

Pictorial Illustrations in Encyclopaedias and in Dictionaries – a Comparison

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Abstract

One of the most important differences between an encyclopaedia and a dictionary, which is very often underlined in scientific papers, is the relatively common occurrence of pictorial illustration in encyclopaedias compared to dictionaries. Theoreticians indicate different goals of these two types of reference works. While an encyclopaedia describes objects using scientific knowledge, a dictionary presents words with linguistic arguments. Since the presumed differences are so crucial in their nature, the two types of reference works should not have much in common. On the other hand, a pictorial technique in dictionaries is relatively young and non-omnipresent, and furthermore, undoubtedly arose in a predominantly encyclopaedic surrounding. Therefore, in this paper, I have focused on this graphical distinction: do visual facilities in an encyclopaedia vary from their counterparts in general dictionaries? As a result of this analysis, it can be stated that, apart from general differences (aim of description, types of units, function of caption), an encyclopaedia and a dictionary have surprisingly much in common regarding the visual mode.

Keywords: multimodality; encyclopaedia; dictionary; theory of lexicography

1. Dictionaries and Encyclopaedias

Consuetudo altera natura est – custom is second nature. These famous words, written by Cicero, serve as a good starting point for this text. It goes without saying that in contemporary lexicographical practice, authors of reference works, along with lexicography theoreticians, distinguish between two types of reference works, namely encyclopaedia and dictionary (Lara 1989; Hartmann & James, 1998: 48–49; Burada & Sinu, 2016: 61–62). While encyclopaedias describe things (actual referents) from a scientific standpoint, dictionaries characterize senses of words and discontinuous units from a linguistic point of view (in fact they usually mix linguistic knowledge with common-sense and scientific knowledge—because of the immense impact of the latter on our everyday lives). It has also been mentioned in these papers that encyclopaedic works tend to present historical personalities and well-known places (logical definite descriptions). Therefore, the linguist will surely notice the overrepresentation of proper names, usually not included in general dictionaries (unless unabridged, compare, for example, Merriam-Webster Dictionary).

Apart from these aforementioned crucial distinctions, one of the most important differences between these two types of reference works, very often underlined in such

papers, is the presence of pictorial illustration: it is assumed “relatively common” in encyclopaedias; whereas in dictionaries it is perceived as “relatively rare” (Hartmann & James, 1998: 49). During the last 30 years, a significant number of papers concerning the pictorial technique¹ in general and bilingual dictionaries have been written (see: Hupka, 1989; Nesi, 1989; Stein, 1991; Langridge, 1998; Gangla, 2001; Jones, 2004; Müller-Spitzer, 2005; Gumkowska, 2008; Lew & Doroszevska, 2009; Kemmer, 2014; Klosa, 2016; Biesaga, 2017). Although the amount of obtained knowledge should be described as quite rich (see theoretical summary in Biesaga, 2016), in the case of encyclopaedic visual facilities we remain laypersons. There is likely to be a practical connection between these types of reference works. First, there is a century-long tradition of using graphical elements in encyclopaedias. As semioticians describe it, when a visual code of a certain type becomes standardized, its features tend to vanish in the eyes of the users. What is more, the conventionality of images is less recognized by the audience than the conventionality of verbal communication (Chandler 2007: 68, 77). On the other hand, readers expect from a new product the standard to which they have become accustomed. Did non-specialized lexicography perhaps adopt encyclopaedic pictorial practice without even realizing it? Second, in the case of many long-standing publishing houses, dictionaries grew along with encyclopaedias (e.g. MW and Encyclopedia Britannica, Larousse Dictionary and Encyclopaedia) further complicating this connection between crafts.

2. Scientific Procedure

In this paper, I would like to focus on this pictorial distinction: do visual facilities in encyclopaedias vary from their counterparts in general dictionaries? I will analyze a group of entries from an established Polish encyclopaedia in which graphical illustrations were used—namely *Encyklopedia PWN* (all entries starting with the letter A will be taken into account). Subsequently, a division of the illustrated meanings, according to the criteria of lexical semantics, will be made (common and proper names, language level, and thematic classification in the case of common names²). I will subsequently highlight the most typical visual techniques used by the authors of encyclopaedias (relation between the type of entry and the illustration). Next, the procedure will be partially repeated and implemented on the entries taken from the two well-established general and monolingual dictionaries³ (one printed and one

¹ Pictorial technique is defined here as a special lexicographical (not artistic) approach related to the inclusion of illustrations in reference works. To avoid constant repetitions, the pictorial technique will be also called visual practice, graphical technique etc.

² Since proper names do not have meaning (sense, denotation, intension) they will not be subjected to this sort of thematic classification. More about the pictorial thematic classification can be found in Biesaga (2017); see also Batko-Tokarz (2008) for strictly verbal communication.

³ In the case of analyzed general dictionaries, the relation between the verbal mode and the graphical mode will not be taken into account. This issue should be considered as a separate topic for a completely different paper or papers.

published on the Internet): *Ilustrowany słownik języka polskiego* (Illustrated Dictionary of Polish (IDP)—entries starting with the letters A and B) and *Merriam-Webster Dictionary (MW)*—entries starting with the letter A).⁴ Accordingly, a preliminary pictorial distinction between encyclopaedias and dictionaries will be drawn.⁵ Such a distinction will help lexicographers in the future to shape this visual technique more consciously and to increase the number and the types of entries which are graphically illustrated.

3. Encyclopaedias

3.1 Proper Names

Probably the most striking difference, connected with the illustrated encyclopaedic entries, is the overrepresentation of proper names, among them especially geographical names (toponyms). They form the majority of all definite descriptions subjected to this graphical process (71 entries). When it comes to the referential typology of entries, most inform their readers about places located outside their native country or beyond the borders of their native continent (e.g. *Abisyńska Wyżyna* [Ethiopian Highlands]⁶, *Abu Simbel*, *Aconcagua*, *Agra*, *Ahtamar*, *Algier* [Algiers], *Amir*, *Angkor*, *Antarktyda* [Antarctica], *Antyliban* [Anti-Lebanon Mountains], *Aso-San*, *Asuan* [Aswan], *Ayers Rock*). More rarely illustrated proper names are connected with places in Europe (*Aix-en-Provence*, *Aletsch*, *Akmaar*, *Apulia*, *Ateny* [Athens], *Atreusza Skarbiec* [Treasury of Atreus], *Avebury*). Exceptionally definite descriptions, related to Polish lands, are mentioned (*Augustowski Kanał* [Augustów Canal], *Antonin*).

I would like to emphasize the role of perceived 'exoticism' as a criterion for inclusion, which is not necessarily done for educational purposes only. It seems that it was inherited from an old encyclopaedic and thesaural tradition according to which the task of the author was to somehow awe his reader with unfamiliar places, animals or objects. This special exotic touch will be present, as we shall see, in our encyclopedic entries, including the illustrations (compare Picture 1).

⁴ Because of the declared number of entries (description balance) in the case of *Encyklopedia PWN* (122.000 entries) and *MW* (165.000 entries) only the letter A entries will be analysed, in the case of *IDP* (40.000 entries) both letters A and B will be subjected to scrutiny.

⁵ In the next step, more reference works could be added to balance the results. However, one established encyclopedia with a long-standing tradition and two different, also well-established dictionaries should give quite reliable results of comparison.

⁶ Translated versions of the entry labels will be used whenever such equivalents exist. If the label will be the same in Polish and in English only one head of such an entry will be provided for the reader.



Adamawa, wioska na wyżynie

Picture 1: An illustration from the entry *Adamawa* (Adamawa Plateau), caption: *Adamawa, village on the plateau*



Atreusza Skarbiec,

Picture 2: An illustration from the entry *Atreusza Skarbiec* (Treasury of Atreus), caption: *Treasury of Atreus*

Authors illustrate different geographical entries that refer to natural objects (mountains, plateaus, rivers, volcanos etc.) or man-made places (cities, monuments etc.). What I would like to focus upon here is the problem of prototypical images, perceived by a certain culture as the most important for the place in question. Sometimes, while analyzing geographical entries, there was an impression that this certain proper name formed an independent entry just to present such a typical sort of monument or other similar object (e.g. *Agra* – images of Taj Mahal, *Alberobello* – *trullo* buildings, *Amritsar* – Golden Temple, *Andżar* [Anjar] – ruins of the Umayyad palace, *Awinion* [Avignon] – cathedral, see also Picture 3).

Typically, the role of these encyclopaedic visual aids is to either feature culturally important places within a city or some other location, or, on the other hand, to make the cultural image of the world standardized and, to some extent, flattened.



Akwizgran, katedra

Picture 3: An illustration from the entry *Akwizgran* (Aachen), caption: *Aachen, cathedra*

Apart from geographical proper names, *Encyklopedia PWN* describes multimodally historical personalities, ethnic groups and non-authentic personalities (category of anthroponyms in onomastics). For biblical and mythological personalities (7 entries), authors published their images taken from world-renowned works of art (e.g. *Adam i Ewa* [Adam and Eve] - see Picture 4, *Ahura Mazda*, *Amaterasu*, *Anubis*, *Apollo*, *Atena* [Athena]).



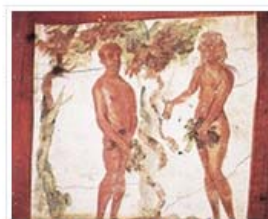
Cranach Lucas (st.), *Adam i Ewa w raju*,



Michał Anioł, *Grzech pierworodny i Wygnanie z raju*, fragment fresków na sklepieniu Kaplicy Sykstyńskiej w Watykanie, 1509–12



Biblia z Grandal,



Adam i Ewa, malowidło wczesnochrześcijańskie



Dürer Albrecht, *Adam i Ewa*,



Michał Anioł Buonarroti, *Stworzenie Adama*,

Picture 4: Illustrations from the entry *Adam i Ewa* (Adam and Eve) – different works of art were chosen

Regarding authentic personalities (30 entries), the pictorial technique is rich. First, we will consider portraits of these described personalities (paintings, photographs, etc.). Of interest is that this visual strategy is often connected with the personality's profession according to his or her typical work context (clothes, tools) and is displayed to the user (see Picture 5).



Aszantowie, farbowanie tkanin (Benin)

Picture 5: An illustration from the entry *Abraham Roman* (Polish general)

Secondly, the user is far more often offered the image of the personality's work result (painter: painting, architect: building, writer: image of the book [see Picture 6], scientist: his invention, famous ruler: a battle etc.). It seems that such a method, naturally, has something in common with deep semantic relations (compare the basic meaning shifts, typical for systematic and regular polysemy, see: Apresjan, 2000). This issue should be further analyzed with more visual evidence from different reference works (e.g. broad typologies of dictionary pictorial facilities, compare: Hupka, 1989; Stein, 1991).



Picture 6: An illustration from the entry *Awicenna* (Avicenna) – image of his scientific tract

The last group of encyclopedic entries, connected with anthroponyms, refer to the tribes and other similar ethnic groups of the users (4 entries): e.g. *Aborygeni* [Indigenous Australians], *Ajmarowie* [Aymara people], *Aszantowie* [Ashanti people]. It is also worth pointing out that the use of 'exoticism' as a feature is particularly

prominent here (see Picture 7).



Awicenna, *Al-Kanun fi at-tibb*,

Picture 7: An illustration from the entry *Aszantowie* (Ashanti people), caption: *Ashanti people, dyeing fabric* (Benin)

Finally, there are two more entries that cannot be classified in any other previously listed group. The first entry, *Al-Fatiha*, informs the user about a famous surah from the Qur`an, and the second, *Apollo*, is devoted to NASA spaceships (see Picture 8).



Picture 8: Illustrations from the entry *Apollo*, captions: *Apollo 11 mission*; *Apollo 2*; *Apollo 11, crew*

Entries related to proper names are highly standardized. The use of visual elements is limited to geographical and personal proper names; however, one could point out many visual possibilities (famous, contemporary non-commercial industrial products, works of art, monuments etc.). Furthermore, the ways in which objects and people are presented ought to be seen as conventional.

3.2 Common Names

As aforementioned, proper names that constitute the majority of all illustrated encyclopedic entries are usually not included in dictionaries. The case is completely different with common names, single words and discontinuous units, which are primarily incorporated into linguistic reference works. Of interest is that we will similarly find a significant number of illustrated common names in an encyclopedia. They will serve as a basis for a later comparison with multimodal dictionary entries.

Regarding the illustrated discontinuous units, all (11 entries) are scientific terms (e.g. *aberracja chromatyczna* [chromatic aberration, see Picture 9], *aberracja chromosomów* [chromosome abnormality], *agama kołnierzysta* [frill-necked lizard], *accelerator plazmy* [plasma accelerator], *algorytm Euklidesa* [Euclidean algorithm], *arnica góraska* [arnica montana/wolf`s bane], *autonomiczny układ nerwowy* [autonomic nervous system]). Most of the referred terms belong to natural sciences (biology, physics, maths).



Picture 9: An illustration from the entry *aberracja chromatyczna* [chromatic aberration]

The situation is more complicated in the case of single words (30 entries). We encounter illustrated units connected with more professional areas of language (e.g. *aksonometria* [axonometry], *aktinidia* [actinidia], *apadana*, *azeotropia* [azeotropy]) along with entries related to everyday, basic language (e.g. *akordeon* [accordion], *ananas* [pineapple], *autostrada* [highway]). It is worth highlighting the special focus on entries describing exotic, non-native reality (*agawa* [agave], *aloes* [aloe], *alpaka* [alpaca], *atol* [atoll]) and historical items (*akwedukt* [aqueduct], *alabastron*, see Picture 10, *antyfonarz* [antiphonary] *astrolabium* [astrolabe]).



Alabastrony korynckie,

Picture 10: An illustration from the entry *alabastron*, caption: *Corinthian alabastrons*

Regarding thematic classification, the majority of illustrated entries relate to plants (11). Other popular categories include: animals, mathematical phenomena, musical instruments, architectural elements and optical phenomena.

As seen in the previous pictures, an encyclopaedia displays a wide use of captions. Verbal support serves not only to indicate the entry headword (semantic recognition, see Picture 2) but also to present additional knowledge. Since an encyclopaedia is focused on the transmission of accurate and precise information, a caption is often used to clarify the object in the picture (a certain type of thing generally described in the encyclopedia entry, elements of its context or scene presented, etc.). For example, almost all single word entries related to plants have associated pictures within which the caption points out the exact species presented to the user (see Picture 11).



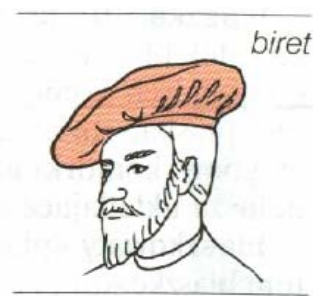
Aloes drzewiasty,

Picture 11: An illustration from the entry *aloes* (aloe), caption: *Krantz aloe*

4. Dictionary

Regarding the two analyzed general dictionaries, we observe differences related to the area of vocabulary connected to the illustrated entries. IDP is considered mixed in its

visual approach: specialized and historical vocabulary (e.g. *akant* [acanthus], *balalajka* [balalaika], *biret* - see Picture 12 [biretta], *bodziszek* [geranium], *buzdygan* [mace]) is subjected to this illustrative technique along with basic vocabulary (e.g. *autobus* [bus], *bocian* [stork], *brokul* [broccoli], *budzik* [alarm clock]). On the other hand, MW tends to present more elaborated words (e.g. *aardwolf*, see Picture 13, *abelia*, *alpenhorn*, *aneurysm*, *ankh*, *anvil*, *arteriole*).



Picture 12: An illustration from the entry *biret* [biretta] (IDP)

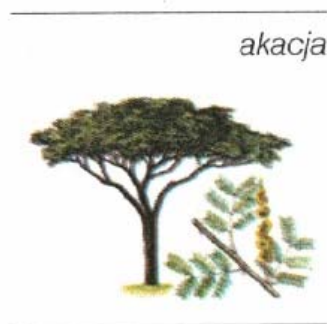
Illustration of AARDWOLF



Picture 13: An illustration from the entry *aardwolf* (MW)

Regarding the opposition between proper and common names, crucial for encyclopedia visual facilities, this does not exist in the dictionaries analyzed. They describe only the referents of common names. Additionally, in comparison to the *Encyklopedia PWN*, both general reference works illustrate only a few discontinuous units (IDP: *bez czarny* [elder/sambucus nigra]; MW: *angora goat*, *arctic fox*). Their presence is deemed accidental. The remaining entries with visual facilities represent the category of single words.

Captions also differ between an encyclopedia and a dictionary. While encyclopedic works use verbal support to identify a meaning or to clarify the content of a picture, in comparison to more general verbal information, dictionaries often do not use captions or, like IDP and MW, use it mainly (though not only) to identify the entry headword with the picture (see Picture 12).



Picture 14: A dictionary entry with a headword identifying caption (entry: *akacja* [acacia], IDP)

As well as these general differences between encyclopedias and dictionaries (type of linguistic objects which are illustrated; function of caption), there also exist similarities, especially when we consider the thematic division of meanings.

Similar to encyclopaedias, IDP and MW dictionaries tend to illustrate the meanings of words related to plants. This group of entries represents the majority of all dictionary units with visual facilities, like in the *Encyklopedia PWN*. In the IDP we will encounter, for example, entries such as: *akacja* (acacia), *aksamitka* (tagetes), *arbuz* (watermelon), *awokado* (avocado), *baobab*, *batat* (sweet potato), *bluszcz* (ivy), *bonsai*, *bulwa* (bulb). The authors of the MW dictionary offer to the user dictionary units like: *abelia*, *acorn*, *agave*, *almond*, *ash*, *asparagus*, *aster*. These special thematic characteristics are most probably inherited in general lexicography from encyclopaedic descriptions.

Both dictionaries offer a significant number of illustrative entries related to animals (e.g. in IDP: *albatross* [albatross], *anaconda* [anaconda], *batalion* [ruff], *bawół* [buffalo], *bażant* [pheasant], *bison* [bison]; in MW: *aardvark*, *addax*, *agouti*, *amoeba*, *arctic fox*, *armadillo*). Simultaneously, encyclopaedias offer just a few such units (e.g. *alpaka* [alpaca], *ara* [scarlet macaw], *archeopteryks* [archaeopteryx]).

A similar relation can be observed in the field of artistic activity (Musical Instruments and Fine arts). Both dictionaries tend to include such illustrations (e.g. in IDP: *akant* [acanthus], *arabeska* [arabesque]; *altówka* [viola], *banjo*, *bębenek* [tambour]; in MW: *accordion*, *alpenhorn*). We also encounter them in encyclopaedias: *akordeon* (accordion), *altówka* (viola).

Furthermore, the thematic field of architecture is shared by both types of reference works (e.g. in *Encyklopedia PWN*: *apadana*, *akwedukt* [aqueduct]; in IDP: *absyda* [apse], *architraw* [architrave], *arkada* [arcade], *bazylika* [basilica]; in MW: *alcazar*, *anta*, *arbor*). The same situation exists in the case of machines and devices (e.g. in *Encyklopedia PWN*: *akcelerator plazmy* [plasma accelerator], *arytmometr* [arithmometer], *astrolabium* [astrolabe]; in IDP: *brona* [harrow]; in MW: *abacus*, *anvil*). Other thematic fields, such as Transport, are present in both resources, albeit to a

lesser extent (e.g. in *Encyklopedia PWN: autostrada* [highway]; in IDP: *amfibia* [amphibia], *balon* [balloon], *bryczka* [chaise]; in MW: *airplane, anchor*).

Although some thematic fields activated in both dictionaries were not found in the analyzed encyclopaedia entries (e.g. Army and War, Closest Human Environment, Clothing, Sport and Leisure time, Body Parts and Body Functions, Diseases and Treatment), it is evident how they could be included, in accordance with previous encyclopedic experiences. Therefore, the thematic difference between illustrated entries from encyclopaedias and their counterparts from dictionaries is not qualitative, but rather quantitative. The only semantic fields that come to mind and could be underrepresented pictorially in encyclopaedias are those connected with humans' closest environment (elements are widely known to users, too obvious to be scientifically described) and human social and psyche life (subjective and abstract meanings, which cannot be easily presented in a picture and are hardly ever included in dictionary, see Biesaga, 2017).

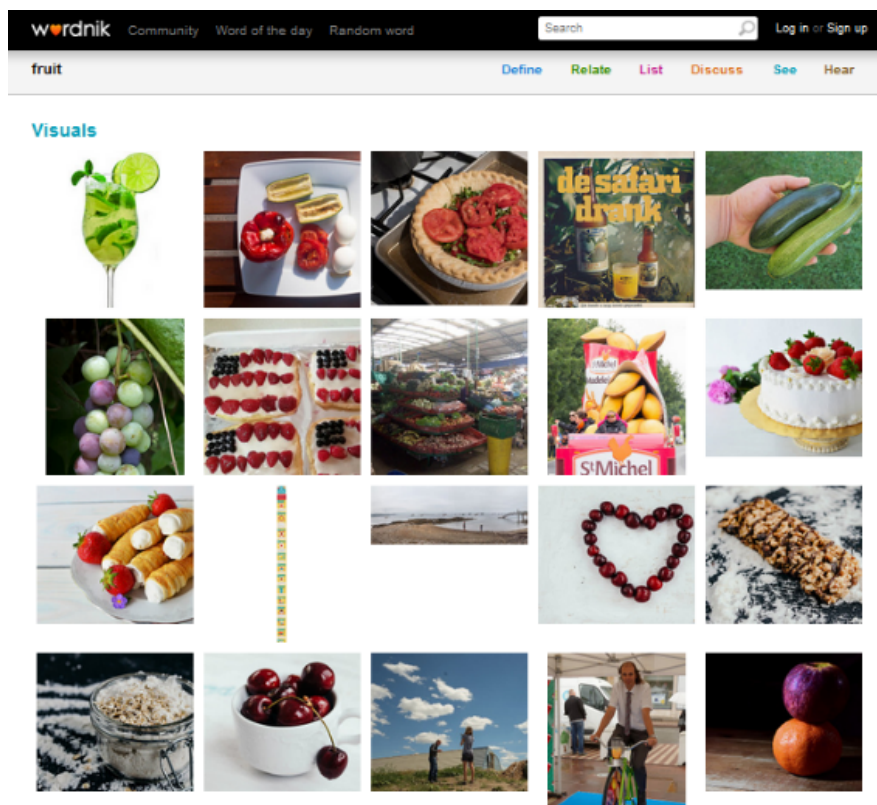
5. Similarities and Differences in Pictorial Technique

The table below gathers the most important differences and similarities between an encyclopaedia and a dictionary, each of them related to visual technique.

Criterion	Encyclopaedia	Dictionary
The presence of proper names	prevalent	none (except for unabridged dictionaries)
The presence of discontinuous unit meanings	significant (scientific terms)	very few
The presence of single word meanings	moderate	prevalent
Area of vocabulary	mostly advanced and specialized vocabulary	mostly basic and advanced vocabulary
Caption	very important, often supplementary knowledge or details given	limited
Most activated thematic fields	Plants	Plants
Moderately activated thematic fields	Animals, Artistic Activity, Architecture, Machines and Devices, Transport	Animals, Army and War, Artistic Activity, Architecture, Machines and Devices, Transport

Table 1: Pictorial techniques in encyclopaedias and dictionaries – comparison.

To summarize, this analysis leads us to different kinds of conclusions. On the one hand, illustrations in encyclopaedias and dictionaries reflect the general purpose of the reference work. This explains why we will find so many pictorial entries connected with certain places, authentic personalities and scientific terms in an encyclopaedia. Their mission is to transmit scientific and cultural knowledge which is presumed important for the user living in a certain society. These characteristics relate to risky decisions because the authors point out what does not belong to a native culture. This could create a temptation to underline this “being-foreign” category which could lead to an abusive usage of graphical materials (political correctness issues). On the other hand, if the author points out culturally and scientifically important graphical objects, he is automatically leaving other images outside the descriptive scope. That helps in information selection (we cannot know everything about everything pictorially) but standardizes and narrows the image of the world. Therefore, in comparison to dictionaries, encyclopaedic graphical descriptions wield a much greater responsibility.



Picture 15: Illustrations from the entry *fruit* (WordNik)

Aside from their differences (general aim of description, types of units, function of captions), encyclopaedias and dictionaries have much in common when it comes to the pictorial technique. Basically, they illustrate similar thematic categories of single word units (plants, animals, architecture, machines and devices etc.). What dictionary authors could learn from the encyclopaedic craft is the incorporation of a wider selection of discontinuous units that are subjected to visual description. This would be especially helpful in relation to scientific terms. They are strongly resistant to accurate

description with verbal units that belong to natural, nonspecialized language.

As a final note, I would like to mention a new trend that is developing in the field of Internet lexicography, a tendency connected with the broadly understood encyclopaedic paradigm in illustrated reference works. There are several projects (e.g. BabelNet, eLexiko, WordNik) in which certain entries are illustrated with a set of different illustrations, sometimes automatically taken from multimodal corpora (see Picture 15).

Such a strategy enables us to solve many of the previously indicated pictorial problems, those typical for the printed lexicographical era (e.g. lack of prototypical example, generic meanings, etc., compare Hupka, 1989: 711; Stein, 1991: 119-120). Like with an encyclopaedia, the user is offered additional knowledge which boldly exceeds the dictionary paradigm. Furthermore, webpages seem to be the perfect “spacious” media for this kind of technique. On the other hand, however, in comparison to website capacities, user attention is under constraint. It is not clear which thematic fields are apt for illustrating (complete list), which are the crucial and additional visual features for addressing meaning (exhaustive typology connected with the types of senses is a must), how many illustrations are required for the meaning recognition process, etc. Therefore, a further theoretical and experimental analysis is advocated. One could also imagine in the future an open access pictorial repository for lexicographers (similar to WordNet).

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