Modern dictionaries in higher language education.
The Dictionary of Contemporary Dutch (ANW) as an example.¹

Josefien Sweep

1. Language learning, vocabulary and dictionaries

Vocabulary is an important part of a language. In language use it is often difficult to find the right words, both for native speakers or for second language learners. Improving language proficiency includes learning vocabulary. Dictionaries are important tools in this respect. They are the most important source of information on vocabulary and they are therefore indispensable in language learning.

However, dictionaries nowadays are not what they used to be. On the one hand, dictionaries are losing popularity and authority, because of free online applications, such as search engines, translation tools and discussion forums. On the other hand, the possibilities of a dictionary have increased immensely in the last few decades, because a modern dictionary does not have to be a paper book with listed meanings anymore. Instead, it can be a complex, digital database with all kinds of information (semantic, conceptual, morphological, syntactic) on the lexical units of a language. For several languages, such databases are in existence, compare e.g. DANTE for English², Grammis and elexiko for German³ or the ANW for Dutch⁴. These databases are often the result of scientific projects, which makes them very suitable for higher language education.

In addition to the academic background, these digital dictionaries or databases are suitable for higher language education because of the information they offer. They contain a large amount of data, often including information on lexical relations, the connection between different meanings, morphological form, morphologically related words, real examples, illustrations, etc. This amount of information with a digital interface gives way to more search opportunities compared to a paper dictionary. For language education, they can therefore be used in many more ways than traditional dictionaries. However, a prerequisite for making use of projects such as the ANW in education is that language trainers and teachers have insight into the design, structure and search options.⁵

For this purpose, I will introduce the ANW, the “Algemeen Nederlands Woordenboek” (‘Dictionary of Contemporary Dutch’), in this paper. I will show that the ANW can be used in many different ways for language education and linguistic training. In the next section (section 2), I will first introduce the project and clarify the ANW’s background and goals. In section 3, I will explain the structure of the ANW. After this, I will show which information can be searched for in the ANW and how this can be done (section 4). This will lead to some suggestions for using the ANW in higher language education and linguistic training in section 5.
2. The “Algemeen Nederlands Woordenboek” (ANW)

The “Algemeen Nederlands Woordenboek” (‘Dictionary of Contemporary Dutch’), abbreviated as ANW, is a digital, corpus-based dictionary. It describes contemporary Dutch from 1970 onwards, as used in the Netherlands and in the Dutch-speaking part of Belgium (Flanders) (see Schoonheim & Tempelaars 2010: 718). It is called a dictionary of “Algemeen Nederlands” (‘general Dutch’), because it describes Dutch which is not specifically connected to a certain subnational region or to a particular social group (see Schoonheim & Tempelaars 2009). Because the ANW is primarily a descriptive dictionary, even this general Dutch can be classified as connected to a specific semantic domain, as belonging to a formal or colloquial register, and some general Dutch words can be considered as offensive, euphemistic or archaic by language users (see “bijzonderheden gebruik”/’specific properties of usage’ as explained below in section 4).

The project runs from 2001 till 2018 at the Institute of Dutch Lexicology (INL) in Leiden. The 2001-2007 period was used to develop the ANW. From 2001-2005 a corpus was built and made suitable for lexicographic usage (for more information, see Moerdijk 2004: 176-179; Moerdijk et al. 2008: 18; Tiberius & Kilgari 2009). The neologism part of this corpus is constantly updated. The 2001-2007 period was also used to design the structure of the ANW and to finish its functional design (for more information, see Moerdijk et al. 2008: 18; Niestadt 2009; van der Kamp 2007). This relatively long preparing phase was needed, because the ANW is not in any sense a standard dictionary. From 2008 onwards, the ANW is to be compiled. At the moment (November 2012) almost 9,000 dictionary entries (which describe over 50,000 words) are published in the current version on the internet. This online version is updated every three months. After the update in December 2012, over 10,000 entries will be available online.

Most dictionaries on the internet show entries from paper dictionaries that are published online (see e.g. http://www.oed.com and http://atilf.atilf.fr/; http://www.vandale.nl; http://www.wnt.inl.nl/). Hence, specific facilities which the internet has to offer remain unused. The ANW is specifically designed for the internet (see Schoonheim & Tempelaars 2010: 724) and makes use of the advantages the internet offers, such as linking information and only showing certain selected information. It would be impossible to present the ANW’s entry design in a paper version, because this structure is layered and works with links.

Furthermore, the ANW is much more than a list of words with meaning descriptions. The ANW also provides information on the structure of the lexicon (by means of explicit lexical relations under “Woordrelaties”/’relations to other words’), on the context of a word (by means of real examples and by “combinatiemogelijkheden”, i.e. lit.: ‘possible combinations’, translated as “combinations” in the English version of the ANW) and on conceptual information (by means of a structured list of properties, the so-
called “semagram”) (see section 3 and especially Figure 3). In a paper dictionary, these different types of information could not be incorporated, because this would result in bulky dictionary entries, which would make it too difficult or too time-consuming for users to find the information they are looking for.

Because of the combination of the great amount of information with an online design, specific information can easily be extracted from the ANW. The online structure makes the ANW suitable for several kinds of usages. Additional and more complex information does not have to be shown and therefore a user does not have to read it, which makes the ANW usable as a simple, traditional dictionary that gives the meanings of a certain word and some grammatical information. But of course, additional information can also be easily extracted, which makes the ANW very useful for higher language education and translation studies. A condition for using the ANW effectively in different contexts is that teachers and users understand the entry structure. I will therefore present the structure of the ANW in the next section.

3. The structure of ANW entries

The ANW can be accessed for free via http://anw.inl.nl. This website shows a list of numbers and letters on the left and a search box on the right. If a word is typed in the search box, a list of results appears. The required entry will be opened by a click on the word which is searched for.

Figure 1: The entry *lexicograaf* (‘lexicographer’) in the ANW

The screen of an ANW entry is divided in two panes, as illustrated in Fig-
ure 1. On the right, the actual dictionary entry is shown. On the left, the structure of this entry is presented. The structure on the left in the example lexicograaf (‘lexicographer’) in Figure 1 shows that this word has only one meaning (1.0 “woordenboekschrijver”, i.e. ‘dictionary maker’). Clicking on the short meaning description in the left pane, such as “woordenboekschrijver”, will open a larger, full definition on the right (as in Figure 1).

Users can find information on the “Woordsoort” (‘part of speech’), “Spelling en flexie” (‘spelling and inflected forms’), “Uitspraak” (‘pronunciation’), “Woordrelaties” (‘relations to other words’), “Semagram” (‘semagram’), “Algemene Voorbeelden” (‘general examples’) and “Woordfamilie” (‘word family’), all belonging to meaning 1.0. It is possible to click on all the headlines in the left pane. The information clicked on will directly appear on the screen in the right pane.

If we compare the entry for lexicograaf (see Figure 1) with, for instance, biograaf (‘biographer’) or cartograaf (‘cartographer’), we see that in the last two entries “Combinatiemogelijkheden” (‘possible combinations’) are also given. In the entry for fotograaf (‘photographer’) under meaning 1.0, we in addition find “Vaste verbindingen” (‘Fixed expressions’) (see Figure 2), which are combinations that are idiomatic or non-transparent (see Tempealaars, to appear).
The full structure of the entry design with all possibilities can be found in the advanced search, under the tab “Kenmerken → Woord” (“Properties → word”; see also Figure 5). An explanation in Dutch of the entry structure is given under the last tab “Help. Over het ANW” / “Help. About the ANW” (i.e. Schoonheim & Tempelaars 2009) under the link “artikelstructuur” (‘entry structure’). In the rest of this section, I will briefly discuss this entry structure (see also Schoonheim & Tempelaars 2010: 720-722).

For many users, an important part of the entry probably is the traditional meaning description. If an entry is opened, this meaning description will automatically appear in the right pane, as in Figure 1. After scrolling through the entry, a user can always return to this general meaning description by clicking on the short description after the meaning number in the left pane. For example, if a user clicks on “woordenboekschrijver” in the left pane of the entry for lexicograaf, the description “iemand die voor zijn beroep de lexicografie beoefent; iemand die werkt of heeft gewerkt aan een woordenboek...” (‘someone who practises lexicography as a profession; someone who is working or has worked on a dictionary...’) will be shown in the right pane (as in Figure 1) and if a user clicks on “iemand die fotograaf
grafcerf” in the entry for *fotograaf* (see Figure 2), the description “iemand die fotografeert voor zijn beroep of uit liefhebberij” (‘someone who takes photographs as a profession or as a hobby’) will appear on the right.

Headlines such as “Woordsoort” / “Part of speech” or “Spelling en flexie” / “Spelling and inflected forms” on the left pane are marked in paper dictionaries and therefore also in most online dictionaries by typographical differences or parentheses and they are often expressed by abbreviations. The meanings of these abbreviations are often incomprehensible without looking them up in a list at the beginning or at the end of the dictionary. In paper dictionaries, this way of presenting such information is probably the best because of lack of space and because of the readability of the entry. In an online design, these two issues do not exist. There is no lack of space and by means of links and different panes the entry remains very well-organised and readable in spite of the amount of information: The left pane always shows which part of the entry is opened and by clicking you can jump to the information you are looking for, which will be shown in the right pane.

After Woordsoort” / “Part of speech” and “Spelling en flexie” / “Spelling and inflected forms”, the entry continues with “Uitspraak” (‘pronunciation’). In this part of the entry, dictionary users can find stress patterns and foreign pronunciations. The dog type *basset*, for example, can in Dutch be pronounced as in English or in a Dutch manner.

The “Woordrelaties” / “Relation to other words” gives the hyperonym (the superordinate), possible synonyms, antonyms and, in the case of person names, masculine and feminine forms (“androniemen” and “feminiemen”). With *fotograaf*, for instance, a hyperonym and a feminine form are given, i.e. *persoon* (‘person’) and *fotografe* respectively.

The “Semagram” is a special feature of the ANW (see Moerdijk 2008a; Moerdijk 2004: 180-181; Moerdijk et al. 2008: 19-20). A semagram is a representation of the concept of a word, especially used for nouns. It is a list with relevant properties of the concept connected to a specific meaning. The semagram goes beyond a traditional meaning description in that it provides more information (including encyclopedic and sometimes even cultural knowledge) and lists this information in a structured way. As we will see in the next section, the semagram enables new ways of searching.

Figure 3 shows the semagram of *lexicograaf*. In the middle, the original semagram is presented. On the right, the properties of this semagram have been translated into English. On the left, the slots that belong to these properties are made explicit. These slots are not or not yet visible for users, the labels for these slots can only be found in the underlying software (‘the editor’) which is used by the lexicographer who makes the entry (see Schoonheim & Tempelaars 2010: 718-720).

Underneath this semagram, a user can find examples with the headword (see the entry structure in the left panes of Figure 1 or Figure 2). First some general examples are given, and in some entries - as is the case for *fotograaf* - combinations with other words and idiomatic expressions can be found.
The combinations (under “combinatiemogelijkheden”, i.e. ‘possible combinations’, compare e.g. Figure 2) provide collocations and also other relatively frequently co-occurring words in the ANW corpus that are considered relevant by the lexicographer. They are classified according to syntactic properties, such as ‘as a subject’ or ‘with an adjective’ for nouns and such as ‘with an adverb’ or ‘with a prepositional phrase’ for verbs (see Tempelaars, to appear). The entry of fotograaf lists under ‘as a subject’ combinations such as een fotograaf fotografeert / maakt foto’s / neemt foto’s / kijkt (i.e. variants for ‘a photographer is making photos’) and under, for example, ‘in a prepositional phrase’ the combination voor een fotograaf poseren (lit.: “for a photographer pose”, i.e. ‘to pose for / to a photographer’).

<table>
<thead>
<tr>
<th>slot (not visible)</th>
<th>online semagram of lexicograaf</th>
<th>translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A + headword...</td>
<td>A lexicographer...</td>
<td>is a person</td>
</tr>
<tr>
<td>category</td>
<td>usually works at a company or</td>
<td>is usually a linguist</td>
</tr>
<tr>
<td></td>
<td>institute that compiles</td>
<td>is a man or a woman</td>
</tr>
<tr>
<td></td>
<td>dictionaries</td>
<td></td>
</tr>
<tr>
<td>(whole:)</td>
<td>does lexicography; is working</td>
<td></td>
</tr>
<tr>
<td>organisation</td>
<td>on or has worked on a</td>
<td></td>
</tr>
<tr>
<td>or institute</td>
<td>dictionary or dictionaries;</td>
<td></td>
</tr>
<tr>
<td>(property:)</td>
<td>has compiled one of more</td>
<td></td>
</tr>
<tr>
<td>expertise</td>
<td>dictionaries; describes</td>
<td></td>
</tr>
<tr>
<td>(property:)</td>
<td>words and word combinations,</td>
<td></td>
</tr>
<tr>
<td>sex/gender</td>
<td>their form, meaning and use;</td>
<td></td>
</tr>
<tr>
<td>(activity or function:)</td>
<td>makes definitions</td>
<td></td>
</tr>
<tr>
<td>activity</td>
<td>is usually occupied in this</td>
<td></td>
</tr>
<tr>
<td>(causality:)</td>
<td>way on a professional basis</td>
<td></td>
</tr>
<tr>
<td>cause or reason</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 3: The semagram of lexicograaf with its categories and a translation

The idiomatic expressions (under “Vaste verbindingen” / “Fixed expressions”, compare e.g. Figure 2) range from proverbs to non-transparent combinations (see Tempelaars, to appear). In the entry for fotograaf, for instance, the combination digitale fotograaf (‘digital photographer’) is classified as a fixed expression, because this does not refer to a photographer who is digital, but to a photographer who is using digital photography.

In most entries, the last headline is the word family. The word family provides all derivations with the headword and all compounds (with the headword as a head in the right part of the compound or as a modifier in the left part) that can be found in the ANW corpus. Because many morphological processes are productive, these lists are by definition not exhaustive. They illustrate, however, how the entry word is used by other words in the corpus, and the word family shows by means of the listed examples what type of words are possible. If, for instance, a language user, such as a translator, wants to know whether a photographer of the German newspaper Die Zeit can be called a Zeitfotograaf and whether this should be spelled with or without a hyphen and with or without Die, the analogy with, for instance, NRC Handelsbladfotograaf, Paroolfotograaf and Volkskrantfotograaf provides the answer (see Figure 4).
Some words from the word family are headwords in the ANW, which means that they have their own entry. If this is the case, the entry can directly be opened by clicking upon the word. With *fotograaf* this is the case for *fotografe*, *amateurfotograaf*, *beroepsfotograaf*, *natuurfotograaf*, *persfotograaf*, *straatfotograaf*, and *vakfotograaf* (see Figure 4).

Understanding the structure of ANW entries is a necessary for knowing what can be looked up in the ANW. Also, it is very useful for understanding the ANW’s different search types. The next section discusses these different ways of searching for information in the ANW.

![Figure 4: The word family of *fotograaf*](image)

4. Searching in the ANW

There are different possibilities for looking up information in the ANW (see Moerdijk et al. 2008: 20-24; Schoonheim & Tempelaars 2010: 721-722). They can be found under the horizontal grey tabs (see Figure 1 or Figure 2).

First of all, it is possible to perform a standard search (i.e. a semasiological search), which allows users to search for a word and to find its meaning. This kind of search can be carried out under the tab “woord → betekenis” / “word → meaning”. If the website http://anw.in.nl is opened, this type of searching will be automatically started. In this search type, it is possible to use wildcards. Searching for “%graaf”, for instance, results in 29 entries, varying from *biograaf* to *vakfotograaf*.

Secondly, it is possible to search in the opposite direction, i.e., in linguistic terminology, to perform an onomasiological search. This can be done under the tab “betekenis → woord” / “meaning → word”. This way of searching is possible on the basis of the semagrams. A user can, for example, look up all words that denote female persons. If the user chooses *person* as the ‘category’ and fills out that a typical character trait of this person is *vrouw* (‘fe-
male”), 245 results will be found at the moment (November 2012), ranging from abortustoerist (‘abortion tourist’) to zondares (‘sinner’). The word lexicograaf is of course included within this result (see the category and sex/gender property in Figure 3). Or suppose a user would like to know which animals bark (“blaffen”) in Dutch, the user can give in “blaffen” under the sound within the animal category. Besides several dogs, the result yields animals such as blafuil (‘barking owl’), stokstaartje (‘meerkat’), and vos (‘fox’).

Thirdly, the advanced search option under “properties → word” can be used. If a user clicks on this tab, the left pane shows all headlines as described in section 3 (i.e. the ANW’s entry structure). Figure 5 illustrates what this looks like. Users can search specifically on all these types of information in the ANW. It is for example possible to find all headwords in the ANW with three syllables by searching under “Spelling and Pronunciation”/“Spelling en uitspraak”. Or to find all verbs which can be combined with another infinitive (via “Combinations” / “Combinatiemogelijkheden”).

Under “Bijzonderheden gebruik” (‘specific properties of usage’), it is possible to search for, for instance, words within a specific register or to look up Dutch words that are typically used only in Belgium or only in the Netherlands. It should be noted that this search is conducted in the entry as a whole. Searching words of a ‘very formal’ register, for example, gives as the first two results ambtenaar (‘civil servant’) and burgemeester (‘mayor’). These words themselves are not formal at all, but on the basis of these entries the formal synonyms “overheidsdienaar” and “burgervader” can be extracted.

The fourth tab provides the option to search for specific examples. This option makes it possible to find all examples from, for instance, the author “Brusselmans”, all examples taken from the “NRC” newspaper or to find all
examples in the ANW that are used in the last year (searching in the date range 2011-2012).

Last but not least, it is possible to find new words in the Dutch language (neologisms). Under this tab, users can find information on neologisms, such as a test on the probability that a new word will be incorporated into the lexicon, users can find all neologisms collected at the Institute of Dutch Lexicology and all neologisms that are incorporated in the ANW (see Schoonheim, to appear). Only for neologisms, etymological information (see Figure 5) is provided.

5. Usage in higher language education

The ANW can be used in different ways in higher language education. A standard semasiological search from a word to its meaning can of course be useful to all kinds of users. In this section, I will make some suggestions for using the ANW in other ways. With these suggestions, teachers should bear in mind that the ANW is a project in progress, which means that at the moment only a part of the Dutch lexicon has been described. New entries are compiled every day and added every three months. Also, the ideas in this section are just suggestions; professionals are of course encouraged to think of other possibilities.

Suggestion 1: Finding words for vocabulary learning and translating

Although the ANW is a monolingual dictionary, it can be used in bilingual education settings. Via the search option from meaning to word ("meaning → word"), a language user with a basic knowledge of Dutch can look up Dutch words on the basis of knowledge of concepts in his or her native language. Suppose that someone would like to know whether Dutch has a word referring to footwear which is in-between a shoe and a boot. The description "halfhoge laars" ('calf-length boots') provides the word bottine. Searching for the name of dried fish for consumption, results in bakkeljaauw, klipvis and stokvis (query description: "gedroogde vis" ('dried fish')). Or suppose that someone needs to know how to translate a movement in-between dancing and jumping. The description "dansen/springen" ('dancing/jumping') results in huppelen. This option is very useful for learners of Dutch to improve their vocabulary and for translators to find correct translations, even if they are native speakers of Dutch.

The advanced search (the third tab) can be used more specifically for finding words in order to improve vocabulary or to find correct translations. If someone needs to know what the animal with the scientific name Limosa limosa is called in Dutch, he or she goes to "kenmerken → word" ("properties → word"), clicks on semagram, types Limosa limosa in the "science"/"wetenschap" field and immediately finds that this bird is called a grutto in Dutch.

For vocabulary learning, learners of Dutch cannot only use the advanced search or the search type from meaning to words (the "meaning → word" tab), but they can also learn vocabulary by learning word relations, such as hyperonyms (superordinates) and synonyms. In principle, general hypero-
nyms are given for each headword. Learning these helps to improve basic vocabulary for beginning learners of Dutch and it gives insight into the lexicon structure for more advanced learners. The word family provides comparable possibilities. The word family can be used to learn many words at once, it provides insight into the structure of the lexicon and could lead to morphological knowledge. Teachers could design tasks and assignments for students on the basis of the ANW’s word family and the word relations.

Suggestion 2: Collocations and grammatical constructions

Translators or translation students and students who have to write in Dutch can also profit from the Combinations (“Combinatiemogelijkheden”). These combinations provide typical or frequently occurring combinations with a headword. Language learners can learn collocations on the basis of the combinations. Students can check and improve their phrases on the basis of these combinations. Translators can use the combinations to find the right translation for certain phrases. As with the search from meaning to word, using the information under combinations can be helpful for academic writers and translators or translation students, who are native speakers of Dutch.

Advanced language learners can also use the combinations to learn certain grammatical constructions. With the advanced search under the “properties → word” tab, combinations of, for instance, verbs with bare infinitives (“met infinitief”), with te (‘to’) + infinitives (“met infinitief met te”), and with om te + infinitive (“met infinitief met om te”) could be compared. This can provide insight into the differences between such constructions.

Suggestion 3: Learning about Dutch varieties

The advanced search (the “properties → word” tab) can also be used for finding differences between standard Dutch used in the Netherlands and standard Dutch used in Belgium (by searching under “Bijzonderheden gebruik”, ‘specific properties of usage’, as described in section 4). This can be useful for highly advanced language learners and advanced language users, such as authors and editors.

Suggestion 4: Improving spelling

Last but not least, the ANW can be used to check and improve a student’s spelling. The ANW fully follows the official Dutch spelling of the so-called “groene boekje” (as also presented on http://woordenlijst.org), shows how to divide words by hyphens and it gives allowed or explicitly non-allowed orthographical variants.

6. Conclusion

In this paper, I have introduced the ANW, illustrated its rich information structure and shown its possibilities for searching information. I have explained that the ANW is not a standard dictionary: It combines many different types of information and the online design makes it possible to perform searches for specific information. As a consequence, the ANW can be
used for simple queries, for instance by language learners at beginner’s level and by high school pupils, as well as for looking up complicated information by highly advanced learners, translators and even scholars. It is possible to perform a standard search of a word’s meaning, but the ANW can also be used for finding information on collocations, frequently used idioms, grammar, or conceptual-cultural knowledge in the semagrams.

Teachers in Translation Studies courses, in Dutch as a Second Language courses or even in Linguistics courses should be able to instruct their learners how to use the ANW. For this purpose, this paper has given insight into the structure of the ANW and presented some of its usage possibilities for language learners and language users with various levels of proficiency.

References


Tempelaars, R. (to appear), 'Contextanten, combinaties, vaste verbindingen en spreukwoorden in het Algemeen Nederlands Woordenboek (ANW)’, will appear as a proceeding of a lecture given at the “19e Fries Filologencongres” on the 14. of June 2012.


1 I would like to thank Tanneke Schoonheim, Rob Tempelaars, Dick Smakman and two reviewers for their useful comments on previous versions of this paper.

2 http://www.webdante.com


4 http://anw.inl.nl; For a comparison of elexiko and the ANW, compare Moerdijk 2008b.

5 The curriculum of the Dutch master’s programme at the Hogeschool van Amsterdam (HvA) -which is a study for becoming a teacher for Dutch at the highest secondary school level ("eerstegraadsdocent")- therefore contains an obligatory course on lexicology and using modern dictionaries such as the ANW in education.

6 An English version of the ANW’s headlines and tabs can be chosen in the browser window at the bottom on the right (see Figure 1). The English version is illustrated in Figure 5; it shows that not all headlines have been translated yet (see "Bijzonderheden gebruik”, i.e. lit.: ‘specific properties of usage’).

7 For another example of a semagram with categories and a translation into English compare Moerdijk et al. 2008: 19. They show the semagram for cow.

8 The query does not only check the headwords themselves, but also the word family. Therefore, the entries paleografie, which gives paleograaf in its word family, and school, which has schoolfotograaf in its word family, are also on the list.

9 Although the categories and the questions are translated into English in the English version, the answers should be in Dutch, because the "meaning to word"-search will search within the dictionary entries (in the semagrams) and they of course only contain Dutch words.

10 Searching with an inflected form and an infinitive provides most results.