

VALENCY OF VERBS IN DEPENDENCY SYNTAX

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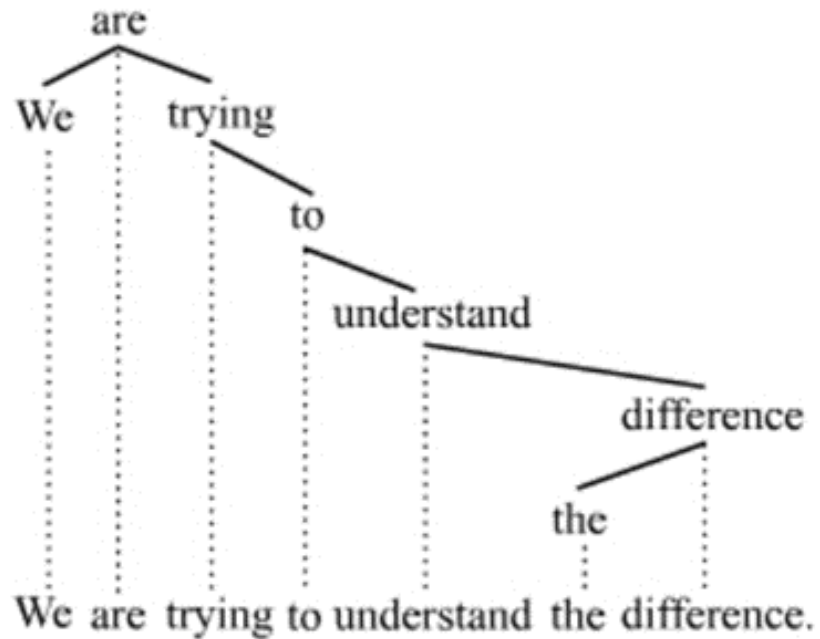
Terminology

- *Morphology* = The system of different forms for a given word; specific identification of the inflection of a given word
- *Syntax* = The arrangement of words to create well-formed sentences in a given language
- *Grammar* = The study of the way the sentences of a language are constructed; morphology and syntax

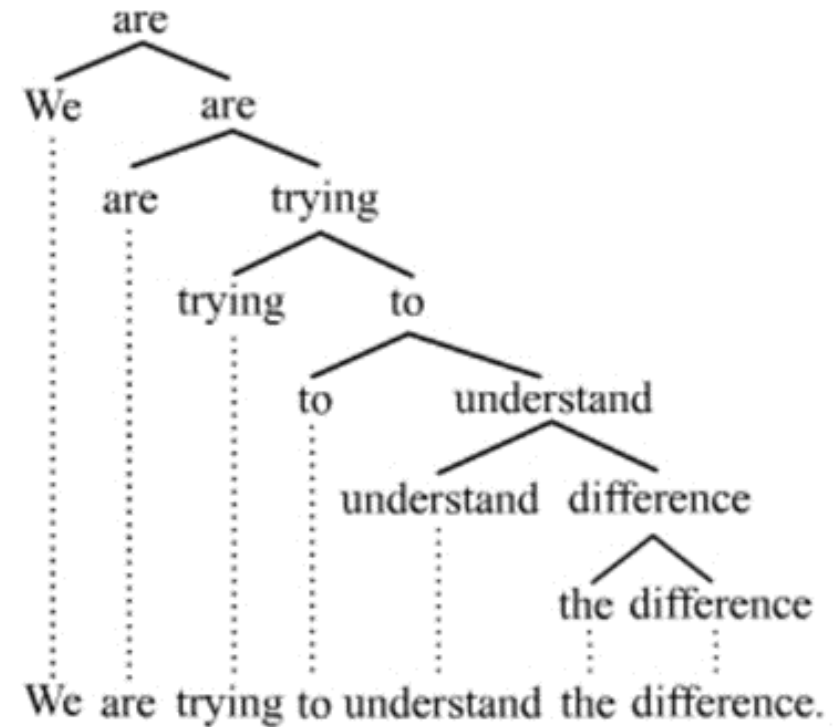
Dependency Syntax

- **Dependency Trees**
- The verb is the structural center of any clause
- Linguistic units (words) are connected by direct links and occur only once in the analysis of the structure of the sentence
 - Better for languages with free word order/periodic
 - English has fixed word order: SBJ – VERB - OBJ
 - Simple and straightforward; easy to learn
- Contrast constituency syntax (Chomsky)
 - Linguistic units occur multiple times
 - Complex and hard to learn; Better for languages with fixed word order

Dependency syntax versus constituency syntax



Dependency



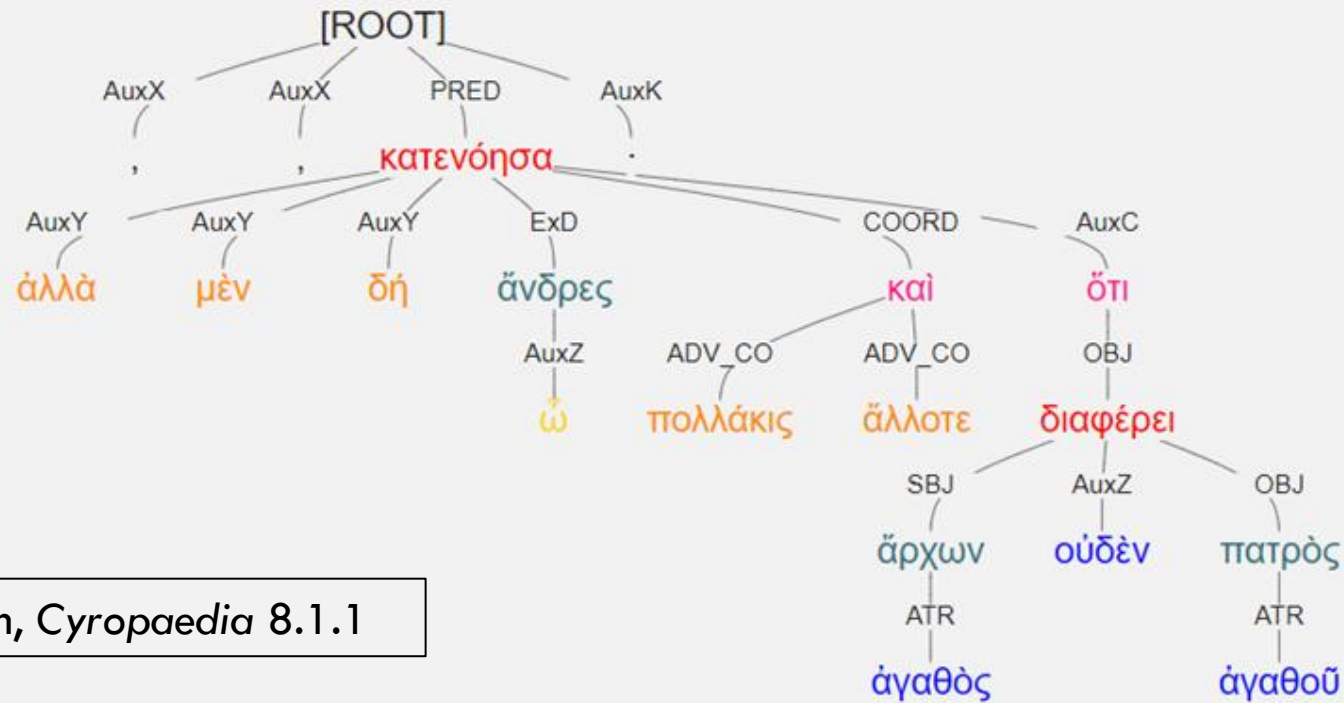
Constituency (BPS)

Dependency Syntax for Greek

[Arethusa through the Perseids Project]

ἀλλὰ πολλάκις μὲν δὴ , ὧ ἄνδρες , καὶ ἄλλοτε κατενόησα ὅτι ἄρχων ἀγαθὸς οὐδὲν διαφέρει πατρὸς ἀγαθοῦ .

selection **none** 0 unused highlight unused



Xenophon, *Cyropaedia* 8.1.1

Types of Conjugated Verbs

- **Transitive** verbs = the action is carried across to a receiver
 - I.e., there is a subject [SBJ] and object(s) [OBJ], whether expressed or implied.
 - “The Athenians [SBJ] fought a war [OBJ].”
 - “The war [SBJ] was won by them [OBJ].”
 - “Sosios [SBJ] obeyed.” [object is implied]
- **Intransitive** verbs = the action stays with the verb
 - Subject, but no object.
 - “The army [SBJ] marched at dawn.”

Copular verbs

- Link equivalencies [expressed in the same case]
 - Also called “linking” or copulative”
- The constructions so linked are labelled **Subject [SBJ]** and **Predicate Nominative [PNOM]** in dependency syntax.
- “to be” or “to become”
 - “Tissaphernes [SBJ] became satrap [PNOM].”
 - “The agora [SBJ] was full of people [PNOM].”
- Other verbs function in the same way
 - “Cimon [SBJ] felt ill [PNOM].”
 - “Alcibiades [SBJ] was found guilty [PNOM].”
 - “The Milesians [SBJ] remained courageous [PNOM].”

“Valency”

- Describes the number of arguments a particular verb requires in dependency syntax.
 - Usually labelled SBJ, OBJ, PNOM
 - The arguments are sometimes assumed rather than expressed
- Every element not required by the valency of the verb is called a satellite or an adjunct.
 - Usually labelled as “Adverbial” [ADV]
- Voice expresses the relationship between the action of the verb and its arguments

Arguments of a verb

- **Zerovalent** verbs do not require any argument to complete their meaning.
 - “It rains.” [“It” doesn’t mean anything]
 - Rare
- **Monovalent** verbs require **one** argument
 - Intransitive verbs: “Let the games begin,” or “The chariot crashed.”

Bivalent verbs

- Require **two** arguments
 - The argument that performs the action (an agent)
 - A second element upon which the action is performed
- •Active verbs
 - “Themistocles [SBJ] made ships [OBJ].”
 - Themistocles cannot “make” without there is an OBJ for that making.
- Passive verbs
 - “The war [SBJ] was begun by Xerxes [OBJ].”
 - The agent and the element upon which he is acting.
- Sometimes impersonal verbs fit this category.
 - “It is better for Cimon to leave.”
 - “To leave [SBJ] is better [PNOM] for Cimon [OBJ].”
 - “For Cimon [SBJ of inf] to leave [SBJ] is better [PNOM] [Assumed ‘for us’] [OBJ].”

Trivalent verbs

- “The Athenians sent Sparta reinforcements” has three arguments.
- In English we often call them the “subject,” “indirect object,” and “direct object.”
 - Just OBJ in Greek
 - Can be expressed with prepositions
 - “The Athenians [SBJ] sent [PNOM] reinforcements [OBJ] to Sparta [OBJ].”
 - “Pompey [SBJ] fought [PNOM] a war [OBJ] against Mithridates [OBJ].”

Miscellaneous Notes

- The same verb may require a different number of arguments depending on how it is being used in a particular context.
 - “Mary runs every day” is monovalent: only the subject is a necessary element.
 - “Mary runs a marathon once a month” is bivalent.
- Sometimes an argument is not directly stated, but it is still implied and is still considered an argument, if you must assume it from the context.
 - “Max gives to charities” implies a direct object “money.”
- Much dispute as to whether verbs can have four arguments.
 - “Darius appointed Tissaphernes as satrap for the Ionians.”
 - OCOMP [object complement]

Impersonal Verbs

- Verbs in the third person singular that have no subject in a normal sense
 - *It is useful, it is clear, it is important, etc.*
- Zerovalent: “It rains.”
- Monovalent: “It is necessary to breathe [SBJ].”
- Bivalent: “It is necessary for them [OBJ] to eat [SBJ] before they leave”
 - “To eat is necessary for them.”

What is the morphology and valency of these verbs?

[XEN., HELL. 1.1.5]

And the Athenians **attacked** him and **did battle**, along the strand near Abydus, from morning till late afternoon. At some points, they **were victorious** and at others they **were defeated**, when Alcibiades **sailed** into the Hellespont to their support with eighteen ships.

- *Attacked*
 - = 3rd pl aor ind act
 - Bivalent
- *Did battle*
 - = 3rd pl aor ind act
 - Bivalent
- *Were victorious; were defeated*
 - 3rd pl impf ind act
 - Monovalent
- *Sailed*
 - = 3rd sg aor ind act
 - Monovalent

What is the morphology and valency of these verbs?

[XEN., HELL. 1.1.5]

Those who had associated with Hermocrates **felt** exceedingly the loss of his care and enthusiasm and democratic spirit. For he **used to gather** them every day in the morning and at evening to his own tent, where he **communicated** to them whatever he was planning to say or to do.

- *Felt*
 - = 3rd pl aor ind act
 - Bivalent
- *Used to gather*
 - = 3rd sg impf ind act [habitual]
 - Bivalent
- *Communicated*
 - 3rd sg impf ind act
 - Trivalent

What is the Valency of these Verbs?

After this happened, Tissaphernes came to the Hellespont. When Alcibiades with [a] single trireme went to visit him, bearing friendly offerings and gifts, Tissaphernes seized him and imprisoned him in Sardis, saying that the King ordered him to make war upon the Athenians. Thirty days later, however, Alcibiades and Mantitheus, who had been taken prisoner in Caria, provided themselves with horses and made their escape from Sardis by night to Clazomenae.

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- Happened
 - = 3rd sg aor ind act
 - = monovalent =
 - SBJ
- Came
 - 3rd sg aor ind act
 - = bivalent = SBJ and place to which [OBJ]
- Went
 - 3rd sg aor ind act
 - = bivalent = SBJ and place to which OBJ [implied]
 - “To visit” is ADV expressing purpose
- Seized and imprisoned
 - 3rd sg aor ind act
 - = bivalent = SBJ and direct OBJ

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- Ordered 3rd sg aor ind act
 - = trivalent
 - SBJ orders someone [OBJ] to do something [OBJ]
- Provided
 - 3rd pl aor ind act
 - = trivalent = SBJ provided something [OBJ] to someone [OBJ]
- Made
 - 3rd pl aor ind act
 - = bivalent = SBJ did something [OBJ]
- Had been taken = mono or bi?
 - Is there an assumed agent?



A terrific reference work for dependency syntax in the context of the ancient world, albeit as applied to Latin, is Harm Pinkster's new *Oxford Latin Syntax*. Volume 1, *The Simple Clause*, was published in 2015. Volume 2 is still forthcoming.