynamic and is continually expanding and improving as new material and features are added (cf. sections 6 & 7 below).

3 Editorial Approach and Organization of Information

The fundamental approach of ONP is to elucidate the actual original medieval material while maintaining rigorous philological standards. The process involves strict textual principles and attention to orthographic details. This policy of philological integrity set, from the beginning, ONP apart from earlier lexicographical work on Old Norse/Icelandic. In other major works (e.g. Fritzner (1881-1893), Cleasby & Vigfusson (1874)) the spelling of example citations is normalized and many times the entries refer to text editions, many of which have become obsolete. Moreover, it is impossible for the user of these dictionaries to see whether the quoted text edition is based on an original 13th century vellum document or a 17th century paper transcript, or whether the editor of the relevant text edition perhaps had “emended” or “improved” the original text, a practice common in the early days of Old Norse scholarship. With the new ONP dictionary detailed textual information

became an integral part of the organization of the material.

The approach laid out by ONP means, in practice, that all example citations are rendered as close to the source material as possible, with each citation given in the medieval original orthography, as found in the relevant scholarly edition, including special and non-standard letters, and provided with a clear reference to the manuscript of origin. This allows the user to check the source material if he or she so desires.² ONP also gives supplementary information and references to relevant secondary literature. A good way to illustrate this is to take a closer look at some entries from one of the printed volumes of the dictionary:

<p>*duma <i>vb.</i> (Fr4 “H. Larsen Gl.” ⇒ þa mun belgi duma (<i>ms. dvina S10r9</i>) <i>MedMisc 11122</i>) → <i>dvina vb.</i> Gloss.: <i>Med ?; Fr4 ?</i></p> <p>¹dumba <i>sb. f.</i> <i>(mørk) skýltáge, ?stovskey // (dark) cloud/mist/fog, ?dust cloud: geck þar af (?: af þeim hræum) ... sua oþolligr snýkr ad þat uar daudligt hueriu lifi. loftid dimadiz oc synndi sic med beiskri hrýgd oc j manadi januario sem þessi dumba kom heim ifir romam ... •Greg AM 764 4° 18bisr17; Hann ... hristi einn poka, en þar úr fýkr ein dumba svört ... Möndull ... hristi belg sinn, ok blés þar úr vindi miklum i móti dumbunni, svá hún fauk aprt i augu á Grims mönnum, svá þeir urðu þegar blindir GHR 33827 sem duft eða dumba: Greca hans vnnosta uar sem dvpt edr dvmba ok allar adrar ivngfrv(r) hia þessvm meykongi Gibb 254</i> Gloss.: <i>EJ; CIV; Fr; LP; AJ; CIVSuppl; deVr; NO; ÁBLM; (Bl cf. corr.)</i></p> <p>²dumba <i>adj.</i> [<i>indecl.</i>] (<i>cf. dumbi adj.</i>) <i>stum, unæxlende // dumb, unable to speak: ¹⁸dvmbi [GKS 3270 4° “B”, etc.; non emend. dumba] sa er ecki mælr. eða dafr sa er ecki heyrir ÁKr 2815n.; stodo aller sem ¹dumbi [var. dumba] være. oc miok sva malausir var. BarLA 13412: AM 232 fol “b”, etc. (~ lat. muti JDamBarl 9430); hann</i></p>	<p>var bæde davfr og dvmba <i>JerReyk 22322</i> (~ <i>nty. stum LegJherPass 210vb32</i>); hon dyrkar ok kyssir dauf ok dumba skurdgod <i>Stj1 20713</i> (~ <i>lat. muta SpecH 43a47 (I 119)</i>); mællto fleiri kykvænndi i þann tima þo at nu se oll dumba <i>Kgs 7837; item: •ÓHLeg 1072</i> Gloss.: <i>EJ; AJ; ÁBLM (dumbi sb.); (Bl)</i></p> <p>dumb-bleikr <i>adj.</i> □ <i>?mat/grálig bleg // ?dull/greyish pale: Calcedonius heiter eirn ærligr Stein hann hefer dumbleikar (<i>ms. dumbleikann</i>) lit <i>LapMedMiscx 22021</i> → <i>ms. 2067</i> (~ <i>da. dum blek HarpK 17820</i>)</i></p> <p>¹dumbi <i>sb. m.</i> [±; -ar] □ <i>(en som er stum ::) bogstav der står for ustemt lyd/konsonant // (one who is dumb ::) a letter which represents an unvoiced sound/consonant: stafer þeir er ver kollvm dumba stafi þat erv. (skrevet med runetegn // written with runic letters) f þ k t b ok erv þesser stafer æi af því ¹dvmbar [var. dvmbir <i>Gramm3748 4412</i>] kallaðer at þeir hafi ekki hliod. helldr af þi, at þeir hafa litið hliod hia raddar stofvm • <i>Gramm3W 64</i></i> Gloss.: <i>EJ (dumba adj.); Fr; Bin; NO; ÁBLM; (Bl)</i></p> <p>²dumbi <i>adj.</i> [<i>indecl.</i>] (<i>cf. dumba adj.</i>) <i>stum, mállos // dumb, speechless: Væringr æinn i garðum austr kæypti ser þræl æinn ungan. Oc var dumbi matte</i></p>
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Figure 1: Entries from the print edition of the dictionary (ONP 3:337-338).

Here we observe two types of lemma: the main entries are in bold, while words that are outside the scope of ONP are shown in normal type. These can be words from poetry that are found in other dictionaries, loan words that are not morphologically integrated into the language, or the so-called “ghost words”, i.e. words which are found in other dictionaries, but are based on obsolete editions or misreading of manuscripts and therefore in reality do not exist (cf. *duma* in Figure 1, which is a misreading of *dvina*). Such ghost words are also indicated by a preceding asterisk.

The dictionary has two target languages: Danish and English. The definitions are largely given as equivalents, rather than detailed explanations. The two target languages are separated with a double slash (/). The square symbol □ indicates that the dictionary lists all the excerpted examples of that particular word, e.g. *dumbleikr* in the 2nd column in Figure 1.

Variant readings are a characteristic feature of ONP. When multiple manuscripts are used in a scholarly text edition, there is often a variation of word use between texts, which can shed light on both nuances in meaning and morphological characteristics of a given word. Such variations can be of interest for the user and are therefore commonly shown. Such is the case, e.g. with the form *dvmbir*

² Of course checking source material requires access to the actual manuscripts. The originals are primarily located at the Arnarnagnæan Institute in Iceland and the Arnarnagnæan Collection in Copenhagen. Alternatively, high-resolution photographs exist of many manuscripts, which are more widely accessible and in some cases are available online, e.g. handrit.is.

under the lemma *dumbi*, which is actually a variant reading of the plural form *dvambar* found in the primary textual source of the referred work.

A detailed system of sigla indicates both a reference to an edition as well as a specific manuscript. Information on what textual sources each siglum refers to is given in the volume of indices (ONP Registre). e.g. *MedMisc III*²² refers to the edition of Larsen (1931), which in turn is based on texts from the manuscript RoyallrAcad 23 D 43 (ONP Registre: 334), a manuscript from the Royal Irish Academy in Dublin (ONP Registre: 491). Sometimes a medieval manuscript is cited directly by shelfmark, folio and line number, as is the case with the first example citation in ¹*dumba* (*Greg AM 764 4^o 18^{bis,r17}*).

Editorial comments are also featured in the entries. These can both be comments by the editor of the cited scholarly work, or by the dictionary editor responsible for the relevant entry. Such comments are often needed to clarify the citation, e.g. under ¹*dumba* we find an explanation of what the preposition *af* ‘of’ refers to.

There are references to foreign parallels (esp. Latin), e.g. in *dumba* adj. in Figure 1. Here the word *dumba* corresponds to *muti* in the Latin texts, which probably served as a source for the Old Norse translation.

Immediately following each headword, we often find morphological information (inflectional pattern and verb conjugation) e.g. *dumbi* [÷; -ar]. The endings in square brackets show the genitive singular ending and nominative plural ending separated by a semicolon. Such morphological information is based on the actual examples found in the dictionary database and not reconstructed on the basis of historical linguistic knowledge. Here the genitive singular form is not found in the dictionary data, where the word is only attested in the plural, and thus we find ÷ in the morphological brackets, instead of a singular ending. If there is no indication of morphological alternation no information is shown.

Some syntactic information is also given, such as complements of verbs and occurrences of collocations and phrases, e.g. *duft eða dumba* under ¹*dumba*. In addition at the bottom of each entry, is a list of other dictionaries or glossaries where the word is found (*Gloss*), references to secondary literature (*Litt*) and a list of compounds where the lemma occurs as a second member (*Comp*).

4 The Development of the Dictionary Database and IT-system

As is evident from the discussion above, ONP keeps track of a variety of different information about each headword, and its quoted citations; more than in most dictionaries. It also gives many more examples of usage than previous works. The level of complexity and details is also quite high. Keeping track of all this information was quite difficult in the early days of the dictionary, where the work was primarily done with pen and paper and the organization of information was carried out mainly through filing of various slips.

In the period between the initial plan for the publication and the early 1980s, when the actual time frame for print publication was established, computers had started to revolutionize the field of lexicography. Using computers was especially advantageous for the type of material ONP deals with and the dictionary editors were relatively quick to realize the advantages of building a database to keep track of all the information that had been collected on paper over the years.

Already in the 1980s, ONP started to use its own digital word lists and computerized databases. This allowed for a wealth of information to be linked together in order to give a much more detailed picture of particular headwords and related citation examples.

headword as well as fields for cross-references to other headwords (although these are empty here). On the right next to it there is another table, which contains the main structure of the entry, consisting in this case of two sections, I and II. These sections are used to organize the citations. Section I is where the bulk of the material belongs. If necessary, additional sections can be used to account for citations that fall outside the main focus of the dictionary. Here section II contains examples from younger Norwegian sources.³ The fourth table visible in the middle of the screenshot shows the list of definitions, in both target languages. This table also contains fields intended to show information about collocations, syntactic elements, e.g. case use and prepositional phrases associated with verbs. The largest part of the screen shows the table containing all the citations associated with this headword. The different fields are highlighted by distinctive colours. From left to right: section (peach), keyword for phrases and collocations (green), homograph number (not needed here), inflected form of the headword (turquoise), headword (pink), definition number (yellow), editorial commentary (white), citation (khaki), old reference siglum (olive), internal commentary (pink), reference to cited work, edition reference, page/line reference, slip number (assigned to each slip in the archive), subentry number (in cases when more than one entry is required to accommodate the amount of information, i.e. when the information is contained on more than one slip).

Additional fields accommodate the information about other relevant factors, such as variant readings, foreign parallels, dating of the manuscripts, geographical provenience (Norway or Iceland) and various other kinds of information not shown here.

The development of the computer system facilitated the publishing of printed volumes of ONP. Once in the database all information could be accessed with relative ease and the editors could work with the material much more efficiently. The computer system was also very important in the later stages of the project and the transition of ONP to an online platform.

5 Online Version and Editorial Procedures

It was a difficult decision to halt the print publication of ONP in 2004. The published volumes had been well received and the editors looked forward to seeing through the publication of all intended volumes. At the same time, it was clear that a digital version of ONP would have many appealing qualities. It would be possible to edit the material more effectively, give immediate access to more information available in the dictionary database and open up for innovative ways of searching and working with the material. An appealing advantage was also the possibility of correcting errors and updating the information. Hence, the decision was made to transfer the material to a digital platform, without ruling out the possibility of resuming publication in print at a later date.

In 2005 work began on preparing the unpublished dictionary material for digitalization and eventual electronic publication. It was decided to publish all excerpted dictionary material, even though the editing work was not finished, including the citations belonging to earlier published entries, but not included in the printed volumes. The idea was that the editing work would continue, but unpublished material would be made accessible in a rather 'raw' form as a list of headwords along with their citations. The preparation for this included physically going through all the material, organizing the citation slips and scanning them under the relevant headwords. The preparation phase also included updating old reference sigla to reflect the latest editions used by the dictionary. Many texts had been republished in improved scholarly editions and the dictionary citations needed to reflect the latest

³ Such secondary material includes younger texts, different types of onomastic material, poetic language, etc.

advancements in text research. Finally the preparation phase included scanning scholarly editions and obtaining the necessary copyrights to integrate them into the online version of the dictionary. The preparation phase is described in more detail in Battista & Johannsson 2014.

The digital edition (ONP Online) has been available on the web since 2010. Its structure is laid out schematically in Figure 3. ONP Online brings together three basic types of dictionary entries, i.e. entries from the printed volumes, later dictionary entries edited online, and the ‘bare’ entries consisting only of a headword plus scanned citation slips. All three types of entries contain citations, which are connected via the reference sigla to a scanned page of the actual scholarly editions.

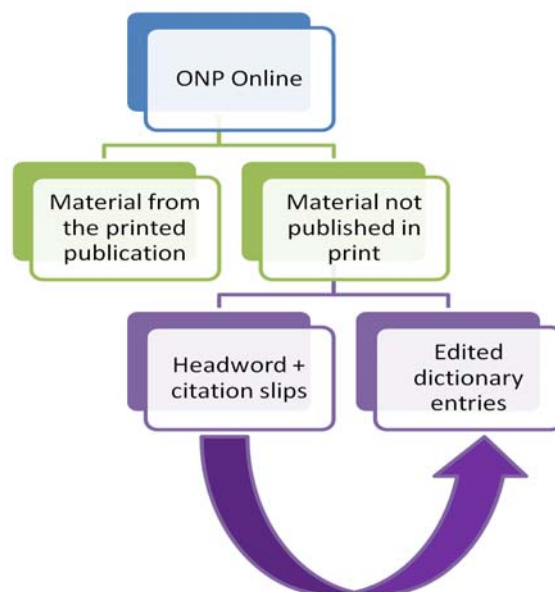


Figure 3: The structure of ONP Online. The figure shows how the online version of the dictionary combines material from the print edition and material not published in print and indicates how raw entries are gradually being replaced by full-fledged edited dictionary entries.

As indicated in Figure 3, the editing work is still a work in progress. However, the editorial procedures of the online version are somewhat different from those of the print publication. The strict alphabetical approach has been abandoned in favour of editing certain groups of words as a whole. The remaining headwords were divided into twelve different groups based on part of speech and morphological complexity. The groups are: simple (uncompounded) nouns (with fewer than ten citations) simplex nouns (with ten or more citations), compound nouns, verbs, simple (uncompounded) adjectives, compound adjectives, simple (uncompounded) adverbs, compound adverbs, pronouns, numerals, conjunctions and prepositions (cf. Johannsson & Battista 2016).

The editing work since 2005 has focused mostly on the more substantial groups: simple nouns, verbs, and prepositions. The editorial procedures for the online version also call for a distinction between semantic and structural editing. Nouns are edited both structurally and semantically, whereas verbs and prepositions are only organized according to structure and not by meaning. The reason for such division is largely practical, as organizing the structural complexity of verb forms has been given a high priority for the users of the dictionary. The idea is also that the structural edition of certain word groups will facilitate a smoother semantic editing at a later date, as ONP aims at providing structural and semantic editing of all headwords. The different types of entries are compared and discussed in some detail in Johannsson & Battista 2014:173-174.

Other changes in the editing procedure include a temporary restriction to only one target language, Danish, but definitions in English will also be available in the near future. Morphological information is collected, but is not displayed in the present version of ONP Online. Reference to foreign parallels is given if the editor in charge of the entry considers them especially relevant. All foreign parallels are however visible on the scanned slip. The number of phrases and collocations has been increased, which is especially useful in entries containing a large amount of example citations. On the whole, these changes in the editing procedure along with the division of the vocabulary into twelve groups and distinction between structural and semantic editing, have made the editing process more manageable and proved to be a useful way to optimize the editorial work. At present (spring 2016), the editors have edited structurally and/or semantically over 60% of ONP's material. About 15% was already covered by the printed volumes, while additional 45% has been edited in the online version since 2010. This means that about 40% of the material is still found as ‘bare’ entries, but this percentage keeps decreasing as the editing work progresses.

6 User Interface and Dissemination of Information

ONP Online brings together all the available dictionary material to give the user a useful tool to work with Old Norse prose texts. The complex information discussed in section 3 can be accessed and used in various ways. The online interface has been described in some detail in previous works (Johannsson & Battista (2014) and Battista & Johannsson (2014)). In the following discussion we will focus on the aspects of the online version, which are relevant for disseminating the more fine-grained information found in the ONP database.

As with most online dictionaries the user has the possibility to tailor the search in various ways. Once the desired entry has been obtained, the user has access to three different tables, or columns, where the information is displayed. This is shown in the figure below:

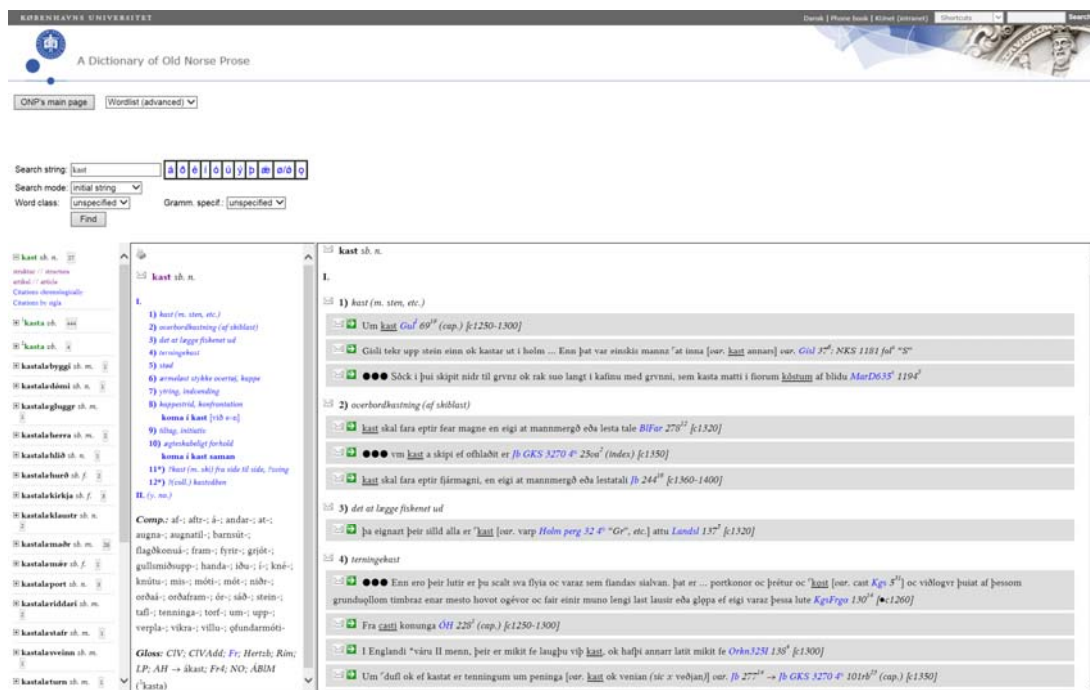


Figure 4: Screenshot of the edited entry for *kast* n. (‘cast’, ‘throw’) from ONP Online.

The first column shown here on the left is an alphabetical list of headwords. By clicking on the target word, which is at the top of this list, the user finds the structural outline (middle column in blue), which provides a quick overview of different definitions, from which to select citations for a closer look. This feature is limited to entries that have been edited, recognizable by the colour green. The structural overview makes it easy to go through the list of definitions, especially when a large number of citations are associated with a particular headword.

Below the structural outline we find the same headings *Comp*, *Gloss* and *Litt*, briefly discussed in Section 3. The online version has the benefit of interlinking. Currently ONP provides a link to the digital version of one older work in the gloss list, namely the dictionary of Fritzner (1886-1896), (Fritzner Online), for a quick comparison to the corresponding entry, if it exists. As more of these dictionaries and glossaries become available online we hope to add additional links to the gloss list. By clicking one of the definitions in the structural outline (or alternatively on the heading *Citations chronologically* in the first column) a new section is displayed where all the citations belonging to that particular definition are listed. Clicking on the green arrow next to any specific citation brings up a new window with detailed information. An example of such a window is shown in Figure 5.

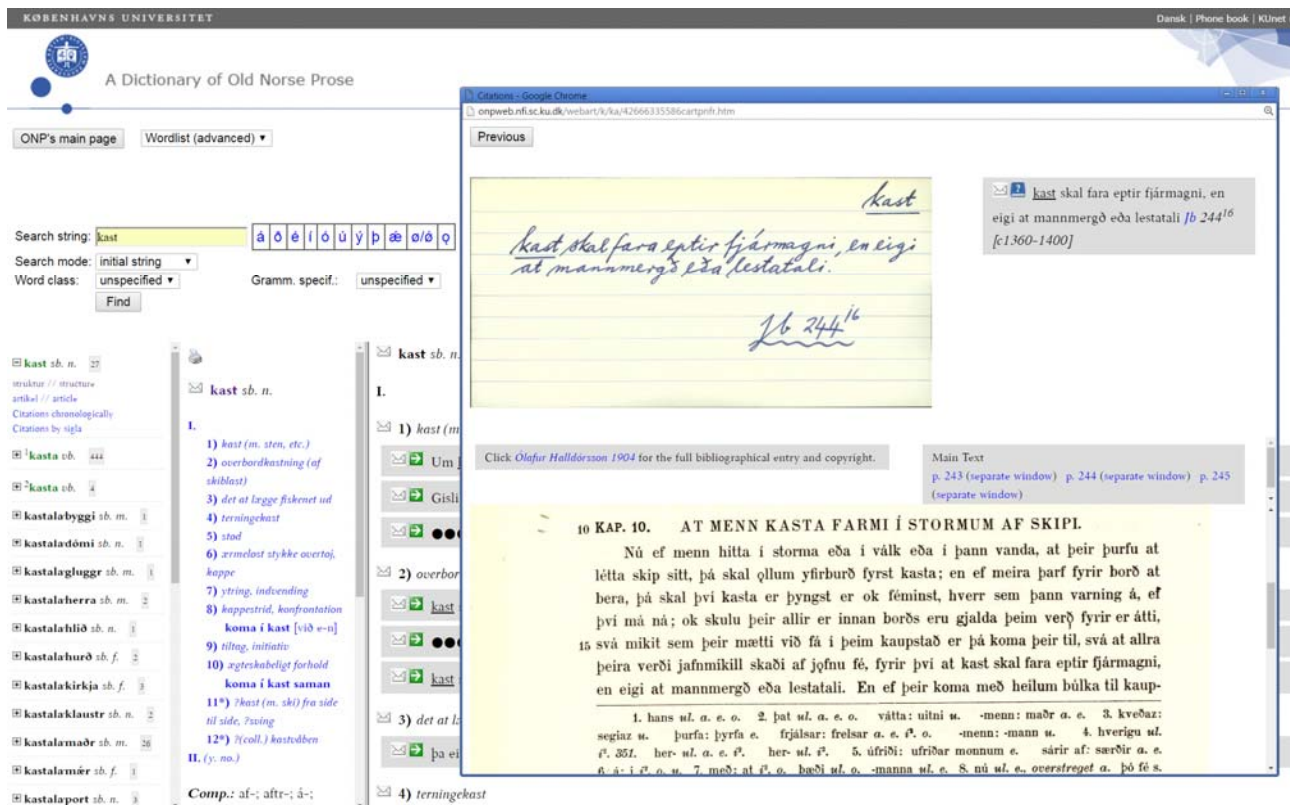


Figure 5: Screenshot of the pop-up window for the 3rd citation in definition 2, under the entry for *kast*.

The second window provides many helpful features in relation to accessing the available information. We see the scanned citation slip, which sometimes contains supplementary information about the relevant word. Next to it we have the typed up citation, which can be copied and pasted. This electronic version of the citation contains all the special symbols used in the non-normalized orthography of the cited edition or manuscript, and therefore requires installation of specific fonts available for download at the ONP-website. The reference siglum following the citation is also

coloured in blue and by clicking on the reference, the user gets the index entry that relates to that particular citation, i.e. the cited scholarly edition and what manuscript or manuscripts were used as basis for the main text. The user can also access details about the edition, i.e. a full entry from the ONP's bibliography, and browse the bibliographical reference list. The window also contains a limited access to the scholarly edition itself with the scanned page where the citation is taken from. Almost all the works cited in ONP Online can be viewed in such a way, with browsing of the edition limited to three pages, i.e. the relevant page cited by ONP along with the preceding and the following page. This allows for more context and clearer grasp of the meaning of a particular word. The one-point access to all this extra information saves a lot of time, for instance if the user would like to cite the primary sources of the text.

Overall, the online interface offers more in-depth information than is possible in a printed edition. The possibility of linking together information from the various sources allows the user more flexibility in accessing the detailed information associated with each headword.

7 Further Development

As the editing of the dictionary progresses, more and more entries are provided with a typed up version of the citations from the scanned slips. This increases the amount of electronic, searchable text. A further development of the search possibilities of ONP online aims at making this text searchable and usable as a text corpus. This would allow the user to access many more examples of a particular word or combination of words, than are found under any specific headword. A problem to be dealt with in this respect is the need to account for the variation in the spelling of the citations, which are not normalized.

Making the citations searchable as a text corpus is one of the possible new features, which we intend to add to ONP Online. Such feature would allow the user to take full advantage of the electronic citation collection. The detailed underlying database can accommodate for the search capabilities to be expanded and tailored in various ways, e.g. using regular expressions, since in principle each field in the database can form the basis for a search. This includes information about specific elements such as: source text, dating of manuscript, geographical origin, etc. Figure 6 shows the (partial) result of a specially tailored search from a beta-version not yet available to the public. The search string is “%fara%”, which contains the stem of the verb *fara* ‘to go’, i.e. every citation where this specific sequence of letters occurs, regardless of headword. The search is furthermore restricted to one particular work, *Njáls saga*, and to a particular period, i.e. manuscripts dated from 1267 to 1347 (+/- 25 years).⁴

⁴ It is generally considered impossible to date Old Norse manuscripts more precisely than within a fifty year period.

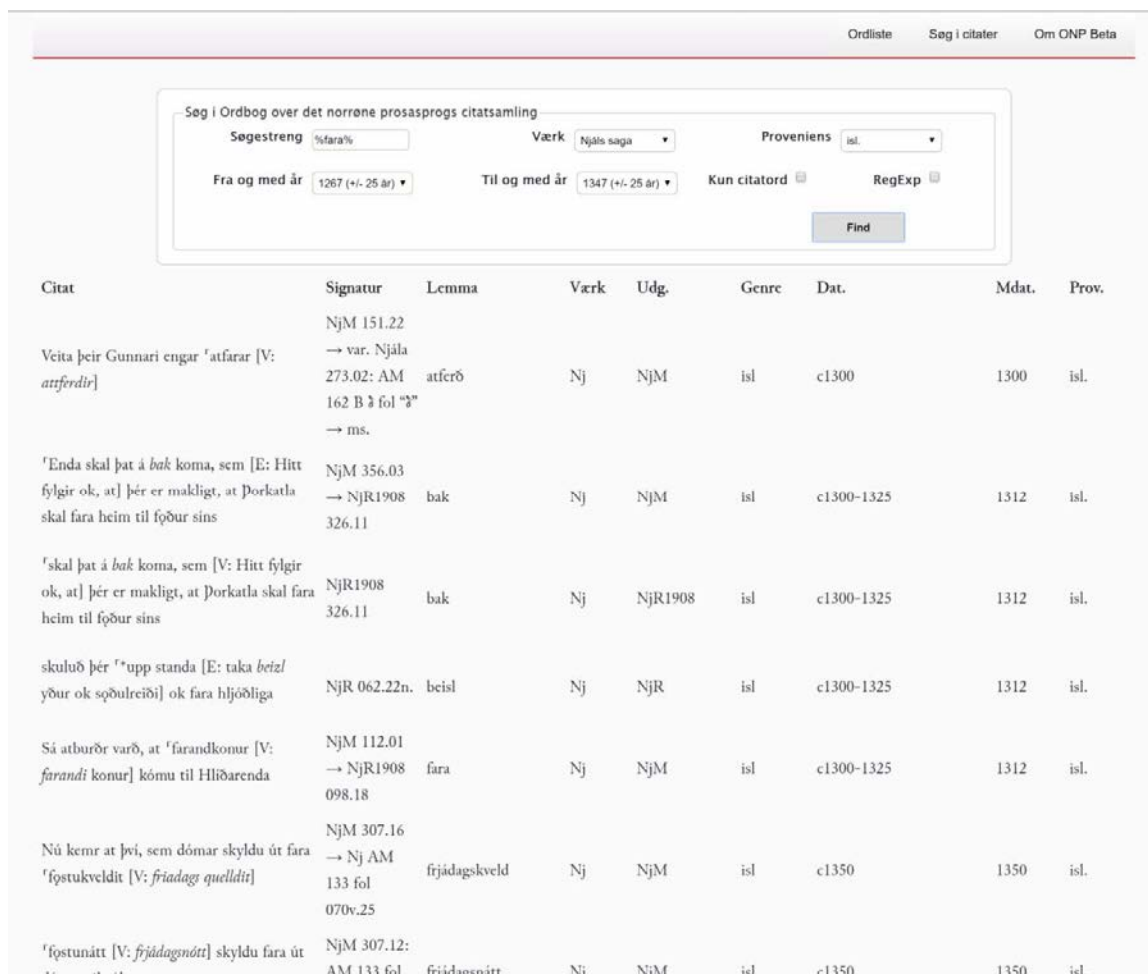


Figure 6: Screenshot from the results of a specially tailored text search (beta)

Here we can see that the examples found are taken from different lemmas, e.g. *atferð* ‘conduct’, *bak* ‘back’, *beisl* ‘bridle’, etc. besides the verb *fara* itself. The results of this search are shown here in chronological order, but the system allows for ordering them by other criteria, such as by siglum, headword, work, edition, genre, and provenience. It is clear that this type of search will help the user to obtain much more detailed search results and make many features of the ONP database more accessible and useful.

It is also desirable, that in the future ONP Online could be used in combination with existing digital corpora of Old Norse texts (such as MENOTA) and modern electronic text editions. Integrating such resources into ONP Online would provide additional citations to structured dictionary entries, as well as a wider variety of searchable examples of word use.

8 Conclusion

In this paper we have accounted for the source material of the ONP dictionary and illustrated its complexity and discussed many problematic aspects associated with it. We have also given account of the detailed information collected by ONP and how it is organized in the ONP’s IT-system, which has evolved with the dictionary from a simple data management program to a full-fledged editing and publishing tool. We have also demonstrated how the material is accessible through the online version of ONP and given an overview of some of the features of ONP Online. It is our hope that by sharing

our approach we can give inspiration to other lexicographers and exchange experience and ideas with those who might be facing similar issues in dealing with complex dictionary material.

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Acknowledgements

We would like to thank Alex Speed Kjeldsen, professor at the department of Nordic Research, University of Copenhagen, for his support of the ONP project and continuous help with updating and developing the features of ONP Online.