

Latin WordNet project

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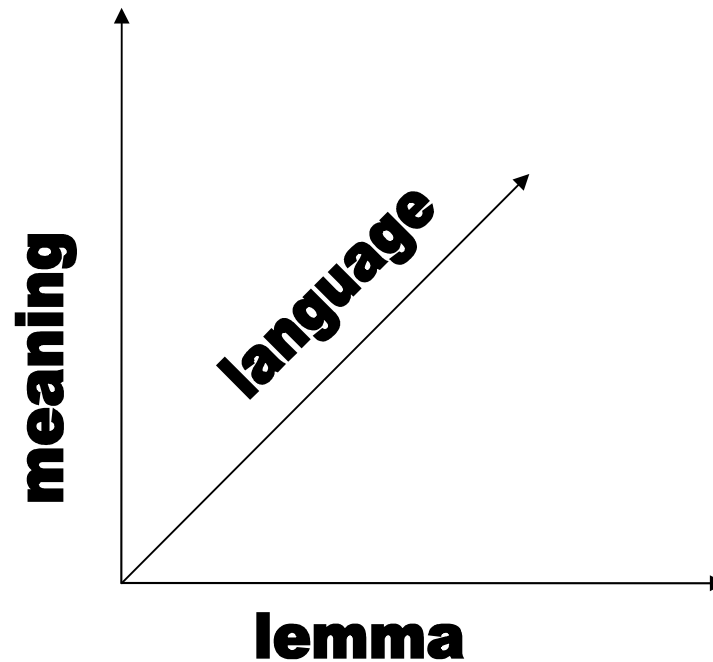
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Università degli Studi di Verona
- <http://www.cyllenius.net/labium/>
- The Cognitive and Communication
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Historical credits.

Latin WordNet project owes to:

- Princeton WordNet: lexical database for the English language (was created and is being maintained at the Cognitive Science Laboratory of [Princeton University](#) under the direction of [psychology professor George A. Miller](#). Development began in 1985.)
- MultiWordNet: a multilingual lexical database in which the Italian WordNet is strictly aligned with [Princeton WordNet](#) v. 1.6. (Developed since 1994, at Istituto Trentino di Cultura – now Fondazione Bruno Kessler)

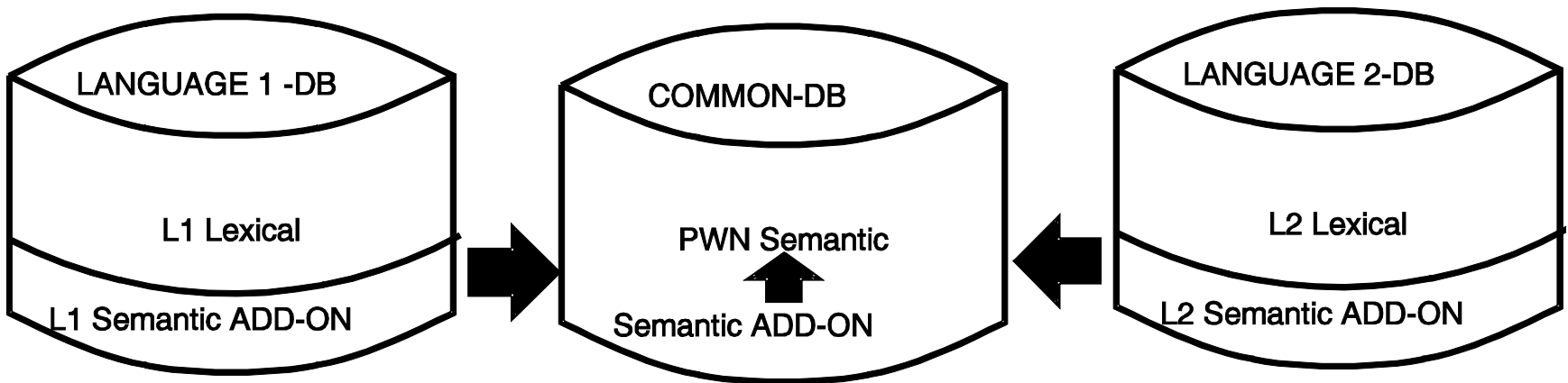
MultiWordnet: multilingual lexical matrix



In Latin WordNet are represented:

- Semantic parts of speech:
 - Nouns
 - Verbs
 - Adjectives
 - Adverbs
- Lexical relations that connect words
- Meanings are considered a constant through the various languages, while the lexicalization of a meaning is a language-specific variable

Structure of the database



the *synset* (= group of synonyms) is the building block of WordNet

v#00682542

express an idea, etc. in words;

\\"He said that he wanted to marry her\\";

\\"tell me what is bothering you\\"; \\"state your opinion\\"

synset	word
v#00682542	state
v#00682542	say
v#00682542	tell

synset	word
v#00682542	dire
v#00682542	enunciare
v#00682542	enunziare
v#00682542	raccontare

synset	lemma
v#00682542	adnuntio
v#00682542	dico
v#00682542	effor
v#00682542	enuntio
v#00682542	for
v#00682542	inquam
v#00682542	inseco
v#00682542	loquor
v#00682542	narro

The *synsets* are linked by relations

POS	type	description	relation	features	coded into DB
NOUNS	!	Antonyms	antonym	:lexical	YES
	@	Hypernyms	hypernym		YES
	~	Hyponyms	hyponym		NO (see the reverse rel @)
	#m	Holonyms (* is a member of)	member-of		NO (see the reverse rel %m)
	#s	Holonyms (* is the substance of)	substance-of		NO (see the reverse rel %s)
	#p	Holonyms (* is a part of)	part-of		NO (see the reverse rel %p)
	%m	Meronymys (members of *)	has-member		YES
	%s	Meronyms (substances of *)	has-substance		YES
	%p	Meronymys (parts of *)	has-part		YES
	=	Attributes (is a value of *)	attribute		YES
		Synset nearest to *	nearest		YES
	+c	Composed-of (is composed of *)	composed-of	:lexical	YES
	-c	Composes (composes of *)	composes	:lexical	NO (see the reverse rel +c)
VERBS	!	Antonyms	antonym	:lexical	YES
	@	Hypernyms	hypernym		YES
	~	Hyponyms	hyponym		NO (see the reverse rel @)
	*	Entails doing	entailment		YES
	>	Causes	causes		YES
	^	Also see	also-see		YES
	\$	senses of * grouped by similarity	verb-group	new 1.6	YES
		Synset nearest to *	nearest		YES
	+c	Composed-of (is composed of *)	composed-of	:lexical	YES
	-c	Composes (composes of *)	composes	:lexical	NO (see the reverse rel +c)

Relations for adjectives and adverbs

ADJ	!	Antonyms	antonym	:lexical	YES
	&	Similar to	similar-to		YES
	<	Participle of verb	participle	:lexical	YES
	\	Pertains to noun	pertains-to	:lexical	YES
	=	Value of (* is a value of)	is-value-of		YES
	^	Also see	also-see		YES
		Synset nearest to *	nearest		YES
	+c	Composed-of (is composed of *)	composed-of	:lexical	YES
	-c	Composes (composes of *)	composes	:lexical	NO (see the reverse rel +c)
ADV	!	Antonyms	antonym	:lexical	YES
	\	Derived from adjective	derived-from		YES
		Synset nearest to *	nearest		YES
	+c	Composed-of (is composed of *)	composed-of	:lexical	YES
	-c	Composes (composes of *)	composes	:lexical	NO (see the reverse rel +c)

- Moreover the *synsets* are connected with semantic field labels in order to create domain-related dictionaries

Building the semantic network

- Build a semantic network from scratch is very time consuming
- Resources available permit a different approach:
 - Automatic assignment of *synsets*
 - Manual correction of the results

Building blocks:

- Latin to Italian MRD (from G. B. Conte – E. Pianezzola)
- Latin to English MRD (from OLD, via William Whitaker's *Words*)
- Italian and English branches of MultiWordNet

We developed a number of assignment strategies

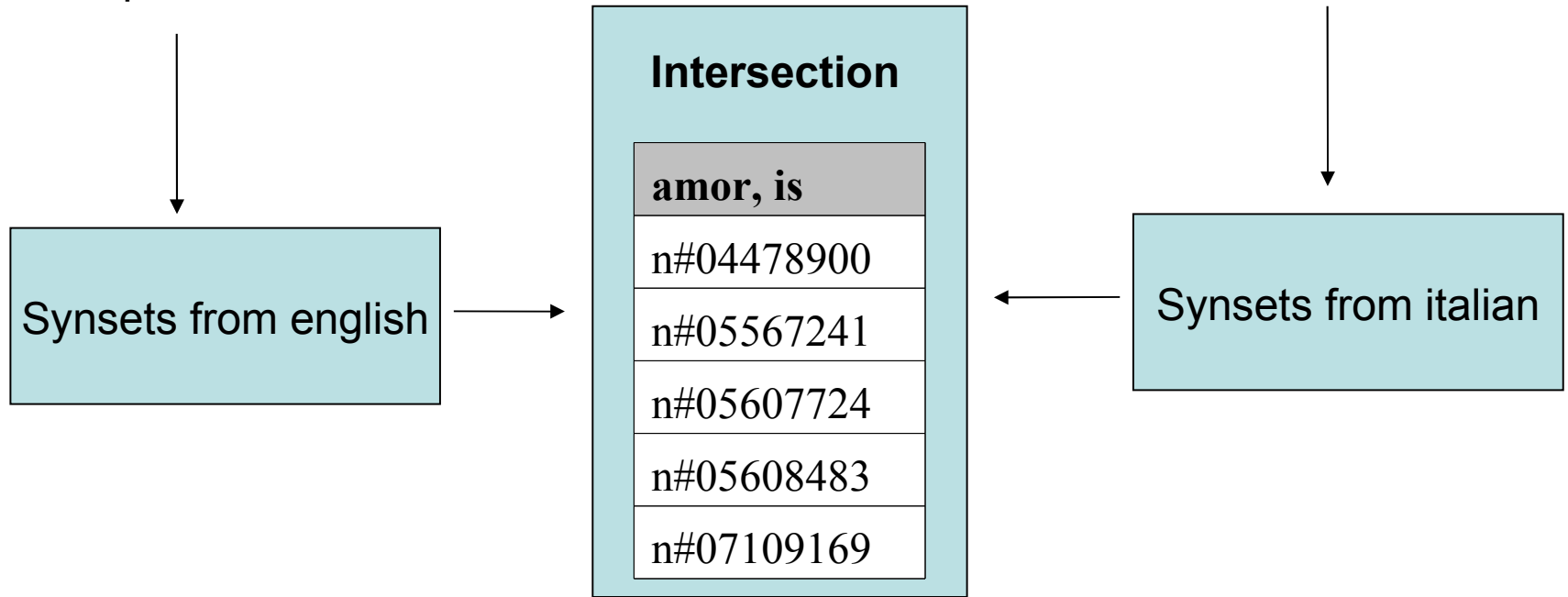
- Multilingual intersection method → exploits multilingual nature of MultiWordNet
- Generic probability → for very specialized words, where polisemy is really limited
- Gloss correspondence → exploits glosses present in the MRD
- Intersection of synsets → assigns a lemma to a synset when a number of the translation equivalents addresses to the same synset

Intersection method

amor, is

love, affection;
the beloved;
Cupid; affair; desire,
passion; sexual passion;
illicit passion

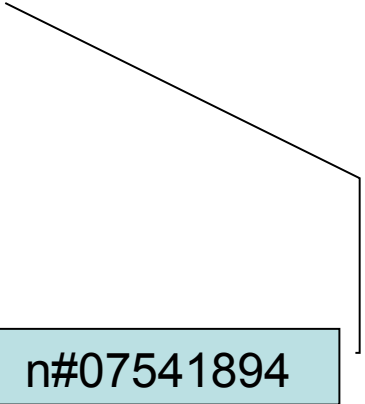
amore; persona amata, amore;
questioni amorose, amozzi;
storie d'amore; amore, desiderio;
Amore; gli Amori, gli Amorini;



Generic probability

abactor, oris → **rustler**, *cattle_thief; one_who_drives_off*

SYNSET



n#07541894

Gloss correspondence

punctum, *i* → point, dot; point, spot; small_hole, pin_prick; sting, small_puncture (of_insect); vote, tick; tiny_amount; full-stop, **period (punctuation)**

PERIOD
n#05126526
n#09715092
n#10843624
n#10868422
n#10869183
n#10954173
n#10961157
n#10982844
n#10988653

n#05126526

Period

point

full_stop

stop

full_point

{a **punctuation** mark (.) placed at the end of a declarative sentence to indicate a full stop or after abbreviations}

Intersection of synsets

punctum, *i* → **point**, **dot**; point, spot; small_hole, pin_prick; sting, small_puncture (of_insect); vote, tick; tiny_amount; full-stop, period (punctuation)

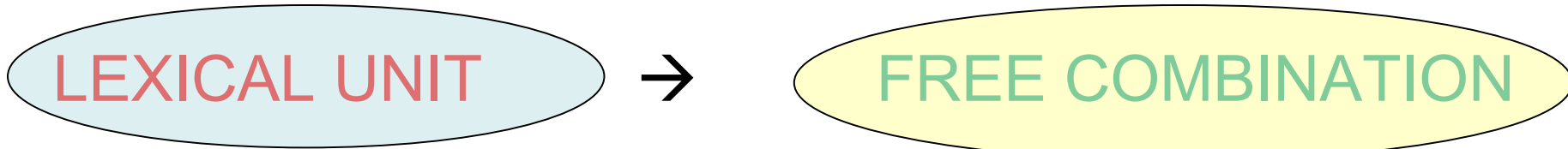
POINT (24 synset)

n#02582551;n#03150523;n#03150944;n#03151033;n#03719894;n#03720036;n#03958380;n#04481751;n#04514257;n#04589546;n#04867079;n#04955967;n#05110203;n#05126526;n#06351684;n#06745866;n#09780630;n#09869507;n#09933792;n#09962048;n#10018378;n#10025218;n#10044643;n#10898122

DOT (2 synset)

n#05096549;n#10025218

Lexical Gaps



abactor, is → gap Latin-TO-Italian: "ladro di bestiame"

Dimension of the database

<u>Latin</u>	Noun	Verb	Adj	Adv	TOTAL
SYNSETS	5621	2283	775	294	8973
LEMMAS	4777	2609	1259	479	9124
WORD SENSES	13060	10062	2054	732	25908

- Latin WordNet can be browsed online
- <http://multiwordnet.itc.it/english/home.php>
- The database of Latin WordNet is available from *European Language Resources Association (ELRA)*
- <http://www.elra.info/>

Latin Word domus Search

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Noun Overview

The word "domus" has 7 senses: Latin WordNet created by University of Verona (Italy)

Noun	
1. aedificatio, aedificium, constructio, domus, fabrica, structura	(Buildings, Town_Planning) [a structure that has a roof and walls and stands more or less permanently in one place; "there was a three-story building on the corner"; "it was an imposing edifice"]
2. aedes, ara, domicilium, domus, focus, habitaculum, Lar, sedes	(Buildings) [a physical structure (e.g., a house) that someone is living in; "he built a modest dwelling near the pond"; "they raise money to provide homes for the homeless"]
3. aedes, atrium, domus, limen, tectum, trabs	(Buildings, Town_Planning) [a dwelling that serves as living quarters for one or more families; "he has a house on Cape Cod"; "she felt she had to get out of the house"]
4. aedes, ara, atrium, domus, familia, focus, genus, limen, tectum, trabs	(Person) [a social unit living together; "he moved his family to Virginia"; "It was a good Christian household"; "I waited until the whole house was asleep"; "the teacher asked how many people made up his home"]

Completato

Sense: domus/1
Pos: Noun
Domain: Buildings, Town_Planning
Affective:

UK MultiWordNet

Synset: building, edifice
Phrasnet:
Gloss: a structure that has a roof and walls and stands more or less permanently in one place; "there was a three-story building on the corner"; "it was an imposing edifice"

IT MultiWordNet

Synset: costruzione, edificio, fabbricato, palazzo, stabile
Phrasnet:
Gloss:

ES MultiWordNet

Synset: edificio, inmueble
Phrasnet:
Gloss:

PT MultiWordNet

Synset: casa, edificação, edifício, imóvel, prédio
Phrasnet:

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Noun

Meronyms (inherited)

- Noun
1. aedificatio, aedificium, constructio, **domus**, fabrica, structura -- (Buildings, Town_Planning) [a building or edifice]
- HAS PART: ala -- (Buildings) [an addition that extends a main building]
 - HAS PART: aula, procoeton -- (Buildings) [a large entrance or reception room]
 - HAS PART: angulus -- (Buildings) [(architecture) solid exterior angle of a building]
 - HAS PART: angulus -- (Buildings) [an interior angle formed by two meeting walls]
 - HAS PART: [cornerstone] -- (Buildings) [a stone at the outer corner of two intersecting walls]
 - HAS PART: [cornerstone] -- (Buildings) [a stone in the exterior of a large and important building]
 - HAS PART: area, cohors, regia -- (Buildings) [a yard wholly or partly surrounded by a building]
 - HAS PART: [cullis] -- (Buildings) [a gutter in a roof]
 - HAS PART: [elevator, lift] -- (Buildings, Town_Planning) [a platform or cage that carries passengers or goods vertically]
 - HAS PART: [car, elevator_car] -- (Buildings, Town_Planning) [where passengers or goods are carried vertically]
 - HAS PART: [exterior_door, outside_door] -- (Buildings) [a doorway that allows access to the exterior]
 - HAS PART: [doorknob, doorhandle] -- (Buildings) [a knob used to release the door]
 - HAS PART: [doorlock] -- (Buildings) [a lock on an exterior door]
 - HAS PART: cardo -- (Buildings, Industry) [a device that holds two parts together]
 - HAS PART: [pintle] -- (Buildings, Industry, Mechanics) [a pin or bolt forming part of a hinge]
 - HAS PART: [paneling, panelling, pane] -- (Buildings) [a panel or section of paneling]
 - HAS PART: libella, tabulatum -- (Buildings) [a room or set of rooms comprising a building]

Sense: domus/1

Pos: Noun

Domain: Buildings, Town_Planning

Affective:

Synset: building, edifice

Phraset:

Gloss: a structure that has a roof and walls and stands more or less permanently in one place; "there was a three-story building on the corner"; "it was an imposing edifice"

Synset: costruzione, edificio, fabbricato, palazzo, stabile

Phraset:

Gloss:

Synset: edificio, inmueble

Phraset:

Gloss:

Synset: casa, edificação, edifício, imóvel, prédio

Phraset:

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Noun Hypernyms

- 1. aedificatio, aedificium, constructio, domus, fabrica, structura -- (Buildings, -> aedificium, compages, comparatio, constructio, fabrica, fabricatio, struct -> [artifact, artefact] -- (Factotum) [a man-made object] -> [object, physical_object] -- (Factotum) [a physical (tangible and visible) -> [entity, something] -- (Factotum) [anything having existence (living
- 2. aedes, ara, domicilium, domus, focus, habitaculum, Lar, sedes -- (Buildings) -> contubernium, deverticulum, hospitium -- (Buildings) [housing collective] -> aedificium, compages, comparatio, constructio, fabrica, fabricatio, stru -> [artifact, artefact] -- (Factotum) [a man-made object] -> [object, physical_object] -- (Factotum) [a physical (tangible and visible) -> [entity, something] -- (Factotum) [anything having existence (living
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Sense: domus/1
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IT Synset: costruzione, edificio, fabbricato, palazzo, stabile
Phraset:
Gloss:

ES Synset: edificio, inmueble
Phraset:
Gloss:

PT Synset: casa, edificação, edifício, imóvel, prédio
Phraset:

proenum, pugna

<p>▶ {n#00610851} obsessio, obsidio, obsidium</p>	<p>(Military) <i>[a war measure that isolates some area of importance to the enemy]</i></p>
<p>▶ {n#00611021} aegis, arx, defensio, munimen, munimentum</p>	<p>(Military) <i>[military action or resources protecting a country against potential enemies; "they died in the defense of Stalingrad"; "they were developed for the defense program"]</i></p>
<p>▶ {n#00611703} administratio</p>	<p>(Military) <i>[a military or naval action (as a maneuver or campaign); "it was a joint operation of the navy and air force"]</i></p>
<p>▶ {n#00612245} obstantia</p>	<p>(Military) <i>[the military action of resisting the enemy's advance; "the enemy offered little resistance"]</i></p>
<p>▶ {n#00617245} communitio, munimen, munimentum, munitio</p>	<p>(Military) <i>[the act of fortifying or strengthening defenses]</i></p>
<p>▶ {n#00619159} bellum, certamen, dimitatio</p>	<p>(History, Military) <i>[an engagement fought between two military forces]</i></p>
<p>▶ {n#00621864} expeditio</p>	<p>(Military) <i>[a military campaign designed to achieve a specific objective in a foreign country]</i></p>

Religion

{a#01713215} pius, religiosus	(Religion) [having or showing or expressing reverence for a deity; "pious readings"]
{a#01714058} impius, irreligiosus, nefandus, profanus, sacrilegus	(Religion) [lacking piety or reverence for a god]
{a#01714321} religiosus	(Religion) [having or showing belief in and reverence for a deity; "a religious man"; "religious attitude"]
{a#01715131} irreligiosus	(Religion) [hostile or indifferent to religion]
{a#01976243} pius, sacer, sacratus, sanctus	(Religion) [belonging to or derived from or associated with a divine power]
{a#02562720} episcopalis	(Religion) [denoting or governed by or relating to a bishop or bishops]
{a#02636348} genialis, maritus	(Religion, Sociology) [of or relating to a wedding; "bridal procession"; "nuptial day"; "spousal rites"; "wedding cake"; "marriage vows"]
{a#02648447} apostolicus	(Religion) [of or relating to or deriving from the Apostles or their teachings]

Thank you! 😊