

Rules of annotation for the analytical layer

of the *Index Thomisticus* Treebank

March 30th, 2016

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Hereafter the rules of annotation for the analytical layer of the *Index Thomisticus* Treebank are provided. They have been developed in accordance with the PDT Guidelines¹ slightly adapted for Latin according to Harm Pinkster's contributions for Latin syntax and semantics². The rules might be subject to further refinements so it is recommended to check this document periodically in order to ascertain every improvement or modification. As it is noticeable, the rules do not consist in a comprehensive explanation of all the annotation solutions, which can be offered only during a specific training, but rather in a list of special cases or in the explanation of the treatment of some particular words/clauses. For this reason, they are not meant to instruct an analytical annotator from scratch, but rather to clarify some aspects to those already possessing a basic experience of annotation and wishing to improve it.

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¹ See <https://ufal.mff.cuni.cz/pdt2.0/doc/manuals/en/a-layer/html/index.html>

² See <http://nlp.perseus.tufts.edu/syntax/treebank/1.3/docs/guidelines.pdf>

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Usage of Coord and Coord_Co

If a Coord stands in a relation of father-child dependency upon another Coord, the Coord-child does not receive the extension "_Co" (unless it is coordinated with another Coord-child of the same Coord-father).

This often occurs at the beginning of the sentence, in the case the sentence begins with a Coord (*et*) governing another Coord inside the sentence, which splits the sentence into two propositions in coordination.

For example: "... *et* ...".

In this case, the comma is the child of "et" and is marked with the analytical function (afun) Coord.

The question arising here is whether the extension "_Co" should be given or not to the Coord-child.

In the event that this choice proves wrong (i.e., the child should receive Coord_Coord and not Coord), an automatic correction may be easily applied, so that each time a node marked with the afun Coord is the son of a node receiving the same afun Coord, the child node receives the afun Coord_Co instead of Coord.

Nouns are marked by the afun Atr and not by Adv or Obj

(see the sections "Non-agreeing attribute expressed by a noun in another prepositionless case" and "Non-agreeing attribute expressed by a noun in prepositional case" of the PDT Guidelines: <https://ufal.mff.cuni.cz/pdt2.0/doc/manuals/en/a-layer/html/ch03s02x03.html>).

In the case a noun governs another noun both directly and indirectly (i.e., preceded by a preposition), this latter must be marked with the afun Atr (and not Adv, or Obj).

An example of application of this type is the occurrence 532 of *forma*. The part involved is "*convenientiam ad formam illam*": "*convenientiam*" governs "*ad formam illam*", where "*formam*" receives the afun Atr.

On the boundaries of sentences

During the annotation process, it is allowed to expand the boundaries of sentences over punctuation, even if it is recommended to do it cautiously: the boundaries may be extended only where the resulting sentence has a manageable, not over-complicated, size, and for the sake of clarity.

As a rule of thumb, however, it is good thing to expand the sentences as much less as possible, given the fact that a sentence can begin with the afun ExD or the predicate of a subordinate clause with can be marked with the afun Pred.

Basically, even it is not strictly prohibited, it is recommended not to begin a sentence with an AuxC, while it is permissible to do so with a Coord and an ExD; again, it is better to begin with a Coord rather than with an ExD.

An example is the occurrence # 198 of the concordances of *forma*.

Usage of Exd and Pred at the beginning of sentences

(see the section "Ellipsis of the governing clause" of the PDT Guidelines: <https://ufal.mff.cuni.cz/pdt2.0/doc/manuals/en/a-layer/html/ch03s03.html#s2-exd>).

In the case of ellipses of the main sentence, that is, if a sentence consists of a dependent clause introduced by a conjunction or by a coordinating item, the following rules have to be applied:

If the root of a tree is a Coord, the main verb of the sentence receives the afun Pred_Co. If there are two main verbs in coordination, they both receive Pred_Co.

For example: "*sed (Coord) contingit (Pred_Co) quod ...*".

If the root of a tree is an AuxC, the main verb of the sentence receives Pred. If there are two main verbs in coordination, both receive Pred_Co.

For example: "*quia (AuxC) forma est (Pred) principium*".

If the root of a tree is a Coord which is father of an AuxC and of no other node marked with an afun ExD_Co, the main verb of the sentence receives Pred_Co. If there are two main verbs in coordination, both receive Pred_Co.

For example: "*et* (Coord) *quia* (AuxC) *ponebat* (Pred_Co)".

If the root of a tree is a Coord who is the father of an AuxC and of at least one other node receiving ExD_Co, the main verb of the sentence introduced by AuxC receives ExD_Co. If there are two main verbs in coordination within the phrase introduced by AuxC, they both receive ExD_Co.

For example: "*sed* (Coord) *vacua* (ExD_Co: missing *est*) *inquantum* (AuxC) *implet* (ExD_Co) ...".

This latter case is the only one where it is required to use not the afun Pred (or Pred_Co), but the afun ExD_Co, because otherwise there would be some upper nodes marked with ExD_Co and a lower node receiving Pred_Co, which does not work. In fact, applying Pred_Co would mean that the verb receiving Pred_Co is the predicate of the whole sentence, which is openly wrong since the predicate of the whole sentence is elliptical, as the use of ExD_Co shows. Instead, there is no inconsistency with the use of Pred_Co in the case the predicate of the sentence is introduced by the afun AuxC: in this case, in fact, the condition is that no node marked with the afun ExD_Co depends upon the node holding the afun Coord.

Suffixed question marks followed by three dots

In the case of suffixed question marks closing the sentence and followed by three dots (? ...;), the question mark (?) receives the afun AuxK and represents the governor node of the three dots, which are marked with the afun AuxG.

Usage of AUxX and AuxG

In contrast to what is proposed in the Prague Dependency Guidelines, which assign AuxG in these cases, the afun AuxX is applied to mark not only commas, but also punctuation marks (.), colons (:), and semicolons (;) when they are found in the phrase/sentence, and not when they are used as punctuation closing the phrase/sentence.

The reason for this is that these punctuations behave mostly as commas - for example, they tend to distinguish a main sentence from a dependent one - and, therefore, are marked accordingly.

Usage of Apos and Coord

A)

When one of the two members of a coordination (where a Coord node is the governor) is governed by an Apos, the node with the afun Apos receives the afun Apos_Co, and his children are marked with the afun_Ap.

Example:

"*Forma universalis et (Coord) primi alterantis (Atr_Ap), scilicet (Apos_Co) caeli (Atr_Ap)*".

B)

When one of the two members of an apposition (where Apos is the node governor) is governed by a Coord, the node with the afun Coord receives the afun Coord_Ap, and his children are marked with the afun_Co.

Example:

"*Creatura habet tantum duas partes (Obj_Ap) essentielles, scilicet (Apos) materiam (Obj_Co) et(Coord_Ap) formam (Obj_Co)*".

To sum up, the children receive the extension according to the afun of the father (_Co if the father is Coord_Ap; _Ap if the father is Apos_Co).

Ita [...] sicut

Connections between two related phrases introduced respectively by *ita* and *sicut* (not necessarily in that order) are managed in the following way: the phrase with *ita* is considered the main one; the phrase with *sicut*, depends on that with *ita*; *sicut* (AuxC) is governed by *ita*, which, in this case, is marked with Adv, while usually receives AuxY. *Ita* is governed by the predicate of the sentence with *ita* or, in his absence, by the ExD.

An example is given in the phrase # 30 (see also # 152) among the concordances of *forma*.

Tantum...Quantum

Before a sentence like "VERB1 *tantum quantum* VERB2", where the two verbs are identical, the VERB2 depends upon VERB1 as Adv, and *quantum* depends on VERB2 as AuxZ.

If the VERB2 is absent, *quantum* and all the other children of VERB2 depend on VERB1 as ExD.

An example is offered by "*tantum distat a X quantum a Y*", where *quantum* and "a Y" depend on *distat* as ExD, in the phrase 004.4SN.DS11QU1.AR3BCO--.24-6.33-3.

Mundus^purus

In the case the lemma *mundus* does not mean "world", but "pure", is lemmatized as "mundus^purus".

An example is provided at 005.SCG*LB1.CP-9++5.N.-7.3-3.4-5.

Liber^filius

In the case the lemma *liber* not mean "book", but "son", it is lemmatized as "liber^filius". Otherwise, the lemmatization is "liber^volumen".

Disambiguation of homograph terms

In the case of a form which can be reduced to two homograph lemmas, these latter are disambiguated through an "explanation" of what the proper lemma is, which is posited after the lemma (within the <l>) and separated by this latter by the sign "^".

For example, see the case of the forms of *accido*, where the lemma can be "<l>accido^cado" or "<l>accido^caedo", on the basis of the derivation from *cado* or *caedo*. These "explanations" are already present in the *lemmario* compiled by Busa, but they are not disambiguated.

Usage of PNOM in passive constructions with supportive verbs (OCOMP)

Where there is a use of passive verbs that in their active form would withstand the afun OComp, this latter becomes a PNOM. This is explicable in the light of the fact that, in the passive construction, the element marked with OComp does not longer play the role of an object complement, but rather that of a subject complement.

For example, in "*Deus dicitur lux*", *lux* is marked as PNOM, son of *dicitur*. In fact, the active form of the phrase sounds like "[*is*] *dicit lucem Deum*", where *lucem* is OComp, child of *dicit*.

The most common verbs that can have an argument marked as OCOMP (and, in the passive forms, as PNOM) are: *accipio, aestimo, appareo, appeto, apprehendo, arbitror, cognosco, colligo, computo, considero, conspicio, constituo, convenio, convinco, credo, creo, definio, denomino, determino, dico, do, efficio, expecto, expono, facio, habeo, individuo, intelligo, intueor, invenio, mereo, nomino, ostendo, pono, perhibeo, praedico, produco, prohibeo, propono, repraesento, reddo, refero, relinquo, reputo, resumo, scio, significo, signo, subsisto, suppono, teneo, trado, video, voco, volo.*

How to decide between OComp and Atv / AtVv

If the node to be marked is an argument of the verb, the afun OComp is applied, otherwise it is required to use Atv / AtVv dependent on the node to which it refers ("*sese addiderat socium*": *socium* depends *sese*).

The case of *maneo*

As for the verbs *appareo*, *patet*, *remaneo*, *redeo*, *resto*, *subsist* and *existo*, *maneo* is used only in the active form. The structure of "X manet Y", where Y is an adjective or a noun, is treated as "Sb manet Pnom", because Y is predicate X. In this way, *maneo* is treated as a copula (as *sum*). An example is given at 003.3SN.DS11QU1.AR1-RA-2.1-1.8-5.

Quo and *eo*

The adverbs *quo* and *eo* are reduced to the lemmas *qui* and *is* respectively. The case code is G as for adverbs. An example of *quo* is the phrase # 162.

Beginning of a sentence with an argument expressed in the genitive

It may happen that Thomas Aquinas, at the beginning of a sentence, makes a prolepsis of the topic which is going to express in the remaining part of the sentence itself: for example, in "*quorumcumque materia secundum esse differre ponitur, oportet [...] quod ...*", meaning "about those (literally: "of those") whose material differs [...], it is convenient that ... "(002.2SN.DS-3QU1.AR4-CO -. 26-4.31-4).

In this case, the prolepsis is made dependent upon the predicate of the main clause by means of the afun Adv.

In the example above given, *ponitur* depends on the Pred *oportet* (head of the phrase "... *quorumcumque ponitur*") and is marked with Adv.

Non classical composed verbal forms

Aquinas tends to apply verbal forms composed with auxiliary forms not allowed in classical Latin. For example, he opts for "*instituta fuerint*" where in Classic Latin classic it would have been *essent*. The example is taken from 002.2SN.DS12QU1.AR4-CO -. 59-2.62-2 (836 occurrence concordance of the lemma *form*). These auxiliary forms are marked with the afun AuxV.

Verb *sum* plus object introduced by *a/ab* and by *e/ex*

In constructions where *sum* appears as a verbal predicate (in the sense of "exist", or even more), if the object indicating the origin of life is introduced by the prepositions *a/ab* it receives the afun Obj, and not Adv.

An example is the phrase # 159 among the concordances of *forma*.

Instead, when the verb *sum* is introduced by the preposition *e/ ex*, it receives the afun Adv, and not Obj, because in this case the object tends to have an adverbial value (usually, of cause or manner).

List of AuxZ and AUXY

The forms that can be marked with AuxZ or AuxY (in some cases both the analytical functions are permitted) are the following:

AuxZ: *adeo*; (per); *et*; *etiam*; *ferē*; *fortasse*; *forte*; *iam* (*jam*); *immo*; *ita*; *item*; *minus* (in "*ad minus*"); *multo*; *nec* (where is not Coord); *neque* (where is not Coord); *non*; *nondum*; *nonne*; *numquam*; *nunquam*; *omnino*; *praecipue* (usage of Aquinas); *quam*; *quamvis*; *quanto*; *quantum*; *quantumcumque*; *quasi*; *quotiescumque*; *saltem*; *sed* (in special cases, such as in 001.1SN.DS23QU1.AR1-RA-1.1-1.6-11); *sic*; *simpliciter* (in special cases, such as in 001.1SN.DS40QU4.AR2-RA-3.6-3.10-5); *statim*; *tam*; *tanto*; *tantum*; *ulterius*; *umquam*; *unquam*; *ut*.

AUXY: *adhuc*; *alias* (lemma "*alius*"); *contra*; *dumtaxat*; *enim*; *ergo*; *gratia* (in the expression "*verbi gratia*", where *verbi* depends on *grace* as an Adv, and *grace* depends on *ut* - if any - as AUXY); *idcirco*; *ideo*; *igitur*; *immo*; *inde*; *ita*; *item*; *nam*; *nihilominus*; *postea*; *praeterea*; *propterea*; *quare*; *quasi*; *quemadmodum*; *quidem*; *quomodo*; *scilicet*; *sic*; *statim*; *tamen*; *tum*; *tunc* (with value of consequence and no of time; in the case of the time value, it receives Adv, consistently with "Now"); *unde*; *utrum*; *vero*; *videlicet*.

AuxY is also applied in the case of:

Coordinating elements in a multi-coordination: *aut*, *et*, *nec*, *neque*, *sive*, *vel*;

Two elements in a composed conjunction or adverb expression: *etiam/et* (in "*etiam/et si*"), *quando* (in "*sicut quando*"), *cum* (in "*ut cum*"), *quod* (in "*quod est*"), *ad* (in "*ad invicem*"), *simul* (in "*simul cum*");

One of the two occurrences of *quod* in 005.SCG * LB2.CP-5 ++ 2.N. 1.1-1.6--1. In this sentence, Thomas provides an example of an anacoluthon and writes two *quod* having the same function of conjunction opening the same sentence. In the annotation process, the second *quod* is made dependent on the first one and receives the afun AuxY.

The same happens in 005.SCG * LB3.CP-4 ++ 3.N.-3.25-1.29-5

What AuxZ can modify a preposition

(see the section "Members modified by means of AuxZ" in the PDT Guidelines: <https://ufal.mff.cuni.cz/pdt2.0/doc/manuals/en/a-layer/html/ch03s02x07.html>).

In the case of prepositional phrases edited by a member marked with the afun AuxZ, this latter member modifies the child node of the preposition insofar as the son of the preposition itself.

For instance, in "*tantum/ etiam ad aliquid*", *tantum* (or *etiam*) is the child of the node *aliquid* and not of *ad*.

Only the following analytical functions AuxZ can change a preposition: *nec*, *not*, *quantum* (in "*quantum ad*"), *quo* (in "*quo ad*").

In fact, if the negation (*nec*, *non*) would change the child node of the preposition, the result would be the semantic denial of it: for example, in "*non de aliqua re*", if *non* was the child of *re*, the semantic result would be "about a not something", which does not make any sense, and not the proper "not about anything".

With regard *quantum ad*, it behaves almost like a *secondary preposition* and is annotated accordingly. If there are other data, other AuxZ changing the preposition may be added.

Analytical functions Apos and Atr

The afun Apos has not be confused with Atr. Especially in the case of a prolepsis of a relative (or of a concept expressed by a proposition, or by a name, or by a pronoun as *hic*) followed by an explanation of it, this explanation (usually expressed by a declarative clause beginning with *quod* or *ut*, or by an infinitive clause, or even by a noun) is marked as Atr of the relative (or of the predicate of the sentence expressing the concept, or of the word that expresses the concept).

Examples:

"*Quod objicitur in contrarium, quod ...*" ("what is brought as a counter-argument, or that ..."): the phrase introduced by the second *quod* is marked as Atr of the first and depends upon *objicitur*. In fact, it explains what the "*quod objicitur in contrarium*" is, so it plays the role of its ATR. This phrase has not thus to be considered the Apos of "*quod objicitur in contrarium*", since it does not express the same concept, but as its attribute, according to the function of the afun Atr, which is to specify, to determine more closely, the meaning of something).

An example where the relative pronoun is explained by a name is given by the passage "... *habere modum compositionis, qui modus compositionis not invenitur ...*": *modus compositionis* depends from *qui* (that is Sb of *invenitur*) as Atr, while *invenitur* depends upon *modus* as Atr.

Moreover, where there is prolepsis of the pronoun with subsequent recovery (for example, "*quod facit aliquid, hoc est aliquid*"), the relative ("*quod facit aliquid*") or infinitive clause depends as Atr upon the pronoun (*hoc*). An example is offered in the sentences 002.2SN.DS-8QU1.AR1-RA-4.6-3.8-3, and 002.2SN.DS14QU1.AR3-CO -. 53-4.56-2.

Also the structure in which a pronoun is explained by a declarative introduced by *quod* falls under this rule: for example, in the case of "*ex / in / per hoc quod ...*", the declarative clause introduced by *quod* depends upon *hoc* as Atr.

The same principle is valid in the case of a noun explained by a dependent clause introduced by *quod/ ut*: for example, "*hoc modo ut/quod*". The proposition introduced by *quod* depends upon *modo* as Atr, and the reason is that the proposition introduced by *quod* explains *modo*.

Idiosyncratic construction with the relative

In all the cases where Aquinas uses a relative clause in which the verb is inflected as the third singular person and introduces a proposition, and the relative pronoun is the subject of the proposition serving as Sb of the verb in the third singular person, the relative clause (whose governor is the verb in the third singular person) is marked with the afun Atr and bound to the referent of the relative pronoun.

This is visible also in the Italian construction in which *che* corresponds to the relative pronoun in Latin: "[...] *gli uomini, che non conviene facciano* [...]".

Consider, for example: "*formas universales, qua non convenit ut immediate dirigant*" (002.2SN.DS14QU1.AR3-CO -. 32-5.36-10). In this case, the relative clause has as governor the verb *convenit* marked as an Atr, which is the son of *formas* (referent of *quae*), while *quae* is Sb and *dirigant* is its child through the structure *ut* as AuxC).

Multiple coordinations with *et* and *aut/vel*

In the case of coordinated constituents separated by *et* and *aut*, they are generally marked with the same analytical function and extension _Co.

For example: "*forma vel et essentia hujusmodi*" (# 266 *forma*). *Et* is the governor of *forma*, *essentia* and *hujusmodi* as a Coord. The alternative option would be that *et* is governor as a Coord, and *vel* is the son of *et* as a Coord and governs, in turn, *forma* and *essentia*: the result would be that *forma* and *essentia* would be placed on a different level from *hujusmodi*.

The solution of putting them on the same level is justified by the fact that the three constituents are coordinated at a syntactic level, while the change impacts the semantic layer only. In addition, it is consistent with the fact that the elements of a coordination should not necessarily be separated by the same lexical constituents (for example, often *et* alternates with commas). An example is the occurrence of # 266 concordances *forma*.

Coordination with comma of Atr of the same and different nature

Generically speaking, in the case of two attributes of different morphological nature of a node separated by a comma, they should not be treated as attributes coordinated by the comma. Instead, if they are of the same morphological or syntactic nature, they have to be treated as coordinated.

For example, if a noun is modified by an adjective and a present participle having a verbal function, these two elements are not marked as Atr_Co, but as Atr.

An example is given by the passage "*forma accidentalis, habens esse ratum et firmum*" (869 occurrence of the concordance of *forma*): in this case, *accidental* and *habens* are marked as not coordinated Atr. If instead of a comma there was an *et* (or *sed*, or *vel*, or other conjunction marked with Coord), then it would have been required to mark them as Atr_Co.

There are many cases in which an adjective and a participle modify a noun, but they are not separated by any comma: in these cases, of course, they are not marked as coordinated, because of the lack of a node father. The mere presence of a comma, even in the case of an editorial choice, does not justify the different treatment of identical cases; on the contrary, the presence of an authorial *et* (or other) is a sign of explicit coordination.

In the case in which the two afuns Atr are identical in nature with regard to PoS or syntactic structure, they should be considered as coordinated. An example is given by the passage "*forma, quae est totum, quae dicitur quidditas, not est form partis*": in this sentence, the two relative clauses introduced by *quae* have to be treated as coordinated by the comma, as they possess the same syntactic (relative) nature.

Position of the comma placed at the end of the structures: (a) AuxP + noun + noun attribute expressed by a relative clause; (B) AuxP + hoc + quod

With regard to structures introduced by a preposition (AuxP) whose object, usually a name, is modified by a relative clause (Atr), if there is a comma positioned after the relative clause, this comma depends upon the governing verb of the relative clause (Atr) and not upon the preposition.

An example is provided by "*per hanc proprietatem, quae ab eis humanitas dicitur*" (003.3SN.DS-2QU2.AR3CEX -. 13-5.17-6). In the tree, the comma placed after *dicitur* depends on *dicitur*, which is the verb of the relative sentence "*qua ... dicitur*", and not on the preposition *per*.

The reason is that the presence of the second comma is justified only in the light of the relative clause; in fact, if there was only a prepositional phrase (in the example, "*per hanc proprietatem*"), there would not be a comma after *proprietatem*.

In the case the construction does not include a relative clause modifying the object of the preposition, but has the form "*per hoc quod ...*," the comma placed after *quod* is the daughter of the preposition node and not the node *quod*. This is because the expression "*per hoc quod*" is a kind of multi-lexical conjunction introducing and governing a dependent clause: it is therefore suitable that the comma closing the dependent clause depends upon that expression.

Treatment of *vel*: Coord or Apos?

The disjunction *vel* is generally marked as a Coord, even in the cases in which it may mean "that is" and thus the afun Apos appears to be more suitable, like in the case of "*quidditas vel forma*": here *quidditas* and *forma* are clearly the same thing and are not in opposition, as it would be if, instead of *vel*, there was *aut*.

This general option for Coord is both related to the difficulty in recognizing the role of *vel* as an Apos and to the more generic nature of Coord, which tends to include also that of Apos.

The sensitiveness of the annotator may help in distinguishing the cases in which *vel* has to be marked as a Coord rather than as an Apos, and thus in refining the related rule.

Absolute Ablative

See the sentence # 57 ("*praesupposita materia*").

In the case of absolute ablatives lacking of the verbal part (for example, "*Cicero consule*"; "*te duce*"; "*ignaris omnibus*"), the annotation treatment consists in marking the governor as Adv governor and the child node as Atv. In order to recognize the governor and his child, the noun phrase may be turned into a sentence with the verb "to be": for example, *Cicero consule* is changed into "being Cicero consule"; *te duce* is changed into *the leader* "since you are leading"; *ignaris omnibus* is changed into "all being unaware". The subject of the sentence with the verb *to be* becomes the governor marked with Adv, while the predicative becomes the child marked with Atv:

Cicero (Adv) *consule* (Atv)

Te (Adv) *Duce* (Atv)

Ignaris (Atr) *omnibus* (Adv)

In the special case of the syntagma "*ab urbe condita*", "*urbe condita*" is considered an ablative absolute inserted within a prepositional phrase. Therefore, it has to be treated in the following way: "*urbe*" depends from "*condita*" as Sb, and "*condita*" depends on "*ab*" as Adv.

The case of *inquit*

(see the section “Direct speech” in the PDT Guidelines: <https://ufal.mff.cuni.cz/pdt2.0/doc/manuals/en/layer/html/ch03s06.html#s2-direct-speech>).

The form *inquit*, both bracketed or placed between commas as an incidental in a direct speech, is marked as a Pred governing the predicate of the direct speech, which, therefore, receives the afun Obj.

Commas or parentheses surrounding *inquit* are dependent directly upon *inquit* as AuxX if commas, or AuxG if parentheses. It has to be taken into account that, even in the presence of brackets, *inquit* receives the afun Pred and not Pred_Pa.

An example is given at 003.3SN.DS-5QU3.AR3-EX -. 8-1.11-1.

The case of *quod quid est*

The expression *quod quid est* is the Latin translation of Aristotelian expression *to ti en einai*, where the Latin *quod* corresponds to the Greek article *to*.

Quod modifies the expression *quid est* as it was an article and thus is marked by the afun Atr and depends upon *est*. Also *quid*, to which the afun Pnom is assigned, depends on *est*, since *quod quid est* can be translated as "what something is", where the Sb is implied or not expressed. And *quid* is what is being predicated of this subject, thereby it is explained the fact that *quid* receives Pnom and not Sb. An example of this treatment is offered by the sentence at 004.4SN.DS44QU1.AR1BRA-3.12-5.16-4.

The case of an independent, isolated proposition, put in brackets or not, whose governor is not the verb of the sentence in which this proposition is included

The independent (i.e., having its own verb) propositions put in brackets or other have as governor the verb of the sentence in which they occur. However, if this solution is not viable, they may have as a governor even a noun or an adjective. In all the cases they are marked with the afun Pred_Pa.

An example is visible at 004.4SN.DS-3QU1.AR2ACO -. 6-1.10-1 where Pred_Pa depends upon a noun (*efficiens*).

Enclitics *que, ve, etc.*

The enclitic - *que* (or - *ve* etc.) is treated as a coordinating conjunction and thus is generally marked with the afun Coord and receives a correspondent node in the tree.

In the case of a word formed with the enclitic - *que*, the word is divided in two parts correspondent to 2 <f>: (1) the word, (2) the enclitic. This means that in the CSTS format a new element <f> (value: "que") is formed: this element receives a value of ranking that is of a unit higher than the ranking value of the word formed with the enclitic - *que*. The value of <l> is *que*, while the morphological tags are those of conjunctions (4-O -----). In the <f> formed with the enclitic - *que*, this latter is removed and the <f> is preceded by a line formed by the single element <w>, whose value is the original form comprising also - *que*.

For example, in the case of "*agnoscere firmissimeque tenere*", the form *firmissimeque* is divided into "<w> *firmissimeque*" + "<f> *firmissime* <r> n" and "<f> *que* <r> n + 1".

This implies that, in the tree, there is always a node correspondent to the form -*que*.

The words formed with the enclitic - *que* can be identified thanks to the code "Q" in ninth position; in addition, it can be inferred that all words followed by a "<f> *que* <l> *que*" are composed with the enclitic - *que*.

Atv / AtvV and OCOMP

With regard to these analytical functions, our treatment is different from that adopted by the Prague Dependency Guidelines. For example, in the case of "*dico aliquem aliquid*", the PDT would annotate the word *aliquid* marked with Atv as a daughter of *aliquem*. Instead, we put *aliquid* marked as Ocomp as daughter of *dico*.

Our solution appears to be more correct in terms of verbal valence, since the verb *dico* has three arguments: in fact, the PDT, at the tectogrammatical layer, restores exactly our structure from that with Atv applied to the analytical level only.

However, our treatment is potentially ambiguous in those cases in which a verb has two Obj (both expressed in the same case, for example in the accusative) and the predicative complement OComp refers to only one of the two Obj. In the light of our usage of OComp and not of Atv, it is required a supplement of attention in annotating, until a definitive solution will have been found.

Verb *sum* + infinitive with meaning of "is possible"

When a form of *sum* holds an infinite value of "is possible", the infinite depends upon *sum* as Obj.

For example, in the case of "*est dare*" in 007.ST1.QU-5 ++ 3.AR-3CO -. 10-1.14-5, *dare* depends on *est* as Obj.

Afun applied to comparative adverbs

Adverbs as *magis*, *plus* or *plures* are marked with the afun Adv. See the phrase # 123 of concordances of *forma* for examples.

Possum (and other servile verbs) + infinitive + *nisi* / *sicut*

Given the structure of "*possum* (and other servile verbs) + infinitive + *nisi* ", the dependent clause introduced by *nisi* always depends upon *possum* both in the cases this dependent possesses a verb (subjunctive), like in the example given at 001.1SN.DS35QU1.AR2-CO -. 7-2.12-4 ("*nisi cognosceret*"), and is elliptical, and thus receives the afun ExD. The verb implied is, generally, that expressed with the infinitive and ruled by *possum*: in fact, the complement introduced by *nisi* without the verb is a complement of the verb expressed by the infinitive. An example of this is available at 001.1SN.DS33QU1.AR4-CO -. 25-1.28-3 ("*attribui [...] personis*").

In the case of ellipses of the verb in the dependent clauses introduced by *nisi*, this clause always depends on *possum* (and not from on the infinitive governed by *possum*) for two reasons: because of consistency with the treatment of the dependent clause introduced by *nisi* and not elliptical of the verb, which is made be dependent on *possum*), and because *possum* (and other servile verbs) works as a "bridge" or almost as a copula between his subject and the verb expressed by the infinitive.

The same is valid also in the case the dependent clause in this structure is introduced by *sicut*.

Position of numbers in quotes

There is a distinction to be made between Arabic and Roman numerals.

Arabic numerals depend upon the name of the work. The only exceptions are represented by cases where the Arabic numerals are related to a name of work posed explicitly in the genitive, or preceded by the preposition *de*: in these occurrences, the Arabic numerals govern the name of the work.

Roman numerals govern the name of the work because this latter is generally inflected in the genitive, even if almost always it takes an abbreviated form.

Examples:

Arabic numeral "matth. 26": 26 depends on *matth.*

Roman numeral "*metamorph. VIII*": *VIII* governs *metamorph.*

Arabic numeral + work expressed in genitive: "2 *De Anima*". "*De Anima*" depends upon 2.

Second element of comparison expressed without the conjunction *quam*

(see the section "Non-agreeing attribute expressed by a genitive noun" in the PDT Guidelines: <https://ufal.mff.cuni.cz/pdt2.0/doc/manuals/en/a-layer/html/ch03s02x03.html>).

If the second element of a comparison is expressed in ablative without the conjunction *quam*, it is attached to the comparative adjective and marked with the afun Adv.

An example is the occurrence # 470 of the concordances of *forma* ("*nobiliores formis elementorum*"): *formis* depends upon *nobiliores* and receives the afun Adv).

Second element with relative superlative ("the X of all")

In the case of a superlative adjective in the genitive followed by a noun (or by a prepositional phrase introduced by *inter*) expressing the relative value of that superlative, this latter receives the afun Adv and depends on the superlative adjective. This is consistent with what was ruled about the second element in a comparison, receiving Adv.

See, for example, "*nobilissima formarum*" (002.2SN.DS17QU2.AR1-RA-2.21-4.22-7), where *formarum* depends on *nobilissima* as Adv.

Idest and *id est*

When the form *idest*, usually annotated with Apos, appears as separated (*id est*), the afun Apos is attributed to *est* and the afun AuxY to *id*, depending upon *est*.

An example is given in the phrase 007.ST1.QU-4 ++ 4.AR-3CO -. 11-7.15-1.

Dicitur + Obj

When *dicitur* introduces a quoted phrase ("*cum dicitur, pater est deus solus*", meaning "when they say the father is the one god"), the predicate of the sentence (in the given example, *est*) is marked with the afun Obj and not with Sb.

An example is provided by the phrase # 215 of concordances of *forma*.

The same solution is applied when *dicitur* introduces an objective clause expressed in the accusative + infinitive (# 222 of *forma*), or introduced by the conjunction *quod* (# 308 of *forma*).

Applying the afun Obj and not Sb emphasizes the impersonality of *dicitur*.

Sum + gerundive

In the constructions *sum* + gerundive, such as "*est sciendum*", the gerundive is treated like any other adjective and generally marked with the afun Pnom.

An example is the phrase # 136 of the concordances of *forma*.

Gerunds and gerundives

Aquinas generally does not apply the classic constructions of gerund and gerundive. For example, he uses the gerund also in constructions like "preposition + accusative / ablative", which, in classical Latin, require the gerundive.

This tendency is confirmed by a case such as "*ad recipiendum formas*" which, in classical Latin, would have been "*ad recipiendas formas*".

Aquinas uses the gerundive rarely and usually in passive periphrastic constructions ("*sciendum est*"), or in an attributive function not replacing the gerund ("*privatio formae inducendae*").

The gerund is treated like any other verb, while the gerundive undergoes two main treatments on the basis of its relationship with the noun which modifies:

If the gerundive changes the noun to which is related as a mere attribute, thus expressing necessity and not completion, it depends upon the noun and is marked with afun Atr. This is the case of "*res gerendae*", or of "*privatio formae inducendae*", meaning "the privation of form to be induced" and not "deprivation to induce the form." In this case, the sentence does not match the alternative structure with the gerund "*privatio inducendi formam*".

If the gerundive changes the noun to which is related as a direct object, the noun depends upon the gerundive with the afun Sb. This is the case of "*spes liberandae patriae*", equivalent to "*spes liberandi patriam*" and meaning "the hope that the homeland has to be made free", where "*patriam*" is Sb of "*liberandae*".

This treatment, typical of Classic Latin but rare in Aquinas' texts, is consistent with that of the absolute ablative, where the noun in ablative depends upon the verb (the participle) as Sb.

In the passive periphrastic construction, the gerundive depends upon the form of the verb "*sum*" as a Pnom. For example, in "*libri legendi sunt*", the gerundive "*legendi*" depends on "*sunt*" as a Pnom, while "*libri*" is a Sb. This is valid also in the cases in which the subject is a declarative clause introduced by "*quod*", like in "*sciendum est quod ...*": in this case, the gerundive "*sciendum*"

depends on "est" as a Pnom and the declarative clause introduced by "quod" is the Sb of "est". An alternative option would be to treat the declarative clause introduced by "quod" as an Obj of "sciendum", where "sciendum est" is an impersonal passive periphrastic (i.e., without a subject of "est"); however, the main objection to this treatment is the fact that the impersonal passive periphrastic is typical of intransitive verbs, like "currendum est", or verb used intransitively, which is not the case with "sciendum est quod...".

Accusative + infinitive

With regard to this structure, see for an example the sentence # 53 ("dicimus enim verum aurum esse").

Double accusative

The verbs holding the double accusative, like *cogo*, *doceo*, *celo*, *posco*, *oro*, are trivalent, i.e., they receive three actants (Sb + 2 Obj), which are their children in the tree. More precisely, the objects are the person / thing you are teaching / hiding / asking, and the object of teaching / concealment / request. This latter object may also be an infinitive like in the example: "dionysius [SB] docet tendentes in contemplationem divinam [OBJ-1] abscedere [OBJ-2] to quibus omnibus" (003.3SN.DS34QU1.AR4-CO -. 60 -7.68-3).

AuxV and participles in composed verbal forms

The morphosyntactic annotation of tags of composed verbal forms consists of a participle annotated as a participle, and the verb *sum* marked with the afun AuxV. For example, the compound form *amatus est* is annotated as *amatus* (lemma "amo"), perfect participle, nominative, singular, masculine, plus *est* (lemma "sum"), active indicative, third person singular.

Oportet, along with impersonal verbs and / or used impersonally verbs, and afun (Sb, or Obj) of propositions (infinitive, or introduced by the conjunction *quod*) dependent on them

The dependent introduced by *quod* and governed by *oportet* is considered its subject (thus marked with the afun Sb), and not its object.

For example, in the sentence "*Oportet quod first forma substantialis perficiat totam materiam*", *perficiat* receives the afun Sb.

If the sentence with *oportet* has a structure of the type: subject + *oportet* + *quod* ..., the subject depends upon the verb phrase introduced by *quod* (which, in turn, is Sb of *oportet*). An example is given in the occurrence 744 of the concordances of *forma* (002.2SN.DS-8QU1.AR5-AG-4.3-1.3-9).

The same solution is valid also in the cases in which *oportet* governs an objective infinitive (expressed by a subject in the accusative case and the infinitive): this objective clause is marked with the afun Sb, since it is an alternative way to express the declarative governed by *oportet* instead of using "*quod* + conjunctive" and, as a consequence, it has to be treated in the same manner of "*quod* + conjunctive", that is, with the afun Sb. An example is given at the number # 364 of the concordances of *forma*.

More generally, the same rule applies to the propositions introduced by *quod* and dependent on a verb impersonally used: if the verb is used impersonally and thus, in the vast majority of cases, in the passive form, the dependent clause introduced by *quod* is marked with the afun Sb: "*dicitur quod* (SB) ... "; if the verb is used personally, and thus in the active form, the dependent clause introduced by *quod* receives the afun Obj: "*ego dico quod* (OBJ) ...".

This solution is applied also to expressions like "*necessarium / possibile est*", as it is visible in the phrase # 61 of the concordances of *forma*.

A special attention has to be paid to *possibilis* where it is used in the expression "*est possibilis + infinitive* (e.g., *haberi*)": in this case, the infinitive depends upon *possibilis* as an Obj, as if "*est possibilis haberi*" was equivalent to "*potest haberi*". Where *possibilis / -e* is absent and there is only the form of the verb *sum* meaning "can be" ("*non est reperire in alio*"), the infinitive depending on the verb *sum* is annotated with the afun Obj.

Instead, if *possibilis* is declined as a neuter in the expression "*est possibile*", the infinitive verb, or the infinitive clause expressed in the accusative + infinitive, or the declarative sentence introduced by *quod*, depend on "*est*" as a Sb. The same solution is valid for "*est necessarium*" (for example, in "*Mori hominem est necessarium*", *mori* is Sb of *est*).

About the afun of infinitive clauses

In accordance with what explained above for propositions introduced by *quod* dependent upon verbs used personally or impersonally, also the infinitive clauses are marked with the afun Sb in the case they are arguments of impersonal verbs (*oportet*), verbs used impersonally (*dicitur/dicatur*), or mono-argumental (*consto*, often used in the impersonal form *constat*); they may be marked as Obj in the case they are arguments (in particular, the second argument, or internal argument) of servile-modal bi-argumental verbs personally.

To clarify, if the verb is used impersonally, it has to be applied Sb: "*dicitur te esse aliquid* (SB) "; if there is an explicit or implicit subject of the verb, there is a personal use of the verb, thus the infinitive tends to be marked as Obj, like in the example "*ego dico te esse aliquid* (Obj)". If *esse* is absent, then the afun OComp is generally attributed to the object, like in the example "*ego dico te aliquid*".

A special case is represented by *videtur* (and *patet* as well). When there is a personal usage, like, for example, in the case of "*hoc non videtur esse*", *esse* is a Pnom and *hoc* a Sb. *Videtur*, in fact, is not a servile-modal verb (*dico*, *possum*, *volo*, and so on) that can withstand an afun Obj, but it acts as a kind of bridge between his subject and the property that "seems" to be attributed to it. If

esse is absent ("*hoc videtur (esse) bonum*"), the adjective (*bonum*) receives the afun Pnom (which is the same function that it would receive if *esse* were openly expressed): this is because the adjective is a complement (more precisely, a noun predicative or Pnom) related to the subject of *videtur*. If the construction is active, the same adjective be marked as object complement (OComp) of the object, like in the structure "*dico te aliquid*". An example is the occurrence 844 of the concordances of *forma*. When there is an impersonal usage, like in "*videtur quod sit...*", the proposition governed by *sit* in the tree is Sb of *videtur*. In both cases, the person to whom it seems, like in "*mihi videtur*", is marked by the afun Obj.

Quod est and *quo est*

Quo est is treated with *est* as a governor, marked with an afun allocated according to its function in the sentence, and *quo* as a child receiving the afun Adv.

Quod est is treated with *est* as a governor, marked with an afun allocated according to its function in the sentence, and *quod* as a child receiving the afun Sb.

An example is offered in the phrase # 103 of the concordances of *forma*.

Quod est meaning "that is"

Quod est in the meaning of "that is" is marked as *scilicet*, with the afun Apos. Since it is an Apos consisting of two elements (*quod* and *est*), the last component *est* is marked with Apos and *quod* with AuxY; therefore, *quod* is the child of *est*. *Quod* is lemmatized under the singular neutral nominative case. An example is given by the occurrence # 394 of the concordances of *forma*.

Genitive of possession or pertinence following a form of the verb *sum*. Dative of possession or pertinence following a form of the verb *sum*

The genitive of possession or pertinence following a form of the verb *sum* is generally treated as a Pnom. However, the border with Adv is subtle and for this reason the specific meaning taken from the verb in every specific context has to be always checked. An example is given by the phrase # 116 of the concordances of *forma*. The dative of pertinence following a form of the verb *sum* is treated as Adv. For example, in "*hoc est mihi accidentale*", *mihi* is marked as Adv, even because the place of Pnom is occupied by *accidentale*). An example is provided at 003.3SN.DS13QU1.AR1-RA-5.1-1.4-7.

The dative of possession following a form of the verb *sum* requires instead to be marked as Pnom, since *sum* means "to belong", like in the example "*sunt mihi septem nimphae*", *mihi* is Pnom.

Dupliciter, tripliciter, etc. followed by vel... vel

In the case of a verb modified by *dupliciter/tripliciter* and so on, followed by the explanation of this *dupliciter / tripliciter ...* in terms of *vel ...vel*, the annotation process is conducted as follows: Apos is assigned to the comma or whatever else is between *dupliciter / tripliciter ...* and the first *vel*; Adv_Ap is applied to mark *dupliciter / tripliciter ...*; Coord_Ap is assigned to the last *vel*; Adv_Co is applied to the elements introduced by *vel ... vel*.

An example is given by the occurrences 753-754 of the concordances of *forma* (002.2SN.DS-9QU1.AR1-RA-7.1-1.4-3).

If, instead of *vel ... vel*, the explanation of *dupliciter / tripliciter ...* is introduced by a *quia*, the afun Apos is not applied; rather, *dupliciter/tripliciter ...* and the proposition introduced by *quia* are converted into two unrelated Adv.

Vocatives: treatment of the interjection o

The interjection o in the vocative case is marked with the afun AuxZ and is made dependent upon the vocative (ExD_Pa) which modifies. An example is provided at * 005.SCG LB1.CP-4 ++ 4.N.-9.6-7.7-4.

Treatment of *sicut*

Phrases introduced by *sicut* are generally subordinates serving as adverbial. Their verb is the child of *sicut* (AuxC) and is marked with the afun Adv. In the case of absence of the verb, the afun ExD is applied.

An example of a phrase introduced by *sicut* followed by a verb marked as Adv is: "*illud principium sit matter, sicut dicimus ...*". An example of a phrase introduced by *sicut* with verb missing (ExD) is: "*terminatur, sicut quaelibet alia forma...*".

Sicut may also introduce an attributive, like in the case of "*habebant capillos (1) sicut capillos (2) mulierum*", where "*sicut capillos (2) mulierum*" is not a dependent clause elliptical of the verb, but is an attributive specifying the meaning of *capillos (1)*. For this reason, *sicut* (AuxC) is annotated as the child of *capillos (1)*, and *capillos (2)* (Atr) as the child of *sicut*.

In order to understand when *sicut* introduces an adverbial clause or an attributive, it is required to wonder what the proposition introduced by *sicut* modifies: if it changes the verb of its governing

clause is an adverbial (v. *terminatur*); if it changes a noun or an adjective, it is an attributive (v. *capillos*).

In summary, *sicut* (AuxC) may introduce a sentence with a verb (Adv) or a phrase with ellipsis of the verb (ExD), or it may be an AuxY, if it means "according to".

Treatment of *puta*

Where *puta* is used to introduce an example, it is treated as a linking element (AuxC), in the same way as *sicut* and *ut*. In fact, in this kind of occurrence, *puta* has lost completely its verbal value and the related governance. The child node of *puta* is marked with ExD, if it depends upon a verb, while it receives Atr if it depends on a noun.

In the case of a composed conjunction (like, for example, "*ut puta*"), *puta* depends on *ut* (AuxC) and is marked with the afun AuxY.

See the following sentence as an example: 004.4SN.DS44QU2.AR2BCO -. 11-4.14-3

Treatment of *quasi*

Quasi can act as a conjunction or an adverb.

If it acts as an adverb, is annotated as AuxZ and child of the modified member (usually a noun, or an adjective, but also a verb). An example is given by the sentence "*quasi audivi vocem turbae magnam*" (*quasi* AuxZ, child of *vocem*).

If it acts as a conjunction and modifies a verb, it is annotated as AuxC and introduces a phrase which, if the verb is present, is generally marked with Adv, while if the verb is absent is marked by ExD. An example is "*numerus est sicut harena maris*" (*harena*, ExD; *sicut*, child of *est*). If the verb is a perfect participle used in a verbal function ("*quasi fixus in illo*"), it should be annotated with the afun Adv (translation: "as if it were a fixed").

As *sicut*, also *almost* can introduce an attributive, like in the case of "*sustulit unus angelus fortis lapidem quasi molarem magnum*", where *molarem magnum* modifies *lapidem*. For this reason, *almost* (AuxC) is annotated as the child of *lapidem*, and *molarem* (Atr) as a child of *quasi*.

In order to distinguish when *quasi* (AuxC) introduces an adverbial sentence, or when is an attributive, it has to be wondered what the proposition introduced by *quasi* modifies: if the verb modifies its governing clause, is an adverbial (v. "*numerus est sicut harena maris*"); if it modifies a noun or an adjective, is an attributive (v. *lapidem*).

In summary, *quasi*, as an adverb is annotated with AuxZ; as a conjunction is annotated as AuxC plus a sentence with a verb (Adv), a phrase with ellipsis of the verb (ExD) or an attributive (Atr)

when there is no verb. In the role of a conjunction, *quasi* can also be marked as AuxY, if, like in the case of *ut*, it means "according to".

Complex titles of works, made up of "preposition + noun"

The complex titles of works, consisting in the structure "preposition + noun", are annotated with the preposition as a governor and the noun as a child, usually marked with the afun Atr. Usually titles are of the type "de + noun" and specify a governor element that can be an abbreviation (dist., Lib.), or an Arabic number (1, 2, etc.)

An example is given by the occurrence 542 of the concordances of *forma*.

Places of literal quotes + quote

When a place of literal quotation is followed directly by the citation of the same passage to which it relates without any verb introducing the passage itself, the place of quotation and citation are considered members of affixing and the comma that separates them receives the afun Apos.

For example, in the passage "*philipp. 2, 7, accipiens formam servi*" (003.3SN.DS-7QU1.AR2-AG-5.2-6.4-5), the comma after "7" receives the afun Apos, while *philipp.* and *accipiens* are marked with the afun_Ap. If, however, before *accipiens* there was a verb introducing the literal quotation ("*dicit accipiens ...*"), this latter would be dependent on the verb that introduces it and get the afun Obj (in the given example, *accipiens* would be child of *dicit* and marked with afun Obj).

Values of *ut*: AuxC and AUXY

(see the section "Non-agreeing attribute expressed by a noun introduced by the conjunction *jako*" in the PDT Guidelines: <https://ufal.mff.cuni.cz/pdt2.0/doc/manuals/en/a-layer/html/ch03s02x03.html>).

Generally, *ut* is marked with the afun AuxC; it is annotated with the afun AuxY when it means "according to": in this latter case, in fact, *ut* depends on the noun or the adjective complement, and does not govern them.

An example is provided by the phrase # 131 of the concordances of *forma*.

To sum up, *ut* can be marked:

As an AuxC introducing an Adv, usually represented by a verb, like in the cases of final subordinates or comparative sentences. In all these cases, *ut* is also governed by a verb. If the sentence is elliptical of the verb, *ut* receives the afun ExD (# 138);

As an AuxC introducing an Atr, usually represented by a noun, an adjective or an adverb. In these cases, *ut* is also governed by a noun. Generally this latter solution is applied where *ut* introduces examples, like the equivalent English expression "such as", or explains a constituent, usually a pronoun: "this (*hoc*), namely that (*ut*) ...";

As an AuxY, as above mentioned.

Ita ut

The locution "*ita ut*" is considered a complex conjunction only where *ita* and *ut* are near or even separated from the main clause with a comma: in these cases, *ita* depends upon *ut* as AuxY (and *ut* depends on the governor verb). An example is represented by the sentence: "*not acquiritur in creatura secundum se, ita ut sit forma ejus*".

In other cases and according the annotator's sensitiveness, *ita* modifies the verb of the main clause as an AuxY, while *ut* continues to depend on the governor verb. An example is given by: "*quod ita est signum et forma ut*" (004.4SN.DS - QU-.AR - PR -. 130-8.133-5).

Relative phrases

Case A: subordination

Generally speaking, the relative dependent clauses relate to the noun (or other PoS) to which they are referred. In these cases, the relative marked as Atr specifies the meaning of the element to which is tied up. An example is given by the phrase # 59 ("*quae sunt actus*"). Also, as already mentioned in the section "The names hold ATR and not Adv/Obj", it has to be remembered that nouns never govern Adv/Obj, but only Atr.

Case B: Coordination

The so-called "false" relative clauses" are treated as coordinators to the main clause in the cases in which they start with *quod*, and this *quod* does not refer to a neutral noun, but to the whole main clause (with the meaning is "not only ..."). Note that the phrases can also start with relative pronouns other from *quod* (but they have to be always neuter, as they refer to the whole phrase), or with *quod* plus preposition (*per quod, cui, cuius*). An example is represented by the phrase # 65 ("*quod divina simplicitas not patitur*"). In fact, if *quod* was referring to a noun, it would be treated as a part of an Atr, which would be a node dependent on the predicate of the main clause.

To sum up:

In the case the relative clause is an Atr of a noun, then it should be treated as a dependent upon that noun;

In the case the relative clause is introduced from *quod* (or by any form of the pronoun *qui* in the neuter) and *quod* (or otherwise) does not refer to a neuter noun, but to the whole main clause, it is treated as node coordinated to the main clause.

Latin and non-Latin abbreviations

Latin abbreviations are kept as they are (in fact, it is not always clear to what they correspond) and are lemmatized under the lemma attributed by the IT, whose constituents are separated by blanks (for example: "*breviata notatio loci*"). The correspondent morphological codes are "5----- ". For example, the abbreviation *Boet .* has "vox breviata" as lemma.

Similarly, also non Latin abbreviations are not solved and are lemmatized under the lemma "non-Latin vox" with morphological codes "5----- ".

In the case abbreviations are associated with prepositional phrases elliptical of the verb, they are treated as the prepositional phrase, or as Adv compared to the verb of the governing clause. For example, in "... *dicitur, secundum philosophum Metaph. 5* "(003.3SN.DS-5QU1.AR2-CO -. 22-1.25-2), "*secundum philosophum* and *Metaph. 5* are both Adv related to the verb *dicitur*.