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Bartosz Ptasznik Uniwersytet Warmińsko-Mazurski, Olsztyn e:mail bartosz.ptasznik@uwm.edu.pl

Types of sense-navigation devices in print monolingual English learners' dictionaries

Typy elementów wspomagających nawigację wewnątrzhasłową w papierowych słownikach pedagogicznych języka angielskiego

The aim of the paper is to describe the types of sense-navigation devices in print monolingual English learners' dictionaries. The paper begins with a section devoted to the various definitions of sense-navigation devices. The following sections are a description of the different types of sense-navigation devices in learners' dictionaries: signposts in the Longman Dictionary of Contemporary English (LDOCE), guide words in the Cambridge International Dictionary of English (CIDE) and guidewords in the Cambridge Advanced Learner's Dictionary (CALD), short cuts in the Oxford Advanced Learner's Dictionary of Current English (OALD) and menus in the Macmillan English Dictionary for Advanced Learners (MED). The paper ends with the author's final comments about what type of research ought to be done in the future with respect to sense-navigation devices.

Key words: sense-navigation devices, signposts, guidewords, short cuts, menus,

learners' dictionaries

Słowa kluczowe: elementy wspomagające nawigację, wskaźniki semantyczne, menu hasła,

słowniki pedagogiczne

1. What are sense-navigation devices?

One of the main problems that dictionary users encounter during dictionary consultation is finding the right meaning of a word in a polysemous entry. Lexicographers have attempted to tackle this problem by assisting dictionary users with sense-navigation devices at the beginning of senses, which dictionary entries. These devices have been defined in different ways:

- they are "words or short phrases that distinguish the meanings of longer entries, act as a visual index to help the user access the meaning they want as quickly as possible" (LDOCE3, xi),
- "short cuts¹ show the general meaning or context of each meaning" (OALD6, viii),
- "the $sign\ posts^2$ and $menus^3$ in LDOCE and the $guide\ words^4$ in CIDE try to lead the users as fast as possible to the part of the entry which may serve them best" (Bogaards 1998: 556),
- it is a "word or short phrase that summarizes the sense [...] and comes after the sense number and before the definition" (Nichols 2006: 162),
- "LDOCE3 [...] adapted a strategy [...] for each separate sense, there is a short descriptor [...] designed to give the user a general idea of the way the word is divided up; these can be scanned fairly quickly, and ideally the user is drawn to the appropriate sense" (Rundell 1998: 327).

Sense-navigation devices have been illustrated below in Fig. 1 (signposts which appear in the first six senses of the verb entry *press* in LDOCE3).

$press^2 v$

- 1 ► AGAINST STH [T always + adv/prep] to push something firmly against a surface: The little boys pressed their noses against the glass. | Viv tried to press himself back against the wall. | The old man pressed a coin into her hand.
- **2** ▶BUTTON [T] to push something with your finger to make a machine start, a bell ring etc: *What happens if I press the reset button?*
- 3 ► CLOTHES [T] to make clothes smooth using heat; IRON: *I'll need to press my suit.*
- **4** ► **CROWD** ◄ [I always + adv/prep] to move in a particular direction by pushing: *The crowds pressed around her, hoping for her autograph.*
- 5 ▶ PERSUADE ◄ [T] to try hard to persuade someone to do something: Please don't press me on this point, I have no more to say. | press sb to do sth Katie pressed me to stay a little longer. | press sb for sth The bank is pressing us for a quick decision.
- **6** ► FOR JUICE **◄** [T] to put a heavy weight on something to get liquid from it: *The grapes must be pressed to extract the juice.*

Fig. 1. Signposts in the verb entry press in LDOCE3 (LDOCE3, 1113).

¹ Short cuts are sense-navigation devices which appear in OALD.

² Signposts are sense-navigation devices which appear in LDOCE (the term "signpost" can also refer to all types of sense-navigation devices).

³ Menus featured in the third edition of LDOCE. They were combined with signposts in longer entries. Menus are also the specific type of sense-navigation device which appears in both editions of MED (2002 and 2007).

⁴ Guide words are sense-navigation devices which featured in CIDE.

2. Signposts in the Longman Dictionary of Contemporary English

Signposts, which are an incarnation of sense-navigation devices in LDOCE, were introduced in the dictionary for the first time in 1995. Lexicographers implemented signposts into entries with the aim of shortening entry consultation time and increasing the sense selection accuracy of dictionary users in longer entries. A common feature of LDOCE3 signposts is that they appear at the beginning of each sense (before the definition), and each signposted sense always begins on a new line. They are printed in capital letters and boldface font, and two black triangles have been placed next to each signpost (one to the left and one to the right of the signpost, both triangles pointed in the direction of the signpost). LDOCE3 signposts are preceded by sense numbers. According to LDOCE3 lexicographers, signposts have been formed out of the dictionary's defining vocabulary (LDOCE3, xvi), with the intention of making the signposts more clear and transparent during entry consultation. In addition, LDOCE3 signposts "may be a synonym, a short definition, or the typical subject or object of a verb" (LDOCE3, xvii). Interestingly, Urata et. al. (1999: 78-79) observed that LDOCE3 signposts could be classified into: "synonyms; short definitions; hypernyms; typical subjects; typical objects; context; purpose". These two classifications reveal that LDOCE3 signposts are not homogenous with regard to their linguistic form.

Also, LDOCE3 assists dictionary users in entry consultation through both signposts and menus in "some of the longer entries" (LDOCE3, xvii). In these entries, LDOCE3 menus are combined with "super signposts, the main headings [...] Each of these headed a group of meanings, and in each group the meanings were headed by their signposts" (Béjoint 2010: 175–176). It is important to point out, however, that signposts were not used for each single sense in all groups of meanings, in which case dictionary users need to meticulously scan through whole senses in order to obtain pertinent information from entries. Nevertheless, combining signposts and menus in entries remains to be a unique method of assisting dictionary users in entry navigation. No other English learners' dictionary has adopted this strategy.

LDOCE4 signposts do not differ much from their counterparts in LDOCE3. These signposts are printed in boldface and capital letters, they appear after the sense numbers at the beginning of senses and start on a new line. One major modification, however, was the introduction

of color and highlighting (LDOCE4 signposts are highlighted in blue color). Clearly, the aim of this alteration was to enhance the transparency of the signposting system. In addition, the black triangles which appeared next to LDOCE3 signposts were no longer used in LDOCE4. As far as the linguistic form of LDOCE4 signposts is concerned, DeCesaris (2012) observed that mainly superordinates (in noun entries) and contextual information (in adjective entries) were used as LDOCE4 signposts. Atkins and Rundell (2008: 216), however, conclude that LDOCE4 signposts are formed by synonyms, paraphrases and superordinates of the headword, and can also be "an indication of the domain or subject matter". Differences between LDOCE3 and LDOCE4 signposts can be found with respect to their wording or position within entries. Some entries even have new signposts. Signposts are not combined with menus in LDOCE4.

LDOCE5 and LDOCE6 signposts resemble the signposts from the fourth edition of LDOCE: they start on a new line, appear after the sense numbers, and they are highlighted in blue. The difference, however, is that they are printed in white small capital letters, whereas LDOCE4 signposts were printed in black. Significantly, there is now evidence (Dziemianko 2016) that the visual presentation of signposts (in online dictionaries) in LDOCE5 is more optimal than the method for highlighting signposts in OALD8 and OALD9. This finding suggests that overall LDOCE lexicographers have adopted the right approach in the visual presentation of sense-navigation devices in a learners' dictionary. In her research (2016), Dziemianko demonstrated that signposts that appear in white capitals on a blue background (LDOCE5) are generally a more effective highlighting method than signposts which appear in crimson capitals above a crimson line (OALD8), or lower-case letters above a dark orange line (OALD9), with respect to the consultation time of retrieving senses (also retrieval of entry-final senses). Furthermore, the subjects assisted by white capitals on a blue background achieved comparable results to subjects who had crimson capitals above a crimson line at their disposal and also lower-case letters above a dark orange line with regard to accuracy of sense identification. In addition, LDOCE5 signposts and OALD9 guiding devices were more beneficial for users in comparison with OALD8 meaning access facilitating devices when taking meaning retention into account.

3. Guide words in the Cambridge International Dictionary of English and guidewords in the Cambridge Advanced Learner's Dictionary

Guide words are the specific type of incarnation of sense-navigation devices that appear in CIDE, which was published in 1995. The aims of CIDE guide words have been clearly stated in the front matter of the dictionary: (1) "[w]hen a single word has more than one meaning, GUIDE WORDS help you to find which meaning you want. More commonly used meanings are usually given first" (CIDE, ix); and (2) "When a word has more than one meaning, the GUIDE WORDS help you to find the right one quickly" (CIDE, x). In other words, the role of guide words is to increase sense selection accuracy and to reduce entry consultation time during entry navigation. The CIDE signposting system differs from all the other entry navigation systems in the remaining English learners' dictionaries. Polysemous words have been divided into several entries (with the same headword), with each of these entry words being assigned some general core meaning. As an example, the noun entry burlesque is divided into two noun entries (both entries being headed by the headword burlesque), with one entry being assigned the guide word WRITING, while the other the guide word SHOW. The guide words are printed in framed small capital letters.

A revision of CIDE led to its publication as CALD1 in 2003. However, only minor changes were introduced into the dictionary's entry navigation system. For example, lexicographers added guidewords⁵ to some of the entries (the guideword PRODUCE LIGHT was added to the verb entry burn). As for the visual presentation of CALD1 guidewords, there were no changes. Longer entries were split into several entries, which were headed by the same headword, and a different guideword was assigned to each entry. The CALD2 guideword system was unaltered. A more innovative sense-navigation system was introduced by lexicographers in CALD3 in 2008.

As far as the typographical features of sense-navigation devices are concerned, CALD3 guidewords are printed in boldface and small capital letters, and the guidewords appear in blue. Each guideword has a blue circle located to the right of the guideword, with a white arrow appearing in the background of the circle. In general, dictionary users are assisted with run-on guidewords in CALD3. However, it can be observed that CALD3 guidewords begin on a new line in the most polysemous CALD3

⁵ Spelled as one word in all four editions of CALD (2003, 2005, 2008, 2013).

entries. The vast majority of guidewords consist of one to two words. CALD3 guidewords could be assigned to more than one meaning and it is "the frequency of the first meaning in each guideword group" (CALD3, XI) which determines how the senses in entries are ordered.

As for CALD4 guidewords, only a few changes have been made in comparison with CALD3 guidewords. The color in which the guidewords appear has been changed to red and red-framed triangles against a white background have been placed to the right of each guideword. Another distinguishing feature is that CALD4 entries have run-on guidewords (CALD3 guidewords start on a new line in entries with many meanings).

4. Short cuts in the Oxford Advanced Learner's Dictionary of Current English

Dictionary compilers implemented sense-navigation devices (called short cuts⁶ in OALD5) into the microstructure design of OALD4 entries in 1989. OALD4 short cuts appear only in the most polysemous verb entries (do, make, see, etc.). They are printed in capital letters and each short cut is preceded by a black triangle which is pointed in the direction of the short cut. Unlike LDOCE3 signposts, which are placed in-between two triangles, OALD4 short cuts have one triangle. Similarly to CALD3 guidewords, OALD4 short cuts cover more than one meaning (for example, the verb entry make has four different senses under the short cut CONSTRUCTING OR CREATING). The short cuts start a new paragraph, with white space separating paragraphs from one another.

In 1995, OALD5 introduced its own sense-navigation system. OALD5 short cuts only appear in "large verb entries" (OALD5, *Symbols used in the dictionary*). On the contrary to OALD4 short cuts, the OALD5 guiding devices are not printed in capital letters and they are printed in boldface. Moreover, the OALD4 triangular arrows are not used for OALD5 short cuts. Instead, these guiding devices appear with centered bullets positioned to the left of the short cut. Interestingly, there is less spacing between the paragraphs headed by different short cuts, which could be perceived as a space-saving technique.

In contrast with OALD4 and OALD5 short cuts, which were used only in the most polysemous verb entries, the OALD6 sense-navigation system uses short cuts systematically in a number of entries with many meanings. OALD6 short cuts may cover more than one meaning (OALD6, viii).

 $^{^6\,\}mathrm{OALD4}$ sense-navigation devices will be referred to throughout as short cuts.

Taking typographical features into consideration, the visual presentation of OALD6 short cuts clearly differs from the method for highlighting OALD4 and OALD5 short cuts. OALD6 short cuts are capitalized and printed in black, and appear in half-rectangular frames, which are presumably there to improve the visibility of the short cuts. OALD6 entries do not have run-on short cuts, the short cuts begin on a new line. One characteristic feature of the OALD short cut system (not only OALD6, but also OALD4, OALD5, OALD7, OALD8 and OALD9) is that short cuts are followed by sense numbers. In the LDOCE signposting system (LDOCE3, LDOCE4, LDOCE5, LDOCE6), however, signposts are always preceded by sense numbers.

The most recent short cut systems (OALD7, OALD8, OALD9) differ from their older versions given the introduction of two-tone printing. The short cuts appear in blue and small capital letters, and they are printed in boldface. OALD7 and OALD8 short cuts have blue triangular arrows to their left, whereas in OALD9 entries the arrows have been replaced by centered bullets, but much smaller with respect to size than the ones appearing in OALD5. Taking the linguistic content of OALD6 and OALD7 short cuts into account, there are slight differences, for example, new short cuts were added, or the wording of short cuts could be different in certain entries. In general, the OALD7, OALD8 and OALD9 short cut systems appear to be more user-friendly than the OALD4, OALD5 and OALD6 short cut systems.

5. Menus in the Macmillan English Dictionary for Advanced Learners

Sense-navigation devices, such as signposts⁷, guidewords, or short cuts, which are located in the immediate vicinity of the definition of a given sense, are not the only type of meaning access facilitator in English monolingual learners' dictionaries. Dictionaries can also assist users in entry navigation with menus. As mentioned above, menus were used in LDOCE3 entries by lexicographers to assist dictionary users, however, only with the longest entries. In this particular case, menus were combined with signposts, but they were not used throughout the whole dictionary as the main type of sense-navigation device. MED is the only English monolingual learners' dictionary which uses menus as its main entry navigation device. Menus form a "list of senses⁸" (Welker 2010: 213),

 $^{^7}$ Signposts, guidewords and short cuts will be referred to throughout as signposts.

⁸ Nesi and Tan (2011: 79) define menus as a list of "numbered signposts".

which is located at the top of the entry. This means that the sense-navigation devices of particular senses appear in this list, "gathered in a single block above the entry" (Lew 2010: 1121), rather than next to the senses. Menus have the same function as signposts, as they are to assist dictionary users with entry consultation, and increase sense selection accuracy and entry consultation time.

Lexical words with at least five meanings have menus in MED (Béjoint 2010: 187), which are always located above the entry. The senses in the menu are numbered, printed in boldface and they appear in lower case letters (in general, the menus are printed in black against a red shading). Some menus have additional information (+ PHRASES; + PHRASAL VERBS) about senses, which is located at the end of the menu, appearing after the last sense. This means that these senses (below the menu) contain information about the phrases or phrasal verbs that have been lemmatized with the headword. Additional information in menus about phrasal verbs (+ PHRASAL VERBS) can only be found in MED2, however, not in MED1. Taking the linguistic content of menus into account, DeCesaris (2012: 533-534) classifies the sense cues in MED into synonyms and superordinates of the headword, subject field labels and context with information about the headword, while Atkins and Rundell (2008: 204) state that the sense cues "are kept as brief as is consistent with intelligibility" and that "[i]n many cases, they take the form of a telegraphic version of the main definition, but they can also work on the basis of contextual or collocational hints". As far as the differences between MED1 and MED2 menus are concerned, additional sense cues were added to newly formed senses in the dictionary and some sense cues were rephrased.

A sample menu has been illustrated below in Fig. 2 (the noun entry lime appearing with a menu and the first three senses of this entry from MED2). The headword lime and star symbol in Fig. 2 appear in red; the menu is printed in black but it has a red background.

lime /laim/ noun 🛪					
1 fruit with green skin 2 white substance 3 lime-green colour	4 drink made from limes 5 type of tree				
1 [C/U] a fruit with a hard green skin and sour juice that grows on a lime tree: <i>a slice of lime</i> –picture → C10 2 [U] a white substance used for making CEMENT and for helping plants to grow 3 [U] a LIME-GREEN colour					

Fig. 2. Sample noun entry lime (fragment) with menu in MED2 (MED2, 875).

6. Suggestions for research

The different types of sense-navigation devices in English monolingual learners' dictionaries are listed in Table 1. Guiding devices are presented in the same order in which they appear in specific sections of the paper.

Table 1.	Types of	f sense-navig	ation (devices:	in print	monolingua	al English	learners'	dictionaries

Dictionary/	Year of	Type of guiding	Color	Typographical	Run-on
edition	publication	device	accentuation	features	devices
LDOCE3	1995	Signposts/menus	No	$\mathrm{CL}^a/\mathrm{BF}^b/\mathrm{T}^c$	No
LDOCE4	2003	Signposts	Yes	$\mathrm{CL/BF/BH}^d$	No
LDOCE5	2009	Signposts	Yes	WSCL ^e /BF/BH	No
LDOCE6	2014	Signposts	Yes	WSCL/BF/BH	No
CIDE	1995	Guide words	No	FSCL^f	No
CALD1	2003	Guidewords	No	FSCL	No
CALD2	2005	Guidewords	No	FSCL	No
CALD3	2008	Guidewords	Yes	$\mathrm{BSCL}^g/\mathrm{BF/BC}^h$	Yes
CALD4	2013	Guidewords	Yes	$\mathrm{RSCL}^i/\mathrm{BF/WA}^j$	Yes
OALD4	1989	Short cuts	No	CL/T	No
OALD5	1995	Short cuts	No	$\mathrm{BF}/\mathrm{CB}^k$	No
OALD6	2000	Short cuts	No	$\mathrm{CL}/\mathrm{HF}^l$	No
OALD7	2005	Short cuts	Yes	$BSCL/BF/BTA^m$	No
OALD8	2010	Short cuts	Yes	BSCL/BF/BTA	No
OALD9	2015	Short cuts	Yes	BSCL/BF/CB	No
MED1	2002	Menus	Yes	LCL ⁿ /BF/RS ^o	No
MED2	2007	Menus	Yes	LCL/BF/RS	No

^a Capital letters. ^b Boldface font. ^c Triangles. ^d Blue highlighting. ^e White small capital letters. f Framed small capital letters. g Blue small capital letters. h Blue circle with white arrow. ⁱ Red small capital letters. ^j White arrow. ^k Centred bullets. ^l Half-rectangular frames. ^m Blue triangular arrows. ⁿ Lower case letters. ^o Red shading.

Various studies have shown that sense-navigation devices are helpful when dictionary users are searching for the correct meaning in a dictionary entry. One of the first findings was that less proficient English learners benefit from having menus in entries (Tono 1992). The same conclusion was drawn from Tono's (2011) eye-tracking study, however, more proficient students did not really use menus during dictionary consultation, preferring to use signposts instead. Lew (2010) and Nesi and Tan (2011) inferred from their research that signposts are more useful in dictionary use than menus. Similarly, Lew and Pajkowska (2007) showed in their study that

by having access to LDOCE4 signposts pre-intermediate and intermediate students had a tendency to perform better in their dictionary tasks. Ptasznik's finding (2015) was that signposts reduce entry consultation time during dictionary look-up and that a combination of signposts and menus contributed to faster entry consultation than in comparison with entries without sense-navigation devices.

It seems that the introduction of colored sense-navigation devices in English monolingual learner's dictionaries was the right decision and, significantly, there is now evidence (Dziemianko 2015: 27) in the field of dictionary use that "functional labels in colour significantly increase the speed and effectiveness of online dictionary search". Although these research results are not concerned specifically with sense-navigation devices, it appears that there must be some advantages for dictionary users when consulting polysemous entries which are equipped with colored sense-navigation devices. In another study, Dziemianko (2016) found that the method for highlighting sense-navigation devices in OALD8 and OALD9 is not as effective as the visual presentation of LDOCE5 signposts in online dictionaries. More such studies are needed.

An additional research direction taken by metalexicographers could be one focusing on the visual presentation of sense-navigation devices in print dictionaries, as well as their location within entries. For example, LDOCE6 signposts begin on a new line, whereas CALD4 has run-on guidewords. Perhaps the placement of sense-navigation devices in entries does affect entry consultation time or even sense selection accuracy. Also, researchers could study the typographical features of sense-navigation devices in paper dictionaries. Possible research questions include:

- (1) Do sense-navigation devices that appear in boldface font increase sense selection accuracy in comparison with sense-navigation devices that appear in small capital letters?
- (2) Do sense-navigation devices that appear in boldface font reduce entry consultation time in comparison with sense-navigation devices that appear in capital letters?
- (3) Do sense-navigation devices that appear in half-rectangular frames (see OALD6 guidewords) improve the visibility of sense-navigation devices in comparison with sense-navigation devices that appear without such frames?
- (4) Do sense-navigation devices that appear with symbols (see LDOCE3 signposts which appear with two black triangles) improve the visibility of sense-navigation devices in comparison with sense-navigation devices that appear without such symbols?

Finally, the linguistic form of sense-navigation devices is still one research area in dictionary use which remains unexplored. For example, questions have been raised about the heterogeneity of signposts (Yamada 2010). Yamada notices that signposts are not homogeneous with respect to their linguistic form. In other words, signposts could be synonyms, superordinates, short definitions, or paraphrases of headwords, etc. According to Yamada, this could be a serious drawback and it could influence dictionary users' sense selection accuracy negatively primarily because users are not presented with information in these situations in a uniform manner, or in other words such a method of presentation lacks standard lexicographic consistency. Dealing with the issue from a different perspective, Ptasznik (2015) argues for the flexibility of phrasing signposts. Put another way, limiting signposts to given linguistic forms, for example, synonyms or contextual information in relation to the headword only, could lead to situations in which dictionary users would not be able to notice the relation between signposts and their senses. Consequently, such signposts would most probably mislead dictionary users. Others problems that metalexicographers should attempt to analyze more closely include the vagueness of signposts, signpost redundancy, or the fact that some signposts may not be phrased within the limits of a dictionary's defining vocabulary. Not only do these issues need to be debated, but also research needs to be conducted.

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Summary

Sense-navigation devices in English monolingual learners' dictionaries are the primary focus of this paper. There are two main types of sense-navigation devices: signposts and menus. Signposts (also called guidewords, or short cuts), which help dictionary users quickly find the sense of a word they are searching for, appear next to the senses of a word. They are brief definitions of senses and consist of a few words. Menus, which are the second type of sense-navigation devices, form a list of senses (or signposts) above the entry. Similarly to signposts, their role is to increase sense selection and shorten consultation time. The paper describes the specific types of sense-navigation devices which appear in the Longman Dictionary of Contemporary English (signposts and menus), Cambridge International Dictionary of English (guide words) and Cambridge Advanced Learner's Dictionary (guidewords), Oxford Advanced Learner's Dictionary of Current English (short cuts) and Macmillan English Dictionary for Advanced Learners (menus).