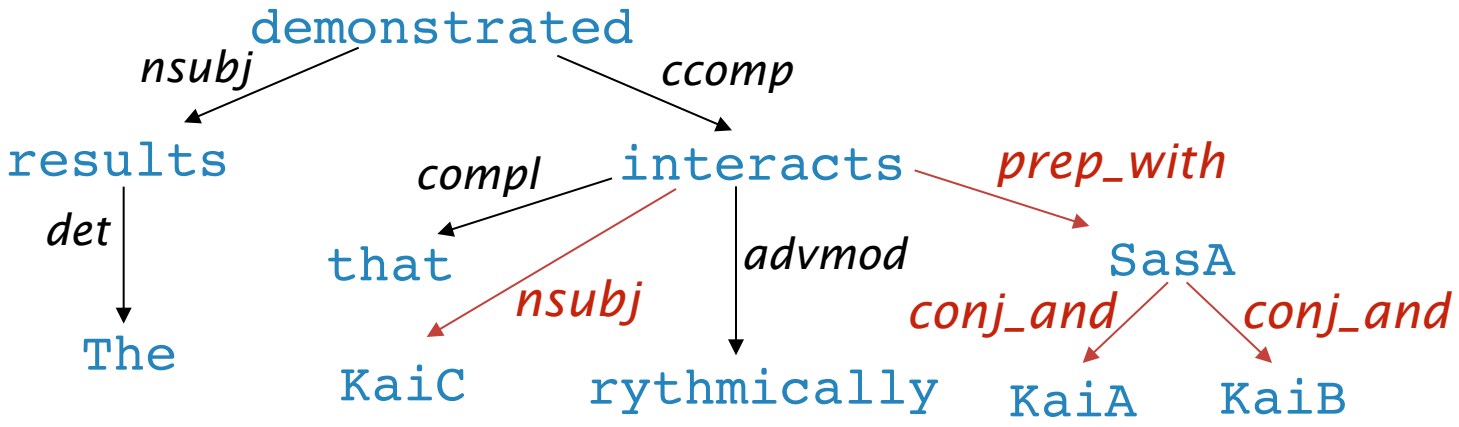
Dependencies encode relational structure

Relation Extraction with Stanford Dependencies

Dependency paths identify relations like protein interaction

[Erkan et al. EMNLP 07, Fundel et al. 2007]



KaiC ←nsubj interacts prep_with→ SasA

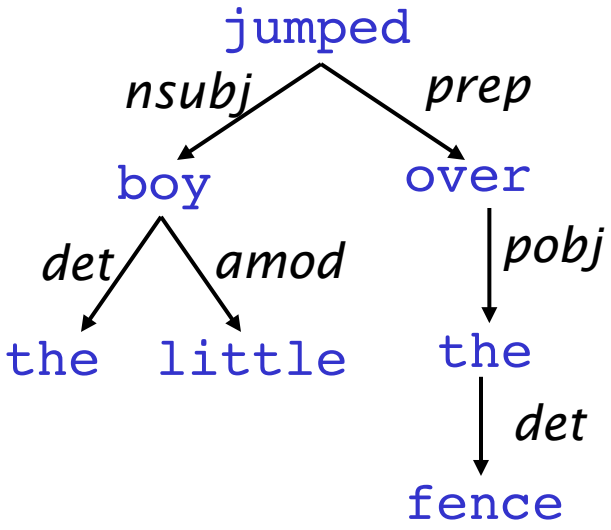
KaiC ←nsubj interacts prep_with→ SasA conj_and→ KaiA

KaiC ←nsubj interacts prep_with→ SasA conj_and→ KaiB

Stanford Dependencies

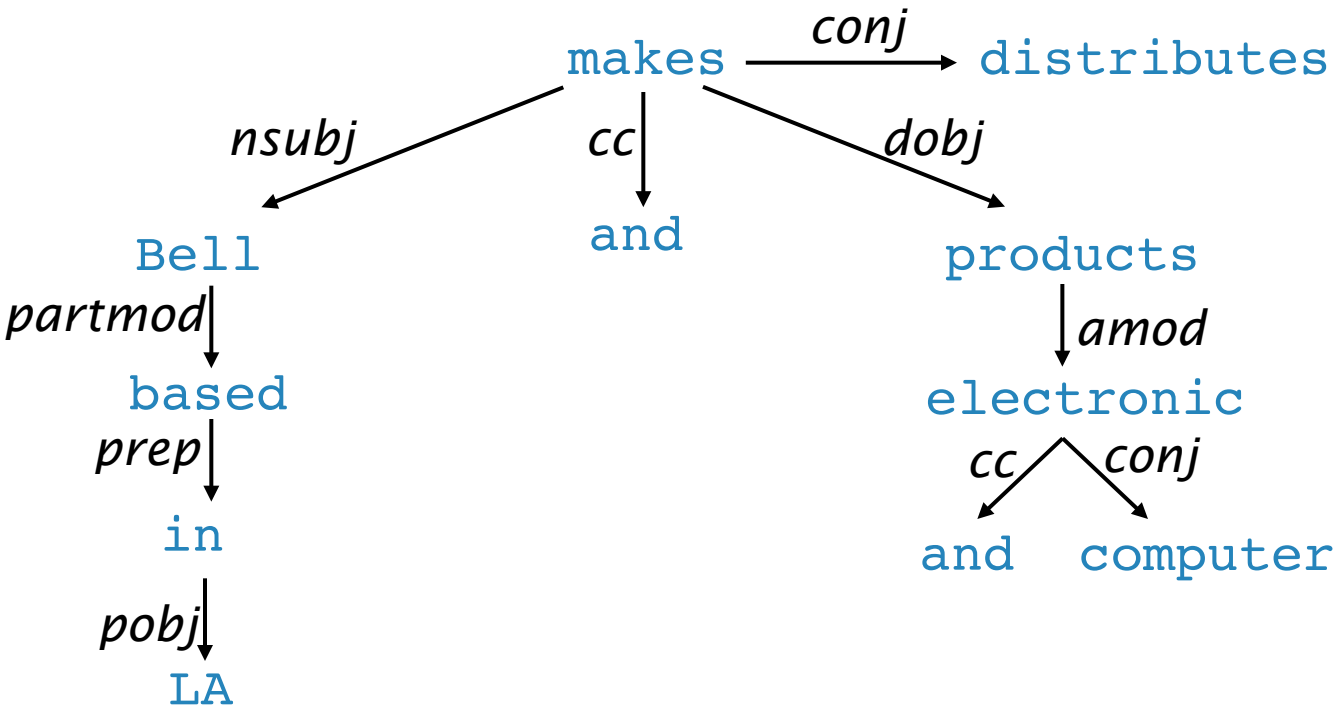
[de Marneffe et al. LREC 2006]

- The basic dependency representation is projective
- It can be generated by postprocessing headed phrase structure parses (Penn Treebank syntax)
- It can also be generated directly by dependency parsers, such as MaltParser, or the Easy-First Parser



Graph modification to facilitate semantic analysis

Bell, based in LA, makes and distributes electronic and computer products.



Graph modification to facilitate semantic analysis

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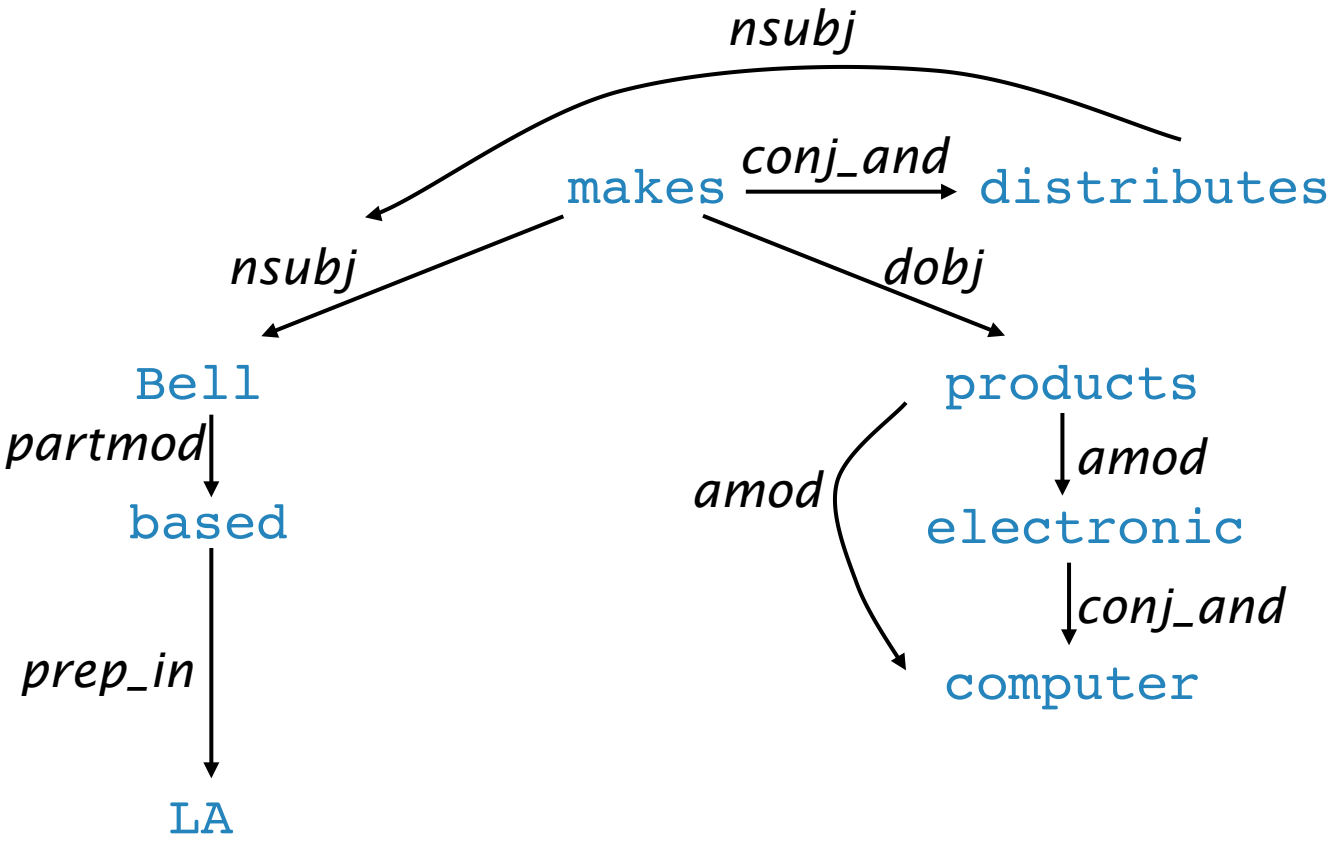
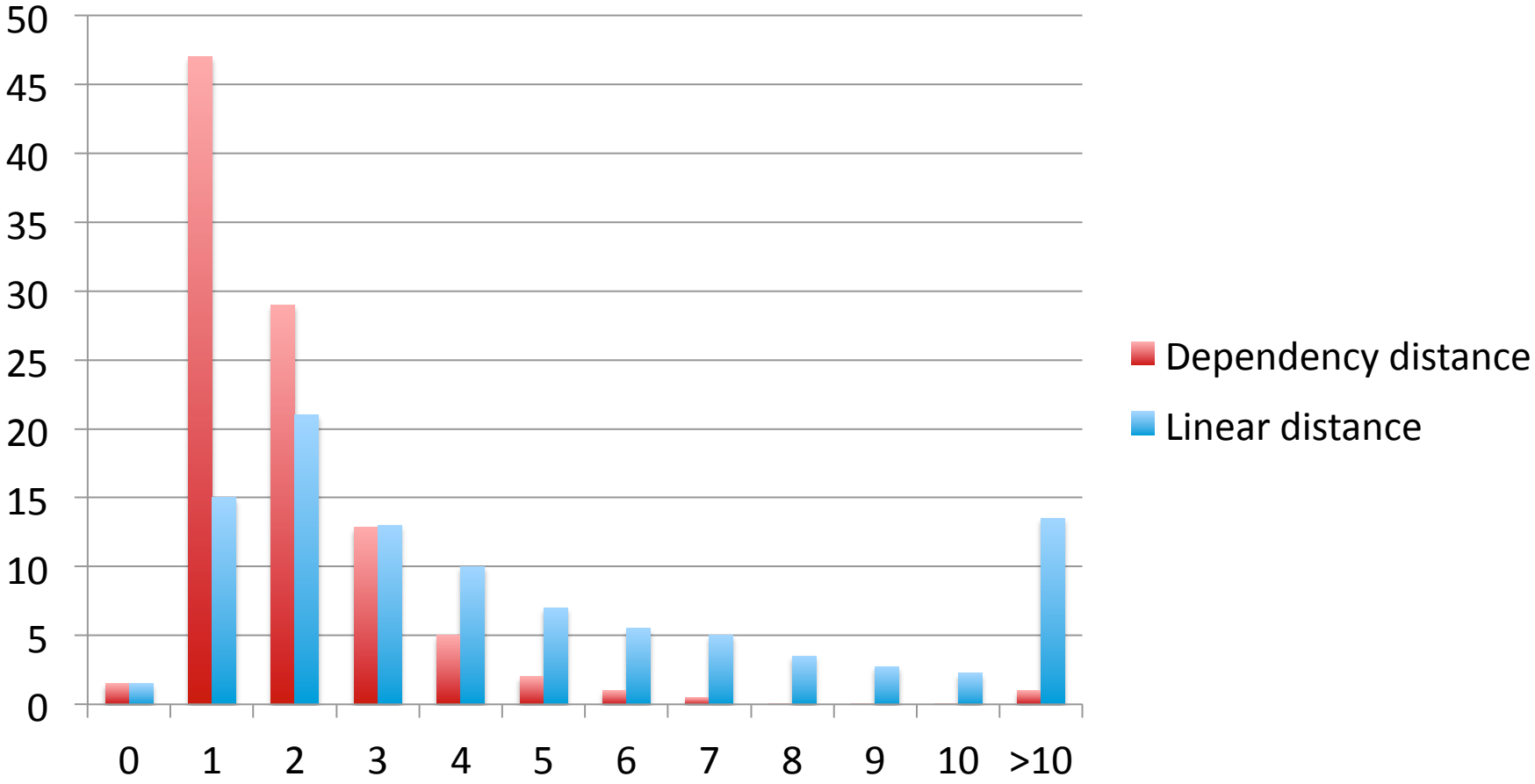


BioNLP 2009/2011 relation extraction shared tasks [Björne et al. 2009]



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