

CONCEPTUAL GRAMMAR

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In OWL, an implementation of conceptual grammar, the two types of data items are symbols and concepts and the two basic data composition operations are specialization and restriction.

A symbol is an alphanumeric string headed by ". Symbols correspond to words, suffixes, prefixes, and word stems in English and the programmer can introduce them at will.

OWL concepts correspond to the meanings of English words and phrases. They are constructed using the specialization operation, comparable to CONS in LISP. (A B) is the specialization of A, a concept, by B, a concept or symbol. OWL forms a branching tree under specialization, with SOMETHING at the top.

Concepts are given properties by restriction, which puts a concept on the reference list of another concept (compare property lists and S-expressions in LISP). A/B is the restriction of A by B.

The categories in the specialization tree are semantic, but we use them also for the purposes usually assigned to syntactic categories.

A predication is a double specification of a model such as present tense or can. Examples are

The pool is full of water. ((PRES-TNS (BE (FULL WATER))) POOL/THE)
 The cookie can be in the jar. ((CAN (BE (IN JAR/THE))) COOKIE/THE)
 Bob is the father of Sam. ((PRES-TNS (BE (FATHER SAM)/THE)) BOB)
 Bob hits the ball. ((PRES-TNS (HIT BALL/THE)) BOB)
 Bob is hitting the ball. ((PRES-TNS (BE (-ING (HIT BALL/THE))))BOB)

Starting from this base we will discuss a number of issues such as nominalization incorporation, and deep vs surface cases.