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=0ArjTKYTQS1lWcnNUWGJrX3lZTkxDc3QxYmlqWlRXQ1E&hl=en

Contents

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
isa super
[12]

The notation in the left margin indicates that we now describe the relation relation; it has immediate super type super and is defined in row 12 in the spreadsheet. When 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

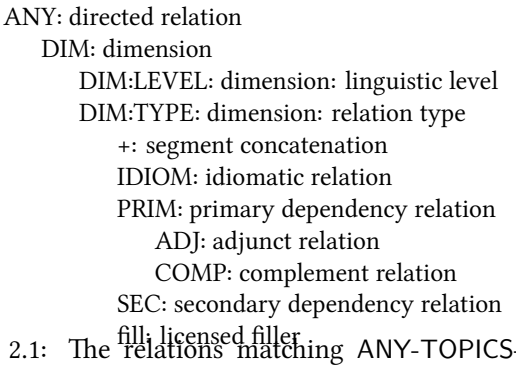


Figure 2.1: The relations matching ANY-TOPICS-SYNTAX-MORPHOLOGY-DISCOURSE-ANAPHORA-SEMANTICS-ALIGNMENT-RULE.

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

Subtypes: DIM RULE TOPICS.

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

Subtypes: DIM:LEVEL DIM:TYPE.

DIM:LEVEL isa DIM [6] *Dimension: linguistic level.* Dimension specifying the linguistic level of the relation. The classification of relations into linguistic levels is slightly arbitrary (there will be 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 isa DIM [7] *Dimension: relation type.* Dimension specifying the type of the relation.

Subtypes: + IDIOM PRIM SEC fill.

+ isa DIM:TYPE [31] *Segment concatenation* (long: CONCATENATION). A concatenation relation between two adjacent segments. This relation is used if an indecomposable lexeme has mistakenly been segmented into two segments. Lexicalized complex expressions are instead marked as IDIOM relations with the "#" suffix.

Related types: IDIOM.

IDIOM *Idiomatic relation.* An idiomatic relation. Ie, a relation between tokens in a complex lexicalized expression that form a single lexical unit.
isa DIM:TYPE
[32]
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. The relation is licensed by the adjunct, ie, the lexical entry of the adjunct specifies the permissible adjunct frames for the adjunct (ie, the permissible adjunct roles and the restrictions on the governor, eg, with respect to word class). In the compositional semantics, the adjunct acts as functor with the governor as argument.
isa PRIM
[26]
Subtypes: DISCOTHER DISCPRAG DISCSEM SYNADJ.

COMP *Complement relation* (long: COMPLEMENT). A primary complement relation. The relation is licensed by the governor, ie, the lexical entry of the governor specifies the complement frames that it allows (the complement frame specifies the permissible complement roles, and the lexical restrictions on the complements, eg, with respect to word class). In the compositional semantics, the complements act as arguments with the governor as functor.
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"}".

fill *Licensed filler.* A relation from a filler licensor to a phonetically empty filler that it licenses. Filler relations are never annotated explicitly in the CDT annotation, but play an important role in the underlying linguistic theory, Discontinuous Grammar. In DG, a "filler" is a phonetically empty constituent which is licensed lexically by a "filler licensor" lexeme (eg, the relative verb in a relative construction acts as filler licensor for a filler that essentially provides a copy of the relativized noun, and in control constructions, the controlling verb passes on a copy of the controlled complement to the subordinate verb).
isa DIM:TYPE
[29]

Chapter 3

Syntactic relations: SYNTAX

SYN: syntax level

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

SYN *Syntax level* (long: SYNTAX). A relation at the syntactic level. Ie, a relation between two segments within a sentence, but not within a single word.
isa DIM:LEVEL [16]
Subtypes: SYNADJ SYNCOMP.

3.1 Complement relations: SYNCOMP

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

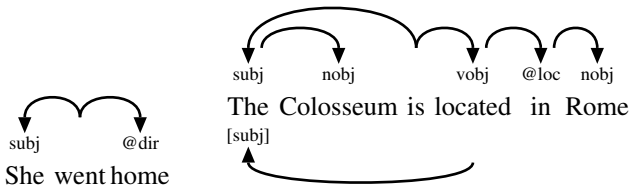
Figure 3.2: The relations matching SYNCOMP.

SYNCOMP *Syntactic complement.* A syntactic complement role. Complements are lexically licensed by
isa COMP SYN [75]

their governors. In the functor-argument structure, they act as functors with the complements as arguments.

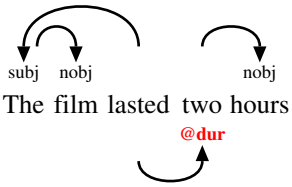
Subtypes: @space @time aobj avobj dobj fobj gobj iobj nobj numa numm part pobj possd possr pred qobj robj subj vobj.

@space *Valency-bound location/direction adverbial.*
isa SYNCOMP Related types: dir loc.
[84]



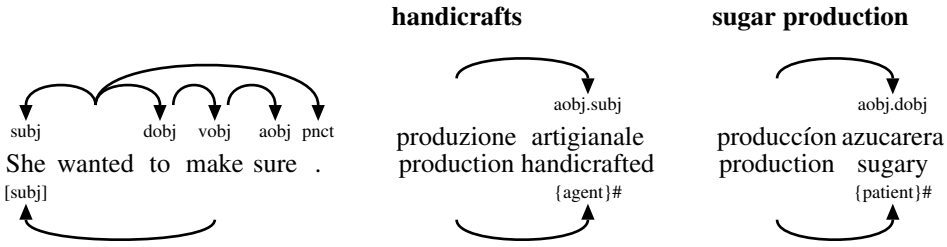
@time *Valency-bound time adverbial.* A valency bound time expression. Formerly analyzed as
isa SYNCOMP locative object, but we have decided to provide a general mechanism (@) for converting
[100] adverbial relations into valency-bound relations.

Related types: cont dur ext hab prec succ.

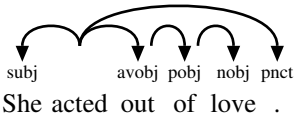


aobj *Adjectival object.* If the adverbial object is part of a NP which nucleus is deverbal, the
isa %SYN:NP:MOD following annotation possibilities are available: aobj.subj{SEMROLE} aobj.dobj{SEMROLE}
SYNCOMP aobj.pobj{SEMROLE} aobj.iobj{SEMROLE} The relevant semantic roles in this context are
[91] agent, patient, recipient, experient, location.

Related types: avobj.
Confusion$_9$: attr$_{44\%}$ aobj$_{33\%}$ man$_{11\%}$ nobj$_{11\%}$.



avobj *Adverbial object.*
isa SYNCOMP Related types: aobj part.
[92] Confusion$_4$: quant$_{50\%}$ loc$_{25\%}$ avobj$_{25\%}$.

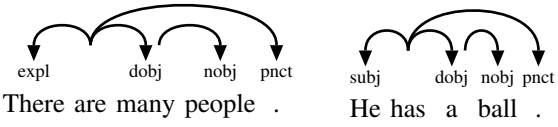


dobj isa SYNCOMP [80]

Direct object. A direct object relation. In languages with case, the direct object is typically accusative-marked.

Related types: iobj robj.

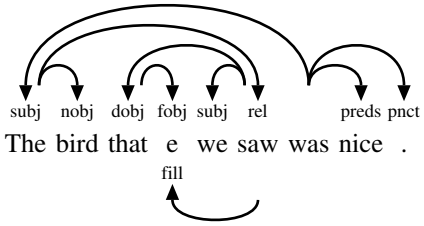
Confusion$_{93}$: dobj$_{86\%}$ pobj$_{4\%}$ nobj$_{2\%}$ preds$_{2\%}$ iobj$_{2\%}$ predo$_{1\%}$ dir$_{1\%}$ pnct$_{1\%}$.



fobj isa SYNCOMP [93]

Filler object. Filler objects are never annotated explicitly in the CDT annotation. In Discontinuous Grammar, a "filler" is a phonetically empty constituent which is licensed lexically by a "filler licensor" lexeme (eg, the relative verb in a relative construction acts as filler licensor for a filler that essentially provides a copy of the relativized noun). A "filler object" is reserved for the special case where a particular word (eg, a relative pronoun) must consume a filler (eg, the filler created by the relative verb). That is, most of the constructions which include a "ref" relation in the CDT involve the use of a filler object in the detailed theoretical account in Discontinuous Grammar.

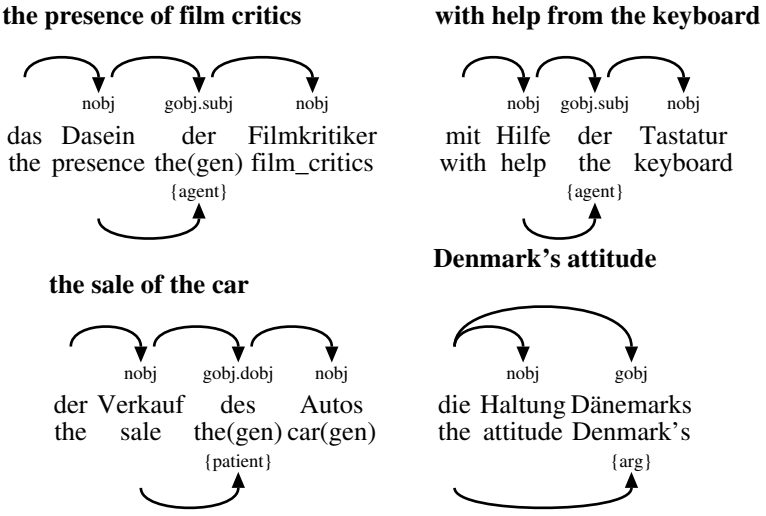
Related types: fill ref.



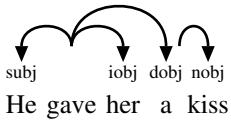
gobj isa SYNCOMP [82]

Genitive object. If the genitve 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.



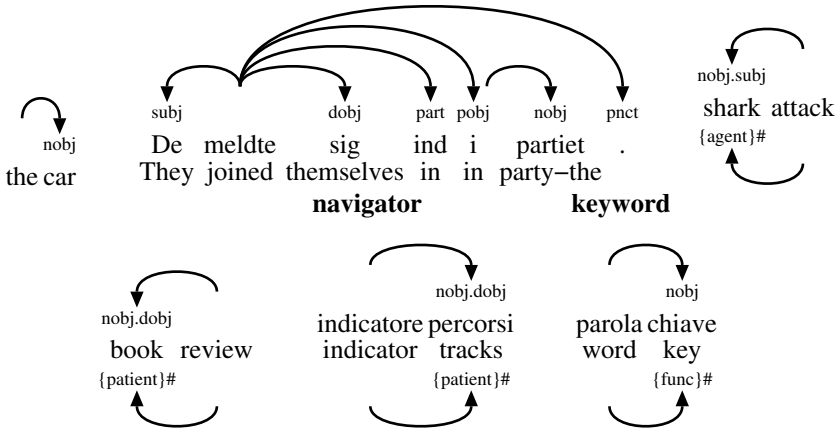
iobj *Indirect object.*
isa SYNCOMP Related types: dobj.
[83] Confusion$_2$: dobj$_{100\%}$.



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

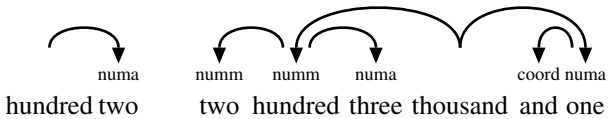
Confusion$_{488}$: nobj$_{92\%}$ attr$_{1\%}$ name$_{1\%}$ pobj$_{1\%}$ title$_{1\%}$ vobj$_{1\%}$ time$_{0\%}$ dobj$_{0\%}$ subj$_{0\%}$ possd$_{0\%}$ conj$_{0\%}$ aobj$_{0\%}$ pnct$_{0\%}$ quant$_{0\%}$ preds$_{0\%}$ loc$_{0\%}$ modp$_{0\%}$.

They joined the party.



numa *Additive numeral complement.* An additive numeral complement relation. Numerals license
isa SYNCOMP one additive and one numeral complement, both optional. The numerical value associated
[94] with the expression is the value M * N + A, where M is the numerical value of the multiplicative complement, A is the numerical value of the additive complement, and N is the numerical value associated with the lexical numeral itself. Eg, ”two hundred four” has value ”2 * 100 + 4”, ”two hundred four thousand” has value ”(2 * 100 + 4) * 1000”, and ”two hundred four thousand and twenty three” has value ”(2 * 100 + 4) * 1000 + (20 + (3))”.

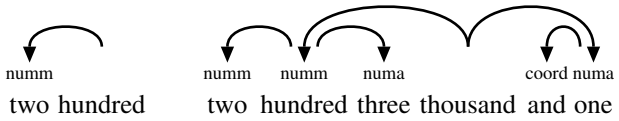
Related types: numm.



numm *Multiplicative numeral complement.* An multiplicative numeral complement relation. Nu-
isa SYNCOMP merals license one additive and one numeral complement, both optional. The numerical value
[95] associated with the expression is the value M * N + A, where M is the numerical value of the multiplicative complement, A is the numerical value of the additive complement, and N is

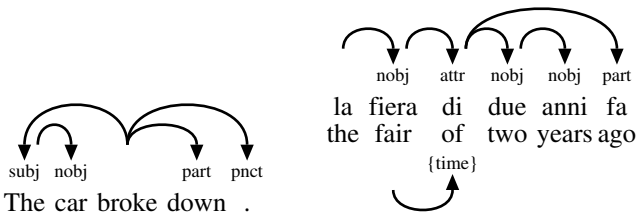
the numerical value associated with the lexical numeral itself. Eg, ”two hundred four” has value ”2 * 100 + 4”, ”two hundred four thousand” has value ”(2 * 100 + 4) * 1000”, and ”two hundred four thousand and twenty three” has value ”(2 * 100 + 4) * 1000 + (20 + (3))”.

Related types: numa.
Confusion$_1$: numm$_{100\%}$.



part *Verbal particle.* Verbal particle.
isa SYNCOMP Related types: avobj.
[96] Confusion$_3$: part$_{67\%}$ dir$_{33\%}$.

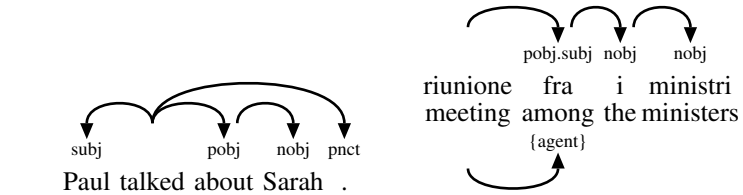
the fair two years ago



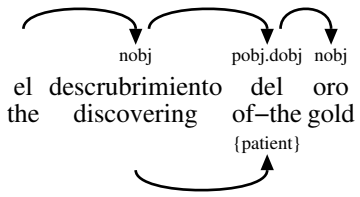
pobj *Prepositional object.* A prepositional object relation. The governor may be a verb, noun, adjective, adverbial, or another preposition. The preposition is analyzed as the head of the prepositional object itself. If the prepositional object is part of a deverbal NP (ie, an NP where the nucleus is derived from a verb), the CDT annotation specifies the underlying role of the NP within the PP by adding a ”.” followed by the underlying role to the relation, e.g., ”pobj.subj” (the NP in the PP would act as subject in the underlying V), ”pobj.dobj”, ”pobj.pobj”, and ”pobj.iobj”; in these cases, the semantic role ”{SEMROLE}” must be annotated as well (the most relevant semantic roles in this context are ”agent”, ”patient”, ”recipient”, ”experient”, ”location”).
isa SYNCOMP
[81]

Related types: SEMROLE avobj.
Confusion$_{109}$: pobj$_{55\%}$ attr$_{20\%}$ dir$_{6\%}$ nobj$_{5\%}$ dobj$_{4\%}$ source$_{3\%}$ goal$_{3\%}$ loc$_{2\%}$ man$_{1\%}$ other$_{1\%}$ inst$_{1\%}$ cause$_{1\%}$.

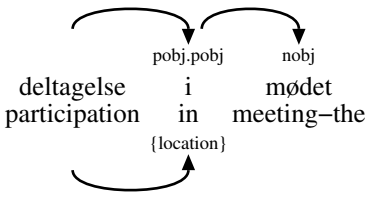
meeting of ministers



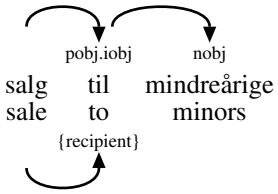
the discovering of the gold



participation in the meeting



sale to minors

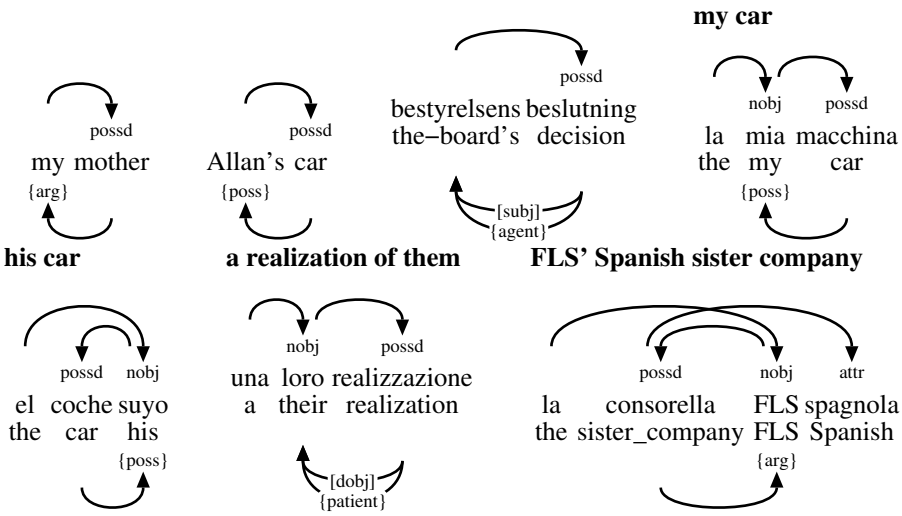


possd *Possessed complement.* The possessed complement in a possessive construction. Possession is understood in a syntactic sense as any construction with a clitic genitive marker, not necessarily as possession in a narrow semantic sense. A better name may be chosen for this relation in the future.

isa SYNCOMP [97]

Related types: "{"$PRIM"}" SEMROLE poss possr.

Confusion$_{30}$: possd$_{90\%}$ nobj$_{7\%}$ attr$_{3\%}$.



possr *Possessor complement.* NO LONGER IN USE

isa SYNCOMP [98]

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 [85]

Subtypes: predo preds.

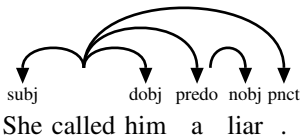
Related types: predo preds.

predo *Object predicative.*

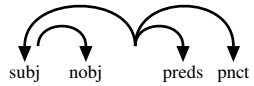
isa pred [87]

Related types: preds.

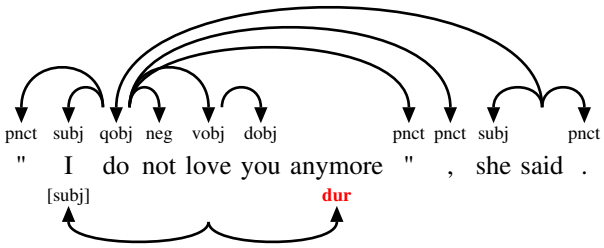
Confusion$_{1}$: dobj$_{100\%}$.



preds *Subject predicative.*
isa pred Related types: predo.
[86] Confusion$_{43}$: preds$_{86\%}$ dobj$_{5\%}$ nobj$_{2\%}$ loc$_{2\%}$ inst$_{2\%}$ resem$_{2\%}$.

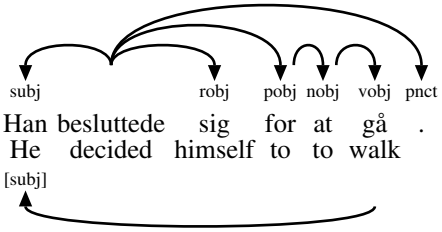


qobj *Quotational object.* A phrase or discourse segment functioning as directly quoted speech, typically by an attribution verb. Indirect speech is analyzed as ”dobj” or ”nobj”.
isa SYNCOMP
[99] Related types: xpl.
Confusion$_{5}$: qobj$_{100\%}$.



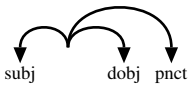
robj *Reflexive object.*
isa SYNCOMP Related types: dobj.
[89]

He decided to walk.



subj *Subject.* A subject relation. In languages with case, subjects are usually nominative-marked.
isa SYNCOMP Agent-roles are often encoded as subjects, but not necessarily so (eg, in passive constructions).
[78]

Subtypes: expl.
Related types: expl.
Confusion$_{171}$: subj$_{98\%}$ nobj$_{1\%}$ correl$_{1\%}$ attr$_{1\%}$.



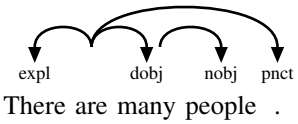
expl *Expletive subject.* An expletive subject relation. The expletive subject is typically a situational place adverbial like ”there” or time adverbial like ”now”, and is only possible for verbs that support the expletive alternation. The expletive alternation applies to all verbs that do not have a direct object (this observation, due to Richard Hudson, can be used as a test to distinguish between direct and indirect objects in verbs that take a single object). The alternation creates a new lexicalization of the verb by demoting the original subject to the vacant direct object role (with the restriction that only indefinites are allowed in this direct object role), and letting the subject role be filled by a situational place or time adverbial.

isa subj

[79]

Related types: subj.

Confusion$_4$: expl$_{100\%}$.



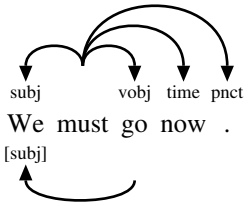
vobj *Verbal object.*

isa SYNCOMP

Related types: "["$PRIM"]".

[88]

Confusion$_{116}$: vobj$_{96\%}$ nobj$_{3\%}$ conj$_{1\%}$ relr$_{1\%}$.



3.2 Adverbial adjunct relations: ADVERB

ADVERB *Adverbial.* V/N/P->adverbial

isa SYNADJ

Subtypes: agent cause conc concom cond cons exem man neg other prg quant resem source space time.

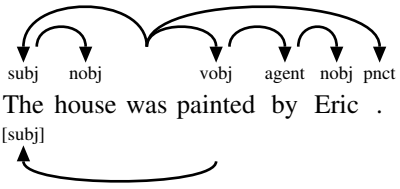
[139]

agent *Agent adverbial.* The passivized agent in passives.

isa ADVERB

Confusion$_1$: agent$_{100\%}$.

[167]



cause *Causation adverbial.* Causation adverbial. Describes why the event occurred.

isa ADVERB

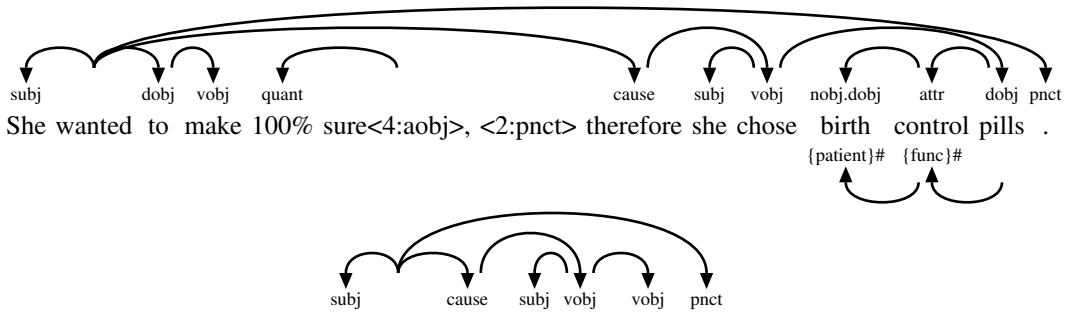
Subtypes: goal.

[157]

Confusion$_6$: cause$_{33\%}$ attr$_{33\%}$ pobj$_{17\%}$ cons$_{17\%}$.

ADVERB: adverbial
- agent: agent adverbial
- cause: causation adverbial
  - goal: goal adverbial
- conc: concession adverbial
- concom:
- cond: condition adverbial
- cons: consequence adverbial
- exem: example adverbial
- man: manner adverbial
  - accom: companionship adverbial
  - inst: instrument adverbial
- neg: negation adverbial
- other: other adverbial
- prg: pragmatic adverbial
  - discmark: sentence-initial discourse marker
  - epi: epistemic adverbial
  - eval: evaluation adverbial
  - focal: focalizer adverbial
  - scene: pragmatic condition and structural adverbial
    - add: additive adverbial
    - contr: contrast adverbial
    - elab: elaboration adverbial
- quant: degree adverbial
- resem: comparison adverbial
- source: source attribution adverbial
- space: space adverbial
  - dir: direction adverbial
  - loc: location adverbial
- time: time adverbial
  - iter: habituality adverb

Figure 3.3: The relations matching ADVERB.

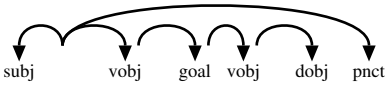


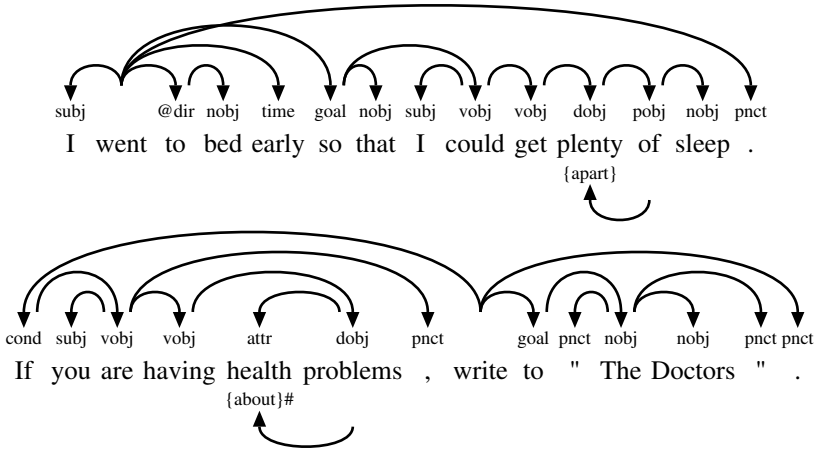
goal isa cause [158]

Goal adverbial (deprecated ben). Describes the intended goal of the event/action. Also used in connection with free datives.

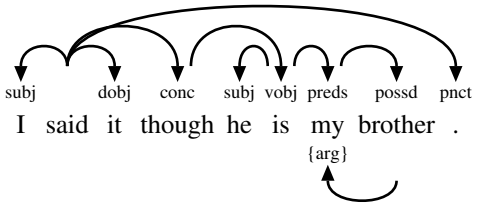
Related types: reas.

Confusion$_9$: goal$_{44\%}$ pobj$_{33\%}$ man$_{11\%}$ scene$_{11\%}$.



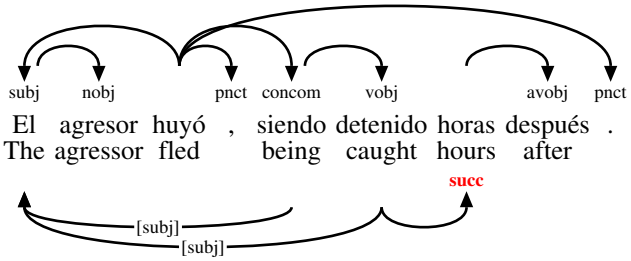


conc *Concession adverbial.* Describes the concession of the event/action.
isa ADVERB
[161] Confusion$_3$: contr$_{67\%}$ conc$_{33\%}$.

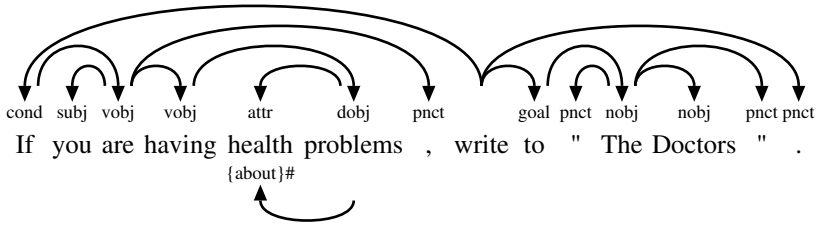


concom . Gerunds in Romance
isa ADVERB
[165] Related types: vobj.

The agressor fled and/but got caught hours later.

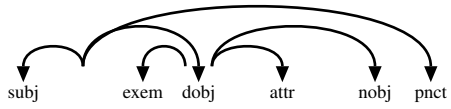


cond *Condition adverbial.* Describes the condition of the event/action.
isa ADVERB
[160] Related types: pcond.
Confusion$_2$: cond$_{100\%}$.

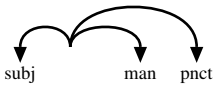


cons *Consequence adverbial.* Describes the consequence of the event/action.
isa ADVERB Related types: xtop.
[159] Confusion$_{3}$: cons$_{67\%}$ cause$_{33\%}$.

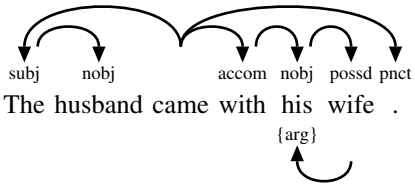
exem *Example adverbial* (long: exemplification, deprecated ex). Exemplification; subordinated the object which is added to a list.
isa ADVERB
[164] Confusion$_{3}$: exem$_{100\%}$.



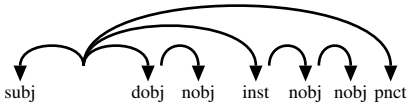
man *Manner adverbial.* The way things are done
isa ADVERB Subtypes: accom inst.
[154] Related types: fpredo.
Confusion$_{30}$: man$_{43\%}$ accom$_{10\%}$ epi$_{7\%}$ time$_{7\%}$ other$_{7\%}$ quant$_{7\%}$ source$_{3\%}$ attr$_{3\%}$ goal$_{3\%}$ aobj$_{3\%}$ eval$_{3\%}$ pobj$_{3\%}$.



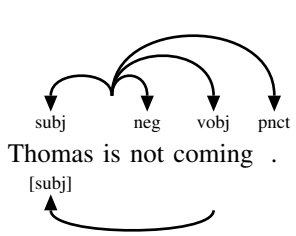
accom *Companionship adverbial* (deprecated comp). Companionship
isa man Related types: man.
[155] Confusion$_{5}$: man$_{60\%}$ accom$_{40\%}$.



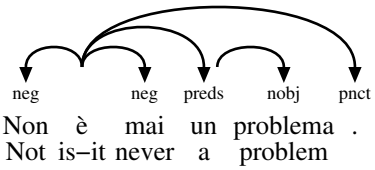
inst *Instrument adverbial.* Instrument/means
isa man Related types: man.
[156] Confusion$_{9}$: inst$_{44\%}$ loc$_{11\%}$ scene$_{11\%}$ preds$_{11\%}$ attr$_{11\%}$ pobj$_{11\%}$.



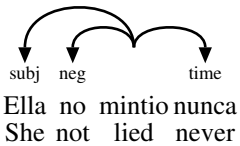
neg *Negation adverbial.* Negation of a verbal
isa ADVERB Confusion$_{14}$: neg$_{93\%}$ coord$_{7\%}$.
[168]



It's never a problem.



She never lied

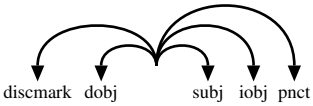


other *Other adverbial.*
isa ADVERB
[169] Confusion$_9$: loc$_{33\%}$ man$_{22\%}$ other$_{11\%}$ focal$_{11\%}$ attr$_{11\%}$ pobj$_{11\%}$.

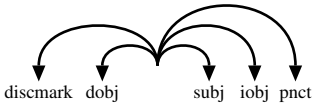
prg *Pragmatic adverbial* (long: pragmatic). Sentence level.
isa ADVERB
[140] Subtypes: discmark epi eval focal scene.

discmark *Sentence-initial discourse marker* (long: discoursemarker). Discourse marker
isa prg
[145] Related types: coord.
Confusion$_4$: contr$_{75\%}$ add$_{25\%}$.

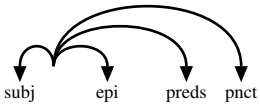
And I'm telling you...



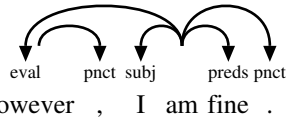
But I'm telling you...

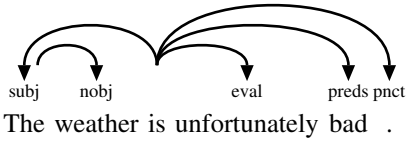


epi *Epistemic adverbial* (long: epistemic). Regarding the level of truth in the expression
isa prg
[143] Related types: eval.
Confusion$_5$: epi$_{60\%}$ man$_{40\%}$.



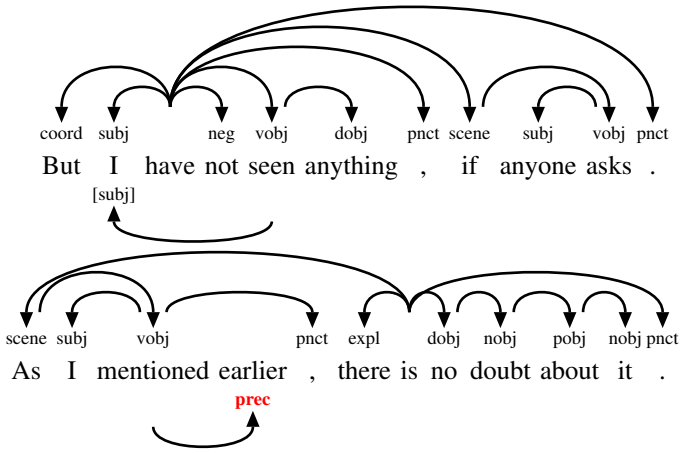
eval *Evaluation adverbial* (long: evaluation, deprecated evalatt). Evaluating and attitude adverbials
isa prg
[144] Related types: epi.
Confusion$_9$: eval$_{67\%}$ quant$_{22\%}$ man$_{11\%}$.



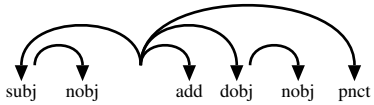


focal *Focalizer adverbial* (long: focalizator). Focalization of a noun
isa prg
[141] Related types: quant.
Confusion$_7$: focal$_{43\%}$ other$_{14\%}$ correl$_{14\%}$ loc$_{14\%}$ attr$_{14\%}$.

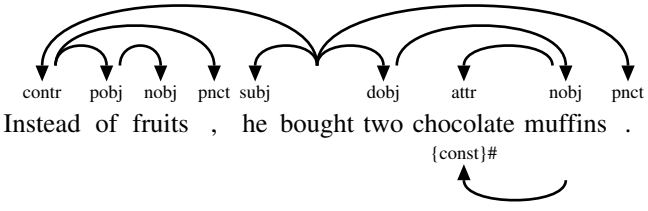
scene *Pragmatic condition and structural adverbial* (deprecated prgcondpcondbgstruct). Setting the scene
isa prg
[142]
Subtypes: add contr elab.
Related types: cond.
Confusion$_3$: goal$_{33\%}$ time$_{33\%}$ inst$_{33\%}$.



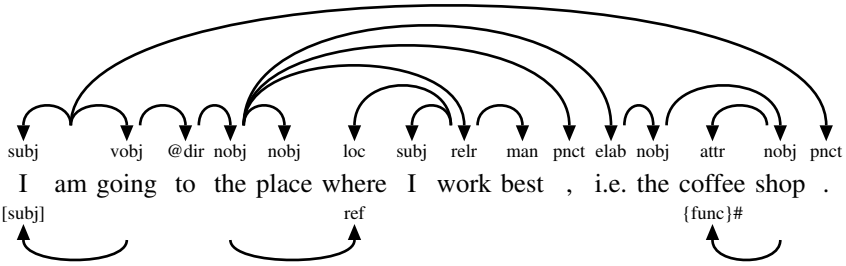
add *Additive adverbial* (long: additive). Additive information
isa scene
[148]
Confusion$_{11}$: add$_{91\%}$ discmark$_{9\%}$.



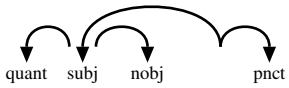
contr *Contrast adverbial* (long: contrast). Opposition
isa scene
[146]
Related types: struct.
Confusion$_7$: discmark$_{43\%}$ conc$_{29\%}$ coord$_{29\%}$.



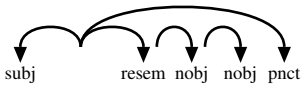
elab *Elaboration adverbial* (long: elaboration). More detailed description
isa scene
[147]



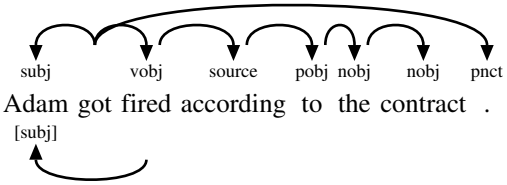
quant *Degree adverbial* (long: quantification, deprecated degr). Modifies the object or verbal by degree
isa ADVERB Related types: focal.
[166] Confusion$_{35}$: quant$_{77\%}$ man$_{6\%}$ avobj$_{6\%}$ eval$_{6\%}$ nobj$_{3\%}$ time$_{3\%}$.



resem *Comparison adverbial* (deprecated comparecomp). Comparison
isa ADVERB Confusion$_{1}$: preds$_{100\%}$.
[162]

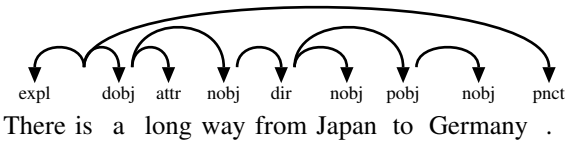


source *Source attribution adverbial.* Reference/source
isa ADVERB Confusion$_{4}$: pobj$_{75\%}$ man$_{25\%}$.
[163]

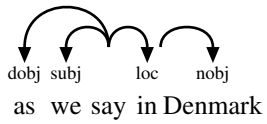


space *Space adverbial.* Space adverbials
isa ADVERB Subtypes: dir loc.
[151]

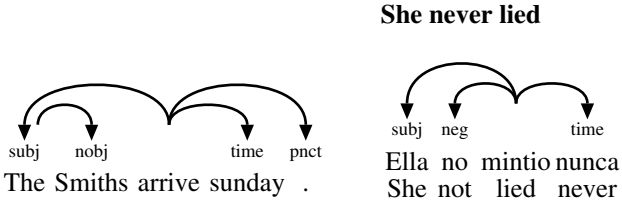
dir *Direction adverbial.* Movement from one place to another; direction
isa space Related types: loc.
[153] Confusion$_{15}$: pobj$_{40\%}$ dir$_{33\%}$ loc$_{13\%}$ part$_{7\%}$ dobj$_{7\%}$.



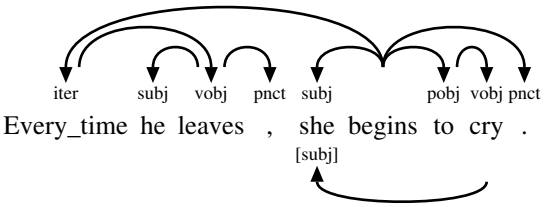
loc *Location adverbial.* Location
isa space Related types: dir.
[152] Confusion$_{45}$: loc$_{71\%}$ other$_{7\%}$ dir$_{4\%}$ pobj$_{4\%}$ nobj$_{2\%}$ preds$_{2\%}$ avobj$_{2\%}$ focal$_{2\%}$ attr$_{2\%}$ inst$_{2\%}$.



time *Time adverbial.* Time relating adverbials
isa ADVERB Subtypes: iter.
[149] Confusion$_{36}$: time$_{72\%}$ iter$_{6\%}$ man$_{6\%}$ nobj$_{6\%}$ attr$_{6\%}$ scene$_{3\%}$ quant$_{3\%}$.



iter *Habituality adverb* (deprecated hab). Habitual; repeated habit
isa time Related types: dur ext.
[150] Confusion$_{2}$: time$_{100\%}$.



3.3 Other adjunct relations: SYNADJ

SYNADJ *Syntactic adjunct.* A syntactic adjunct role. Adjuncts license their governors. In the functor-argument structure, they act as modifiers (ie, functors) which as their argument take the governor along with its complements and lower-scoped adjuncts.
isa ADJ SYN
[76]

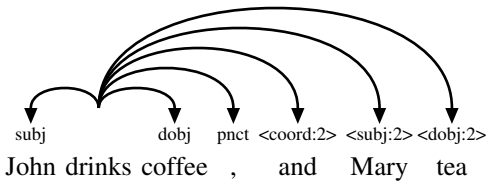
Subtypes: ADVERB GAP app attr attrg conj coord correl fpred mod name pnct rel voc xtop.

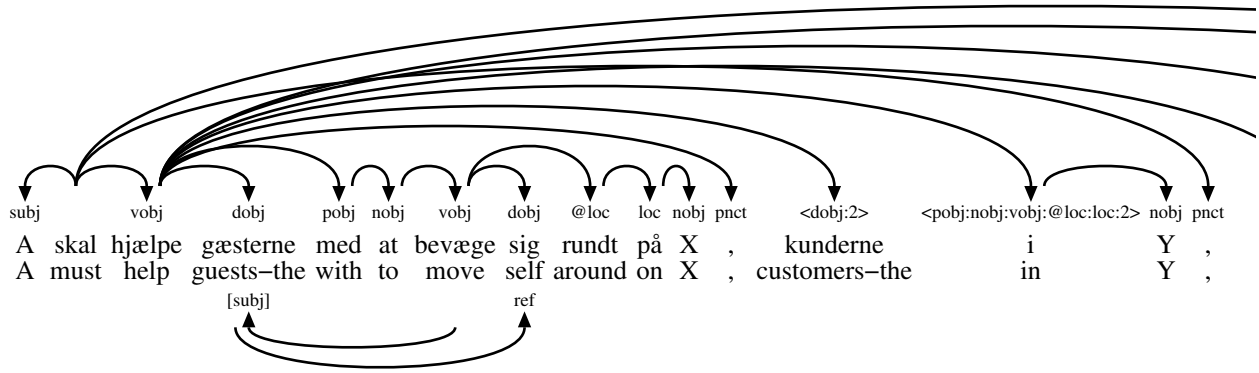
GAP *Gapping dependent* (long: GAPPING). A relation between a gapping dependent in a secondary conjunct and the head of the first conjunct. In gapping coordinations, the secondary conjuncts have an elided head, so the remaining material in the secondary conjuncts is instead analyzed as gapping dependents 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.
isa SYNADJ
[28]

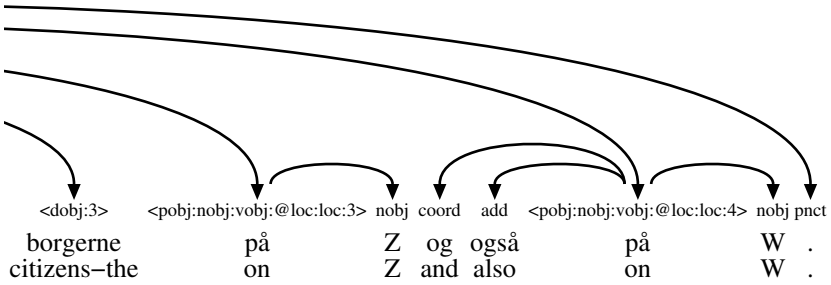
Subtypes: "<"PRIM...":"INTEGER">".

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
- mod: modifier/adverbial
  - modp: parenthetic modifier
- 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

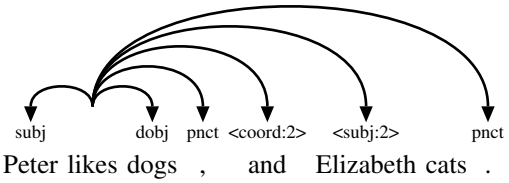
Figure 3.4: The relations matching SYNADJ-ADVERB.





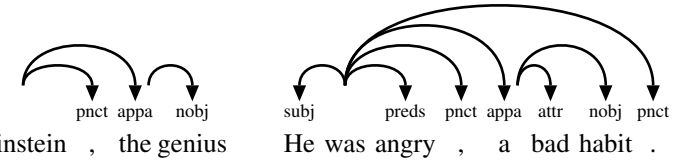


"<"PRIM...":"INTEGER">" *Gapping dependent.* First conjunct->gapping dependent
isa GAP RULE
[351]

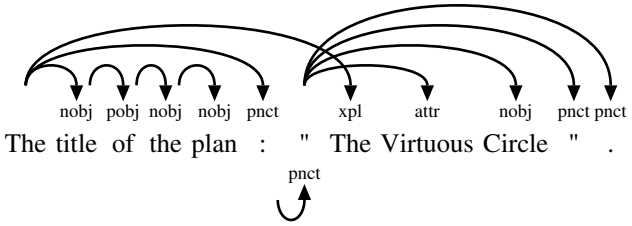


app *Apposition.* An appositional relation between two phrases, typically NPs. The head of the first NP in the apposition is always analyzed as the head of the second NP.
isa SYNADJ
[114]
Subtypes: appa appr.
Related types: appa appr.

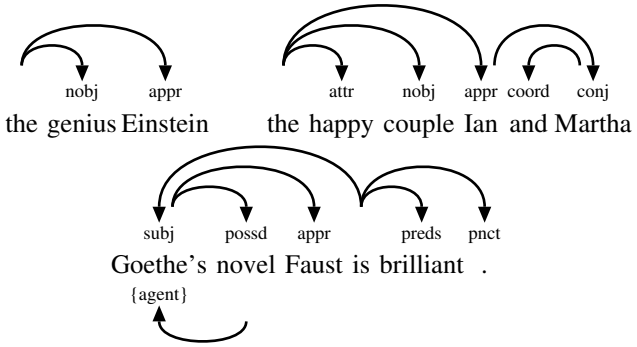
appa *Parenthetic apposition (comma).*
isa app
[115]
Subtypes: xpl.
Related types: appr xpl.
Confusion$_5$: appa$_{100\%}$.



xpl *Explication.* Explication of an NP or VP.
isa appa
[128]
Related types: qobj.
Confusion$_2$: xpl$_{100\%}$.

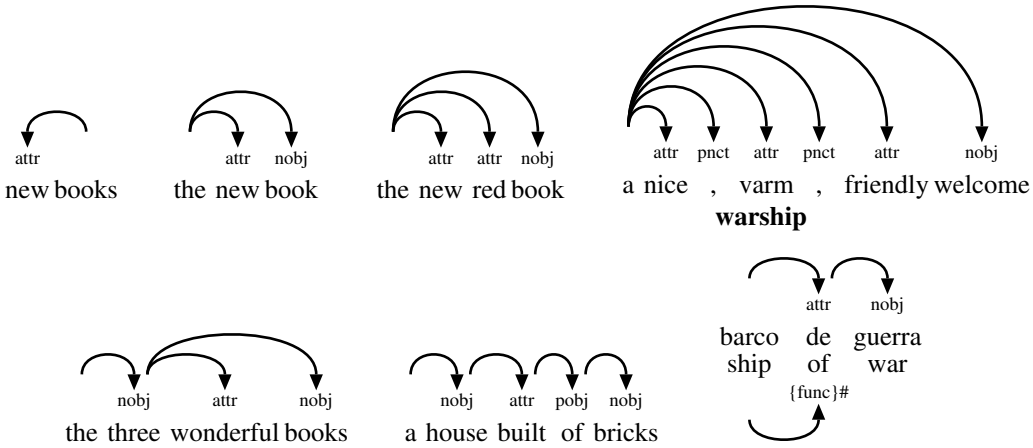


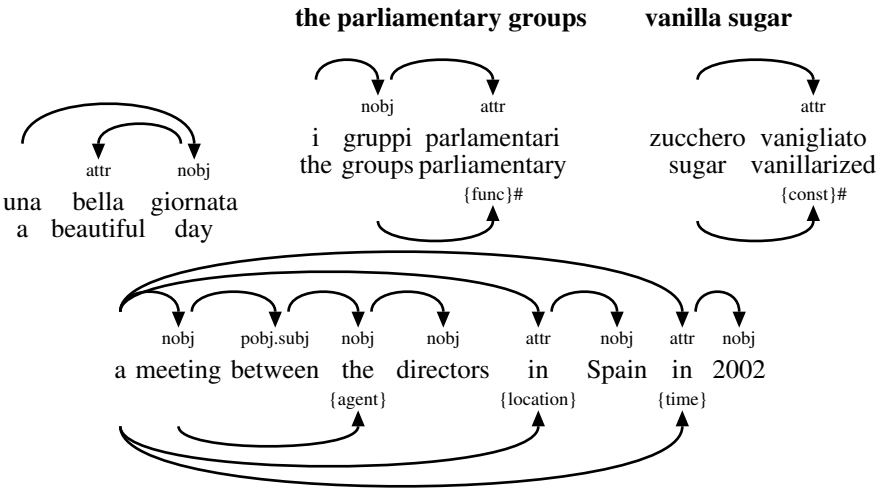
appr *Restrictive apposition (no comma).*
isa app Related types: appa.
[116] Confusion$_5$: appr$_{100\%}$.



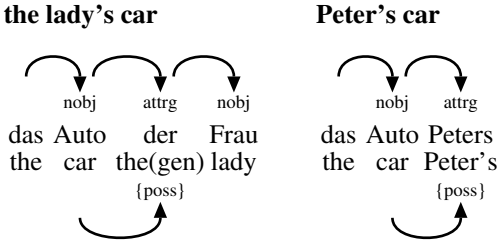
attr *Attributive* (deprecated attrdattrr). An attributive relation, typically between an adjective and a
isa %SYN:NP:MOD SYNADJ noun/determiner. In Germanic languages, adjectives are assumed to modify the determiner
[112] (because of the strong/weak congruence between determiner and adjective), or the noun if no determiner is present; in Romance languages, adjectives are assumed to modify the noun even if there is a determiner, and the determiner is only analyzed as the head if no noun is present (eg, in partitive constructions). The only exception to this rule is when the adjective and the noun form a compound, in which case the adjective is always analyzed as a "attr#" dependent of the lexical noun in both Germanic and Romance languages, even if a determiner is present.

Related types: SEMROLE attrg pobj.
Confusion$_{245}$: attr$_{81\%}$ pobj$_{9\%}$ nobj$_{2\%}$ aobj$_{2\%}$ conj$_{1\%}$ time$_{1\%}$ cause$_{1\%}$ focal$_{0\%}$ name$_{0\%}$ possd$_{0\%}$ subj$_{0\%}$ man$_{0\%}$ loc$_{0\%}$ other$_{0\%}$ inst$_{0\%}$ modp$_{0\%}$.



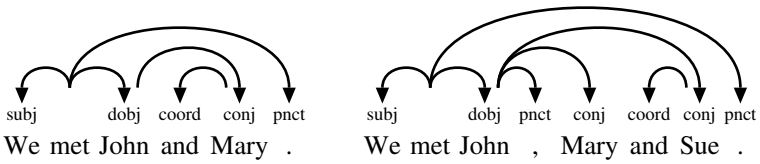


attrg *Genitive attributive.*
isa SYNADJ Related types: SEMROLE gobj.
[113]



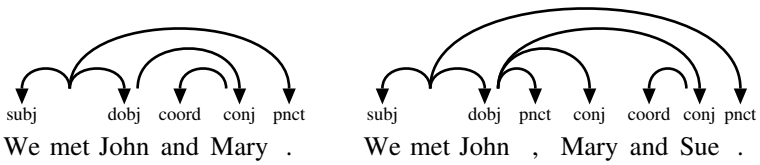
conj *Conjunct relation.* A dependency relation relating the conjuncts in a coordination. Secondary
isa SYNADJ conjuncts are analyzed as "conj"-dependents of the first conjunct. Coordinators are analyzed
[104] as dependents of the secondary conjuncts.

Related types: coord correl.
Confusion$_{93}$: conj$_{96\%}$ attr$_{2\%}$ nobj$_{1\%}$ vobj$_{1\%}$.

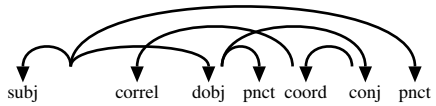


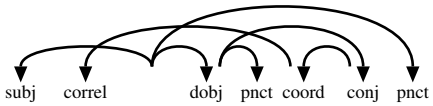
coord *Coordinator relation.* A dependency relation between a coordinating conjunction and a sec-
isa SYNADJ ondary conjunct. The coordinator is analyzed as a dependent of the secondary conjunct.
[105] Secondary conjuncts are in turn analyzed as "conj"-dependents of the first conjunct.

Related types: conj correl discmark.
Confusion$_{66}$: coord$_{95\%}$ contr$_{3\%}$ neg$_{2\%}$.



correl *Correlative coordinator relation.*
isa SYNADJ Related types: conj coord.
[106] Confusion$_4$: correl$_{50\%}$ focal$_{25\%}$ subj$_{25\%}$.

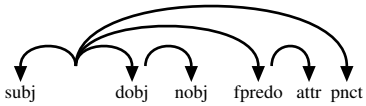




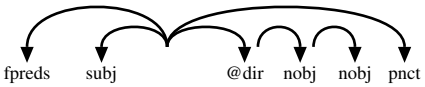
fpred *Free predicative.*
isa SYNADJ Subtypes: fpredo fpreds.
[109] Related types: fpredo fpreds.

V–>free predicative

fpredo *Free direct-object predicative.*
isa fpred Related types: fpreds man.
[111]



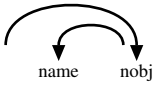
fpreds *Free subject predicative.*
isa fpred Related types: fpredo.
[110]

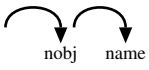


mod *Modifier/adverbial.* Deprecated name for adverbials
isa SYNADJ Subtypes: modp.
[134]

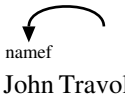
modp *Parenthetic modifier.* Deprecated name for parenthetic modifiers
isa mod Related types: {elab}.
[136] Confusion$_3$: nobj$_{33\%}$ attr$_{33\%}$ modp$_{33\%}$.

name *Part of name.* Part of a name.
isa SYNADJ Subtypes: namef namel title.
[122] Confusion$_{17}$: name$_{65\%}$ nobj$_{29\%}$ attr$_{6\%}$.

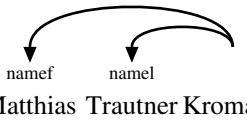




namef *First name.* A first name.
isa name Related types: namel title.
[123] Confusion$_{21}$: namef$_{100\%}$.

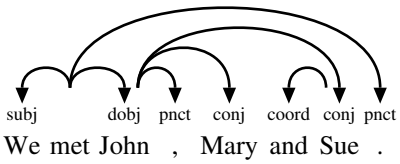


namel *Last name.* A second last name
isa name Related types: namef title.
[124] Confusion$_{4}$: namel$_{100\%}$.

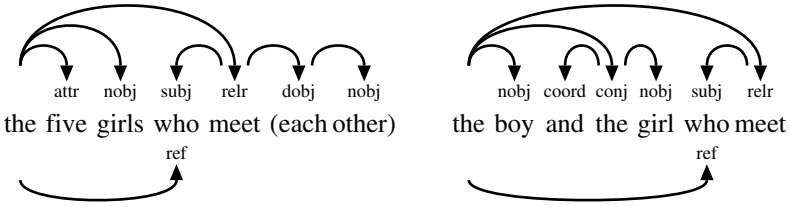


title *Person title.* A title in a name. If the is the title is determinated by an article, eg. the director
isa name Smith, the title must be annotated as "nobj" and the name as "appr".
[125] Related types: namef namel.
Confusion$_{6}$: nobj$_{50\%}$ title$_{50\%}$.

pnct *Punctuation.*
isa SYNADJ Confusion$_{275}$: pnct$_{99\%}$ nobj$_{0\%}$ dobj$_{0\%}$.
[107]



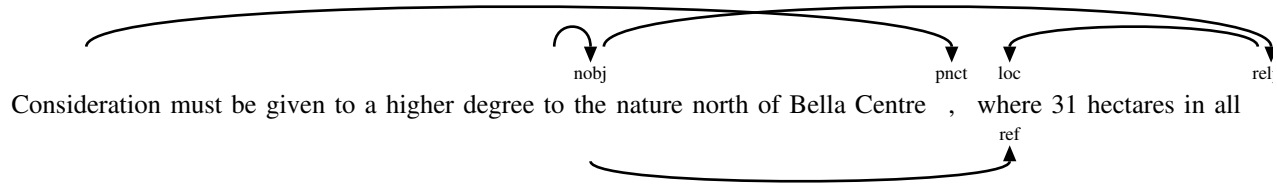
rel *Relative clause.* A relation between a relative clause and a relativized NP/VP. The finite verb
isa SYNADJ in the relative clause is analyzed as a "rel" dependent of the head of the relativized NP/VP
[117] (ie, the determiner if present, otherwise the noun). If there is a relative pronoun, it receives an incoming "ref" arrow from the head of the relativized NP/VP; otherwise, the head of the relativized NP/VP must function as a secondary dependent of some word within the relative clause (often the relative verb itself).
Subtypes: relelab relpa relr.
Related types: relelab relpa relr.

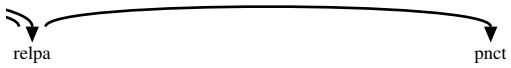


relelab *Elaborating relative clause.* Ledsætning med sætningsantecedent i hovedsætning; da: hvilket, it: il che, cosa che
isa rel
[120] Related types: relpa relr.

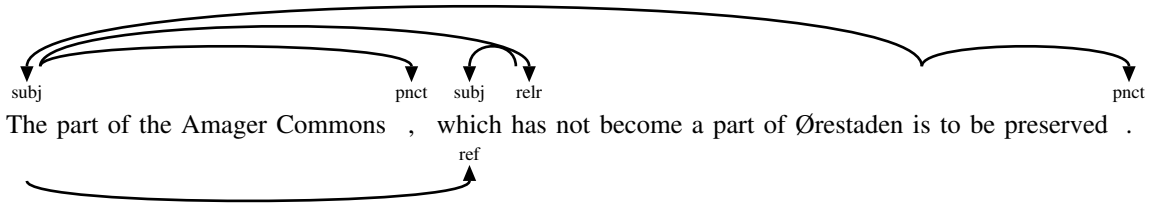
V–>V

relpa *Parenthetic relative clause.*
isa rel Related types: relelab relr.
[119] Confusion$_{11}$: relr$_{64\%}$ relpa$_{36\%}$.

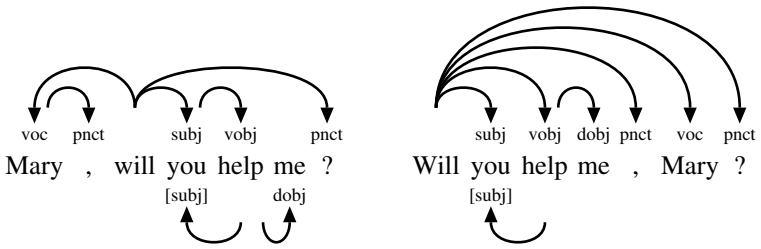




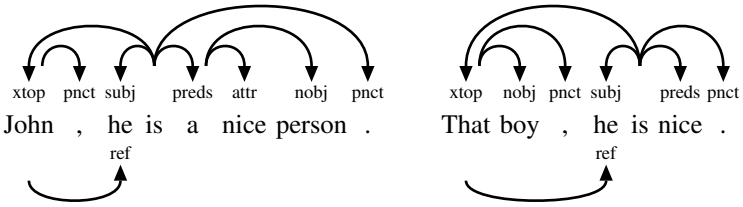
relr *Restrictive relative clause.*
isa rel Related types: relelab relpa.
[118] Confusion$_{23}$: relr$_{65\%}$ relpa$_{30\%}$ vobj$_{4\%}$.



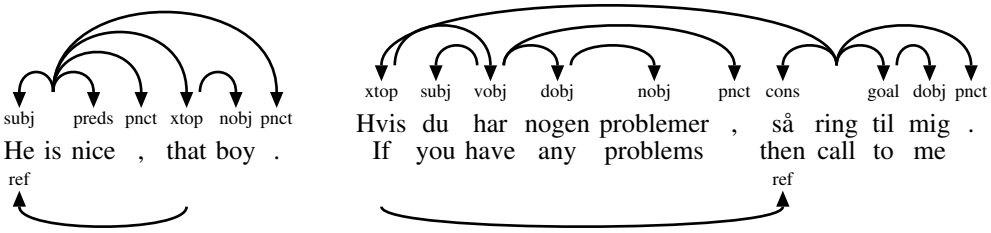
voc *Vocative.* Vocative specification. The person to whom the statement is directed.
isa SYNADJ
[127]



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. Eg in ”John, he is a nice person”. Here ”John” is the ”xtop” of ”is”, and ”he” is the subject of ”is”.
isa SYNADJ
[121] Related types: cons ref xtop.



If you are having any problems, call me.



Chapter 4

Morphological relations: MORPHOLOGY

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

MORPH isa DIM:LEVEL [15] *Morphology level* (long: MORPHOLOGY). A relation at the morphological level. Ie, a relation between two word segments within a single word.

Subtypes: "§"PRIM MORPHCOMP MORPHDERIV.

"§"PRIM isa MORPH RULE [354] *Morphology specification.*

4.1 Compositional relations: MORPHCOMP

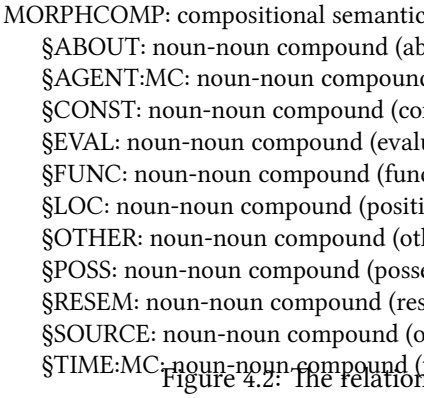


Figure 4.2: The relations matching MORPHCOMP.

MORPHCOMP isa MORPH [254] *Compositional semantic relations.* A semantic relation is created between two (or more) elements which could potentially be used as stems. (A compound contains at least two roots.)

Subtypes: §ABOUT §AGENT:MC §CONST §EVAL §FUNC §LOC §OTHER §POSS §RESEM §SOURCE §TIME:MC.

§ABOUT isa MORPHCOMP [341] *Noun-noun compound (about).* Non-head has an aboutness meaning wrt. head.

(theme: skattelov 'tax law' = lov –[skat]te/ABOUT)

§AGENT:MC *Noun-noun compound (agentive).* Non-head has an agentive meaning wrt. head.
isa MORPHCOMP
[333]

(agent: politikontrol 'police control' = kontrol –politi/AGENT)

§CONST *Noun-noun compound (constitutive).* Non-head has a constitutive meaning wrt. head.
isa MORPHCOMP
[332]

(constitutive: træbord 'wooden table' = bord –træ/CONST)

§EVAL *Noun-noun compound (evaluative).* Non-head has an evaluative meaning wrt. head.
isa MORPHCOMP
[339]

coche de lujo 'luksusbil'

§FUNC *Noun-noun compound (function).* Non-head has a functional meaning wrt. head.
isa MORPHCOMP
[335]

(function: krigsskib 'war ship' = skib –[krig]s/FUNC)

§LOC *Noun-noun compound (position).* Non-head has a locative meaning wrt. head.
isa MORPHCOMP
[337]

(position: loftlampe 'ceiling lamp' = lampe –loft/POS)

§OTHER *Noun-noun compound (other).* If in doubt about the meaning relation between head and
isa MORPHCOMP non-head.
[342]

§POSS *Noun-noun compound (possession).* Non-head has a possessive meaning wrt. head.
isa MORPHCOMP
[336]

(possession: politibil = bil –politi/POSS

§RESEM *Noun-noun compound (resemblance).* Denotations of head and non-head resemble each
isa MORPHCOMP other.
[340]

silla de tijeras 'saksestol' [klapstol], válvula de mariposa 'sommerfugleventil'

§SOURCE *Noun-noun compound (origin).* Non-head has a meaning of origin wrt. head.
isa MORPHCOMP
[334]

(origin: rørsukker 'cane sugar' = sukker –rør/ORIGIN)

§TIME:MC *Noun-noun compound (time).* Non-head has a temporal meaning wrt. head.
isa MORPHCOMP
[338]

(time: oktoberregn 'October rain' = regn –oktober/TIME)

MORPHDERIV: derivational semantic relations

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

PREFIX: semantic relations appearing with prefixes
- §AGENT: agentive
- §ITER: iteration
- §MOD: modification
  - §MOD:eval: evaluation
  - §MOD:qual: qualification
  - §MOD:quant: quantification
- §NEG: negation
  - §NEG:contr: contrast
  - §NEG:priv: privation
  - §NEG:rev: reversion
- §PRE:other: other prefix relation
- §SPACE: space
  - §SPACE:dir: direction
  - §SPACE:loc: location
  - §SPACE:source: source
- §TELIC: telic
- §TIME: time
  - §TIME:post: temporal succession
  - §TIME:pre: temporal precedence
- §TRANS: transitivity

Figure 4.4: The relations matching PREFIX.

4.2 Derivational relations: MORPHDERIV

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

4.2.1 Prefix relations: PREFIX

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

§AGENT *Agentive* (deprecated ASPEC:cause+reflex). Prefix conveys agentive action.
isa PREFIX
[272]

(causative: acallar 'silence' = callar –a/AGENT)

§ITER *Iteration* (deprecated ASPEC:iter). Prefix conveys iteration.
isa PREFIX
[271]

(iterative: redefine = define –re/ITER)

§MOD *Modification.* Prefix conveys modification in a broad sense.
isa PREFIX
[275] Subtypes: §MOD:eval §MOD:qual §MOD:quant.

§MOD:eval *Evaluation* (deprecated MOD:man). Prefix conveys evaluation
isa §MOD
[277]

(manner: maleducado = educado –mal/MOD:eval)

§MOD:qual *Qualification* (deprecated MOD:qual+MOD:rel+GRAD:qual). Prefix conveys qualification.
isa §MOD
[278]

(qualification: paleochristian = christian –paleo/MOD:qual)

§MOD:quant *Quantification* (deprecated MOD:cuant+GRAD:size). Prefix conveys quantification.
isa §MOD
[276]

(quantification: multicultural = cultural –multi/MOD:quant)

§NEG *Negation.* Prefix conveys negation in a broad sense.
isa PREFIX
Subtypes: §NEG:contr §NEG:priv §NEG:rev.
[267]

§NEG:contr *Contrast* (deprecated NEG:oppo). Prefix conveys contrast.
isa §NEG
[268]

(opposition: antihero = hero –anti/NEG:contr)

§NEG:priv *Privation.* Prefix conveys privation.
isa §NEG
[269]

(privation: desalt = salt –de/NEG:priv)

§NEG:rev *Reversion* (deprecated ASPEC:rev). Prefix conveys reversion.
isa §NEG
[270]

(reversion: deactivate = activate –de/NEG:rev)

§PRE:other *Other prefix relation.* If in doubt about the meaning conveyed by the prefix
isa PREFIX
[279]

§SPACE *Space* (deprecated LOC). Prefix expresses space in a broad sense.
isa PREFIX
Subtypes: §SPACE:dir §SPACE:loc §SPACE:source.
[259]

§SPACE:dir *Direction* (deprecated LOC:dir). Prefix expresses direction.
isa §SPACE
[261]

(direction/origin: deverbal = verbal –de/SPACE:dir)

§SPACE:loc *Location* (deprecated LOC:pos). Prefix expresses location.
isa §SPACE
[260]

(position: intramural = mural –intra/SPACE:pos)

§SPACE:source *Source* (deprecated LOC:proce). Prefix conveys source.
isa §SPACE
[262]

(origin: extraer: = traer –ex/SPACE:source)

§TELIC *Telic* (deprecated ASPEC:term+resul). Prefix conveys termination or result.
isa PREFIX
[273]

(terminative: oplåse 'open' = låse –op/TELIC)

§TIME *Time.* Prefix conveys time in a broad sense.
isa PREFIX
[264]
Subtypes: §TIME:post §TIME:pre.

§TIME:post *Temporal succession* (deprecated TIME:succ). Prefix conveys succession.
isa §TIME
[266]

(temporal succession: postmodernism = modernism –post/TIME:post)

§TIME:pre *Temporal precedence* (deprecated TIME:prec). Prefix conveys precedence.
isa §TIME
[265]

(temporal precedence: prehistorical = historical –pre/TIME:pre)

§TRANS *Transitivity.* Prefix conveys transitivity.
isa PREFIX
[274]

(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.
isa MORPHDERIV
[257]
Subtypes: §AUG §DENUM §DER §DERan:qual §DERna §DERnn §DERv §DIMIN §PEJ.

§AUG *Augmentation.* Suffix conveys augmentation.
isa SUFFIX
[280]

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

§DENUM *Adjective-numeral derivation.* Suffix creates denumeral adjectives in a broad sense.
isa SUFFIX
[328]
Subtypes: §DENUM:apart §DENUM:ord §DENUM:quant.

§DENUM:apart *Adjective-partitive derivation* (deprecated DENUM:part). Suffix creates partitive numerals.
isa §DENUM
[330]

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

§DENUM:ord *Adjective-ordinal derivation.* Suffix creates ordinals.
isa §DENUM
[329]

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

SUFFIX: semantic relations appearing with suffixes
- §AUG: augmentation
- §DENUM: adjective-numeral derivation
  - §DENUM:apart: adjective-partitive derivation
  - §DENUM:ord: adjective-ordinal derivation
  - §DENUM:quant: adjective-multiplicative derivation
- §DER: verb derivation
  - §DERadvv: adverb-verb derivation
  - §DERav: adjective-verb derivation
  - §DERnv: noun-verb derivation
    - §DERvn:agent: verb-noun derivation (agent)
    - §DERvn:core: verb-noun derivation (core)
    - §DERvn:exper: verb-noun derivation (experiencer)
    - §DERvn:inst: verb-noun derivation (instrument)
    - §DERvn:loc: verb-noun derivation (location)
    - §DERvn:other: verb-noun derivation (other)
    - §DERvn:patient: verb-noun derivation (patient)
    - §DERvn:recip: verb-noun derivation (recipient)
  - §DERva: verb-adjective derivation
    - §DERva:act: verb-adjective derivation (active)
      - §DERva:act.disp: verb-adjective derivation (pure)
      - §DERva:act.epi: verb-adjective derivation (disposition)
    - §DERva:pas: verb-adjective derivation (potentiality)
      - §DERva:pas.deon: verb-adjective derivation (passive potentiality)
      - §DERva:pas.epi: verb-adjective derivation (passive participles)
    - §DERva:pas.part: verb-adjective derivation (passive)
  - §DERvn: verb-noun derivation
  - §DERvv: verb-verb derivation
- §DERan:qual: adjective derivation
- §DERna: noun-adjective derivation
  - §DERna:deono: noun-adjective derivation (naming)
    - §DERna:deono.pers: noun-adjective derivation (naming persons)
    - §DERna:deono.place: noun-adjective derivation (naming places)
  - §DERna:disp: noun-adjective derivation (disposition)
  - §DERna:other: noun-adjective derivation (other)
  - §DERna:poss: noun-adjective derivation (possession)
  - §DERna:rel: noun-adjective derivation (relational)
    - §DERna:rel.norm: noun-adjective derivation (normal)
  - §DERna:resem: noun-adjective derivation (resemblance)
  - §DERna:telic: noun-adjective derivation (effect)
- §DERnn: noun-noun derivation
  - §DERnn:agent: noun-noun derivation (agent)
  - §DERnn:assoc: noun-noun derivation (association)
  - §DERnn:capac: noun-noun derivation (capacity)
  - §DERnn:cont: noun-noun derivation (container)
  - §DERnn:loc: noun-noun derivation (location)
  - §DERnn:other: noun-noun derivation (other)
  - §DERnn:quant: noun-noun derivation (quantification)
  - §DERnn:telic: noun-noun derivation (telic)
  - §DERnn:time: noun-noun derivation (time)
- §DERv:
- §DIMIN: diminution
- §PEJ: pejoration

Figure 4.5: The relations matching SUFFIX.

§DENUM:quant *Adjective-multiplicative derivation.* Suffix creates multiplicative numerals.
isa §DENUM
[331]

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

§DER *Verb derivation.* Suffix triggers a derivation
isa SUFFIX
Subtypes: §DERadvv §DERav §DERnv §DERva §DERvn §DERvv.
[283]

§DERadvv *Adverb-verb derivation.* Suffix triggers a derivation from an adverb to a verb
isa §DER
[287]

§DERav *Adjective-verb derivation* (deprecated §DER:av). Suffix triggers a derivation from an adjective to a verb.
isa §DER
[285]

(adjective–>verb derivation: darken = dark +en/§DERav)

§DERnv *Noun-verb derivation* (deprecated §DER:nvPRED). Suffix triggers a derivation from a noun to a verb.
isa §DER
Subtypes: §DERvn:agent §DERvn:core §DERvn:exper §DERvn:inst §DERvn:loc §DERvn:other §DERvn:patient §DERvn:recip.
[284]

(noun–>verb derivation: salar 'to salt' = sal +ar/§DERnv)

§DERvn:agent *Verb-noun derivation (agent).* Suffix creates deverbal nouns absorbing the agent role.
isa §DERnv
[289]

(agent derivation: singer = sing +er/§DERnv:agent)

§DERvn:core *Verb-noun derivation (core).* Suffix creates deverbal nouns expressing a nominalized version of the situation denoted by the original verb.
isa §DERnv
[291]

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

§DERvn:exper *Verb-noun derivation (experiencer).* Suffix creates deverbal nouns absorbing the experiencer role.
isa §DERnv
[290]

(experiencer derivation: admirer = admire +r/§DERnv:exper

§DERvn:inst *Verb-noun derivation (instrument).* Suffix creates deverbal nouns expressing the instrument related to the meaning of the original noun.
isa §DERnv
[295]

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

§DERvn:loc *Verb-noun derivation (location).* Suffix creates deverbal nouns expressing the location related to the meaning of the original noun.
isa §DERnv
[294]

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

§DERvn:other *Verb-noun derivation (other).* If in doubt about the meaning conveyed by the suffix
isa §DERnv
[296]

§DERvn:patient *Verb-noun derivation (patient).* Suffix creates deverbal nouns absorbing the patient role.
isa §DERnv
[292]

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

§DERvn:recip *Verb-noun derivation (recipient).* Suffix creates deverbal nouns absorbing the recipient role
isa §DERnv
[293]

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

§DERva *Verb-adjective derivation* (deprecated §DERV). Suffix creates deverbal adjectives in a broad sense.
isa §DER
[309]

Subtypes: §DERva:act §DERva:pas §DERva:pas.part.

§DERva:act *Verb-adjective derivation (active)* (deprecated DEVERB:act.pure). Suffix creates active adjectives.
isa §DERva
[310]

Subtypes: §DERva:act.disp §DERva:act.epi.

§DERva:act.disp *Verb-adjective derivation (pure)* (deprecated DEVERB:act.disp). Suffix creates active adjectives with the meaning aspect "pure".
isa §DERva:act
[311]

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

§DERva:act.epi *Verb-adjective derivation (disposition)* (deprecated DEVERB:act.poten). Suffix creates active adjectives with the meaning aspect "disposition".
isa §DERva:act
[312]

"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

§DERva:pas *Verb-adjective derivation (potentiality)* (deprecated DEVERB:pas). Suffix creates active adjectives with the meaning aspect "potentiality".
isa §DERva
[313]

Subtypes: §DERva:pas.deon §DERva:pas.epi.

(deverbal adjective: transportable = transport +able/§DERva:pas.epi)

§DERva:pas.deon *Verb-adjective derivation (passive potentiality)* (deprecated DEVERB:pas.deon). Suffix creates passive adjectives with the meaning aspect ”potentiality”.
isa §DERva:pas
[316]

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

’transportabel/maskine som kan blive transporteret/transporteres

§DERva:pas.epi *Verb-adjective derivation (passive participles)* (deprecated DEVERB:pas.poten). Suffix creates passive adjectives with the form of participles.
isa §DERva:pas
[315]

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

købt"

§DERva:pas.part *Verb-adjective derivation (passive)* (deprecated DEVERB:pas.part). Suffix creates passive adjectives.
isa §DERva
[314]

§DERvn *Verb-noun derivation* (deprecated PREDDEVERBN). Suffix creates deverbal nouns in a broad sense.
isa §DER
[288]

§DERvv *Verb-verb derivation* (deprecated §DER:vv). Suffix triggers a derivation from a verb to another verb.
isa §DER
[286]

(verb–>verb derivation: adormecer ’lull to sleep’ = dormir –+[a][ecer]/§DERvv)

§DERan:qual *Adjective derivation* (deprecated QUAL). Suffix creates deadjectival nouns.
isa SUFFIX
[297]

(deadjectival noun: bitterness = bitter +ness/§DERan:qual)

§DERna *Noun-adjective derivation* (deprecated DENOM). Suffix creates denominal adjectives in a broad sense.
isa SUFFIX
[317]
Subtypes: §DERna:deono §DERna:disp §DERna:other §DERna:poss §DERna:rel §DERna:resem §DERna:telic.

§DERna:deono *Noun-adjective derivation (naming)* (deprecated DENOM:rel.deono). Suffix creates relational adjectives with the meaning of ”naming”.
isa §DERna
[320]
Subtypes: §DERna:deono.pers §DERna:deono.place.

§DERna:deono.pers *Noun-adjective derivation (naming persons)* (deprecated DENOM:rel.deono.pers). Suffix creates relational adjectives with the meaning of ”naming” persons.
isa §DERna:deono
[321]

Cervantino 'som har at gøre med Cervantes'

§DERna:deono.place *Noun-adjective derivation (naming places)* (deprecated DENOM:rel.deono.place). Suffix creates relational adjectives with the meaning of "naming" of places.
isa §DERna:deono
[322]

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

§DERna:disp *Noun-adjective derivation (disposition)* (deprecated DENOM:disp). Suffix creates denominal adjectives that express disposition.
isa §DERna
[325]

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

§DERna:other *Noun-adjective derivation (other)* (deprecated DENOM:other). If in doubt about the meaning conveyed by the suffix
isa §DERna
[327]

§DERna:poss *Noun-adjective derivation (possession)* (deprecated DENOM:poss). Suffix creates denominal adjectives that express possession.
isa §DERna
[324]

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

§DERna:rel *Noun-adjective derivation (relational)* (deprecated DENOM:rel). Suffix creates denominal adjectives with a relational meaning.
isa §DERna
[318]
Subtypes: §DERna:rel.norm.

§DERna:rel.norm *Noun-adjective derivation (normal)* (deprecated DENOM:rel.norm). Suffix creates relational adjectives with a "normal" meaning aspect.
isa §DERna:rel
[319]

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

§DERna:resem *Noun-adjective derivation (resemblance)* (deprecated DENOM:resem). Suffix creates denominal adjectives that express resemblance.
isa §DERna
[323]

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

§DERna:telic *Noun-adjective derivation (effect)* (deprecated DENOM:eff). Suffix creates denominal adjectives that express an effect.
isa §DERna
[326]

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

§DERnn *Noun-noun derivation* (deprecated NOPRED). Suffix creates non-predicative nouns (from other nouns) in a broad sense.
isa SUFFIX
[298]
Subtypes: §DERnn:agent §DERnn:assoc §DERnn:capac §DERnn:cont §DERnn:loc §DERnn:other §DERnn:quant §DERnn:telic §DERnn:time.

§DERnn:agent *Noun-noun derivation (agent)* (deprecated NOPRED:agent). Suffix creates non-predicative nouns expressing an agent role.
isa §DERnn
[299]

(agent derivation: miller = mill +er/§DERnn:agent)

§DERnn:assoc *Noun-noun derivation (association)* (deprecated NOPRED:script). Suffix creates non-predicative nouns expressing a script/notion related to the original noun.
isa §DERnn
[306]

(script derivation: pontaje 'brobetaling' = puente +aje/§DERnn:assoc)

§DERnn:capac *Noun-noun derivation (capacity)* (deprecated NOPRED:capac). Suffix creates non-predicative nouns expressing a capacity.
isa §DERnn
[304]

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

§DERnn:cont *Noun-noun derivation (container)* (deprecated NOPRED:cont). Suffix creates non-predicative nouns expressing a container.
isa §DERnn
[301]

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

§DERnn:loc *Noun-noun derivation (location)* (deprecated NOPRED:loc). Suffix creates non-predicative nouns expressing a location.
isa §DERnn
[305]

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

§DERnn:other *Noun-noun derivation (other)* (deprecated NOPRED:other). If in doubt about the meaning conveyed by the suffix
isa §DERnn
[307]

§DERnn:quant *Noun-noun derivation (quantification)* (deprecated NOPRED:set). Suffix creates non-predicative nouns expressing a quantification.
isa §DERnn
[303]

(set derivation: perrada 'hundekobbel' = perro +ada/§DERnn:quant)

§DERnn:telic *Noun-noun derivation (telic)* (deprecated NOPRED:result). Suffix creates non-predicative nouns expressing a telic result.
isa §DERnn
[300]

(result derivation: puñalada 'knivstik' = puñal +ada/§DERnn:telic)

§DERnn:time *Noun-noun derivation (time)* (deprecated NOPRED:temp). Suffix creates non-predicative nouns expressing a temporal aspect.
isa §DERnn
[302]

(temporal derivation: temporada 'tidsrum/sæson' = tiempo +ada/§DERnn:time)

§DERv (deprecated DEVERB).
isa SUFFIX
[303]

§DIMN *Diminution.* Suffix conveys diminution.
isa SUFFIX
[281]

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

§PEJ *Pejoration.* Suffix conveys a pejorative sense.
isa SUFFIX
[282]

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

Chapter 5

Discourse relations: DISCOURSE

DISC: discourse level
- ”¤”PRIM: discourse specification
- DISCOTHER:
  - JOINT: no clear relation
  - REP: repaired
  - SCENE: scene

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

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

”¤”PRIM (isa DISC RULE [353])
Discourse specification. A primary syntactic relation that has been used as a discourse relation for stilistic purposes.

DISCOTHER (isa ADJ DISC [201])
.
Subtypes: JOINT REP SCENE.

JOINT (isa DISCOTHER [251])
No clear relation. The dependent text segment adds a completely new content without any clear discourse relation to the governing segment
Confusion$_2$: JOINT$_{100\%}$.

REP (isa DISCOTHER [250])
Repaired (deprecated STRUCT:rep). Dependent text segment is interrupted and unfinished and ”repaired” by the following and governing text segments, which completes it

SCENE (isa DISCOTHER [249])
Scene (deprecated STRUCT:prepPREP). Dependent text segment expresses the scene of the following and governing text, e.g. headings, titles
Confusion$_4$: SCENE$_{100\%}$.

5.1 Functional relations: DISCFUNC

DISCPRAG (isa ADJ DISC [200])
Pragmatic and illocutionary discourse relations (deprecated DISCFUNC). The dependent text segment expresses a change in speech act or pragmatic function (speaker's intention) wrt the governing segment; the label indicates the speech act or function of the dependent segment;

DISCPRAG: pragmatic and illocutionary discourse relations
- ANSW: answer
- CONSOL: consolidation
  - CONSOL:inst: instrumental
  - CONSOL:motiv: motivation
  - CONSOL:source: justification
- DIREC: directive act
- EXPR: expressive act
- INTACT: interactional signals
  - INTACT:attn: attention
  - INTACT:inter: interruption
- QUEST: question

Figure 5.2: The relations matching DISCFUNC.

regarding speaker's intentions and speech acts we consider the narrating asserting speech act as our default value.

Subtypes: ANSW CONSOL DIREC EXPR INTACT QUEST.

ANSW isa DISCPRAG [238] *Answer.* Governing text segment contains question or problem, dependent text segment answer or solution

Confusion$_1$: ANSW$_{100\%}$.

CONSOL isa DISCPRAG [244] *Consolidation* (deprecated SUPPORT?).

Subtypes: CONSOL:inst CONSOL:motiv CONSOL:source.

CONSOL:inst isa CONSOL [246] *Instrumental* (deprecated CONSOL:enabl). S is instrumental in helping reader or recipient to carry out the action mentioned in N; frequent in directive texts

CONSOL:motiv isa CONSOL [247] *Motivation.* S motivates reader or recipient to carry out the action mentioned in N

Confusion$_1$: AGENTIVE:expl$_{100\%}$.

CONSOL:source isa CONSOL [245] *Justification* (deprecated JUSTCONSOL:just). S expresses a source that justifies N wrt its content (reason for mentioning it or sim.) thereby strengthening it argumentatively

Typical connectives: [da] Fordi, Eftersom.

Confusion$_1$: CONJ:elab$_{100\%}$.

DIREC isa DISCPRAG [239] *Directive act.* Dependent text segment contains an order, command or request

e.g. imperatives

EXPR isa DISCPRAG [240] *Expressive act.* Dependent text segment contains an expression of the speaker's attitudes or emotions, e.g. congratulations, excuses or thanks

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

INTACT isa DISCPRAG [241] *Interactional signals.*

Subtypes: INTACT:attn INTACT:inter.

INTACT:attn isa INTACT [242] *Attention.* S contains an attention signal

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

INTACT:inter *Interruption.* S contains an interruption signal
isa INTACT
[243]

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

QUEST *Question* . The dependent text segment contains a question with or withour an answer
isa DISCPRAG
[237]

5.2 Semantic relations: DISCSEM

DISCSEM: semantic discourse relations
- AGENTIVE: cause relation (discourse)
  - AGENTIVE:expl: explanation relation in discourse
  - AGENTIVE:reas: reason relation (discourse)
  - AGENTIVE:sbj: subjective cause
- CONC: concession
- COND: condition
- CONJ: conjunction
  - CONJ:add: conjunction, addition
  - CONJ:elab: conjunction, elaboration
  - CONJ:seq: sequence
- CONST: constitutive elaboration
  - CONST:apart: part of relation
  - CONST:elab: elaboration
  - CONST:exem: exemplification
  - CONST:rest: restatement
- CONTR: contrast
  - CONTR:dir: direct contrast
  - CONTR:sbj: subjective contrast
- DISJ: disjunction
  - DISJ:dir: direct disjunction
  - DISJ:sbj: subjective disjunction
- FORMAL: formal description
  - FORMAL:descr: neutral description
  - FORMAL:eval: positive/negative evaluation
- TELIC: consequence/result/conclusion relation (discourse)
  - TELIC:cons.dir: direct, physical consequence, result
  - TELIC:cons.sbj: pragmatic/personal conclusion, deduction
  - TELIC:goal: goal relation (discourse)
- TIME: temporal relation
  - TIME:cont: contemporaneity
  - TIME:post: temporal succession
  - TIME:pre: temporal precedence

Figure 5.3: The relations matching DISCSEM.

DISCSEM *Semantic discourse relations.* The relations hold between the propositions of the governing and dependent text segments and are defined in semantic terms; relations are mono- or multinuclear; the four "prg"-subtypes express changes of speech act like the DISCPRAG, however the semantic relations are so dominant that they should determine the main type of the relation
isa ADJ DISC
[199]

Subtypes: AGENTIVE CONC COND CONJ CONST CONTR DISJ FORMAL TELIC TIME.

AGENTIVE isa DISCSEM [203] *Cause relation (discourse).* S expresses "bringing about" or cause in a broad sense

Subtypes: AGENTIVE:expl AGENTIVE:reas AGENTIVE:sbj.

AGENTIVE:expl isa AGENTIVE [204] *Explanation relation in discourse.* An explanation relation. The satellite explains the nucleus. The relation is more general and elaborating than "reason".

Typical connectives: [da] Nemlig; [it] Infatti; [en] In fact, Indeed.
Related types: reason.

Confusion$_{6}$: CONJ:add$_{33\%}$ AGENTIVE:expl$_{33\%}$ CONSOL:motiv$_{17\%}$ vobj$_{17\%}$.

AGENTIVE:reas isa AGENTIVE [205] *Reason relation (discourse).* S expresses a specific and concrete reason

Typical connectives: [da] Fordi, Eftersom; [en] Since, Because.

AGENTIVE:sbj isa AGENTIVE [206] *Subjective cause.* The speaker uses the cause as a subjective/personal argument to support a claim

Typical connectives: Because, In fact, Indeed.

CONC isa DISCSEM [219] *Concession.* S admits or acknowledges a fact wrt N, which may however not have the expected consequence or effect

Confusion$_{2}$: CONJ:add$_{50\%}$ CONC$_{50\%}$.

COND isa DISCSEM [220] *Condition.*

CONJ isa DISCSEM [226] *Conjunction.* Dependent text segment elaborates and expans knowledge of governing text segment or adds a new subject somehow related to it

Subtypes: CONJ:add CONJ:elab CONJ:seq.

CONJ:add isa CONJ [227] *Conjunction, addition.* Dependent text segment adds a new subject somehow related to the governing text segment; in cases of uncertainty between add and elab we do not specify the subtype

Confusion$_{39}$: CONJ:add$_{40\%}$ CONJ:elab$_{29\%}$ CONTR:sbj$_{5\%}$ AGENTIVE:expl$_{5\%}$ conj$_{4\%}$ rel$_{3\%}$ TELIC:cons.sbj$_{3\%}$ time$_{3\%}$ TELIC:cons.dir$_{3\%}$ CONST:exem$_{3\%}$ CONC$_{3\%}$ qobj$_{2\%}$.

CONJ:elab isa CONJ [228] *Conjunction, elaboration* (deprecated ELAB:spec,ELAB:exp,CONST:elab). Dependent text segment elaborates and expans knowledge of governing text segment; in cases of uncertainty between add and elab we do not specify the subtype

Confusion$_{27}$: CONJ:add$_{42\%}$ CONJ:elab$_{41\%}$ CONST:rest$_{5\%}$ FORMAL:descr$_{4\%}$ CONSOL:source$_{4\%}$ qobj$_{2\%}$ xpl$_{2\%}$.

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

CONST isa DISCSEM [211] *Constitutive elaboration.* S adds more details on N or parts of N

Subtypes: CONST:apart CONST:elab CONST:exem CONST:rest.

CONST:apart isa CONST [214] *Part of relation.* S is a part of N

Typical connectives: [da] Herunder, Heri.

CONST:elab isa CONST [213] *Elaboration* (deprecated ELAB:spec,ELAB:exp). S elaborates and expans knowledge of N; may be difficult to distinguish from CONJ

Typical connectives: [it] Cioè.
Related types: CONJ.

CONST:exem *Exemplification.* S gives examples of elements or phenomena mentioned in N
isa CONST
[212] Typical connectives: [en] For example.
Confusion$_1$: CONJ:add$_{100\%}$.

CONST:rest *Restatement.* S states N again in a different way
isa CONST
[215] Typical connectives: [da] Dvs.; [it] Ossia, In altre parole, Cioè; [en] In other words, Or.
Confusion$_4$: CONST:rest$_{50\%}$ CONJ:elab$_{33\%}$ xpl$_{17\%}$.

CONTR *Contrast.*
isa DISCSEM
[230] Subtypes: CONTR:dir CONTR:sbj.
Confusion$_1$: CONTR:sbj$_{50\%}$ conj$_{50\%}$.

CONTR:dir *Direct contrast.* The contrast lies between the governing and dependent text segment
isa CONTR
[231] Typical connectives: [da] Men, Derimod.
Confusion$_2$: expl$_{50\%}$ CONTR:dir$_{50\%}$.

CONTR:sbj *Subjective contrast* (deprecated CONTR:prg). The contrast lies between an explicit and a subjectively inferred text segment
isa CONTR
[232] Typical connectives: [da] Men.
Confusion$_{10}$: conj$_{40\%}$ CONTR:sbj$_{25\%}$ CONJ:add$_{20\%}$ coord$_{10\%}$ CONTR$_{5\%}$.

DISJ *Disjunction.*
isa DISCSEM
[233] Typical connectives: [da] Eller.
Subtypes: DISJ:dir DISJ:sbj.

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

DISJ:sbj *Subjective disjunction* (deprecated DISJ:prg). The disjunction lies between the dependent and a subjectively inferred text segment
isa DISJ
[235]

FORMAL *Formal description.* S describes N, N may be a first-order or second-order entity
isa DISCSEM
[216] Subtypes: FORMAL:descr FORMAL:eval.

FORMAL:descr *Neutral description* (deprecated DESCR:qual). S expresses an objective and/or neutral description of N
isa FORMAL
[217] Confusion$_1$: CONJ:elab$_{100\%}$.

FORMAL:eval *Positive/negative evaluation* (deprecated DESCR:eval). S expresses a personal and/or subjective positive or negative description of N
isa FORMAL
[218]

TELIC *Consequence/result/conclusion relation (discourse).* S expresses purpose, function or consequence wrt N
isa DISCSEM
[207] Subtypes: TELIC:cons.dir TELIC:cons.sbj TELIC:goal.

TELIC:cons.dir *Direct, physical consequence, result* (deprecated TELIC:dir). Physical, objectively observed consequence or result
isa TELIC
[209] Typical connectives: [da] Derfor, Af den grund.
Confusion$_3$: TELIC:cons.dir$_{44\%}$ CONJ:add$_{33\%}$ vobj$_{22\%}$.

TELIC:cons.sbj *Pragmatic/personal conclusion, deduction* (deprecated TELIC:sbj). Subjective conclusion or deduction on behalf of the speaker
isa TELIC
[210]
Typical connectives: [da] Derfor, Af den grund.
Confusion$_4$: TELIC:cons.sbj$_{75\%}$ CONJ:add$_{25\%}$.

TELIC:goal *Goal relation (discourse).* S expresses goal, purpose, aim
isa TELIC
[208]
Typical connectives: [da] For (at).

TIME *Temporal relation* (deprecated CIRCUM). There is a clear temporal relation between N and S
isa DISCSEM
[221]
Subtypes: TIME:cont TIME:post TIME:pre.

TIME:cont *Contemporaneity.* S is contemporary with N (now includes abolished TIME:dur)
isa TIME
[222]
Typical connectives: [da] Samtidig, Mens, Så længe, Da.

TIME:post *Temporal succession* (deprecated TIME:succ). S succeeds N
isa TIME
[224]
Typical connectives: [en] Later, Some time afterwards.

TIME:pre *Temporal precedence* (deprecated TIME:prec). S precedes N
isa TIME
[223]
Typical connectives: [en] Earlier, Some days before.

Chapter 6

Anaphor relations: ANAPHORA

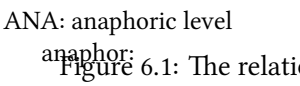


Figure 6.1: The relations matching ANAPHORA-coref-assoc-TOPICS.

ANA isa DIM:LEVEL [20] *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.

Subtypes: anaphor.

anaphor isa ANA [181] . This section concerns anaphors as well as cataphors; cataphors may by and large express the same relations with their postcedents as anaphors with their antecedents; the relations are therefore labelled identically and will be distinguished solely by the edge direction: from left to right (anaphors) or from right to left (cataphors); because of their much higher frequency, we shall limit ourselves to examples of anaphors

Subtypes: assoc coref.

6.1 Coreference relations: coref

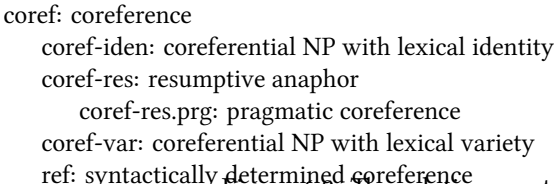


Figure 6.2: The relations matching coref.

coref isa anaphor [182] *Coreference.* Anaphor denotes same entity as antecedent; all coreferential pronouns are labelled this way

Subtypes: coref-iden coref-res coref-var ref.

coref-iden isa coref [184] *Coreferential NP with lexical identity* (deprecated coref-id).

(antecedent–>anaphor) a car –> the car // a yellow car –> the yellow car

coref-res *Resumptive anaphor* (deprecated nowincludescoref-res.cause).
isa coref Subtypes: coref-res.prg.
[186] Confusion$_1$: coref-res$_{100\%}$.

coref-res.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
isa coref-res
[187]

coref-var *Coreferential NP with lexical variety.*
isa coref
[185]

a car –> the vehicle // a yellow car –> the car

ref *Syntactically determined coreference.* Syntactically determined coreference (eg, relative pronouns, external topics)
isa coref
[183] Confusion$_{38}$: ref$_{100\%}$.

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-formal.loc: associative locative anaphor
- 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.
[189]

”assoc-”QUALIA *Associative anaphor wrt. qualia.* Anaphor denotes entity which is associated with antecedent
isa RULE assoc
[190]

assoc-agentive *Associative anaphor (agentive)* (deprecated assoc-agent?). Anaphor is associated with antecedent wrt its agentive qualia (creator, factory, producer, author, etc.)
isa assoc
[192]

a car –> the factory; a piece of music –> the composer

assoc-const *Associative anaphor (constitutive)* (deprecated assoc-loc?). Anaphor is associated with antecedent wrt its constitutive qualia (parts, material, etc.)
isa assoc
[191]

ex. a car –> the wheels, the numberplate, the driver's seat; a hotel –> the kitchen; a bunch of flowers –> the roses; a couple –> the man; the Italian partitive "ne", ex. some wine –> ne vuoi (un po')?

assoc-formal
isa assoc
[193]

Associative anaphor (formal). Anaphor is associated with antecedent wrt its formal qualia (shape, dimension, colour, etc.)
Subtypes: assoc-formal.loc.

a car –> the size, the colour; a building –> the height

assoc-formal.loc
isa assoc-formal
[194]

Associative locative anaphor. The anaphor is located in the antecedent

a village –> the church, the inn, the train station

assoc-telic
isa assoc
[195]

Associative anaphor (telic) (deprecated assoc-scope?). Anaphor is associated with antecedent wrt its telic qualia (purpose, function, etc.)

a car –> the driver, the passengers; a hotel –> the guests, the receptionist

Chapter 7

Semantic relations: SEMANTICS

SEM: semantic level

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

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

7.1 Qualia relations: QUALIA

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

Figure 7.2: The relations matching QUALIA.

QUALIA isa SEM [33]
Qualia roles. A semantic qualia role. Ie, a relation that links a lexeme to a particular role associated with that lexeme. Eg, "music" to the act of "composing" (agentive), "performing" (telic), etc.
Subtypes: const formal resemblance telic.

const isa QUALIA [40]
Constitutive qualia. Relates to material or part-whole qualia

N–>P.material/part

formal isa QUALIA [37]
Formal qualia. A qualia role that relates a lexeme to a hyperonym (super type) wrt. form, dimension, quality, shape, size, etc.
Subtypes: agentive location.

agentive *Agentive qualia.* A qualia role that relates a lexeme to its agentive qualia, ie, the act that made it come into being.
isa formal
[38]

N–>P.agent

location *Location qualia.* A qualia role that relates a lexeme to its location qualia.
isa formal
[39]

resemblance *Resemblance wrt. qualia role.* Resemblance wrt. some qualia role
isa QUALIA
Subtypes: ””QUALIA.
[43]

N–>P.resem

””QUALIA *Resemblance wrt. $qualia relation.*
isa RULE resemblance
[44]

telic *Telic qualia.* Relates to purpose qualia
isa QUALIA
Subtypes: about.
[41]

about *About qualia.* Relates to hyponym (subtype)
isa telic
[42]

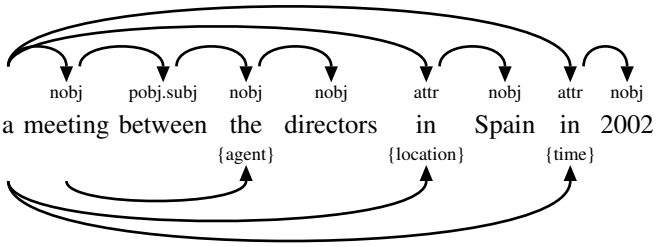
7.2 Thematic role relations: SEMROLE

SEMROLE:
{about}:
{agent}: An object or a person that performs an action
{apart}:
{arg}:
{cause}:
{class}:
{const}:
{elab}:
{eval}:
{experiencer}: The receiver of an emotion or a physical impact
{form}:
{func}:
{goal}:
{iden}:
{location}: The location where something is situated or happens
{loc}:
{other}: No specific semantic role
{patient}: An object or a person that is the subject of the action or the one who is located somewhere
{poss}:
{quant}:
{recipient}: The receiver of something
{resem}:
{source}:
{time}:

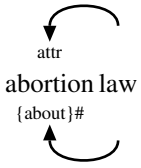
Figure 7.3: The relations matching SEMROLE.

SEMROLE . A semantic relation. All the relations of the semantic roles run under the text line. The
isa SEM syntactic relation that runs over the text line is determined by the word class of the lemma
[47] in question. In NP constructions, the syntactic head of an adjunct is assumed to also act as the semantic head of the adjunct, ie, the semantic relation mirrors the syntactic relation in this respect.

Subtypes: {about} {agent} {apart} {arg} {cause} {class} {const} {elab} {eval} {experiencer} {form} {func} {goal} {iden} {location} {loc} {other} {patient} {poss} {quant} {recipient} {resem} {source} {time}.



{about} . Used in noun phrases where the satellite indicates the content or genre of the nucleus.
isa SEMROLE Confusion$_{13}$: {arg}$_{31\%}$ {about}$_{31\%}$ {patient}$_{15\%}$ {func}$_{15\%}$ {loc}$_{8\%}$.
[61]

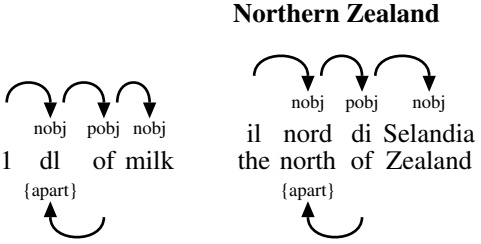


{agent} *An object or a person that performs an action.* Used in noun phrases where there the satellite
isa SEMROLE is the person or object that performs the volitional action indicated by the nucleus.An object
[50] or a person that performs an action. Used in noun phrases where there is a deverbal relation between the nucleus and the satellite. Often realized as a subject.

Confusion$_{17}$: {agent}$_{35\%}$ {arg}$_{29\%}$ {experiencer}$_{18\%}$ {loc}$_{6\%}$ {patient}$_{6\%}$ {source}$_{6\%}$.

{apart} . Used in noun phrases where the satellite represents an arbitary part of the nucleus. Please
isa SEMROLE note that the semantic relation goes from the satellite to the nucleus in opposition to the main
[62] part of the other semantic roles.

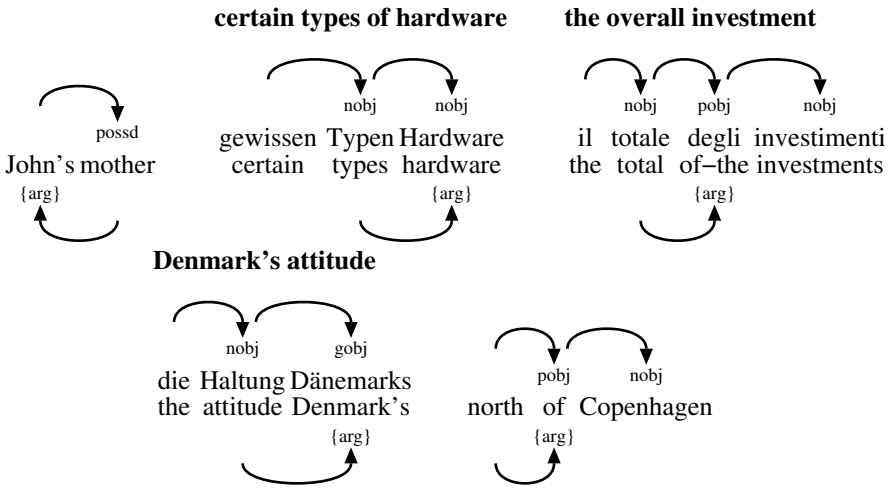
Confusion$_{7}$: {apart}$_{71\%}$ {loc}$_{14\%}$ {const}$_{14\%}$.



{arg} . Used in noun phrases where there is a deadjectival relation or another similiar relationship between the nucleus and the satellite.

isa SEMROLE

[67] Confusion$_{56}$: {arg}$_{34\%}$ {func}$_{14\%}$ {const}$_{11\%}$ {agent}$_{9\%}$ {source}$_{9\%}$ {about}$_{7\%}$ {patient}$_{7\%}$ {loc}$_{4\%}$ {other}$_{4\%}$ {poss}$_{2\%}$.



{cause} . Used in noun phrases where there the satellite is the person or object that performs the non-volitional action indicated by the nucleus.

isa SEMROLE

[53]

ildebrand sultedød

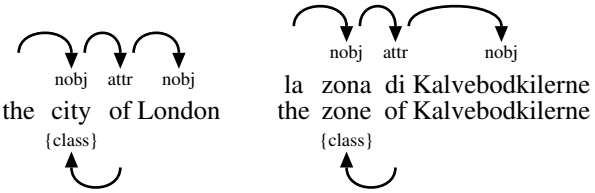
{class} . Used in noun phrases where the satellite indicates the super type or classification of the nucleus. This is in opposition to the identity relation which denotates the opposit relationship between the two units. Please note that the semantic relation goes from the satellite to the nucleus in opposition to the main part of the other semantic roles.

isa SEMROLE

[63]

Related types: {iden}.

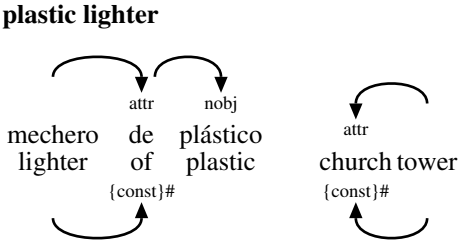
Confusion$_{1}$: {const}$_{100\%}$.



{const} . Used in noun phrases where the satellite represents a part, material or essential constituent of the nucleus.

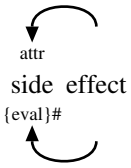
isa SEMROLE

[49] Confusion$_{20}$: {const}$_{35\%}$ {arg}$_{30\%}$ {form}$_{10\%}$ {apart}$_{5\%}$ {loc}$_{5\%}$ {class}$_{5\%}$ {func}$_{5\%}$ {source}$_{5\%}$.



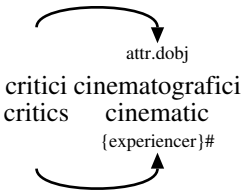
{elab} . Often used together with parenthetic modifiers
isa SEMROLE Related types: modp.
[48] Confusion$_2$: {loc}$_{50\%}$ {elab}$_{50\%}$.

{eval} . Used in noun phrases where there is a descriptive relation between the nucleus and the satellite. The relation is often a subjective description from the writer who either evaluates the relationship in a positive or negative manner.
isa SEMROLE
[59] Confusion$_1$: {eval}$_{100\%}$.



{experiencer} *The receiver of an emotion or a physical impact.* Used in noun phrases where there is a deverbal relation between the nucleus and the satellite. Often realized as a direct object
isa SEMROLE
[70] Confusion$_4$: {agent}$_{75\%}$ {patient}$_{25\%}$.

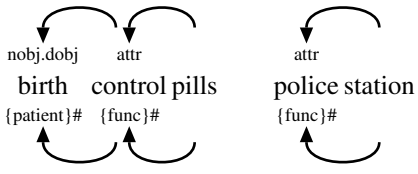
film critics



{form} . Used in noun phrases where the satellite indicates the shape or form of the nucleus.
isa SEMROLE Confusion$_2$: {const}$_{100\%}$.
[65]

baking powder **country ham in julienne strips**

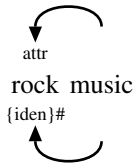
{func} . Used in noun phrases where the satellite determinates the function of the nucleus.
isa SEMROLE Confusion$_{33}$: {func}$_{48\%}$ {arg}$_{24\%}$ {loc}$_{9\%}$ {about}$_{6\%}$ {const}$_{3\%}$ {patient}$_{3\%}$ {iden}$_{3\%}$ {other}$_{3\%}$.
[55]



{goal} . Used in noun phrases where the satellite determinates the goal or the intention for which the nucleus is destinated.
isa SEMROLE
[54]

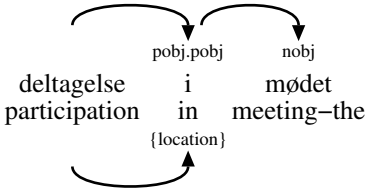
{iden} . Used in noun phrases where the satellite indicates the identity of the nucleus. In this case it is also possible to equate the satellite to the nucleus i.e. that the nucleus represents the super type of the satellite.
isa SEMROLE
[66]

Related types: {class}.
Confusion$_1$: {func}$_{100\%}$.



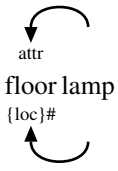
{location} *The location where something is situated or happens.* Used in noun phrases where there is a deverbal relation between the nucleus and the satellite. Often realized as a prepositional object
isa SEMROLE
[72]

Confusion$_1$: {loc}$_{100\%}$.



{loc} (deprecated {pos}). Used in noun phrases where the satellite indicates the location of the position or the location of nucleus.
isa SEMROLE
[57]

Confusion$_{31}$: {loc}$_{58\%}$ {func}$_{10\%}$ {arg}$_{6\%}$ {const}$_{3\%}$ {location}$_{3\%}$ {agent}$_{3\%}$ {elab}$_{3\%}$ {apart}$_{3\%}$ {recipient}$_{3\%}$ {about}$_{3\%}$ {poss}$_{3\%}$.



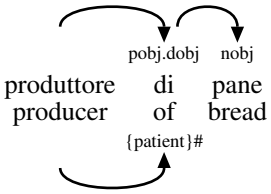
{other} *No specific semantic role.* Used when none of the other semantic roles are suitable or when in doubt.
isa SEMROLE
[73]

Confusion$_4$: {arg}$_{50\%}$ {time}$_{25\%}$ {func}$_{25\%}$.

{patient} *An object or a person that is the subject of the action or the one who is located somewhere.* Used in noun phrases where there is a deverbal relation between the nucleus and the satellite. Often realized as a direct object
isa SEMROLE
[69]

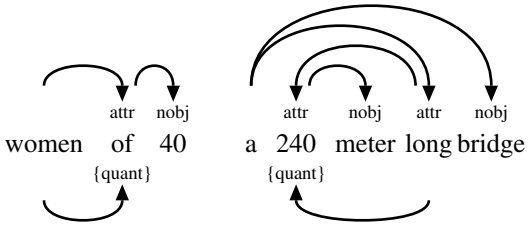
Confusion$_{21}$: {patient}$_{57\%}$ {arg}$_{19\%}$ {about}$_{10\%}$ {func}$_{5\%}$ {experiencer}$_{5\%}$ {agent}$_{5\%}$.

bread producer



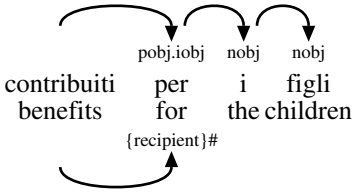
{poss} . Used in noun phrases where there is a possession relation between the nucleus and the satellite. Often the satelitte is the owner or possessor of the nucleus.
isa SEMROLE
[56] Confusion$_8$: {poss}$_{75\%}$ {loc}$_{13\%}$ {arg}$_{13\%}$.

{quant} . Used in noun phrases where the satellite indicates the quantity in numbers or another countable unit of the nucleus.
isa SEMROLE
[64] Confusion$_1$: {quant}$_{100\%}$.



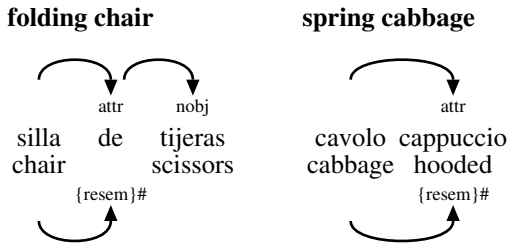
{recipient} *The receiver of something.* Used in noun phrases where there is a deverbal relation between the nucleus and the satellite. Often realized as an indirect object
isa SEMROLE
[71] Confusion$_1$: {loc}$_{100\%}$.

child benefits

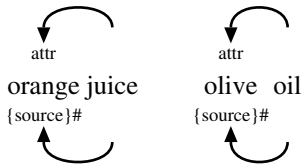


child maintenance

{resem} . Used in noun phrases where there is a resemblance between the nucleus and the satellite.
isa SEMROLE
[60]



{source} (deprecated {origin}). Used in noun phrases where the satellite is the source from which the nucleus derives or is deduced.
isa SEMROLE
[52] Confusion$_{21}$: {source}$_{57\%}$ {arg}$_{24\%}$ {time}$_{10\%}$ {const}$_{5\%}$ {agent}$_{5\%}$.



{time} . Used in noun phrases where the satellite indicates some kind of temporal aspect of the nucleus.
isa SEMROLE
[58] Confusion$_{11}$: {time}$_{73\%}$ {source}$_{18\%}$ {other}$_{9\%}$.

Chapter 8

Word alignment relations: ALIGN

ALIGN: alignment level
  "": unlabeled word alignment
  f: fuzzy word alignment

Figure 8.1: The relations matching ALIGN-TOPICS.

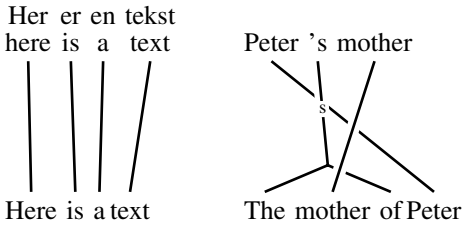
ALIGN *Alignment level* (long: ALIGNMENT). A relation at the word alignment level. Ie, an alignment relation that expresses a translational equivalence between two sets of words (and their iated phrases), either in terms of form or meaning. Null alignments - ie, a set of words in one text which does not correspond to any set of words in the other text - are encoded as a set of words that is aligned to itself.

isa DIM:LEVEL [19]

Subtypes: "" f.

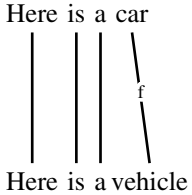
"" *Unlabeled word alignment* (long: align). An unlabeled word alignment is represented as a word alignment where the label is an empty string. It is used to represent the default word alignment, where there is full translational equivalence between the two sets of words.

isa ALIGN [371]



f *Fuzzy word alignment* (long: fuzzy). A semantically fuzzy word alignment.

isa ALIGN [372]



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 realtion 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

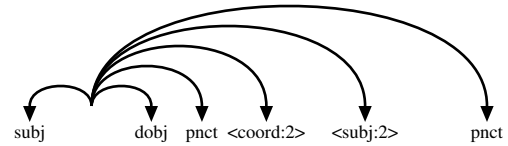
Figure 9.1: The relations matching RULE-TOPICS.

RULE *Relation rule.* Rule for specifying complex relations.
isa ANY [8]
Subtypes: ”(”ANY”)” ”*”DISC ”<”PRIM...”:”INTEGER”>” ”@”adverb ”[”PRIM”]” ”assoc-”QUALIA ”{”SEM”}” ””QUALIA ”¤”PRIM ”§”PRIM ANY”&”ANY ANY”|”ANY DISC”*” PRIM”#” PRIM”/”CONNECTOR PRIM”/(”CONNECTOR”)” PRIM”/ATTR”INTEGER PRIM”{”THEM”}”.

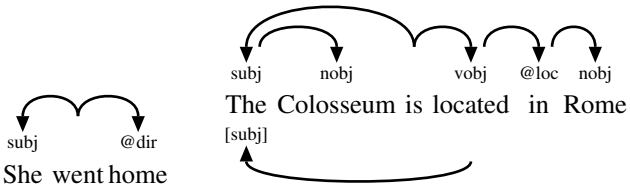
”(”ANY”)” *Disambiguation.*
isa RULE [7]

”*”DISC *Down-head in attribution.* The head in the relation is one step further down in the attribution chain
isa RULE [363]

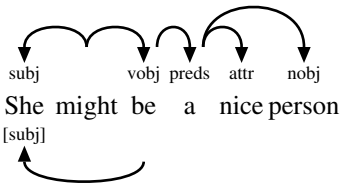
”<”PRIM...”:”INTEGER”>” *Gapping dependent.* First conjunct->gapping dependent
isa GAP RULE [351]



"@"adverb isa COMP RULE [365]
Valency-bound adverbial. A complement relation which can be interpreted as an obligatory, valency-bound adverbial relation.
Related types: cont dir dur ext hab loc prec succ time.

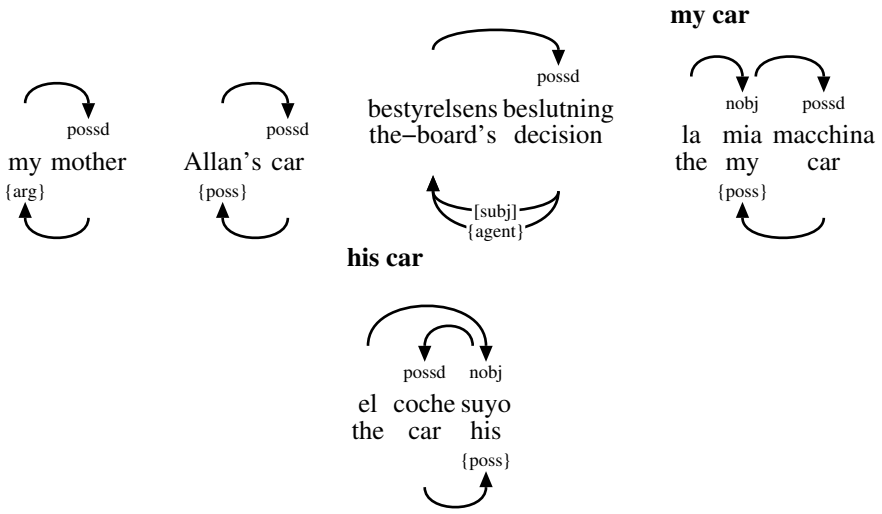


"["PRIM"]" isa RULE SEC [349]
Pattern for secondary syntactic dependency relation formed from primary syntactic dependency relation. Governor->secondary syntactic dependent; $PRIM must be non-secondary
Related types: "{"$PRIM"}".



"assoc-"QUALIA isa RULE assoc [190]
Associative anaphor wrt. qualia. Anaphor denotes entity which is associated with antecedent

"{"SEM"}" isa RULE SEC [350]
Pattern for secondary semantic dependency realtion formed from primary semantic dependency relation. Governor->secondary semantic dependent; $PRIM must be non-secondary
Related types: "["$PRIM"]".



""QUALIA *Resemblance wrt. $qualia relation.*
isa RULE resemblance
[354]

"¤"PRIM *Discourse specification.* A primary syntactic relation that has been used as a discourse relation for stilistic purposes.
isa DISC RULE
[353]

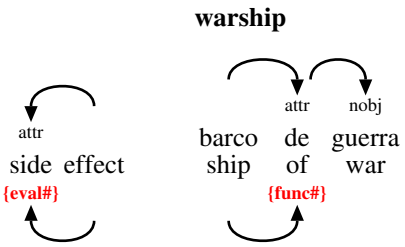
"§"PRIM *Morphology specification.*
isa MORPH RULE
[357]

ANY"&"ANY *Both-and relation.* Both relations hold
isa RULE
[355]

ANY"|"ANY *Either-or relation.* One of the relations holds
isa RULE
[356]

DISC *Down-dependent in attribution.* The dependent in the relation is one step further down in the attribution chain
isa RULE
[364]

PRIM"#" *Pattern for idiomatic primary dependency.* Head->dependent within idiom
isa IDIOM RULE
[347]

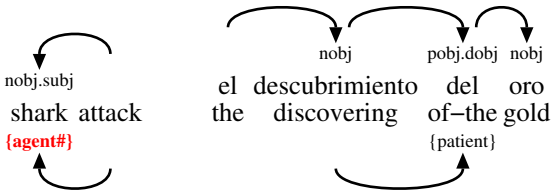


PRIM"/"CONNECTOR *Explicit connector.* The discourse relation has explicit connector $CONNECTOR
isa RULE
[361]

PRIM"/("CONNECTOR")" *Implicit connector.* The discourse relation has implicit connector $CONNECTOR
isa RULE
[362]

PRIM"/ATTR"INTEGER *Attribution.* Specifies the person to whom the utterance is attributed (ATTR or ATTR1, ATTR2, ... when there is more than one person)
isa RULE
[352]

PRIM"{"THEM"}" *Pattern for primary dependency relation with thematic role.* $PRIM must be non-thematic; the thematic roles can be agent, patient, recipient, experient, location.
isa RULE
[348]



Chapter 10

Relations misplaced outside the ANY hierarchy

MISPLACED: misplaced relation

Figure 10.1: The relations matching -ANY.

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

Chapter 11

Annotation topics:: TOPICS

TOPICS: annotation topics
- %ALIGN: Alignment constructions
- %DISC: Discourse constructions
- %MORPH: Morphological constructions
- %SEM: Semantic constructions
- %SYN: Syntactic constructions
  - %SYN:NP: Complex NP constructions
    - %SYN:NP:CP: Compounds
    - %SYN:NP:GEN: Genitive NP constructions
    - %SYN:NP:MOD: NP-modifiers
      - %SYN:NP:MOD:ADJ: Adjectives modifying a NP construction
      - %SYN:NP:MOD:ADV: Adverbial modifying a NP construction
    - %SYN:NP:RELN: NP constructions with relational nouns
    - %SYN:NP:VRN: NP constructions with verb-related nouns
  - %SYN:VP: VP constructions

Figure 11.1: The relations matching TOPICS-DIM.

TOPICS isa ANY [10]
Annotation topics. A detailed description of the annotation of specific constructions, as an aid in the interpretation and annotation of the treebanks.
Subtypes: %ALIGN %DISC %MORPH %SEM %SYN.

%ALIGN isa TOPICS [367]
Alignment constructions.

%DISC isa TOPICS [368]
Discourse constructions.

%MORPH isa TOPICS [371]
Morphological constructions.

%SEM isa TOPICS [372]
Semantic constructions.

%SYN isa TOPICS [376]
Syntactic constructions.
Subtypes: %SYN:NP %SYN:VP.

%SYN:NP isa %SYN [381]
Complex NP constructions. A detailed description of how different complex NP constructions are annotated. En general, all complex NP constructions have a syntactic as well a semantic annotation.
Subtypes: %SYN:NP:CP %SYN:NP:GEN %SYN:NP:MOD %SYN:NP:RELN %SYN:NP:VRN.

example1 example2

%SYN:NP:CP *Compounds.*
isa %SYN:NP
[387]

%SYN:NP:GEN *Genitive NP constructions.* In genitive constructions (X's Y) the dependent (Y) is always annotated as "possd" in the syntactic annotation. In the semantic annotation X is analysed as the dependent and the semantic relation annotated depends on the type of noun or entity represented by Y. The "s" functions as a determiner, thus attributives are annotated as dependents to the X, with the exception of compounds of the type [Adj. ø N]# (Lotte's green card) Genitive constructions with verb-related nouns: Genitive constructions with relational nouns: Other genitive constructions:
isa %SYN:NP
[388]

%SYN:NP:MOD *NP-modifiers.*
isa %SYN:NP
Subtypes: %SYN:NP:MOD:ADJ %SYN:NP:MOD:ADV aobj attr.
[382]

%SYN:NP:MOD:ADJ *Adjectives modifying a NP construction.* Adjectives modifying a NP construction are annotated using the syntactic label "attr" when the adjective functions as a syntactic adjunct, or "aobj" when the adjective modifies a verb-related or relational noun. In the analysis of Germanic languages, the adjective is analysed as a dependent of the pronoun where it is present, and as a dependent of the noun otherwise, whereas in the analysis of Romanic languages the adjective is always analysed as a dependent of the noun. However, when forming part of a compound of the type [Adj. ø N#] (e.g. "high school") the adjective is always analysed as dependent on the noun. In the case of relational adjectives, the semantic relation between the noun and adjective is also annotated. In the semantic annotation, the adjective is always analysed as a dependent of the noun.
isa %SYN:NP:MOD
[383]

%SYN:NP:MOD:ADV *Adverbial modifying a NP construction.*
isa %SYN:NP:MOD
[384]

%SYN:NP:REL *NP constructions with relational nouns.*
isa %SYN:NP
[386]

%SYN:NP:VRN *NP constructions with verb-related nouns.*
isa %SYN:NP
[385]

%SYN:VP *VP constructions.*
isa %SYN
[391]

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
    - fill: licensed filler

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

SYN: syntax level

The relations matching SYNTAX-SYNCOMP-SYNADJ-TOPICS.

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
- cause: causation adverbial
  - goal: goal adverbial
- conc: concession adverbial
- concom:
- cond: condition adverbial
- cons: consequence adverbial
- exem: example adverbial
- man: manner adverbial
  - accom: companionship adverbial
  - inst: instrument adverbial
- neg: negation adverbial
- other: other adverbial
- prg: pragmatic adverbial
  - discmark: sentence-initial discourse marker
  - epi: epistemic adverbial
  - eval: evaluation adverbial
  - focal: focalizer adverbial
  - scene: pragmatic condition and structural adverbial
    - add: additive adverbial
    - contr: contrast adverbial
    - elab: elaboration adverbial
- quant: degree adverbial
- resem: comparison adverbial
- source: source attribution adverbial
- space: space adverbial
  - dir: direction adverbial
  - loc: location adverbial
- time: time adverbial
  - iter: habituality adverb

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
- mod: modifier/adverbial
  - modp: parenthetic modifier
- 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-TOPICS.

MORPHCOMP: compositional semantic relations
- §ABOUT: noun-noun compound (about)
- §AGENT:MC: noun-noun compound (agentive)
- §CONST: noun-noun compound (constitutive)
- §EVAL: noun-noun compound (evaluative)
- §FUNC: noun-noun compound (function)
- §LOC: noun-noun compound (position)
- §OTHER: noun-noun compound (other)
- §POSS: noun-noun compound (possession)
- §RESEM: noun-noun compound (resemblance)
- §SOURCE: noun-noun compound (origin)
- §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
- §AGENT: agentive
- §ITER: iteration
- §MOD: modification
  - §MOD:eval: evaluation
  - §MOD:qual: qualification
  - §MOD:quant: quantification
- §NEG: negation
  - §NEG:contr: contrast
  - §NEG:priv: privation
  - §NEG:rev: reversion
- §PRE:other: other prefix relation
- §SPACE: space
  - §SPACE:dir: direction
  - §SPACE:loc: location
  - §SPACE:source: source
- §TELIC: telic
- §TIME: time
  - §TIME:post: temporal succession
  - §TIME:pre: temporal precedence
- §TRANS: transitivity

The relations matching PREFIX.

SUFFIX: semantic relations appearing with suffixes
- §AUG: augmentation
- §DENUM: adjective-numeral derivation
  - §DENUM:apart: adjective-partitive derivation
  - §DENUM:ord: adjective-ordinal derivation
  - §DENUM:quant: adjective-multiplicative derivation
- §DER: verb derivation
  - §DERadvv: adverb-verb derivation
  - §DERav: adjective-verb derivation
  - §DERnv: noun-verb derivation
    - §DERvn:agent: verb-noun derivation (agent)
    - §DERvn:core: verb-noun derivation (core)
    - §DERvn:exper: verb-noun derivation (experiencer)
    - §DERvn:inst: verb-noun derivation (instrument)
    - §DERvn:loc: verb-noun derivation (location)
    - §DERvn:other: verb-noun derivation (other)
    - §DERvn:patient: verb-noun derivation (patient)
    - §DERvn:recip: verb-noun derivation (recipient)
  - §DERva: verb-adjective derivation
    - §DERva:act: verb-adjective derivation (active)
      - §DERva:act.disp: verb-adjective derivation (pure)
      - §DERva:act.epi: verb-adjective derivation (disposition)
    - §DERva:pas: verb-adjective derivation (potentiality)
      - §DERva:pas.deon: verb-adjective derivation (passive potentiality)
      - §DERva:pas.epi: verb-adjective derivation (passive participles)
    - §DERva:pas.part: verb-adjective derivation (passive)
  - §DERvn: verb-noun derivation
  - §DERvv: verb-verb derivation
- §DERan:qual: adjective derivation
- §DERna: noun-adjective derivation
  - §DERna:deono: noun-adjective derivation (naming)
    - §DERna:deono.pers: noun-adjective derivation (naming persons)
    - §DERna:deono.place: noun-adjective derivation (naming places)
  - §DERna:disp: noun-adjective derivation (disposition)
  - §DERna:other: noun-adjective derivation (other)
  - §DERna:poss: noun-adjective derivation (possession)
  - §DERna:rel: noun-adjective derivation (relational)
    - §DERna:rel.norm: noun-adjective derivation (normal)
  - §DERna:resem: noun-adjective derivation (resemblance)
  - §DERna:telic: noun-adjective derivation (effect)
- §DERnn: noun-noun derivation
  - §DERnn:agent: noun-noun derivation (agent)
  - §DERnn:assoc: noun-noun derivation (association)
  - §DERnn:capac: noun-noun derivation (capacity)
  - §DERnn:cont: noun-noun derivation (container)
  - §DERnn:loc: noun-noun derivation (location)
  - §DERnn:other: noun-noun derivation (other)
  - §DERnn:quant: noun-noun derivation (quantification)
  - §DERnn:telic: noun-noun derivation (telic)
  - §DERnn:time: noun-noun derivation (time)
- §DERv:
- §DIMIN: diminution
- §PEJ: pejoration

The relations matching SUFFIX.

DISC: discourse level
- ”¤”PRIM: discourse specification
- DISCOTHER:
  - JOINT: no clear relation
  - REP: repaired
  - SCENE: scene

The relations matching DISCOURSE-DISCFUNC-DISCSEM-TOPICS.

DISCPRAG: pragmatic and illocutionary discourse relations
- ANSW: answer
- CONSOL: consolidation
  - CONSOL:inst: instrumental
  - CONSOL:motiv: motivation
  - CONSOL:source: justification
- DIREC: directive act
- EXPR: expressive act
- INTACT: interactional signals
  - INTACT:attn: attention
  - INTACT:inter: interruption
- QUEST: question

The relations matching DISCFUNC.

DISCSEM: semantic discourse relations
- AGENTIVE: cause relation (discourse)
  - AGENTIVE:expl: explanation relation in discourse
  - AGENTIVE:reas: reason relation (discourse)
  - AGENTIVE:sbj: subjective cause
- CONC: concession
- COND: condition
- CONJ: conjunction
  - CONJ:add: conjunction, addition
  - CONJ:elab: conjunction, elaboration
  - CONJ:seq: sequence
- CONST: constitutive elaboration
  - CONST:apart: part of relation
  - CONST:elab: elaboration
  - CONST:exem: exemplification
  - CONST:rest: restatement
- CONTR: contrast
  - CONTR:dir: direct contrast
  - CONTR:sbj: subjective contrast
- DISJ: disjunction
  - DISJ:dir: direct disjunction
  - DISJ:sbj: subjective disjunction
- FORMAL: formal description
  - FORMAL:descr: neutral description
  - FORMAL:eval: positive/negative evaluation
- TELIC: consequence/result/conclusion relation (discourse)
  - TELIC:cons.dir: direct, physical consequence, result
  - TELIC:cons.sbj: pragmatic/personal conclusion, deduction
  - TELIC:goal: goal relation (discourse)
- TIME: temporal relation
  - TIME:cont: contemporaneity
  - TIME:post: temporal succession
  - TIME:pre: temporal precedence

The relations matching DISCSEM.

ANA: anaphoric level
- anaphor:

The relations matching ANAPHORA-coref-assoc-TOPICS.

coref: coreference
- coref-iden: coreferential NP with lexical identity
- coref-res: resumptive anaphor
  - coref-res.prg: pragmatic coreference
- coref-var: coreferential NP with lexical variety
- 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-formal.loc: associative locative anaphor
- assoc-telic: associative anaphor (telic)

The relations matching assoc.

SEM: semantic level

The relations matching SEMANTICS-QUALIA-SEMROLE-TOPICS.

QUALIA: qualia roles
- const: constitutive qualia
- formal: formal qualia
  - agentive: agentive qualia
  - location: location qualia
- resemblance: 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}:
{cause}:
{class}:
{const}:
{elab}:
{eval}:
{experiencer}: The receiver of an emotion or a physical impact
{form}:
{func}:
{goal}:
{iden}:
{location}: The location where something is situated or happens
{loc}:
{other}: No specific semantic role
{patient}: An object or a person that is the subject of the action or the one who is located somewhere
{poss}:
{quant}:
{recipient}: The receiver of something
{resem}:
{source}:
{time}:

The relations matching SEMROLE.

ALIGN: alignment level
"": unlabeled word alignment
f: fuzzy word alignment

The relations matching ALIGN-TOPICS.

RULE: relation rule
”(”ANY”)”: disambiguation
”*”DISC: down-head in attribution
”<”PRIM...”:”INTEGER”>”: gapping dependent
”@”adverb: valency-bound adverbial
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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-TOPICS.

MISPLACED: misplaced relation

The relations matching -ANY.

Appendix B

Agreement and confusion tables

In the following tables, the columns are interpreted as follows:

- *Relation name R:* the name of the relation.
- *Agreement A:* the estimated level of agreement, defined as the probability that another annotator assigns the same label to the relation (this number may be inaccurate if N is small).
- *Relation count N:* the number of distinct multiply annotated tokens in the corpus that were annotated with the relation by at least one annotator.
- *Confusion table:* the relations that other annotators used, with a percentage that indicates the probability that each relation was used by the other annotator instead of R.

B.1 Confusion table: syntax

R	A	N	Confusion list
xpl	100%	2	$\mathsf{xpl}_{100\%}$
qobj	100%	5	$\mathsf{qobj}_{100\%}$
numm	100%	1	$\mathsf{numm}_{100\%}$
namel	100%	4	$\mathsf{namel}_{100\%}$
namef	100%	21	$\mathsf{namef}_{100\%}$
expl	100%	4	$\mathsf{expl}_{100\%}$
exem	100%	3	$\mathsf{exem}_{100\%}$
cond	100%	2	$\mathsf{cond}_{100\%}$
appr	100%	5	$\mathsf{appr}_{100\%}$
appa	100%	5	$\mathsf{appa}_{100\%}$
agent	100%	1	$\mathsf{agent}_{100\%}$
pnct	99%	275	$\mathsf{pnct}_{99\%}$ $\mathsf{nobj}_{0\%}$ $\mathsf{dobj}_{0\%}$
subj	98%	171	$\mathsf{subj}_{98\%}$ $\mathsf{nobj}_{1\%}$ $\mathsf{correl}_{1\%}$ $\mathsf{attr}_{1\%}$
vobj	96%	116	$\mathsf{vobj}_{96\%}$ $\mathsf{nobj}_{3\%}$ $\mathsf{conj}_{1\%}$ $\mathsf{relr}_{1\%}$
conj	96%	93	$\mathsf{conj}_{96\%}$ $\mathsf{attr}_{2\%}$ $\mathsf{nobj}_{1\%}$ $\mathsf{vobj}_{1\%}$
coord	95%	66	$\mathsf{coord}_{95\%}$ $\mathsf{contr}_{3\%}$ $\mathsf{neg}_{2\%}$
neg	93%	14	$\mathsf{neg}_{93\%}$ $\mathsf{coord}_{7\%}$
nobj	92%	488	$\mathsf{nobj}_{92\%}$ $\mathsf{attr}_{1\%}$ $\mathsf{name}_{1\%}$ $\mathsf{pobj}_{1\%}$ $\mathsf{title}_{1\%}$ $\mathsf{vobj}_{1\%}$ $\mathsf{time}_{0\%}$ $\mathsf{dobj}_{0\%}$ $\mathsf{subj}_{0\%}$ $\mathsf{possd}_{0\%}$ $\mathsf{conj}_{0\%}$ $\mathsf{aobj}_{0\%}$ $\mathsf{pnct}_{0\%}$ $\mathsf{quant}_{0\%}$ $\mathsf{preds}_{0\%}$ $\mathsf{loc}_{0\%}$ $\mathsf{modp}_{0\%}$

add	91%	11	add$_{91\%}$ discmark$_{9\%}$
possd	90%	30	possd$_{90\%}$ nobj$_{7\%}$ attr$_{3\%}$
preds	86%	43	preds$_{86\%}$ dobj$_{5\%}$ nobj$_{2\%}$ loc$_{2\%}$ inst$_{2\%}$ resem$_{2\%}$
dobj	86%	93	dobj$_{86\%}$ pobj$_{4\%}$ nobj$_{2\%}$ preds$_{2\%}$ iobj$_{2\%}$ predo$_{1\%}$ dir$_{1\%}$ pnct$_{1\%}$
attr	81%	245	attr$_{81\%}$ pobj$_{9\%}$ nobj$_{2\%}$ aobj$_{2\%}$ conj$_{1\%}$ time$_{1\%}$ cause$_{1\%}$ focal$_{0\%}$ name$_{0\%}$ possd$_{0\%}$ subj$_{0\%}$ man$_{0\%}$ loc$_{0\%}$ other$_{0\%}$ inst$_{0\%}$ modp$_{0\%}$
quant	77%	35	quant$_{77\%}$ man$_{6\%}$ avobj$_{6\%}$ eval$_{6\%}$ nobj$_{3\%}$ time$_{3\%}$
time	72%	36	time$_{72\%}$ iter$_{6\%}$ man$_{6\%}$ nobj$_{6\%}$ attr$_{6\%}$ scene$_{3\%}$ quant$_{3\%}$
loc	71%	45	loc$_{71\%}$ other$_{7\%}$ dir$_{4\%}$ pobj$_{4\%}$ nobj$_{2\%}$ preds$_{2\%}$ avobj$_{2\%}$ focal$_{2\%}$ attr$_{2\%}$ inst$_{2\%}$
part	67%	3	part$_{67\%}$ dir$_{33\%}$
eval	67%	9	eval$_{67\%}$ quant$_{22\%}$ man$_{11\%}$
cons	67%	3	cons$_{67\%}$ cause$_{33\%}$
relr	65%	23	relr$_{65\%}$ relpa$_{30\%}$ vobj$_{4\%}$
name	65%	17	name$_{65\%}$ nobj$_{29\%}$ attr$_{6\%}$
epi	60%	5	epi$_{60\%}$ man$_{40\%}$
pobj	55%	109	pobj$_{55\%}$ attr$_{20\%}$ dir$_{6\%}$ nobj$_{5\%}$ dobj$_{4\%}$ source$_{3\%}$ goal$_{3\%}$ loc$_{2\%}$ man$_{1\%}$ other$_{1\%}$ inst$_{1\%}$ cause$_{1\%}$
title	50%	6	nobj$_{50\%}$ title$_{50\%}$
correl	50%	4	correl$_{50\%}$ focal$_{25\%}$ subj$_{25\%}$
inst	44%	9	inst$_{44\%}$ loc$_{11\%}$ scene$_{11\%}$ preds$_{11\%}$ attr$_{11\%}$ pobj$_{11\%}$
goal	44%	9	goal$_{44\%}$ pobj$_{33\%}$ man$_{11\%}$ scene$_{11\%}$
man	43%	30	man$_{43\%}$ accom$_{10\%}$ epi$_{7\%}$ time$_{7\%}$ other$_{7\%}$ quant$_{7\%}$ source$_{3\%}$ attr$_{3\%}$ goal$_{3\%}$ aobj$_{3\%}$ eval$_{3\%}$ pobj$_{3\%}$
focal	43%	7	focal$_{43\%}$ other$_{14\%}$ correl$_{14\%}$ loc$_{14\%}$ attr$_{14\%}$
accom	40%	5	man$_{60\%}$ accom$_{40\%}$
relpa	36%	11	relr$_{64\%}$ relpa$_{36\%}$
modp	33%	3	nobj$_{33\%}$ attr$_{33\%}$ modp$_{33\%}$
dir	33%	15	pobj$_{40\%}$ dir$_{33\%}$ loc$_{13\%}$ part$_{7\%}$ dobj$_{7\%}$
conc	33%	3	contr$_{67\%}$ conc$_{33\%}$
cause	33%	6	cause$_{33\%}$ attr$_{33\%}$ pobj$_{17\%}$ cons$_{17\%}$
aobj	33%	9	attr$_{44\%}$ aobj$_{33\%}$ man$_{11\%}$ nobj$_{11\%}$
avobj	25%	4	quant$_{50\%}$ loc$_{25\%}$ avobj$_{25\%}$
other	11%	9	loc$_{33\%}$ man$_{22\%}$ other$_{11\%}$ focal$_{11\%}$ attr$_{11\%}$ pobj$_{11\%}$
source	0%	4	pobj$_{75\%}$ man$_{25\%}$
scene	0%	3	goal$_{33\%}$ time$_{33\%}$ inst$_{33\%}$
resem	0%	1	preds$_{100\%}$
predo	0%	1	dobj$_{100\%}$
iter	0%	2	time$_{100\%}$
iobj	0%	2	dobj$_{100\%}$
discmark	0%	4	contr$_{75\%}$ add$_{25\%}$
contr	0%	7	discmark$_{43\%}$ conc$_{29\%}$ coord$_{29\%}$
TOTAL	84%	2137	

B.2 Confusion table: semantics

R	A	N	Confusion list
quant	100%	1	quant$_{100\%}$

eval	100%	1	$\text{eval}_{100\%}$
poss	75%	8	$\text{poss}_{75\%}$ $\text{loc}_{13\%}$ $\text{arg}_{13\%}$
time	73%	11	$\text{time}_{73\%}$ $\text{source}_{18\%}$ $\text{other}_{9\%}$
apart	71%	7	$\text{apart}_{71\%}$ $\text{loc}_{14\%}$ $\text{const}_{14\%}$
loc	58%	31	$\text{loc}_{58\%}$ $\text{func}_{10\%}$ $\text{arg}_{6\%}$ $\text{const}_{3\%}$ $\text{location}_{3\%}$ $\text{agent}_{3\%}$ $\text{elab}_{3\%}$ $\text{apart}_{3\%}$ $\text{recipient}_{3\%}$ $\text{about}_{3\%}$ $\text{poss}_{3\%}$
source	57%	21	$\text{source}_{57\%}$ $\text{arg}_{24\%}$ $\text{time}_{10\%}$ $\text{const}_{5\%}$ $\text{agent}_{5\%}$
patient	57%	21	$\text{patient}_{57\%}$ $\text{arg}_{19\%}$ $\text{about}_{10\%}$ $\text{func}_{5\%}$ $\text{experiencer}_{5\%}$ $\text{agent}_{5\%}$
elab	50%	2	$\text{loc}_{50\%}$ $\text{elab}_{50\%}$
func	48%	33	$\text{func}_{48\%}$ $\text{arg}_{24\%}$ $\text{loc}_{9\%}$ $\text{about}_{6\%}$ $\text{const}_{3\%}$ $\text{patient}_{3\%}$ $\text{iden}_{3\%}$ $\text{other}_{3\%}$
const	35%	20	$\text{const}_{35\%}$ $\text{arg}_{30\%}$ $\text{form}_{10\%}$ $\text{apart}_{5\%}$ $\text{loc}_{5\%}$ $\text{class}_{5\%}$ $\text{func}_{5\%}$ $\text{source}_{5\%}$
agent	35%	17	$\text{agent}_{35\%}$ $\text{arg}_{29\%}$ $\text{experiencer}_{18\%}$ $\text{loc}_{6\%}$ $\text{patient}_{6\%}$ $\text{source}_{6\%}$
arg	34%	56	$\text{arg}_{34\%}$ $\text{func}_{14\%}$ $\text{const}_{11\%}$ $\text{agent}_{9\%}$ $\text{source}_{9\%}$ $\text{about}_{7\%}$ $\text{patient}_{7\%}$ $\text{loc}_{4\%}$ $\text{other}_{4\%}$ $\text{poss}_{2\%}$
about	31%	13	$\text{arg}_{31\%}$ $\text{about}_{31\%}$ $\text{patient}_{15\%}$ $\text{func}_{15\%}$ $\text{loc}_{8\%}$
recipient	0%	1	$\text{loc}_{100\%}$
other	0%	4	$\text{arg}_{50\%}$ $\text{time}_{25\%}$ $\text{func}_{25\%}$
location	0%	1	$\text{loc}_{100\%}$
iden	0%	1	$\text{func}_{100\%}$
form	0%	2	$\text{const}_{100\%}$
experiencer	0%	4	$\text{agent}_{75\%}$ $\text{patient}_{25\%}$
class	0%	1	$\text{const}_{100\%}$
TOTAL	45%	256	

B.3 Confusion table: discourse

R	A	N	Confusion list
SCENE	100%	4	$\text{SCENE}_{100\%}$
JOINT	100%	2	$\text{JOINT}_{100\%}$
ANSW	100%	1	$\text{ANSW}_{100\%}$
TELIC:cons.sbj	75%	4	$\text{TELIC:cons.sbj}_{75\%}$ $\text{CONJ:add}_{25\%}$
CONTR:dir	50%	2	$\text{expl}_{50\%}$ $\text{CONTR:dir}_{50\%}$
CONTR	50%	1	$\text{CONTR:sbj}_{50\%}$ $\text{conj}_{50\%}$
CONST:rest	50%	4	$\text{CONST:rest}_{50\%}$ $\text{CONJ:elab}_{33\%}$ $\text{xpl}_{17\%}$
CONC	50%	2	$\text{CONJ:add}_{50\%}$ $\text{CONC}_{50\%}$
TELIC:cons.dir	44%	3	$\text{TELIC:cons.dir}_{44\%}$ $\text{CONJ:add}_{33\%}$ $\text{vobj}_{22\%}$
CONJ:elab	41%	27	$\text{CONJ:add}_{42\%}$ $\text{CONJ:elab}_{41\%}$ $\text{CONST:rest}_{5\%}$ $\text{FORMAL:descr}_{4\%}$ $\text{CONSOL:source}_{4\%}$ $\text{qobj}_{2\%}$ $\text{xpl}_{2\%}$
CONJ:add	40%	39	$\text{CONJ:add}_{40\%}$ $\text{CONJ:elab}_{29\%}$ $\text{CONTR:sbj}_{5\%}$ $\text{AGENTIVE:expl}_{5\%}$ $\text{conj}_{4\%}$ $\text{rel}_{3\%}$ $\text{TELIC:cons.sbj}_{3\%}$ $\text{time}_{3\%}$ $\text{TELIC:cons.dir}_{3\%}$ $\text{CONST:exem}_{3\%}$ $\text{CONC}_{3\%}$ $\text{qobj}_{2\%}$
AGENTIVE:expl	33%	6	$\text{CONJ:add}_{33\%}$ $\text{AGENTIVE:expl}_{33\%}$ $\text{CONSOL:motiv}_{17\%}$ $\text{vobj}_{17\%}$
CONTR:sbj	25%	10	$\text{conj}_{40\%}$ $\text{CONTR:sbj}_{25\%}$ $\text{CONJ:add}_{20\%}$ $\text{coord}_{10\%}$ $\text{CONTR}_{5\%}$
xpl CONJ:elab	0%	1	$\text{xpl}_{100\%}$
FORMAL:descr	0%	1	$\text{CONJ:elab}_{100\%}$

CONST:exem	0%	1	CONJ:add$_{100\%}$
CONSOL:source	0%	1	CONJ:elab$_{100\%}$
CONSOL:motiv	0%	1	AGENTIVE:expl$_{100\%}$
TOTAL	42%	110	

B.4 Confusion table: anaphora

R	A	N	Confusion list
ref	100%	38	ref$_{100\%}$
coref-res	100%	1	coref-res$_{100\%}$
TOTAL	100%	39	

B.5 Confusion table: morphology

R	A	N	Confusion list

B.6 Confusion table: alignment

R	A	N	Confusion list

Appendix C

Annotation status

C.1 All texts

	alignment	discourse	morphology	postag	syntax
none	1016	2099	2226		971
auto				1775	75
outdated-final	536				941
first	45	20	85		69
discussed	178	193	1		182
final				537	74

C.2 da texts

	discourse	morphology	postag	syntax
none	440	473		
auto				
outdated-final				503
first	12	63		20
discussed	85	1		7
final			537	7

C.3 de texts

	discourse	morphology	postag	syntax
none	405	413		346
auto			413	
outdated-final				
first	8			38
discussed				6
final				23

C.4 en texts

	discourse	morphology	postag	syntax
none	536	536		
auto			536	75
outdated-final				438

first	10
discussed	7
final	6

C.5 es texts

	discourse	morphology	postag	syntax
none	388	393		343
auto			413	
outdated-final				
first		20		1
discussed	25			65
final				4

C.6 it texts

	discourse	morphology	postag	syntax
none	330	411		282
auto			413	
outdated-final				
first		2		
discussed	83			97
final				34

C.7 da-de texts

	alignment
none	368
auto	
outdated-final	
first	45
discussed	
final	

C.8 da-en texts

	alignment
none	
auto	
outdated-final	536
first	
discussed	
final	

C.9 da-es texts

	alignment
none	332

auto	
outdated-final	
first	
discussed	81
final	

C.10 da-it texts

	alignment
none	316
auto	
outdated-final	
first	
discussed	97
final	

Appendix D

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