

Harmonization of Dependency Trees

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May 12, 2022



EUROPEAN UNION
European Structural and Investment Fund
Operational Programme Research,
Development and Education

Charles University
Faculty of Mathematics and Physics
Institute of Formal and Applied Linguistics

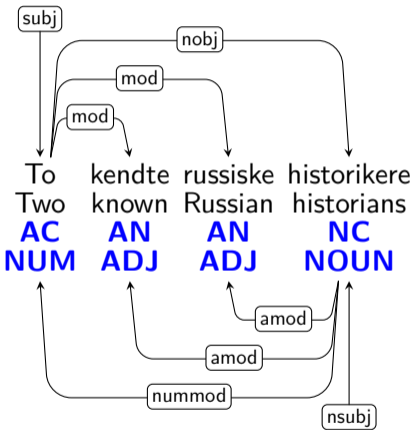


unless otherwise stated

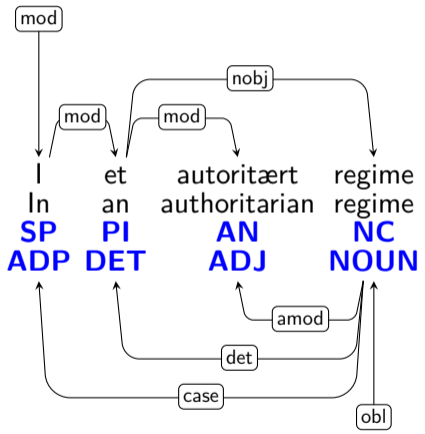
Harmonization of Dependency Tree Style

- Universal Dependencies
 - Solved problem?
 - Almost. But not completely.
- Transformations sometimes needed for learnability experiments
- There are still non-UD treebanks that need to be converted
- **SUD** (Surface-syntactic Universal Dependencies)
- Transformations trivial?
 - Not necessarily...

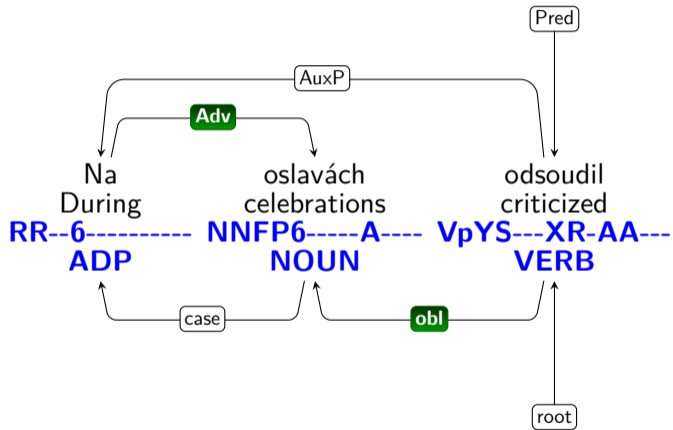
Danish Dependency Treebank



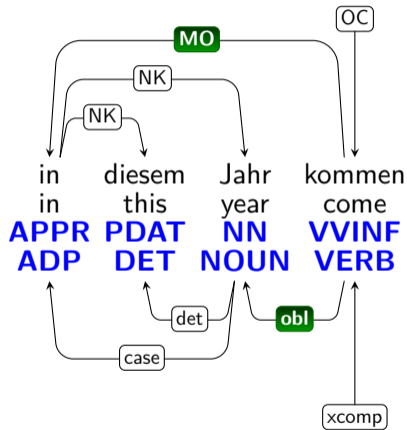
Danish Dependency Treebank



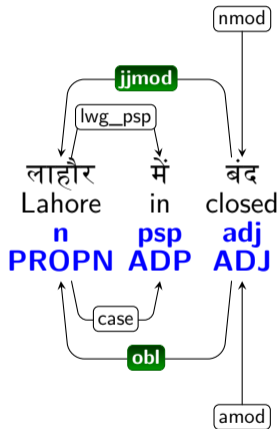
Adpositions



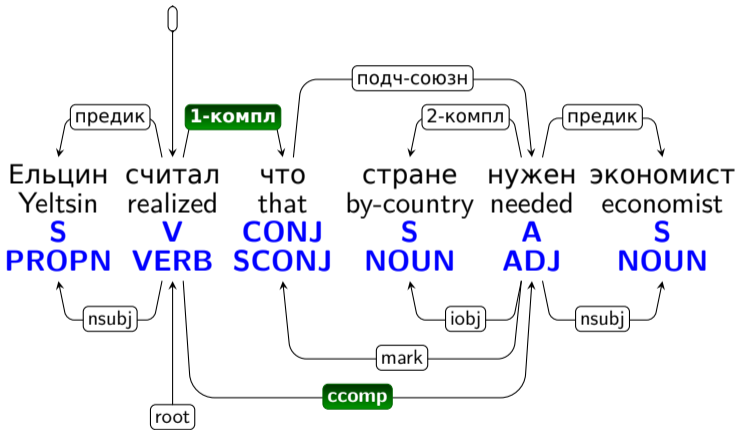
Adpositions



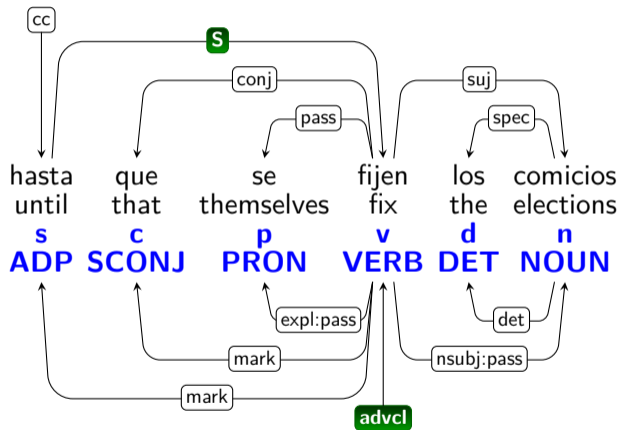
Adpositions



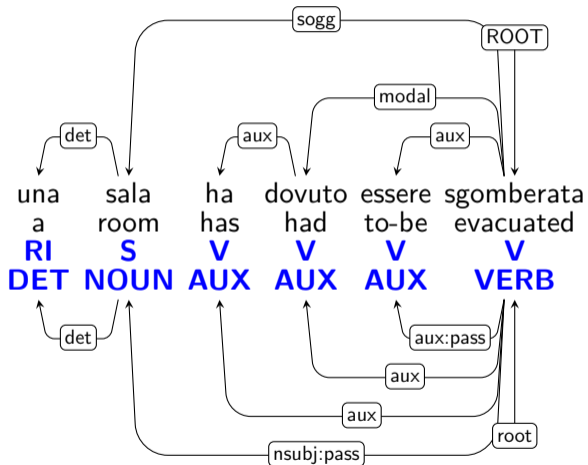
Subordinate Clauses



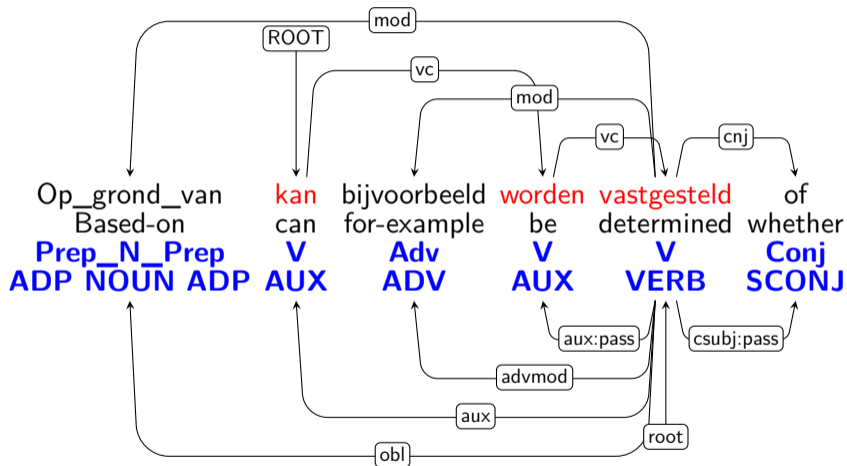
Subordinate Clauses



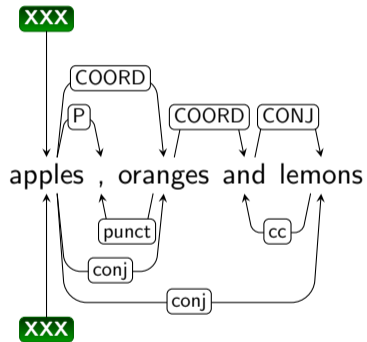
Verb Groups



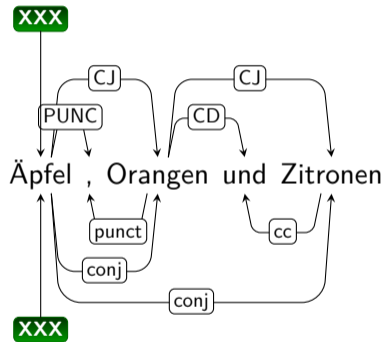
Verb Groups



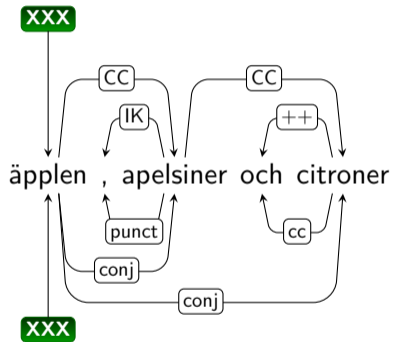
Coordination: Mel'čuk [en]



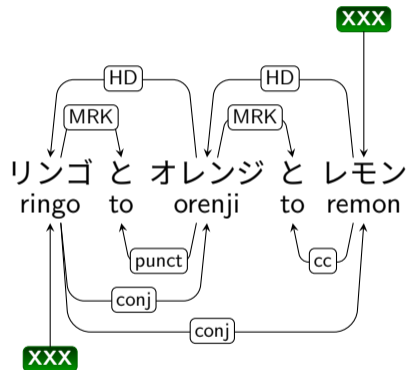
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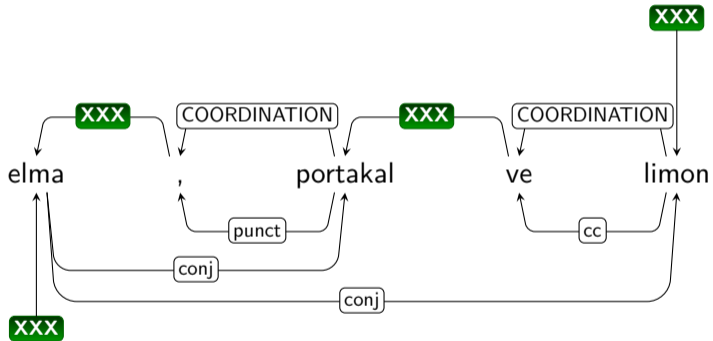
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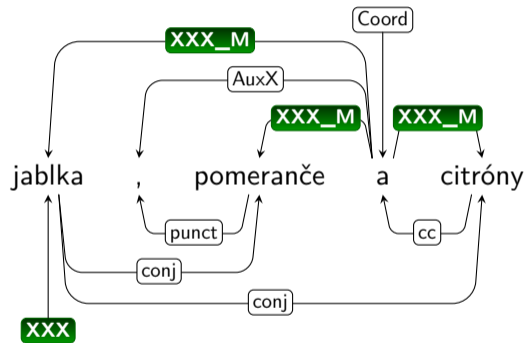
Coordination: Mel'čuk [ja]



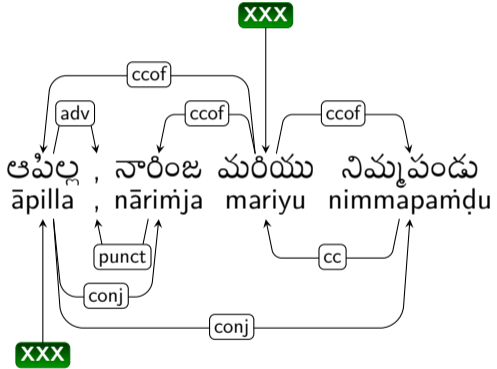
Coordination: Mel'čuk [tr]



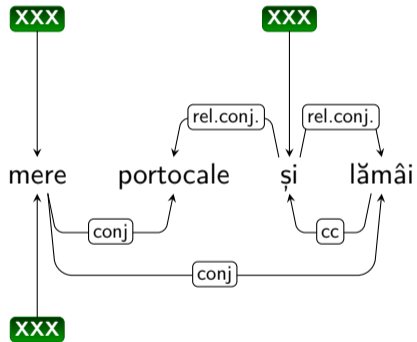
Coordination: Prague [cs]



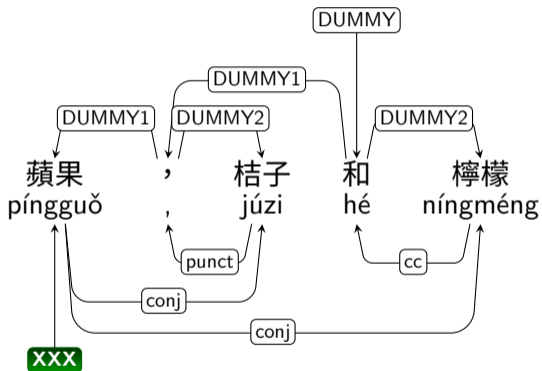
Coordination: Prague [te]



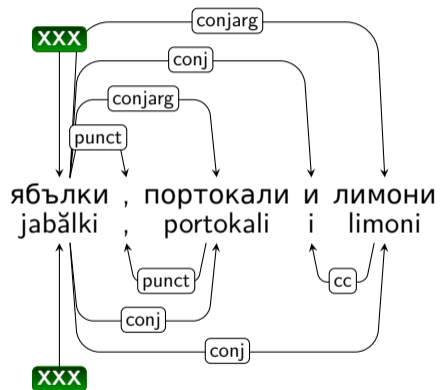
Coordination: Half-Prague [ro]



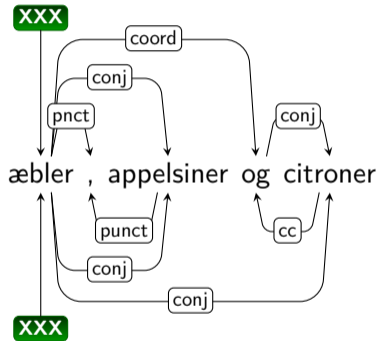
Coordination: Obligatorily Nested Prague [zh]



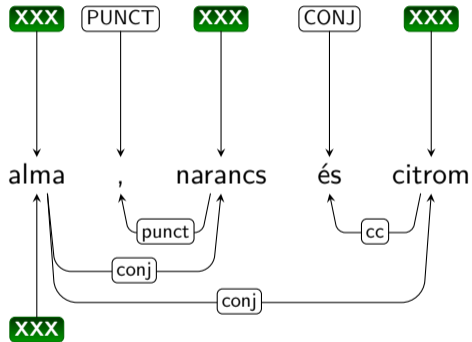
Coordination: Stanford [bg]



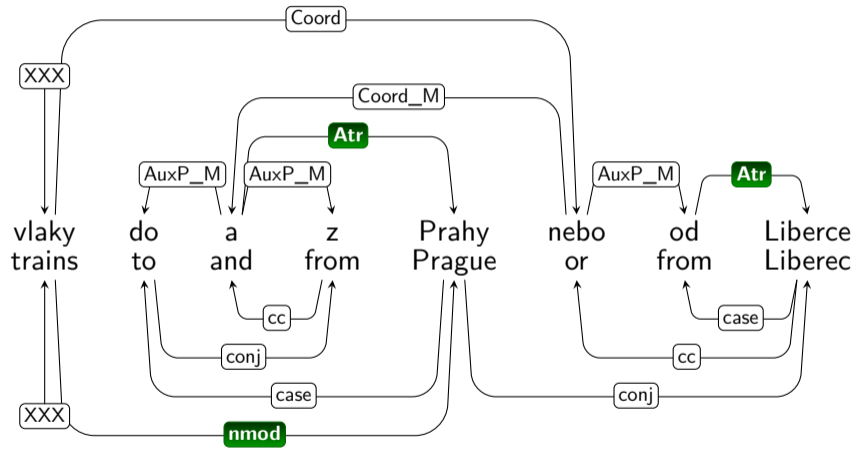
Coordination: Half-Stanford [da]



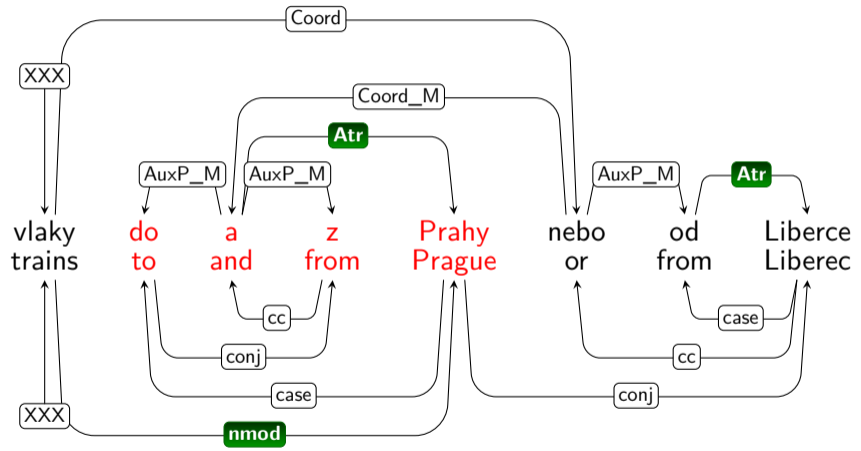
Coordination: Tesnière [hu]



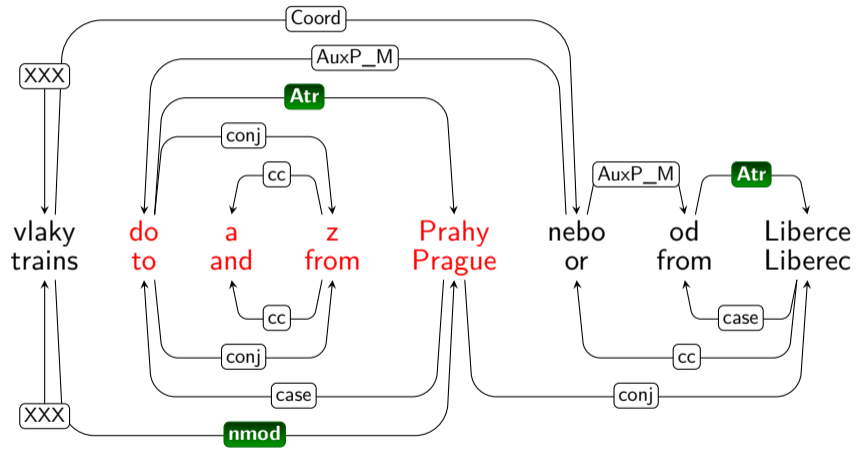
Interaction of Structures in Prague



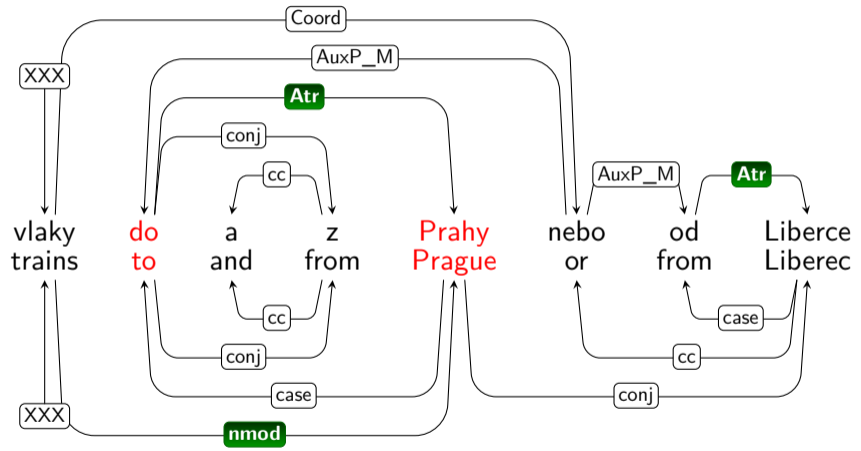
Interaction of Structures in Prague



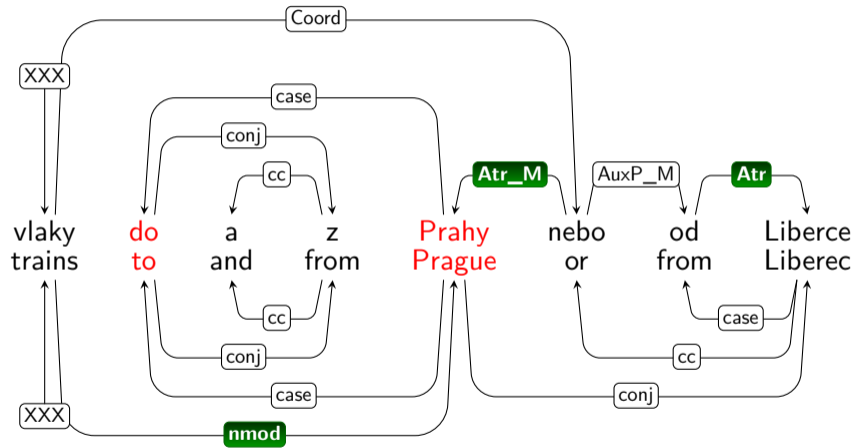
Interaction of Structures in Prague



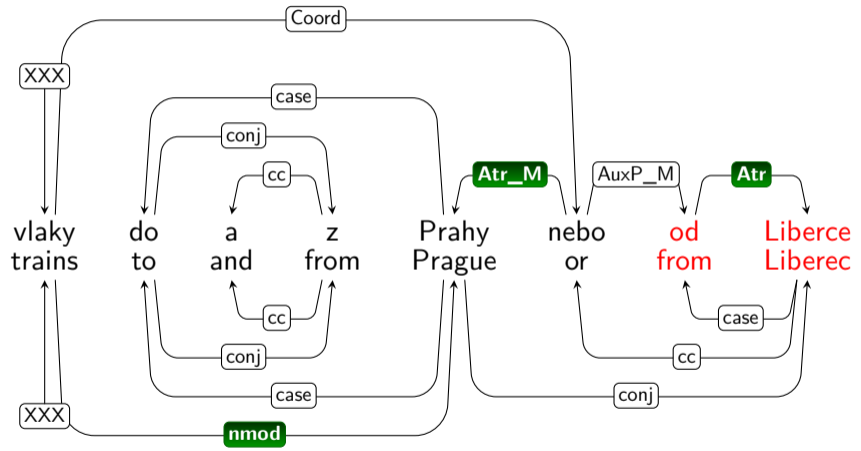
Interaction of Structures in Prague



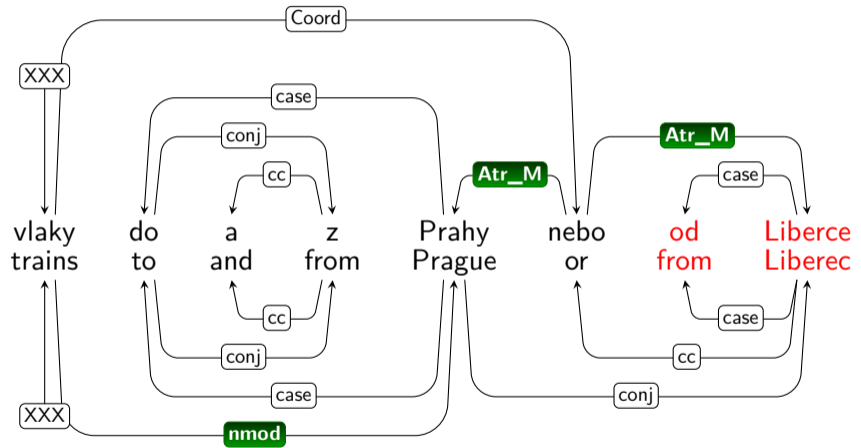
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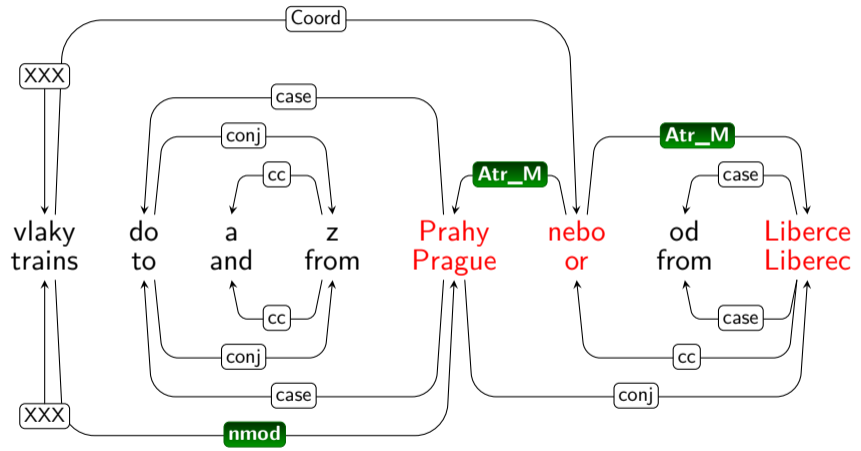
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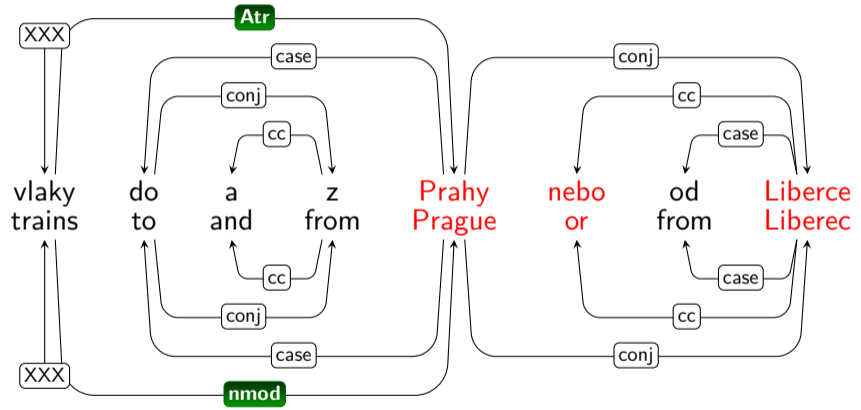
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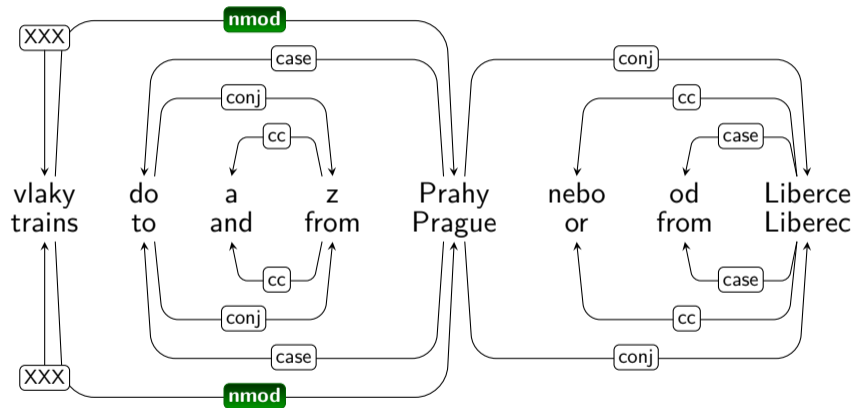
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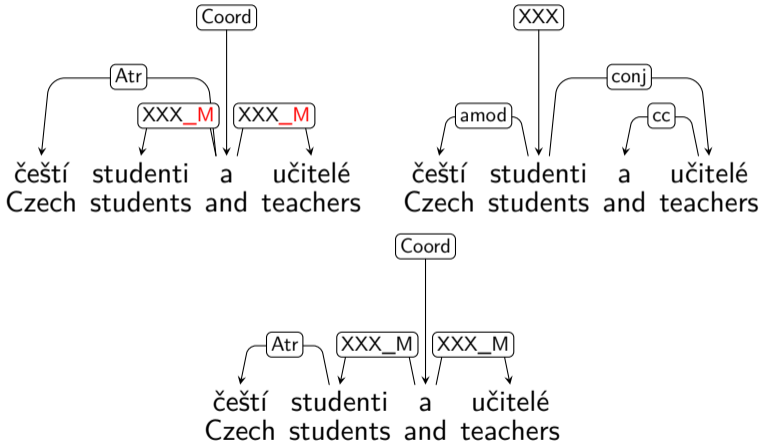
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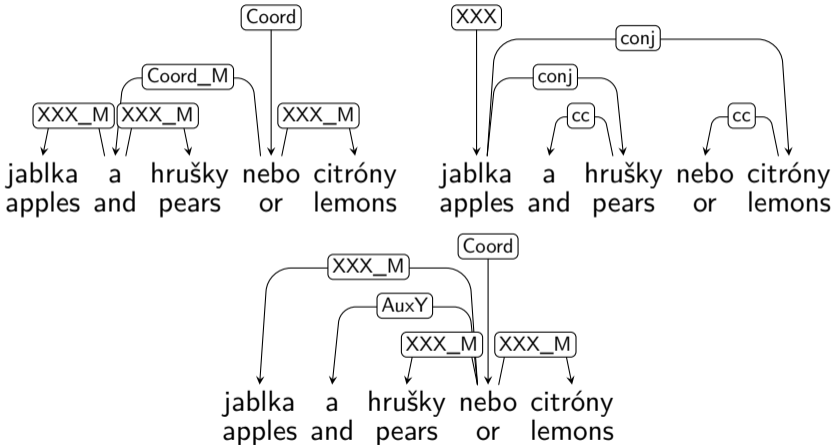
Interaction of Structures in Prague



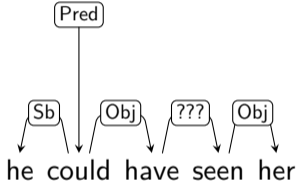
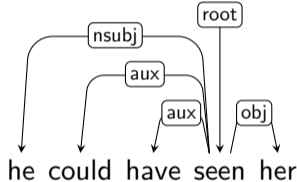
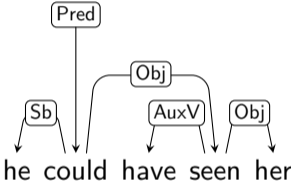
Round-Trip: Shared Dependents



Round-Trip: Nested Coordination

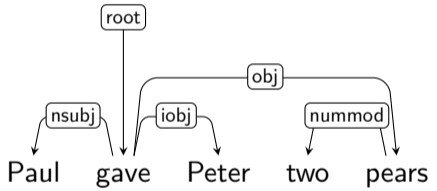
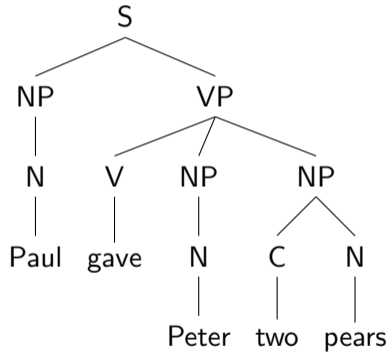


Round-Trip: Auxiliary Verbs



- Udapi
 - <http://udapi.github.io/> (main page)
 - <https://ufal.mff.cuni.cz/~zeman/vyuka/deptreebanks/NPFL075-working-with-UD.pdf> (tutorial)
- Grew
 - <https://grew.fr/>

Phrase vs. Dependency Trees



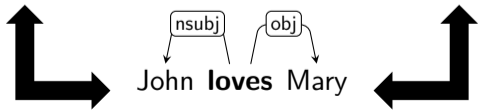
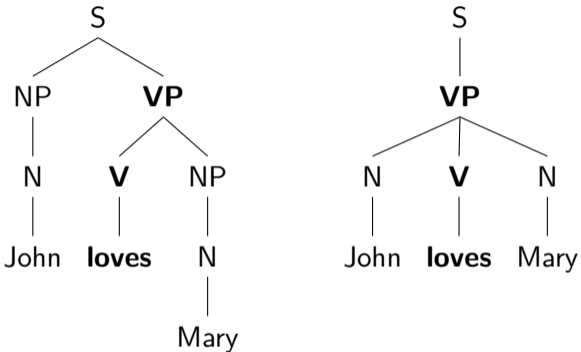
Phrase vs. Dependency Trees

- Phrase trees
 - Usually do not mark the **head**
 - May not mark the **function** of the constituent in the superordinate constituent

Phrase vs. Dependency Trees

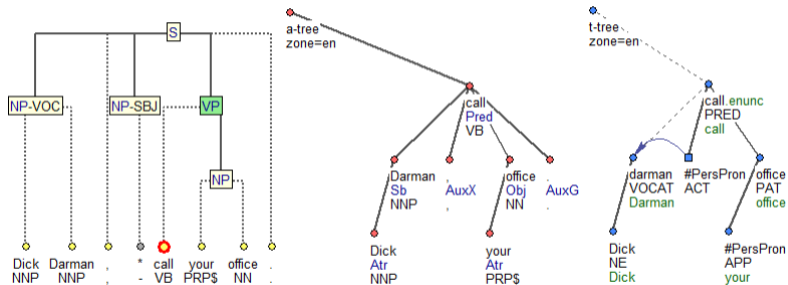
- Phrase trees
 - Usually do not mark the **head**
 - May not mark the **function** of the constituent in the superordinate constituent
- Dependency trees
 - Do not show **nonterminals** (phrase types)
 - Nor any other phrase-level features
 - Do not show “how the sentence is generated” (order, recursion, **proximity** of constituents)

Example

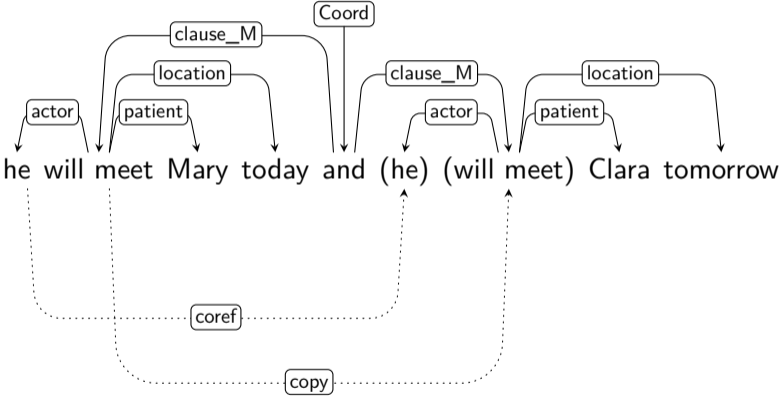


Prague Tectogrammatical Layer

Dick Darman, call your office.



Prague Tectogrammatical Layer: Ellipsis



Basic vs. Enhanced Universal Dependencies

