



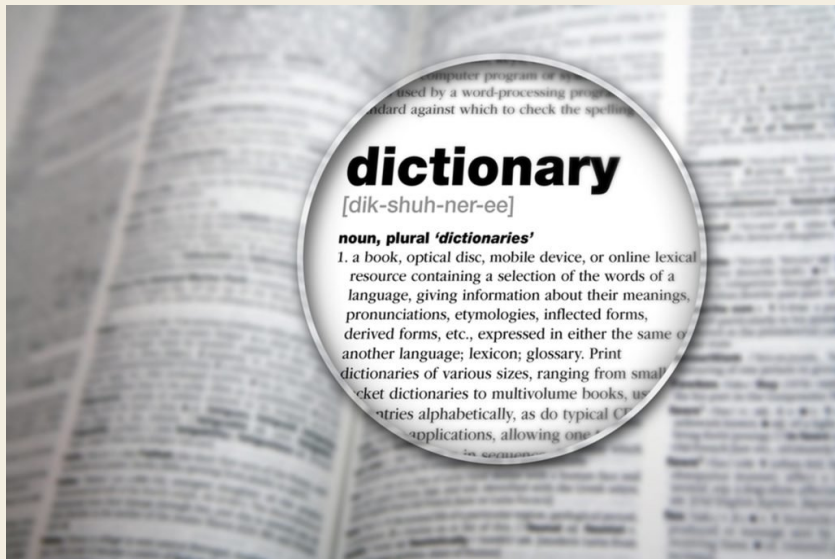
FACULTY
OF INFORMATICS

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Automatically Created Noun Explanations for English

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Definition? Word Meaning Explanation?



Sketch Grammar

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*STRUCTLIMIT s
*WSPOSLIST ",noun,-n,verb,-v,adjective,-j,adverb,-a,pronoun,-d"
#nouns
=and_other
1:Noun andOther 2:Noun

=hypo_hypero2
2:Noun (andOr Det? Adj? Noun)* andOr (Also)? Similar (Det? Adj{0,2} Noun)? Det? 1:Noun

=hypo_hypero
2:Noun (andOr Det? Noun)? toBe Det? Type Det? 1:Noun

=WORD_is
1:Noun upTo5words toBe upTo5words 2:Noun

=WORD_has
1:Noun upTo5words toHave upTo5words 2:Noun

=what_who_has_WORD
2:Noun upTo5words toHave upTo5words 1:Noun

=adj_modif
2:Adj Det? adjReflComma Det? 1:Noun
2:Adj andOr Det? adjReflComma Det? 1:Noun
adjReflComma andOr 2:Adj Det? 1:Noun
1:Noun 2:Adj
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dictionary (noun)

British National Corpus (TreeTagger) freq = 1,499 (13.26 per million)

<u>adj_modif</u>		28.42
domain-specific	<u>22</u>	10.60
domain-specific dictionary		
machine-readable	<u>20</u>	10.18
machine-readable dictionaries		
readable	<u>9</u>	8.99
machine readable dictionaries		
biographical	<u>6</u>	8.08
bilingual	<u>5</u>	7.92

<u>is_subject</u>		18.48
outperform	<u>3</u>	8.24
compile	<u>6</u>	8.05
index	<u>3</u>	8
define	<u>8</u>	6.07
my dictionary defines		
test	<u>3</u>	5.44

<u>is_object</u>		15.41
compile	<u>13</u>	9.08
compiled a dictionary		
consult	<u>3</u>	6.38
comprise	<u>3</u>	5.24
speak	<u>3</u>	5.14
use	<u>51</u>	5.13
use standard english dictionaries		

<u>N_coord</u>		5.34
thesaurus	<u>9</u>	11.36
dictionaries and thesauri		
encyclopedia	<u>4</u>	10.49
encyclopaedia	<u>4</u>	10.43
grammar	<u>7</u>	10.08
in dictionaries and grammars		
lexicon	<u>3</u>	9.89

<u>gen</u>		4.34
slang	<u>4</u>	10.65
quotation	<u>3</u>	9.30
language	<u>7</u>	5.94
dictionary of the english language		
word	<u>6</u>	5.74

<u>WORD is</u>		3.47
use	<u>3</u>	5.58

<u>what who has WORD</u>		1.13
word	<u>3</u>	7.64

<u>for example</u>		1.87
source	<u>4</u>	7.28

<u>consists of</u>		0.73
contribution	<u>4</u>	9.34

Code → Result

dictionary

meanings similar to dictionary can also be expressed by (a/an) thesaurus, encyclopedia, encyclopaedia, textbook, guide, lexicon, use

domain-specific, machine-readable, readable dictionary

for example (a/an) source

can have/contain (a/an) contribution

(a/an) word can have/contain (a/an) dictionary

is a subject of outperform, compile, index

is an object of compile, consult, comprise

of (a/an) slang, quotation, language

Evaluation

- 70 nouns (64 in BNC)
- frequency (from 2 to 67 826); abstract & concrete nouns; homonyms; synonyms; ad hoc selection
- "mostly good"

Somewhat Discouraging Results

mamluk (35)

is an object of exist

excavator (43)

meanings similar to excavator can also be expressed by (a/an) digger,
tractor, shaker, extractor, harvester, pride

mini, rotary, bulk excavator

for example (a/an) bow, hall, town

can have/contain (a/an) coin, finance, right

(a/an) other can have/contain (a/an) excavator

is a subject of sex, indemnify, assign

is an object of alert, prompt, decide

of (a/an) heart

Somewhat Encouraging Results

theatre (2)

meanings similar to theatre can also be expressed by (a/an) cinema,
concert, opera, gallery, museum, play, life

open-air, Kuwaiti, provincial theatre

(a/an) experience can have/contain (a/an) theatre

is a subject of reopen, crowd, close

is an object of operate, tour, love

of (a/an) operation, war, dream

Somewhat Encouraging Results

bed (244)

similar meaning can have (a/an) breakfast, border, table, room, door, wall

double, twin, unmade bed

for example (a/an) doctor, child

(a/an) price, kitchen, room can have/contain (a/an) bed

is a subject of stare, knit, sleep

is an object of share, wet, strip

of (a/an) rose, lettuce, nail

with (a/an) flu, someone, sheet

More Encouraging Results

house (45 503)

meanings similar to house can also be expressed by (a/an) home, sale, garden, flat, shop, building, room

public, upper, big house

for example (a/an) home, hotel

can have/contain (a/an) garden, bedroom, room

(a/an) family, time, people can have/contain (a/an) house

is a subject of build, stand, sell

is an object of terrace, buy, build

of (a/an) parliament, card, lord

with (a/an) garden, roof, wall

Correction

corpus. Three words are interpreted as a different part of speech (*an expose*, *(a) lead* are recognised/appearing in the corpus only as verbs, *a mammoth* as an adjective).

- *(a) lead*, *a mammoth* are present as nouns in BNC