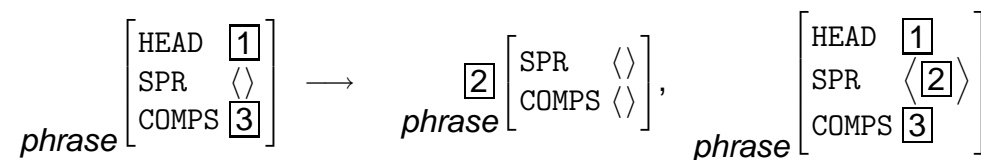


Computational Linguistics (INF2820 — Lexical Rules)



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Our Grammars: Table of Contents

Type Description Language (TDL)

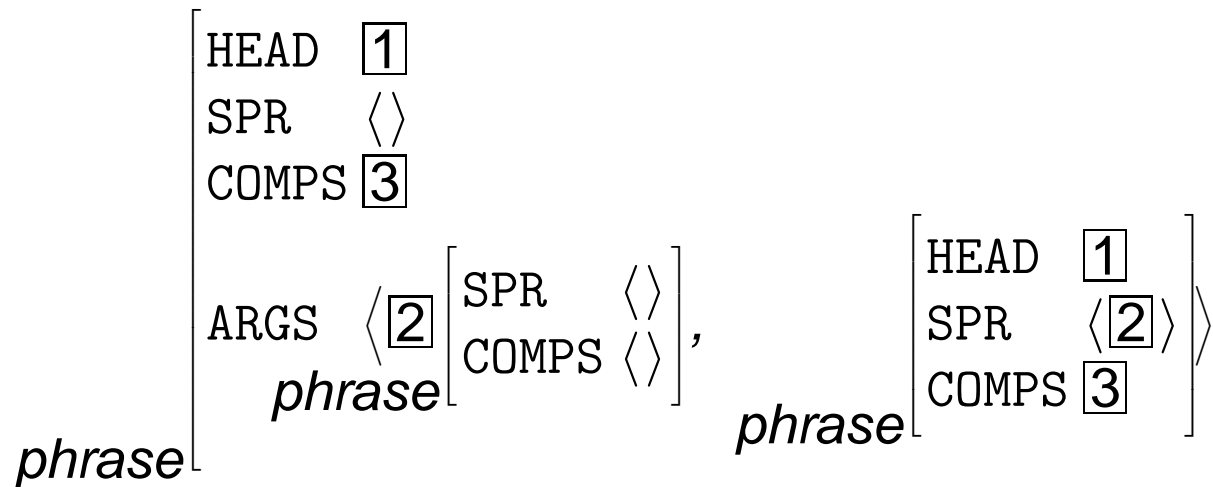
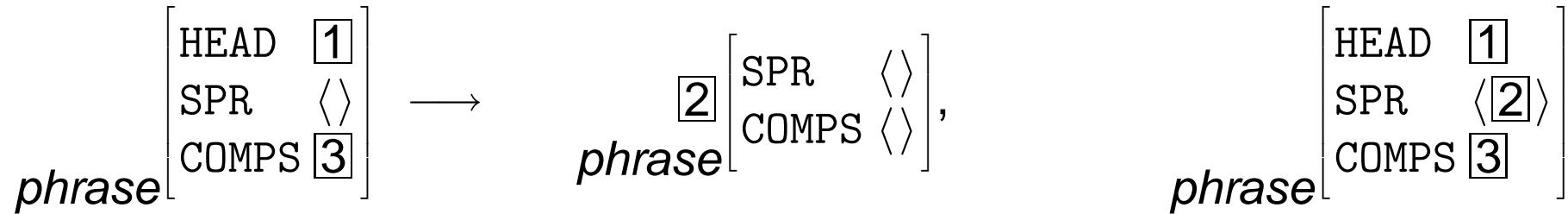
- `types.tdl` type definitions: hierarchy of grammatical knowledge;
- `lexicon.tdl` instances of (lexical) types plus orthography;
- `rules.tdl` instances of construction types; used by the parser;
- `lrules.tdl` lexical rules, applied before non-lexical rules;
- `irules.tdl` lexical rules that require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

Auxiliary Files (Grammar Configuration for LKB)

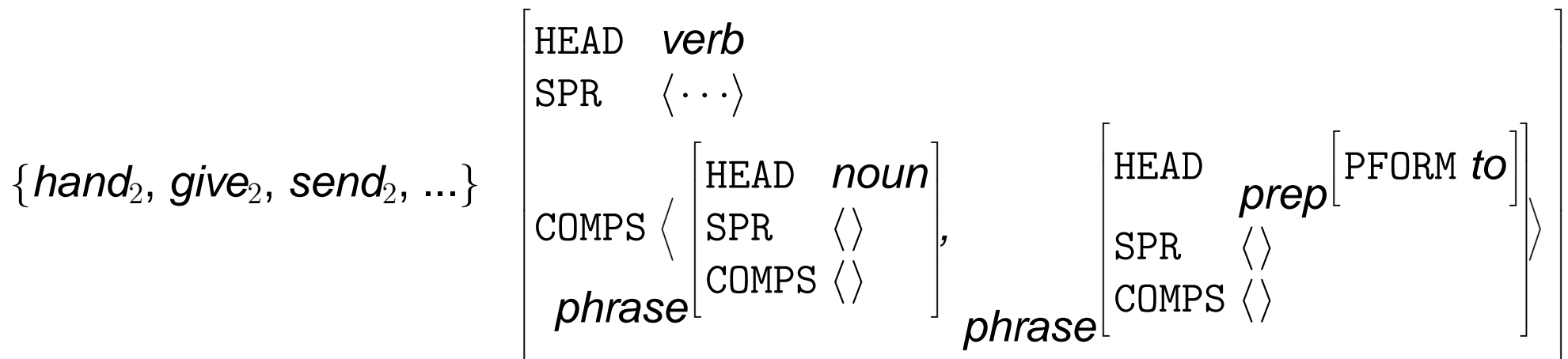
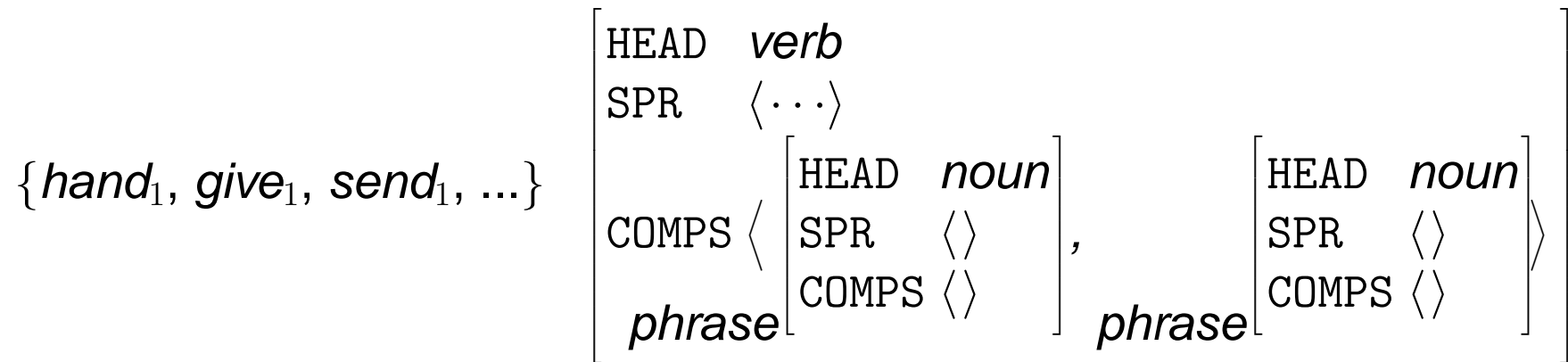
- `labels.tdl` TFS templates abbreviating node labels in trees;
- `globals.lsp`, `user-fns.lsp` parameters and interface functions;
- `mrsglobals.lsp` MRS parameters (path to semantics et al.)



The Format of Grammar Rules in the LKB



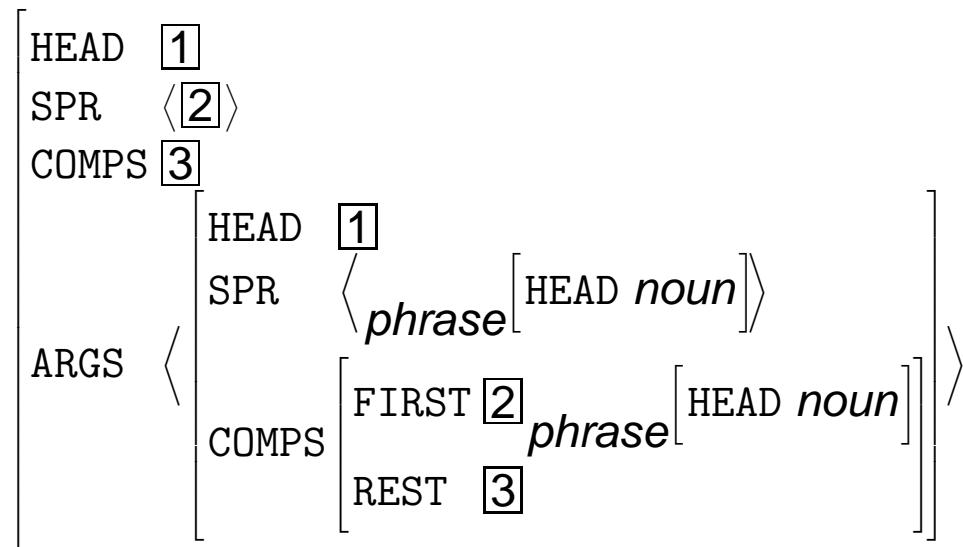
Dative Shift: A Productive Process



Lexical Variation: Lexical Rules

- Dative shift, passivization, et al. are systematic processes in the lexicon;
- use of *monotonic* inheritance is insufficient to relate $give_1$ and $give_2$;
- *lexical rules* are unary grammar rules that operate ‘within the lexicon’;
- take as input a lexical sign (*expression*) and output a derived lexical sign.

Rough Approximation of Passive Lexical Rule



Orthographic Variation: Inflectional Rules

```
%(letter-set (!s abcdefghijklmnopqrstuvwxyz))
```

```
noun-non-3sing_irule :=
```

```
%suffix (!s !ss) (!ss !ssses) (ss sses)
```

```
non-3sing-word &
```

```
[ HEAD [ AGR non-3sing ],
```

```
  ARGS < noun-lxm > ].
```

```
noun-3sing_irule :=
```

```
3sing-word &
```

```
[ ORTH #1,
```

```
  ARGS < noun-lxm & [ ORTH #1 ] > ].
```

dog

|

dogs

bus

|

busses

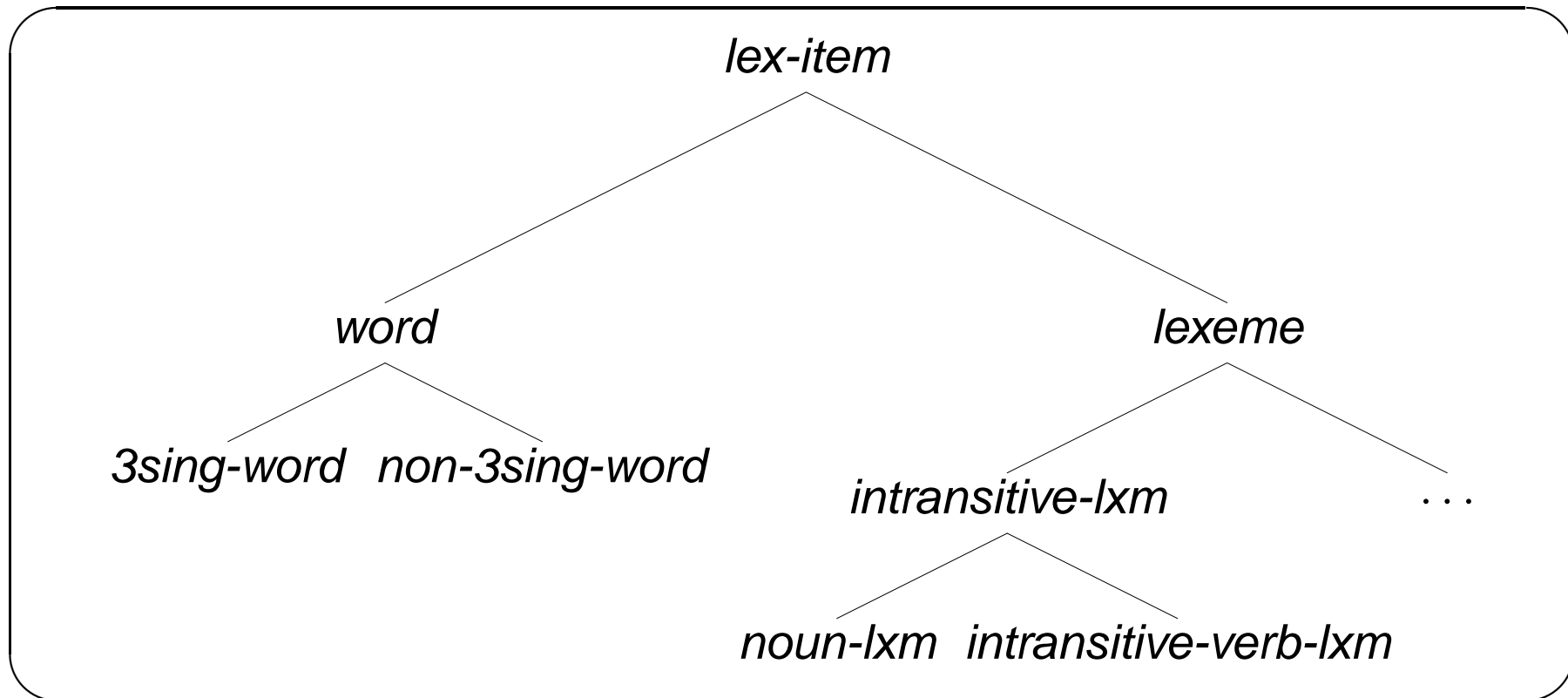
pass

|

passes



The Lexeme vs. Word Distinction



- Lexical entries are *uninflected*; cannot enter syntax by themselves;
- inflectional rules ‘make’ *word* from *lexeme*, possibly with ‘null’ suffix.

