

Harmonization of Dependency Trees

Daniel Zeman, Rudolf Rosa

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EUROPEAN UNION
European Structural and Investment Fund
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Development and Education

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

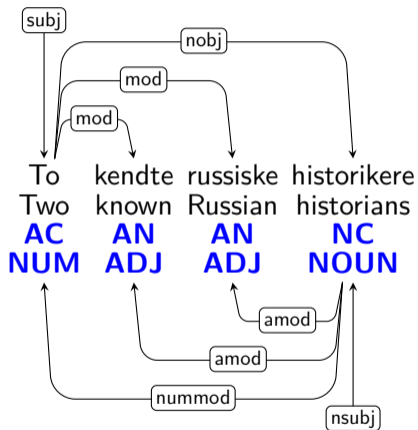


unless otherwise stated

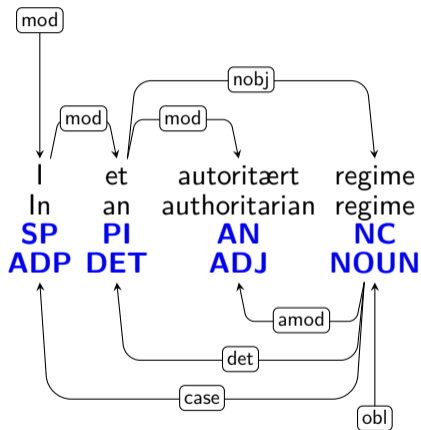
Harmonization of Dependency Tree Style

- Universal Dependencies
 - Solved problem?
 - Almost. But not completely.
- Transformations sometimes needed for learnability experiments
- Transformations trivial?
 - Not necessarily...

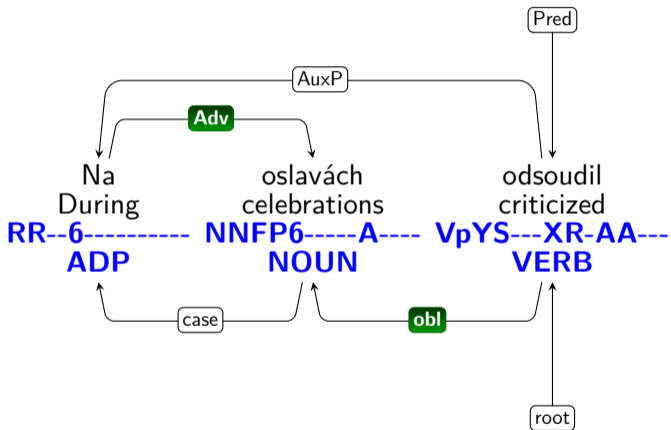
Danish Dependency Treebank



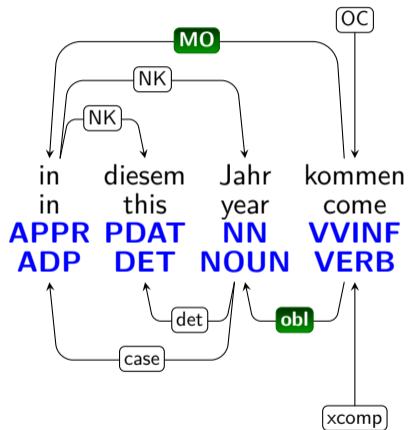
Danish Dependency Treebank



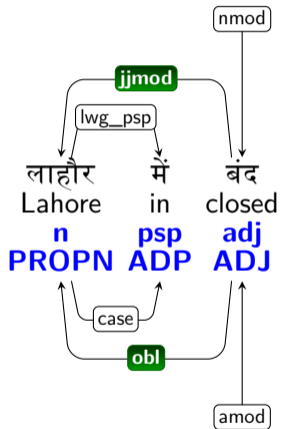
Adpositions



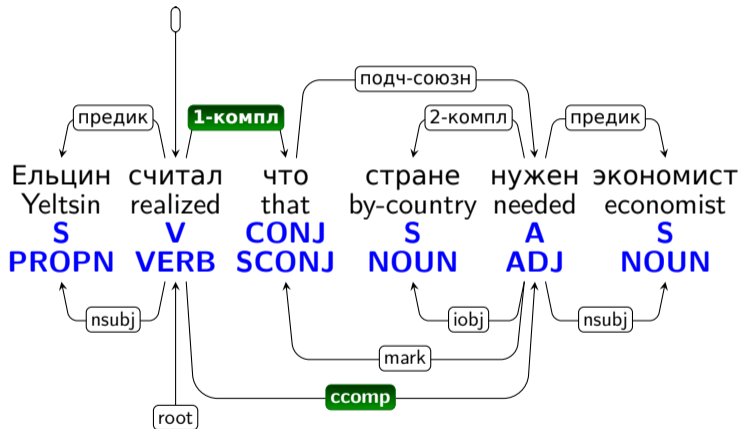
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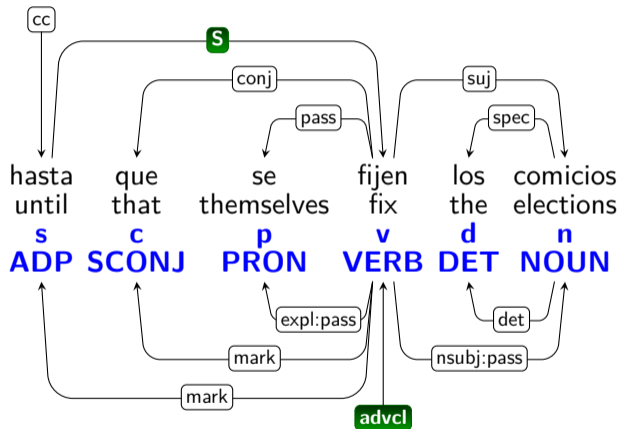
Adpositions



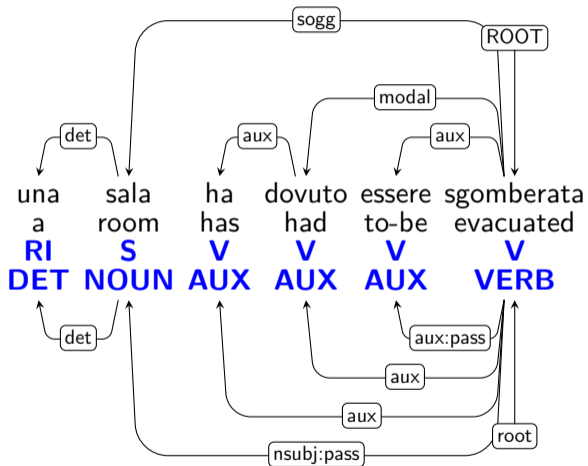
Subordinate Clauses



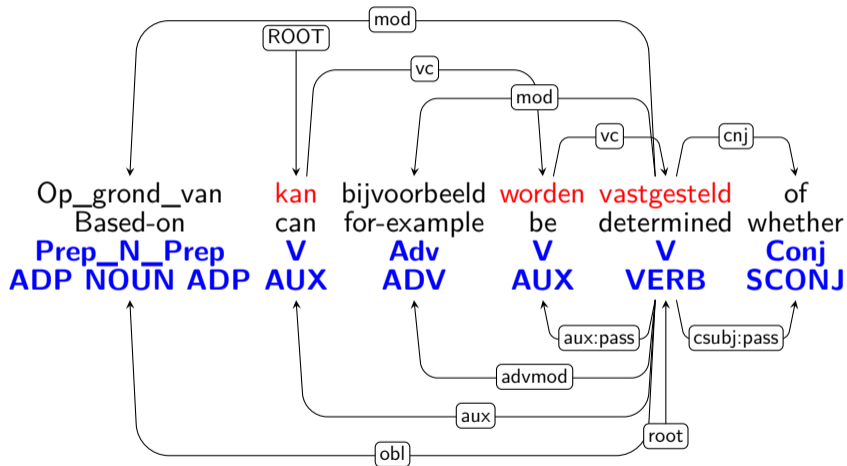
Subordinate Clauses



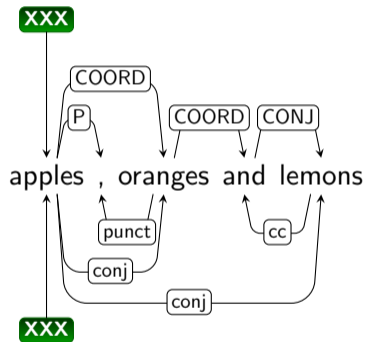
Verb Groups



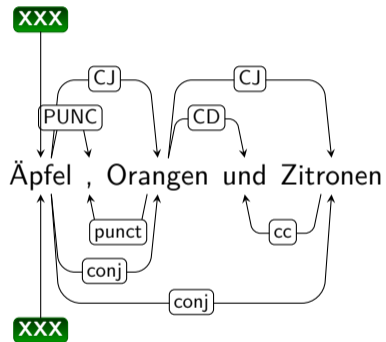
Verb Groups



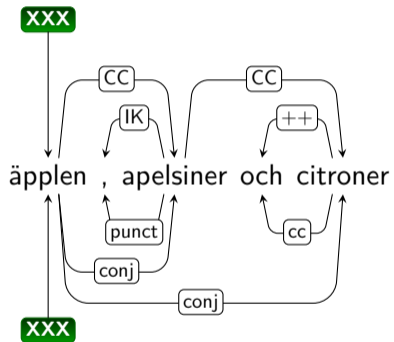
Coordination: Mel'čuk [en]



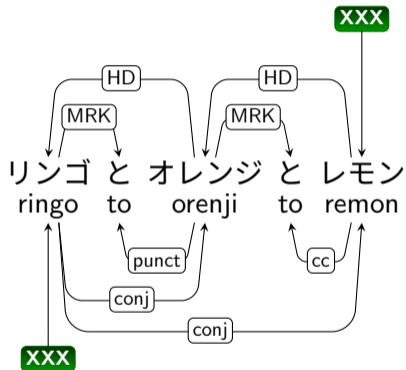
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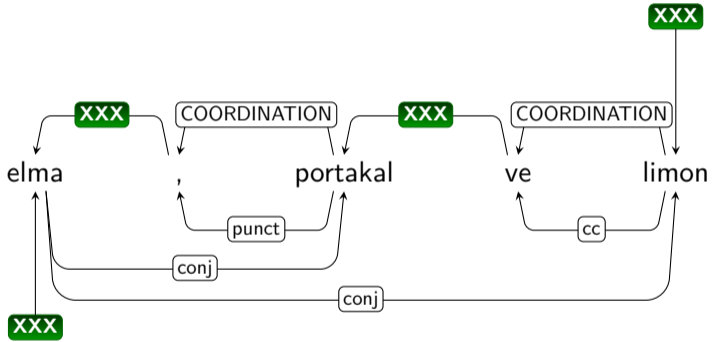
Coordination: Mel'čuk [sv]



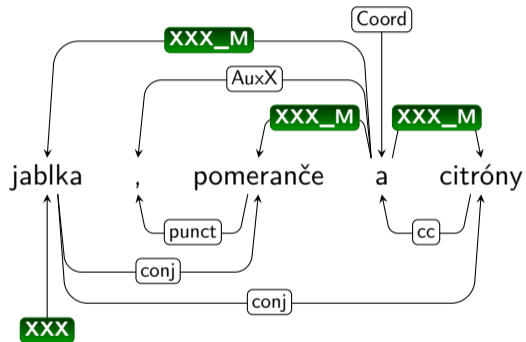
Coordination: Mel'čuk [ja]



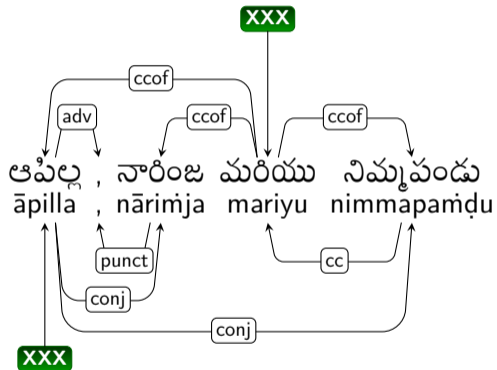
Coordination: Mel'čuk [tr]



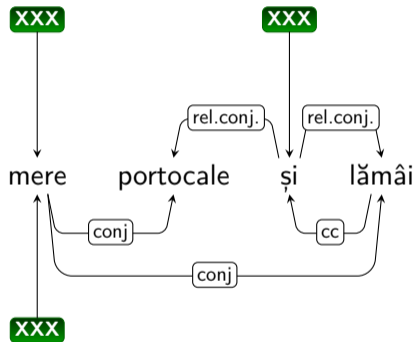
Coordination: Prague [cs]



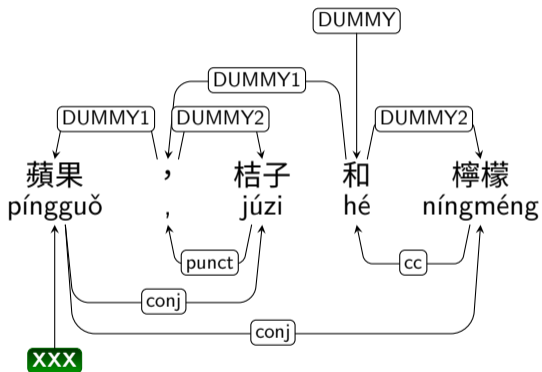
Coordination: Prague [te]



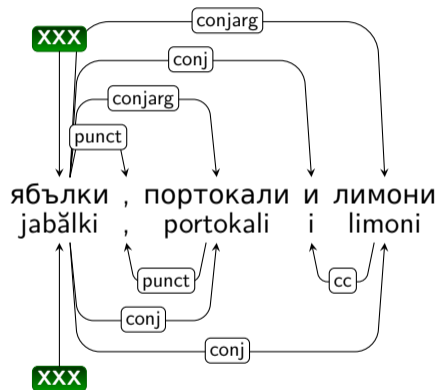
Coordination: Half-Prague [ro]



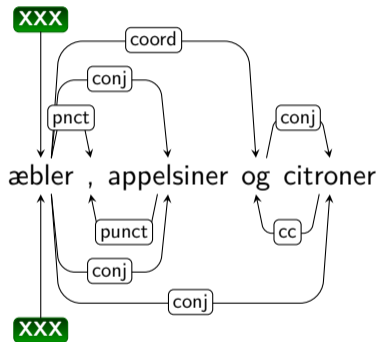
Coordination: Obligatorily Nested Prague [zh]



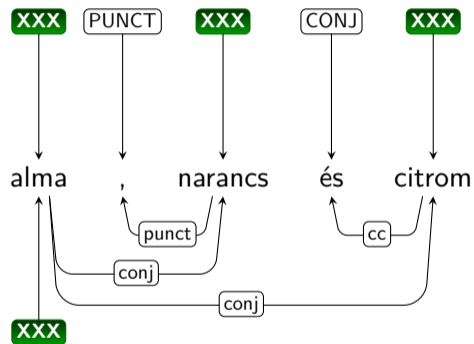
Coordination: Stanford [bg]



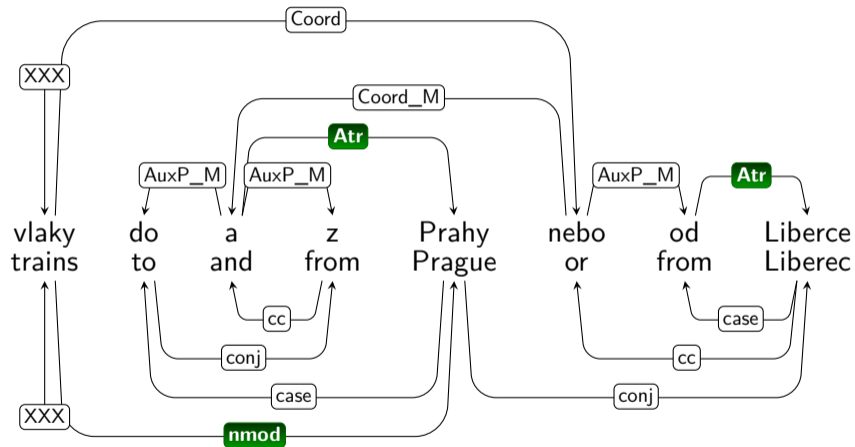
Coordination: Half-Stanford [da]



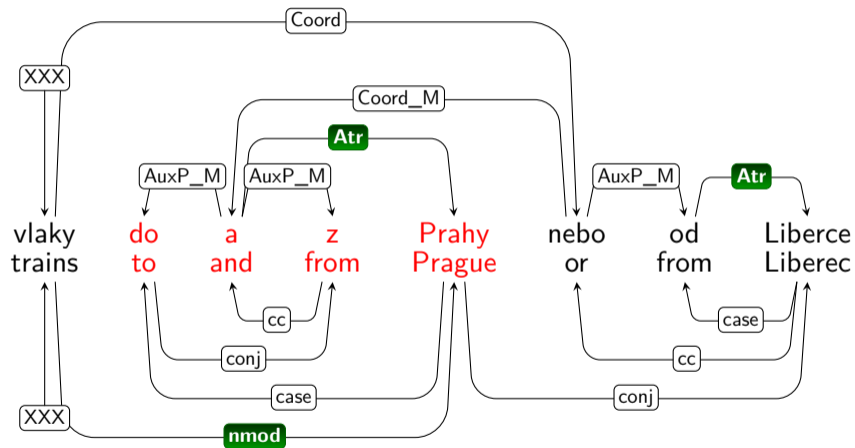
Coordination: Tesnière [hu]



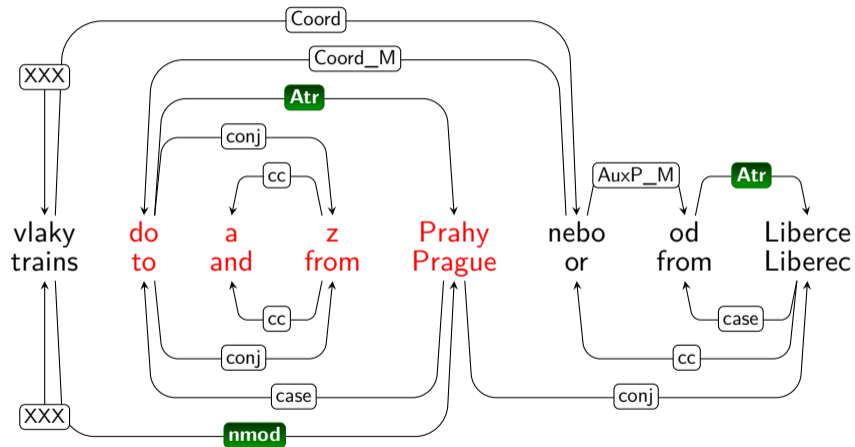
Interaction of Structures in Prague



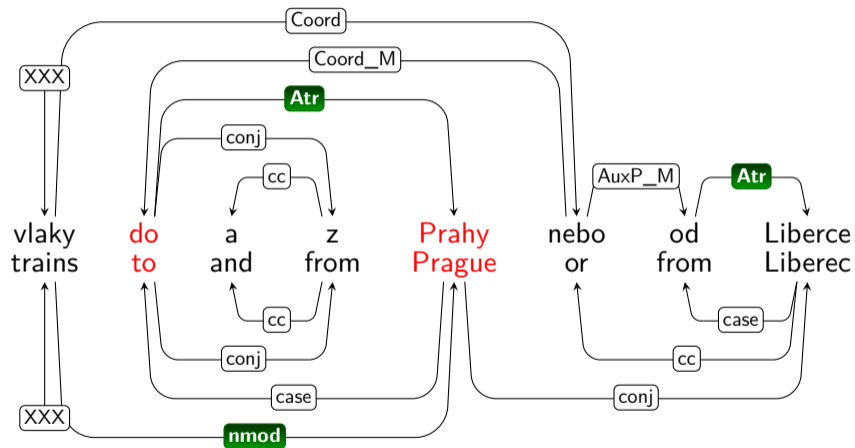
Interaction of Structures in Prague



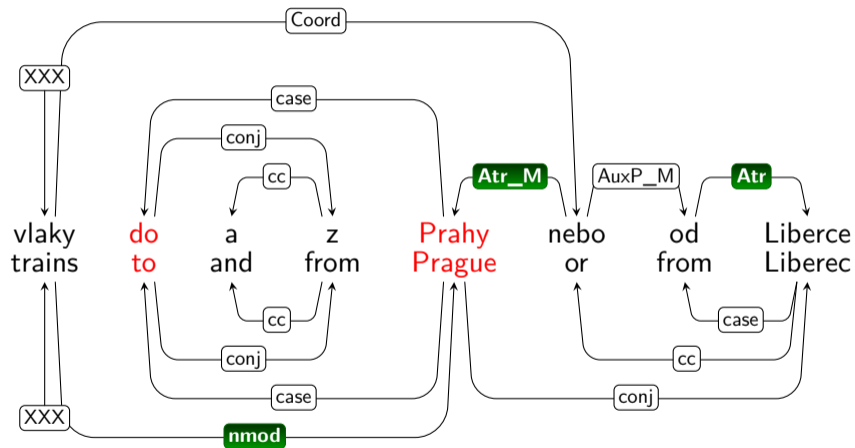
Interaction of Structures in Prague



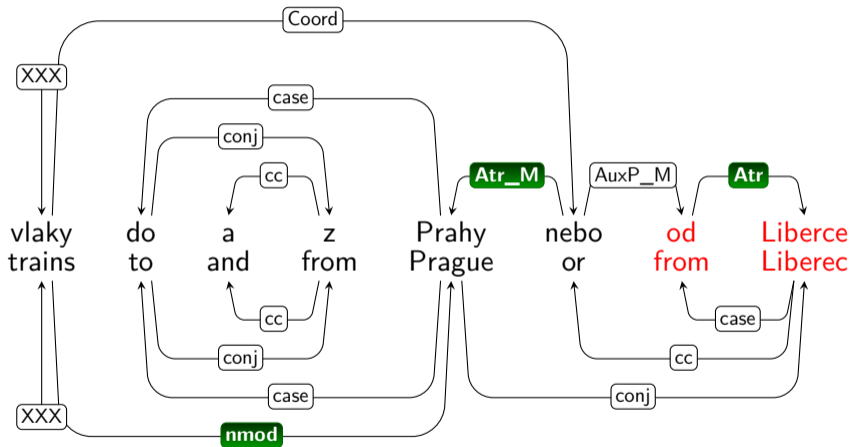
Interaction of Structures in Prague



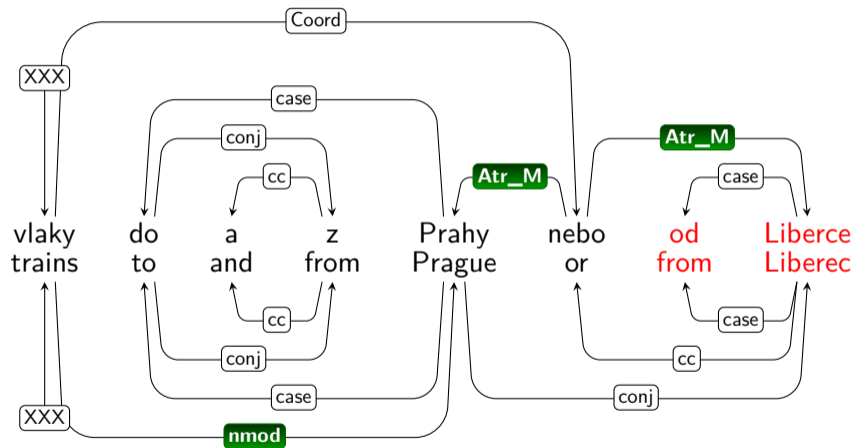
Interaction of Structures in Prague



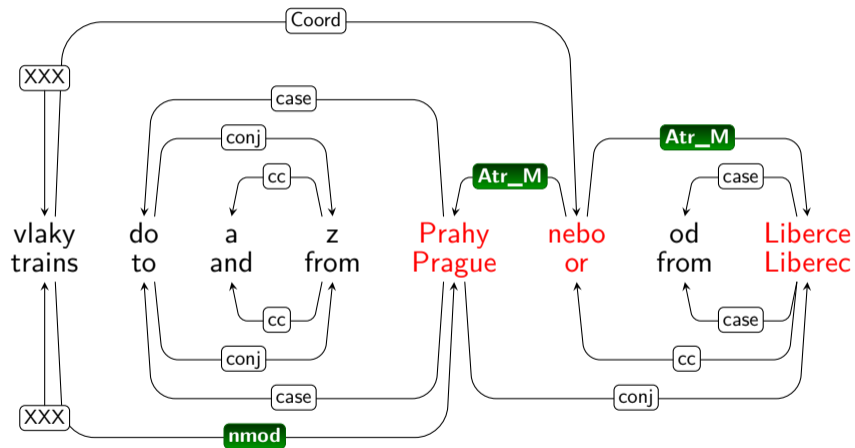
Interaction of Structures in Prague



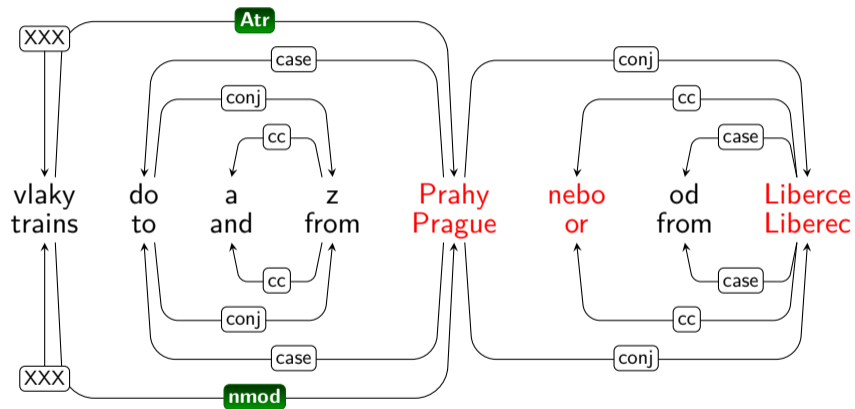
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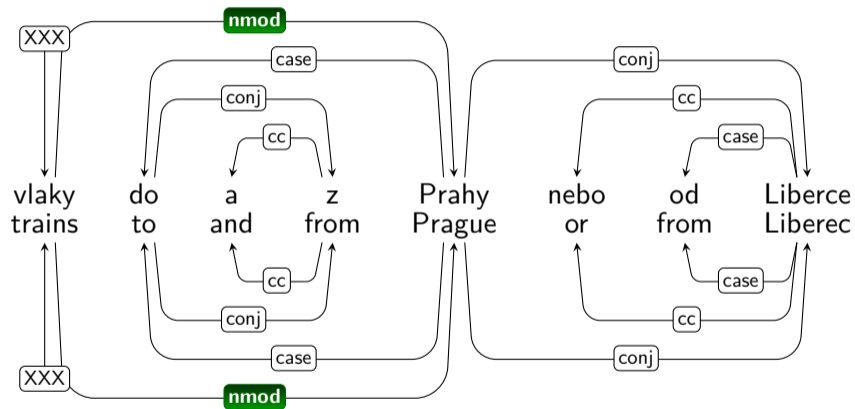
Interaction of Structures in Prague



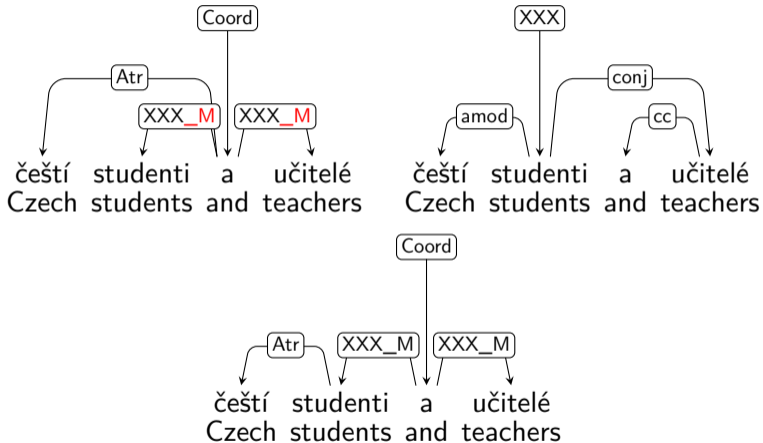
Interaction of Structures in Prague



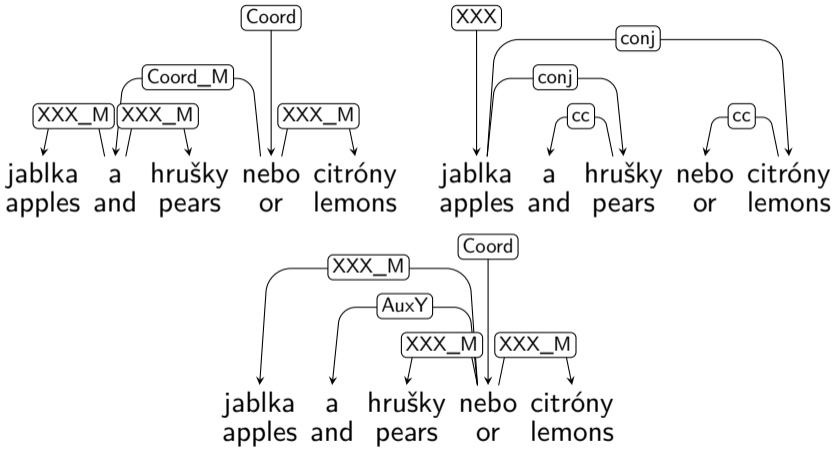
Interaction of Structures in Prague



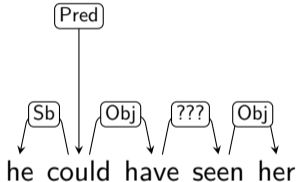
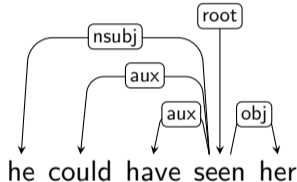
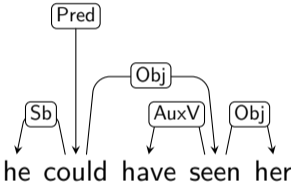
Round-Trip: Shared Dependents



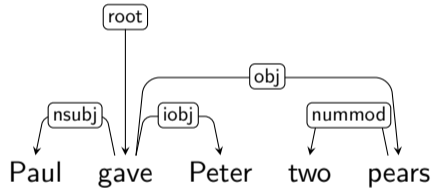
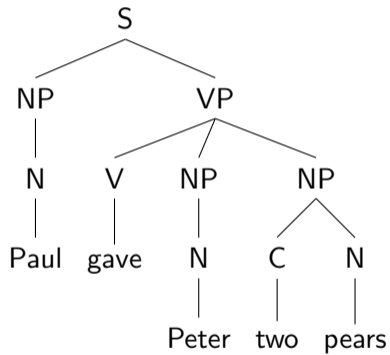
Round-Trip: Nested Coordination



Round-Trip: Auxiliary Verbs



Phrase vs. Dependency Trees



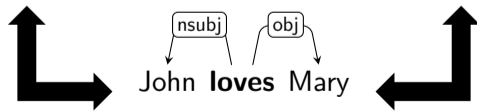
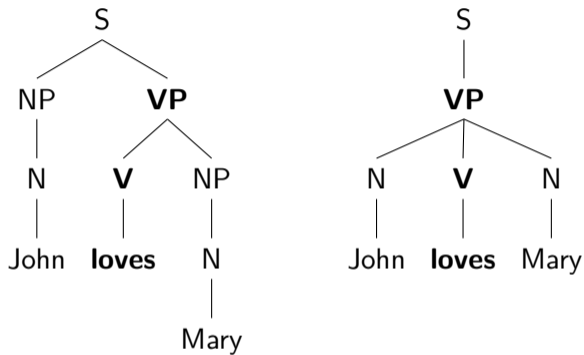
Phrase vs. Dependency Trees

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

Phrase vs. Dependency Trees

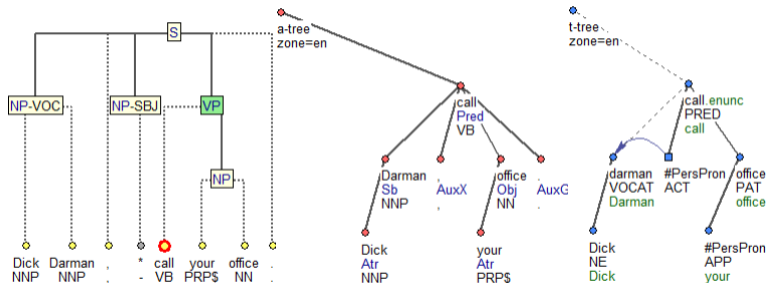
- Phrase trees
 - Usually do not mark the **head**
 - May not mark the **function** of the constituent in the superordinate constituent
- Dependency trees
 - Do not show **nonterminals** (phrase types)
 - Nor any other phrase-level features
 - Do not show “how the sentence is generated” (order, recursion,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

Example

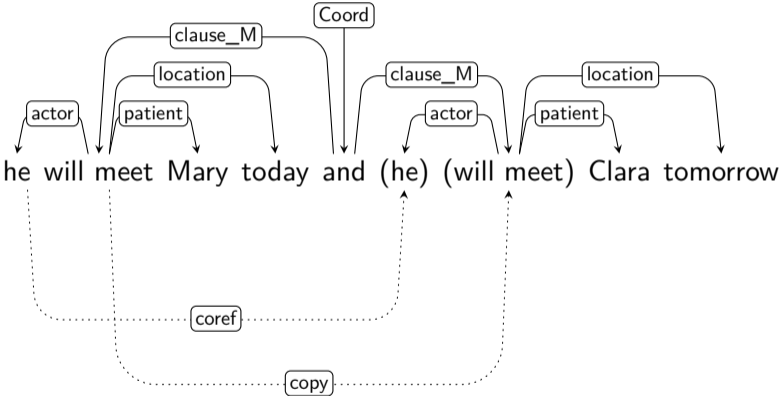


Prague Tectogrammatical Layer

Dick Darman, call your office.



Prague Tectogrammatical Layer: Ellipsis



Basic vs. Enhanced Universal Dependencies

