

The inventory of linguistic relations used in the Copenhagen Dependency Treebanks

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Abstract

This manual describes the inventory of linguistic relations used in the Copenhagen Dependency Treebanks, a set of parallel treebanks for Danish, English, German, Italian, and Spanish annotated with respect to syntax, morphology, discourse, coreference, and translational equivalence. The manual is generated automatically from the CDT project's online relation spreadsheet.¹

¹<http://spreadsheets.google.com/ccc?key=0ArjTKYTQS1lWcnNUWGGJrX3lZTkxDc3QxYmlqWlRXQ1E&hl=en>

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Chapter 1

Introduction

This manual describes the relations used in the Copenhagen Dependency Treebanks. The relations are ordered in a hierarchy, where each relation may have zero or more immediate super types, and zero or more immediate subtypes. The relations are presented in detail in the following chapters, grouped by linguistic level and general relation type. Every time a relation is introduced, its name is written in the left margin, with an indication of its immediate super types and the row in the online CDT spreadsheet in which the relation was defined. An example is shown below.

relation The notation in the left margin indicates that we now describe the relation **relation**;
isa **super** it has immediate super type **super** and is defined in row 12 in the spreadsheet. When
[12] describing a relation, we also lists its other properties, if relevant, including its:

- *long name*: we use short names in the annotation for brevity, but long names are sometimes more descriptive, so we provide these as an alias for the short relation name;
- *deprecated names*: when renaming relations, the old name is listed as a deprecated name for backwards compatibility, but it should be avoided in future annotation;
- *immediate subtypes*: the relation names that have been specified as the immediate subtypes of the relation;
- *related types*: lists the relations that are closely related to this relation, in some way or another, and which you might want to consult for clarification or additional information;
- *examples*: small annotated text examples that illustrate how the relation is used;

In PDF versions of this document, relation names are clickable so that you can navigate through the relation hierarchy by clicking on the relation names.

Chapter 2

Top-level relations: ANY

ANY: directed relation
DIM: dimension
 DIM:LEVEL: dimension: linguistic level
 DIM:TYPE: dimension: relation type
 +: segment concatenation
 IDIOM: idiomatic relation
 PRIM: primary dependency relation
 ADJ: adjunct relation
 COMP: complement relation
 SEC: secondary dependency relation

Figure 2.1: The relations matching ANY-SYNTAX-MORPHOLOGY-DISCOURSE-ANAPHORA-SEMANTICS-ALIGNMENT-RULE.

ANY *Directed relation.* An arbitrary directed relation between two tokens. The arrow
[4] goes from parent (head, governor, nucleus) to child (dependent, satellite).
Subtypes: DIM RULE.

DIM *Dimension* (long: DIMENSION). A dimension in the hierarchy. Eg, linguistic level and
isa ANY relation type.
[5] Subtypes: DIM:LEVEL DIM:TYPE.

DIM:LEVEL *Dimension: linguistic level.* Dimension specifying the linguistic level of the relation.
isa DIM The classification of relations into linguistic levels is slightly arbitrary (there will be
[6] borderline cases where there is no single natural classification), and does not carry
any deep linguistic significance. It is more a question about linguistic convention and
research tradition than about any deep underlying difference between relations.
Subtypes: ALIGN ANA DISC MORPH SEM SYN.

DIM:TYPE *Dimension: relation type.* Dimension specifying the type of the relation.
isa DIM Subtypes: + IDIOM PRIM SEC.

[7] **+** *Segment concatenation* (long: CONCATENATION). A concatenation relation between
isa DIM:TYPE two adjacent segments. This relation is used if an indecomposable lexeme has mis-
[30] takenly been segmented into two segment. Lexicalized complex expressions are
instead marked as IDIOM relations with the "#" suffix.

- IDIOM** *Idiomatic relation*. Idiomatic relation. Ie, relations between tokens in a complex lexicalized expression.
 isa DIM:TYPE [31] Subtypes: PRIM "#".
- PRIM** *Primary dependency relation* (long: PRIMARY). A primary dependency relation. Ie, a relation which specifies the primary head (the governor) of a token (the dependent).
 isa DIM:TYPE [24] Subtypes: ADJ COMP.
- ADJ** *Adjunct relation* (long: ADJUNCT). A primary adjunct relation.
 isa PRIM [26] Subtypes: DISCFUNC DISCSEM SYNADJ.
- COMP** *Complement relation* (long: COMPLEMENT). A primary complement relation.
 isa PRIM [25] Subtypes: "@" adverb SYNCOMP.
- SEC** *Secondary dependency relation* (long: SECONDARY). A secondary dependency relation. Eg, the secondary dependency relation in filler-gap constructions such as relatives without a relative pronoun (the relativized noun is a secondary dependent of the relative verb), raising and control constructions, and elliptic coordinations.
 isa DIM:TYPE [27] Subtypes: "[" PRIM "]" "{" SEM "}".

Chapter 3

Syntactic relations: SYNTAX

SYN: syntax level

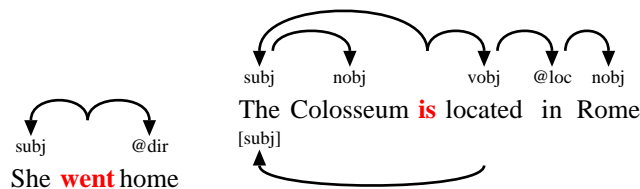
Figure 3.1: The relations matching SYNTAX-SYNCOMP-SYNADJ.

SYN *Syntax level* (long: SYNTAX). A relation at the syntactic level. Ie, a relation between segments within a sentence, but between different lexical units.
isa DIM:LEVEL
[16] Subtypes: SYNADJ SYNCOMP.

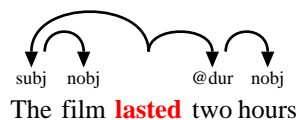
3.1 Complement relations: SYNCOMP

SYNCOMP *Syntactic complement.*
isa COMP SYN
[69] Subtypes: @space @time aobj avobj dobj fobj gobj iobj nobj numa numm part pobj possd possr
pred qobj robj subj vobj.

@space *Valency-bound location/direction adverbial.*
isa SYNCOMP
[78] Related types: dir loc.



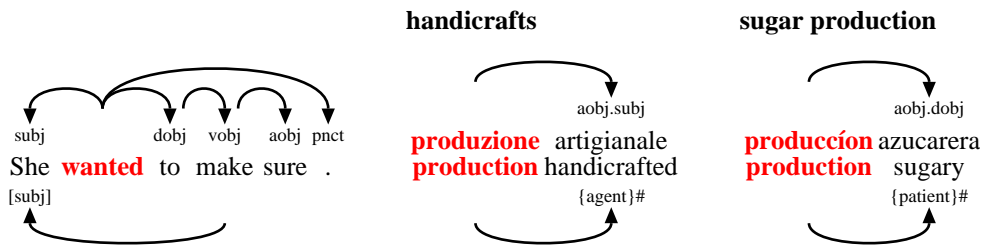
@time *Valency-bound time adverbial.* A valency bound time expression. Formerly analyzed as locative object, but we have decided to provide a general mechanism (@) for converting adverbial relations into valency-bound relations.
isa SYNCOMP
[94] Related types: cont dur ext hab prec succ.



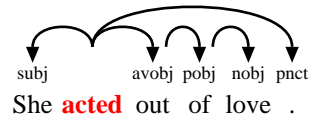
SYNCOMP: syntactic complement
 @space: valency-bound location/direction adverbial
 @time: valency-bound time adverbial
 aobj: adjectival object
 avobj: adverbial object
 dobj: direct object
 fobj: filler object
 gobj: genitive object
 iobj: indirect object
 nobj: nominal object
 numa: additive numeral complement
 numm: multiplicative numeral complement
 part: verbal particle
 pobj: prepositional object
 possd: possessed complement
 possr: possessor complement
 pred: predicative
 predo: object predicative
 preds: subject predicative
 qobj: quotational object
 robj: reflexive object
 subj: subject
 expl: expletive subject
 vobj: verbal object

Figure 3.2: The relations matching SYNCOMP.

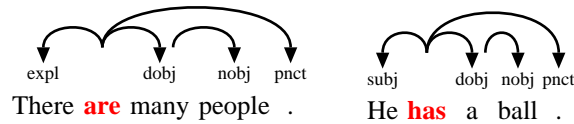
aobj *Adjectival object.* If the adverbial object is part of a NP which nucleus is de-
 isa SYNCOMP verbal, the following annotation possibilities are available: aobj.subj{SEMROLE}
 [85] aobj.dobj{SEMROLE} aobj.pobj{SEMROLE} aobj.iobj{SEMROLE} The relevant
 semantic roles in this context are agent, patient, recipient, experient, location.
 Related types: avobj.



avobj *Adverbial object.*
 isa SYNCOMP Related types: aobj part.
 [86]



dobj *Direct object.*
 isa SYNCOMP Related types: iobj robj.
 [74]

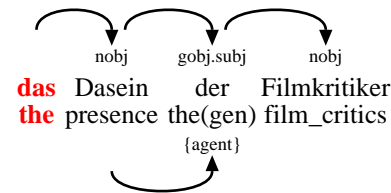


fobj *Filler object.* NO LONGER IN USE; see gapping constructions.
 isa SYNCOMP Related types: GAP.
 [87]

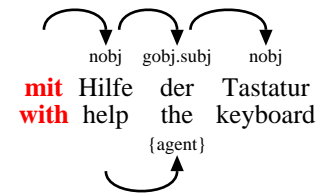
N/A

gobj *Genitive object.* If the genitive object is part of a NP which nucleus is deverbal, the following annotation possibilities are available: gobj.subj{SEMROLE} gobj.dobj{SEMROLE} gobj.pobj{SEMROLE} gobj.iobj{SEMROLE} The relevant semantic roles in this context are agent, patient, recipient, experient, location.
 Related types: SEMROLE attrg.

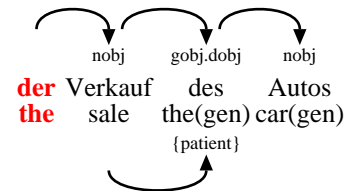
the presence of film critics



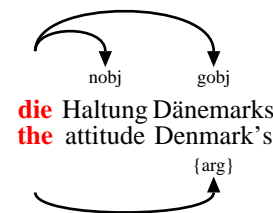
with help from the keyboard



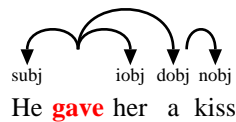
the sale of the car



Denmark's attitude



iobj *Indirect object.*
 isa SYNCOMP Related types: dobj.
 [77]



nobj *Nominal object.* If the nominal object is part of a NP which nucleus is deverbal, the following annotation possibilities are available: nobj.subj{SEMROLE} nobj.dobj{SEMROLE} nobj.pobj{SEMROLE} nobj.iobj{SEMROLE} The relevant semantic roles in this context are agent, patient, recipient, experient, location.
 [84]

Diagram illustrating the extraction of semantic roles from a sentence using a dependency parser. The sentence is: "De meldte sig ind i partiet . shark attack the car navigator keyword".

The diagram shows the following dependencies and semantic roles extracted:

- Dependency 1:** "De" (subj) to "meldte" (sig). Semantic role: **nobj** (nobj) to "the car".
- Dependency 2:** "meldte" (sig) to "sig" (part). Semantic role: **indicator** (indicator) to "persorsi tracks".
- Dependency 3:** "sig" (part) to "ind" (part). Semantic role: **indicator** (indicator) to "persorsi tracks".
- Dependency 4:** "ind" (part) to "i" (pobj). Semantic role: **indicator** (indicator) to "persorsi tracks".
- Dependency 5:** "i" (pobj) to "partiet" (pobj). Semantic role: **indicator** (indicator) to "persorsi tracks".
- Dependency 6:** "partiet" (pobj) to "." (punct). Semantic role: **indicator** (indicator) to "persorsi tracks".
- Dependency 7:** "shark" (nobj) to "attack" (subj). Semantic role: **parola** (parola) to "chiave".
- Dependency 8:** "attack" (subj) to "the" (nobj). Semantic role: **word** (word) to "key".
- Dependency 9:** "the" (nobj) to "car" (punct). Semantic role: **word** (word) to "key".
- Dependency 10:** "navigator" (nobj) to "keyword" (punct). Semantic role: **word** (word) to "key".

numa

hundred two

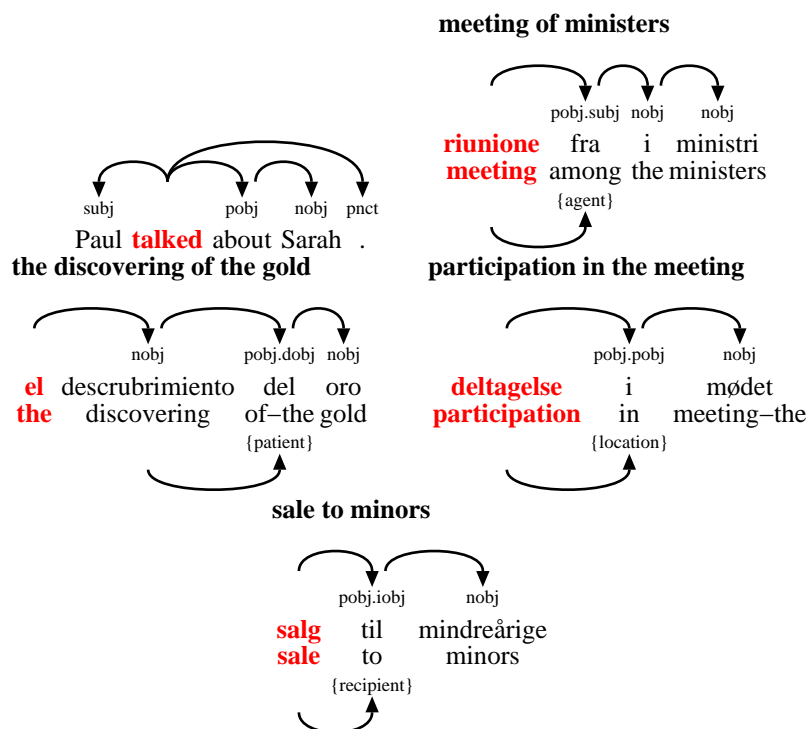
numm
two **hundred**

the fair two years ago

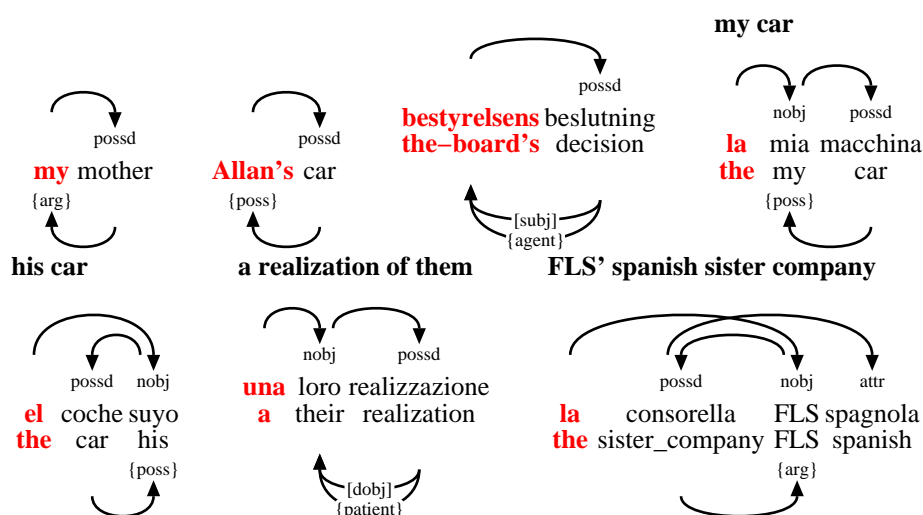
la fiera di due anni fa
the fair of two years ago

{time}

8



possd *Possessed complement.* The possessed complement in a possessive construction. Possession is understood in a syntactic sense as any construction with a clitic genitive marker, not necessarily as possession in a narrow semantic sense. A better name may be chosen for this relation in the future.
 Related types: "{" "}" \$PRIM SEMROLE poss possr.



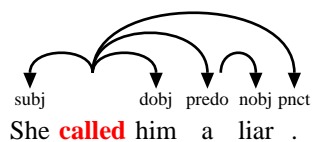
possr *Possessor complement.* NO LONGER IN USE
 The possessor complement in a possessive construction. Possession is understood in a syntactic sense as any construction with a clitic genitive marker, not necessarily as possession in a narrow semantic sense. A better name may be chosen for this relation in the future.
 Related types: poss possd.

N/A

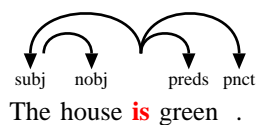
pred *Predicative.*
 isa SYNCOMP Subtypes: predo preds.
 [79] Related types: predo preds.

V->predicative, P->predicative

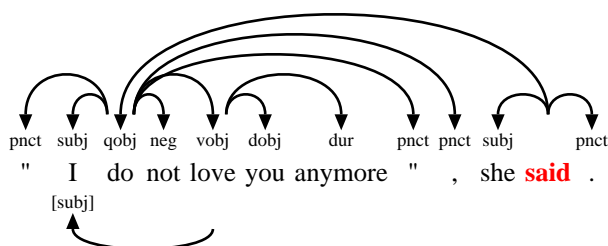
predo *Object predicative.*
 isa pred Related types: preds.
 [81]



preds *Subject predicative.*
 isa pred Related types: predo.
 [80]

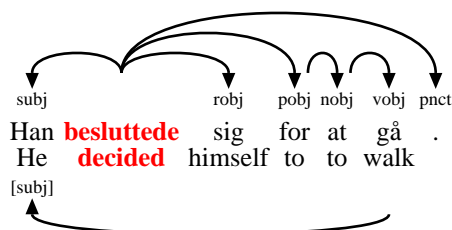


qobj *Quotational object.* A phrase or discourse segment functioning as directly quoted speech, typically by an attribution verb. Indirect speech is analyzed as "dobj" or "nobj".
 isa SYNCOMP [93] Related types: xpl.

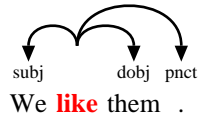


robj *Reflexive object.*
 isa SYNCOMP Related types: dobj.
 [83]

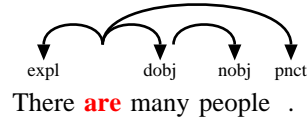
He decided to walk.



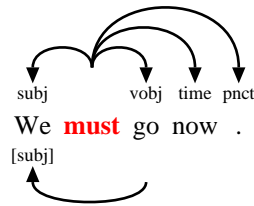
subj *Subject.* A subject relation.
 isa SYNCOMP Subtypes: expl.
 [72] Related types: expl.



expl *Expletive subject.*
 isa subj Related types: subj.
 [73]



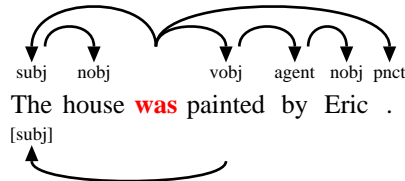
vobj *Verbal object.*
 isa SYNCOMP Related types: "[" "]" \$PRIM.
 [82]



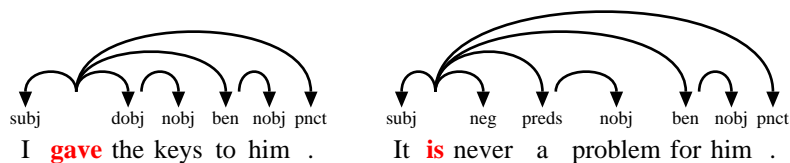
3.2 Adverbial adjunct relations: ADVERB

ADVERB *Adverbial* (deprecated other). V/N/P->adverbial
 isa SYNADJ Subtypes: agent ben cause comp conc concom cond cons degr exem man neg other prg source space
 [133] struct time.

agent *Agent adverbial.* The passivized agent in passives.
 isa ADVERB
 [171]



ben *Benefactive adverbial.* Free dative
 isa ADVERB Related types: pobj.
 [170]



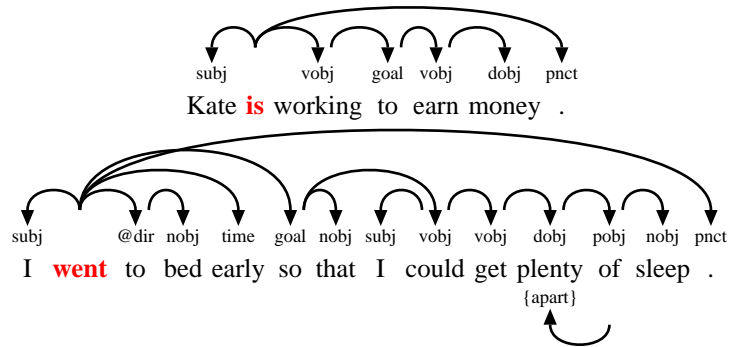
ADVERB: adverbial

- agent: agent adverbial
- ben: benefactive adverbial
- cause: causation adverbial
 - goal: goal adverbial
 - reas: reason adverbial
- comp: comparison adverbial
- conc: concession adverbial
- concom:
- cond: condition adverbial
- cons: consequence adverbial
- degr: degree adverbial
- exem: example adverbial
- man: manner adverbial
 - accom: companionship adverbial
 - inst: instrument adverbial
- neg: negation adverbial
- other: other adverbial
- prg: pragmatic adverbial
 - att: attitude adverbial
 - discmark: sentence-initial discourse marker
 - epi: epistemic adverbial
 - eval: evaluation adverbial
 - focal: focalizer adverbial
 - pcond: pragmatic condition adverbial
- source: source attribution adverbial
- space: space adverbial
 - dir: direction adverbial
 - loc: location adverbial
- struct: text-structuring or connective adverbial
 - add: additive adverbial
 - bg: background adverbial
 - contr: contrast adverbial
 - elab: elaboration adverbial
- time: time adverbial
 - cont: contemporaneity adverbial
 - dur: duration adverbial
 - ext: extent/frequency adverbial
 - hab: habituality adverb
 - prec: precedence adverbial
 - succ: succession adverbial

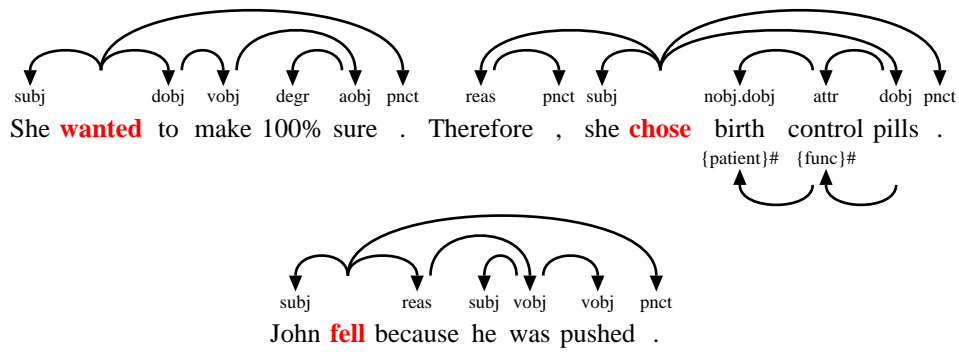
Figure 3.3: The relations matching ADVERB.

cause *Causation adverbial*. Causation adverbial. Describes why the event occurred.
 isa ADVERB Subtypes: goal reas.
 [159]

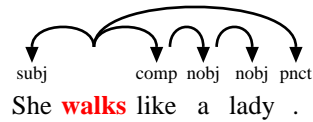
goal *Goal adverbial*. Describes the intended goal of the event/action.
 isa cause Related types: reas.
 [160]



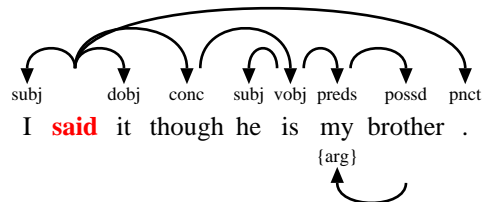
reas *Reason adverbial*. Describes the cause of the event/action.
 isa cause
 [161] Related types: goal.



comp *Comparison adverbial* (deprecated compare). Comparison
 isa ADVERB
 [165]

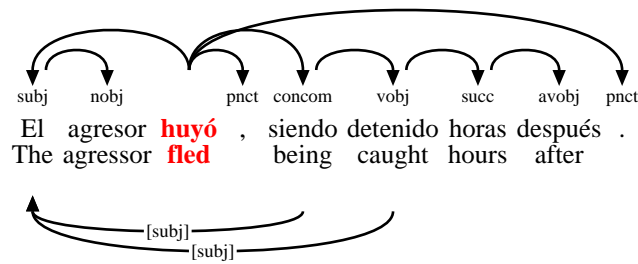


conc *Concession adverbial*. Describes the concession of the event/action.
 isa ADVERB
 [164]

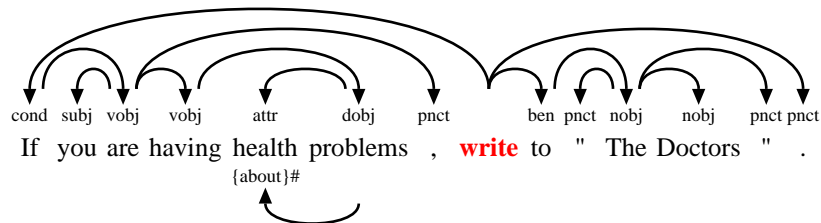


concom . Gerunds in Romance
 isa ADVERB
 [168] Related types: vobj.

The agressor fled and/but got caught hours later.

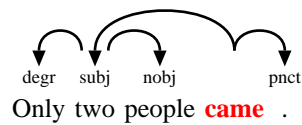


cond *Condition adverbial*. Describes the condition of the event/action.
 isa ADVERB Related types: pcond.
 [163]

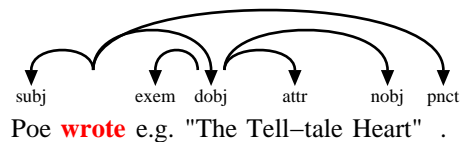


cons *Consequence adverbial*. Describes the consequence of the event/action.
 isa ADVERB Related types: xtop.
 [162]

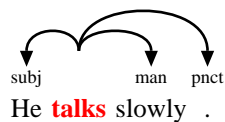
degr *Degree adverbial*. Modifies the object or verbal by degree
 isa ADVERB Related types: focal.
 [169]



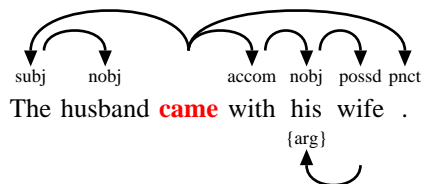
exem *Example adverbial* (deprecated ex). Exemplification; subordinated the object which is added to a list.
 isa ADVERB
 [167]



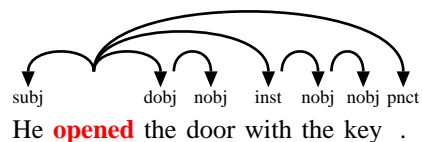
man *Manner adverbial*. The way things are done
 isa ADVERB Subtypes: accom inst.
 [156] Related types: fpredo.



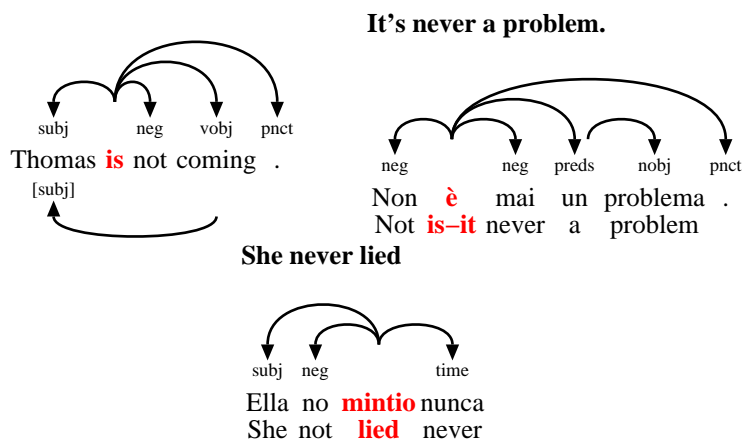
accom *Companionship adverbial* (deprecated *comp*). Companionship
 isa man
 [157] Related types: man.



inst *Instrument adverbial*. Instrument/means
 isa man
 [158] Related types: man.



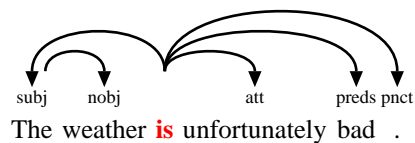
neg *Negation adverbial*. Negation of a verbal
 isa ADVERB
 [172]



other *Other adverbial*.
 isa ADVERB

prg *Pragmatic adverbial*. Sentence level.
 isa ADVERB
 [134] Subtypes: att discmark epi eval focal pcond.

att *Attitude adverbial*. Regarding attitude
 isa prg
 [138] Related types: epi eval.

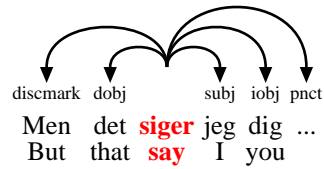


discmark *Sentence-initial discourse marker*. Discourse marker
 isa prg
 [140] Related types: coord.

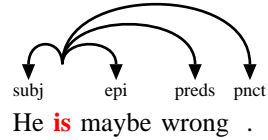
And I'm telling you...



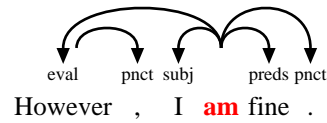
But I'm telling you...



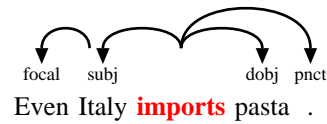
epi *Epistemic adverbial*. Regarding the level of truth in the expression
isa prg
[137] Related types: att eval.



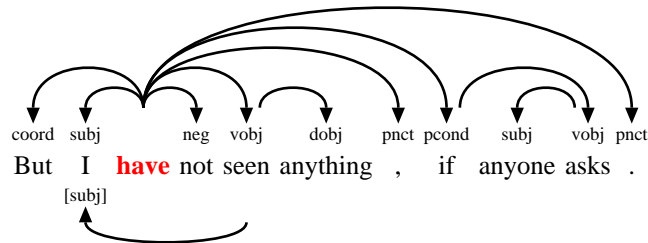
eval *Evaluation adverbial*. Evaluating adverbials
isa prg
[139] Related types: att epi.



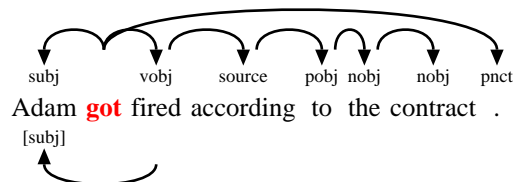
focal *Focalizer adverbial*. Focalization of a noun
isa prg
[135] Related types: degr.



pcond *Pragmatic condition adverbial* (deprecated prgcond). Pragmatic condition
isa prg
[136] Related types: cond.

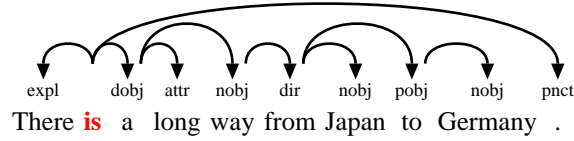


source *Source attribution adverbial*. Reference/source
isa ADVERB
[166]

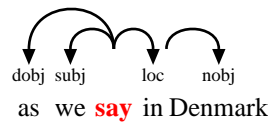


space *Space adverbial.* Space adverbials
 isa ADVERB Subtypes: dir loc.
 [153]

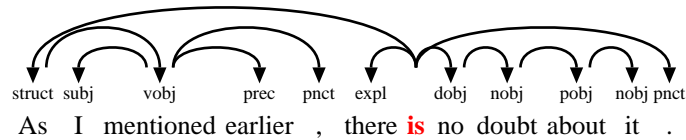
dir *Direction adverbial.* Movement from one place to another; direction
 isa space Related types: loc.
 [155]



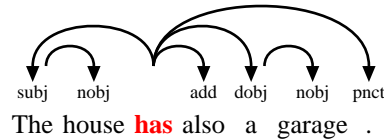
loc *Location adverbial.* Location
 isa space Related types: dir.
 [154]



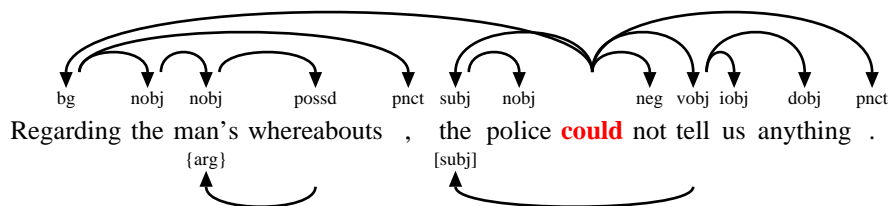
struct *Text-structuring or connective adverbial.* Connectives and text structuring adverbials
 isa ADVERB Subtypes: add bg contr elab.
 [141] Related types: bg contr.



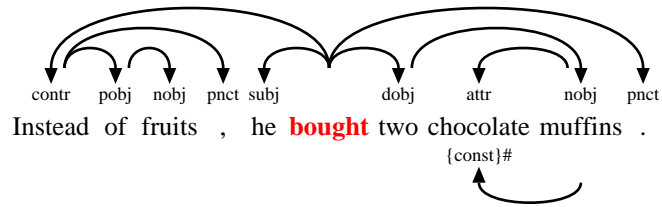
add *Additive adverbial.* Additive information
 isa struct
 [145]



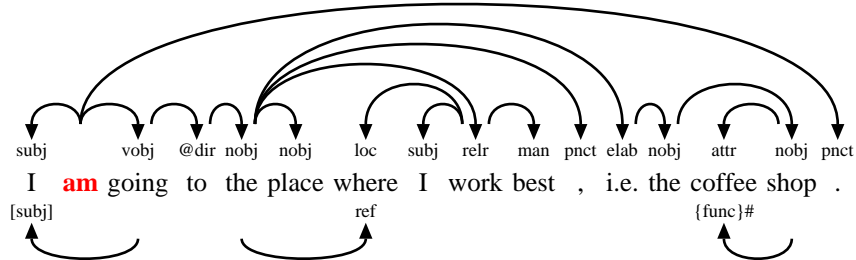
bg *Background adverbial.* Background information
 isa struct Related types: struct.
 [142]



contr *Contrast adverbial.* Opposition
 isa struct Related types: struct.
 [143]

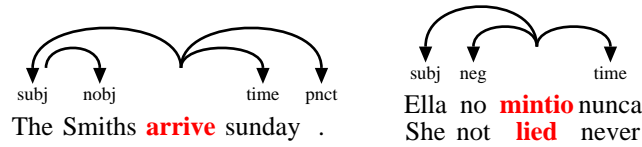


elab *Elaboration adverbial*. More detailed description
 isa struct
 [144]

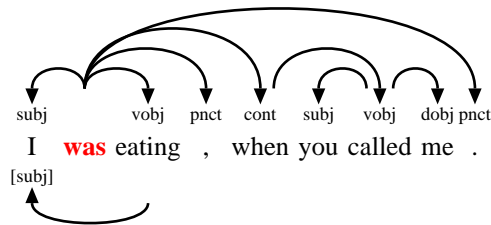


time *Time adverbial*. Time relating adverbials
 isa ADVERB Subtypes: cont dur ext hab prec succ.
 [146]

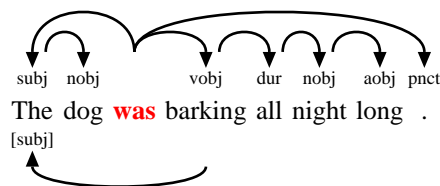
She never lied



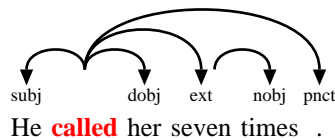
cont *Contemporaneity adverbial*. Contemporaneity
 isa time Related types: time.
 [150]



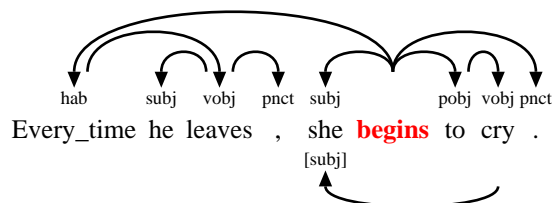
dur *Duration adverbial*. Duration
 isa time Related types: ext hab.
 [147]



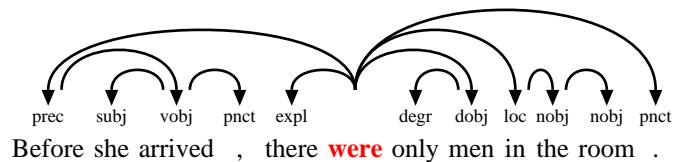
ext *Extent/frequency adverbial* (deprecated freq). Frequency; extention
 isa time
 [152] Related types: dur hab.



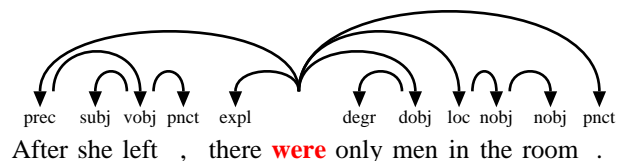
hab *Habituality adverb.* Habitual; repeated habit
 isa time
 [151] Related types: dur ext.



prec *Precedence adverbial.* Precedence
 isa time
 [148]



succ *Succession adverbial.* Succession
 isa time
 [149]



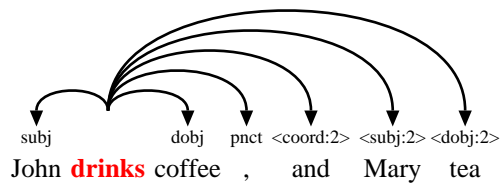
3.3 Other adjunct relations: SYNADJ

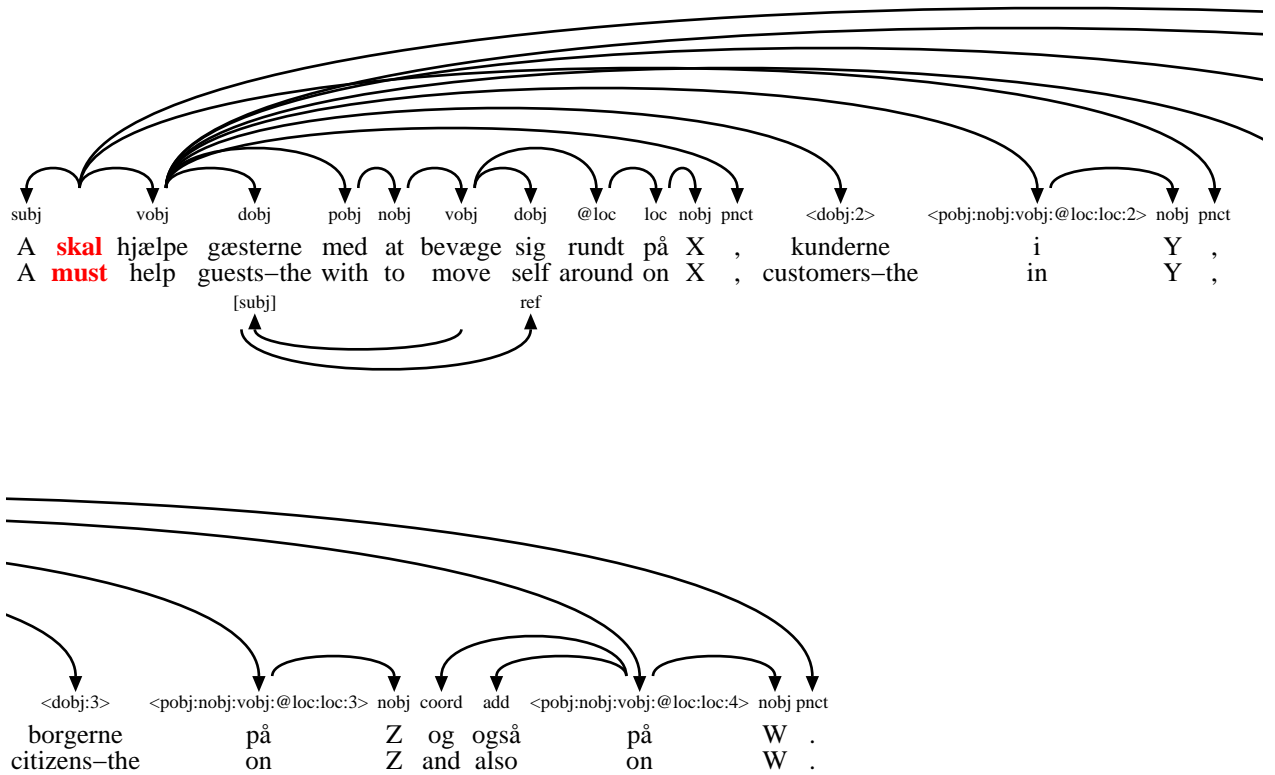
SYNADJ *Syntactic adjunct.*
 isa ADJ SYN
 [70] Subtypes: ADVERB GAP app attr attrg conj coord correl fpred name pnct rel voc xtop.

GAP *Gapping dependent* (long: GAPPING). A relation between a gapping dependent in a secondary conjunct and the head of the first conjunct. In gapping coordinations, the secondary conjuncts have an elided head, so the remaining material in the secondary conjuncts is instead analyzed as gapping dependents of the head of the first conjunct. In the final CDT annotation, the annotation of gapping dependents will eventually be used to insert a phonetically empty head for the gapped conjuncts, and the gapping dependents will be attached to this gapped head.
 [28] Subtypes: "<" PRIM ... ":" INTEGER ">".

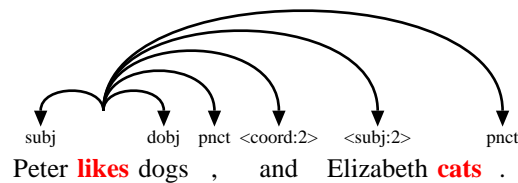
SYNADJ: syntactic adjunct
 GAP: gapping dependent
 "<" PRIM ... ":" INTEGER ">": gapping dependent
 app: apposition
 appa: parenthetic apposition (comma)
 xpl: explication
 appr: restrictive apposition (no comma)
 attr: attributive
 attrg: genitive attributive
 conj: conjunct relation
 coord: coordinator relation
 correl: correlative coordinator relation
 fpred: free predicative
 fpredo: free direct-object predicative
 fpreds: free subject predicative
 name: part of name
 namef: first name
 namel: last name
 title: person title
 pnct: punctuation
 rel: relative clause
 relelab: elaborating relative clause
 relpa: parenthetic relative clause
 reldr: restrictive relative clause
 voc: vocative
 xtop: external topic with resuming pronoun

Figure 3.4: The relations matching SYNADJ-ADVERB.



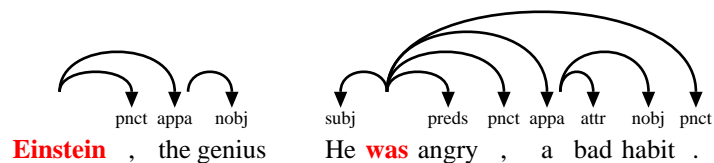


"<" PRIM ... ":" Gapping dependent. First conjunct->gapping dependent
 INTEGER ">"
 isa GAP RULE
 [356]

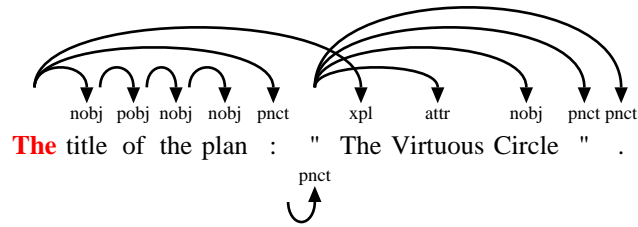


app *Apposition.*
 isa SYNADJ Subtypes: appa appr.
 [108] Related types: appa appr.

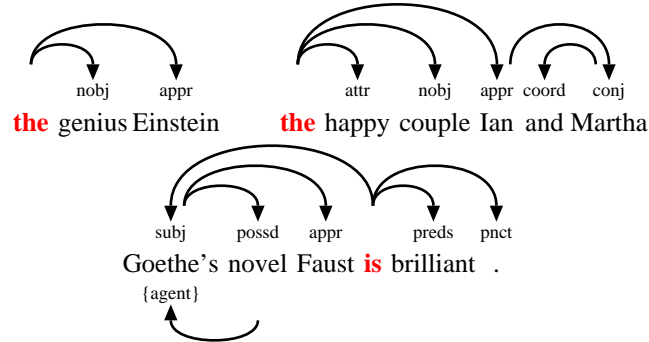
appa *Parenthetic apposition (comma).*
 isa app Subtypes: xpl.
 [109] Related types: appr xpl.



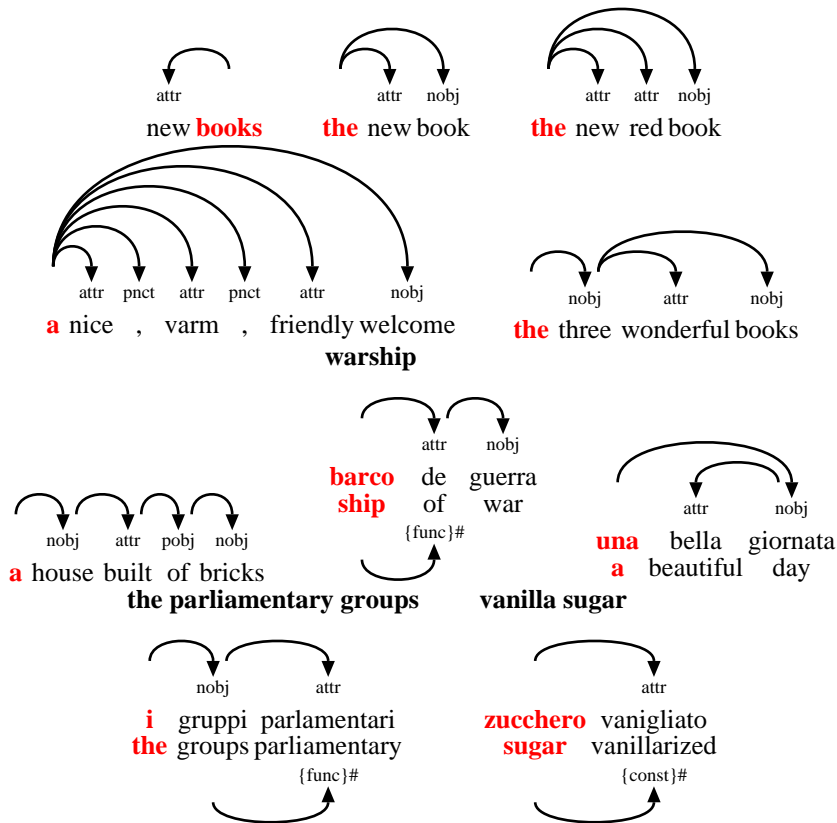
xpl *Explication.* Explication of an NP or VP.
 isa appa Related types: qobj.
 [122]



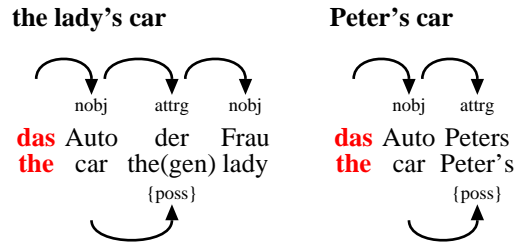
appr *Restrictive apposition (no comma).*
 isa app Related types: appa.
 [110]



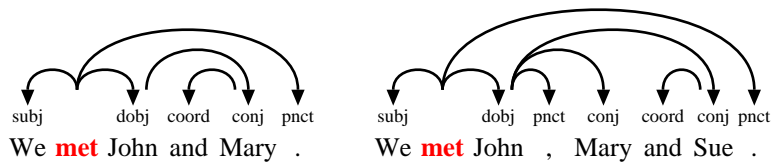
attr *Attributive* (deprecated attrd attrr). In Germanic languages, adjectives modify the determiner; in Romance languages, adjectives modify the noun even if there is a determiner
 isa SYNADJ [106]
 Related types: SEMROLE attrg pobj.



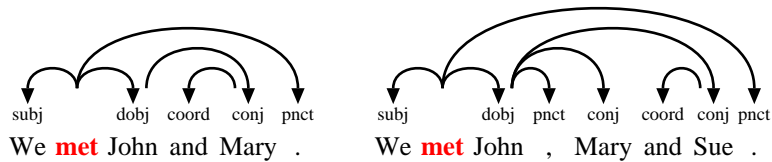
attrg *Genitive attributive.*
 isa SYNADJ Related types: SEMROLE gobj.
 [107]



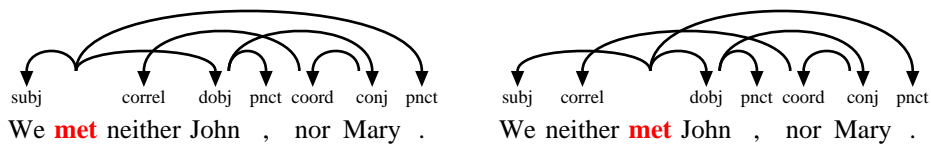
conj *Conjunct relation.*
 isa SYNADJ Related types: coord correl.
 [98]



coord *Coordinator relation.* A dependency relation between a coordinating conjunction and a secondary conjunct. The coordinator is analyzed as a dependent of the secondary conjunct. Secondary conjuncts are in turn analyzed as "conj"-dependents of the first conjunct.
 isa SYNADJ [99]
 Related types: conj correl discmark.



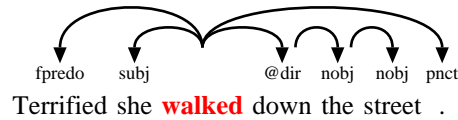
correl *Correlative coordinator relation.*
 isa SYNADJ Related types: conj coord.
 [100]



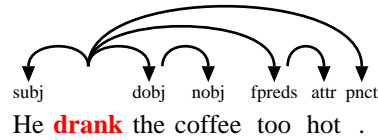
fpred *Free predicative.*
 isa SYNADJ Subtypes: fpredo fpreds.
 [103] Related types: fpredo fpreds.

V→free predicative

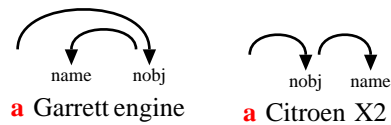
fpredo *Free direct-object predicative.*
 isa fpred Related types: fpreds man.
 [105]



fpreds *Free subject predicative.*
 isa fpred Related types: fpredo.
 [104]



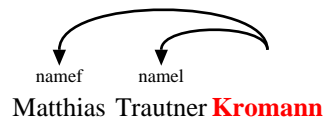
name *Part of name.* Part of a name.
 isa SYNADJ Subtypes: namef name1 title.
 [116]



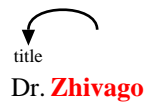
namef *First name.* A first name.
 isa name Related types: name1 title.
 [117]



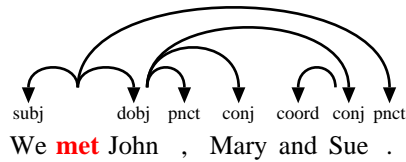
name1 *Last name.* A second last name
 isa name Related types: namef title.
 [118]



title *Person title.* A title in a name. If the title is determined by an article, eg. the director Smith, the title must be annotated as "nobj" and the name as "appr".
 isa name Related types: namef name1.
 [119]



pnct *Punctuation.*
 isa SYNADJ
 [101]



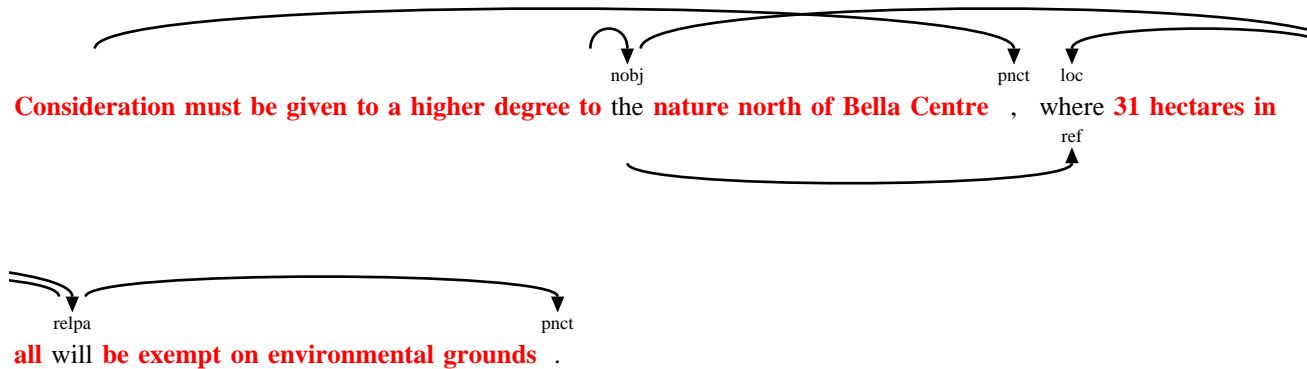
rel *Relative clause.*
 isa SYNADJ Subtypes: relelab relpa relr.
 [111] Related types: relelab relpa relr.

N->V, V->V

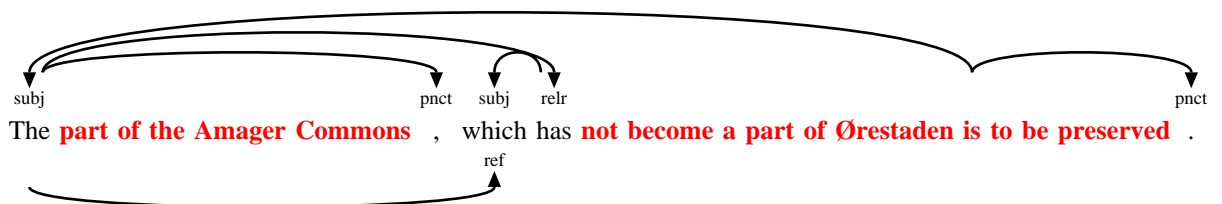
relelab *Elaborating relative clause.* Ledsætning med sætningsantecedent i hovedsætning; da:
 isa rel hvilket, it: il che, cosa che
 [114] Related types: relpa relr.

V->V

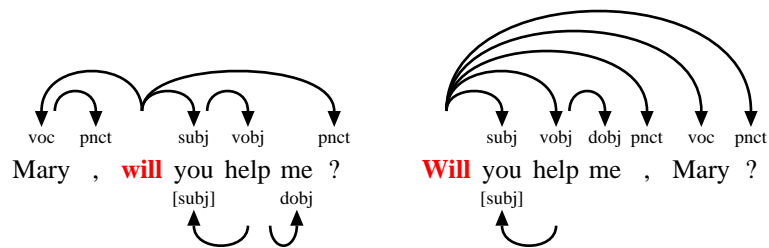
relpa *Parenthetical relative clause.*
 isa rel Related types: relelab relr.
 [113]



relr *Restrictive relative clause.*
 isa rel Related types: relelab relpa.
 [112]

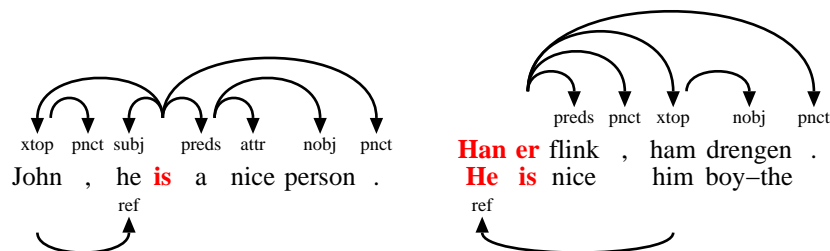


voc *Vocative.* Vocative specification. The person to whom the statement is directed.
 isa SYNADJ
 [121]

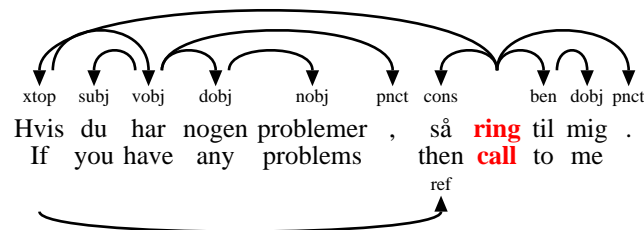


xtop *External topic with resuming pronoun.* An external topic is a sentence-initial NP whose only function is to provide the antecedent for a pronoun later in the sentence. [115] Eg in "John, he is a nice person". Here "John" is the "xtop" of "is", and "he" is the subject of "is".
Related types: cons ref.

He is nice, that boy.



If you are having any problems, call me.



Chapter 4

Morphological relations: MORPHOLOGY

MORPH: morphology level
"§" PRIM: morphology specification

Figure 4.1: The relations matching MORPHOLOGY-MORPHCOMP-MORPHDERIV.

MORPH *Morphology level* (long: MORPHOLOGY). A relation at the morphological level. Ie, a relation between segments within a word.
isa DIM:LEVEL [15] Subtypes: "§" PRIM MORPHCOMP MORPHDERIV.

"§" PRIM *Morphology specification.*
isa MORPH RULE [359]

4.1 Compositional relations: MORPHCOMP

MORPHCOMP: compositional semantic relations
ABOUT: noun-noun compound (about)
AGENT: noun-noun compound (agentive)
CONST: noun-noun compound (constitutive)
EVAL: noun-noun compound (evaluative)
FUNC: noun-noun compound (function)
ORIGIN: noun-noun compound (origin)
OTHER: noun-noun compound (other)
POS: noun-noun compound (position)
POSS: noun-noun compound (possession)
RESEM: noun-noun compound (resemblance)
TIME:MC: noun-noun compound (time)

Figure 4.2: The relations matching MORPHCOMP.

MORPHCOMP	<i>Compositional semantic relations.</i> A semantic relation is created between two (or more) elements which could potentially be used as stems. (A compound contains at least two roots.)
isa MORPHCOMP [254]	Subtypes: ABOUT AGENT CONST EVAL FUNC ORIGIN OTHER POS POSS RESEM TIME:MC.
ABOUT	<i>Noun-noun compound (about).</i> Non-head has an aboutness meaning wrt. head.
isa MORPHCOMP [346]	(theme: skattelov 'tax law' = lov –[skat]te/ABOUT)
AGENT	<i>Noun-noun compound (agentive).</i> Non-head has an agentive meaning wrt. head.
isa MORPHCOMP [338]	(agent: politikontrol 'police control' = kontrol –politi/AGENT)
CONST	<i>Noun-noun compound (constitutive).</i> Non-head has a constitutive meaning wrt. head.
isa MORPHCOMP [337]	(constitutive: træbord 'wooden table' = bord –træ/CONST)
EVAL	<i>Noun-noun compound (evaluative).</i> Non-head has an evaluative meaning wrt. head.
isa MORPHCOMP [344]	coche de lujo 'luksusbil'
FUNC	<i>Noun-noun compound (function).</i> Non-head has a functional meaning wrt. head.
isa MORPHCOMP [340]	(function: krigsskib 'war ship' = skib –[krig]s/FUNC)
ORIGIN	<i>Noun-noun compound (origin).</i> Non-head has a meaning of origin wrt. head.
isa MORPHCOMP [339]	(origin: rørsukker 'cane sugar' = sukker –rør/ORIGIN)
OTHER	<i>Noun-noun compound (other).</i> If in doubt about the meaning relation between head and non-head.
isa MORPHCOMP [347]	
POS	<i>Noun-noun compound (position).</i> Non-head has a locative meaning wrt. head.
isa MORPHCOMP [342]	(position: loftlampe 'ceiling lamp' = lampe –loft/POS)
POSS	<i>Noun-noun compound (possession).</i> Non-head has a possessive meaning wrt. head.
isa MORPHCOMP [341]	(possession: politibil = bil –politi/POSS)
RESEM	<i>Noun-noun compound (resemblance).</i> Denotations of head and non-head resemble each other.
isa MORPHCOMP [345]	silla de tijeras 'saksestol' [klapstol], válvula de mariposa 'sommerfugleventil'
TIME:MC	<i>Noun-noun compound (time).</i> Non-head has a temporal meaning wrt. head.
isa MORPHCOMP [343]	(time: oktoberregn 'October rain' = regn –oktober/TIME)

4.2 Derivational relations: MORPHDERIV

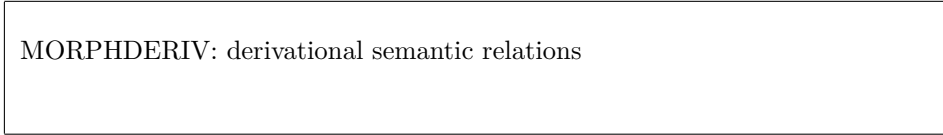


Figure 4.3: The relations matching MORPHDERIV-PREFIX-SUFFIX.

MORPHDERIV *Derivational semantic relations.* A semantic relation is created between a base and
 isa MORPH an affix
 [253] Subtypes: PREFIX SUFFIX.

4.2.1 Prefix relations: PREFIX

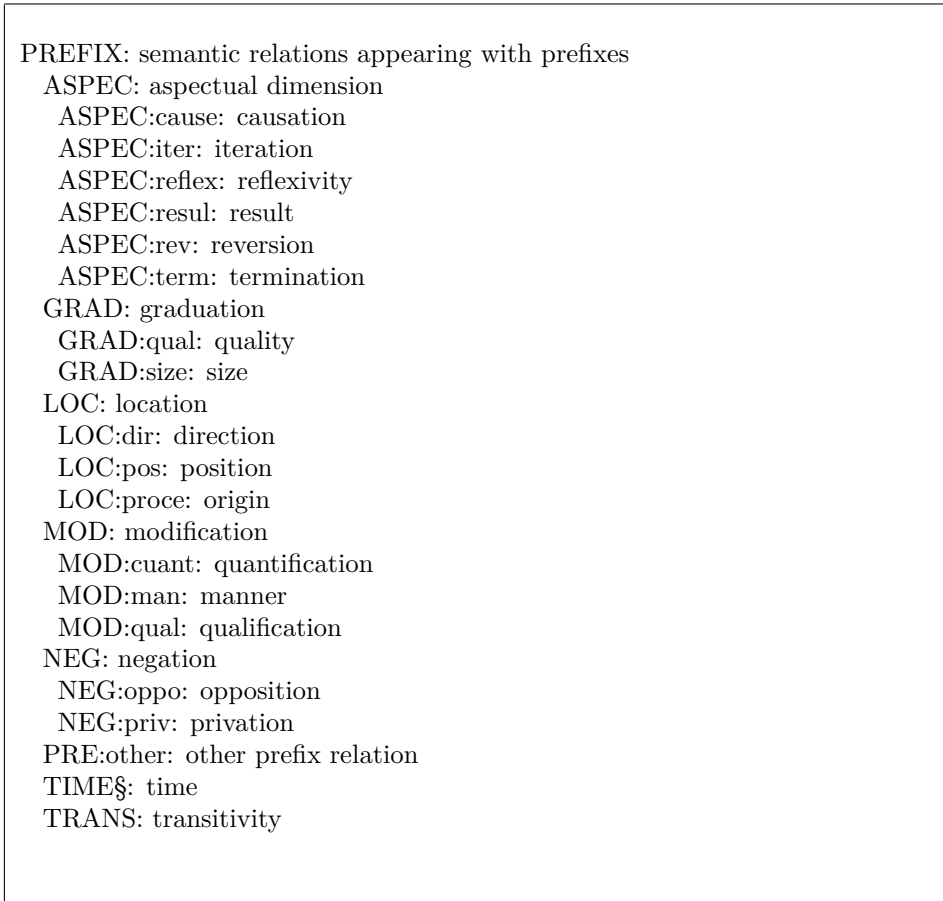


Figure 4.4: The relations matching PREFIX.

PREFIX *Semantic relations appearing with prefixes.* A semantic relation is created between
 isa MORPHDERIV a base and a prefix.
 [256] Subtypes: ASPEC GRAD LOC MOD NEG PRE:other TIME§ TRANS.

ASPEC *Aspectual dimension.* Prefix conveys an asepctual dimension in a broad sense.
 isa PREFIX Subtypes: ASPEC:cause ASPEC:iter ASPEC:reflex ASPEC:resul ASPEC:rev ASPEC:term.
 [273]

- ASPEC:cause** *Causation.* Prefix conveys causation.
 isa ASPEC
 [276]
 (causative: acallar 'silence' = callar –a/ASPEC:cause)
- ASPEC:iter** *Iteration.* Prefix conveys iteration.
 isa ASPEC
 [275]
 (iterative: redefine = define –re/ASPEC:iter)
- ASPEC:reflex** *Reflexivity.* Prefix conveys reflexivity.
 isa ASPEC
 [277]
 (reflexive: autopilot = pilot –auto/ASPEC:reflex)
- ASPEC:resul** *Result.* Prefix conveys result.
 isa ASPEC
 [279]
 (resultative: fastnagle 'rivet' = nagle –fast/ASPEC:resul)
- ASPEC:rev** *Reversion.* Prefix conveys reversion.
 isa ASPEC
 [274]
 (reversion: deactivate = activate –de/ASPEC:rev)
- ASPEC:term** *Termination.* Prefix conveys termination.
 isa ASPEC
 [278]
 (terminative: oplåse 'open' = låse –op/ASPEC:term)
- GRAD** *Graduation.* Prefix conveys graduation in a broad sense.
 isa PREFIX
 Subtypes: GRAD:qual GRAD:size.
 [270]
- GRAD:qual** *Quality.* Prefix conveys quality.
 isa GRAD
 [272]
 (quality: supercomputer = computer –super/GRAD:qual)
- GRAD:size** *Size.* Prefix conveys size.
 isa GRAD
 [271]
 (size/quantity: minibar = bar –mini/GRAD:size)
- LOC** *Location.* Prefix expresses location in a broad sense.
 isa PREFIX
 Subtypes: LOC:dir LOC:pos LOC:proce.
 [259]
- LOC:dir** *Direction.* Prefix expresses direction.
 isa LOC
 [261]
 (direction/origin: deverbal = verbal –de/LOC:dir)

LOC:pos isa LOC [260]	<i>Position.</i> Prefix expresses position. (position: intramural = mural –intra/LOC:pos)
LOC:proce isa LOC [262]	<i>Origin.</i> Prefix conveys origin. (origin: extraer = traer –ex/LOC:proce)
MOD isa PREFIX [281]	<i>Modification.</i> Prefix conveys modification in a broad sense. Subtypes: MOD:cuant MOD:man MOD:qual.
MOD:cuant isa MOD [282]	<i>Quantification.</i> Prefix conveys quantification. (quantification: multicultural = cultural –multi/MOD:quant)
MOD:man isa MOD [283]	<i>Manner.</i> Prefix conveys manner. (manner: maleducado = educado –mal/MOD:man)
MOD:qual isa MOD [284]	<i>Qualification.</i> Prefix conveys qualification. (qualification: paleochristian = christian –paleo/MOD:qual)
NEG isa PREFIX [267]	<i>Negation.</i> Prefix conveys negation in a broad sense. Subtypes: NEG:oppo NEG:priv.
NEG:oppo isa NEG [268]	<i>Opposition.</i> Prefix conveys opposition. (opposition: antihero = hero –anti/NEG:oppo)
NEG:priv isa NEG [269]	<i>Privation.</i> Prefix conveys privation. (privation: desalt = salt –de/NEG:priv)
PRE:other isa PREFIX [285]	<i>Other prefix relation.</i> If in doubt about the meaning conveyed by the prefix
TIME isa PREFIX [286]	<i>Time.</i> Prefix conveys time in a broad sense.
TRANS isa PREFIX [287]	<i>Transitivity.</i> Prefix conveys transitivity. (transitivising: påsejle 'collide': sejle –på/TRANS)

4.2.2 Suffix relations: SUFFIX

SUFFIX *Semantic relations appearing with suffixes.* A semantic relation is created between a base and a suffix.

[257]

Subtypes: AUG DENOM DENUM DER DEV DEVN DIMIN NOPRED PEJ QUAL.

AUG *Augmentation.* Suffix conveys augmentation.

isa SUFFIX

[286]

(augmentative: perrazo 'big dog' = perro +azo/AUG)

DENOM *Noun-adjective derivation.* Suffix creates denominal adjectives in a broad sense.

isa SUFFIX

[322]

Subtypes: DENOM:disp DENOM:eff DENOM:other DENOM:poss DENOM:rel DENOM:resem.

DENOM:disp *Noun-adjective derivation (disposition).* Suffix creates denominal adjectives that express disposition.

isa DENOM

[330]

"que tiene afición por N" (mujeriego – "que afición por las mujeres" 'kvindeglad/som er glad for kvinder')

DENOM:eff *Noun-adjective derivation (effect).* Suffix creates denominal adjectives that express an effect.

isa DENOM

[331]

"que causa simpatía" (simpático – "que causa simpatía" 'sympatisk/som vækker sympati')

DENOM:other *Noun-adjective derivation (other).* If in doubt about the meaning conveyed by the suffix

isa DENOM

[332]

DENOM:poss *Noun-adjective derivation (possession).* Suffix creates denominal adjectives that express possession.

isa DENOM

[329]

"que posee/tiene/lleva N" (barbudo – "que lleva barba" 'skægget/som bærer skæg')

DENOM:rel *Noun-adjective derivation (relational).* Suffix creates denominal adjectives with a relational meaning.

isa DENOM

[323]

Subtypes: DENOM:rel.deono DENOM:rel.norm.

DENOM:rel.deono *Noun-adjective derivation (naming).* Suffix creates relational adjectives with the meaning of "naming".

isa DENOM:rel

[325]

Subtypes: DENOM:rel.deono.pers DENOM:rel.deono.place.

DENOM:rel.deono.pers *Noun-adjective derivation (naming persons).* Suffix creates relational adjectives with the meaning of "naming" persons.

isa DENOM:rel.deono

[326]

Cervantino 'som har at gøre med Cervantes'

DENOM:rel.deono.place *Noun-adjective derivation (naming places).* Suffix creates relational adjectives with the meaning of "naming" of places.
 isa DENOM:rel.deono [327]

Madrileño 'som har at gøre med/kommer fra Madrid'

DENOM:rel.norm *Noun-adjective derivation (normal).* Suffix creates relational adjectives with a "normal" meaning aspect.
 isa DENOM:rel [324]

(denominal adjective: presidential = president +ial/DENOM:rel.norm)

DENOM:resem *Noun-adjective derivation (resemblance).* Suffix creates denominal adjectives that express resemblance.
 isa DENOM [328]

"que se parece a N" (sanchopancesco – "que se parece a Sancho Panza" 'sanchopanzask/som ligner Sancho

Panza')

DENUM *Adjective-numeral derivation.* Suffix creates denumeral adjectives in a broad sense.
 isa SUFFIX Subtypes: DENUM:mult DENUM:ord DENUM:part. [333]

DENUM:mult *Adjective-multiplicative derivation.* Suffix creates multiplicative numerals.
 isa DENUM [336]

"kardinal=cinco – multiplikativ=quintuplo" 'fem/femdobbelte'

DENUM:ord *Adjective-ordinal derivation.* Suffix creates ordinals.
 isa DENUM [334]

"kardinal=dos – ordinal=segundo" 'to/anden'

DENUM:part *Adjective-partitive derivation.* Suffix creates partitive numerals.
 isa DENUM [335]

"kardinal=doce – partitiv=doceavo" 'tolv/tolvtedel'

DER *Verb derivation.* Suffix triggers a derivation
 isa SUFFIX Subtypes: DER:av DER:nv DER:vv. [289]

DER:av *Adjective-verb derivation.* Suffix triggers a derivation from an adjective to a verb.
 isa DER [291]

(adjective->verb derivation: darken = dark +en/DER:av)

DER:nv *Noun-verb derivation.* Suffix triggers a derivation from a noun to a verb.
 isa DER
 [290]

(noun->verb derivation: salar 'to salt' = sal+ar/DER:nv)

DER:vv *Verb-verb derivation.* Suffix triggers a derivation from a verb to another verb.
 isa DER
 [292]

(verb->verb derivation: adormecer 'lull to sleep' = dormir--[a][ecer]/DER:vv)

DEV (long: DEVERB).
 isa SUFFIX
 [313]

Subtypes: DEVA.

DEVA *Verb-adjective derivation* (long: DEVERBA). Suffix creates deverbal adjectives in a broad sense.
 isa DEV
 [314]

Subtypes: DEVA:act DEVA:pas.part.

DEVA:act *Verb-adjective derivation (active)* (long: DEVERB:act.pure). Suffix creates active adjectives.
 isa DEVA
 [315]

Subtypes: DEVA:act.disp DEVA:act.poten DEVA:pas.

DEVA:act.disp *Verb-adjective derivation (pure)* (long: DEVERB:act.disp). Suffix creates active adjectives with the meaning aspect "pure".
 isa DEVA:act
 [316]

"que V" (conmover – "que conmueve" 'gribende/der griber')

DEVA:act.poten *Verb-adjective derivation (disposition)* (long: DEVERB:act.poten). Suffix creates active adjectives with the meaning aspect "disposition".
 isa DEVA:act
 [317]

"que suele V, que tiende a V" (adulón – "que suele adular, que tiende a adular" 'smigre/som plejer eller

har tendens til at være krybende

DEVA:pas *Verb-adjective derivation (potentiality)* (long: DEVERB:pas). Suffix creates active adjectives with the meaning aspect "potentiality".
 isa DEVA:act
 [318]

Subtypes: DEVA:pas.deon DEVA:pas.poten.

(deverbal adjective: transportable = transport+able/DEVERB:pas.poten)

DEVA:pas.deon *Verb-adjective derivation (passive potentiality)* (long: DEVERB:pas.deon). Suffix creates passive adjectives with the meaning aspect "potentiality".
 isa DEVA:pas
 [321]

"que puede {ser PP/Vse}" (transportable – "máquina que puede {ser transportada/transportarse}

'transportabel/maskine som kan blive transporteret/transporteres

DEVA:pas.poten *Verb-adjective derivation (passive participles)* (long: DEVERB:pas.poten). Suffix creates passive adjectives with the form of participles.
isa DEVA:pas
[320]

"que {ha sido/está/es} PP" (comprado – "hombre que {ha sido/está/es} comprado 'mand som er

blevet/er/bliver købt"

DEVA:pas.part *Verb-adjective derivation (passive)* (long: DEVERB:pas.part). Suffix creates passive adjectives.
isa DEVA
[319]

DEVN *Verb-noun derivation* (long: DEVERBN, deprecated PRED). Suffix creates deverbal nouns in a broad sense.
isa SUFFIX
[293] Subtypes: DEVN:agent DEVN:core DEVN:exper DEVN:inst DEVN:loc DEVN:other DEVN:recip DEVN:result.

DEVN:agent *Verb-noun derivation (agent)*. Suffix creates deverbal nouns absorbing the agent role.
isa DEVN
[294]

(agent derivation: singer = sing +er/PRED:agent)

DEVN:core *Verb-noun derivation (core)*. Suffix creates deverbal nouns expressing a nominalized version of the situation denoted by the original verb.
isa DEVN
[296]

(core derivation: exploitation = exploit@V +ation/PRED:core)

DEVN:exper *Verb-noun derivation (experiencer)*. Suffix creates deverbal nouns absorbing the experiencer role.
isa DEVN
[295]

(experiencer derivation: admirer = admire +r/PRED:exper)

DEVN:inst *Verb-noun derivation (instrument)*. Suffix creates deverbal nouns expressing the instrument related to the meaning of the original noun.
isa DEVN
[300]

(instrument derivation: exprimidor 'saftpresser' = exprimir +dor/PRED:inst)

DEVN:loc *Verb-noun derivation (location)*. Suffix creates deverbal nouns expressing the location related to the meaning of the original noun.
isa DEVN [299]

(locative derivation: comedor 'spisestue' = comer +dor/PRED:loc)

DEVN:other *Verb-noun derivation (other)*. If in doubt about the meaning conveyed by the suffix
isa DEVN [301]

DEVN:recip *Verb-noun derivation (recipient)*. Suffix creates deverbal nouns absorbing the recipient role
isa DEVN [298]

(recipient derivation: beneficiario 'den begunstigede' = beneficiar +ario/PRED:recip)

DEVN:result *Verb-noun derivation (patient)*. Suffix creates deverbal nouns absorbing the patient role.
isa DEVN [297]

(result derivation: hallazgo 'fund' = hallar +azgo/PRED:result)

DIMIN *Diminution*. Suffix conveys diminution.
isa SUFFIX [287]

(diminutive: viejecito 'little old man' = viejo +ecito/DIM)

NOPRED *Noun-noun derivation*. Suffix creates non-predicative nouns (from other nouns) in a broad sense.
isa SUFFIX [303]
Subtypes: NOPRED:agent NOPRED:capac NOPRED:cont NOPRED:loc NOPRED:other NOPRED:result NOPRED:script NOPRED:set NOPRED:temp.

NOPRED:agent *Noun-noun derivation (agent)*. Suffix creates non-predicative nouns expressing an agent role.
isa NOPRED [304]

(agent derivation: miller = mill +er/NOPRED:agent)

NOPRED:capac *Noun-noun derivation (capacity)*. Suffix creates non-predicative nouns expressing a capacity.
isa NOPRED [309]

(capacity derivation: cestada 'kurvfuld' = cesta +ada/NOPRED:capac)

NOPRED:cont *Noun-noun derivation (container)*. Suffix creates non-predicative nouns expressing a container.
isa NOPRED [306]

(container derivation: azucarero 'sugar bowl' = azucar +ero/NOPRED:cont)

NOPRED:loc *Noun-noun derivation (location).* Suffix creates non-predicative nouns expressing a location.
isa NOPRED
[310]

(locative derivation: arenal 'sandet strækning' = arena +al/NOPRED:loc)

NOPRED:other *Noun-noun derivation (other).* If in doubt about the meaning conveyed by the suffix
isa NOPRED
[312]

NOPRED:result *Noun-noun derivation (result).* Suffix creates non-predicative nouns expressing a result.
isa NOPRED
[305]

(result derivation: puñalada 'knivstik' = puñal +ada/NOPRED:result)

NOPRED:script *Noun-noun derivation (script).* Suffix creates non-predicative nouns expressing a script/notion related to the original noun.
isa NOPRED
[311]

(script derivation: pontaje 'brobetaling' = puente +aje/NOPRED:script)

NOPRED:set *Noun-noun derivation (set).* Suffix creates non-predicative nouns expressing a set.
isa NOPRED
[308]

(set derivation: perrada 'hundekobbel' = perro +ada/NOPRED:set)

NOPRED:temp *Noun-noun derivation (temporal).* Suffix creates non-predicative nouns expressing a temporal aspect.
isa NOPRED
[307]

(temporal derivation: temporada 'tidsrum/sæson' = tiempo +ada/NOPRED:temp)

PEJ *Pejoration.* Suffix conveys a pejorative sense.
isa SUFFIX
[288]

(pejorative: vinacho 'bad vine' = vino +acho/PEJ)

QUAL *Adjective derivation.* Suffix creates deadjectival nouns.
isa SUFFIX
[302]

(deadjectival noun: bitterness = bitter +ness/QUAL)

SUFFIX: semantic relations appearing with suffixes
 AUG: augmentation
 DENOM: noun-adjective derivation
 DENOM:disp: noun-adjective derivation (disposition)
 DENOM:eff: noun-adjective derivation (effect)
 DENOM:other: noun-adjective derivation (other)
 DENOM:poss: noun-adjective derivation (possession)
 DENOM:rel: noun-adjective derivation (relational)
 DENOM:rel.deono: noun-adjective derivation (naming)
 DENOM:rel.deono.pers: noun-adjective derivation (naming persons)
 DENOM:rel.deono.place: noun-adjective derivation (naming places)
 DENOM:rel.norm: noun-adjective derivation (normal)
 DENOM:resem: noun-adjective derivation (resemblance)
 DENUM: adjective-numeral derivation
 DENUM:mult: adjective-multiplicative derivation
 DENUM:ord: adjective-ordinal derivation
 DENUM:part: adjective-partitive derivation
 DER: verb derivation
 DER:av: adjective-verb derivation
 DER:nv: noun-verb derivation
 DER:vv: verb-verb derivation
 DEV:
 DEVA: verb-adjective derivation
 DEVA:act: verb-adjective derivation (active)
 DEVA:act.disp: verb-adjective derivation (pure)
 DEVA:act.poten: verb-adjective derivation (disposition)
 DEVA:pas: verb-adjective derivation (potentiality)
 DEVA:pas.deon: verb-adjective derivation (passive potentiality)
 DEVA:pas.poten: verb-adjective derivation (passive participles)
 DEVA:pas.part: verb-adjective derivation (passive)
 DEVN: verb-noun derivation
 DEVN:agent: verb-noun derivation (agent)
 DEVN:core: verb-noun derivation (core)
 DEVN:exper: verb-noun derivation (experiencer)
 DEVN:inst: verb-noun derivation (instrument)
 DEVN:loc: verb-noun derivation (location)
 DEVN:other: verb-noun derivation (other)
 DEVN:recip: verb-noun derivation (recipient)
 DEVN:result: verb-noun derivation (patient)
 DIMIN: diminution
 NOPRED: noun-noun derivation
 NOPRED:agent: noun-noun derivation (agent)
 NOPRED:capac: noun-noun derivation (capacity)
 NOPRED:cont: noun-noun derivation (container)
 NOPRED:loc: noun-noun derivation (location)
 NOPRED:other: noun-noun derivation (other)
 NOPRED:result: noun-noun derivation (result)
 NOPRED:script: noun-noun derivation (script)
 NOPRED:set: noun-noun derivation (set)
 NOPRED:temp: noun-noun derivation (temporal)
 PEJ: pejoration
 QUAL: adjective derivation

Figure 4.5: The relations matching SUFFIX.

Chapter 5

Discourse relations: DISCOURSE

DISC: discourse level
"α" PRIM: discourse specification

Figure 5.1: The relations matching DISCOURSE-DISCFUNC-DISCSEM.

DISC *Discourse level* (long: DISCOURSE). A relation at the discourse level. Ie, a relation
isa DIM:LEVEL between segments in different sentences or clauses.
[17] Subtypes: "α" PRIM DISCFUNC DISCSEM.

"α" PRIM *Discourse specification*. A primary syntactic relation that has been used as a dis-
isa DISC RULE course relation for stylistic purposes.
[358]

5.1 Functional relations: DISCFUNC

DISCFUNC: functional discourse relation
ANSW: answer
CONSOL: consolidation
CONSOL:enabl: enablement
CONSOL:just: justification
CONSOL:motiv: motivation
DIREC: directive act
EXPR: expressive act
INTACT: interactional signals
INTACT:attn: attention
INTACT:inter: interruption
QUEST: question

Figure 5.2: The relations matching DISCFUNC.

DISCFUNC *Functional discourse relation*. The relation between governing and depending text
isa ADJ DISC segments is defined functionally: the depending text segment has illocutionary,
[205] structuring or enhancing function

Subtypes: ANSW CONSOL DIREC EXPR INTACT QUEST.

ANSW *Answer.* Governing text segment contains question or problem, dependent text
isa DISCFUNC segment answer or solution
[241]

CONSOL *Consolidation* (deprecated SUPPORT?).
isa DISCFUNC Subtypes: CONSOL:enabl CONSOL:just CONSOL:motiv.
[247]

CONSOL:enabl *Enablement.* S enables reader or recipient to carry out the action mentioned in N;
isa CONSOL frequent in directive texts
[249]

CONSOL:just *Justification* (deprecated JUST). S justifies N wrt its content (reason for mentioning it
isa CONSOL or sim.) thereby strengthening it argumentatively
[248]

[da] Fordi, Eftersom

CONSOL:motiv *Motivation.* S motivates reader or recipient to carry out the action mentioned in N
isa CONSOL
[250]

DIREC *Directive act.* Dependent text segment contains an order, command or request
isa DISCFUNC
[242]

e.g. imperatives

EXPR *Expressive act.* Dependent text segment contains an expression of the speaker's
isa DISCFUNC attitudes or emotions, e.g. congratulations, excuses or thanks
[243]

[en] I'm sorry!; My condolences!

INTACT *Interactional signals.*
isa DISCFUNC Subtypes: INTACT:attn INTACT:inter.
[244]

INTACT:attn *Attention.* S contains an attention signal
isa INTACT
[245]

[da] Ja; Nå; OK; [it] Sì; Beh; [en] Yeah, Oh, Really?

INTACT:inter *Interruption.* S contains an interruption signal
isa INTACT
[246]

[da] Jamen; [it] Ma; [en] But... But

QUEST *Question .* The dependent text segment contains a question with or without an
isa DISCFUNC answer
[240]

DISCSEM: semantic discourse relation
 CAUSE: cause relation (discourse)
 CAUSE:expl: explanation relation (discourse)
 CAUSE:goal: goal relation (discourse)
 CAUSE:reas: reason relation (discourse)
 CONC: concession
 COND: condition
 CONJ: conjunction
 CONJ:seq: sequence
 CONS: consequence/result/conclusion relation (discourse)
 CONS:dir: direct, physical consequence, result
 CONS:prg: pragmatic/personal conclusion, deduction
 CONTR: contrast
 CONTR:dir: direct contrast
 CONTR:prg: pragmatic contrast
 DESCR: description/evaluation
 DESCR:eval: positive/negative evaluation
 DESCR:qual: neutral description
 DISJ: disjunction
 DISJ:dir: direct disjunction
 DISJ:prg: pragmatic disjunction
 ELAB: elaboration
 ELAB:exem: exemplification
 ELAB:exp: expansion
 ELAB:part: part of relation
 ELAB:rest: restatement
 JOINT: no clear relation
 STRUCT: structural relation
 STRUCT:prep: preparation
 STRUCT:rep: repaired
 TIME: temporal relation
 TIME:cont: contemporaneity
 TIME:prec: temporal precedence
 TIME:prec§: temporal precedence
 TIME:succ: temporal succession
 TIME:succ§: temporal succession

Figure 5.3: The relations matching DISCSEM.

5.2 Semantic relations: DISCSEM

DISCSEM *Semantic discourse relation.* The relation between governing and depending text
 isa ADJ DISC segments is defined semantically
 [204] Subtypes: CAUSE CONC COND CONJ CONS CONTR DESCR DISJ ELAB JOINT STRUCT
 TIME.

CAUSE *Cause relation (discourse).* S expresses cause in a broad sense
 isa DISCSEM
 [207] Subtypes: CAUSE:expl CAUSE:goal CAUSE:reas.

CAUSE:expl *Explanation relation (discourse).* S expresses explanation; a more general and elab-
 isa CAUSE orating explanation than "reason"
 [208]

[da] Nemlig; [it] Infatti

CAUSE:goal *Goal relation (discourse).* S expresses goal, purpose, aim
isa CAUSE
[209]

[da] For (at)

CAUSE:reas *Reason relation (discourse).* S expresses a specific and concrete reason
isa CAUSE
[210]

[da] Fordi, Eftersom

CONC *Concession.* S admits or acknowledges a fact wrt N, which may however not have
isa DISCSEM the expected consequence or effect
[226] Related types: conc.

[da] Dog, Skønt

COND *Condition.*
isa DISCSEM Related types: cond.
[227]

[da] På betingelse af, Hvis

CONJ *Conjunction.* Dependent text segment adds a new subject somehow related to gov-
isa DISCSEM erning text segment; may be difficult to distinguish from ELAB:exp
[228] Subtypes: CONJ:seq.
Related types: conj.

CONJ:seq *Sequence.* Dependent text segment is part of list or sequence linked to governing
isa CONJ text segment as e.g. in recipes, sport results etc.
[229]

CONS *Consequence/result/conclusion relation (discourse).* S expresses consequence, result
isa DISCSEM or conclusion wrt N
[211] Subtypes: CONS:dir CONS:prg.

CONS:dir *Direct, physical consequence, result.* Physical, objectively observed consequence or
isa CONS result
[212]

[da] Derfor, Af den grund

CONS:prg *Pragmatic/personal conclusion, deduction.* Personal, subjective conclusion or de-
isa CONS duction
[213]

[da] Derfor, Af den grund

CONTR *Contrast.*
 isa DISCSEM Subtypes: CONTR:dir CONTR:prg.
 [233]

CONTR:dir *Direct contrast.* The contrast lies between the governing and dependent text segment
 isa CONTR
 [234]

[da] Men, Derimod

CONTR:prg *Pragmatic contrast.* The contrast lies between the dependent and an inferred text segment
 isa CONTR
 [235]

[da] Men

DESCR *Description/evaluation.* S expresses description or evaluation of N
 isa DISCSEM Subtypes: DESCR:eval DESCR:qual.
 [214]

DESCR:eval *Positive/negative evaluation.* S expresses a personal and/or subjective positive or negative description of N
 isa DESCR
 [215]

DESCR:qual *Neutral description.* S expresses an objective and/or neutral description of N
 isa DESCR
 [216]

[da] Sådan

DISJ *Disjunction.*
 isa DISCSEM Subtypes: DISJ:dir DISJ:prg.
 [236]

[da] Eller

DISJ:dir *Direct disjunction.* The disjunction lies between the governing and dependent text segment
 isa DISJ
 [237]

DISJ:prg *Pragmatic disjunction.* The disjunction lies between the dependent and an inferred text segment
 isa DISJ
 [238]

ELAB *Elaboration.* S adds more information or detail on N
 isa DISCSEM Subtypes: ELAB:exem ELAB:exp ELAB:part ELAB:rest.
 [217]

ELAB:exem *Exemplification.* S gives examples of elements or phenomena mentioned in N
 isa ELAB
 [218]

[en] For example

ELAB:exp *Expansion* (deprecated ELAB:spec). S develops and expands knowledge of N; may be difficult to distinguish from CONJ
 isa ELAB
 [219]

[it] Cioè

ELAB:part isa ELAB [220]	<i>Part of relation.</i> S is a concrete part of N [da] Herunder, Heri
ELAB:rest isa ELAB [221]	<i>Restatement.</i> S states N again in a different way [da] Dvs.; [it] Ossia, In altre parole, Cioè; [en] In other words, Or
JOINT isa DISCSEM [239]	<i>No clear relation.</i> The dependent text segment adds a completely new content without any clear discourse relation to the governing segment
STRUCT isa DISCSEM [230]	<i>Structural relation.</i> Subtypes: STRUCT:prep STRUCT:rep.
STRUCT:prep isa STRUCT [231]	<i>Preparation.</i> Dependent text segment "prepares" for the following and governing text, e.g. headings, titles
STRUCT:rep isa STRUCT [232]	<i>Repaired.</i> Dependent text segment is interrupted and unfinished and "repaired" by the following and governing text segments, which completes it
TIME isa DISCSEM [222]	<i>Temporal relation</i> (deprecated CIRCUM). There is a clear temporal relation between N and S Subtypes: TIME:cont TIME:prec TIME:prec§ TIME:succ TIME:succ§.
TIME:cont isa TIME [223]	<i>Contemporaneity.</i> S is contemporary with N (now includes abolished TIME:dur) [da] Samtidig, Mens, Så længe, Da
TIME:prec isa TIME [224]	<i>Temporal precedence.</i> S precedes N [en] Earlier, Some days before
TIME:prec§ isa TIME [265]	<i>Temporal precedence.</i> Prefix conveys precedence. (temporal precedence: prehistorical = historical –pre/TIME:prec)
TIME:succ isa TIME [225]	<i>Temporal succession.</i> S succeeds N [en] Later, Some time afterwards
TIME:succ§ isa TIME [266]	<i>Temporal succession.</i> Prefix conveys succession. (temporal succession: postmodernism = modernism –post/TIME:succ)

Chapter 6

Anaphor relations: ANAPHORA

ANA: anaphoric level
anaphor:

Figure 6.1: The relations matching ANAPHORA-coref-assoc.

ANA *Anaphoric level* (long: ANAPHORA). An anaphoric relation. Ie, a relation between an anaphor (pronoun, definite description, etc.) and an antecedent which either is a coreferent, or which provides access to a coreferent via its qualia structure. The relation goes from antecedent to anaphor.
isa DIM:LEVEL [20]
Subtypes: anaphor.

anaphor .
isa ANA [185]
Subtypes: assoc coref.

6.1 Coreference relations: coref

coref: coreference
coref-id: lexical identity coreference
coref-part: partial coreference
coref-prg: pragmatic coreference
coref-res: resumptive anaphor
coref-var: lexical variation coreference
ref: syntactically determined coreference

Figure 6.2: The relations matching coref.

coref *Coreference*. Anaphor denotes same entity as antecedent
isa anaphor [186]
Subtypes: coref-id coref-part coref-prg coref-res coref-var ref.

coref-id *Lexical identity coreference*. A car -> the car // a yellow car -> the yellow car
isa coref [188]

coref-part *Partial coreference.* Coreferential with a part of the antecedent
 isa coref
coref-prg *Pragmatic coreference.* Takes up a statement and evaluates it with respect to speech
 act; I will be there tomorrow -> the threat / promise / warning / statement
 [190]
coref-res *Resumptive anaphor.*
 isa coref
coref-var *Lexical variation coreference.* A car -> the vehicle // a yellow car -> the car
 isa coref
coref-rel *Syntactically determined coreference.* Syntactically determined coreference (eg, relative pronouns, external topics)
 [187]
 isa coref

antecedent→anaphor

6.2 Associative anaphor relations: assoc

assoc: associative anaphor
 "assoc-" QUALIA: associative anaphor wrt. qualia
 assoc-agentive: associative anaphor (agentive)
 assoc-const: associative anaphor (constitutive)
 assoc-formal: associative anaphor (formal)
 assoc-telic: associative anaphor (telic)

Figure 6.3: The relations matching **assoc**.

assoc *Associative anaphor.* Anaphor denotes entity which is associated with antecedent
 isa anaphor
 Subtypes: "assoc-" QUALIA assoc-agentive assoc-const assoc-formal assoc-telic.
 [193]
assoc-" QUALIA *Associative anaphor wrt. qualia.* Anaphor denotes entity which is associated with
 antecedent
 isa RULE assoc
 [194]
assoc-agentive *Associative anaphor (agentive)* (deprecated **assoc-agent?**).
 isa assoc
 [196]
assoc-const *Associative anaphor (constitutive)* (deprecated **assoc-loc?**).
 isa assoc
 [195]
assoc-formal *Associative anaphor (formal)* (deprecated **assoc-form?**).
 isa assoc
 [197]
assoc-telic *Associative anaphor (telic)* (deprecated **assoc-scope?**).
 isa assoc
 [198]

Chapter 7

Semantic relations: SEMANTICS

SEM: semantic level

Figure 7.1: The relations matching SEMANTICS-QUALIA-SEMROLE.

SEM *Semantic level* (long: SEMANTICS). A relation at the semantic level. Ie, a relation
isa DIM:LEVEL between functors, arguments, and modifiers.
[18] Subtypes: QUALIA SEMROLE.

7.1 Qualia relations: QUALIA

QUALIA: qualia roles
const: constitutive qualia
formal: formal qualia
agentive: agentive qualia
location: location qualia
resem: resemblance wrt. qualia role
"* QUALIA: resemblance wrt. \$qualia relation
telic: telic qualia
about: about qualia

Figure 7.2: The relations matching QUALIA.

QUALIA *Qualia roles.*
isa SEM Subtypes: const formal resem telic.
[32]
const *Constitutive qualia.* Relates to material or part-whole qualia
isa QUALIA
[39]

N->P.material/part

formal *Formal qualia.* Relates to hyperonym (super type) wrt. form, dimension, quality, shape, size.
 isa QUALIA [36] Subtypes: agentive location.

agentive *Agentive qualia.* Relates to agentive qualia
 isa formal [37]

N->P.agent

location *Location qualia.*
 isa formal
resem [38] *Resemblance wrt. qualia role.* Resemblance wrt. some qualia role
 isa QUALIA Subtypes: "" QUALIA.
 [42]

N->P.resem

"" QUALIA *Resemblance wrt. \$qualia relation.*
 isa RULE resem

telic [43] *Telic qualia.* Relates to purpose qualia
 isa QUALIA Subtypes: about.
 [40]

about *About qualia.* Relates to hyponym (subtype)
 isa telic [41]

7.2 Thematic role relations: SEMROLE

SEMROLE . All the relations of the semantic roles run under the text line. The syntactic relation that runs over the text line is determined by the word class of the lemma in question.
 isa SEM [46] Subtypes: {about} {agent} {apart} {arg} {class} {const} {eval} {experient} {form} {func} {iden} {location} {origin} {patient} {poss} {pos} {quant} {recipient} {resem} {time}.

{about} .
 isa SEMROLE [56]



{agent} *An object or a person that performs an action.* Often generated by subject relation
 isa SEMROLE [63]

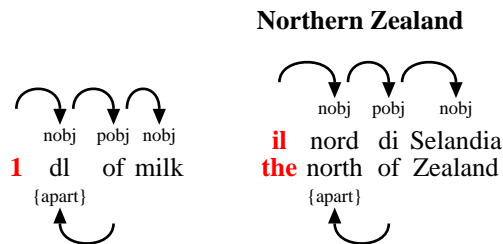


SEMROLE:

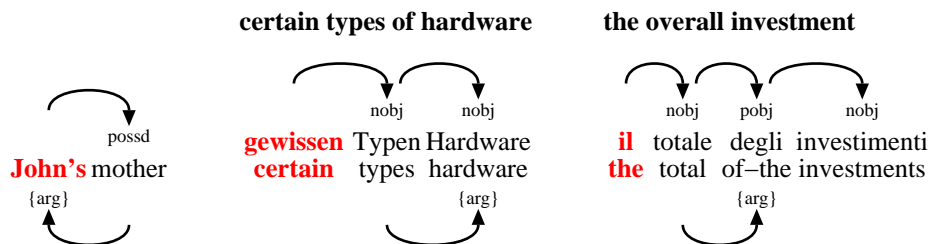
- {about}:
- {agent}: An object or a person that performs an action
- {apart}:
- {arg}:
- {class}:
- {const}:
- {eval}:
- {experient}: The receiver of an emotion or a psysical impact
- {form}:
- {func}:
- {iden}:
- {location}: The location where something is situated or happens
- {origin}:
- {patient}: An object or a person that is the subject of the action or the one who is located somewhere
- {poss}:
- {pos}:
- {quant}:
- {recipient}: The receiver of something
- {resem}:
- {time}:

Figure 7.3: The relations matching SEMROLE.

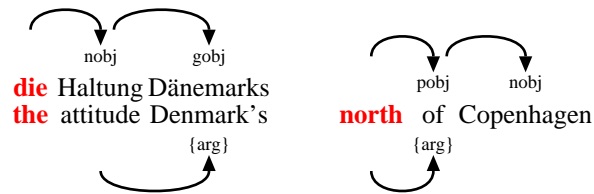
{apart} (long: arbitrary part). Please note that the semantic relation goes from the satellite to the nucleus in opposition to the main part of the other semantic roles.
 isa SEMROLE [57]



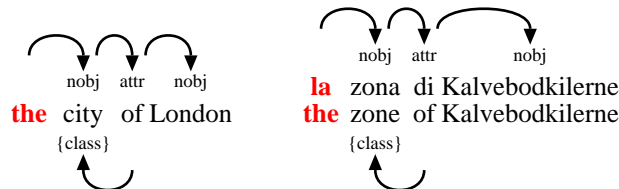
{arg} (long: argument).
 isa SEMROLE [62]



Denmark's attitude

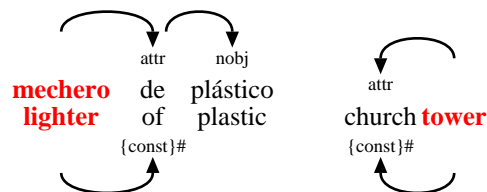


{class} . Please note that the semantic relation goes from the satellite to the nucleus in opposition to the main part of the other semantic roles.
 isa SEMROLE [58]

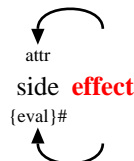


{const} (long: constituent).
 isa SEMROLE [47]

plastic lighter

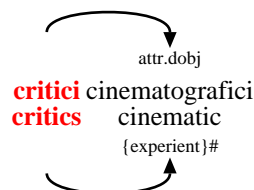


{eval} (long: evaluation).
 isa SEMROLE [54]



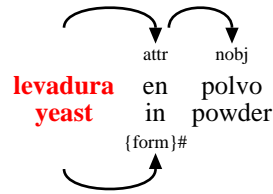
{experient} *The receiver of an emotion or a psysical impact.* Often generated by direct object
 isa SEMROLE [65]

film critics

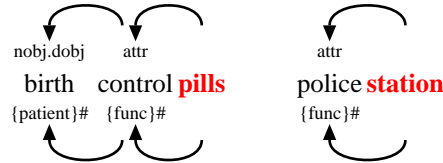


{form} .
 isa SEMROLE [60]

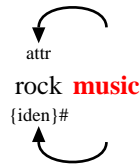
baking powder



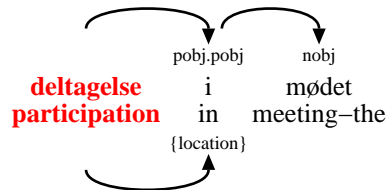
{func} (long: function).
isa SEMROLE
[50]



{iden} (long: identity).
isa SEMROLE
[61]



{location} *The location where something is situated or happens.* Often generated by prepositional object
isa SEMROLE
[67]

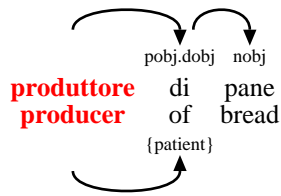


{origin} .
isa SEMROLE
[49]



{patient} *An object or a person that is the subject of the action or the one who is located somewhere.* Often generated by direct object
isa SEMROLE
[64]

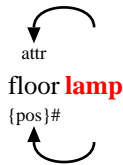
bread producer



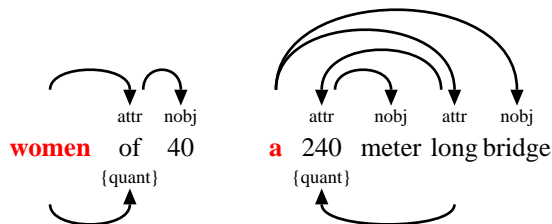
{poss} (long: possession).
isa SEMROLE
[51]



{pos} (long: position).
isa SEMROLE
[52]

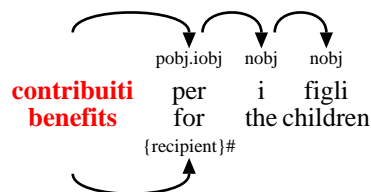


{quant} (long: quantity).
isa SEMROLE
[59]

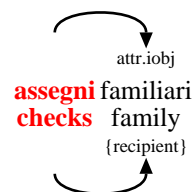


{recipient} *The receiver of something.* Often generated by indirect object
isa SEMROLE
[66]

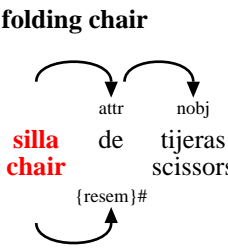
child benefits



child maintenance



{resem} (long: resemblance).
isa SEMROLE
[55]



{time} .
isa SEMROLE
[53]



Chapter 8

Word alignment relations: ALIGN

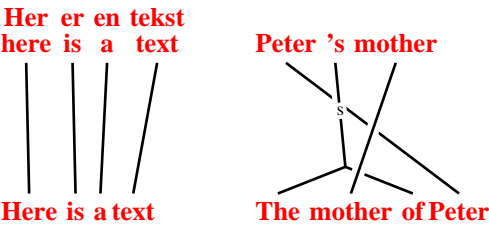


Figure 8.1: The relations matching ALIGN.

- ALIGN**
isa DIM:LEVEL
[19]

Alignment level (long: ALIGNMENT). A relation at the word alignment level. Ie, an alignment relation that expresses a translational equivalence between two sets of words (and their associated phrases), either in terms of form or meaning.
Subtypes: "" f.
- ""
isa ALIGN
[372]

Unlabeled word alignment (long: align). An unlabeled word alignment is represented as a word alignment where the label is an empty string. It is used to represent the default word alignment, where there is full translational equivalence between the two sets of words.



Chapter 9

Rule schemata for complex relations: RULE

RULE: relation rule
"(" ANY ")": disambiguation
"*" DISC: down-head in attribution
"<" PRIM ... ":" INTEGER ">": gapping dependent
"@ " adverb: valency-bound adverbial
"[" PRIM "]": pattern for secondary syntactic dependency relation formed from primary syntactic dependency relation
"assoc-" QUALIA: associative anaphor wrt. qualia
"{ " SEM "}": pattern for secondary semantic dependency relation formed from primary semantic dependency relation
"\$ " QUALIA: resemblance wrt. \$qualia relation
"⌘ " PRIM: discourse specification
"§ " PRIM: morphology specification
ANY "&" ANY: both-and relation
ANY "|" ANY: either-or relation
DISC "*": down-dependent in attribution
PRIM "#": pattern for idiomatic primary dependency
PRIM "/" CONNECTOR: explicit connector
PRIM "/(" CONNECTOR ")": implicit connector
PRIM "/ATTR" INTEGER: attribution
PRIM "{ " THEM "}": pattern for primary dependency relation with thematic role

Figure 9.1: The relations matching RULE.

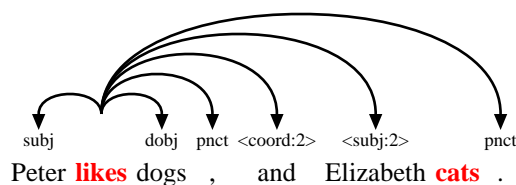
RULE *Relation rule.* Rule for specifying complex relations.

isa ANY Subtypes: "(" ANY ")" "*" DISC "<" PRIM ... ":" INTEGER ">" "@ " adverb "[" PRIM "]" "assoc-"
[8] QUALIA "{ " SEM "} " " QUALIA "⌘ " PRIM "§ " PRIM ANY "&" ANY ANY "|" ANY DISC "*"
PRIM "#" PRIM "/" CONNECTOR PRIM "/(" CONNECTOR ")" PRIM "/ATTR" INTEGER
PRIM "{ " THEM "}".

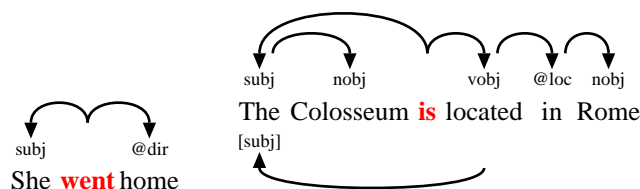
"(" ANY ")" *Disambiguation.*

isa RULE
"*" **DISC** *Down-head in attribution.* The head in the relation is one step further down in the
isa RULE attribution chain
[368]

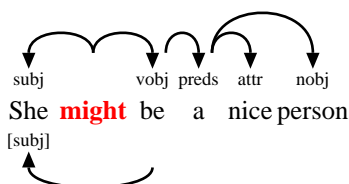
"<" **PRIM ... ":"** *Gapping dependent.* First conjunct->gapping dependent
INTEGER ">"
 isa GAP RULE
 [356]



"@" **adverb** *Valency-bound adverbial.* A complement relation which can be interpreted as an obligatory, valency-bound adverbial relation.
 isa COMP RULE
 [370] Related types: cont dir dur ext hab loc prec succ time.

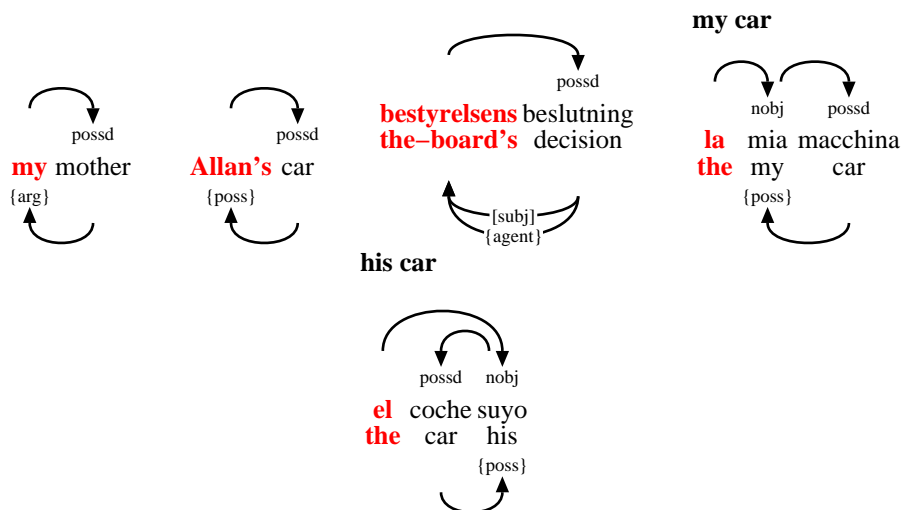


"[" **PRIM "]"** *Pattern for secondary syntactic dependency relation formed from primary syntactic dependency relation.* Governor->secondary syntactic dependent; \$PRIM must be non-secondary
 isa RULE SEC
 [354] Related types: "[" "]" \$PRIM.

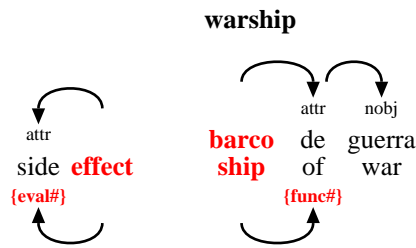


assoc-" **QUALIA** *Associative anaphor wrt. qualia.* Anaphor denotes entity which is associated with antecedent
 isa RULE assoc
 [194]

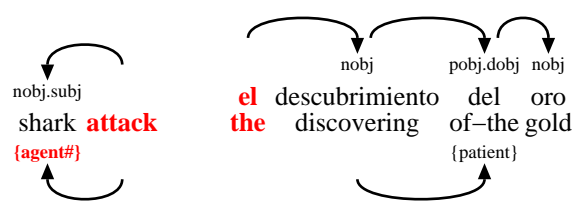
"{" **SEM "}"** *Pattern for secondary semantic dependency relation formed from primary semantic dependency relation.* Governor->secondary semantic dependent; \$PRIM must be non-secondary
 isa RULE SEC
 [355] Related types: "[" "]" \$PRIM.



" QUALIA	<i>Resemblance wrt. \$qualia relation.</i>
isa RULE resem	
" PRIM	<i>Discourse specification. A primary syntactic relation that has been used as a dis-</i>
isa DISC RULE	<i>course relation for stylistic purposes.</i>
[358]	
" PRIM	<i>Morphology specification.</i>
isa MORPH RULE	
ANY "&" PRIM	<i>Both-and relation. Both relations hold</i>
isa RULE	
ANY " " PRIM	<i>Either-or relation. One of the relations holds</i>
isa RULE	
DISC " PRIM	<i>Down-dependent in attribution. The dependent in the relation is one step further</i>
isa RULE	<i>down in the attribution chain</i>
[369]	
PRIM "#"	<i>Pattern for idiomatic primary dependency. Head->dependent within idiom</i>
isa IDIOM RULE	
[352]	




PRIM " PRIM	<i>Explicit connector. The discourse relation has explicit connector \$CONNECTOR</i>
CONNECTOR	
PRIM " PRIM	<i>Implicit connector. The discourse relation has implicit connector \$CONNECTOR</i>
CONNECTOR	
PRIM " PRIM	<i>Attribution. Specifies the person to whom the utterance is attributed (ATTR or</i>
PRIM " PRIM	<i>ATTR1, ATTR2, ... when there is more than one person)</i>
PRIM " PRIM	<i>Pattern for primary dependency relation with thematic role. \$PRIM must be non-</i>
PRIM " PRIM	<i>thematic; the thematic roles can be agent, patient, recipient, experient, location.</i>
isa RULE	
[353]	



Chapter 10

Relations misplaced outside the ANY hierarchy



MISPLACED: misplaced relation

Figure 10.1: The relations matching -ANY.

MISPLACED *Misplaced relation.* A relation is misplaced if it fails to have ANY as a transitive
[9] super type. This should never happen, and the problem must be corrected if a
misplaced relation shows up here.

Appendix A

Overview tables

The tables in this section lists all the relations in the Copenhagen Dependency Treebanks, repeated from the preceding sections.

ANY: directed relation
DIM: dimension
 DIM:LEVEL: dimension: linguistic level
 DIM:TYPE: dimension: relation type
 +: segment concatenation
IDIOM: idiomatic relation
PRIM: primary dependency relation
 ADJ: adjunct relation
 COMP: complement relation
 SEC: secondary dependency relation

The relations matching ANY-SYNTAX-MORPHOLOGY-DISCOURSE-ANAPHORA-SEMANTICS-ALIGNMENT-RULE.

SYN: syntax level

The relations matching SYNTAX-SYNCOMP-SYNADJ.

SYNCOMP: syntactic complement
@space: valency-bound location/direction adverbial
@time: valency-bound time adverbial
aobj: adjectival object
avobj: adverbial object
dobj: direct object
fobj: filler object
gobj: genitive object
iobj: indirect object
nobj: nominal object
numa: additive numeral complement
numm: multiplicative numeral complement
part: verbal particle
pobj: prepositional object
possd: possessed complement
possr: possessor complement
pred: predicative
 predo: object predicative
 preds: subject predicative
qobj: quotational object
robj: reflexive object
subj: subject
 expl: expletive subject
vobj: verbal object

The relations matching SYNCOMP.

ADVERB: adverbial
 agent: agent adverbial
 ben: benefactive adverbial
 cause: causation adverbial
 goal: goal adverbial
 reas: reason adverbial
 comp: comparison adverbial
 conc: concession adverbial
 concom:
 cond: condition adverbial
 cons: consequence adverbial
 degr: degree adverbial
 exem: example adverbial
 man: manner adverbial
 accom: companionship adverbial
 inst: instrument adverbial
 neg: negation adverbial
 other: other adverbial
 prg: pragmatic adverbial
 att: attitude adverbial
 discmark: sentence-initial discourse marker
 epi: epistemic adverbial
 eval: evaluation adverbial
 focal: focalizer adverbial
 pcond: pragmatic condition adverbial
 source: source attribution adverbial
 space: space adverbial
 dir: direction adverbial
 loc: location adverbial
 struct: text-structuring or connective adverbial
 add: additive adverbial
 bg: background adverbial
 contr: contrast adverbial
 elab: elaboration adverbial
 time: time adverbial
 cont: contemporaneity adverbial
 dur: duration adverbial
 ext: extent/frequency adverbial
 hab: habituality adverb
 prec: precedence adverbial
 succ: succession adverbial

The relations matching ADVERB.

SYNADJ: syntactic adjunct
 GAP: gapping dependent
 "<" PRIM ... ":" INTEGER ">": gapping dependent
 app: apposition
 appa: parenthetic apposition (comma)
 xpl: explication
 appr: restrictive apposition (no comma)
 attr: attributive
 attrg: genitive attributive
 conj: conjunct relation
 coord: coordinator relation
 correl: correlative coordinator relation
 fpred: free predicative
 fpredo: free direct-object predicative
 fpreds: free subject predicative
 name: part of name
 namef: first name
 namel: last name
 title: person title
 pnct: punctuation
 rel: relative clause
 relelab: elaborating relative clause
 relpa: parenthetic relative clause
 relr: restrictive relative clause
 voc: vocative
 xtop: external topic with resuming pronoun

The relations matching SYNADJ-ADVERB.

MORPH: morphology level
 "§" PRIM: morphology specification

The relations matching MORPHOLOGY-MORPHCOMP-MORPHDERIV.

MORPHCOMP: compositional semantic relations
 ABOUT: noun-noun compound (about)
 AGENT: noun-noun compound (agentive)
 CONST: noun-noun compound (constitutive)
 EVAL: noun-noun compound (evaluative)
 FUNC: noun-noun compound (function)
 ORIGIN: noun-noun compound (origin)
 OTHER: noun-noun compound (other)
 POS: noun-noun compound (position)
 POSS: noun-noun compound (possession)
 RESEM: noun-noun compound (resemblance)
 TIME:MC: noun-noun compound (time)

The relations matching MORPHCOMP.

MORPHDERIV: derivational semantic relations

The relations matching MORPHDERIV-PREFIX-SUFFIX.

PREFIX: semantic relations appearing with prefixes

ASPEC: aspectual dimension

ASPEC:cause: causation

ASPEC:iter: iteration

ASPEC:reflex: reflexivity

ASPEC:resul: result

ASPEC:rev: reversion

ASPEC:term: termination

GRAD: graduation

GRAD:qual: quality

GRAD:size: size

LOC: location

LOC:dir: direction

LOC:pos: position

LOC:proce: origin

MOD: modification

MOD:cuant: quantification

MOD:man: manner

MOD:qual: qualification

NEG: negation

NEG:oppo: opposition

NEG:priv: privation

PRE:other: other prefix relation

TIME\$: time

TRANS: transitivity

The relations matching PREFIX.

SUFFIX: semantic relations appearing with suffixes
 AUG: augmentation
 DENOM: noun-adjective derivation
 DENOM:disp: noun-adjective derivation (disposition)
 DENOM:eff: noun-adjective derivation (effect)
 DENOM:other: noun-adjective derivation (other)
 DENOM:poss: noun-adjective derivation (possession)
 DENOM:rel: noun-adjective derivation (relational)
 DENOM:rel.deono: noun-adjective derivation (naming)
 DENOM:rel.deono.pers: noun-adjective derivation (naming persons)
 DENOM:rel.deono.place: noun-adjective derivation (naming places)
 DENOM:rel.norm: noun-adjective derivation (normal)
 DENOM:resem: noun-adjective derivation (resemblance)
 DENUM: adjective-numeral derivation
 DENUM:mult: adjective-multiplicative derivation
 DENUM:ord: adjective-ordinal derivation
 DENUM:part: adjective-partitive derivation
 DER: verb derivation
 DER:av: adjective-verb derivation
 DER:nv: noun-verb derivation
 DER:vv: verb-verb derivation
 DEV:
 DEVA: verb-adjective derivation
 DEVA:act: verb-adjective derivation (active)
 DEVA:act.disp: verb-adjective derivation (pure)
 DEVA:act.poten: verb-adjective derivation (disposition)
 DEVA:pas: verb-adjective derivation (potentiality)
 DEVA:pas.deon: verb-adjective derivation (passive potentiality)
 DEVA:pas.poten: verb-adjective derivation (passive participles)
 DEVA:pas.part: verb-adjective derivation (passive)
 DEVN: verb-noun derivation
 DEVN:agent: verb-noun derivation (agent)
 DEVN:core: verb-noun derivation (core)
 DEVN:exper: verb-noun derivation (experiencer)
 DEVN:inst: verb-noun derivation (instrument)
 DEVN:loc: verb-noun derivation (location)
 DEVN:other: verb-noun derivation (other)
 DEVN:recip: verb-noun derivation (recipient)
 DEVN:result: verb-noun derivation (patient)
 DIMIN: diminution
 NOPRED: noun-noun derivation
 NOPRED:agent: noun-noun derivation (agent)
 NOPRED:capac: noun-noun derivation (capacity)
 NOPRED:cont: noun-noun derivation (container)
 NOPRED:loc: noun-noun derivation (location)
 NOPRED:other: noun-noun derivation (other)
 NOPRED:result: noun-noun derivation (result)
 NOPRED:script: noun-noun derivation (script)
 NOPRED:set: noun-noun derivation (set)
 NOPRED:temp: noun-noun derivation (temporal)
 PEJ: pejoration
 QUAL: adjective derivation

The relations matching SUFFIX.

DISC: discourse level
"α" PRIM: discourse specification

The relations matching DISCOURSE-DISCFUNC-DISCSEM.

DISCFUNC: functional discourse relation
ANSW: answer
CONSOL: consolidation
 CONSOL:enabl: enablement
 CONSOL:just: justification
 CONSOL:motiv: motivation
DIREC: directive act
EXPR: expressive act
INTACT: interactional signals
 INTACT:attn: attention
 INTACT:inter: interruption
QUEST: question

The relations matching DISCFUNC.

DISCSEM: semantic discourse relation
 CAUSE: cause relation (discourse)
 CAUSE:expl: explanation relation (discourse)
 CAUSE:goal: goal relation (discourse)
 CAUSE:reas: reason relation (discourse)
 CONC: concession
 COND: condition
 CONJ: conjunction
 CONJ:seq: sequence
 CONS: consequence/result/conclusion relation (discourse)
 CONS:dir: direct, physical consequence, result
 CONS:prg: pragmatic/personal conclusion, deduction
 CONTR: contrast
 CONTR:dir: direct contrast
 CONTR:prg: pragmatic contrast
 DESCR: description/evaluation
 DESCR:eval: positive/negative evaluation
 DESCR:qual: neutral description
 DISJ: disjunction
 DISJ:dir: direct disjunction
 DISJ:prg: pragmatic disjunction
 ELAB: elaboration
 ELAB:exem: exemplification
 ELAB:exp: expansion
 ELAB:part: part of relation
 ELAB:rest: restatement
 JOINT: no clear relation
 STRUCT: structural relation
 STRUCT:prep: preparation
 STRUCT:rep: repaired
 TIME: temporal relation
 TIME:cont: contemporaneity
 TIME:prec: temporal precedence
 TIME:prec§: temporal precedence
 TIME:succ: temporal succession
 TIME:succ§: temporal succession

The relations matching DISCSEM.

ANA: anaphoric level
 anaphor:

The relations matching ANAPHORA-coref-assoc.

coref: coreference
coref-id: lexical identity coreference
coref-part: partial coreference
coref-prg: pragmatic coreference
coref-res: resumptive anaphor
coref-var: lexical variation coreference
ref: syntactically determined coreference

The relations matching coref.

assoc: associative anaphor
"assoc-" QUALIA: associative anaphor wrt. qualia
assoc-agentive: associative anaphor (agentive)
assoc-const: associative anaphor (constitutive)
assoc-formal: associative anaphor (formal)
assoc-telic: associative anaphor (telic)

The relations matching assoc.

SEM: semantic level

The relations matching SEMANTICS-QUALIA-SEMROLE.

QUALIA: qualia roles
const: constitutive qualia
formal: formal qualia
agentive: agentive qualia
location: location qualia
resem: resemblance wrt. qualia role
" QUALIA: resemblance wrt. \$qualia relation
telic: telic qualia
about: about qualia

The relations matching QUALIA.

SEMROLE:

{about}:
{agent}: An object or a person that performs an action
{apart}:
{arg}:
{class}:
{const}:
{eval}:
{experient}: The receiver of an emotion or a psysical impact
{form}:
{func}:
{iden}:
{location}: The location where something is situated or happens
{origin}:
{patient}: An object or a person that is the subject of the action or the one
who is located somewhere
{poss}:
{pos}:
{quant}:
{recipient}: The receiver of something
{resem}:
{time}:

The relations matching SEMROLE.

ALIGN: alignment level

": unlabeled word alignment
f: fuzzy word alignment

The relations matching ALIGN.

RULE: relation rule
 "(" ANY "): disambiguation
 "*" DISC: down-head in attribution
 "<" PRIM ... ":" INTEGER ">": gapping dependent
 "@" adverb: valency-bound adverbial
 "[" PRIM "]: pattern for secondary syntactic dependency relation formed from primary syntactic dependency relation
 "assoc-" QUALIA: associative anaphor wrt. qualia
 "{" SEM "}: pattern for secondary semantic dependency relation formed from primary semantic dependency relation
 "\$ QUALIA: resemblance wrt. \$qualia relation
 "⋈" PRIM: discourse specification
 "§" PRIM: morphology specification
 ANY "&" ANY: both-and relation
 ANY "|" ANY: either-or relation
 DISC "*": down-dependent in attribution
 PRIM "#": pattern for idiomatic primary dependency
 PRIM "/" CONNECTOR: explicit connector
 PRIM "/"(" CONNECTOR "): implicit connector
 PRIM "/ATTR" INTEGER: attribution
 PRIM "{" THEM "}: pattern for primary dependency relation with thematic role

The relations matching RULE.

MISPLACED: misplaced relation

The relations matching -ANY.

Appendix B

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