FUNCTION- AND USER-RELATED DEFINITIONS IN ONLINE DICTIONARIES

1. Introduction

Definitions play an important part in the use and making of dictionaries. A study of the existing literature reveals that the contributions primarily concern printed dictionaries and show that definitions are static in that only one definition should be provided for each sense of a lemma or entry word (see e.g. Jackson, 2002, 86-100; Landau, 2001, 153-189). However, online dictionaries provide lexicographers with the option of taking a more flexible and dynamic approach to lexicographic definitions in an attempt to give the best possible help to users.

Online dictionaries vary in size and shape. Some contain many data, some contain few data, some are intended to be used by adults, and some are intended to be used by children. These dictionaries contain data that reflect the differences between these groups of users, not only between general competences of children and adults but also between various competences among adults. The main distinction is between general and specialised dictionaries because their intended users belong to different types of users based on user competences and user needs. Even though lexicographers are aware of this distinction, “surprisingly little has been written about the relationship between the definition and the needs and skills of those who will use it” (Atkins/Rundell, 2008, 407). Most relevant contributions addressing definitions and user competences concern specialised dictionaries, but there are no reasons why the principles discussed should not be adopted by lexicographers at large (Bergenholtz/Kauffman, 1997; Bergenholtz/Nielsen, 2002). Moreover, lexicographers designing, analysing and examining online dictionaries should start to think outside the box of linguistics, because electronic platforms provide options and practical solutions that have nothing to do with linguistic theories.

2. Electronic dictionaries are complex lexicographic tools

Before embarking on a lexicographic project, lexicographers should adopt a clear ontological position. This means that they should be able to give a precise and lexicographically relevant answer to the question: What is the nature and reality of online dictionaries? At first sight, the answer to this question seems simple enough: A list of alphabetically arranged words with their meanings explained (or a similar description; see e.g. Dictionary of Lexicography). However, an online dictionary is not a purely linguistic concept but a practical tool that contains data that have been selected because they can help people in various pre-defined situations, which may or may not be related to linguistics. This has two important implications. First, online dictionaries are lexicographic products carried by a medium developed by computer science and technology. Secondly, dictionaries cannot reasonably be defined in purely linguistic terms because many specialised dictionaries treat non-linguistic concepts for the benefit of users who want to know something about the non-linguistic world. It is therefore suggested that an online dictionary should be regarded as a complex whole in the two-dimensional space provided by the image on a (computer) screen with data list and outer texts, referred to as surface features, as well as the following three underlying features:

1. The dictionary has been designed to fulfil one or more functions.
2. The dictionary contains data that have been selected because they help to fulfil its function(s).
3. The dictionary has structures and links that marshal its data into the task of fulfilling its function(s).

This description of dictionaries shifts the focus from linguistic categories to the inherent nature of this kind of electronic tool. For one thing, it is not biased towards linguistics and linguistic categories but focuses on the functions dictionaries may have when consulted by users, i.e. the focus is on satisfying user needs. For another thing, it emphasizes that the data to be included in dictionaries should not be treated as either semantic or encyclopaedic and that the data may be linked and presented in ways that directly support the functions dictionaries are designed to have. Thirdly, the description indirectly takes users into account as the functions of dictionaries can only be determined by identifying and analysing the types of situation in which users consult or are likely to consult dictionaries. Finally, the definition provides guidance that enables lexicographers to make a utility product with a solid foundation, good supporting structure and user-specific contents. By adopting an ontological position like this, lexicographers will not be reined in by the constraints of linguistic theories but will be able to take advantage of the possibilities offered by electronic media as
platforms for dictionaries. After this rather abstract description, it is appropriate to take a closer look at online dictionaries in the lexicographic (and social) reality.

3. Dictionary and database as elements of a single lexicographic tool

Our perspective of the objects in the world normally changes over time, and this is also the case with the way in which we perceive dictionaries. When we talk about online dictionaries – whether intranet or internet – we often think of a database that is accessed by users from an interface whose only function is to give direct access to the dictionary, i.e. the database and its articles. The database contains a number of cards each headed by a lemma and with several data fields containing, for instance, definitorial, grammatical and syntactic data, respectively. When they consult these databases, users will be presented with the card for the lemma searched for, usually in the form of a traditional dictionary article. In other words, the database is the dictionary.

However, online dictionaries may have a different overall structure based on the technological options available. As described in Nielsen/Almind (2011), it is possible to describe online dictionaries as complex lexicographic tools that have three main components. The first one is a database that contains specially selected data that have been structured in a way that makes data search and retrieval easy and quick. This type of database contains data fields each containing a specific type of data. Examples are fields that contain lemmata, fields that contain definitions, fields that contain grammatical data (e.g. inflectional paradigms), fields that contain syntactic data, fields that contain collocational data (e.g. collocations and phrases). These fields are connected through relational links so that the field containing a specific lemma is connected to the field with the appropriate definition, the field with the appropriate grammatical data, etc. The important point is that this type of relational database allows lexicographers to present users with different search options that match user needs. Furthermore, the database is not a surface feature but contains data that may be shown in a surface feature component.

Secondly, users may be presented with one or more dictionaries that are in effect websites that do not contain lexicographic data as these are contained in the database. For instance, a specific database may serve as the core of a defining dictionary and a production dictionary. Users will see dictionary and database as one, but compilers of online dictionaries should treat them as two discrete components that work in tandem. The entire dictionary is made up of surface and underlying features, and a database that functions as an electronic platform for containing data in a structured way.

The third component is a search engine functioning as an intermediary between the dictionary (user interface as a surface feature) and the database. This search engine allows users to search for data in the individual data fields in the database from where it retrieves the relevant data and presents the results of searches to users according to the setup chosen by the compilers, i.e. compilers can make different setups for different users and different functions. The defining dictionary will then show e.g. lemmata and definitions, whereas the production dictionary will show e.g. lemmata, definitorial, grammatical and syntactic data. In this type of structural setup, the database, the search engine and the dictionary together form a whole which users see as the dictionary.

The new description of online dictionaries with three main components has practical and theoretical implications. First of all, the database may be the source of several dictionaries, each with its own search engine. The search engine may allow users to make focussed searches in data that have been placed in specific data fields in a structured way in the relational database. Furthermore, online dictionaries may contain several independent surface feature components, as the search engine provides links that give direct access to components that support the function(s) and use of dictionaries, for instance user guides and subject-field components that give a carefully arranged introduction to the relevant subject fields along the lines described in Bergenholz/Nielsen (2006) and Fuertes-Olivera (2009). Finally, lexicographers often claim that online dictionaries contain macrostructures. This is only true if the traditional structure from printed dictionaries is used, for example when the online dictionary is nothing more than a printed dictionary presented in electronic form, or when the database is the dictionary. However, online dictionaries with a complex structural setup as the one described above do not have any macrostructures in the traditional, text-linguistic sense of the word: A lexicographical structure that arranges lemmata in a specific order so that they and the data addressed to them in articles can easily be found (see e.g. Hausmann/Wiegand, 1989, 336). Online dictionaries based on relational databases with complex structures have no wordlists in the traditional sense, because they allow compilers to fill in the data fields in random order, allow users to access data in the individual data fields and present the search results on the computer screen – and these search results may be several single sets of data (e.g. in the form of traditional articles or lists of collocations) retrieved from the database no matter where their data were actually placed. If this line of reasoning is accepted, it may be more appropriate to say that the
macrostructure has been replaced by what may be called a data presentation structure. This new structure is supported technically by an output device that arranges the data retrieved from the database according to type, and presents these data in a predetermined order depending on user needs. In order to cope satisfactorily with these practical and theoretical challenges, it is helpful to establish a set of principles that can guide lexicographers in respect of definitions in dictionaries.

4. What is the optimal lexicographic definition?

Many dictionaries contain what may be called general definitions that are intended to apply to as many situations as possible. The result is that, inter alia, compilers try to write explanations of words and concepts that have general referential foci to their objects so that these definitions can be used by as many people as possible not matter who they are. This problem is faced by lexicographers in general when writing definitions that are intended to please everyone and is aptly characterised by Harris/Hutton (2007) in the following way:

“Generalized focus makes no more semantic sense than private property that belongs to no one.” (Harris/Hutton, 2007, 212)

This “one-size-fits-all” approach to dictionary making has its limits. Lexicographers may therefore want to consider the options of making online dictionaries that are multi-functional and that present definitions targeted to specific user types, because “There are exciting opportunities here in the electronic medium; one can envisage different styles of entry geared to different user functions” (Atkins/Rundell, 2008, 410). One possible outcome is the writing and presentation of more than one definition for each sense of a word or concept in a dictionary.

In this context, the term definition is not used in the sense found in the disciplines of philosophy or logic but in a strict lexicographic sense (see Wiegand, 1992). For the purpose of online dictionaries, it is proposed that a lexicographic definition is:

The specific set of data that explains the meaning of a lemma and which is clearly addressed to the lemma.

This proposal is in line with the type of meaning explanation usually referred to as a lexicographic meaning description. Lexicographers have often tried to determine what the best lexicographic meaning explanation consists of and several theoretical approaches have been suggested, for example the lexical definition, the conceptual definition, the relational definition, definition by extension, and definition by intension (Fuertes-Olivera/Arribas-Bañó, 2008, 49-50). Furthermore, lexicographers have used these approaches in an attempt to write the “correct” definition of a particular lemma but lexicographers may not be able to achieve that target:

“The notion of a definition adequate to all occasions and all demands is a semantic ignis fatuus.” (Harris/Hutton, 2007, 49)

One interpretation of this statement is that a lemma may be explained in more than one way depending on whom the intended readers are and the specific situation in which the definition is intended to be used. Lexicographers have to some extent realised this, for instance by making children’s dictionaries with meaning explanations that differ from those found in dictionaries for adults. Generally speaking, potential and actual dictionary users can be classified in two triadic sets of user types:

Beginner – Intermediate – Advanced
Layperson – Semi-expert – Expert

The way in which meaning is explained should depend on the intended user group of a dictionary. The problem with the first triadic set of user types is that it was developed for the purposes of teaching specific foreign-language courses and programmes and it was based on the number of lessons that the participants had had; it is not a classification developed for lexicographic purposes. The second set of user types was developed for describing the competences of users of specialised dictionaries and was therefore developed for lexicographic purposes (e.g. Nielsen, 1990, 131; Bergenholtz/Tarp, 1995, 19-22). However, general-language dictionaries contain words from specialised domains and registers so this distinction should be relevant for all
dictionaries. The distinction between beginners, intermediate and advanced learners applies to language teaching and will not be commented on further.

The distinction between laypersons, semi-experts and experts covers both factual and linguistic competences and is, therefore, more interesting for dictionaries in general and online dictionaries in particular. Laypersons may be described as potential dictionary users with no knowledge of the basic theories of a subject field and its language, whereas semi-experts are potential dictionary users with a higher level of knowledge of a subject-field and its language. Experts are potential dictionary users with full knowledge of a subject field and its language. One implication of this distinction is that the data explaining the meaning of lemmata have to be presented in such a way that they match the lexicographically relevant competences of users. Identifying user competences may be carried out by supplementing the triadic distinctions between types of users with a set of general questions that give answers that lexicographers can use directly when planning and making dictionaries. Bergenholtz/Nielsen (2006, 286) propose a list of questions lexicographers may use for this purpose:

- Which is their native language?
- At what level do they master their native language?
- At what level do they master the foreign language?
- How extensive is their experience in translating texts between the languages in question?
- What is the level of their general cultural and factual knowledge?
- At what level do they master the subject-field in their own culture?
- At what level do they master the subject-field in the foreign culture?
- At what level do they master the relevant LSP in their own culture?
- At what level do they master the relevant LSP in the foreign culture?

These general questions may have to be supplemented by more specific questions relating to a particular dictionary project. Such additional questions may concern aspects that provide lexicographers with information about user competences in specific user situations, for instance knowledge of textual and genre conventions for general-language and special-language texts in one or more languages, as well as knowledge about translation theories, strategies and processes. When they have established the relevant user competences, lexicographers will have a good indication of which types of data users need and how the data should be presented.

5. User-related definitions

Online dictionaries designed to help different types of users should contain definitions that reflect the cultural, factual and linguistic competences of those groups. This is where the triadic set of user types distinguishing between laypersons, semi-experts and experts comes in. The competences of these different types of user do not only refer to general competences such as language for general purposes, but also to domain-specific aspects such as language for special purposes. The definition that can best help laypersons understand a concept is different from the definition that experts and semi-experts need in order to successfully understand the same concept appearing in their field of specialisation. The following example is a typical definition helping laypersons understand a concept:

**gold**

A chemical element. Gold is a yellow precious metal used for making coins, jewellery, decorative objects, etc.

*(Oxford Advanced Learner’s Dictionary of Current English)*

This meaning explanation was clearly written with the competences of laypersons in mind, and it seems reasonable to assume that the compilers used generalised referential focus. The definition contains relatively simple words and sentence structures, which is in line with the expected factual and linguistic competences of laypersons. Most laypersons will be content with this type of definition as it provides them with a general sense of what the word *gold* means for most people in most everyday situations, such as buying and selling gold or objects made of gold. This type of explanation is sometimes referred to as a definition of a word (word definition), in contrast to what is sometimes referred to as a definition of a thing (real definition). Experts who want to consult a dictionary in order to find the meaning of the word *gold* will need a definition like the following:
gold
AU. Element. A. w. 196.967, at. no. 79, rel. d. 19.32, m.p. 1062°C.

In contrast to the first definition, this one was clearly written for specialists. It allows experts who read this meaning explanation to make a direct link between the definitorial data and the concept of gold so that it makes sense to them. On the other hand, this explanation will be incomprehensible to other user groups. Not because it is shorter than the first one but because the data items and their presentation belong to a type or genre that is completely foreign to laypersons; they are not able to decode the message. Experts will easily be able to decode the abbreviations A. w., at. no., rel. d., and m.p., which mean atomic weight, atomic number, relative density and melting point, respectively. The numbers following these abbreviations will also make sense to experts. It may perhaps be said that it is relevant to distinguish between the meaning of words (for laypersons) and the meaning of things (for experts) depending on the two user types discussed so far. This runs counter to the claim “that dictionaries are about words, not essentially about the things described by them” (Landau, 2001, 163). However, this claim ignores the fact that dictionaries are designed to give specific types of help to specific types of users, and if the users of a dictionary need real definitions the dictionary should give them real definitions and not word definitions. Otherwise dictionaries do not serve the best interests of users but the personal preferences of lexicographers.

Semi-experts who want to know the meaning of the concept of gold are likely to need yet another definition. The following example illustrates this point:

gold
A soft yellow malleable metallic element, occurring in veins and alluvial deposits. A good thermal and electrical conductor, it is used as an international monetary standard, in jewellery, for decoration, and as a plated coating on a wide variety of electrical and mechanical components. Atomic number 79; atomic weight 196.967; melting point 1,063.0°C; boiling point 2,966.0°C; specific gravity 19.32; valence 1, 3.
(The American Heritage College Dictionary)

This third lexicographic definition can be said to be a mixture of elements from the two first meaning explanations. It contains both a word definition and a real definition and has been written in a language that suits the factual and linguistic competences of semi-experts in relation to gold. Laypersons are unlikely to properly understand words such as malleable, veins and alluvial deposits, whereas semi-experts (and experts) are able to understand them.

The above discussion is directly relevant for both compilers and users of online dictionaries. First of all, compilers should realise that it is possible to have all three definitions in the one database. As explained above, the relational database contains independent data fields that contain different types of data. Compilers will then need one data field containing the lemma gold, and this data field has to be linked to three data fields containing definitions one, two and three, and which are clearly marked for laypersons, semi-experts and experts, respectively. There is no need to have three data fields with the lemma gold, because the compilers will direct users to the correct definition through manipulation of the search engine and the output device.

Users who consult online dictionaries have various access routes. One route of access to the help given by dictionaries is for users to type the search word into a search box and indicate whether they are laypersons, semi-experts or experts. If a user has indicated that he or she is a layperson, the search engine will then search the database for the graphemic string gold in the data fields containing lemmata and retrieve one hit, and it will also search the data fields containing definitions for the definition linked to gold and marked as intended for laypersons. The output device may then present the result as shown in the first example above. Similarly, if a user has identified him- or herself as a semi-expert, the search engine will search the lemma fields for gold and the definition fields for the appropriate definition marked for semi-experts; and the output device may show the result as indicated in the third example above. Finally, the online dictionary will allow users to identify themselves as experts whereupon the search engine will search the lemma fields and definition fields, and the output device will show the lemma and the definition intended for experts as illustrated by the second example above. This shows that online dictionaries with relational databases may contain more than one definition of the same lemma and instead of showing all three definitions every time users look for a particular lemma, the dictionary – through its search engine and output device – will show only the one users need.

Whether written for laypersons, semi-experts or expert, definitions should be easy to understand. Comprehensibility does not only concern the words, abbreviations, sentence structures etc. used in actual definitions but also involves the language in which these definitions are written. The examples given above
are all in English, but non-native English speakers may have difficulty understanding them. The first of the questions designed to establish user competences explicitly refers to the native language of the intended users and if their native language is not English, the compilers of the dictionary should consider whether definitions are to be written in English as well as in another language. If they come to the conclusion that some of the intended users may be unable properly to understand the English definitions, the compilers may translate all three definitions into the native language of the users or write three new definitions in that language. In that case, the database will still have one data field with the lemma gold and six definition fields: three written in English and three written in the other language. These definition fields will be marked as intended for laypersons, semi-experts and experts as appropriate and linked to the data field containing the lemma. When users consult the dictionary because they want to know what gold means they will indicate in which language they want the dictionary to present the definition. The search engine will then perform a search through the data fields containing lemmata and the data fields containing definitions, and the output device will present the lemma as well as the definition for laypersons, semi-experts or experts in English or in another language according to the options chosen by the users. In other words, users identifying themselves as laypersons, semi-experts or experts get access to the definition that is adapted to their factual and linguistic competences.

The comprehensibility of lexicographic data presented in online dictionaries is directly related to the concept of lexicographic information costs. For the current discussion, lexicographic information costs are defined “as the effort that a user believes or feels is associated with consulting a dictionary, an article or any other text part of a dictionary” (Nielsen, 2008, 173). The relevant type of information costs is comprehension-related information costs, which “are the costs (i.e. effort) related to the user’s ability to understand and interpret the data presented in a dictionary” (Nielsen, 2008, 174). The question of how difficult or easy it is for users to understand the data in dictionaries is directly related to the factual and linguistic competence of users and the way in which the data are presented. For instance, the language (in particular a foreign language), a high degree of textual condensation of data, the use of technical terms, and complex sentence structures in definitions may result in high, or even prohibitive, information costs for users. Compilers should pay attention to information costs when writing definitions but also need to realise that, due to their very nature, lexicographic information costs cannot be eliminated. Nevertheless, prudent and proper consideration may result in a reasonable cost level that does not seriously affect the understanding of user-related definitions in online dictionaries.

6. Function-related definitions

Dictionaries with multiple functions may have one type of definition for each function. According to Tarp (2008: 81) a lexicographic function is the type of help a dictionary can give to a specific user type in a specific type of non-lexicographic situation in which someone may consult dictionaries to find help. In order to identify the functions of a dictionary, it is necessary to examine the human activities the dictionary is designed to address. User situations may generally be described as types of actual situation in which users encounter problems that may prompt them to consult dictionaries in search for solutions. Even though the concept of user situations is an ideal type, it is important to appreciate that actual user situations are not abstract lexicographic concepts. Furthermore, user situations have basically nothing to do with lexicography but result, or may result, in dictionary consultation.

Lexicographers distinguish between two broad types of user situation. The first type is called communicative user situations and involves ongoing oral or written acts of communication. Typical situations are where students or specialists are writing texts, and they decide to consult dictionaries in order to find data that can help them to write these texts. Authors or copy editors may be revising or editing texts and consult dictionaries to find help. Similarly, professors correcting essays or marking examination papers may need to check something in dictionaries, either related to linguistic or non-linguistic matters. Translators often consult dictionaries when translating fictional and non-fictional texts from or into their native language. And finally, readers of texts may consult dictionaries in order to get help understand individual words, collocations or phrases.

The other type of user situations is referred to as cognitive user situations, which are independent of ongoing communicative acts. Semi-experts and specialists may want to acquire general cultural knowledge about something or general factual knowledge about e.g. metallurgy in an effort to expand their horizons. Students may want to acquire specific knowledge about a particular topic, for instance the inflectional paradigm of an irregular verb or the birthday of a famous physicist. Finally, people may want to learn something specific about language usage or a subject field. It is important to note that these cognitive user situations do not arise from ongoing communicative acts or a desire to get help in connection with such acts; they arise from a desire to gain knowledge.
Dictionaries are consulted because users need information or knowledge. If this is taken at face value, dictionary functions are the lexicographic responses to non-lexicographic user situations. A dictionary function, also referred to as a lexicographic function, is the satisfaction of specific types of lexicographically relevant need of specific types of potential user in specific types of non-lexicographic situation. These functions can be divided into general types that match user situations and constitute one of the underlying features of dictionaries. Those functions that attempt to satisfy user needs in communicative user situations are called communicative functions. The following list contains some of the most important; online dictionaries may be designed to:

- provide help to produce texts;
- provide help to translate texts;
- provide help to edit and revise texts;
- provide help to correct and mark texts;
- provide help to understand words, texts and concepts.

Lexicographers may also design their dictionaries to satisfy user needs in cognitive user situations and the relevant functions are referred to as cognitive functions. These match the corresponding types of user situation. For example, online dictionaries can:

- provide help to acquire general factual knowledge about a subject field;
- provide help to acquire specific factual knowledge about a topic;
- provide help to acquire general linguistic knowledge;
- provide help to acquire specific linguistic knowledge.

Online dictionaries may be designed to satisfy a range of user needs. Dictionaries can have only one function, for instance to provide help to understand texts, or to provide help to produce texts, and such dictionaries are called monofunctional. Other dictionaries are polyfunctional, as they have been designed to satisfy several types of user need arising from several types of user situation. Whether dictionaries are monofunctional or polyfunctional, it should be clear that the claim about definitions that “their practical purpose is to resolve the communicative needs of dictionary users” (Atkins/Rundell, 2008, 407) is misleading. The purpose of meaning descriptions in dictionaries is to resolve communicative or cognitive user needs, and sometimes both.

Lexicographers should carefully consider the number of functions their online dictionaries are going to have. The more functions dictionaries have the more difficult it will be for lexicographers to prepare a lexicographic tool that satisfies all selected user needs. However, dictionary functions may be combined in one dictionary. For instance, lexicographers can relatively easily make dictionaries that help users understand texts as well as help users acquire general knowledge. Similarly, the functions to provide help to write texts and to provide help to revise or copyedit texts may be combined in the same dictionary. In some cases, however, lexicographers may have to give more weight to one function at the expense of others, so that their dictionaries have a primary function and a secondary, and perhaps a tertiary, function. The adoption of graduated functions will then be reflected in the data presented in that users get most help in respect of the primary function.

Even though a specific type of data may be shared by several functions, there are a number of aspects to take into account. A good definition supporting text production in a foreign language may differ from the optimal definition for text production in the same language by native speakers. Similarly, the definition that can best support the understanding of texts written in the native language of users is likely to differ from the optimal definition supporting the acquisition of knowledge. In these situations, the general cultural, factual and linguistic competences of intended user groups are important.

User competences and dictionary functions are directly related because dictionary functions help users where their competences are insufficient. Lexicographic definitions should therefore be adapted to those user situations in which they can satisfy user needs in whole or in part. This concerns the understanding of concepts, and several attempts have been made to explain what it takes to understand words, concept etc. Peirce (1998) offers one explanation, namely:

“Consider what effects that might conceivably have practical bearings we conceive the object of our conception to have: then, our conception of those effects is the whole of our conception of the object.” (Peirce, 1998, 135)
What this essentially boils down to is that you have not fully understood a concept until you have identified all the practical consequences the concept may possibly have. Writing definitions that can fully meet Peirce’s requirement is a tall order but for the purpose of lexicography, dictionaries that provide help in various types of situation may use the following three elements of the process of understanding as a point of departure. In order to fully understand a concept, you need answers to the following questions (Nielsen, 2010, 99):

- **Definition**: What is it?
- **Function**: What does it do?
- **Relation**: How is this concept related to other concepts?

Data explaining the meaning of lemmata based on these three elements provide users with a good foundation for understanding concepts and acquiring the knowledge needed to understand, write and translate texts, or as the case may be.

Definitions may support a number of functions. For example, definitions can help users who have problems understanding texts; definitions can help users to find the correct terms for text production; definitions can help users make correct translations of terms into or from a foreign language; definitions can help users acquire knowledge about general factual or linguistic matters as well as specific factual or linguistic matters. However, user needs may differ depending on user situations. An online dictionary whose function is to help users understand concepts or texts may have meaning explanations that focus on the first element:

**Definition** – the dictionary provides an answer to the question: What is it?

Users reading texts should be able to use a meaning explanation based on this element and place it into the context described in the text they are reading. The same online dictionary may also have the function of helping users write texts. In this case the meaning explanations adapted to support this function may focus on the first and the second element:

**Definition** – the dictionary provides an answer to the question: What is it?
**Function** – the dictionary provides an answer to the question: What does it do?

When producing texts users need to know what “the word is” and “how it works” so that they can be sure that they use the right word and use it properly in the text they are writing. In addition to the two communicative functions, the online dictionary may have a cognitive function and meaning explanations supporting cognitive functions should be based on all three elements:

**Definition** – the dictionary provides an answer to the question: What is it?
**Function** – the dictionary provides an answer to the question: What does it do?
**Relation** – the dictionary provides an answer to the question: How is this concept related to other concepts?

Users who want to acquire general or specific knowledge about something will need to know what it is, how it works and how it relates to other concepts or words in order to be able to distinguish between them and place them correctly within the structure of a particular domain.

Some may argue that a concept has one, and only one, meaning, and this is the meaning dictionaries should contain. However, if you ask people what a concept means you will likely get as many different answers as the number of people asked; it will therefore be difficult to say which one is the “correct” meaning. This problem was also recognised by Harris/Hutton (2008), who explain the definitorial task of lexicographers as follows:

“A lexicographical definition, we shall argue, does not in most cases identify a meaning independently existing in actual usage and discovered there by the lexicographer: it is deliberately constructed and allocated by the lexicographer on the basis of materials selected for study, and its allocation will depend on the viewpoint the lexicographer has chosen to adopt.” (Harris/Hutton, 2008, 78)
This statement is in line with the arguments put forward so far. Experts, semi-experts and laypersons need different types of definition and different dictionary functions are best supported by meaning explanations that focus on different elements. And, as we have seen, online dictionaries can cope with different definitions of the same concept depending on user type, i.e. user-related definitions. This capability may be extended to function-related definitions.

The process of linking lexicographic definition to functions in online dictionaries is relevant for compilers and users alike. First, compilers should realise that it is possible to have definitions supporting more than one function in a single database. Relational databases contain discrete data fields that contain different types of data, which allows compilers to have one data field containing a specific lemma and link this to two or more data fields containing definitions specifically written and marked for a particular function. As was the case with user-related definitions, compilers only need on lemma field because they can manipulate the search engine and the output device so that users are presented with the definition that matches the function they have selected.

From a user’s point of view, the question of access to the lexicographic data is important. Users type search words into a search box and indicate which kind of help they are seeking from the online dictionary, for example help to understand a word or help to write a text according to the options available. If users have selected help to understand a word, the search engine will then search the database for the lemma in the data fields containing lemmata and retrieve one hit (the search word), and it will also search the data fields containing definitions for the definition linked to the lemma and marked as intended for providing help to understand the word. The data found will then be presented to users onscreen. If users have chosen to get help to write texts, the search engine will search the lemma fields for the lemma typed in the search box and the definition fields for the appropriate definition marked for providing help to produce texts. The output device will then show the data found onscreen. Finally, online dictionaries allow users to select the option of acquiring knowledge and in such cases the search engine will search the lemma fields and definition fields, and the output device will show the lemma searched for and the definition intended to provide help to gain knowledge. Once again, online dictionaries with relational databases can contain several definitions of the same lemma and instead of showing all three definitions every time users look for a particular lemma, the dictionary will show only the one users need because compilers have geared the search engine to search for specific types of data linked in specific ways and geared the output device to show the retrieved data in a particular way.

6. Concluding remarks

Online dictionaries allow lexicographers to take a flexible approach to lexicographic definitions. Lexicographers can also have dynamic data in their database in the sense that the same set of data may support more than one dictionary functions. These lexicographic options differ fundamentally from the “one-size-fits-all” approach to dictionary making inspired by linguistic theories; lexicographers thinking outside the linguistic box can make online dictionaries that are multifunctional and at the same time present definitions targeted to specific user types. This may result in the writing and presentation of more than one definition for each meaning of a word or concept.

First, polyfunctional dictionaries can have one type of definition for each function. A lexicographic function is the type of help a dictionary can give to a specific user type in a specific type of non-lexicographic situation in which someone may consult dictionaries to find help, for instance when they are reading texts, producing texts or want to acquire knowledge about something in general or something specific. A good definition supporting text production in a foreign language is likely to differ from the optimal definition for text production in the same language by native speakers, and the definition that can best support text comprehension in the user’s native language is likely to differ from the optimal definition supporting the acquisition of knowledge.

Secondly, online dictionaries designed to help different types of users should contain definitions that reflect the cultural, factual and linguistic competences of those groups, such as laypersons, semi-experts and experts. The competences do not only refer to general competences such as language for general purposes, but also to domain-specific aspects such as language for special purposes. The definition that can best support the function text production by laypersons is different from the definitions that experts and semi-experts need in order to produce texts.

Thirdly, the question of access by users to the definitions is closely linked to their presentation. Online dictionaries can offer users a variety of search routes that differ considerably from those offered by printed dictionaries. Online dictionaries can ask users to specify why they are looking for help when they enter their search words, for instance by clicking one box if users want help to understand texts and clicking another box
if users want help to produce texts. Depending on which options users select, the definition presented on the screen will be specifically targeted to provide help in the situation indicated. Similarly, users may be asked to specify whether they are laypersons, semi-experts or experts, and the result of their searches will then provide them with help that is specific for the particular type of user in a particular type of user situation. As indicated above, online dictionaries can be designed to give help to different types of users in different types of user situations, thereby having several target groups and several functions. And the help online dictionaries give is tailor-made to cater to the lexicographic needs of each user group and in each type of non-lexicographic situation.

References:


