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I. DEPENDENCY GRAMMAR

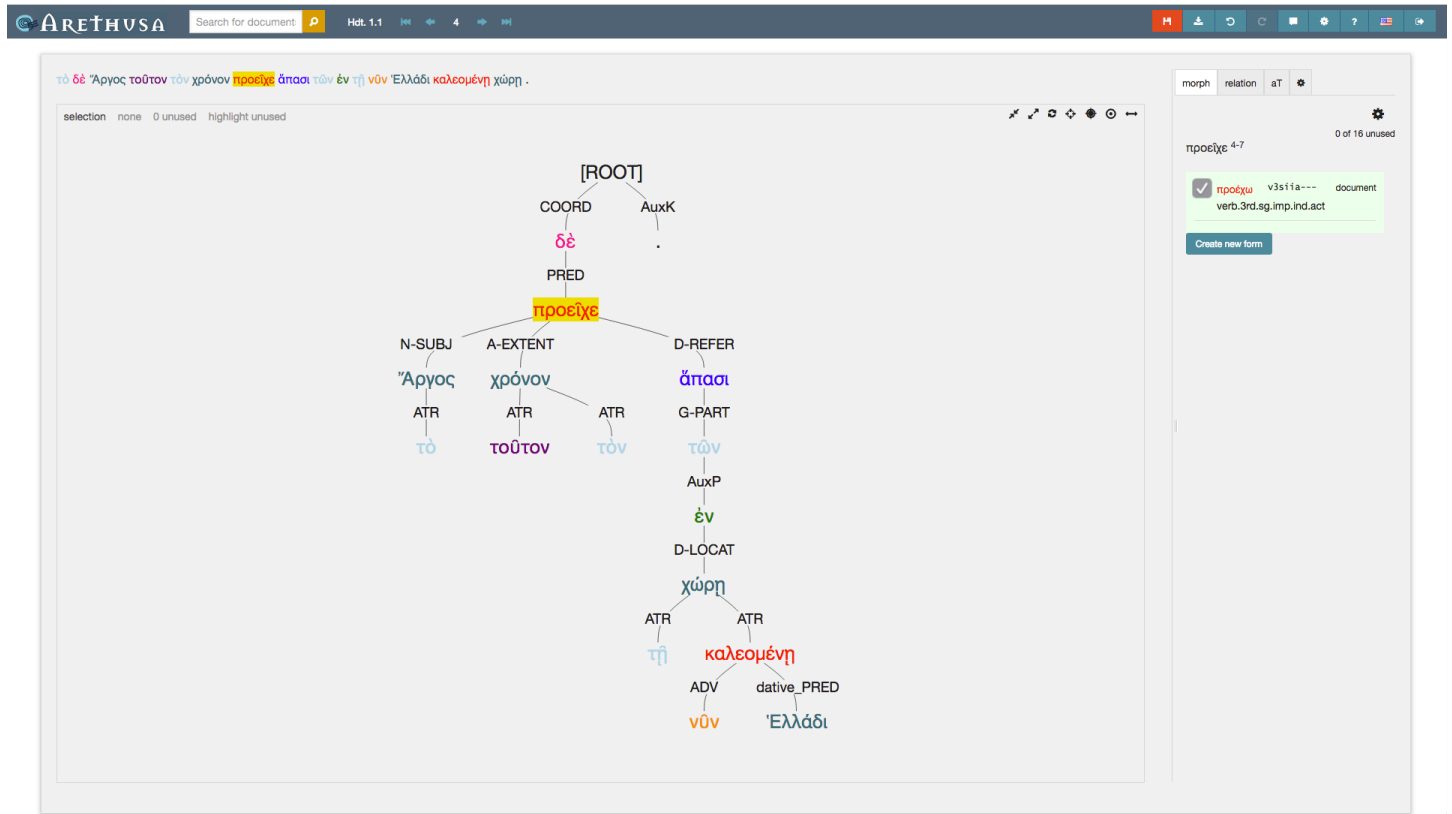
In essence, Greek words and constructions have one modification: one syntactic relationship with another word or structure within the sentence: e.g. an adjective modifies its noun, a *nominative subject* modifies its verb, a purpose clause modifies a verbal form in its main clause, *etc.* A form is dependent on the word or structure that it modifies, and this dependency is visualized by hanging (*dēpendere*) the word from the word or structure that it modifies.

Crucially, word order in Greek is both semantic and syntactic, so the Greek must be constructed with the left to right sequence foremost, with each syntactic expectation resolved by connection to the needed form in sequence within its own clause or level of subordination.¹ Similarly, the semantic force of verbal (and other) forms directs the reading of many of the forms that modify them: e.g. only certain verbs will construe with a *Complimentary Infinitive*; an infinitive modifying a verb that is not from this set of verbs would thus not be a *Complimentary Infinitive*, no matter how similar the syntax might appear.

It is important to realize that many of the terms for case usages or types of construction also describe the semantic force of the construction, not just the syntax: e.g. the *Accusative Direct Object* (A-DO) and the *Accusative Interior Object* (A-INTOBJ) are both accusative (morphologically) adverbial modifiers (syntactically), but their semantic force is distinct, and thus requires a different descriptive tag.

¹ An obvious example of misconstruing syntactic connection based on reading out of sequence is the error of taking the verb of a *Relative Clause* as the main verb of the sentence. Much less obvious forms of error are avoided by recursively considering the word order in determining modification.

EXAMPLE: Herodotus, *Historiai* 1.1: τὸ δὲ Ἄργος τοῦτον τὸν χρόνον προεῖχε ἅπασιν τῶν ἐν τῇ νῦν Ἑλλάδι καλεομένη χώρῃ. (And Argos during this time was excelling all of those in the country now called Hellas.)



τὸ – definite article adjectivally modifying Ἄργος, ATR (Attributive) tag

δὲ – coordinating conjunction as sentence coordinator, COORD (coordinator) tag

Ἄργος – noun as subject of προεῖχε, N-SUBJ (*Subject Nominative*) tag

τοῦτον – adjective adjectivally modifying χρόνον, ATR (Attributive) tag

τὸν – definite article adjectivally modifying χρόνον, ATR (Attributive) tag

χρόνον – noun with *Accusative of Extent* construction modifying προεῖχε, A-EXTENT (*Accusative of Extent*) tag

προεῖχε – numeral adjectivally modifying *legiones*, ATR (attributive) tag

ἅπασιν – substantive adjective in a *Dative of Reference* construction indicating what Ἄργος is προ-, D-REFER (*Dative of Reference*) tag

τῶν – substantive definite article limiting ἅπασιν, G-PART (Partitive Genitive) tag

ἐν – preposition joining the prepositional phrase [ἐν τῇ νῦν Ἑλλάδι καλεομένη χώρῃ] to the substantive definite article τῶν, AuxP (preposition) tag

τῇ – definite article adjectivally modifying χώρῃ, ATR (Attributive) tag

νῦν – adverb modifying καλεομένη, ADV (Adverbial) tag

Ἑλλάδι – noun functioning role of Predicate set up by the participle καλεομένη and attracted into the Dative case to agree with χώρῃ, since this is not a typical Dative case function only its dative case is tagged, dative (Dative) tag and _PRED (Predicate) subtag

καλεομένη – participle adjectivally modifying χώρῃ, ATR (Attributive) tag

χώρῃ – noun within *Dative of Location* construction, D-LOCAT (*Dative of Location*) tag

II. BASIC INSTRUCTIONS

Create a Perseids Editor Account:

- I. in Firefox (or Chrome) go to <http://sosol.perseids.org/sosol/signin> ;
- II. follow the instructions to create an account.

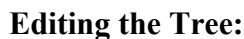
Start a New Text for Treebanking:

- I. in Firefox (or Chrome) go to <http://sosol.perseids.org/sosol/signin> ;
- II. log in by clicking on Tufts icon at left of screen (or the Google+);
- III. once logged in, go to your HOME via link at top right;
- IV. Click “New Treebank Annotation” at center;
- V. Paste the assigned lines together into the text box under “Input Text” at left;
- VI. Select the button left of “Latin” under the “Language” header at top right;
- VII. Click on “Click to toggle advanced options...” under the blue “Edit” button;
- VIII. Select the button next to “JMH Latin Tagset”
- IX. Click the blue “Edit” button at right;
- X. Wait for the text to be converted to XML code and appear in the editing window.

Load an existing XML file:

- I. in Firefox (or Chrome) go to <http://sosol.perseids.org/sosol/signin>;
- II. log in by clicking on Tufts icon at left of screen (or the Google+);
- III. once logged in, go to your HOME via link at top right;
- IV. Click “New Treebank Annotation” at center;
- V. Select the button left of “Latin” under the “Language” header at top right;
- VI. Click on “Click to toggle advanced options...” under the blue “Edit” button;
- VII. Select the button next to “JMH Latin Tagset”
- VIII. Scroll to the bottom left of the window and click the "Browse" button under "From file";
- IX. select the XML file on your computer and click "Open";
- X. Wait for the text to be converted to XML code and appear in the editing window.

- I. **SAVE YOUR WORK FREQUENTLY** by clicking on the farthest left icon at top right (it will be red when there is work that can be saved);
- II. “Undo” and “Redo” buttons are immediately to the right of the “Save” button **at top right**;
- III. when a word is selected, typing “w” will select the next word, and typing “e” will select the previous word



- I. click on a word to select it (highlights in yellow); click on same word to de-select, OR
- II. click on another word to make the selected 1st word dependent on the about to be clicked 2nd word.
- III. at top left of tree window, you can see how many words still need to be connected; you can click on the numbers to highlight all unused words.

Editing the Morphology:

- I. click on a word to select it (highlights in yellow); click on same word to de-select OR
- II. click on the “morph” tab at top right
- III. click on the correct morphological analysis; BE SURE, DO NOT GUESS
 - a. consult section V for how to add a word use the entries for each lemma within Logeion and/or Perseus to make sure that the form selected is from the correct word; there may be many morphological possibilities listed, but only one is correct.
- IV. type “w” to move to the next word, or type "e" to move back to the previous word.
- V. It is best to go in sequence through all the words so that none are missed; make sure that the selected morphology matches the structure of the tree and the intended syntax.

The screenshot shows the ARETHUSA web interface. At the top, there's a navigation bar with tabs: morph, relation, at, selector, history, comments. The main area displays a morphological tree for the sentence: "Non mehercules illi ignoscere, si placeat praeterisset. * (Inquam) At non (ita fuit) Trimalchio, qui relaxato in hilaritatem vultu * Ergo, * inquit, * quia tam malae memoriae es, palam nobis illum exintera. * Recepta cocus tunica cultum arripuit, porci -que verterem hinc atque illic timida manu secuit."

The tree structure shows the word "relaxato" highlighted in yellow. A red arrow points to the "morph" tab, labeled "MORPHOLOGY TAB". Another red arrow points to the selected morphological analysis for "relaxato", labeled "CORRECT SELECTED MORPHOLOGY". A third red arrow points to the "Create new form" button, labeled "CREATE NEW FORM BUTTON".

The morphological analysis for "relaxato" is shown in a table:

relaxato	37-6	1 of 29 unused
<input type="checkbox"/> relaxo	v3s fma---	bsp/morpheus
<input checked="" type="checkbox"/> relaxo	v-s rppnb-	bsp/morpheus
<input type="checkbox"/> relaxo	v2s fma---	bsp/morpheus
<input type="checkbox"/> relaxo	v-s rppnb-	bsp/morpheus
<input type="checkbox"/> relaxo	v-s rppnd-	bsp/morpheus
<input type="checkbox"/> relaxo	v-s rppnd-	bsp/morpheus

At the bottom of the interface, there's a search bar and a status bar showing "Highlight All", "Match Case", "Whole Words", and "28 of 141 matches".

Editing the Syntax:

- I. click on a word to select it (highlights in yellow); click on same word to de-select OR
- II. click on the “relation” (syntactic relationship) tab at top right
- III. pull down to the correct syntactic analysis
- IV. type “w” to move to the next word, or type “e” to move back to the previous word.
- V. It is best to go in sequence through all the words so that none are missed; make sure that the selected syntax matches the structure of the tree and the intended morphology.

The screenshot shows the ARETHUSA web application interface. The top navigation bar includes tabs for 'morph', 'relation', 'aT', 'selector', 'history', and 'comments'. The 'relation' tab is selected. The main area displays a syntactic tree diagram for the Greek text: *Voca, voca cocum in medio. * (Trimalchio inquit) Cum constisset ad mensam cocus tristis et diceret se oblitum esse exinterare. * Quid (tu), oblitus? Trimalchio exclamat, putes illum piper et cuminum non conleisse! Despolia! * (Trimalchio exclamat) []*. The tree diagram shows the hierarchical structure of the sentence, with nodes for various syntactic relationships. Red arrows point to the following UI elements:

- SYNTACTIC RELATIONSHIP TAB**: Points to the 'relation' tab in the top navigation bar.
- FIRST (LEFT-HAND) PULL-DOWN MENU**: Points to the first pull-down menu in the right-hand panel, which is currently set to 'BASIC > PRED'.
- SECOND (RIGHT-HAND) PULL-DOWN MENU**: Points to the second pull-down menu in the right-hand panel, which is currently set to 'accusative'.
- SUBMENU OF CASE USAGE TAGS UNDER "ACCUSATIVE"**: Points to the submenu of case usage tags under the 'accusative' pull-down menu, which includes options like 'A-DO', 'A-INTOBJ', 'A-PRED', 'A-SUBJ', 'A-ORIENT', 'A-EXTENT', 'A-RESPECT', 'A-ADVERB', and 'A-EXCLAM'.

III. MORPHOLOGICAL TAG-SET LIST

First (Left-Hand) Pull-Down Menu

BASIC	PRED	PRED-HORT	Hortatory Subjunctive Predicate
		PRED-DELIB	Deliberative Subjunctive Predicate
		PRED-POTENT	Potential Optative Predicate
		PRED-OPT	Optative of Wish Predicate
	AUX	(Auxiliary words)	
		AUX-C	Subordinating Conjunction
		AUX-P	Preposition
		AUX-V	Auxiliary Verb
		AUX-Y	Sentence Adverbial
		AUX-G	Bracketing Punctuation (‘ “)
		AUX-K	Final Punctuation (. ;)
		AUX-X	Comma (or other non-final punctuation , : -)
	ATR		Attribute (i.e. adjectival modification)
	ADV		Adverb (i.e. true morphological adverbs and indeclinable adverbials)
	COORD		Coordinating Conjunction or element
	APOS		Apposition
	INTRJ		Interjection
	PARENTH		Parenthesis (i.e. an aside to the audience external to the syntax of the sentence)
Nominative	N-SUBJ		Subject Nominative
	N-PRED		Predicate Nominative
Genitive	G-POSS		Genitive of Possession
	G-PART		Partitive Genitive
	G-OBJEC		Objective Genitive
	G-DESC		Genitive of Description
	G-VALUE		Genitive of Value
	G-MATER		Genitive of Material
	G-CHARGE		Genitive of the Charge
	G-TIMEWW		Genitive of the Time Within Which
	G-ORIENT		Genitive of Orientation
	G-SOURCE		Genitive of the Source
	G-SEPAR		Genitive of Separation
	G-CAUSE		Genitive of Cause
	G-AGENT		Genitive of Agent
	G-ABSOL		Genitive Absolute
Dative	G-COMPAR		Genitive of Comparison
	G-ACCOMP		Genitive of Accompaniment
	D-IO		Indirect Object
	D-INTER		Dative of Interest
	D-POSS		Dative of Possession
	D-REFER		Dative of Reference
	D-AGENT		Dative of Agent
	D-LOCAT		Dative of Location
	D-RESPECT		Dative of Respect
	D-ACCOMP		Dative of Accompaniment
	D-MEANS		Dative of Means
	D-MANN		Dative of Manner
	D-DEGDIF		Dative of Degree of the Difference

Accusative	A-DO	Direct Object
	A-INTOBJ	Interior Object
	A-PRED	Predicate Accusative
	A-SUBJ	Subject Accusative
	A-ORIENT	Accusative of Orientation
	A-EXTENT	Accusative of Extent
	A-RESPECT	Accusative of Respect
	A-ADVERB	Adverbial Accusative
	A-ABSOL	Accusative Absolute
V-VOC		Vocative
adjectival clause	ADJ-RC	Relative Clause
adverbial clause	ADV-PURP	Purpose Clause
	ADV-RESULT	Result Clause
	ADV-PROTAS	Conditional Protasis
	ADV-TEMPOR	Temporal Clause
	ADV-CIRCUMS	Circumstantial Clause
	ADV-CAUSAL	Causal Clause
	ADV-CONCESS	Concessive Clause
	ADV-COMPAR	Clause of Comparison
	ADV-PROVISO	Proviso Clause
	ADV-RCPURP	Relative Clause of Purpose
nominal clause	ADV-RCRESULT	Relative Clause of Result
	ADV-RCCONDIT	Conditional Relative Clause
	ADV-RCCAUSAL	Causal Relative Clause
	NOM-EFFORT	Object Clause of Effort
	NOM-FEARCL	Fear Clause
participle uses	NOM-INDQUES	Indirect Question
	NOM-INDSTAT	Indirect Statement
	NOM-DIRSTAT	Direct Statement
	CP-TEMPOR	Temporal Circumstantial Participle
infinitive uses	CP-CAUSAL	Causal Circumstantial Participle
	CP-CONCESS	Concessive Circumstantial Participle
	CP-CONDIT	Conditional Circumstantial Participle
	CP-FPPURP	Future Participle of Purpose
	SP-SUPPL	Supplementary Participle
	INF-COMP	Complimentary Infinitive
	INF-EXPL	Explanatory Infinitive
	INF-IMPER	Imperative Infinitive

Second (Right-Hand) Pull-Down Menu

---	No secondary tag
CO	Coordinated element (an element hanging under a COORD tag that is coordinated with other element(s))
AP	Element in Apposition (an element hanging under a APOS tag that is in apposition to other element(s))
SBJ	Clause functioning as a Subject
SBJ-CO	Clause in Coordination functioning as a Subject
SBJ-AP	Clause in Apposition functioning as a Subject
PRED	Clause functioning as a Predicate
PRED-CO	Clause in Coordination functioning as a Predicate
PRED-AP	Clause in Apposition functioning as a Predicate
OBJ	Clause functioning as an Object
OBJ-CO	Clause in Coordination functioning as an Object
OBJ-AP	Clause in Apposition functioning as an Object

The screenshot shows the Arethusa web interface for treebanking. The main window displays a Greek sentence with a tree structure. The sentence is: "Non mehercules illi ignoscere, si piscoem praeterisset. (Inquam) At non (ita fuit) Trimalchio, qui relaxato in hilaritatem vultu. Ergo, inquit, quia tam malae memoriae es, palam nobis illum exintera." The tree structure shows the hierarchical relationships between the words and their grammatical functions. The word "relaxato" is highlighted in yellow. The word "quia" is highlighted in red. The word "tam" is highlighted in orange. The word "malae" is highlighted in blue. The word "es" is highlighted in green. The word "palam" is highlighted in purple. The word "nobis" is highlighted in pink. The word "illum" is highlighted in light blue. The word "exintera" is highlighted in light green. The word "inquit" is highlighted in light orange. The word "Ergo" is highlighted in light purple. The word "in" is highlighted in light blue. The word "vultu" is highlighted in light green. The word "hilaritatem" is highlighted in light orange. The word "memoriae" is highlighted in light blue. The word "ATR" is highlighted in light green. The word "ADV" is highlighted in light orange. The word "tam" is highlighted in light purple. The word "quia" is highlighted in red. The word "palam" is highlighted in purple. The word "nobis" is highlighted in pink. The word "illum" is highlighted in light blue. The word "exintera" is highlighted in light green. The word "inquit" is highlighted in light orange. The word "Ergo" is highlighted in light purple. The word "in" is highlighted in light blue. The word "vultu" is highlighted in light green. The word "hilaritatem" is highlighted in light orange. The word "memoriae" is highlighted in light blue. The word "ATR" is highlighted in light green. The word "ADV" is highlighted in light orange. The word "tam" is highlighted in light purple.

On the right side, there is a pull-down menu for the word "relaxato". The menu shows the following options: ---, CO, AP, SBJ, PRED, OBJ, PRED-CO, and PRED-AP. The word "relaxato" is highlighted in yellow. The word "quia" is highlighted in red. The word "tam" is highlighted in orange. The word "malae" is highlighted in blue. The word "es" is highlighted in green. The word "palam" is highlighted in purple. The word "nobis" is highlighted in pink. The word "illum" is highlighted in light blue. The word "exintera" is highlighted in light green. The word "inquit" is highlighted in light orange. The word "Ergo" is highlighted in light purple. The word "in" is highlighted in light blue. The word "vultu" is highlighted in light green. The word "hilaritatem" is highlighted in light orange. The word "memoriae" is highlighted in light blue. The word "ATR" is highlighted in light green. The word "ADV" is highlighted in light orange. The word "tam" is highlighted in light purple.

Red arrows point to the pull-down menus. One arrow points to the "relaxato" pull-down menu, labeled "SECOND (RIGHT-HAND) PULL-DOWN MENU". Another arrow points to the "quia" pull-down menu, labeled "SUBMENU OF COORDINATION/APPOSITION TAGS UNDER PRED". A third arrow points to the "inquit" pull-down menu, labeled "FIRST (LEFT-HAND) PULL-DOWN MENU".

IV. TAG-SET INSTRUCTIONS

A. Substantives (nouns, pronouns, and adjectives functioning as nouns) are labeled with the appropriate tag for their particular case usage: e.g. an accusative adjective functioning as a *Direct Object* uses the **A-DO** tag.

Adjectives that modify other words – use the **ATR** (attribute) tag in the “BASIC” pull-down menu. The adjective is just agreeing with its head; it is not the *Direct Object*, for example.²

Adjectival use of pronouns – use the **ATR** (attribute) tag: e.g. *τοῦτος ὁ Ἀντίοχος*.

B. Subordinated Clauses (nominal, adjectival, and adverbial clauses) are labeled on the highest verbal form in the clause³ with the appropriate tag for their particular clause usage: e.g. an *Indirect Statement* functioning as an *Object* uses the **NOM-INDSTAT** tag with the **_OBJ** modifier in the second (right hand) pull-down menu.

Subordinating Conjunctions – use the **AuxC** (subordinator) tag in the “BASIC” pull-down menu: e.g. *ἐάν, εἰ, ἐπεὶ, ἐπειδάν, ἐπειδή, ἕως, ἵνα, μέχρι, ὅπως, ὅταν, ὅτε, ὅτι, πρίν, ὥς, ὥσπερ, ὥστε*.

C. Coordination – coordinating conjunctions are labeled with the **COORD** tag in the “BASIC” pull-down menu. The elements that are so coordinated (linked under the coordinator) are labeled with the **_CO** tag in the second (right hand) pull-down menu, in addition to their own proper tag in the first (left hand) pull-down menu: (e.g. conjunctive: *καί*; adversative: *ἀλλά*; disjunctive: *ἢ*). In the case of the combined forms (*μήτε*, the *μή* is adverbial (ADV) typically modifying a verbal form, and the enclitic *-τε* functions as a coordinator (COORD)).

Asyndeton – frequently, Greek authors do not use coordinating conjunctions. In these instances, the editor of the text has usually added commas, which can be used in place of conjunctions in the tree and labeled with the **COORD** tag in the BASIC pull-down menu. If no commas are available, add an ellipsis with the coordinator *καί* within parentheses (cf. section E below) to represent the coordination: i.e. (*καί*).

Polysyndeton – frequently, Greek authors use more coordinating conjunctions than strictly required. The “extra” coordinators have an adverbial force, conveying something like “and even” or “also.” In these instances, the “extra” coordinators are adverbial in function and should be labeled with the **ADV** tag in the “BASIC” pull-down menu: e.g. the second and third coordinators in “*καὶ... καὶ... καὶ*” .. “*τε... καὶ*.”

“Nested” Coordination – frequently, Greek authors create larger structures (often balanced) using coordinating conjunctions to group some elements of the coordination more closely than others. In these instances, the “extra” coordinators are dependent on another coordinator and function as true coordinators (COORD) of other coordinated elements: e.g. *A et B aut C et D* (A is directly coordinated to B, but not to C; the unit AB is coordinated to the unit CD).

Differential Emphasis in Coordination – The various coordinators do not have the same semantic force, particularly in the case of *atque/ac*, which conveys more the sense of “and indeed” than the unmarked “and” conveyed by *et*. For example, the earlier (often two) elements will be coordinated by *et*, while the final (often more elaborated) element will be coordinated with *atque/ac*: the first two elements are coordinated, and that combined unit is coordinated with the more strongly emphasized (by *atque/ac*) final element.

² Pronouns functioning adjectivally are also labeled with the ATR tag: e.g. *οὗτος ἄναξ*.

³ A result clause, for example, would be labeled on the verb under the *ὥστε*, not on the subordinator *ὥστε* itself (which is labeled with AuxC).

Sentence Connecting Coordinators – Greek sentences often use the coordinators *δέ* or *καί* functioning to join the sentence to the ideas of the previous sentence. In these instances, that coordinator is placed directly under the ROOT and should be labeled with the **COORD** tag in the BASIC pull-down menu. The predicate hanging under such a sentence coordinator is not marked with the **_CO** tag.

D. Apposition – When two (or more) elements are in apposition (the element(s) later in sequence rename the first element) they are labeled with the **_AP** tag in the second (right hand) pull-down menu, in addition to their own proper tag in the first (left hand) pull-down menu: e.g. A-DO_**_AP**

Nota Bene – in Greek, there is no word that signals apposition, and thus there is nothing specific from which to hang the forms in apposition. In these instances, if the editor of the text has added a comma, this can be used to join the elements in apposition in the tree and the comma is labeled with the **APOS** tag in the “BASIC” pull-down menu. If there is no comma that can be used, it is necessary to create an ellipsis (cf. section E below) using a pair of square brackets with a single space between them to stand for an appositional node: i.e. [].

E. Ellipsis – Greek authors frequently do not repeat verbs that would be used in parallel clauses, they omit forms of *εἶναι*, or do not use coordination. These instances are not mistakes; the forms are just not necessary, and would even harm the stylistics of the author - were they present. For the sake of clarity, however, such forms are represented in the tree with an ellipsis character. (DO NOT ADD UNNECESSARY ELLIPSES.)

Add an Ellipsis character:

1. Click the “aT” tab at the top right of the editor window;
2. click the “Create” button;
3. click the cross-hairs button under “Insertion Point”;
4. select the word or punctuation next to the place where the “elided” word would have been, and click the arrow at right to select in front of or behind the selected word;
5. fill in the appropriate form within parentheses: e.g. (**ἐστί**), (**καί**), or [] for an apposition or coordination;
6. click the “Add Token” button;
7. link the ellipsis character to the tree as if it were the “missing” element.

F. Modification of a Coordinated Structure – When an adjective, *Subject Nominative*, or other modifier modifies all parts of a coordinated structure, it is dependent on (hangs under) the coordinator, indicating that it modifies all of the coordinated forms hanging under the coordinator and marked with the **_CO** tag.

Adjectives with “Unusual” Cases or Constructions – There are a few Greek nouns, adjectives, and participles that routinely attract standard uses of specific cases or constructions, *exempli gratiā*:

ἐραστής – typically attracts an *Objective Genitive* **G-OBJEC** to express of whom the ἐραστής is the lover.

Adverbs and Adverbials – use the **ADV** (adverbial) tag in the “BASIC” pull-down menu. Use this tag for true morphological adverbs like *καλῶς* or *ὀμῶς*, as well as for words of obscured origin like *νυν*, *εὔ*, *ποτε*, *πῶς*, or *μέν*. Adverbial forms most frequently modify verbal forms, but they may modify adjectives, nouns, and even other adverbial forms.

Aposiopesis – a sentence may be broken off abruptly for rhetorical or dramatic effect, which is termed an *aposiopesis*. Use a pair of square brackets with the word “aposiopesis” and a single space before and after it to stand for the missing syntactic elements: i.e. [**aposiopesis**]. This symbol can be labeled with the appropriate tag for a missing sentence element: e.g. a verbal form, *Direct Object*, or clause.

Case Usage – Consult Logeion (and/or other dictionaries) to see what cases and constructions normally construe with a particular verb – CHECK THE SEMANTIC/SYNTACTIC USAGES OF A WORD IN THE DICTIONARIES. Remember that the cases have particular basic meanings that are not interchangeable; do not be misled by the syntax of the English verb – GREEK SYNTAX OFTEN DIFFERS SIGNIFICANTLY FROM THE ENGLISH SYNTAX

Case Usage Terminology – I have worked carefully to create a tagset that can describe all unique syntactic relationships while maintaining the greatest possible simplicity. For this reason, common terms that do not describe syntactically or semantically different relationships are mostly elided: e.g. the *Dative of the Place at Which* and the *Dative of the Time at Which* are not different types of Dative usage - the dative content of such a usage only indicates location, but it is the semantic force of the particular word that indicates time or place: e.g. *ἡμέρα* could be called *Dative of the Time at Which* only because the word *ἡμέρα* has to do with time. All such dative usages are thus tagged with the Dative of Location tag: D-LOCAT. Below is a list of case usage terminology in common use in relation to my tagset.

Subjective Genitive	<i>Genitive of Possession</i>	G-POSS
Chorographic Genitive	<i>Genitive of Possession</i>	G-POSS
Genitive of Quality	<i>Genitive of Description</i>	G-DECS
Genitive of the Crime	<i>Genitive of the Charge</i>	G-CHARGE
Genitive of Place from Which	<i>Genitive of Orientation</i>	G-ORIENT
Dative of Advantage/Disadvantage	<i>Dative of Interest</i>	D-INTER
Ethical Dative	<i>Dative of Reference</i>	D-REFER
Dative of Place at Which	<i>Dative of Location</i>	D-LOCAT
Dative of Time at Which	<i>Dative of Location</i>	D-LOCAT
Dative of Attendant Circumstances (instr)	<i>Dative of Manner</i>	D-MANN
Cognate Accusative	<i>Accusative Internal Object</i>	A-INTOBJ
Internal Accusative	<i>Accusative Internal Object</i>	A-INTOBJ
Object Compliment	<i>Predicate Accusative</i>	A-PRED
Accusative of Place Toward Which	<i>Accusative of Orientation</i>	A-ORIENT
Accusative of End of Motion	<i>Accusative of Orientation</i>	A-ORIENT
Accusative of Duration of Time	<i>Accusative of Extent</i>	A-EXTENT
Accusative of Extent of Space	<i>Accusative of Extent</i>	A-EXTENT
Accusative of Specification	<i>Accusative of Respect</i>	A-RESPECT

Circumstantial Participle – The *Circumstantial Participle* is tagged with the particular CP tag in the “participle uses” pull-down menu that is specific to its adverbial sense: e.g. if the CP is conveying an idea of causality, use the **CP-CAUSAL** tag. It hangs from whatever form it is adjectivally modifying. (If the CP is

substantive, it hangs from the form it is dependent due to its case: e.g. if it is functioning as a *Subject* of a verb, then it hangs from the verb.)

Clause of Comparison – The clause of comparison will be dependent on the comparative form within its main clause, or it will be dependent on the verbal form that it compares the manner of action with. Use the **AuxC** (subordinating conjunction) tag in the “BASIC” pull-down menu for the subordinator: e.g. ὥς. Use the **ADV-COMPAR** (Clause of Comparison) tag for the highest verbal form within the clause; note that a clause of comparison usually does not have an explicit verbal form within it; it is commonly necessary to add the appropriate verbal form that is elided by adding a form in parentheses (e.g. (ἐστὶ)) using the procedure in section E.

Correlatives – The indefinite correlative (and its clause) is dependent on the demonstrative correlative: ὅσος is dependent on τόσος. The indefinite form explains the exact semantic force of the demonstrative form.

Dates – The date may be expressed simply by a *Dative of Location* **D-LOCAT**: e.g. τῇ δὲ ὑστεραίᾳ (on the day later), Ἐλαφηβολιῶνος μηνὸς ἕκτη φθίνοντος (on the sixth day of the waning Elaphebolion month), τοῖς Διονυσίαις (on the Dionysia). Dates may also be expressed with a *Genitive Absolute* **G-ABSOL**: e.g. Ἀλκαίου δ' ἄρχοντος Ἀθηναίων (while Alkaios was archon for the Athenians). The *Genitive of Time Within Which* **G-TIMEWW** also occurs: e.g. ἐπὶ τῆς ρνζ' Ὀλυμπιάδος (during the 157th Olympiad).

Direct Statement (sustained without a subordinating verbal form within the sentence) – In extended directly quoted speeches, it is typical to not repeat the subordinating verbal form as the Predicate: e.g. *inquit*. In these instances, the last explicit verbal form should be carried forward as an ellipsis in the following sentences, using the procedure in Section E: e.g. (*inquit*) as the *Predicate* using the **PRED** tag.

1. Place any final punctuation related to the *Direct Statement* on the highest element of that clause.
2. If a section of the text that is set in direct speech is longer than 5-6 sentences, just treebank the sentence that includes the verb of saying with the subordinated indirect or direct speech, and treebank the remaining sentences as ordinary predicates.
3. If the quoted speech uses a subjunctive as its main verb (hortatory, deliberative, potential, optative), select the appropriate tag use the tags in the pull-down menu within the **NOM-DIRSTAT** tag:

NOM-DS-HORT	Direct Statement Hortatory Subjunctive
NOM-DS-DELIB	Direct Statement Deliberative Subjunctive
NOM-DS-POTENT	Direct Statement Potential Optative
NOM-DS-OPT	Direct Statement Optative of the Wish

and then add the appropriate **_OBJ** tag in the second pull-down menu.

γῆ – The adverbial force of **γῆ** makes a single word or concept emphatic. While **γῆ** may not be explicitly translated into English, it does have a specific modification, usually a substantive, from which it depends. Use the **ADV** (adverbial) tag in the “BASIC” pull-down menu

Genitive Absolutes – the noun is placed under (hangs from) the verbal adjective; both are labeled with the **G-ASOL** tag in the “genitive” pull-down menu: e.g. Σωκράτους παιδεύοντος – Σωκράτους is placed under παιδεύοντος. The participle may stand without an explicit noun or pronoun, when that substantive is clear from the context.

Genitive describing/specifying – The adjectival force of the Genitive may be foremost, with the effect of describing or specifying what type of thing it limits: e.g. δῶρα χρυσοῦ *Genitive of Description* **G-DESC**.

When the genitive word describes the material from which the limited object is made, the more specific *Genitive of Material* **G-MATER** is used: e.g. στέφανος **χρυσού**.

Indirect Statement – There are three types of syntactic structure used to represent Indirect Speech in Greek. Each structure uses the **NOM-INDSTAT** tag and, since it is a nominal clause, also requires a function modifier in the second (right hand) pull-down menu: e.g. **_OBJ**.

Indirect Statement (using a finite verb and ὅτι, ὥς, or ∅) – In indirect statement using a finite verb, the subordinating conjunction (ὅτι, ὥς) hangs below the subordinating verbal form and is tagged with **Aux-C** tag. The finite verb of the indirect statement hangs below the subordinating conjunction and the **NOM-INDSTAT** tag is used.

Indirect Statement (using an infinitive) – In indirect statement using an infinitive, the infinitive hangs below the subordinating verbal form and uses the **NOM-INDSTAT** tag with the appropriate function modifier. The *Accusative Subject* hangs below the infinitive and is labeled with the **A-SUBJ** tag.

Indirect Statement (using a participle) – In indirect statement using a participle instead of an infinitive or finite verb, the participle hangs below the substantive that it modifies and the **ATR** tag is used. The substantive uses the **NOM-INDSTAT** tag: e.g. ἦσθοντο τοὺς φίλους νενικημένους, φίλους is tagged **NOM-INDSTAT _OBJ** and νενικημένους is tagged **ATR**.

Indirect Statement (sustained or implied without a subordinating verbal form) – In extended speeches, it is typical to not repeat the subordinating verbal form as the Predicate: e.g. ἔφην. In these instances, the last explicit verbal form should be carried forward as an ellipsis in the following sentences, using the procedure in Section E: e.g. (ἔφην) as the Predicate.

Infinitives – use the appropriate tag in the “infinitive uses” pull-down menu to label these neuter, verbal nouns:

INF-COMP	Complimentary Infinitives (functioning as the <i>Direct Objects</i> of certain verbs)
INF-EXPL	Explanatory Infinitives (modifying certain adjectives)
INF-IMPER	Imperitival Infinitives (functioning as the <i>Predicate</i>)
N-SUBJ	Subject Infinitives (functioning as the <i>Subjects</i> of certain verbs, especially of impersonal verbs.)

Interjections – Distinct from sentence adverbials (e.g. inferential particles like οὐν), interjections are somewhat separate from the syntactic structure of the sentence, much like a *Vocative* form: e.g. ὦ, εἴθε, οἶμοι, φεῦ, αἰᾶ. Interjections typically hang from the *predicate*. Use the **INTRJ** (interjection) tag in the “Aux” pull-down menu located in the “BASIC” pull-down menu to label the interjection. Note that *Vocative* forms invoking a god (e.g. ὦ Πόσειδον) are labeled with the **V-VOC** tag.

Names – Greek Names: typically a Genitive noun (the name of the father or husband) labeled with **G-POSS**.

Any ethnic adjectives use the **ATR** (attribute) tag in the “BASIC” pull-down menu: e.g. Θουκυδίδης **Ἀθηναῖος**. Roman Names: use the **ATR** (attribute) tag in the “BASIC” pull-down menu to label *praenomina* and *cognomina*, which hang from the *nomen*. The *nomen* is labeled based on its case function. Any period after the abbreviated *praenomen* is labeled with **AuxG** and hangs from the *praenomen*. (The *nomen* is typically an **adjective**, but the *praenomen* is a noun, as is usually the *cognomen*.)

Negation – use the **ADV** (adverbial) tag in the “BASIC” pull-down menu: e.g. οὐ, οὐκ, οὐχ, μὴ. Note that some words can be used as negation (ADV) or as subordinators (AuxC): e.g. μὴ.

Parenthetical Statements – Parenthetical statements are complete statements that are not joined to the sentence using coordination or subordination (a grammatically independent structure within another sentence); they are frequently an aside from the speaker embedded within another sentence, much like an *Interjection*. Hang the Parenthetical Statement from the first punctuation that separates it from the sentence, and hang the punctuation from the structure in the sentence that occasions the aside – usually a verbal form and often the Predicate. Label the connecting punctuation with the **PARENTH** tag in the “BASIC” pull-down menu the highest verbal form with the appropriate **PRED** tag in the “BASIC” pull-down menu. Many apparent asides are, however, abbreviated or atypical *Causal Clauses* or the like: i.e. they actually explain or otherwise modify the main clause, despite not using a common subordinator.

Periphrastic Verbal Forms – the auxiliary verbal form is taken as being dependent on (hangs under) the verbal adjective in the periphrastic forms. Use the **AuxV** (auxiliary verbal form) tag in the “BASIC” pull-down menu for finite verbs and infinitives used in a periphrastic verbal form: e.g. πεπαυκότες ὦμεν, or πεπαυμένοι εἶτε.⁴

Predicate – if they are indicative, the verb or verbs of the independent clause are labeled with the **PRED** tag in the “BASIC” pull-down menu; if they are subjunctive, use the tags in the pull-down menu within the PRED tag:

PRED-HORT	hortatory subjunctive predicate
PRED-DELIB	deliberative subjunctive predicate
PRED-POTENT	potential optative predicate
PRED-OPT	optative optative predicate (<i>Optative of the Wish</i>)

The predicate may be coordinated, like any other structure.

Prepositions – use the **AuxP** (preposition) tag in the “Aux” pull-down menu located in the “BASIC” pull-down menu: e.g. περί. Remember that the case use attracts certain prepositions; the prepositions do not cause the case. Label the substantive under the preposition with the appropriate tag for its particular clause usage:

Accusative, Dative, or Genitive and usually matching as below:

διά	<i>Accusative of Orientation</i>	ἀγχοῦ	<i>Genitive of Orientation</i>
εἰς, ἐς	<i>Accusative of Orientation</i>	ἀμφί	<i>Genitive of Orientation</i>
ἐπί	<i>Accusative of Orientation</i>	ἀντί	<i>Genitive of Orientation</i>
κατά	<i>Accusative of Orientation</i>	ἀντία, ἀντίον	<i>Genitive of Orientation</i>
μετά	<i>Accusative of Orientation</i>	ἀπό	<i>Genitive of Orientation</i>
παρά	<i>Accusative of Orientation</i>	ἄχρι	<i>Genitive of Orientation</i>
περί	<i>Accusative of Orientation</i>	διά	<i>Genitive of Orientation</i>
πρός	<i>Accusative of Orientation</i>	ἐγγύς	<i>Genitive of Orientation</i>
ὑπέρ	<i>Accusative of Orientation</i>	εἴσω (ἔσω)	<i>Genitive of Orientation</i>
ὑπό	<i>Accusative of Orientation</i>	ἐκατέρωθεν	<i>Genitive of Orientation</i>
ὥς	<i>Accusative of Orientation</i>	ἐκτός	<i>Genitive of Orientation</i>
		ἐμπροσθεν	<i>Genitive of Orientation</i>
ἀμφί	<i>Accusative of Extent</i>	ἐναντίον	<i>Genitive of Orientation</i>
ἀνά	<i>Accusative of Extent</i>	ἐντός	<i>Genitive of Orientation</i>
διά	<i>Accusative of Extent</i>	ἐξ, ἐκ	<i>Genitive of Orientation</i>
κατά	<i>Accusative of Extent</i>	ἔξω	<i>Genitive of Orientation</i>
ὑπέρ	<i>Accusative of Extent</i>	ἐπί	<i>Genitive of Orientation</i>
		εὐθύ	<i>Genitive of Orientation</i>

⁴ Since main verbal force of the periphrastic verb is contained in the participle, with the form of εἶναι merely supplying tense and mood.

κατά	<i>Genitive of Orientation</i>	πόρρω, πρόσω	<i>Genitive of Separation</i>
καταντικρύ	<i>Genitive of Orientation</i>	χωρίς	<i>Genitive of Separation</i>
μεταξύ	<i>Genitive of Orientation</i>		
μέχρι	<i>Genitive of Orientation</i>	ἅμα	<i>Dative of Location</i>
ὀπισθεν	<i>Genitive of Orientation</i>	ἀμφί	<i>Dative of Location</i>
παρά	<i>Genitive of Orientation</i>	ἀνά	<i>Dative of Location</i>
πέρα	<i>Genitive of Orientation</i>	ἐν	<i>Dative of Location</i>
πέραν	<i>Genitive of Orientation</i>	ἐπί	<i>Dative of Location</i>
περί	<i>Genitive of Orientation</i>	παρά	<i>Dative of Location</i>
πλησίον	<i>Genitive of Orientation</i>	περί	<i>Dative of Location</i>
πρό	<i>Genitive of Orientation</i>	πλησίον	<i>Dative of Location</i>
πρός	<i>Genitive of Orientation</i>	πρός	<i>Dative of Location</i>
σχεδόν	<i>Genitive of Orientation</i>	ὑπό	<i>Dative of Location</i>
ὑπέρ	<i>Genitive of Orientation</i>		
ὑπό	<i>Genitive of Orientation</i>	ἅμα	<i>Dative of Accompaniment</i>
		ὁμοῦ	<i>Dative of Accompaniment</i>
ὑπό	<i>Genitive of Agent</i>	σύν	<i>Dative of Accompaniment</i>
διά	<i>G. of Time Within Which</i>	σύν	<i>Dative of Manner (more rare)</i>
μετά	<i>G. of Accompaniment</i>	ἄνευ	<i>Genitive of Separation</i>
ἀπό	<i>Genitive of Cause</i>	ἐνέρθε	<i>Genitive of Orientation (poetic)</i>
ἀμφί	<i>Genitive of Cause</i>	πάρος	<i>Genitive of Orientation (poetic)</i>
διά	<i>Genitive of Cause</i>	πέλας	<i>Genitive of Orientation (poetic)</i>
ἐξ, ἐκ	<i>Genitive of Cause</i>	πρίν	<i>Genitive of Orientation (poetic)</i>
παρά	<i>Genitive of Cause</i>		
ὑπό	<i>Genitive of Cause</i>	δίχα	<i>Genitive of Separation (poetic)</i>
		νόσφι	<i>Genitive of Separation (poetic)</i>
ἄνευ	<i>Genitive of Separation</i>	τῆλε	<i>Genitive of Separation (poetic)</i>
ἄτερ	<i>Genitive of Separation</i>		
δίχα	<i>Genitive of Separation</i>	ἐγγύς	<i>Dative of Location (poetic)</i>
ἐκάς	<i>Genitive of Separation</i>	ἐναντίον	<i>Dative of Location (poetic)</i>
κρύφα	<i>Genitive of Separation</i>	πέλας	<i>Dative of Location (poetic)</i>
λάθρα	<i>Genitive of Separation</i>		
νόσφι	<i>Genitive of Separation</i>		
πλήν	<i>Genitive of Separation</i>		

Pronouns (used adjectivally) – Pronouns that adjectivally modify another word are tagged with **ATR**: e.g.

οὗτος ἄναξ.

Punctuation – When not otherwise needed to stand for coordination or apposition within a syntactic tree:

1. Commas (AuxX) and quotation marks (AuxG) are hung from the highest verbal form of the clause that necessitates their existence: e.g. a comma separating a *Purpose Clause* from the main clause hangs from the highest verbal form of the *Purpose Clause*, since the comma would not be there except to separate that clause from the *Main Clause*.
2. Commas between elements in coordination are hung from the coordinator and retain their **AuxX** tag.
3. Final punctuation (. ;) remains hanging on the **ROOT** and retains its **AuxK** tag.
4. Semicolons (·) that separate clauses or other structures (e.g. in a list of statements) are marked with the **AuxX** tag.
5. Parentheses, brackets, and hyphens are labeled with the **AuxG** tag, when not otherwise used in the structure of the tree.

Quotation Marks – Direct quotation should be surrounded by double quotation marks (“ ”), and a quotation embedded within another quotation should be surrounded by single quotation marks (‘ ’).

Relative Clause – The *Relative Clause* frequently stands without an antecedent as an object or subject of a verbal form. In these cases, use the **_OBJ** or **_SBJ** modifier in the second (right hand) pull-down menu.

Relative Pronoun – The *Relative Pronoun* is tagged with the case tag specific to its role within its clause. It hangs from whatever form it is dependent due to its case.

Sentence Coordinators – Coordinators (e.g. *δὲ, καὶ*) are often used to link sentences semantically rather than to link structures within a particular sentence. These coordinators often come first in sequence and depend on the ROOT. The predicate hanging under such a sentence coordinator is not marked with the **_CO** tag.

Verbs with “Unusual” Cases – in addition to intransitive verbs (those that do not take an accusative *Direct Object*), there are a few Greek verbs that attract standard uses of other cases instead or in addition to an accusative *Direct Object*, e.g.:

- ἀκούω – may attract a to indicate the audible stimulus and attracts an *Genitive of the Source* **G-SOURCE** to indicate the personal source of what is audible – to hear something from someone
- ἄπτω – often attracts an *Objective Genitive* **G-OBJEC** to express of what the subject has been bound.
- βάλλω – typically attracts a personal *Direct Object* **A-DO** and often attracts a *Dative of Means* **D-MEANS** or *Dative of Manner* **D-MANN** – to range-attack someone by means of something
- δεῖ – instead of indirect statement as its subject, δεῖ may attract a *Dative of Reference* **D-REFER** to express to whom there is a necessity; it may also attract an *Objective Genitive* **G-OBJEC** to express of what there is a need.
- ἐφάπτω – often attracts an *Objective Genitive* **G-OBJEC** to express of what the subject has laid hold.
- λήγω – often attracts a *Genitive of Separation* **G-SEPAR** to express away from what the subject stays.
- μέτεμι – often attracts a *Partitive Genitive* **G-PART** to express of what the subject has part as a share.
- ὁμολογέω – often attracts a *Dative of Reference* **D-REFER** to express in reference to whom the subject says the same thing.
- πείθομαι – in the middle and passive attracts a *Dative of Interest* **D-INTER** to indicate for whose interest one has been persuaded – to be persuaded for someone, to render obedience to someone
- χράομαι – often attracts a *Dative of Means* **D-MEANS** to express with whom the subject takes consultation; may attract an *Objective Genitive* **G-OBJEC** to express of what the subject has a need.

Vocatives – use the **V-VOC** tag in the pull-down menu, indicating that they are not part of the syntactic structure of the tree. A vocative normally depends on the main verbal form of the independent clause.

AuxY (sentence adverbials) – many adverbial forms (not generally true morphological adverbs) emphasize the sentence (independent clause) as a whole, rather than a particular word within the sentence: e.g. *δῆ, γάρ, γε, τοι, οὖν*.

V. MORPHOLOGY INSTRUCTIONS

A. Label a word based on its morphology, not its function: e.g. a substantive adjective is morphologically an adjective, NOT a noun.

B. Know what you are looking for before selecting the morphological analysis. (Multiple distinct forms may derive from the same or similar roots.) If the precisely correct form is not present, you must create a new form: (DO NOT ADD UNNECESSARY FORMS.)

Create a new morphological analysis:

1. In the “Morph” tab at the top right of the editor window;
2. click the “Create new form” button;
3. in the “Lemma” box add the first word of the dictionary entry: e.g. *Caesar* instead of *Caesare* (in the case of abbreviations, use the complete word: e.g. *M.* would be *Marcus*);
4. select the part of speech in the “Part of Speech” pull-down menu (participles, gerundives, gerunds, supines, and infinities are lumped under “verb” and differentiated in the “Mood” drop-down menu);
5. select the properties of the word in the drop-down menus that appear;
6. when all properties are complete, click the “Save” button.

C. Make sure that the selected morphology and the syntactic TAG are in agreement: i.e. do not label θεοῖς D-IO and then identify the morphology as the genitive of θεός. (Check in both directions.)

In general, a great strength of your grammar was the inclusion of examples to explain each construction. I am- with regards to treebanking- a visual learner, I would benefit from visual examples (i.e. pictures of treebanks) of the tagging you describe.

Regarding the polysydeton: the extra conjunctions are now to be marked as ADV- I am used to hanging the supplementary conjunctions directly off of the main COORD but if they are now ADV will they be hung off of each coordinated verb?

VI. EDITING THE XML CODE DIRECTLY

At times the automatic XML parser may make errors. Sometimes you may disagree with the editing choices of the editor of your text: e.g. punctuation, which manuscript reading to use, what word best solves a *crux* (a textual corruption induced problem in syntax). In these situations, you will need to directly edit the XML code. (Note that when you change the numbering of words within a sentence using many of these types of edit, the dependencies in the tree will need to be redone; when a word or punctuation is changed, it may have to be retagged and re-identified.)

EDITING THE XML CODE

- I. note which sentence you are currently editing
- II. save, and then exit the editor window by clicking on the exit arrow at top right
- III. select "EDIT XML" from the options in blue text near top of window
- IV. scroll to the appropriate sentence: e.g. sentence 4, then...

Divide a word

- I. select the entire word entry, including all brackets

```
<sentence id="4" document_id="" subdoc="" span="">
  <word id="1" form="rudis" lemma="rudis1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
  <word id="2" form="indigestaque" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
  <word id="3" form="moles" lemma="moles" postag="n-s---fn-" relation="N-PRED" head="23"/>
  <word id="4" form="ne" lemma="ne1" postag="d-----" relation="ADV" head="24"/>
  <word id="5" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
</sentence>
```

- II. copy and paste in another copy of the word entry immediately after the first instance

```
<sentence id="4" document_id="" subdoc="" span="">
  <word id="1" form="rudis" lemma="rudis1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
  <word id="2" form="indigestaque" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
  <word id="2" form="indigestaque" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
  <word id="3" form="moles" lemma="moles" postag="n-s---fn-" relation="N-PRED" head="23"/>
  <word id="4" form="ne" lemma="ne1" postag="d-----" relation="ADV" head="24"/>
  <word id="5" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
</sentence>
```

- III. delete the 2nd word from the first entry, AND replace the 1st word in the second entry with a hyphen

```
<sentence id="4" document_id="" subdoc="" span="">
  <word id="1" form="rudis" lemma="rudis1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
```

```

<word id="2" form="indigesta" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
<word id="2" form="-que" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
<word id="3" form="moles" lemma="moles" postag="n-s---fn-" relation="N-PRED" head="23"/>
<word id="4" form="ne" lemma="ne1" postag="d-----" relation="ADV" head="24"/>
<word id="5" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
</sentence>

```

IV. click on "SAVE" at the bottom of the page (there is no need to renumber the word entries)

Combine two words

I. find the two word entries that should be a single word entry

```

<sentence id="4" document_id="" subdoc="" span="">
  <word id="1" form="eodem" lemma="eodem" postag="d-----" relation="ADV" head="12"/>
  <word id="2" form="non" lemma="non" postag="d-----" relation="ADV" head="16"/>
  <word id="3" form="be" lemma="bene" postag="d-----" relation="ADV" head="17"/>
  <word id="4" form="-ne" lemma="bene" postag="d-----" relation="ADV" head="17"/>
  <word id="5" form="iunctarum" lemma="jungo" postag="v-prppfg-" relation="ATR" head="20"/>
  <word id="6" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
</sentence>

```

II. add the letters of the second word entry to the end on the first word, AND delete the second entry

```

<sentence id="4" document_id="" subdoc="" span="">
  <word id="1" form="eodem" lemma="eodem" postag="d-----" relation="ADV" head="12"/>
  <word id="2" form="non" lemma="non" postag="d-----" relation="ADV" head="16"/>
  <word id="3" form="bene" lemma="bene" postag="d-----" relation="ADV" head="17"/>

  <word id="5" form="iunctarum" lemma="jungo" postag="v-prppfg-" relation="ATR" head="20"/>
  <word id="6" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
</sentence>

```

III. click on "SAVE" at the bottom of the page (there is no need to renumber the word entries)

Combine two sentences

I. select the entire sentence end tag of the 1st sentence and the entire sentence beginning tag of the 2nd sentence, including all brackets

```

<sentence id="4" document_id="" subdoc="" span="">
  <word id="1" form="iners" lemma="iners" postag="a-s---nn-" relation="ATR" head="10"/>

```

```
<word id="2" form="congesta" lemma="congero1" postag="v-prppnn-" relation="ATR" head="19"/>
<word id="3" form="-que" lemma="-que" postag="c-----" relation="COORD" head="22"/>
<word id="4" form="eodem" lemma="eodem" postag="d-----" relation="ADV" head="12"/>
<word id="5" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
```

```
</sentence>
```

```
<sentence id="5" document_id="" subdoc="" span="">
```

```
<word id="1" form="rudis" lemma="rudis1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
<word id="2" form="indigesta" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
<word id="3" form="-que" lemma="-que" postag="c-----" relation="COORD" head="4"/>
<word id="4" form="moles" lemma="moles" postag="n-s---fn-" relation="N-PRED" head="23"/>
<word id="5" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
```

```
</sentence>
```

II. delete both tags entirely, including all brackets

```
<sentence id="4" document_id="" subdoc="" span="">
```

```
<word id="1" form="iners" lemma="iners" postag="a-s---nn-" relation="ATR" head="10"/>
<word id="2" form="congesta" lemma="congero1" postag="v-prppnn-" relation="ATR" head="19"/>
<word id="3" form="-que" lemma="-que" postag="c-----" relation="COORD" head="22"/>
<word id="4" form="eodem" lemma="eodem" postag="d-----" relation="ADV" head="12"/>
<word id="5" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
```

```
<word id="1" form="rudis" lemma="rudis1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
<word id="2" form="indigesta" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
<word id="3" form="-que" lemma="-que" postag="c-----" relation="COORD" head="4"/>
<word id="4" form="moles" lemma="moles" postag="n-s---fn-" relation="N-PRED" head="23"/>
<word id="5" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
```

```
</sentence>
```

III. change punctuation at the end of the 1st sentence if necessary

IV. click on "SAVE" at the bottom of the page (there is no need to renumber the word entries)

Separate one sentence into two sentences

I. select the entire sentence end tag of a sentence and the entire sentence beginning tag of the following sentence, including all brackets

```
<sentence id="4" document_id="" subdoc="" span="">
```

```
<word id="1" form="rudis" lemma="rudis1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
<word id="2" form="indigesta" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
```

```

<word id="3" form="-que" lemma="-que" postag="c-----" relation="COORD" head="4"/>
<word id="4" form="moles" lemma="moles" postag="n-s---fn-" relation="N-PRED" head="23"/>
<word id="5" form="ne" lemma="ne1" postag="d-----" relation="ADV" head="24"/>
<word id="6" form="-c" lemma="-que" postag="c-----" relation="COORD" head="0"/>
<word id="7" form="quicquam" lemma="quisquam" postag="p-s---nn-" relation="N-PRED" head="24"/>
<word id="8" form="ni" lemma="ni" postag="d-----" relation="ADV" head="22"/>
<word id="9" form="-si" lemma="si" postag="c-----" relation="AuxC" head="24"/>
<word id="10" form="pondus" lemma="pondus" postag="n-s---nn-" relation="N-PRED_CO" head="13"/>

```

</sentence>

<sentence id="5" document_id="" subdoc="" span="">

```

<word id="1" form="rudis" lemma="rudis1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
<word id="2" form="indigesta" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
<word id="3" form="-que" lemma="-que" postag="c-----" relation="COORD" head="4"/>
<word id="4" form="moles" lemma="moles" postag="n-s---fn-" relation="N-PRED" head="23"/>
<word id="5" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>

```

</sentence>

II. copy both tags entirely, including all brackets

III. paste both tags entirely, including all brackets, between the final word of the 1st part of the sentence to be divided and the second part

```

<sentence id="4" document_id="" subdoc="" span="">
  <word id="1" form="rudis" lemma="rudis1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
  <word id="2" form="indigesta" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
  <word id="3" form="-que" lemma="-que" postag="c-----" relation="COORD" head="4"/>

```

</sentence>

<sentence id="5" document_id="" subdoc="" span="">

```

<word id="4" form="moles" lemma="moles" postag="n-s---fn-" relation="N-PRED" head="23"/>
  <word id="5" form="ne" lemma="ne1" postag="d-----" relation="ADV" head="24"/>
  <word id="6" form="-c" lemma="-que" postag="c-----" relation="COORD" head="0"/>
  <word id="7" form="quicquam" lemma="quisquam" postag="p-s---nn-" relation="N-PRED" head="24"/>
  <word id="8" form="ni" lemma="ni" postag="d-----" relation="ADV" head="22"/>
  <word id="9" form="-si" lemma="si" postag="c-----" relation="AuxC" head="24"/>
  <word id="10" form="pondus" lemma="pondus" postag="n-s---nn-" relation="N-PRED_CO" head="13"/>

```

</sentence>

<sentence id="5" document_id="" subdoc="" span="">

```

<word id="1" form="rudis" lemma="rudis1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
<word id="2" form="indigesta" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
<word id="3" form="-que" lemma="-que" postag="c-----" relation="COORD" head="4"/>
<word id="4" form="moles" lemma="moles" postag="n-s---fn-" relation="N-PRED" head="23"/>

```

```
<word id="5" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
</sentence>
```

IV. add (copy & paste) a word entry for punctuation at the end of the 1st sentence if necessary

V. click on "SAVE" at the bottom of the page (there is no need to renumber the word entries)

Add punctuation

I. select the word entry for any punctuation, preferably the type that you want to add

```
<sentence id="4" document_id="" subdoc="" span="">
  <word id="1" form="tam" lemma="tam" postag="d-----" relation="ADV" head="4"/>
  <word id="2" form="miserum" lemma="miser" postag="a-s---na-" relation="ATR_CO" head="5"/>
  <word id="3" form="," lemma="comma" postag="c-----" relation="COORD" head="2"/>
  <word id="4" form="tam" lemma="tam" postag="d-----" relation="ADV" head="7"/>
  <word id="5" form="solum" lemma="solus" postag="a-s---na-" relation="ATR_CO" head="5"/>
  <word id="6" form="vidimus" lemma="video" postag="v1pria---" relation="PRED" head="0"/>
  <word id="7" form="ut" lemma="ut" postag="c-----" relation="AuxC" head="8"/>
  <word id="8" form="deterius" lemma="deterior" postag="a-s---nac" relation="N-PRED" head="31"/>
  <word id="9" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
</sentence>
```

II. copy the word entry for the punctuation

III. paste the word entry for the punctuation between two other word entries where needed

```
<sentence id="4" document_id="" subdoc="" span="">
  <word id="1" form="tam" lemma="tam" postag="d-----" relation="ADV" head="4"/>
  <word id="2" form="miserum" lemma="miser" postag="a-s---na-" relation="ATR_CO" head="5"/>
  <word id="3" form="," lemma="comma" postag="c-----" relation="COORD" head="2"/>
  <word id="4" form="tam" lemma="tam" postag="d-----" relation="ADV" head="7"/>
  <word id="5" form="solum" lemma="solus" postag="a-s---na-" relation="ATR_CO" head="5"/>
  <word id="6" form="vidimus" lemma="video" postag="v1pria---" relation="PRED" head="0"/>
  <word id="3" form="," lemma="comma" postag="c-----" relation="COORD" head="2"/>
  <word id="7" form="ut" lemma="ut" postag="c-----" relation="AuxC" head="8"/>
  <word id="8" form="deterius" lemma="deterior" postag="a-s---nac" relation="N-PRED" head="31"/>
  <word id="9" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
</sentence>
```

IV. click on "SAVE" at the bottom of the page (there is no need to renumber the word entries)

Remove punctuation

I. select the word entry for the punctuation needing to be removed

```
<sentence id="4" document_id="" subdoc="" span="">
  <word id="1" form="rudis" lemma="rudis1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
  <word id="2" form="indigesta" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
  <word id="3" form="-que" lemma="-que" postag="c-----" relation="COORD" head="4"/>
  <word id="4" form="," lemma="comma" postag="u-----" relation="AuxX" head="0"/>
  <word id="5" form="moles" lemma="moles" postag="n-s---fn-" relation="N-PRED" head="23"/>
  <word id="6" form="ne" lemma="ne1" postag="d-----" relation="ADV" head="24"/>
  <word id="7" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
</sentence>
```

II. delete the word entry for the punctuation entirely, including all brackets

```
<sentence id="4" document_id="" subdoc="" span="">
  <word id="1" form="rudis" lemma="rudis1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
  <word id="2" form="indigesta" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
  <word id="3" form="-que" lemma="-que" postag="c-----" relation="COORD" head="4"/>

  <word id="5" form="moles" lemma="moles" postag="n-s---fn-" relation="N-PRED" head="23"/>
  <word id="6" form="ne" lemma="ne1" postag="d-----" relation="ADV" head="24"/>
  <word id="7" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
</sentence>
```

III. click on "SAVE" at the bottom of the page (there is no need to renumber the word entries)

Edit a single word or character

I. select the word or punctuation needing to be edited

```
<sentence id="4" document_id="" subdoc="" span="">
  <word id="1" form="rudis" lemma="rudis1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
  <word id="2" form="innigesta" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
  <word id="3" form="-que" lemma="-que" postag="c-----" relation="COORD" head="4"/>
  <word id="4" form="moles" lemma="moles" postag="n-s---fn-" relation="N-PRED" head="23"/>
  <word id="5" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
</sentence>
```

II. make any needed edits or substitutions

```
<sentence id="4" document_id="" subdoc="" span="">
  <word id="1" form="rudis" lemma="rudis1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
```



```
<word id="2" form="indigesta" lemma="indigestus1" postag="a-s---fn-" relation="ATR_CO" head="3"/>
<word id="3" form="-que" lemma="-que" postag="c-----" relation="COORD" head="4"/>
<word id="4" form="moles" lemma="moles" postag="n-s---fn-" relation="N-PRED" head="23"/>
<word id="5" form="." lemma="punc1" postag="u-----" relation="AuxK" head="0"/>
</sentence>
```

III. click on "SAVE" at the bottom of the page

Add the line or paragraph numbers to every sentence:

I. In the header of each sentence, find: subdoc=""

```
<sentence id="21"
  document_id="urn:cts:latinLit:phi0690.phi003.perseus-lat2"
  subdoc=""
  span="">
  <word id="1" form="Se" lemma="sui" postag="p-p---ma-" relation="A-DO_CO" head="9"/>
  <word id="2" form="quoque" lemma="quoque" postag="d-----" relation="ADV" head="5"/>
  ...
</sentence>
```

II. Consult the line or paragraph numbering in the text and fill in the correct numbers: e.g. subdoc="1.488-489"

tum uero ingentem gemitum dat pectore ab imo, 1.485
 ut spolia, ut currus, utque ipsum corpus amici
 tendentemque manus Priamum conspexit inermis.
se quoque principibus permixtum agnouit Achiuis,
Eoasque acies et nigri Memnonis arma.
 ducit Amazonidum lunatis agmina peltis 1.490
 Penthesilea furens mediisque in milibus ardet,
 ...

```
<sentence id="21"
  document_id="urn:cts:latinLit:phi0690.phi003.perseus-lat2"
  subdoc="1.488-489"
  span="">
  <word id="1" form="Se" lemma="sui" postag="p-p---ma-" relation="A-DO_CO" head="9"/>
  <word id="2" form="quoque" lemma="quoque" postag="d-----" relation="ADV" head="5"/>
  ...
</sentence>
```

I am still a bit up in the air about when to use AUX_Y as opposed to ADV. In the past you have explained that AUX_Y is when something is modifying the entire clause and ADV is only modifying the verb. Is this still the case? Furthermore, is negation only tagged as ADV regardless of whether it is οὐ or μή?

Regarding the circumstantial participle, I would like this explanation put in the larger context of participial usage. Participles are a cause of consternation to me; if a participle is not part of a participial clause and doesn't seem to imply anything (temporal, concessive, causal... etc), I consider it to be functioning in a purely adjectival manner and will mark it as ATR. If it has a clause, I use your tagset to mark what kind of clause it is (though supplementary usage still confuses me). If, however, the participle is used as what I would call a "substantive verbal adjective" when no noun is present then I will often simply mark it as how it functions in the clause. For example, in the sentence *morituri te salutant*, I would mark *morituri* as the subject (NOM_SUB)- should I be marking this as CP_CAUSAL or am I misunderstanding?

Regarding names in Greek, please explain the AUX_G? I always assumed patronymics would be marked as ATR and a Genitive place name (e.g. of/from Athens) would be a genitive of source, am I incorrect?