

% start S

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# Sentence structure
S[SENT=?s] -> NP[NUM=?n, PERS=?p,SENT=?sn] VP[NUM=?n,
PERS=?p, SENT=?s,SUBCAT=?c]
S[SENT=?s] -> NP[NUM=?nn, PERS=?pp,SENT=?sn] Modal
VP[NUM=?n, PERS=?p, SENT=?s,SUBCAT=?c] | NP[NUM=?nn, PERS=?pp,SENT=?
sn] Modal Negation VP[NUM=?n, PERS=?p, SENT=?s,SUBCAT=?c]
S[SENT=?s] -> NP[NUM=?n, PERS=?p, SENT=?s]
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# Example: For the team [NP], winning [VP] is
everything.
S[SENT = ?s] -> 'for' NP[NUM=?n, PERS=?p, SENT=?sn]
COMMA S
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# Use of Relative Clause
S[SENT=?s] -> NP[NUM=?n, PERS=?p,SENT=?s] VP[NUM=?n,
PERS=?p, SENT=?s,SUBCAT=?c] RelClause S[SENT=?s]
S[SENT=?s] -> NP[NUM=?n, PERS=?p,SENT=?s] VP[NUM=?n,
PERS=?p, SENT="neutral",SUBCAT=?c] RelClause S[SENT=?s]
S[SENT=?s] -> NP[NUM=?n, PERS=?p,SENT=?s2] VP[NUM=?n,
PERS=?p, SENT=?s,SUBCAT=?c] RelClause S[SENT="neutral"]
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# Example: The car, which is parked outside, belongs to
my neighbor.
S[SENT=?s] -> NP[NUM=?n, PERS=?p,SENT=?s2] COMMA
RelClause COMMA VP[NUM=?n, PERS=?p, SENT=?s,SUBCAT=?c]
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# AND
S[SENT = ?s] -> NP[NUM=?n, PERS=?p, SENT=?s1] VP[NUM=?n,
PERS=?p, SENT=?s,SUBCAT=?c] CC[+and] S[SENT = ?s]
S[SENT = ?s] -> NP[NUM=?n, PERS=?p, SENT=?s1] VP[NUM=?n,
PERS=?p, SENT="neutral",SUBCAT=?c] CC[+and] S[SENT = ?s]
S[SENT = ?s] -> NP[NUM=?n, PERS=?p, SENT=?s1] VP[NUM=?n,
PERS=?p, SENT=?s,SUBCAT=?c] CC[+and] S[SENT = "neutral"]
S[SENT = ?s] -> NP[NUM=?n, PERS=?p, SENT=?s1] VP[NUM=?n,
PERS=?p, SENT=?s,SUBCAT=?c] COMMA CC[+and] S[SENT = ?s]
S[SENT = ?s] -> NP[NUM=?n, PERS=?p, SENT=?s1] VP[NUM=?n,
PERS=?p, SENT="neutral",SUBCAT=?c] COMMA CC[+and] S[SENT = ?s]
S[SENT = ?s] -> NP[NUM=?n, PERS=?p, SENT=?s1] VP[NUM=?n,
PERS=?p, SENT=?s,SUBCAT=?c] COMMA CC[+and] S[SENT = "neutral"]
S[SENT = ?s] -> NP[NUM=?n, PERS=?p, SENT=?s1] VP[NUM=?n,
PERS=?p, SENT="neutral",SUBCAT=?c] COMMA [+and] S[SENT = ?s]
S[SENT = ?s] -> NP[NUM=?n, PERS=?p, SENT=?s1] VP[NUM=?n,
PERS=?p, SENT=?s ,SUBCAT=?c] COMMA S[SENT = neutral]
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# BUT
S[SENT = ?s2] -> NP[NUM=?n, PERS=?p, SENT=?sn] VP[NUM=?
n, PERS=?p, SENT=?s1,SUBCAT=?c] COMMA CC[+but] S[SENT = ?s2]
S[SENT = ?s2] -> NP[NUM=?n, PERS=?p, SENT=?sn] VP[NUM=?
n, PERS=?p, SENT=?s1,SUBCAT=?c] CC[+but] S[SENT = ?s2]
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# OR
S[SENT = ?s2] -> NP[NUM=?n, PERS=?p, SENT=?sn] VP[NUM=?
n, PERS=?p, SENT=?s1,SUBCAT=?c] CC[+or] S[SENT = ?s2]
S[SENT = ?s2] -> NP[NUM=?n, PERS=?p, SENT=?sn] VP[NUM=?
n, PERS=?p, SENT=?s1,SUBCAT=?c] COMMA CC[+or] S[SENT = ?s2]
S[SENT = "neutral" ] -> NP[NUM=?n, PERS=?p, SENT=?sn]
VP[NUM=?n, PERS=?p, SENT="positive",SUBCAT=?c] CC[+or] S[SENT =
"negative"]|NP[NUM=?n, PERS=?p, SENT=?sn] VP[NUM=?n, PERS=?p,
SENT="positive",SUBCAT=?c] COMMA CC[+or] S[SENT = "negative"]
S[SENT = "neutral"] -> NP[NUM=?n, PERS=?p, SENT=?sn]
VP[NUM=?n, PERS=?p, SENT="negative",SUBCAT=?c] CC[+or] S[SENT
="positive" ]|NP[NUM=?n, PERS=?p, SENT=?sn] VP[NUM=?n, PERS=?p,
SENT="negative",SUBCAT=?c] COMMA CC[+or] S[SENT ="positive" ]

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## Other CC
S[SENT="positive"] -> S[SENT="positive"] CC[-and, -but,
-or] S[SENT="positive"] | S[SENT="positive"] CC[-and, -but, -or]
S[SENT="neutral"] | S[SENT="neutral"] CC[-and, -but, -or]
S[SENT="positive"]
S[SENT="negative"] -> S[SENT="negative"] CC[-and, -but,
-or] S[SENT="negative"] | S[SENT="negative"] CC[-and, -but, -or]
S[SENT="neutral"] | S[SENT="neutral"] CC[-and, -but, -or]
S[SENT="negative"]
S[SENT="neutral"] -> S[SENT="neutral"] CC[-and, -but,
-or] S[SENT="neutral"]

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S_THAT[SENT = ?s] -> NP[NUM=?n, PERS=?p, SENT=?sn]
VP[NUM=?n, PERS=?p, SENT=?s,SUBCAT=?c] THAT S[SENT=?s]

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# Noun Phrase (NP) structure
NP[NUM=?n, PERS=?p, SENT=?s] -> N[NUM=?n, PERS=?p,
SENT=?s]|NNP[NUM=?n, PERS=?p]|Det[NUM=?n]|PRP[NUM=?n, PERS=?p]
NP[NUM=?n, PERS=?p, SENT=?s] -> PosPro NP[NUM=?n, PERS=?
p, SENT=?s]| ADVP[SENT=?s2] NP[NUM=?n, PERS=?p, SENT=?s]

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# Use of ADJ in NP
NP[NUM=?n, PERS=?p, SENT=?s] -> ADJP[SENT=?s] NP[NUM=?n,
PERS=?p, SENT=?s2]|ADJP[SENT=?s]
NP[NUM=?n, PERS=?p, SENT=?s] -> ADJP[SENT=neutral]
NP[NUM=?n, PERS=?p, SENT=?s]
NP[NUM=?n, PERS=?p, SENT=?s] -> Det[NUM=?n] ADJP[SENT=?
s] N[NUM=?n, PERS=?p] | N[NUM=?n, PERS=?p] NP[NUM=?n, PERS=?p,
SENT=?s]

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# Use of ADJ in PP
NP[NUM=?n, PERS=?p, SENT=?s] -> Det[NUM=?n] N[NUM=?n,
PERS=?p, SENT=?s] | Det[NUM=?n] NP[NUM=?n, PERS=?p, SENT=?s]|
Det[NUM=?n] NP[NUM=?n, PERS=?p, SENT=?s] PP
NP[NUM=?n, PERS=?p, SENT=?s] -> NP[NUM=?n, PERS=?p,
SENT=?s] OF NP[NUM=?n1, PERS=?p, SENT=?s2]
NP[NUM=?n, PERS=?p, SENT=neutral] -> NP[NUM=?n, PERS=?p,

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SENT=positive] OF NP[NUM=?n1, PERS=?p, SENT=negative] | NP[NUM=?n, PERS=?p, SENT=negative] OF NP[NUM=?n, PERS=?p, SENT=positive]

Use of CC in NP

NP[NUM=?n, PERS=?p, SENT=?s] -> NP[NUM=?n, PERS=?p, SENT=?s] CC[+and] NP[NUM=?n, PERS=?p, SENT=?s] | NP[NUM=?n, PERS=?p, SENT=neutral] CC[+and] NP[NUM=?n, PERS=?p, SENT=?s] | NP[NUM=?n, PERS=?p, SENT=?s] CC[+and] NP[NUM=?n, PERS=?p, SENT=neutral]

NP[NUM=?n, PERS=?p, SENT=?s] -> NP[NUM=?n, PERS=?p, SENT=?s] CC[+or] NP[NUM=?n, PERS=?p, SENT=?s1]

NP[NUM=?n, PERS=?p, SENT="neutral"] -> NP[NUM=?n, PERS=?p, SENT="positive"] CC[+or] NP[NUM=?n, PERS=?p, SENT="negative"] | NP[NUM=?n, PERS=?p, SENT="negative"] CC[+or] NP[NUM=?n, PERS=?p, SENT="positive"]

NP[NUM=?n, PERS=?p, SENT=?s] -> NP[NUM=?n, PERS=?p, SENT=?s2] CC[+but] NP[NUM=?n, PERS=?p, SENT=?s] | NP[NUM=?n, PERS=?p, SENT=?s2] COMMA CC[+but] NP[NUM=?n, PERS=?p, SENT=?s]

NP[NUM=?n, PERS=?p, SENT=?s] -> N[NUM=?n, PERS=?p, SENT=?s] COMMA NP[NUM=?n, PERS=?p, SENT=?s] | COMMA NP[NUM=?n, PERS=?p, SENT=?s] | ADJP[SENT=?s] COMMA NP[NUM=?n, PERS=?p, SENT=?s]

Numbers

NP[NUM=?n, PERS=?p, SENT=?s] -> Cardinal NP[NUM=?n, PERS=?p, SENT=?s] | Cardinal[NUM=?n]

Use of Relative Clause in NP

NP[NUM=?n, PERS=?p, SENT=?s] -> Det[NUM=?n] NP[NUM=?n, PERS=?p, SENT=?s] RelClause[SENT=?s]

NP[NUM=?n, PERS=?p, SENT=?s] -> Det[NUM=?n] NP[NUM=?n, PERS=?p, SENT="neutral"] RelClause[SENT=?s]

NP[NUM=?n, PERS=?p, SENT=?s] -> Det[NUM=?n] NP[NUM=?n, PERS=?p, SENT=?s] RelClause[SENT="neutral"]

Relative Clause

RelClause[SENT=?s] -> RelPro NP[NUM=?n, PERS=?p, SENT=?s2] VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] | RelPro VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c]

RelClause[SENT=?s] -> RelPro NP[NUM=?n, PERS=?p, SENT=?s]

Example: The company that I work for is opening a new branch. --- the house in which I live.

RelClause[SENT=?s] -> Pre RelClause[SENT=?s] | RelPro NP[NUM=?n, PERS=?p, SENT=?s2] VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] Pre

need to do: He told me about the summer he spent in Italy, which was the best time of his life. --- The movie we watched last night was very interesting.

Relative clause without relative pronoun

Nouns with number and person agreement

N[NUM=sg, PERS=3, SENT=neutral] -> {Noun_s_str} | 'it' | 'she' | 'he' | 'story'

N[NUM=pl, PERS=3, SENT=neutral] -> {Noun_p_str} |
'they'|"boys"
N[NUM=sg, PERS=2, SENT=neutral] -> 'you'

VERB TENSE
PRESENT TENSE
Third person
V[ROOT=?t, SUBCAT=?s, VFORM='pres', NUM=3, PERS=sg] ->
V[ROOT=?t, SUBCAT=?s, VFORM='base', IRREG='PRES-'] 's'

Other agreement
V[ROOT=?t, SUBCAT=?s, VFORM='pres', NUM=?n, PERS=?p]
-> V[ROOT=?t, SUBCAT=?s, VFORM='base', IRREG='PRES-']

Present Participle
V[ROOT=?t, SUBCAT=?s, VFORM='ing'] -> V[ROOT=?t,
SUBCAT=?s, VFORM='base'] 'ing'

Plural Nouns
N[ROOT=?t, AGR='3p'] -> N[ROOT=?t, AGR='3s',
IRREG='PL-'] 's'

VERB SUBCAT
VP[NUM=?n, PERS=?p, SENT=?s2, SUBCAT='_np_pp'] -> V[NUM=?
n, PERS=?p, SENT=?s] NP[NUM=?nn, PERS=?pp, SENT=?s2] PP | V[NUM=?n,
PERS=?p, SENT=?s] NP[NUM=?nn, PERS=?pp, SENT=?s2] PP ADVP | V[NUM=?n,
PERS=?p, SENT=?s] ADVP NP[NUM=?nn, PERS=?pp, SENT=?s2] PP
VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT='_pp'] -> V[NUM=?n,
PERS=?p, SENT=?s] PP | V[NUM=?n, PERS=?p, SENT=?s2] PP ADVP[SENT=?s] |
V[NUM=?n, PERS=?p, SENT=?s] ADVP[SENT=?s] PP
VP[NUM=?n, PERS=?p, SENT=?s2, SUBCAT='_adjp'] -> V[NUM=?
n, PERS=?p, SENT=?s] ADJP[SENT=?s2] | V[NUM=?n, PERS=?p, SENT=?s]
ADJP[SENT=?s2] ADVP | V[NUM=?n, PERS=?p, SENT=?s] ADVP ADJP[SENT=?
s2]
VP[NUM=?n, PERS=?p, SENT=?s2, SUBCAT='_np_adjp'] ->
V[NUM=?n, PERS=?p, SENT=?s] NP[NUM=?nn, PERS=?pp, SENT=?s]
ADJP[SENT=?s2] | V[NUM=?nn, PERS=?pp, SENT=?s] NP[NUM=?nn, PERS=?pp,
SENT=?s] ADJP[SENT=?s2] ADVP | V[NUM=?nn, PERS=?pp, SENT=?s] ADVP
NP[NUM=?nn, PERS=?pp, SENT=?s] ADJP[SENT=?s2]
VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT='_s:that'] -> V[NUM=?
n, PERS=?p, SENT=?s2] S_THAT[SENT=?s] | V[NUM=?n, PERS=?p, SENT=?s2]
S_THAT[SENT=?s] ADVP | V[NUM=?n, PERS=?p, SENT=?s2] ADVP[SENT=?s]
S_THAT[SENT=?s]
VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT='none'] -> V[NUM=?n,
PERS=?p, SENT=?s] | V[NUM=?n, PERS=?p, SENT=?s2] ADVP [SENT=?s]
VP[NUM=?n, PERS=?p, SENT=?s2, SUBCAT='_np'] -> V[NUM=?n,
PERS=?p, SENT=?s] NP[NUM=?nn, PERS=?pp, SENT=?s2] | V[NUM=?n, PERS=?p,
SENT=?s] NP[NUM=?nn, PERS=?pp, SENT=?s2] ADVP[SENT=?s] | V[NUM=?n,
PERS=?p, SENT=?s] ADVP NP[NUM=?nn, PERS=?pp, SENT=?s2]
VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT='_vp:inf'] -> V[NUM=?
n, PERS=?p, SENT=?s] VP_INF | V[NUM=?n, PERS=?p, SENT=?s] VP_INF ADVP
VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT='_np_vp:inf'] ->

V[NUM=?n, PERS=?p, SENT=?s] NP[NUM=?nn, PERS=?pp, SENT=?s2]
VP_INF[NUM=?n2, PERS=?p2, SENT=?s, SUBCAT=?c2] | V[NUM=?n, PERS=?p,
SENT=?s] NP[NUM=?nn, PERS=?pp, SENT=?s2] VP_INF[NUM=?n2, PERS=?p2,
SENT=?s, SUBCAT=?c2] ADVP

VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT='_np_vp:ing'] ->
V[NUM=?n, PERS=?p, SENT=?s] NP[NUM=?n, PERS=?p, SENT=?s2]
VP_ING[NUM=?n, PERS=?p, SENT=?s2] | V[NUM=?n, PERS=?p, SENT=?s]
NP[NUM=?nn, PERS=?pp, SENT=?s2] VP_ING[NUM=?n, PERS=?p, SENT=?s2]
ADVP

VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT='_np_vp:base'] ->
V[NUM=?n, PERS=?p, SENT=?s1] NP[NUM=?nn, PERS=?pp, SENT=?s]
VP_BASE[NUM=?n2, PERS=?p2, SENT=?s2] | V[NUM=?n, PERS=?p, SENT=?s1]
NP[NUM=?nn, PERS=?pp, SENT=?s] VP_BASE[NUM=?n2, PERS=?p2, SENT=?s2]
ADVP

VP[NUM=?n, PERS=?p,
SENT='negative', SUBCAT='_to_be_negation'] -> HelperNegation[NUM=?n,
PERS=?p, SENT='negative'] NP[NUM=?nn, PERS=?pp, SENT=?s]

VP[NUM=?n, PERS=?p,
SENT='positive', SUBCAT='_to_be_negation'] -> HelperNegation[NUM=?n,
PERS=?p, SENT='negative'] NP[NUM=?nn, PERS=?pp, SENT='negative']

#Verb Negation

VP[NUM=?n, PERS=?p, SENT='positive', SUBCAT=?c] ->
VerbNegation[NUM=?n, PERS=?p] VP[NUM=?n2, PERS=?p2,
SENT='negative', SUBCAT=?c]

VP[NUM=?n, PERS=?p, SENT='negative', SUBCAT=?c] ->
VerbNegation[NUM=?n, PERS=?p] VP[NUM=?n2, PERS=?p2,
SENT='positive', SUBCAT=?c]

VP[NUM=?n, PERS=?p, SENT='negative', SUBCAT=?c] ->
VerbNegation[NUM=?n, PERS=?p] VP[NUM=?n2, PERS=?p2,
SENT='neutral', SUBCAT=?c]

Modal

VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] -> Modal
VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] | Modal ADVP[SENT=?s1]
VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c]

Passive

VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] -> Cop
VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c]

VP_INF[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] -> TO
VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c]
VP_ING[NUM=?n, PERS=?p, SENT=?s2] -> V[+ing] NP[NUM=?n,
PERS=?p, SENT=?s2]
VP_BASE[NUM=?n, PERS=?p, SENT=?s2] -> V[NUM=?n, PERS=?p,
SENT=?s] NP[NUM=?n, PERS=?p, SENT=?s2]

Use of CC in VP

VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] -> VP[NUM=?n,

PERS=?p, SENT=?s, SUBCAT=?c] CC[+and] VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] | VP[NUM=?n, PERS=?p, SENT="neutral", SUBCAT=?c] CC[+and] VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] | VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] CC[+and] VP[NUM=?n, PERS=?p, SENT="neutral", SUBCAT=?c]

VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] -> VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] CC[+or] VP[NUM=?n, PERS=?p, SENT=?s1, SUBCAT=?c]

VP[NUM=?n, PERS=?p, SENT="neutral", SUBCAT=?c] -> VP[NUM=?n, PERS=?p, SENT="positive", SUBCAT=?c] CC[+or] VP[NUM=?n, PERS=?p, SENT="negative", SUBCAT=?c] | VP[NUM=?n, PERS=?p, SENT="negative", SUBCAT=?c] CC[+or] VP[NUM=?n, PERS=?p, SENT="positive", SUBCAT=?c]

VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] -> VP[NUM=?n, PERS=?p, SENT=?s2, SUBCAT=?c] CC[+but] VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] | VP[NUM=?n, PERS=?p, SENT=?s2, SUBCAT=?c] COMMA CC[+but] VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c]

VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] -> VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] COMMA VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c] | COMMA VP[NUM=?n, PERS=?p, SENT=?s, SUBCAT=?c]

Verbs with number and person agreement

V[NUM=sg, SENT='neutral'] -> 'was' | 'gave' | 'has' | 'is'

V[NUM=pl, SENT='neutral'] -> 'were' | Cop[NUM=pl, PERS=?

p]

V[NUM=?n, PERS=?p, SENT='positive'] -> {Verb_str_pos}

V[NUM=?n, PERS=?p, SENT='negative'] -> {Verb_str_neg}

V[NUM=sg, PERS=3, SENT='neutral'] -> {Verb_third_str}

V[NUM=?n, PERS=?p, SENT='neutral'] ->

{Verb_str_nut}|"drink"

VerbNegation[NUM=?n, PERS=?p] -> Helper[NUM=?n, PERS=?p]

Negation

This is only for TOBE verb

HelperNegation[NUM=?n, PERS=?p, SENT='negative'] ->

Helper[NUM=?n, PERS=?p] Negation

Verb Phrase (VP) structure

VP[NUM=?n, PERS=?p, SENT=?s] -> V[NUM=?n, PERS=?p, SENT=?s]

VP[NUM=?n, PERS=?p, SENT=?s2] -> V[NUM=?n, PERS=?p, SENT=?s1] NP[NUM=?n, SENT=?s2]

VP[NUM=?n, PERS=?p, SENT=?s2] -> V[NUM=?n, PERS=?p, SENT=?s1] Adj[SENT=?s2]

VP[NUM=?n, PERS=?p, SENT=?s2] -> V[NUM=?n, PERS=?p, SENT=?s1] P NP[NUM=?n, SENT=?s2]

VP[NUM=?n, PERS=?p, SENT=?s] -> Modal V[NUM=?n, PERS=?p, SENT=?s] | Modal V[NUM=?n, PERS=?p, SENT=?s] NP

VP[NUM=?n, PERS=?p, SENT=?s2] -> V[NUM=?n, PERS=?p,

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SENT=?s1] NP Adj[SENT=?s2]
    # VP[NUM=?n, PERS=?p] -> Cop[NUM=?n, PERS=?p] NP

    # Determiners
    Det[NUM=sg] -> 'the' | 'this' | 'that' | 'a' |
'an' | 'there' | 'such' | 'all'
    Det[NUM=pl] -> 'the' | 'these' |
'those' | 'there' | 'such' | 'all'

    Negation -> 'not' | "n't"
    Helper[NUM=sg, PERS=3] -> 'does' | 'is' |
'was' | 'has' | 'may' | 'can' | 'would'
    Helper[NUM=pl, PERS=?p] -> 'do' | 'are' |
'were' | 'have' | 'may' | 'can' | 'would'

    # Copula verbs with number and person agreement for "to
be"
    Cop[NUM=sg, PERS=3, SENT='neutral'] -> 'is' | 'was'
    Cop[NUM=pl, PERS=?p, SENT='neutral'] -> 'are' | 'were'
    Cop[NUM=sg, PER=1, SENT='neutral'] -> 'am' | 'was'

    # Modals
    Modal -> {Modal_verb_str}

    # Condition
    # Condition -> CompoundAdjective

    # Adjective Phrases with sentiment
    ADJP[SENT=?s] -> Adj[SENT=?s] CC[+and] Adj[SENT=?s] |
Adj[SENT=?s] CC[+and] ADJP[SENT=?s]
    ADJP[SENT=?s] -> Adj[SENT=?s] COMMA ADJP[SENT=?s] |
Adj[SENT=?s]
    ADJP[SENT=?s] -> Adj CC[+but] Adj[SENT=?s] | Adj CC[+but]
ADJP[SENT=?s]
    ADJP[SENT=?s] -> Adj COMMA CC[+but] Adj[SENT=?s] | Adj
COMMA CC[+but] ADJP[SENT=?s]
    ADJP[SENT=?s] -> Adj[SENT=?s] CC[+or] Adj[SENT=?s]
    ADJP[SENT=neutral] -> Adj[SENT=positive] CC[+or]
Adj[SENT=negative] | Adj[SENT=negative] CC[+or] Adj[SENT=positive]

    # Example: Highly intelligent
    ADJP[SENT=?s] -> ADVP[SENT=?s2] Adj[SENT=?s]

    # Adjective with Negation
    ADJP[SENT=?s] -> Adj[SENT=?s] CC[+but] Negation Adj |
ADJP[SENT=?s] CC[+but] Negation Adj | Adj[SENT=?s] CC[+but] Negation
ADJP

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        ADJP[SENT=?s] -> Adj[SENT=?s] CC[+and] Negation Adj|
ADJP[SENT=?s] CC[+and] Negation Adj|Adj[SENT=?s] CC[+and] Negation
ADJP

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        ADJP[SENT=?s] -> Adj[SENT=?s] CC[+or] Negation Adj|
ADJP[SENT=?s] CC[+or] Negation Adj|Adj[SENT=?s] CC[+or] Negation
ADJP

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        Adj[SENT='positive'] -> {Adj_str_pos}|'compelling' |
{self.sentiment_analyzer.formatted_positive_words} | 'compelling'
        Adj[SENT='negative'] -> {Adj_str_neg}|
{self.sentiment_analyzer.formatted_negative_words}
|'low'|'silly'|"dull" | "hazard" | "mess"|"rancid"
        Adj[SENT='neutral'] -> {Adj_str}|"long"

```

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        # Adverbial Phrase With Sentiment
        ADVP[SENT = ?s] -> adv[SENT = ?s2] adv[ SENT = ?s ]|
adv[SENT = ?s]
        ADVP[SENT = ?s] -> adv[SENT = ?s] CC[+and] adv[SENT = ?
s ]|adv[SENT = ?s ] CC[+or] adv[SENT = ?s]
        ADVP[SENT='neutral'] -> adv[SENT = 'negative'] CC[+or]
adv[SENT = 'positive']|adv[SENT = 'positive'] CC[+or] adv[SENT =
'negative']
        ADVP[SENT=?s2] -> adv[SENT = ?s1] CC[+but] adv[SENT = ?
s2]

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adv[+negation] -> 'not' | "n't"

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adv[SENT = 'neutral' ] ->{Adverb_str}
adv[SENT = 'negative'] -> {Adverb_neg_str}
adv[SENT = 'positive'] -> {Adverb_pos_str}

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        # Relative Pronouns
        RelPro -> 'who' | 'whom' | 'that' | 'which' | 'where' |
'when'|{WhPron_str}

```

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        # Preposition Phrase
        PP -> Pre NP[NUM=?n, PERS=?p, SENT=?s] | TO NP[NUM=?n,
PERS=?p, SENT=?s]| LOC NP | MOT NP
        # PP_TO -> TO NP
        # PP_LOC -> LOC NP
        # PP_MOT -> MOT NP

```

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        TO -> 'to'
        LOC -> 'at' | 'in'
        MOT -> 'to' | 'into'
        ING -> 'ing'
        OF -> 'of'
        Pre -> {Pre_str}

```

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        # Coordinating Conjunction

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CC[+and, -but, -or] -> 'and'
CC[-and, +but, -or] -> 'but' | 'however'
CC[-and, -but, +or] -> 'or' | 'Or'
CC[-and, -but, -or] -> 'because'
# CC -> {CoorCon_str}

# Punctuation
COMMA -> ','

# Possessive Pronoun
PosPro -> "my"|"your"|"his"|"her"|"its"|"our"|"their"

# Person Pronoun
PRP -> {PersonPronoun_str}

# Proper Noun
NNP ->{Propn_str}

Cardinal[NUM=?n] ->{CardinalNumber_str}
Cardinal[NUM=1] -> "one"
```