

Topics in Computational Linguistics — Grammar Engineering —

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Our Grammars: Table of Contents

Type Description Language (TDL)

- `types.tdl` type definitions: hierarchy of grammatical knowledge;
- `lexicon.tdl` instances of (lexical) types plus orthography;
- `rules.tdl` instances of construction types; used by the parser;
- `lrules.tdl` lexical rules, applied before non-lexical rules;
- `irules.tdl` lexical rules that require orthographemic variation;
- `roots.tdl` grammar start symbol(s): ‘selection’ of final results.

Auxiliary Files (Grammar Configuration for LKB)

- `labels.tdl` TFS templates abbreviating node labels in trees;
- `globals.lsp`, `user-fns.lsp` parameters and interface functions;
- `mrsglobals.lsp` MRS parameters (path to semantics et al.)



Types vs. Named Feature Structures ('Instances')

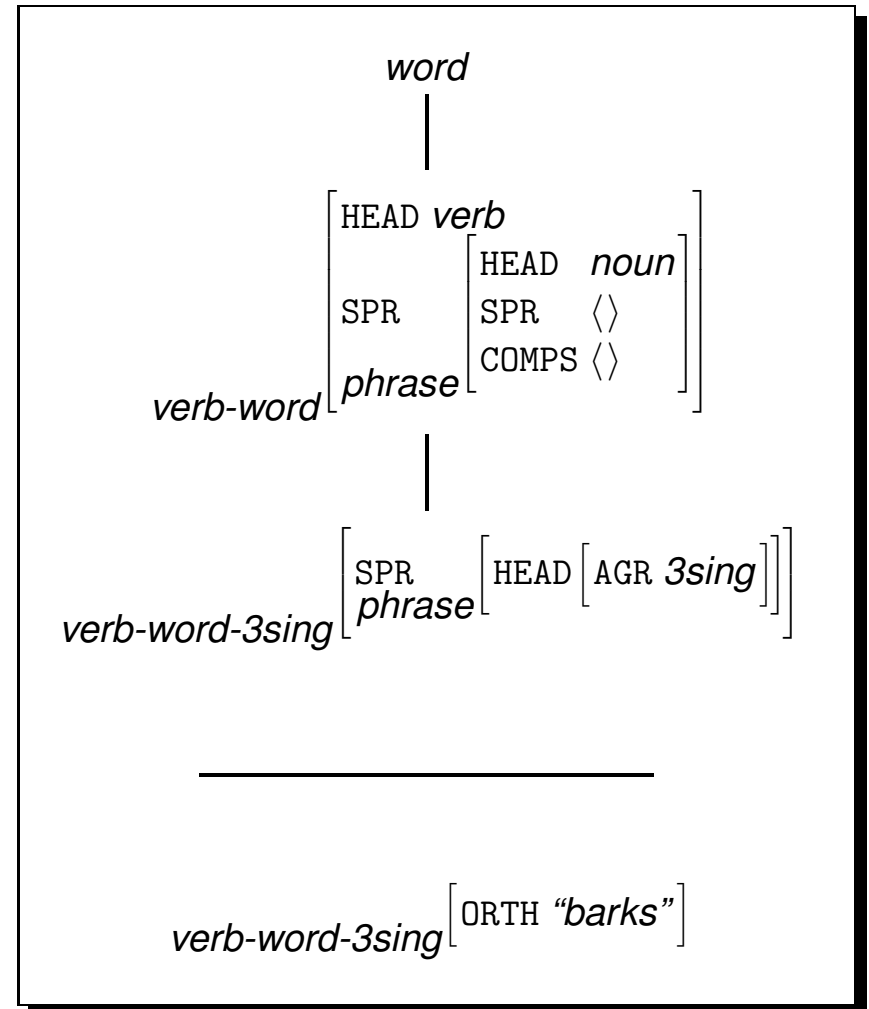
'types.tdl'

```
verb-word := word &
[ HEAD verb,
  SPR < phrase & [ HEAD noun,
                   SPR < >,
                   COMPS < > ] > ].
```

```
verb-word-3sing := verb-word &
[ SPR < [ HEAD [ AGR 3sing ] ] > ].
```

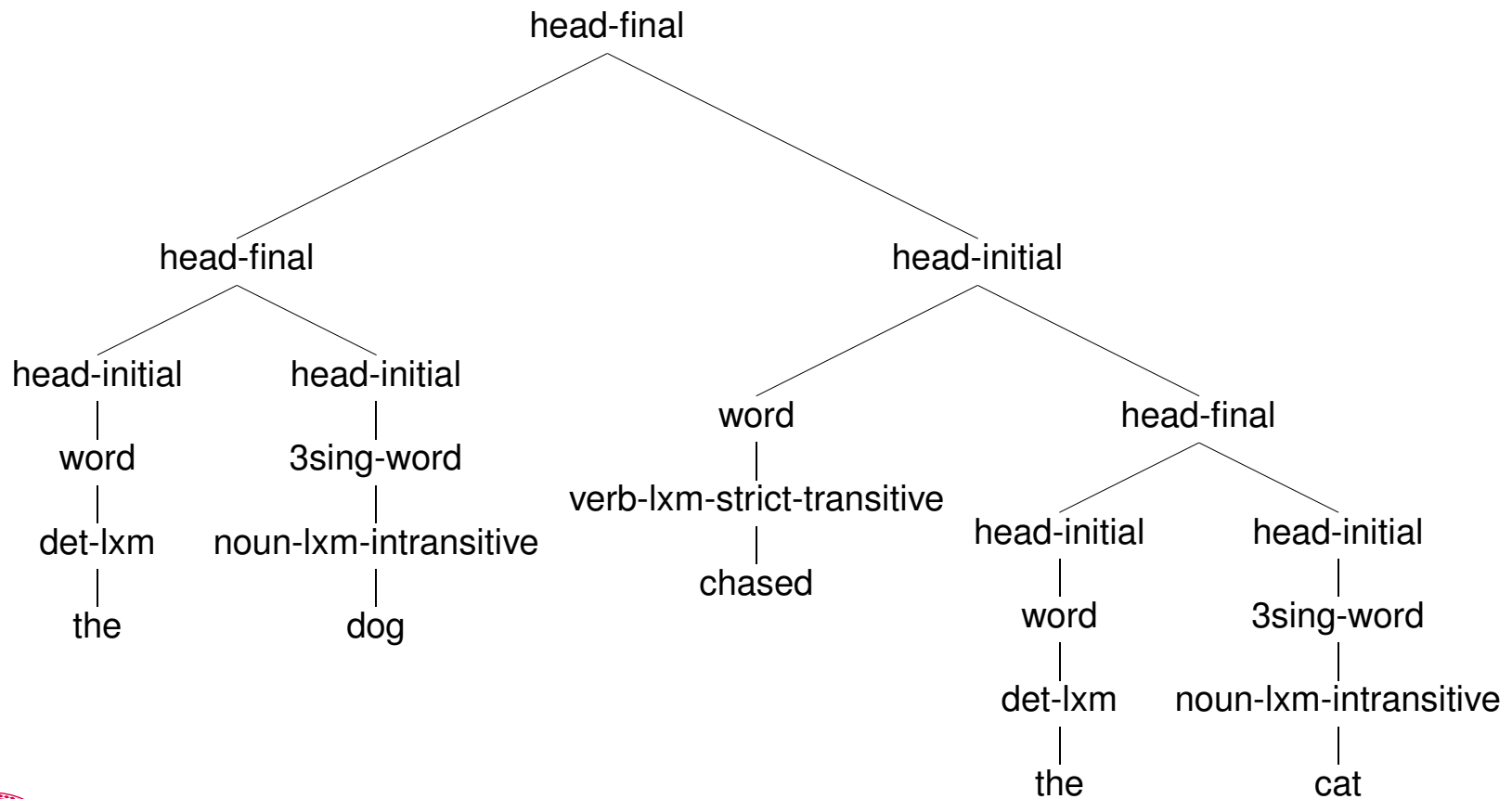
'lexicon.tdl'

```
barks := verb-word-3sing &
[ ORTH "barks" ].
```



Parse Trees and Node Labeling

- Derivation trees are constructed from lexical items and grammar rules;
- node labels (up to now) are top-level types of underlying feature structure.



Decorating our Trees: Abbreviatory Node Labels

'labels.tdl'

```
s-label := label &  
[ HEAD verb, SPR <>, COMPS <>,  
  LABEL-NAME "S" ].
```

```
vp-label := label &  
[ HEAD verb, SPR < [] >, COMPS <>,  
  LABEL-NAME "VP" ].
```

```
v-label := label &  
[ HEAD verb,  
  LABEL-NAME "V" ].
```

```
np-label := label &  
[ HEAD noun, SPR <>, COMPS <>,  
  LABEL-NAME "NP" ].
```

