The Concept of Lexicographic Condensation: A Review of and Perspectives on Digital Lexicography

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Abstract: This study focuses on the concept of lexicographic textual condensation in order to determine its role in digital lexicography. Current interpretations of this concept, which was originally coined for printed dictionaries, are analysed. Special emphasis is placed on the relevant differentiation between the various textual levels in which the content of these works are distributed and on the difference between primary and secondary condensation. Examples from English–Spanish digital dictionaries will be explored in order to answer the question of how condensation is presented in these works and what types of components or items are particularly affected by it. Finally, meaning of condensation forms in current dictionaries based on the reading approaches applied to reference works is discussed. We support the argument that these forms are intrinsic to the type of *text* that we call a *dictionary*, and that the reasons behind condensation mechanisms are not limited to mere spatial constraints, but that these, together with other formal aspects, can make it easier to find the desired answers through a nonlinear reading process that is generally and legitimately applied to dictionaries.

Keywords: DIGITAL LEXICOGRAPHY, PRINTED LEXICOGRAPHY, LEXICOGRAPHIC TEXTUAL CONDENSATION, THEORY OF THE FORM OF DICTIONARIES, PRIMARY LEXICOGRAPHIC CONDENSATION, SECONDARY LEXICOGRAPHIC CONDENSATION, BILINGUAL ENGLISH–SPANISH LEXICOGRAPHY, MICROSTRUCTURE, REFERENCING, NATURAL LANGUAGES

Opsomming: Die konsep van leksikografiese verdigting: 'n Oorsig van en perspektiewe op die digitale leksikografie. In hierdie artikel word gefokus op die konsep van leksikografiese tekstuele verdigting om sodoende die rol daarvan in die digitale leksikografie te bepaal. Huidige interpretasies van hierdie konsep wat oorspronklik vir gedrukte woordeboeke geskep is, word geanaliseer. Besondere klem word geplaas op die relevante onderskeiding tussen die verskillende tekstuele vlakke waarin die inhoud van hierdie werke versprei is en op die verskil tussen primêre en sekondêre verdigting. Voorbeelde uit Engels–Spaanse digitale woordeboeke word ondersoek om te bepaal hoe verdigting in hierdie werke aangebied word en watter soorte komponente of items spesifiek hierdeur beïnvloed word. Laastens word die betekenis van verdigtingsvorme in huidige woordeboeke wat gebaseer is op die leesbenaderings wat op naslaanwerke toegepas word, bespreek. Ons steun die argument dat hierdie vorme inherent is aan die tipe *teks*

wat 'n *woordeboek* genoem word, en dat die oorsake van verdigtingsmeganismes nie beperk is tot blote ruimtelike beperkings nie, maar dat hierdie meganismes, saam met ander formele aspekte, dit makliker kan maak om die verlangde antwoorde deur middel van 'n nieliniêre leesproses wat oor die algemeen en aanvaarbaar op woordeboeke toegepas word, te vind.

Sleutelwoorde: DIGITALE LEKSIKOGRAFIE, GEDRUKTE LEKSIKOGRAFIE, LEKSIKO-GRAFIESE TEKSTUELE VERDIGTING, TEORIE VAN WOORDEBOEKVORM, PRIMÊRE LEKSI-KOGRAFIESE VERDIGTING, SEKONDÊRE LEKSIKOGRAFIESE VERDIGTING, TWEETALIGE ENGELS–SPAANSE LEKSIKOGRAFIE, MIKROSTRUKTUUR, VERWYSING, NATUURLIKE TALE

1.   The concept of lexicographic condensation

The framework of the *general theory of the form of dictionaries* (e.g. Wiegand 1984, 1996a, 1997, Wiegand and Fuentes Morán 2009) presents and develops the concept of *lexicographic textual condensation* (Wiegand 1996b, Bustos Plaza and Wiegand 2005–2006) as one of the main pillars for the formal description of its subject matter. This concept attempts to explain partially the particular, albeit not unique, form in which data are presented in standardized dictionaries. Indeed, one of the characteristics that identifies the *lexicographic text*[1] is the fact that, to a large extent, linguistic data are essentially expressed throughout the dictionary with forms of expression that are not part of natural language (Wiegand 2009). As a consequence, lexicographic condensation is described as the process that leads from a full text (a text showing *complete* cohesion and explicit syntax) to a condensed article text (with addressing as syntax, cf. Gouws 2015).

This can be illustrated with a very simplified example. If we look for information about the word *increase* (which, in an attempt to simplify the question, will be discussed here exclusively as a verb) in a bilingual English–Spanish dictionary, we do not generally find entries in modern dictionaries with the following information:

(1)   *increase* is a verb
(2)   *increase* means aumentar

but rather, e.g.

(a)   **increase** *verb* aumentar
or
(b)   **increase** *v* aumentar

When comparing (1) and (2), which are presented in natural language, with (a) or (b), which present the characteristics of a lexicographic *text*, we can observe that (a) and (b) do not include "is a", that "verb" in (b) is abbreviated and presented as "v", and that "means […]" is omitted.[2] (a) and (b) are condensed sequences in non-natural language that try to provide the same propositional

content than (1) and (2). Both (a) and (b) apply one of the most common condensing procedures: omitting; and abbreviating is also a technique applied in (b). Therefore, (b) is more condensed than (a). Together with omitting and abbreviating, other condensation mechanisms have been described: shortening, shifting, substituting, summarizing, and embedding.[3]

However, *condensation* is described as a *transformation* process. If interpreted literally, this would imply that the text starts as a sequence in natural language (for example: "*increase* is a verb") which is then subjected to different transformations until it reaches the form in which the result is presented in the dictionary. However, we must admit that this principle can only ever be applied from a theoretical perspective (Rascón Caballero 2021: 104-106). That is, lexicographers in a real context do not generally formulate the contents in natural language and then *transform* them through condensation procedures in order to include the data in the dictionary according to the required standard format. Therefore, an actual *condensation* process is not taking place. However, the purpose behind the application of this concept goes beyond this principle. The objective is to determine formally the propositional content of the sequences that are transformed — in other words, the data that need to be transmitted — and to contribute to the description, development, or assessment, among others, of the corresponding forms of representation of these data in the dictionary. This, in turn, provides a tool that can be applied, for example, to perception studies — in other words, to studies on how the transmitted data are interpreted and on what potential sources of error can be found in these interpretations. Therefore, the strengths in the application of this concept include its contribution to the detailed description of the differences between natural language and the forms of expression used in the dictionary and, with it, to an accurate description of the different levels of *lexicographic textualization* (e.g. Wiegand 1996a). In sum, this type of description makes it possible to establish the initial guidelines of a partial methodology for the planning, design, comparison, and assessment of dictionaries on a formal plane — which is intrinsically connected to their contents (Wiegand 1998). This provides a base to study the way in which users infer the information that is conveyed through the dictionary, as supported by Nielsen (2002: 597):

> The lexicographical information can only be inferred from the article when the user successfully establishes the relation between two items, e.g. the item giving the meaning paraphrase and the item giving the form of the lemma sign. Therefore, the way in which the items have been written is of the utmost importance in establishing this relation, and this may be analysed in terms of textual condensation, which also has a direct bearing on the readability of an article.

The incidence of condensed components in a lexicographic article, as can be seen in (a) and (b) allows us to classify it as being more or less condensed, as can be also seen in the following two examples:

increase

INTRANSITIVE VERB [ɪnˈkriːs 🔊 ⓘ]

[*number, size, speed, pain*] aumentar 🔊

[*prices, temperature, pressure*] subir 🔊 ♦ aumentar 🔊

Figure 1: Partial article of *increase* from *Collins E–S*

I.**increase** V. intr. [🇺🇸 ɪnˈkrɪs, 🇬🇧 ɪnˈkriːs]

📖 Mostrar la tabla de conjugación

🔊 **increase** *number/size:*   aumentar

🔊 **increase** *prices:*   aumentar

Figure 2: Partial article of *increase* from *Pons/Oxford E–S*

The example in Figure 1 presents "intransitive verb" without an abbreviation (and therefore, without condensation), whereas the example in Figure 2 shows "V. intr.", which is an equivalent propositional content to the previous one, but which is presented here in its abbreviated (condensed) form. In any case, it is necessary to consider that all the dictionary articles, as they are currently known and according to the basic conventions of the *object* that we call a *dictionary*, always present a certain degree of condensation. Even if all the components in the lexicographic article were presented in their uncondensed form — which is not at all common — we always find at least some omissions: the components are not linked to each other through the procedures of natural languages, as can be seen in Figures 1 and 2. There are no sequences such as "an equivalent for *increase* in Spanish is …", "the meaning of *increase* is …", "*increase* is an intransitive verb …" or "*increase*, as an intransitive verb, means …". No, as observed, the corresponding data are formalized through different procedures that are typical of dictionaries and that allow us to identify them as such. Moreover, the process that we call *lemmatization* is a type of condensation that is typical of lexicography and characterizes it. For example, in all the dictionaries in which the word is included, *increase* is a lemma sign that, through a process of selection — and, consequently, the omission of all other potential elements — represents the entire paradigm of the verb.[4]

Therefore, it is essential to establish a category for a type of condensation that will be described as *primary* and that encompasses (1) the procedures that determine the form of the lemma sign, and (2) the omissions of expressions in natural language that join the different components of the article, as seen before (expressions such as "the meaning of … is …" or "… is an intransitive verb …").

These omissions can also be seen in instances of non-lemmatic addressing. For example, bilingual dictionaries may show the following:

(a₂) **increase** *verb* aumentar *verbo*

or

(b₂) **increase** *v* aumentar *v*

Both "aumentar *verbo*" and "aumentar *v*" show the omission — a characteristic of modern dictionaries, as has been pointed out — of the element of natural language that would join syntactically "aumentar" with ″*verbo*" (a₂) or with "*v*" (b₂).

Therefore, this is what we call a *primary* type of condensation that has been conducted through omission.

The other varied forms of lexicographic condensation which are generally decided when planning the design of each specific dictionary and which may be motivated by the linguistic conventions of each language — such as the abbreviation systems — may be referred to as *secondary* condensation.

Currently, primary condensation identifies the modern lexicographic text as such. Secondary condensation is just a possibility. It seems that those who insist that condensation is no longer necessary in digital dictionaries refer to this secondary form (Wolski 2020).[5]

The result of the condensation does not necessarily appear through linguistic signs, but also, for example, through icons and symbols, such as asterisks, arrows, etc., or through a combination of linguistic and non-linguistic signs. That is the case, for example, in the printed dictionary *Oxford Study*, targeted at Spanish-speaking English students:
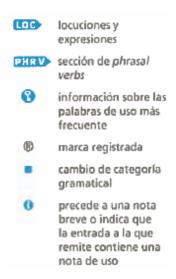
Figure 3: Fragment of the instructions in *Oxford Study*

Here, the symbol of an arrow with the letters "LOC" inside it is revealed as "locuciones y expresiones" [phrases and expressions], while the same symbol with the letters "PHR V" inside means "sección de phrasal verbs" [phrasal verb section]. The symbol of a key inside a circle means "información sobre uso de palabras de uso más frecuente" [information on the usage of the most frequent words]. In the example in Figure 2 there are symbols that represent the flags of the United States and the United Kingdom, which correspond to "American English" and "British English", respectively, as can be seen in Figure 4 by hovering the cursor over the symbols.

Figure 4:   *Pons/Oxford E–S* explanation of the flag symbols

In contrast with the limitations of the two-dimensional surface of printed dictionaries, digital dictionaries may present up to three characteristic textual levels:

(a)   An initial level (extended by means of a *more–less* folding system)
(b)   A second level that is accessed by hovering the cursor over a component in an article
(c)   A third level that is accessed by clicking a component in an article

Let us briefly discuss some examples of these three levels.

(a)   The initial level is sometimes expanded or collapsed through the more–less feature (or a similar procedure), as can be seen in *Wordreference E–S*:

Figure 5:   Partial article of *increase* in *Wordreference E–S*

(b)   In the example in Figure 4, the explanations "American English" and "British English" are visible by hovering the cursor over the flags, as previously shown. The flag symbols are, therefore, items that are presented in a condensed form, and which become uncondensed through a textual level that is accessed by hovering the cursor over them. Another example of un-condensation that is visible by hovering the cursor over a condensed form in the initial level can be found in *Wordreference E–S*:

Figure 6:   Partial article of *increase* in *Wordreference E–S* with information that is presented in a non-condensed form for *UK* through hovering

(c)   Examples of the textual level that can be accessed by clicking are found, for example, in *Linguee E–S*:

Figure 7:   Partial article of *increase* in *Linguee E–S*

In *Linguee E–S* (in which the textual level is not developed by hovering), the information regarding pronunciation (a recording) is accessed by clicking on the loudspeaker symbol. This is a way to expand information through a reference: the initial level, through the symbol of the loudspeaker, refers to a different textual level in which, through another reference, the user can access the oral reproduction of the word.

As we can see, changes in the textual level are particularly used to expand the information (references) or to un-condense some of the elements that are initially condensed. The example in Figure 7 is a very common type of reference in digital dictionaries.

Although it is generally possible to establish a clear difference between the expansion of information achieved through *references* and *un-condensation*, we can also find some less precise cases in which both concepts are entwined. The following example can be found in *Cambridge E–S*:

Figure 8:   Partial article of *increase* in *Cambridge E–S*

By clicking on [I or T] — hovering the cursor does not have any effect — we can access the section "Labels & Codes", where we can find the full list of these elements and, in several cases, a short explanation of their meaning (Figure 9). This is, therefore, an un-condensation procedure that presents the full form of items. In addition, the expanded information included in the original lexicographic article can be found in that same location.
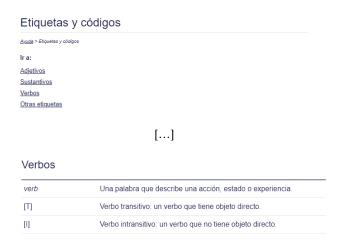
Etiquetas y códigos

Ayuda > Etiquetas y códigos

Ir a:

Adjetivos
Sustantivos
Verbos
Otras etiquetas

[…]

Verbos

verb	Una palabra que describe una acción, estado o experiencia.
[T]	Verbo transitivo: un verbo que tiene objeto directo.
[I]	Verbo intransitivo: un verbo que no tiene objeto directo.

Figure 9:   Partial article of *increase* in *Cambridge E–S*

2.   Trends in digital lexicography (English–Spanish)

This section discusses the most characteristic types of items that include condensation and the type of procedures they follow in the selected dictionaries. Indeed, in some of these dictionaries we can find, apart from primary condensation forms, instances of secondary condensation, particularly in (1) morphosyntactic items, such as *v* (verb) or *pl.* (*plural*) — probably the most classical and visible type — and (2) the way in which disambiguators are presented, and occasionally the definitions, equivalents and examples. The pertinence of including these items or the forms in which they are presented are not discussed here, but the fact is that we can find a range of different decisions in the examples from the selected dictionaries. An overview of the most significant cases will be presented and the way in which condensation has been applied in the articles corresponding to the verb *increase* will be analysed.

2.1   Morphosyntactic items

Included here are all the items that refer to different classes of words, syntax (such as *transitive/intransitive*), and morphological items (e.g. conjugation models). In *Collins E–S*, *Cambridge G. E–S*, and *Longman E–S*, we can find information presented in a non-condensed form regarding the fact that *increase* is a verb, and also regarding its transitive or intransitive nature. Figure 1 showed the example from *Collins E–S* ("intransitive verb"). Figure 10 shows two more examples.

Figure 10:   Partial articles of *increase* from *Cambridge G. E–S* and *Longman E–S*

The dictionary *Nglish E–S* does not condense the word *verb*, but in this case there is no information on the transitivity or intransitivity of the word (Figure 11).
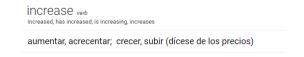

Figure 11:   Partial article of *increase* from *Nglish E–S*

Examples where the form *verbo* or *verb* is not condensed but the information on its transitivity or intransitivity can be found in a condensed form in *Cambridge E–S* (Figure 8) and in *Linguee E–S* (Figure 12).

Figure 12:   Partial article of *increase* from *Linguee E–S*

The information on the transitivity or intransitivity of the verb is indicated through the condensed form "(sth.)". In this case, the mention to the object is abbreviated (*sth.*, as an abbreviation of *something*), and the parentheses indicate that this is an optional element. The item is not linked here to another textual level and, therefore, it is a condensed element that does not give access to its explanation or un-condensation.

Both *Wordreference E–S* and *Pons/Oxford E–S* include condensed items on the category of the verb and its transitivity or intransitivity. Figure 13 shows an example from *Wordreference E–S*, which is discussed below, together with its conjugation forms (Figures 17–20).

Figure 13:   Partial article of *increase* from *Wordreference E–S*

In *Pons/Oxford E–S*, hovering the cursor over the condensed part of speech shows the following pop-up information (Figure 14):

Figure 14:   Partial article of *increase* from *Pons/Oxford E–S* with an explanation for "V." and "intr.", respectively

Although in *Pons/Oxford E–S* the item "intr." Always appears next to "V.", "intr." is uncondensed as "verbo intransitivo" [intransitive verb].

The forms of inclusion on the verb conjugation also show that different decisions have been made. *Pons/Oxford E–S* also presents a hyperlink to a conjugation table that provides extensive information related to the article through a process similar to referencing (Figure 15).
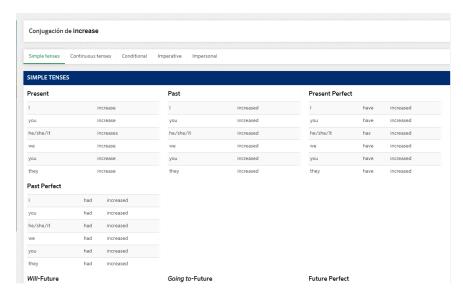

Figure 15:   Fragment from *Pons/Oxford E–S* with part of a conjugation table

In *Linguee E–S* (Figures 7 and 12), next to the word "*verbo*" can be found "(*increased*, *increased*)", which, as users may deduce, are the forms of the past simple and the participle (in no specific order). By clicking on "*increased*" more information is available (Figure 16):

Figure 16:   Partial article of *increased* from *Linguee E–S*

The classical verb conjugation forms (in this case *increased*, *has increased*, *is increasing* and *increases*, in that order) can also be found in *Nglish E–S* (Figure 11), although without any hyperlink, explanation or additional information.

The case of the tool *Wordreference E–S* is unique and will be discussed separately.

Figure 17:   Partial article of *increase* from *Wordreference E–S*

The items on the word category and conjugation are condensed and uncondensed in the same textual level. This example presents the uncondensed items *noun* and *verb* in the first line, and the corresponding condensed items (*v.* and *n.*) in the second and third lines.[6] These are, therefore, items with the same propositional content and presented at the same level, but in two different forms. The abbreviated items *v.* and *n.* are not explained by hovering the cursor over them or by clicking.
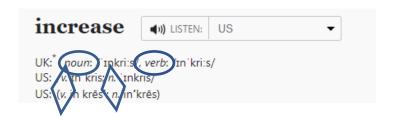

Figure 18:   Partial article of *increase* from *Wordreference E–S*

The section "Inflections of 'increase'" also shows different items, related to inflection, and presented in both condensed an uncondensed form in the same textual level:

Figure 19:   Partial article of *increase* from *Wordreference E–S*

The classical forms from the conjugation model are included (*increases*, *increasing*, *increased* and *increased*), as in other dictionaries, but in this case, they add an indication of the form (or person) for each of them. Once again, "person singular" is not condensed, but the forms "pres p", "past" and "past p" are partially condensed. In this case, condensed forms are presented in full in a second textual level that can be accessed by hovering the cursor over them:

Figure 20:   Partial article of *increase* from *Wordreference E–S*

Here, apart from the full form (1), we can find an explanation (2) of the meaning of "present participle", "past simple" and "past participle", respectively, and examples (3) for each of them. These are different types of information, with two different forms of addressing, in the same pop-up. In summary, as we can see, there is a wide range of decisions that have been taken regarding the presentation of morphosyntactic items.

2.2   Disambiguators and other condensed components

Semantic annotations act as disambiguators and establish differences between the meanings and equivalent alternatives. In *Collins E–S* (Figure 21), the annotation [*number, size, speed, pain*] is partially condensed through the omission of the characteristic linking elements from natural language, and through a linking procedure with commas; and it may be interpreted as a simple group of generic items of a cotext.

Figure 21:   Disambiguators in *Collins E–S*

The same procedure can be seen in *Pons/Oxford E–S* (Figure 2) and in *Longman E–S*. In this last case, this does not appear in the English–Spanish section, but in the Spanish–English one (Figure 22), which may be due to the didactic approach of this dictionary.

Figure 22:   Disambiguators in *Longman E–S*

As is known, some bilingual dictionaries also contain definitions.[7] The following example from *Cambridge E–S* (Figure 23) includes a case of condensation through embedding.
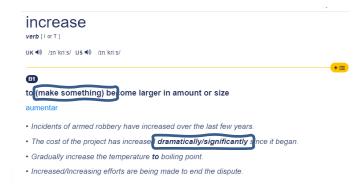

Figure 23:   Embedding in a definition in *Cambridge E–S*

This example shows an embedding mechanism which is not uncommon in definitions, but which is less frequent within examples. The sentence "to (make something) become larger in amount or size" embeds two definitions into one: "to become larger in amount or size" and "to make something become larger in amount or size". A similar procedure can be found in the second example: "The cost of the project has increased dramatically/significantly since it began". As we know, the slash replaces "or" in natural language. The same type of formalization can be found in *Collins E–S* (Figure 21: "to increase in weight/volume/size/value …") or *Cambridge G. E–S* (Figure 24).

Figure 24:   Embedding in a definition in *Cambridge G. E–S*

This example shows that the definition is not included in this procedure, because it is presented in natural language at all times, using "or". We can also find slashes in the presentation of translations of examples into Spanish, as can be seen in *Longman E–S* (Figure 25)

increase

in·crease¹ [S2] [W1] /ɪnˈkris/ *verbo* 🔊

[intransitivo, transitivo] aumentar, incrementar(se)

increase by 3%/17%
aumentar un 3%/17%

[…]

increase dramatically
aumentar/crecer enormemente

Figure 25:   Translation with slashes in *Longman E–S*

Finally, we must mention another significant factor: the presence of identical condensed items ("US", second and third lines), with a difference that can only be observed by hovering the cursor over them:
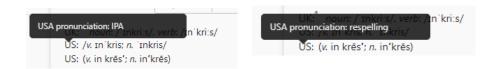
USA pronunciation: IPA
UK: /ˈɪnkriːs/, *verb:* /ɪnˈkriːs/
US: /*v.* ɪnˈkris; *n.* ˈɪnkris/
US: (*v.* in krēs'; *n.* inˈkrēs)

USA pronunciation: respelling
UK: *noun:* /ˈɪnkriːs/, *verb:* /ɪnˈkriːs/
US: /*v.* ɪnˈkris; *n.* ˈɪnkris/
US: (*v.* in krēs'; *n.* inˈkrēs)

Figure 26:   Partial article of *increase* from *Wordreference E–S*

3.   Condensation in digital dictionaries?

The presence of condensed forms in the printed format was markedly determined by the need to save space and provide as much information as possible, and it was considered necessary in order to optimize the printing surface. This may be a plausible explanation for the use of abbreviations and acronyms, as well as other condensation forms such as omission or embedding. The lack of space is a reasonable explanation for the fact that data in printed dictionaries are presented in formats that diverge from natural language.

Over the last decades of the 19th century and the first decades of the 20th century, many social and commercial changes have expanded the scope of interlinguistic communication, and there was a growing need for dictionaries that were easier to transport and use. These changes paved the way for the

arrival of more reduced formats that joined large dictionaries, particularly those known as "pocket dictionaries".[8] This decrease in size did involve including fewer entries and less information, but also led to the systematic development of different methods to save space and, as a consequence, of the forms that we now know as *condensation*. Dictionaries evolved to become increasingly standardized texts, and only rarely can we find, in the last decade of the 20th century, some examples of a slight change of trend in pedagogical lexicography.

However, in modern printed dictionaries, the question of space is combined with other aspects related to the forms in which the book is consulted, the ways in which it is *read*. In fact, textual density in dictionaries is not only motivated by the need to save space — which is more evident in printed dictionaries —, but also, as many other current means of communication, by the search for greater dynamism and effectiveness in the transmission of the message (Torres del Rey and Fuentes Morán 2013). In fact a dictionary is not a *text* meant to be read from left to right and from top to bottom (or in the direction required by each language). The same applies to each of the lexicographic articles it contains. This does not occur now, in digital dictionaries, just as it did not occur earlier, in printed formats.

Let us remember, in line with Rowe (2013), the difference between at least two reading modes — linear and tabular reading:[9]

> The act of reading has numerous and highly distinct functions and attitudes […]. Two basic types of engagement with a text may be identified, however, which are generally termed linear and tabular reading. Linear or intensive reading characterises the way we consume narrative fiction, [...] the reader of such works is typically highly absorbed in their storylines, borne along almost automatically by the temporal and causal narrative connections between sentences, paragraphs, and chapters. The tabular mode of reading, however, does not correspond to the storytelling form […]. In this case, reading is interrogative, seeking information about a specific subject, and this is reflected in the formats of tabular texts — encyclopedias, dictionaries and other reference books. Such works employ a number of organisational strategies — including alphabetisation, block spacing of text, section headings, and so on […], all of which are designed to facilitate the readers' search for specific information as well as to direct them towards the text's sources or related material if necessary.

In fact, the typical reading mode when consulting a dictionary is tabular, according to this classification, but it is also referred to as "scanning" (Rosenwald 2014) or hyper reading (Hayles 2010), for example, and its true purpose is to locate and obtain specific information or, in fewer cases, more general information about a lexical unit. We navigate across the dictionary and our eyes scan the lexicographic article until they have found (or they believe they have found) the information they were looking for. The process may continue if the previous results were not satisfactory, or it may end at that point, regardless of whether the article contained more information than what was actually assimilated by the reader. In dictionaries, as in many other *texts*, information is

structured with more or less advanced formal characteristics that enable this type of reading. These characteristics are position, size, font, style, color, and contents. With *contents* were refer to the components of the lexicographic article as they are presented in the dictionary, but regardless of their position, size, font, style, or color (because these elements, as structural indicators, are not meant to convey linguistic information and propositional contents, but to support and clarify the structural organization of the lexicographic article).

Finally, as stated by Krug (2014) when he tried to answer the question "Why do we scan?":

[1]   We're usually on a mission. Most Web use involves trying to get something done, and usually done quickly. As a result, Web users tend to act like sharks: They have to keep moving, or they'll die. We just don't have the time to read any more than necessary.

[2]   We know we don't need to read everything. On most pages, we're really only interested in a fraction of what's on the page. We're just looking for the bits that match our interests or the task at hand, and the rest of it is irrelevant. Scanning is how we find the relevant bits.

[3]   We're good at it. It's a basic skill: When you learn to read, you also learn to scan. We've been scanning newspapers, magazines, and books — or if you're under 25, probably reddit, Tumblr, or Facebook — all our lives to find the parts we're interested in, and we know that it works.

4.   Conclusions and perspectives

The practices that were originally justified in printed formats because of the spatial constraints acquire a new dimension and different characteristics in digital lexicography. The revision of the essential aspects of the concept of lexicographic condensation allows us to reconsider its relevance and to qualify and modify it in the field of digital lexicography. This is not due to the inertia of classical procedures, but to the need to adapt the works to the changing characteristics of the surface — which can now be visualized in all sorts of screens, from the smallest mobile phone to the largest monitors — and to the different textual levels that can be defined. However, beyond these considerations, current formats promote or must promote and enable reading modes that were already characteristic of dictionaries and are now inherent to digital tools as a whole.

Acknowledgements

Endnotes

1.   We refer here to dictionaries and lexicographic articles as *text*, as usual, in a generic sense. We are aware, however, that in a strict linguistic sense, these works do not completely meet the requisites for textuality (cf. De Beaugrande and Dressler 1981, Bernárdez 1982).

2.   We will not discuss other aspects that are intrinsically related to the entries, such as the characteristics of the format (bold, italic) that act as a support for information and, therefore, for legibility and readability (see Sections 3 and 4).

3.   A summarized and exemplified account of lexicographic condensation can be found in Wolski 1989, on monolingual dictionaries; and in Wolski 1991, on bilingual dictionaries. The form in which each of these condensation types and methods can be described may be consulted in Wiegand 1996a, 1996b and Wiegand 1998, particularly. The works that analyze the condensation procedures of specific dictionaries include Nielsen 2002, Gouws 2005, and Fuentes Morán and Pradas Macías 2009.

4.   This work will not establish a difference between *inner textual condensation* — which concerns all those lexicographic partial texts containing a carrier of the guiding element, in particular dictionary articles and index entries — and *outer textual condensation* — pertaining to the carriers of the guiding element such as lemmata and sub-lemmata, for example. This difference is particularly relevant for printed dictionaries. In addition, a qualitative approach, rather than quantitative, will be applied here, therefore, the different degrees of condensation are not described here.

5.   All the dictionaries used here to provide examples show instances of primary condensation. As we shall see, they also present secondary condensation to different extents.

6.   Other possible incoherences regarding position and structure can also be seen, but they will not be discussed here.

7.   This study will not discuss whether these dictionaries are strictly bilingual, bilingualized, semi-bilingual, etc. They will be treated as bilingual dictionaries because they contain two languages which are analyzed, and our teaching experience indicates that students do treat them as bilingual dictionaries.

8.   Observing and interpreting the evolution of dictionary formats through history can only be done with a broad perspective. This evolution is influenced by a wide range of factors, among which commercial, ideological and socio-cultural ones should not be overlooked. Some interesting notes on this can be found e.g. in Cowie 1998 and 1999, Hartmann 2000 or Collison 1982.

9.   There are several works that cast light on this topic and present different advances. We particularly recommend Durant 2017 because of its analytical literature review on reading forms in the digital era within the framework of the widely known *Charleston Briefings*.

References

A.   Dictionaries

Cambridge Dictionary (https://dictionary.cambridge.org/), español–inglés (*Cambridge S–E*), inglés–español (*Cambridge E–S*).

Cambridge Global Dictionary (https://dictionary.cambridge.org/), español–inglés (*Cambridge G. S–E*), inglés–español (*Cambridge G. E–S*).

Collins Dictionary (https://www.collinsdictionary.com/), inglés (Collins-E), inglés–español (*Collins E–S*) español–inglés (*Collins S–E*).

Linguee (https://www.linguee.es/), español–inglés (*Linguee S–E*), inglés–español (*Linguee E–S*).

Longman (https://www.ldoceonline.com/), español–inglés (*Longman S–E*), inglés–español (*Longman E–S*).

Nglish by Britannica (https://www.nglish.com/), español–inglés (*Nglish S–E*), inglés–español (*Nglish E–S*).

Pons/Oxford Dictionary (https://es.pons.com/traducci%C3%B3n), español–inglés (*Pons/Oxford S–E*), inglés–español (*Pons/Oxford E–S*).

Wordreference (https://www.wordreference.com/, español–inglés (*Wordreference S–E*) inglés–español (*Wordreference E–S*).

B.   Other literature

Bernárdez, E. 1982. *Introducción a la Lingüística del Texto.* Madrid: Espasa-Calpe.

Bustos Plaza, A. and H.E. Wiegand. 2005–2006. Condensación textual lexicográfica: esbozo de una concepción integral. *Revista de Lexicografía* 12: 7-46.

Collison, R.L. 1982. *A History of Foreign-language Dictionaries*. London: André Deutsch.

Cowie, A. 1998. A.S. Hornby: A Centenary Tribute. Fontenelle, T. et al. (Eds.). 1998. *EURALEX '98 Proceedings*: 3-16. Liège: English and Dutch Departments, University of Liège.

Cowie, A. 1999. Learners' Dictionaries in a Historical and a Theoretical Perspective. Herbst, T. and K. Popp (Eds.). 1999. *The Perfect Learners' Dictionary (?)*: 3-13. Lexicographica. Series Maior 95. Tübingen: Niemeyer.

De Beaugrande, R. and W. Dressler. 1981. *Introduction to Text Linguistics*. London: Longman.

Durant, D.M. 2017. *Reading in a Digital Age*. ATG LLC (Media).

Fuentes Morán, M.T. and E.M. Pradas Macías. 2009. Zur Textverdichtung in spanischen Lerner-wörterbüchern. *Lexicographica: International Annual for Lexicography* 25: 3-20.

Gouws, R.H. 2005. Textual Condensation in the DUDEN. DAS GROSSE WÖRTERBUCH DER DEUTSCHEN SPRACHE IN ZEHN BÄNDEN. Herbert Ernst Wiegand (Ed.). 2005. *Duden. Das große Wörterbuch der deutschen Sprache in zehn Bänden. Print- und CD-ROM-Version. Vol. 2*: 279-294. Berlin/Boston: Max Niemeyer.

Gouws, R.H. 2015. Expanding the Notion of Addressing Relations. *Lexicography. Journal of ASIALEX* 1(2): 159-184.

Hartmann, R. 2000. European Lexicography: Perspectives on Dictionary Research, with Special Reference to the Countries of the European Union. *Dictionaries: Journal of the Dictionary Society of North America* 21: 1-21.

Hayles, N.K. 2010. How We Read: Close, Hyper, Machine. *ADE Bulletin* 150: 62-78. https://www.maps.mla.org/content/download/155872/file/ade.150.62.pdf

Krug, S. 2014. *Don't Make Me Think, Revisited. A Common Sense Approach to Web Usability.* Third edition. San Francisco: New Riders.

Nielsen, S. 2002. Textual Condensation in the Articles of *de Gruyter Wörterbuch Deutsch als Fremd-sprache*. Wiegand, H.E. (Ed.). 2002. *Perspektiven der pädagogischen Lexikographie des Deutschen II: Untersuchungen anhand des »de Gruyter Wörterbuchs Deutsch als Fremdsprache«*: 597-608. Tübingen: Max Niemeyer.

Rascón Caballero, A. 2021. *Teoría y práctica del ejemplo lexicográfico bilingüe*. Barcelona: Universidad Autónoma de Barcelona.

Rosenwald, M.S. 2014. Serious Reading Takes a Hit from Online Scanning and Skimming, Researchers Say. *Washington Post, April 6,* 2014. Available at:
https://www.washingtonpost.com/local/serious-reading-takes-a-hit-from-online-scanning-and-skimming-researchers-say/2014/04/06/088028d2-b5d2-11e3-b899-20667de76985_story.html.

Rowe, C. 2013. The New Library of Babel? Borges, Digitisation and the Myth of a Universal Library. *First Monday* 18(2).
https://doi.org/10.5210/fm.v18i2.3237.

Torres del Rey, J. and M.T. Fuentes Morán. 2013. Diccionarios electrónicos: (re) estructuras de acceso. Cordón García, J.A., R. Gómez Díaz and J. Alonso Arévalo. 2013. *Documentos electrónicos y textualidades digitales*: 237-245. Salamanca: Universidad de Salamanca.

Wiegand, H.E. 1984. On the Structure and Contents of a General Theory of Lexicography. Hartmann, R.R.K. (Ed.). 1984. *LEXeter Proceedings. Papers from the International Conference on Lexicography at Exeter 9.–12. September 1983*: 13-30. Lexikographica. Series Maior 1. Tübingen: Niemeyer.

Wiegand, H.E. 1996a. A Theory of Lexicographic Texts: An Overview. *South African Journal of Linguistics* 14(4): 134-149.

Wiegand, H.E. 1996b. Textual Condensation in Printed Dictionaries. A Theoretical Draft. *Lexikos* 6: 133-158.

Wiegand, H.E. 1997. Printed Language Dictionaries and their Standardization: Notes on the Progress toward a General Theory of Lexicography. Hock, H.H. (Ed.). 1997. *Historical, Indo-European, and Lexicographical Studies. A Festschrift for Ladislav Zgusta on the Occasion of his 70th Birthday*: 319-380. Trends in Linguistics. Studies and Monographs 90. Berlin/New York: De Gruyter Mouton.

Wiegand, H.E. 1998. Lexikographische Textverdichtung. Entwurf zu einer vollständigen Konzeption. Zettersten, A., V.H. Pedersen and J.E. Mogensen (Eds.). 1998. *Symposium on Lexicography VIII. Proceedings of the Eighth Symposium on Lexicography May 2–4, 1996 at the University of Copenhagen*: 1-35. Lexikographica. Series Maior 90. Tübingen: Niemeyer.

Wiegand, H.E. 2009. Nichtnatürlich über natürliche Sprache schreiben. Zu einigen formalen Aspekten von Wörterbuchartikeln. Felder, E. (Ed.). 2009. *Sprache*: 247-285. Heidelberger Jahrbücher 53. Berlin: Springer.
https://doi.org/10.1007/978-3-642-00342-4_10

Wiegand, H.E. and M.T. Fuentes Morán. 2009. *Estructuras lexicográficas: aspectos centrales de una teoría de la forma del diccionario.* Granada: Tragacanto.

Wolski, W. 1989. Formen der Textverdichtung im allgemeinen einsprachigen Wörterbuch. Hausmann, F.J. et al. (Eds.). 1989. *Worterbücher. Ein internationales Handbuch zur Lexikographie*. Vol. 1: 956-967. Handbücher zur Sprach- und Kommunikationswissenschaft 5.1. Berlin/New York: De Gruyter.

Wolski, W. 1991. Formen der Textverdichtung im zweisprachigen Wörterbuch. Hausmann, F.J. et al. (Eds.). 1989. *Worterbücher. Ein internationales Handbuch zur Lexikographie*. Vol. 1: 2837-2854. Handbücher zur Sprach- und Kommunikationswissenschaft 5.1. Berlin/New York: De Gruyter.

Wolski, W. 2020. Textverdichtung. Wiegand, H.E. et al. 2020. *Wörterbuch zur Lexikographie und Wör ter-buchforschung. Dictionary of Lexicography and Dictionary Research*. Vol 3, I–U: 934-937. Berlin/Boston: De Gruyter.

C.   Additional literature

Béjoint, H. 2000. *Modern Lexicography. An Introduction*. Oxford: Oxford University Press.

Gorodischer, H. and J. Scaglione. 2020. *Legibilidad y tipografía: La composición de los textos*. Valencia: Campgràfic Editors, S.L.

Gouws, R.H. 1999. Mediostructural Representation, Textual Condensation and User-orientation in the *WAT* X. *Lexicographica: International Annual for Lexicography* 15: 4-37.

Ising, G. 1978. Textverdichtung und Redundanz in der Lexikographie. *Wissenschaftliche Zeitschrift der Wilhelm-Pieck-Universität Rostock* 27. *Gesellschafts- und sprachwissenschaftliche Reihe* (1/2): 9-13.

Jardí, E. 2021. *Cincuenta y tantos consejos sobre tipografía*. New revised and expanded edition. Barcelona: Editorial GG.

Rahnenführer, I. and G. Böhme. 1995. Orthographiewörterbuch und Textverdichtung. Ewald, P. und K.-E. Sommerfeldt (Eds.). 1995. *Beiträge zur Schriftlinguistik. Festschrift zum 60. Geburtstag von Dieter Nerius*: 257-268. Sprache, System und Tätigkeit 15. Frankfurt a.M./Berlin/Bern/New York/Paris/Vienna, Lang.

Torres del Rey, J. 2009. Diccionarios electrónicos bilingües: nuevas posibilidades de futuro. Fuentes Morán, M.T. and B.A. Model (Eds.). 2009. *Investigaciones sobre lexicografía bilingüe*: 29-79. Granada: Tragacanto.