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Architecture

2007-10-30

Summaries

1. Two types of dictionaries:

- Semasiological dictionary (also named reader's dictionary or decoding dictionary): in such a dictionary, one may look up the new words he doesn't know the meaning or the usage;
- Onomasiological dictionary (also named writer's dictionary or encoding dictionary): namely, this kind of dictionary is usually applied by a writer, who needs the information about more words that have the same or similar meaning of the known word.

2. Structures of A Dictionary

A dictionary is composed of four parts: Megastructure, Macrostructure, Mesostructure and Microstructure.

2.1 The **megastructure** of a dictionary is the entire structure of the dictionary, including

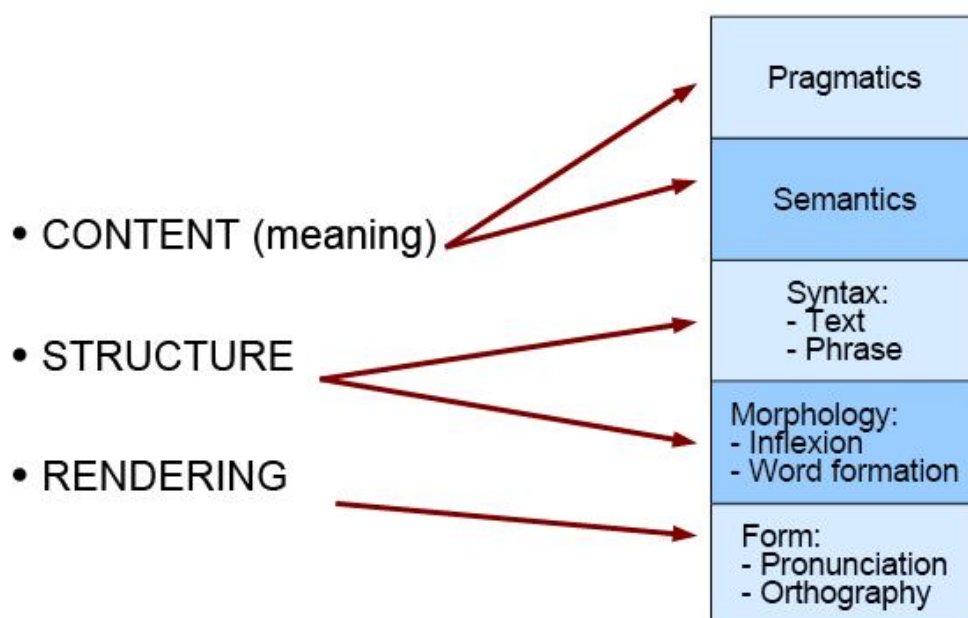
- the front matter, e.g. contents, instruction;
- abbreviations and explanations of grammar, e.g. adj.=adjective;
- the body of the dictionary, e.g. Adam ['aedem]n.(in the Bible) the first man;
- the back matter, e.g. the irregular verbs.

2.2 The **macrostructure** of a dictionary is the organisation of the lexical entries in the body of a dictionary into lists, tree structures, and networks.

Two types of macrostructure:

- semasiological: more like tree structures
- onomasiological: more like lists (Both of them are networks.)

2.3 The **microstructure** of a dictionary is the consistent organisation of lexical information within lexical entries in the dictionary. This structure shows the properties of linguistic units such as words:



For example: what's the microstructure of "antiestablishmentarianism"?

According to the rules of morphology, the word could be divided into 5 parts: "anti-", "establish", "-ment", "arial", "-ism". But in terms of the rules of content, only three parts can be gained: "anti-", "establishment", and "arialism".

2.4 The **mesostructure** of a dictionary is the set of relations between lexical entries and other entities such as other parts of a dictionary or a text corpus. In another word, it's mainly about links, e.g. hypernym, hyponym, antonym, synonym, inflection, conjugation, etc. Here's another example:

Lexical entries relate to each other, and to:

- the mini-grammar in the megastructure
- text corpora

red swollen condition
Edam /'i:dəm, -dəm/ *n* [U] a yellow cheese from the Netherlands made in balls covered with red wax
eddy ¹ /'edi/ *n* a circular movement of water, wind, dust, smoke, etc.: *The little paper boat was caught in an eddy and spun round and round in the water.*
eddy ² *v* [I] (of water, wind, dust, smoke, etc.) to move

Anyway, the mesostructure of a dictionary or lexicon mesostructure is about links between different kinds of information:

- Links between groups of lexical information types:

- modality
- grammar
- object semantics

- Abbreviations for parts of speech

- link to mini-grammar

- Links between related entries

- co-hyponyms (synonyms, antonyms, ...)

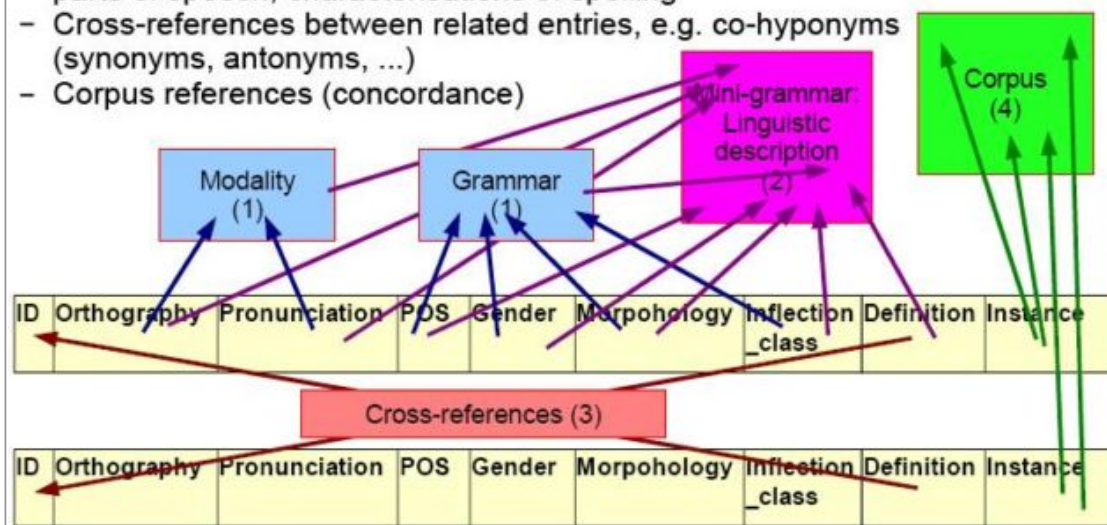
- i.e. cross-references

- References to text corpora (concordance function)

- i.e. examples, data

If we detail a dictionary entry in a table, the lexicon mesostructure would be the follows:

- Linguistically motivated class hierarchy of DATCAT subvectors e.g. modality, grammar, object semantics
- Linguistic description references, e.g. use of abbreviations for parts of speech, characterisations of spelling
- Cross-references between related entries, e.g. co-hyponyms (synonyms, antonyms, ...)
- Corpus references (concordance)



Above all, we get an overall view of a **dictionary architecture**:

1. MEGASTRUCTURE

2. META INFORMATION

Metadata, front matter, back matter

3. MACROSTRUCTURE

4. MICROSTRUCTURE

(data categories, types of lexical information)

Lexical entries

5. MESOSTRUCTURE

Sketch grammar, i.e. conventions for generalisations over microstructure:

- orthography
- pronunciation
- word formation
- syntax
- definitions
- examples

All above are quoted from the notes of the lecture given by Dr. Gibbon.

Quiz & Answers

1. What is the megastructure and macrostructure of a lexicon? Give examples.

A: See to summaries.

2. What is a semasiological and onomasiological dictionary? Give examples.

A: See to summaries.

Evaluation

Obviously, this lecture is quite an important one, as structure is the basic components of making a dictionary. However, it's not easy to grasp, since there're too many glossaries.

References

- Gibbon, Dafydd. "Archetecture." 29.10.2007. University of Bielefeld. 30.10.2007 <<http://www.homes.uni-bielefeld.de/~gibbon/Classes/Classes2007WS/HTMD/htmd03-architecture-v01.pdf>>.

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