Lexical dictionary

owe { 
  dpos=V spos=verb 
  gp = { // e.g., X owes Y to Z 
    l=II r=I // trivial diathesis 
    II=(dpos=Num rel=prep-to) } 
}

debt { 
  dpos=N spos=noun 
  gp = { // X’s debt of Y to Z 
    1-II r=I // special diathesis 
    II=(dpos=Num rel=prep case=GEN) 
    III=(dpos=N rel=prep-to) } 
}

Semantic dictionary

owe { 
  lex=owe 
  dep=have } 

Lexical coverage

English 1,500
French 1,500
Lithuanian 180
Persian 60

Lexical functions meta-dictionary

Oper1 { // e.g., X has a debt 
  dpos = V 
  gp = { l=I r=II } 
}

Oper13 { // e.g., X owes a debt to Y 
  dpos = V 
  gp = { l=I r=III } 
}

Func2 { // e.g., the debt amounts to Y 
  dpos = V 
  gp = { l=I r=II } 
}

Lexical Functions (LFs)

Collocations tend to be instances of recurrent patterns across languages, e.g., strong preference, gravelly ill, intense flavour and win hands down are all instances of the same pattern where a base is intensified by a syntactic modifier (the collocate).

What defines a collocation is the special relationship that exists between the base and the collocate it selects, which is modeled as a function. Intensification collocations are modeled with a Magn function: Magn(preference)=strong, etc.

Over the years, around 60 basic LFs have been identified, that combine to form a large number of complex LFs. GenDR implements ~26,000.

Semantics

Simple lexicalization

Bound lexicalization

Surface syntax

Paul owes $500k to the bank.

Paul’s debt to the bank amounts to $500k.