

AceWiki Grammar

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Below, the grammar rules of the AceWiki grammar are shown:

Texts and Sentences

'text' stands for a complete text consisting of an arbitrary number of complete sentences (including zero):

$$(1) \text{ text } \xrightarrow{\cdot} \rightarrow$$

$$(2) \text{ text } \xrightarrow{\cdot} \rightarrow \text{ complete_sentence } \text{ text }$$

A complete sentence is represented by the category 'complete_sentence' and is either a declarative sentence that ends with a full stop or a question ending with a question mark:

$$(3) \text{ complete_sentence } \xrightarrow{\sim} \rightarrow \parallel \text{ sentence } [.]$$

$$(4) \text{ complete_sentence } \xrightarrow{\sim} \rightarrow \parallel \text{ simple_sentence_2 } \begin{pmatrix} \text{qu: +} \\ \text{whin: -} \\ \text{whout: +} \end{pmatrix} [?]$$

General sentences are represented by 'sentence':

$$(5) \text{ sentence } \xrightarrow{\cdot} \rightarrow \text{ sentence_coord_1 }$$

$$(6) \text{ sentence } \xrightarrow{\sim} \rightarrow \parallel [\text{for every}] \text{ nc } \begin{pmatrix} \text{qu: -} \\ \text{subj: -} \end{pmatrix} \text{ sentence_coord_1 }$$

$$(7) \text{ sentence } \xrightarrow{\sim} \rightarrow \parallel [\text{if}] \text{ sentence_coord_1 } [\text{then}] \text{ sentence_coord_1 }$$

Sentences can be coordinated using "or" ('sentence_coord_1') and "and" ('sentence_coord_2'):

$$(8) \text{ sentence_coord_1 } \xrightarrow{\cdot} \rightarrow \text{ sentence_coord_2 }$$

$$(9) \text{ sentence_coord_1 } \xrightarrow{\sim} \rightarrow \parallel \text{ sentence_coord_2 } [\text{or}] \text{ sentence_coord_1 }$$

$$(10) \text{ sentence_coord_2 } \xrightarrow{\cdot} \rightarrow \text{ simple_sentence_1 }$$

$$(11) \text{ sentence_coord_2 } \xrightarrow{\cdot} \rightarrow \text{ simple_sentence_1 } [\text{and}] \text{ sentence_coord_2 }$$

Uncoordinated sentences are represented in two levels by 'simple_sentence_1' and 'simple_sentence_2':

$$(12) \text{ simple_sentence_1 } \xrightarrow{\sim} \rightarrow \parallel [\text{it is false that}] \text{ simple_sentence_2 } (\text{qu: -})$$

$$(13) \text{ simple_sentence_1 } \xrightarrow{\cdot} \rightarrow [\text{there is}] \text{ np } \begin{pmatrix} \text{case: nom} \\ \text{def: -} \\ \text{exist: +} \\ \text{pl: -} \\ \text{qu: -} \\ \text{subj: -} \end{pmatrix}$$

$$(14) \text{ simple_sentence_1 } \xrightarrow{\cdot} \rightarrow [\text{there is}] \text{ np } \begin{pmatrix} \text{case: nom} \\ \text{def: -} \\ \text{exist: +} \\ \text{pl: -} \\ \text{qu: -} \\ \text{subj: -} \end{pmatrix} [\text{such that}] \text{ simple_sentence_1 }$$

$$(15) \text{ simple_sentence_1 } \xrightarrow{\cdot} \rightarrow [\text{there are}] \text{ np } \begin{pmatrix} \text{case: nom} \\ \text{def: -} \\ \text{exist: +} \\ \text{pl: +} \\ \text{qu: -} \\ \text{subj: -} \end{pmatrix}$$

$$(16) \text{ simple_sentence_1 } \xrightarrow{\cdot} \rightarrow \text{ simple_sentence_2 } (\text{qu: -})$$

$$(17) \text{ simple_sentence_2 } \begin{pmatrix} \text{qu: } [1] \\ \text{whin: } [2] \\ \text{whout: } [3] \end{pmatrix} \xrightarrow{\sim} \rightarrow \text{ np } \begin{pmatrix} \text{case: nom} \\ \text{id: } [4] \\ \text{pl: } [5] \\ \text{qu: } [1] \\ \text{subj: -} \\ \text{whin: } [2] \\ \text{whout: } [6] \end{pmatrix} \text{ vp_coord_1 } \begin{pmatrix} \text{pl: } [5] \\ \text{qu: } [1] \\ \text{subj: } [4] \\ \text{whin: } [6] \\ \text{whout: } [3] \end{pmatrix}$$

Verb Phrases

Like sentences, verb phrases can be coordinated using "or" ('vp_coord_1') and "and" ('vp_coord_2'):

$$(18) \text{ vp_coord_1 } \begin{pmatrix} \text{pl: } [1] \\ \text{qu: } [2] \\ \text{subj: } [3] \\ \text{whin: } [4] \\ \text{whout: } [5] \end{pmatrix} \xrightarrow{\cdot} \rightarrow \text{ vp_coord_2 } \begin{pmatrix} \text{pl: } [1] \\ \text{qu: } [2] \\ \text{subj: } [3] \\ \text{whin: } [4] \\ \text{whout: } [5] \end{pmatrix}$$

$$(19) \text{ vp_coord_1 } \begin{pmatrix} \text{pl: } [1] \\ \text{qu: } [2] \\ \text{subj: } [3] \\ \text{whin: } [4] \\ \text{whout: } [5] \end{pmatrix} \xrightarrow{\sim} \rightarrow \parallel \text{ vp_coord_2 } \begin{pmatrix} \text{pl: } [1] \\ \text{qu: } [2] \\ \text{subj: } [3] \\ \text{whin: } [4] \\ \text{whout: } [5] \end{pmatrix} [\text{or}] \text{ vp_coord_1 } \begin{pmatrix} \text{pl: } [1] \\ \text{qu: } [2] \\ \text{subj: } [3] \\ \text{whin: } [6] \\ \text{whout: } [5] \end{pmatrix}$$

$$(20) \quad vp_coord_2 \begin{pmatrix} pl: \boxed{1} \\ qu: \boxed{2} \\ subj: \boxed{3} \\ whin: \boxed{4} \\ whout: \boxed{5} \end{pmatrix} \dot{\rightarrow} vp \begin{pmatrix} pl: \boxed{1} \\ qu: \boxed{2} \\ subj: \boxed{3} \\ whin: \boxed{4} \\ whout: \boxed{5} \end{pmatrix}$$

$$(21) \quad vp_coord_2 \begin{pmatrix} pl: \boxed{1} \\ qu: \boxed{2} \\ subj: \boxed{3} \\ whin: \boxed{4} \\ whout: \boxed{5} \end{pmatrix} \dot{\rightarrow} vp \begin{pmatrix} pl: \boxed{1} \\ qu: \boxed{2} \\ subj: \boxed{3} \\ whin: \boxed{4} \\ whout: \boxed{6} \end{pmatrix} \text{ [and] } vp_coord_2 \begin{pmatrix} pl: \boxed{1} \\ qu: \boxed{2} \\ subj: \boxed{3} \\ whin: \boxed{6} \\ whout: \boxed{5} \end{pmatrix}$$

Uncoordinated verb phrases represented by 'vp' can use an auxiliary verb:

$$(22) \quad vp \begin{pmatrix} exist: \boxed{1} \\ pl: \boxed{2} \\ qu: \boxed{3} \\ rel: \boxed{4} \\ subj: \boxed{5} \\ whin: \boxed{6} \\ whout: \boxed{7} \end{pmatrix} \rightsquigarrow aux \begin{pmatrix} be: \boxed{8} \\ exist: \boxed{1} \\ pl: \boxed{2} \end{pmatrix} v \begin{pmatrix} be: \boxed{8} \\ exist: \boxed{1} \\ pl: \boxed{2} \\ qu: \boxed{3} \\ rel: \boxed{4} \\ subj: \boxed{5} \\ vform: inf \\ whin: \boxed{6} \\ whout: \boxed{7} \end{pmatrix}$$

$$(23) \quad vp \begin{pmatrix} exist: + \\ pl: \boxed{1} \\ qu: \boxed{2} \\ rel: \boxed{3} \\ subj: \boxed{4} \\ whin: \boxed{5} \\ whout: \boxed{6} \end{pmatrix} \rightsquigarrow v \begin{pmatrix} be: - \\ exist: + \\ pl: \boxed{1} \\ qu: \boxed{2} \\ rel: \boxed{3} \\ subj: \boxed{4} \\ vform: fin \\ whin: \boxed{5} \\ whout: \boxed{6} \end{pmatrix}$$

The category 'v' represents the main verb or - if "be" is used as a copula verb - the complementing noun phrase or adjective complement:

$$(24) \quad v \begin{pmatrix} be: - \\ copula: - \\ exist: \boxed{1} \\ pl: \boxed{2} \\ vform: \boxed{3} \\ whin: \boxed{4} \\ whout: \boxed{4} \end{pmatrix} \dot{\rightarrow} verb \begin{pmatrix} be: - \\ exist: \boxed{1} \\ pl: \boxed{2} \\ vcat: itr \\ vform: \boxed{3} \end{pmatrix}$$

$$(25) \quad v \begin{pmatrix} be: - \\ copula: - \\ embv: \boxed{1} \\ exist: \boxed{2} \\ pl: \boxed{3} \\ qu: \boxed{4} \\ rel: \boxed{5} \\ subj: \boxed{6} \\ vform: \boxed{7} \\ whin: \boxed{8} \\ whout: \boxed{9} \end{pmatrix} \dot{\rightarrow} verb \begin{pmatrix} be: - \\ exist: \boxed{2} \\ pl: \boxed{3} \\ vcat: tr \\ vform: \boxed{7} \end{pmatrix} np \begin{pmatrix} case: acc \\ embv: \boxed{1} \\ qu: \boxed{4} \\ rel: \boxed{5} \\ subj: \boxed{6} \\ vcat: tr \\ whin: \boxed{8} \\ whout: \boxed{9} \end{pmatrix}$$

$$(26) \quad v \begin{pmatrix} be: + \\ copula: - \\ embv: \boxed{1} \\ qu: \boxed{2} \\ rel: \boxed{3} \\ subj: \boxed{4} \\ whin: \boxed{5} \\ whout: \boxed{6} \end{pmatrix} \dot{\rightarrow} verb \begin{pmatrix} be: + \\ vcat: tr \end{pmatrix} np \begin{pmatrix} case: acc \\ copula: - \\ embv: \boxed{1} \\ qu: \boxed{2} \\ rel: \boxed{3} \\ subj: \boxed{4} \\ whin: \boxed{5} \\ whout: \boxed{6} \end{pmatrix}$$

$$(27) \quad v \begin{pmatrix} be: + \\ copula: + \\ embv: \boxed{1} \\ qu: \boxed{2} \\ rel: \boxed{3} \\ subj: \boxed{4} \\ whin: \boxed{5} \\ whout: \boxed{6} \end{pmatrix} \dot{\rightarrow} np \begin{pmatrix} case: acc \\ copula: + \\ embv: \boxed{1} \\ of: + \\ pl: - \\ qu: \boxed{2} \\ rel: \boxed{3} \\ subj: \boxed{4} \\ whin: \boxed{5} \\ whout: \boxed{6} \end{pmatrix}$$

$$(28) \quad v \begin{pmatrix} be: + \\ copula: + \\ embv: \boxed{1} \\ pl: - \\ qu: \boxed{2} \\ rel: \boxed{3} \\ subj: \boxed{4} \\ whin: \boxed{5} \\ whout: \boxed{6} \end{pmatrix} \dot{\rightarrow} np \begin{pmatrix} case: acc \\ copula: + \\ embv: \boxed{1} \\ of: - \\ pl: - \\ qu: \boxed{2} \\ rel: \boxed{3} \\ subj: \boxed{4} \\ whin: \boxed{5} \\ whout: \boxed{6} \end{pmatrix}$$

$$(29) \quad v \begin{pmatrix} be: + \\ copula: + \\ embv: \boxed{1} \\ qu: \boxed{2} \\ rel: \boxed{3} \\ subj: \boxed{4} \\ whin: \boxed{5} \\ whout: \boxed{6} \end{pmatrix} \dot{\rightarrow} \underline{tradj} np \begin{pmatrix} case: acc \\ copula: - \\ embv: \boxed{1} \\ qu: \boxed{2} \\ rel: \boxed{3} \\ subj: \boxed{4} \\ whin: \boxed{5} \\ whout: \boxed{6} \end{pmatrix}$$

Noun Phrases

Noun phrases are represented by 'np' and can consist of proper names, variables, pronouns, and different noun constructs:

$$(30) \quad np \begin{pmatrix} def: + \\ embv: \boxed{1} \\ exist: + \\ id: \boxed{2} \\ of: - \\ pl: - \\ qu: \boxed{3} \\ rel: \boxed{4} \\ whin: \boxed{5} \\ whout: \boxed{6} \end{pmatrix} \dot{\rightarrow} \underline{propername} \begin{pmatrix} gender: \boxed{7} \\ human: \boxed{8} \\ text: \boxed{2} \end{pmatrix} \gg \begin{pmatrix} gender: \boxed{7} \\ hasvar: - \\ human: \boxed{8} \\ id: \boxed{2} \\ type: prop \end{pmatrix} relcl \begin{pmatrix} embv: \boxed{1} \\ human: \boxed{8} \\ qu: \boxed{3} \\ rel: \boxed{4} \\ subj: \boxed{2} \\ whin: \boxed{5} \\ whout: \boxed{6} \end{pmatrix}$$

$$(31) \quad np \begin{pmatrix} \text{def: +} \\ \text{exist: +} \\ \text{id: } [1] \\ \text{of: -} \\ \text{pl: -} \\ \text{whin: } [2] \\ \text{whout: } [2] \end{pmatrix} \dot{\rightarrow} \#_{[1]} \text{ newvar}(\text{var: } [3]) > \begin{pmatrix} \text{hasvar: +} \\ \text{id: } [1] \\ \text{type: var} \\ \text{var: } [3] \end{pmatrix}$$

$$(32) \quad np \begin{pmatrix} \text{def: +} \\ \text{exist: +} \\ \text{id: } [1] \\ \text{of: -} \\ \text{pl: -} \\ \text{whin: } [2] \\ \text{whout: } [2] \end{pmatrix} \dot{\rightarrow} \text{defnoun}(\text{noun: } [3]) \text{ reference}(\text{text: } [4]) < \begin{pmatrix} \text{gender: } [5] \\ \text{hasvar: +} \\ \text{human: } [6] \\ \text{id: } [1] \\ \text{noun: } [3] \\ \text{type: noun} \\ \text{var: } [4] \end{pmatrix} > \begin{pmatrix} \text{gender: } [5] \\ \text{hasvar: -} \\ \text{human: } [6] \\ \text{id: } [1] \\ \text{type: ref} \end{pmatrix}$$

$$(33) \quad np \begin{pmatrix} \text{def: +} \\ \text{exist: +} \\ \text{id: } [1] \\ \text{of: -} \\ \text{pl: -} \\ \text{whin: } [2] \\ \text{whout: } [2] \end{pmatrix} \dot{\rightarrow} \text{defnoun}(\text{noun: } [3]) < \begin{pmatrix} \text{gender: } [4] \\ \text{human: } [5] \\ \text{id: } [1] \\ \text{noun: } [3] \\ \text{type: noun} \end{pmatrix} > \begin{pmatrix} \text{gender: } [4] \\ \text{hasvar: -} \\ \text{human: } [5] \\ \text{id: } [1] \\ \text{type: ref} \end{pmatrix}$$

$$(34) \quad np \begin{pmatrix} \text{def: +} \\ \text{exist: +} \\ \text{id: } [1] \\ \text{of: -} \\ \text{pl: -} \\ \text{whin: } [2] \\ \text{whout: } [2] \end{pmatrix} \dot{\rightarrow} \text{reference}(\text{text: } [3]) < \begin{pmatrix} \text{gender: } [4] \\ \text{hasvar: +} \\ \text{human: } [5] \\ \text{id: } [1] \\ \text{var: } [3] \end{pmatrix} > \begin{pmatrix} \text{gender: } [4] \\ \text{hasvar: -} \\ \text{human: } [5] \\ \text{id: } [1] \\ \text{type: ref} \end{pmatrix}$$

$$(35) \quad np \begin{pmatrix} \text{embv: } [1] \\ \text{exist: } [2] \\ \text{id: } [3] \\ \text{of: } [4] \\ \text{pl: -} \\ \text{qu: } [5] \\ \text{rel: } [6] \\ \text{subj: } [7] \\ \text{whin: } [8] \\ \text{whout: } [9] \end{pmatrix} \dot{\rightarrow} \text{quant}(\text{exist: } [2]) \text{ nc} \begin{pmatrix} \text{embv: } [1] \\ \text{id: } [3] \\ \text{of: } [4] \\ \text{qu: } [5] \\ \text{rel: } [6] \\ \text{subj: } [7] \\ \text{whin: } [8] \\ \text{whout: } [9] \end{pmatrix}$$

$$(36) \quad np \begin{pmatrix} \text{embv: } [1] \\ \text{exist: } [2] \\ \text{id: } [3] \\ \text{of: -} \\ \text{pl: -} \\ \text{qu: } [4] \\ \text{rel: } [5] \\ \text{whin: } [6] \\ \text{whout: } [7] \end{pmatrix} \dot{\rightarrow} \#_{[3]} \text{ ipron}(\text{exist: } [2] \text{ human: } [8]) \text{ opt_newvar}(\text{hasvar: } [9] \text{ var: } [10]) > \begin{pmatrix} \text{hasvar: } [9] \\ \text{human: } [8] \\ \text{id: } [3] \\ \text{type: ipron} \\ \text{var: } [10] \end{pmatrix} \text{ relcl} \begin{pmatrix} \text{embv: } [1] \\ \text{human: } [8] \\ \text{qu: } [4] \\ \text{rel: } [5] \\ \text{subj: } [3] \\ \text{whin: } [6] \\ \text{whout: } [7] \end{pmatrix}$$

$$(37) \quad np \begin{pmatrix} \text{copula: -} \\ \text{exist: +} \\ \text{id: } [1] \\ \text{of: -} \\ \text{pl: +} \\ \text{whin: } [2] \\ \text{whout: } [2] \end{pmatrix} \dot{\rightarrow} \text{num_quant} \text{ number } \#_{[1]} \text{ nounpl}$$

$$(38) \quad np \begin{pmatrix} \text{copula: -} \\ \text{exist: +} \\ \text{id: } [1] \\ \text{of: -} \\ \text{pl: -} \\ \text{whin: } [2] \\ \text{whout: } [2] \end{pmatrix} \dot{\rightarrow} \text{num_quant} [1] \#_{[1]} \text{ noun}(\text{gender: } [3] \text{ human: } [4] \text{ text: } [5]) > \begin{pmatrix} \text{gender: } [3] \\ \text{hasvar: -} \\ \text{human: } [4] \\ \text{id: } [1] \\ \text{noun: } [5] \\ \text{type: noun} \end{pmatrix}$$

$$(39) \quad np \begin{pmatrix} \text{exist: +} \\ \text{id: } [1] \\ \text{of: -} \\ \text{pl: -} \\ \text{qu: +} \\ \text{whout: +} \end{pmatrix} \dot{\rightarrow} \#_{[1]} [\text{what}] > \begin{pmatrix} \text{hasvar: -} \\ \text{id: } [1] \\ \text{human: -} \\ \text{type: wh} \end{pmatrix}$$

$$(40) \quad np \begin{pmatrix} \text{exist: +} \\ \text{id: } [1] \\ \text{of: -} \\ \text{pl: -} \\ \text{qu: +} \\ \text{whout: +} \end{pmatrix} \dot{\rightarrow} \#_{[1]} [\text{who}] > \begin{pmatrix} \text{hasvar: -} \\ \text{human: +} \\ \text{id: } [1] \\ \text{type: wh} \end{pmatrix}$$

$$(41) \quad np \begin{pmatrix} \text{embv: } [1] \\ \text{exist: +} \\ \text{id: } [2] \\ \text{of: } [3] \\ \text{pl: -} \\ \text{qu: +} \\ \text{rel: } [4] \\ \text{subj: } [5] \\ \text{whout: +} \end{pmatrix} \dot{\rightarrow} [\text{which}] \text{ nc} \begin{pmatrix} \text{embv: } [1] \\ \text{id: } [2] \\ \text{of: } [3] \\ \text{qu: +} \\ \text{rel: } [4] \\ \text{subj: } [5] \\ \text{whin: +} \\ \text{whout: +} \end{pmatrix}$$

$$(42) \quad np \begin{pmatrix} \text{exist: +} \\ \text{id: } [1] \\ \text{of: -} \\ \text{pl: +} \\ \text{qu: +} \\ \text{whout: +} \end{pmatrix} \dot{\rightarrow} [\text{which}] \#_{[1]} \text{ nounpl}$$

The category 'nc' represents nouns optionally followed by variables, relative clauses, and of-constructs:

$$(43) \quad nc \begin{pmatrix} \text{embv: } [1] \\ \text{id: } [2] \\ \text{of: -} \\ \text{qu: } [3] \\ \text{rel: } [4] \\ \text{whin: } [5] \\ \text{whout: } [6] \end{pmatrix} \dot{\rightarrow} n(\text{gender: } [7] \text{ human: } [8] \text{ id: } [2] \text{ text: } [9]) \text{ opt_newvar}(\text{hasvar: } [10] \text{ var: } [11]) > \begin{pmatrix} \text{gender: } [7] \\ \text{hasvar: } [10] \\ \text{human: } [8] \\ \text{id: } [2] \\ \text{noun: } [9] \\ \text{type: noun} \\ \text{var: } [11] \end{pmatrix} \text{ relcl} \begin{pmatrix} \text{embv: } [1] \\ \text{human: } [8] \\ \text{qu: } [3] \\ \text{rel: } [4] \\ \text{subj: } [2] \\ \text{whin: } [5] \\ \text{whout: } [6] \end{pmatrix}$$

$$(44) \quad nc \begin{pmatrix} \text{embv: } [1] \\ \text{of: +} \\ \text{qu: } [2] \\ \text{rel: } [3] \\ \text{subj: } [4] \\ \text{whin: } [5] \\ \text{whout: } [6] \end{pmatrix} \rightsquigarrow \text{nounof} \text{ np} \begin{pmatrix} \text{case: acc} \\ \text{embv: } [1] \\ \text{qu: } [2] \\ \text{rel: } [3] \\ \text{subj: } [4] \\ \text{whin: } [5] \\ \text{whout: } [6] \end{pmatrix}$$

The category 'n' stands for nouns:

$$(45) \quad n \begin{pmatrix} \text{gender: } \boxed{1} \\ \text{human: } \boxed{2} \\ \text{id: } \boxed{3} \\ \text{text: } \boxed{4} \end{pmatrix} \dot{\rightarrow} \#_{\boxed{3}} \text{noun} \begin{pmatrix} \text{gender: } \boxed{1} \\ \text{human: } \boxed{2} \\ \text{text: } \boxed{4} \end{pmatrix}$$

New variables, optional and mandatory, are represented by 'opt_newvar' and 'newvar', respectively:

$$(46) \quad \text{opt_newvar} \begin{pmatrix} \text{hasvar: } - \end{pmatrix} \dot{\rightarrow}$$

$$(47) \quad \text{opt_newvar} \begin{pmatrix} \text{hasvar: } + \\ \text{var: } \boxed{1} \end{pmatrix} \dot{\rightarrow} \text{newvar} \begin{pmatrix} \text{var: } \boxed{1} \end{pmatrix}$$

$$(48) \quad \text{newvar} \begin{pmatrix} \text{var: } \boxed{1} \end{pmatrix} \dot{\rightarrow} \underline{\text{variable}} \begin{pmatrix} \text{text: } \boxed{1} \end{pmatrix} \not\rightarrow \begin{pmatrix} \text{hasvar: } + \\ \text{var: } \boxed{1} \end{pmatrix}$$

Relative Clauses

Relative clauses are represented by 'relcl'. They start with a relative pronoun and are always optional:

$$(49) \quad \text{relcl} \begin{pmatrix} \text{whin: } \boxed{1} \\ \text{whout: } \boxed{1} \end{pmatrix} \dot{\rightarrow}$$

$$(50) \quad \text{relcl} \begin{pmatrix} \text{embv: } + \\ \text{human: } \boxed{1} \\ \text{qu: } \boxed{2} \\ \text{rel: } + \\ \text{subj: } \boxed{3} \\ \text{whin: } \boxed{4} \\ \text{whout: } \boxed{5} \end{pmatrix} \dot{\rightarrow} \text{relpron} \begin{pmatrix} \text{human: } \boxed{1} \\ \text{relpron: } \boxed{6} \end{pmatrix} \text{relcl1} \begin{pmatrix} \text{human: } \boxed{1} \\ \text{qu: } \boxed{2} \\ \text{relpron: } \boxed{6} \\ \text{subj: } \boxed{3} \\ \text{whin: } \boxed{4} \\ \text{whout: } \boxed{5} \end{pmatrix}$$

Like sentences and verb phrases, relative clauses can be coordinated by "or" ('relcl1') and "and" ('relcl2'):

$$(51) \quad \text{relcl1} \begin{pmatrix} \text{human: } \boxed{1} \\ \text{qu: } \boxed{2} \\ \text{relpron: } \boxed{3} \\ \text{subj: } \boxed{4} \\ \text{whin: } \boxed{5} \\ \text{whout: } \boxed{6} \end{pmatrix} \rightsquigarrow // \text{relcl2} \begin{pmatrix} \text{human: } \boxed{1} \\ \text{qu: } \boxed{2} \\ \text{rel: } - \\ \text{relpron: } \boxed{3} \\ \text{subj: } \boxed{4} \\ \text{whin: } \boxed{5} \\ \text{whout: } \boxed{7} \end{pmatrix} \text{or_relpron} \begin{pmatrix} \text{human: } \boxed{1} \\ \text{relpron: } \boxed{3} \end{pmatrix} \text{relcl1} \begin{pmatrix} \text{human: } \boxed{1} \\ \text{qu: } \boxed{2} \\ \text{relpron: } \boxed{3} \\ \text{subj: } \boxed{4} \\ \text{whin: } \boxed{7} \\ \text{whout: } \boxed{6} \end{pmatrix}$$

$$(52) \quad \text{relcl1} \begin{pmatrix} \text{human: } \boxed{1} \\ \text{qu: } \boxed{2} \\ \text{relpron: } \boxed{3} \\ \text{subj: } \boxed{4} \\ \text{whin: } \boxed{5} \\ \text{whout: } \boxed{6} \end{pmatrix} \dot{\rightarrow} \text{relcl2} \begin{pmatrix} \text{human: } \boxed{1} \\ \text{qu: } \boxed{2} \\ \text{relpron: } \boxed{3} \\ \text{subj: } \boxed{4} \\ \text{whin: } \boxed{5} \\ \text{whout: } \boxed{6} \end{pmatrix}$$

$$(53) \quad \text{relcl2} \begin{pmatrix} \text{human: } \boxed{1} \\ \text{qu: } \boxed{2} \\ \text{rel: } \boxed{3} \\ \text{relpron: } \boxed{4} \\ \text{subj: } \boxed{5} \\ \text{whin: } \boxed{6} \\ \text{whout: } \boxed{7} \end{pmatrix} \dot{\rightarrow} \text{vp} \begin{pmatrix} \text{pl: } - \\ \text{qu: } \boxed{2} \\ \text{rel: } - \\ \text{subj: } \boxed{5} \\ \text{whin: } \boxed{6} \\ \text{whout: } \boxed{8} \end{pmatrix} \text{and_relpron} \begin{pmatrix} \text{human: } \boxed{1} \\ \text{relpron: } \boxed{4} \end{pmatrix} \text{relcl2} \begin{pmatrix} \text{human: } \boxed{1} \\ \text{qu: } \boxed{2} \\ \text{rel: } \boxed{3} \\ \text{relpron: } \boxed{4} \\ \text{subj: } \boxed{5} \\ \text{whin: } \boxed{8} \\ \text{whout: } \boxed{7} \end{pmatrix}$$

$$(54) \quad \text{relcl2} \begin{pmatrix} \text{qu: } \boxed{1} \\ \text{rel: } \boxed{2} \\ \text{subj: } \boxed{3} \\ \text{whin: } \boxed{4} \\ \text{whout: } \boxed{5} \end{pmatrix} \dot{\rightarrow} \text{vp} \begin{pmatrix} \text{pl: } - \\ \text{qu: } \boxed{1} \\ \text{rel: } \boxed{2} \\ \text{subj: } \boxed{3} \\ \text{whin: } \boxed{4} \\ \text{whout: } \boxed{5} \end{pmatrix}$$

$$(55) \quad \text{relcl2} \begin{pmatrix} \text{qu: } \boxed{1} \\ \text{subj: } \boxed{2} \\ \text{whin: } \boxed{3} \\ \text{whout: } \boxed{4} \end{pmatrix} \rightsquigarrow \text{np} \begin{pmatrix} \text{case: nom} \\ \text{copula: } - \\ \text{pl: } \boxed{5} \\ \text{qu: } \boxed{1} \\ \text{refl: } - \\ \text{rel: } - \\ \text{subj: } \boxed{2} \\ \text{whin: } \boxed{3} \\ \text{whout: } \boxed{4} \end{pmatrix} \text{aux} \begin{pmatrix} \text{be: } - \\ \text{exist: } \boxed{6} \\ \text{pl: } \boxed{5} \end{pmatrix} \text{verb} \begin{pmatrix} \text{be: } - \\ \text{exist: } \boxed{6} \\ \text{pl: } \boxed{5} \\ \text{vcat: tr} \\ \text{vform: inf} \end{pmatrix}$$

$$(56) \quad \text{relcl2} \begin{pmatrix} \text{qu: } \boxed{1} \\ \text{subj: } \boxed{2} \\ \text{whin: } \boxed{3} \\ \text{whout: } \boxed{4} \end{pmatrix} \rightsquigarrow \text{np} \begin{pmatrix} \text{case: nom} \\ \text{copula: } - \\ \text{pl: } \boxed{5} \\ \text{qu: } \boxed{1} \\ \text{refl: } - \\ \text{rel: } - \\ \text{subj: } \boxed{2} \\ \text{whin: } \boxed{3} \\ \text{whout: } \boxed{4} \end{pmatrix} \text{verb} \begin{pmatrix} \text{be: } - \\ \text{exist: } + \\ \text{pl: } \boxed{5} \\ \text{vcat: tr} \\ \text{vform: fin} \end{pmatrix}$$

Relative pronouns are represented by 'relpron' and can be either "that", "who" or "which":

$$(57) \quad \text{relpron} \begin{pmatrix} \text{relpron: that} \end{pmatrix} \dot{\rightarrow} [\text{that}]$$

$$(58) \quad \text{relpron} \begin{pmatrix} \text{human: } + \\ \text{relpron: who} \end{pmatrix} \dot{\rightarrow} [\text{who}]$$

$$(59) \quad \text{relpron} \begin{pmatrix} \text{human: } - \\ \text{relpron: which} \end{pmatrix} \dot{\rightarrow} [\text{which}]$$

The categories 'or_relpron' and 'and_relpron' define shortcuts - like "or that" as one token - for better usability inside of the predictive editor:

$$(60) \quad \text{or_relpron} \begin{pmatrix} \text{human: } \boxed{1} \\ \text{relpron: } \boxed{2} \end{pmatrix} \dot{\rightarrow} [\text{or}] \text{relpron} \begin{pmatrix} \text{human: } \boxed{1} \\ \text{relpron: } \boxed{2} \end{pmatrix}$$

$$(61) \quad \text{or_relpron} \begin{pmatrix} \text{relpron: that} \end{pmatrix} \dot{\rightarrow} [\text{or that}]$$

$$(62) \quad \text{or_relpron} \begin{pmatrix} \text{human: } + \\ \text{relpron: who} \end{pmatrix} \dot{\rightarrow} [\text{or who}]$$

$$(63) \quad \text{or_relpron} \begin{pmatrix} \text{human: } - \\ \text{relpron: which} \end{pmatrix} \dot{\rightarrow} [\text{or which}]$$

$$(64) \quad and_relpron \left(\begin{smallmatrix} human: \boxed{1} \\ relpron: \boxed{2} \end{smallmatrix} \right) \xrightarrow{\cdot} [and] \quad relpron \left(\begin{smallmatrix} human: \boxed{1} \\ relpron: \boxed{2} \end{smallmatrix} \right)$$

$$(65) \quad and_relpron \left(\begin{smallmatrix} relpron: that \end{smallmatrix} \right) \xrightarrow{\cdot} [and \ that]$$

$$(66) \quad and_relpron \left(\begin{smallmatrix} human: + \\ relpron: who \end{smallmatrix} \right) \xrightarrow{\cdot} [and \ who]$$

$$(67) \quad and_relpron \left(\begin{smallmatrix} human: - \\ relpron: which \end{smallmatrix} \right) \xrightarrow{\cdot} [and \ which]$$

Verbs

The category 'verb' represents main verbs:

$$(68) \quad verb \left(\begin{smallmatrix} be: - \\ pl: - \\ vcat: tr \\ vform: fin \end{smallmatrix} \right) \xrightarrow{\cdot} \underline{verbsg}$$

$$(69) \quad verb \left(\begin{smallmatrix} be: - \\ pl: + \\ vcat: tr \\ vform: fin \end{smallmatrix} \right) \xrightarrow{\cdot} \underline{verbsg}$$

$$(70) \quad verb \left(\begin{smallmatrix} be: - \\ vcat: tr \\ vform: inf \end{smallmatrix} \right) \xrightarrow{\cdot} \underline{verbinf}$$

$$(71) \quad verb \left(\begin{smallmatrix} be: + \\ vcat: tr \end{smallmatrix} \right) \xrightarrow{\cdot} \underline{pverb}$$

Auxiliary verbs are represented by 'aux', which includes negation markers:

$$(72) \quad aux \left(\begin{smallmatrix} be: + \\ exist: + \\ pl: - \end{smallmatrix} \right) \xrightarrow{\cdot} [is]$$

$$(73) \quad aux \left(\begin{smallmatrix} be: + \\ exist: - \\ pl: - \end{smallmatrix} \right) \xrightarrow{\cdot} // \quad [is \ not]$$

$$(74) \quad aux \left(\begin{smallmatrix} be: + \\ exist: - \\ pl: - \end{smallmatrix} \right) \xrightarrow{\cdot} // \quad [is] \quad [not]$$

$$(75) \quad aux \left(\begin{smallmatrix} be: + \\ exist: + \\ pl: + \end{smallmatrix} \right) \xrightarrow{\cdot} [are]$$

$$(76) \quad aux \left(\begin{smallmatrix} be: + \\ exist: - \\ pl: + \end{smallmatrix} \right) \xrightarrow{\cdot} // \quad [are \ not]$$

$$(77) \quad aux \left(\begin{smallmatrix} be: + \\ exist: - \\ pl: + \end{smallmatrix} \right) \xrightarrow{\cdot} // \quad [are] \quad [not]$$

$$(78) \quad aux \left(\begin{smallmatrix} be: - \\ exist: - \\ pl: - \end{smallmatrix} \right) \xrightarrow{\cdot} // \quad [does \ not]$$

$$(79) \quad aux \left(\begin{smallmatrix} be: - \\ exist: - \\ pl: + \end{smallmatrix} \right) \xrightarrow{\cdot} // \quad [do \ not]$$

Quantifiers

Existential and universal quantifiers are represented by 'quant':

$$(80) \quad quant \left(\begin{smallmatrix} exist: + \end{smallmatrix} \right) \xrightarrow{\cdot} [a]$$

$$(81) \quad quant \left(\begin{smallmatrix} exist: + \end{smallmatrix} \right) \xrightarrow{\cdot} [an]$$

$$(82) \quad quant \left(\begin{smallmatrix} exist: - \end{smallmatrix} \right) \xrightarrow{\cdot} // \quad [every]$$

$$(83) \quad quant \left(\begin{smallmatrix} exist: - \end{smallmatrix} \right) \xrightarrow{\cdot} // \quad [no]$$

The category 'num_quant' stands for numerical quantifiers:

$$(84) \quad num_quant \xrightarrow{\cdot} [at \ least]$$

$$(85) \quad num_quant \xrightarrow{\cdot} [at \ most]$$

$$(86) \quad num_quant \xrightarrow{\cdot} [less \ than]$$

$$(87) \quad num_quant \xrightarrow{\cdot} [more \ than]$$

$$(88) \quad num_quant \xrightarrow{\cdot} [exactly]$$

Indefinite Pronouns

Indefinite pronouns are represented by 'ipron':

- (89) $ipron\left(\begin{smallmatrix} \text{exist: +} \\ \text{human: -} \end{smallmatrix}\right) \xrightarrow{\cdot} \text{ [something]}$
- (90) $ipron\left(\begin{smallmatrix} \text{exist: +} \\ \text{human: +} \end{smallmatrix}\right) \xrightarrow{\cdot} \text{ [somebody]}$
- (91) $ipron\left(\begin{smallmatrix} \text{exist: -} \\ \text{human: -} \end{smallmatrix}\right) \xrightarrow{\cdot} \text{ // [everything]}$
- (92) $ipron\left(\begin{smallmatrix} \text{exist: -} \\ \text{human: +} \end{smallmatrix}\right) \xrightarrow{\cdot} \text{ // [everybody]}$
- (93) $ipron\left(\begin{smallmatrix} \text{exist: -} \\ \text{human: -} \end{smallmatrix}\right) \xrightarrow{\cdot} \text{ // [nothing]}$
- (94) $ipron\left(\begin{smallmatrix} \text{exist: -} \\ \text{human: +} \end{smallmatrix}\right) \xrightarrow{\cdot} \text{ // [nobody]}$