

WSTA 3

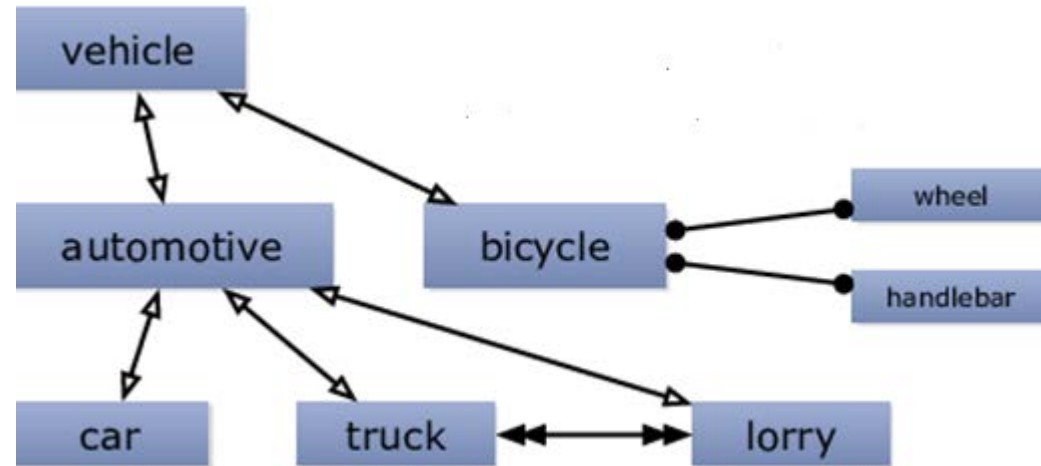
Synonym, hypernym, hyponym

- Two words are **synonyms** when they share (mostly) the same meaning:
 - *Snake* and *serpent* are synonyms.
- One word is a hypernym of a second word when it is a more general instance (“higher up” in the hierarchy) of the latter, for example, *reptile* is the hypernym of *snake*. (*in its animal sense*)
- *Reverse – hyponym*
 - *diamond, emerald, and ruby* are hyponyms of the word *gemstone*
 - *poker, roulette, and craps* are hyponyms of *game*
 - *cyan, navy, and ultramarine* are hyponyms of *blue* (which, in turn, is a hyponym of the word *color*)
 - *fork, knife, and spoon* are hyponyms of *utensil*

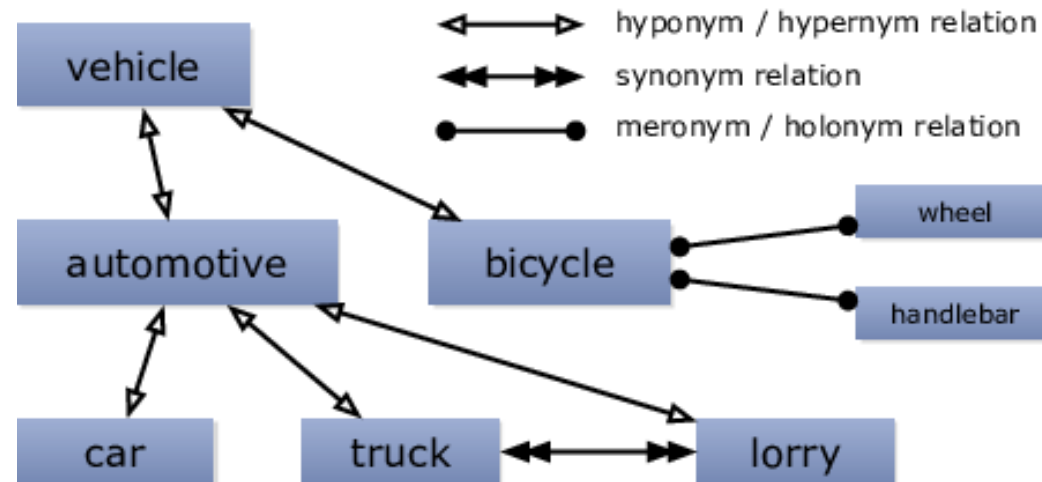
Meronym

- Part of (Meronym)
 - Scales is a meronym of reptile
 - Wheel is a meronym of cycle
- What is the opposite?

Example



Example



Information - hierarchy

entity abstraction... communication message...	entity abstraction... psychological... cognition...	entity abstraction... communication message... statement pleading charge... accusation...	entity abstraction... group... collection...	entity abstraction... measure system of meas... information meas...
information				

Retrieval

entity	entity	
physical...	abstraction...	
process...	psychological...	entity
processing	cognition...	abstraction...
data process...	process...	psychological...
operation	basic cog...	event
computer op...	memory...	act...
retrieval		

Max similarity

- Information & Retrieval – sense 2 for both words

$$\text{sim}(c_1, c_2) = \frac{2 \times \text{depth}(\text{LCS}(c_1, c_2))}{\text{depth}(c_1) + \text{depth}(c_2)}$$

- $(2 * 4)/(5+8) = 0.615$

Overall

	Information				
Retrieval	0.154	0.154	0.118	0.154	0.143
	0.308	0.615	0.235	0.308	0.286
	0.364	0.545	0.267	0.364	0.333