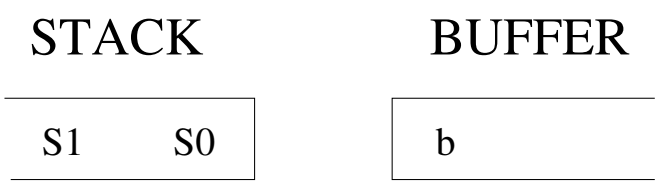
Transition-Based Parsing

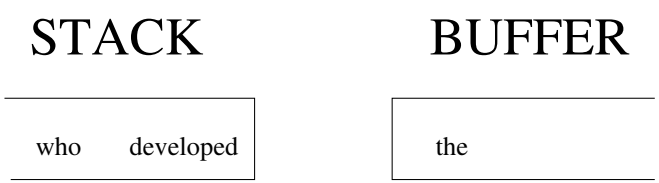
Configuration:



Arc-hybrid (Kuhlmann et al., 2011)

Transition-Based Parsing

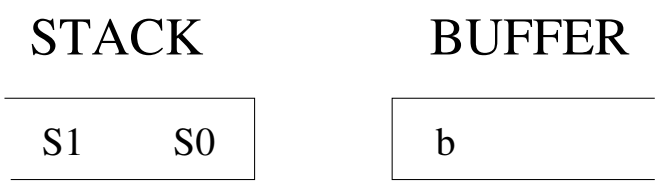
Configuration:



Arc-hybrid (Kuhlmann et al., 2011)

Transition-Based Parsing

Configuration:

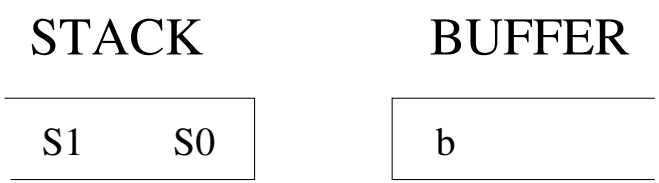


Arc-hybrid (Kuhlmann et al., 2011)

Transition-Based Parsing

Configuration:

Transitions:



Arc-hybrid (Kuhlmann et al., 2011)

Transition-Based Parsing

Configuration:

STACK	BUFFER
S1 S0	b

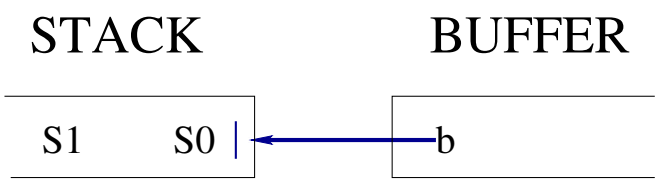
Transitions:

SHIFT

Arc-hybrid (Kuhlmann et al., 2011)

Transition-Based Parsing

Configuration:



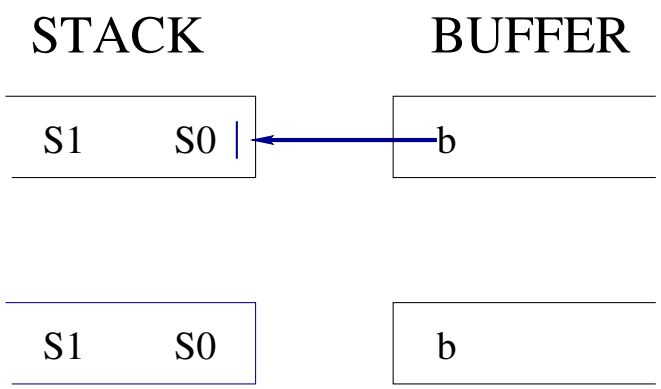
Transitions:

SHIFT

Arc-hybrid (Kuhlmann et al., 2011)

Transition-Based Parsing

Configuration:



Transitions:

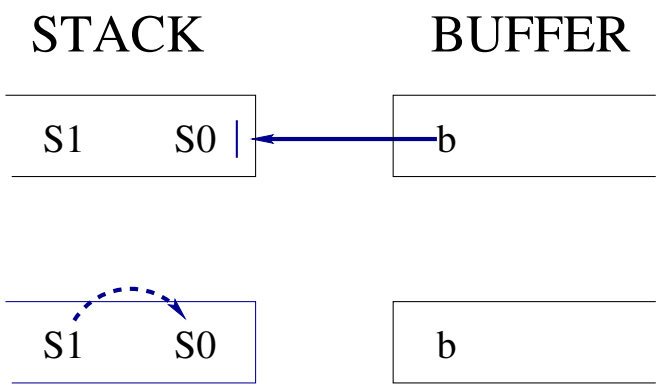
SHIFT

RIGHT–ARC

Arc-hybrid (Kuhlmann et al., 2011)

Transition-Based Parsing

Configuration:



Transitions:

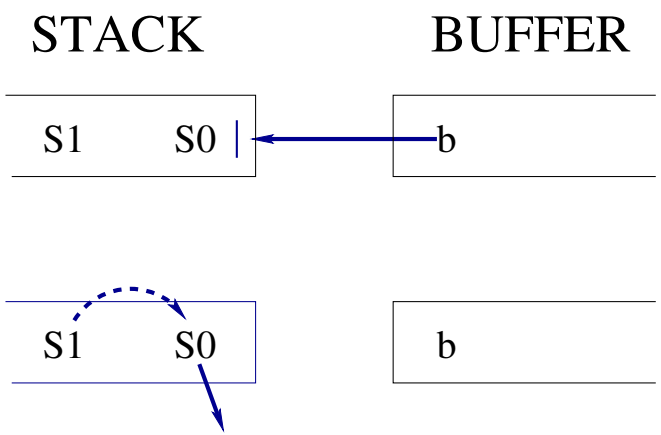
SHIFT

RIGHT–ARC

Arc-hybrid (Kuhlmann et al., 2011)

Transition-Based Parsing

Configuration:



Transitions:

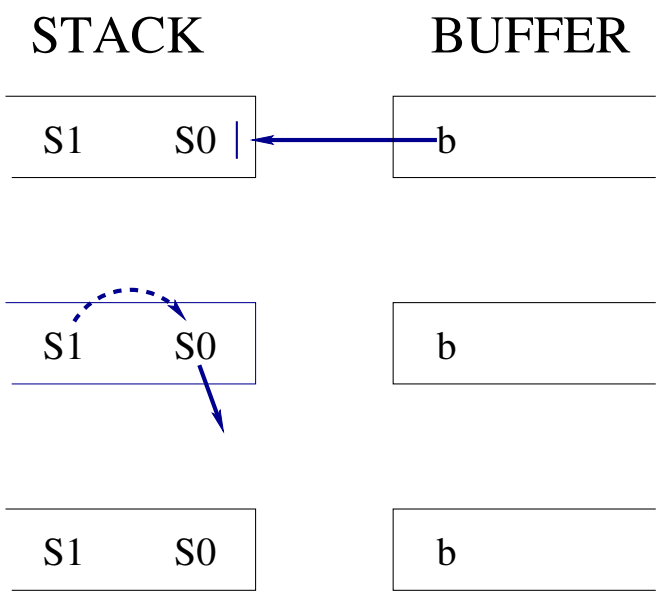
SHIFT

RIGHT–ARC

Arc-hybrid (Kuhlmann et al., 2011)

Transition-Based Parsing

Configuration:



Transitions:

SHIFT

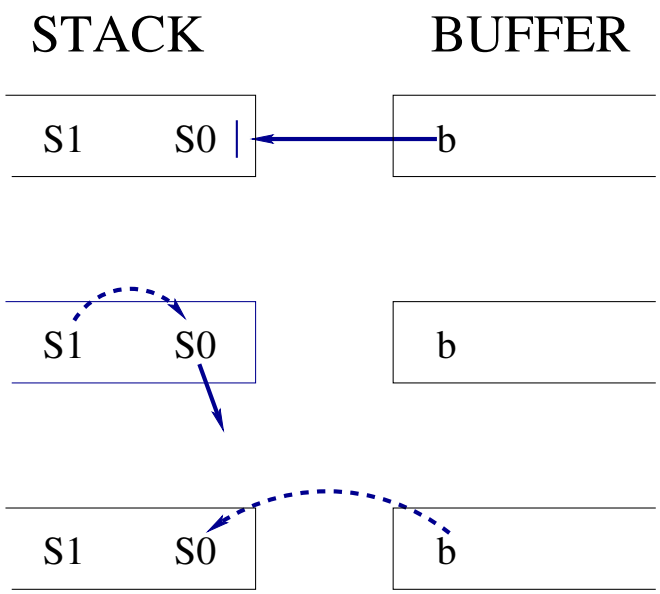
RIGHT–ARC

LEFT–ARC

Arc-hybrid (Kuhlmann et al., 2011)

Transition-Based Parsing

Configuration:



Transitions:

SHIFT

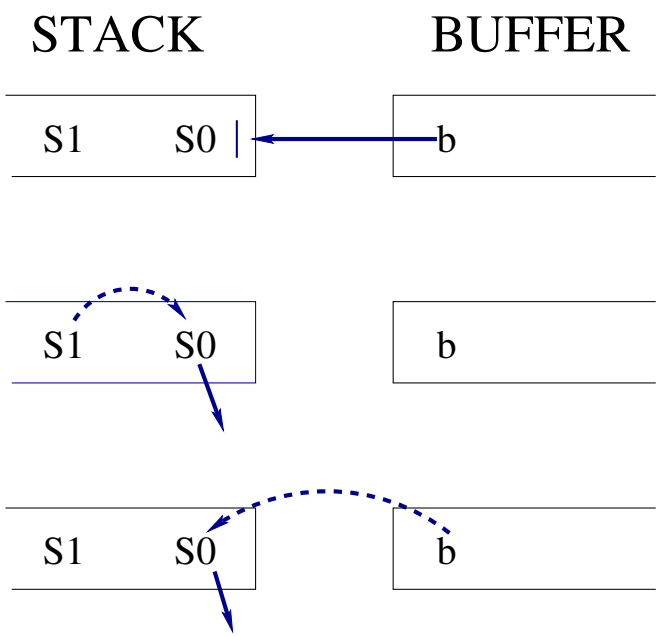
RIGHT–ARC

LEFT–ARC

Arc-hybrid (Kuhlmann et al., 2011)

Transition-Based Parsing

Configuration:



Transitions:

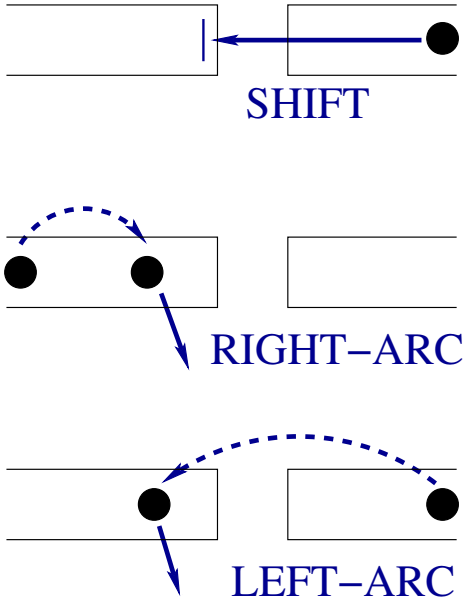
SHIFT

RIGHT–ARC

LEFT–ARC

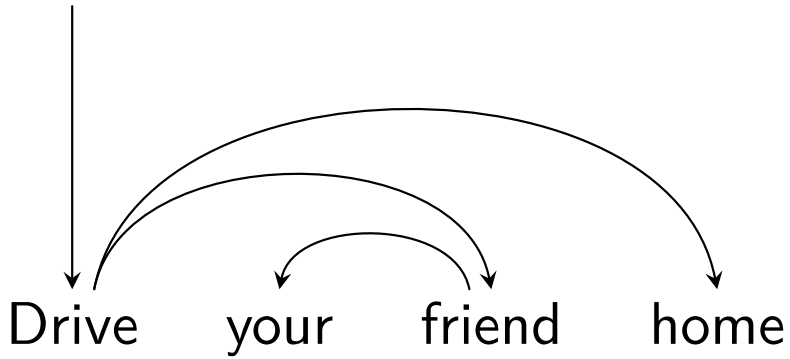
Arc-hybrid (Kuhlmann et al., 2011)

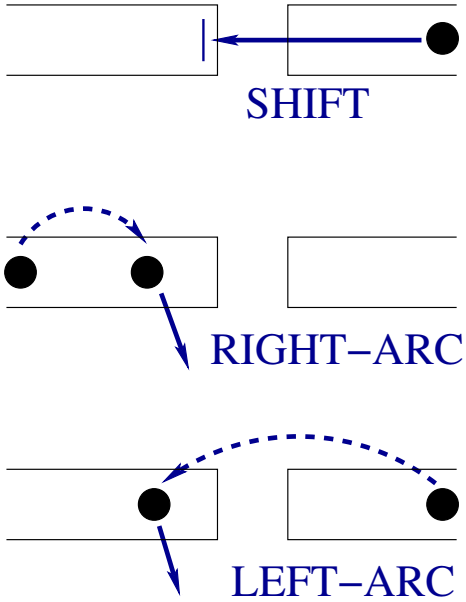
Parsing algorithm



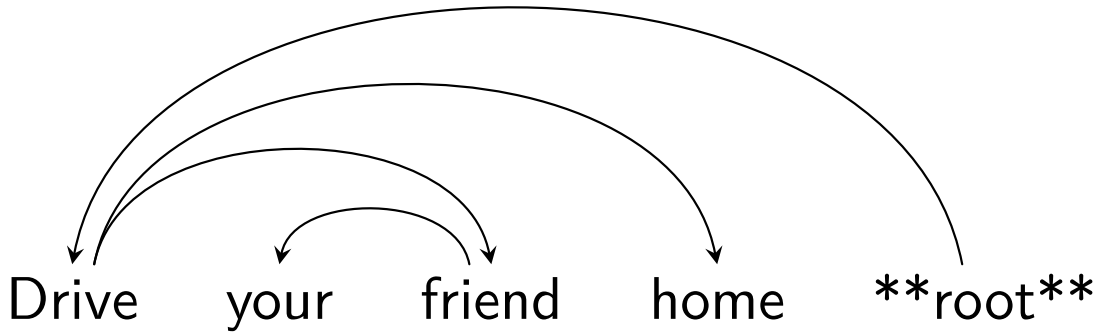
Drive your friend home

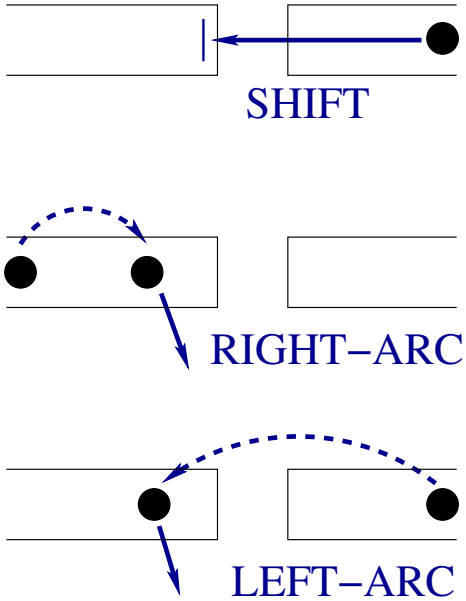
Parsing algorithm





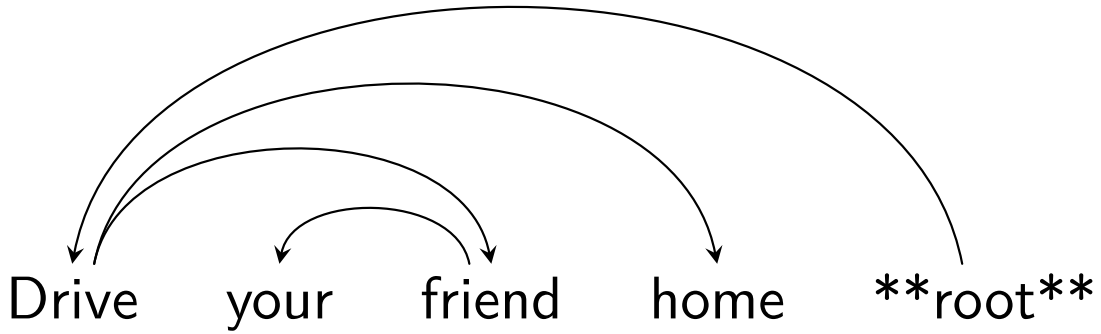
Parsing algorithm



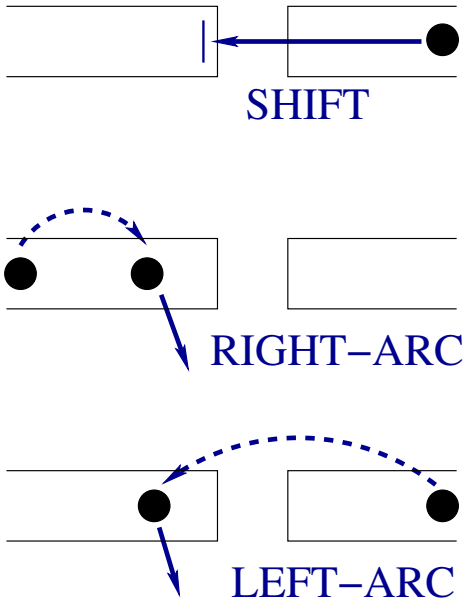


Parsing algorithm

INITIAL CONFIGURATION

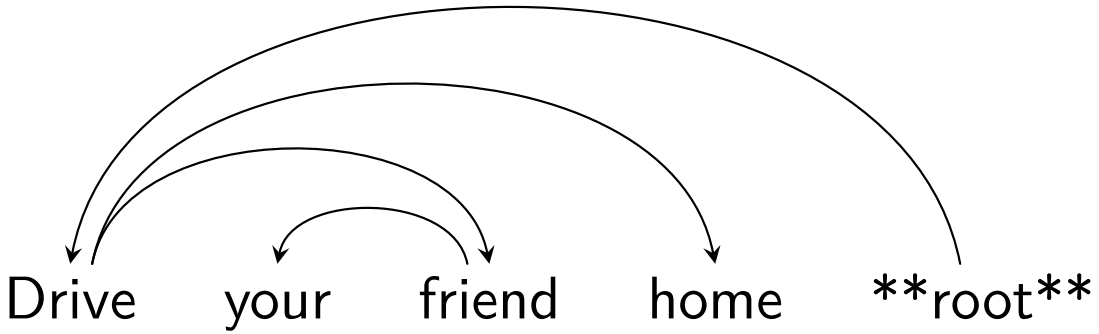


[ ] [Drive your friend home **root**]

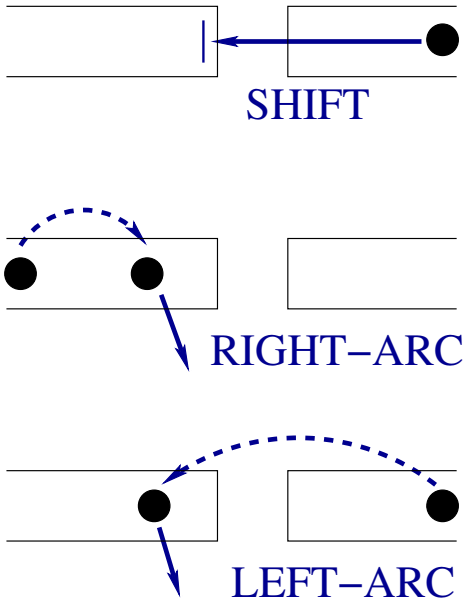


Parsing algorithm

SHIFT

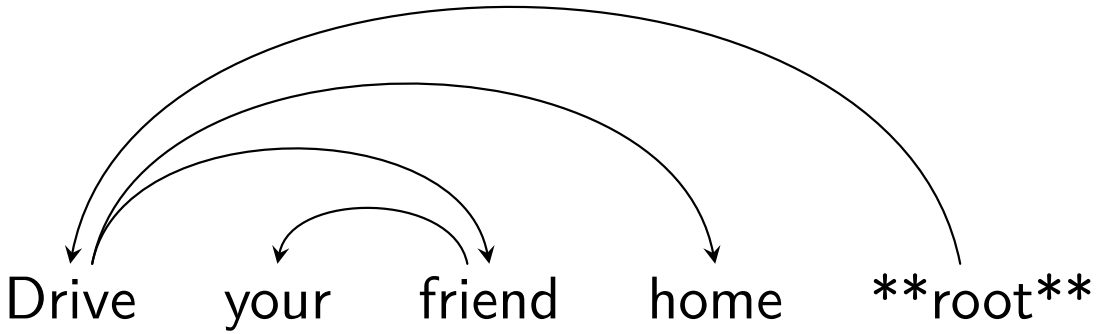


[Drive] [your friend home **root**]

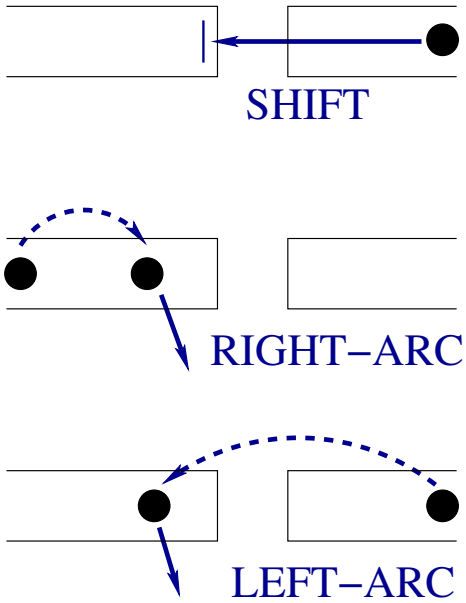


Parsing algorithm

SHIFT

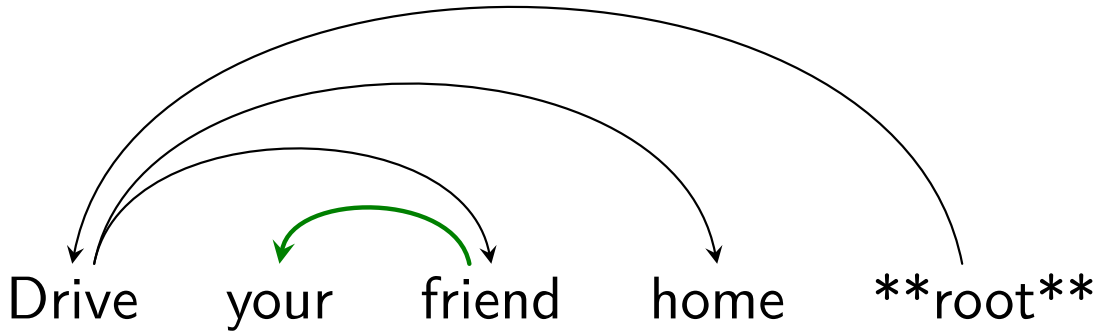


[Drive your] [friend home **root**]

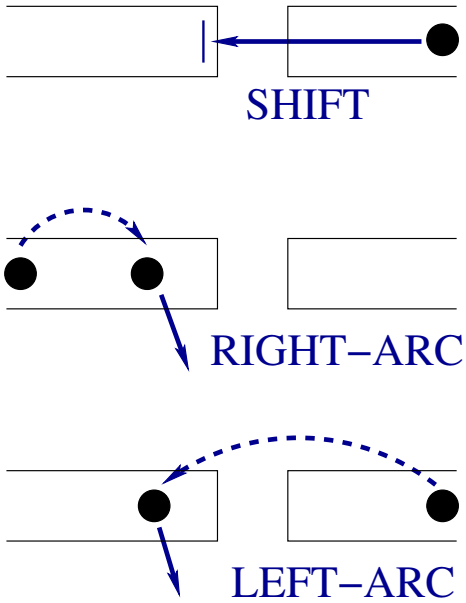


Parsing algorithm

LEFT-ARC

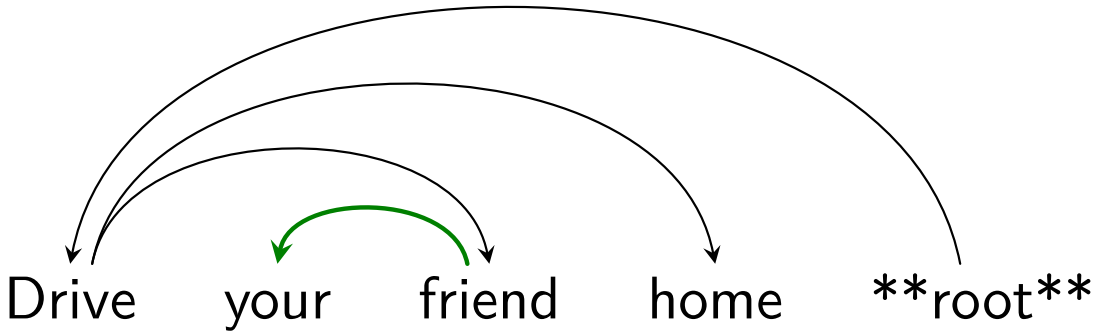


[Drive] [friend home **root**]

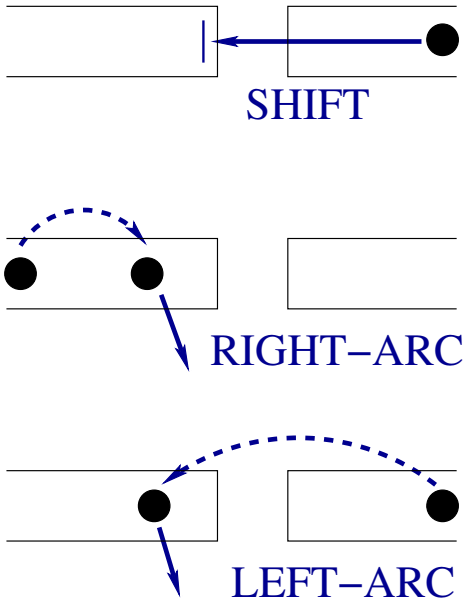


Parsing algorithm

SHIFT

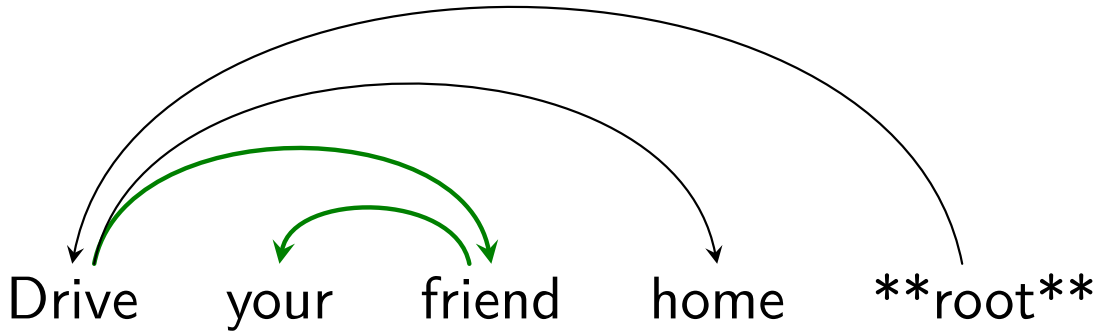


[Drive friend] [home **root**]

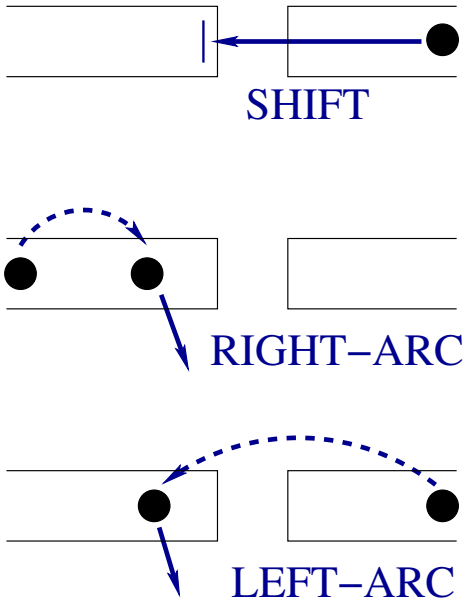


Parsing algorithm

RIGHT-ARC

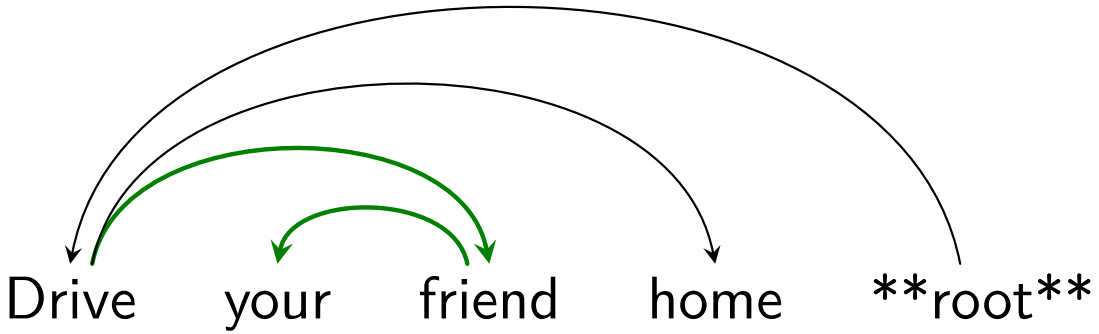


[Drive] [home **root**]

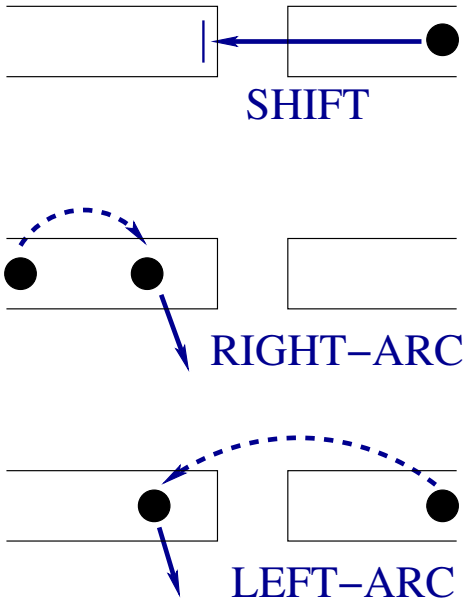


Parsing algorithm

SHIFT

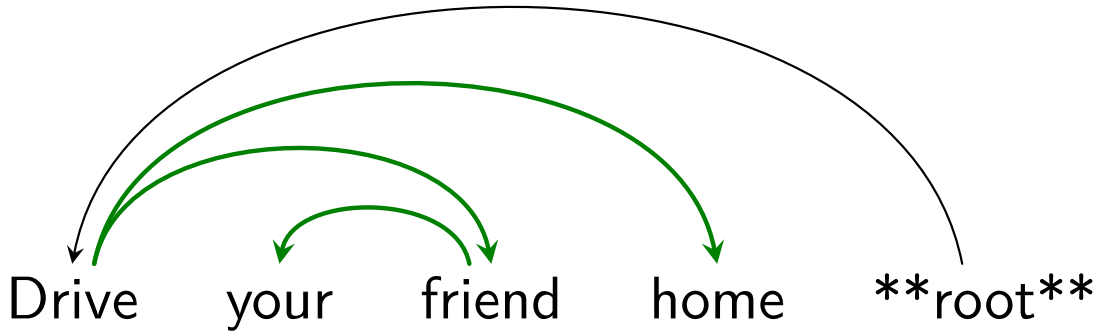


[Drive home] [**root**]

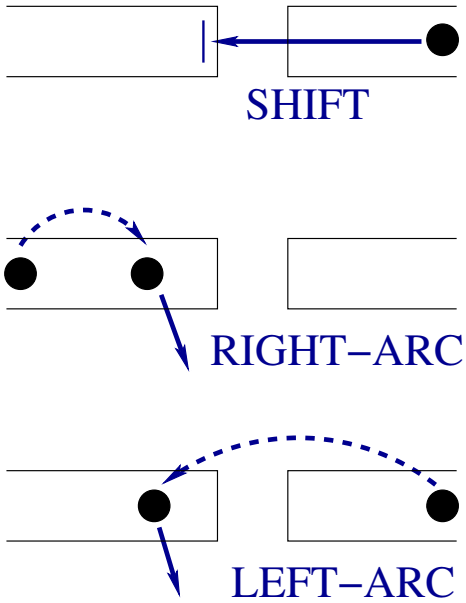


Parsing algorithm

RIGHT-ARC

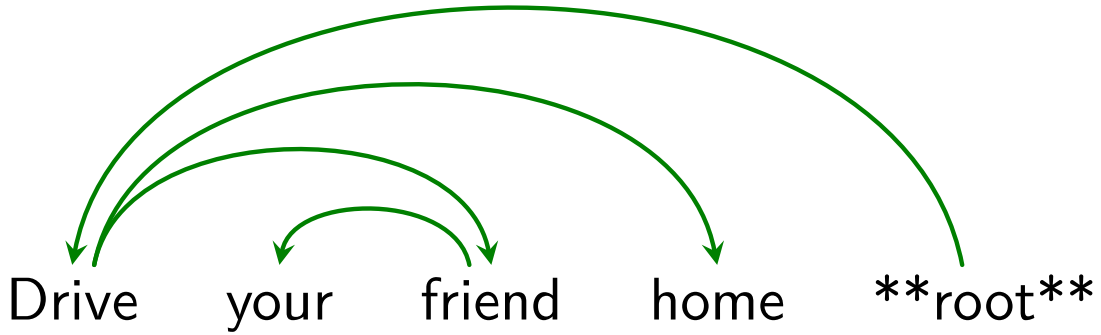


[Drive] [**root**]

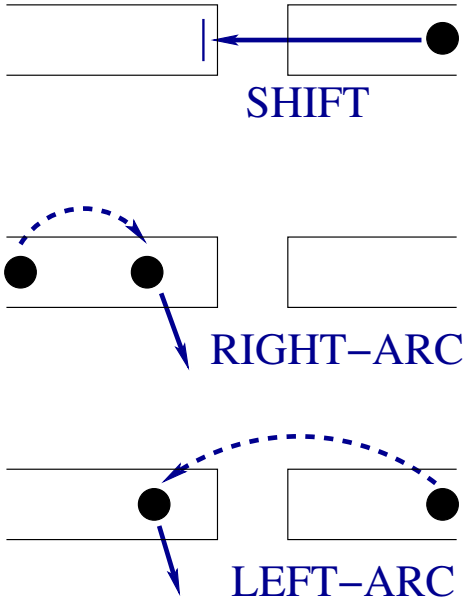


Parsing algorithm

LEFT-ARC

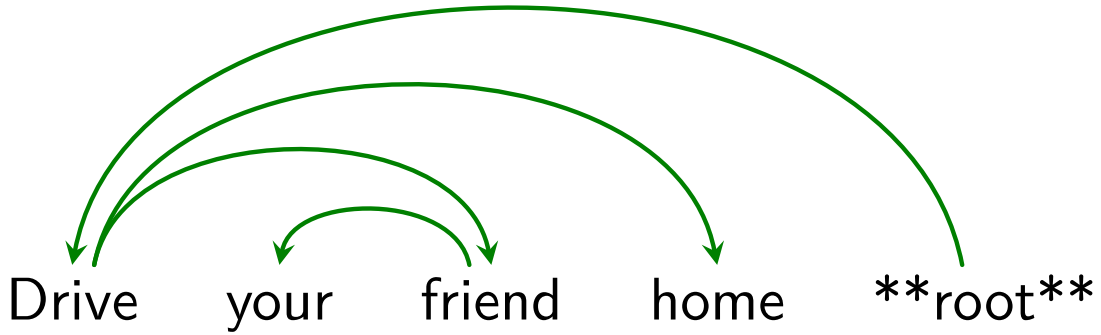


[ ] [**root**]

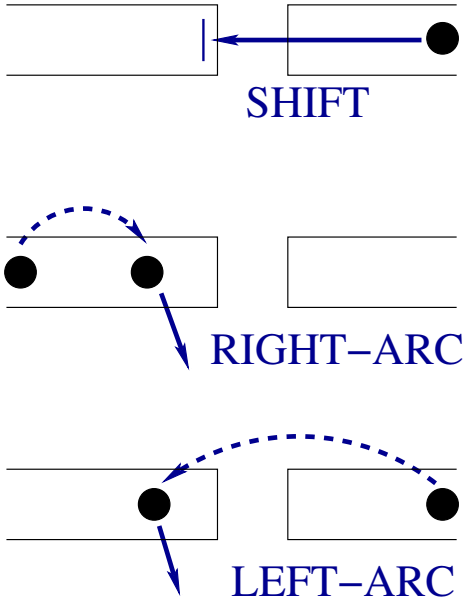


Parsing algorithm

TERMINAL CONFIGURATION

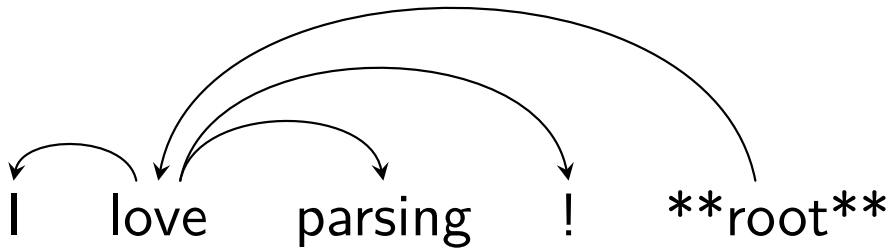


[ ] [**root**]



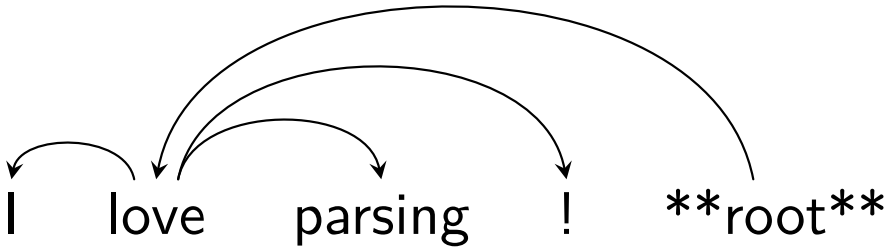
Quiz time!

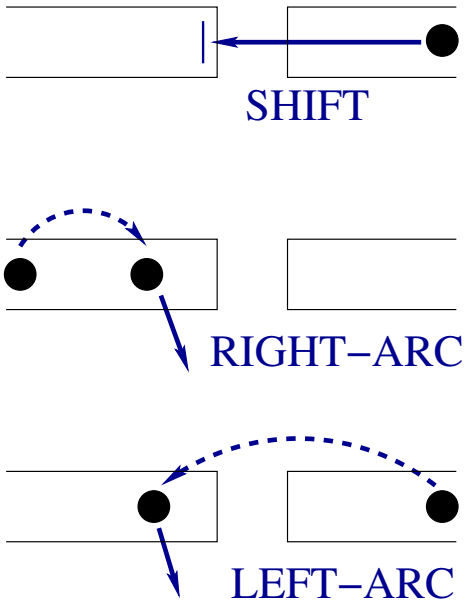
Goal: figure out the transition sequence for this tree:



Quiz time!

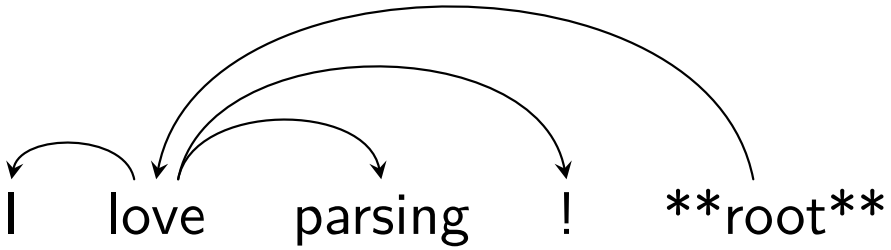
Goal: figure out the transition sequence for this tree:

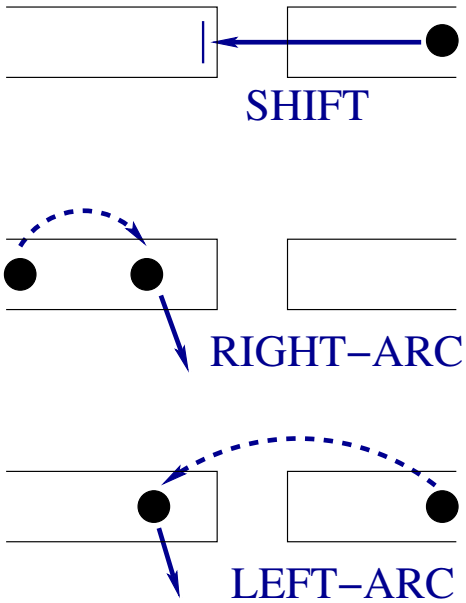




Quiz time!

Goal: figure out the transition sequence for this tree:

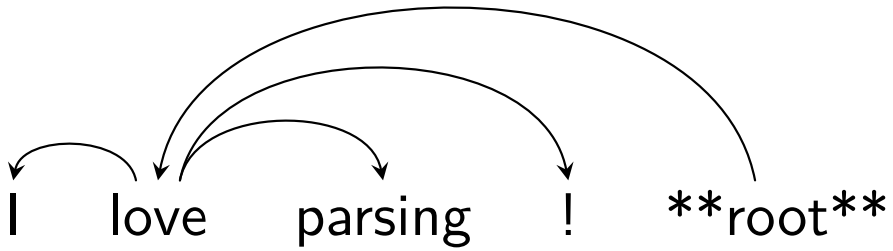




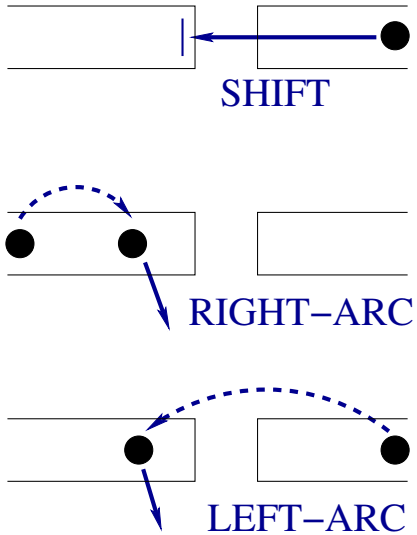
Go to:

ucph.page.link/tb

Quiz - solution

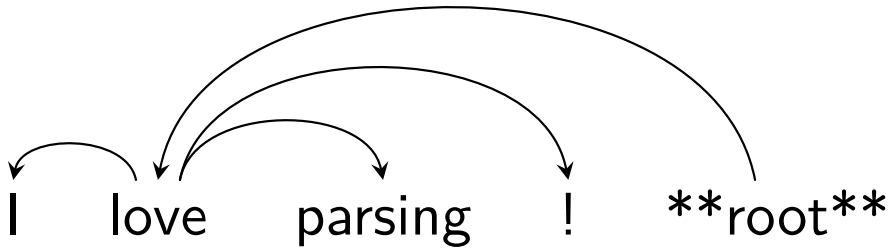


[ ] [I love parsing ! **root**]

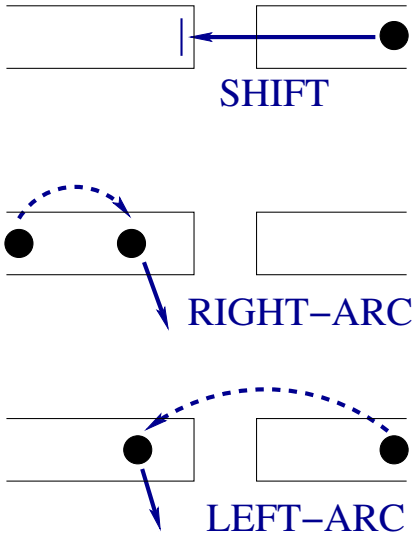


Quiz - solution

SHIFT

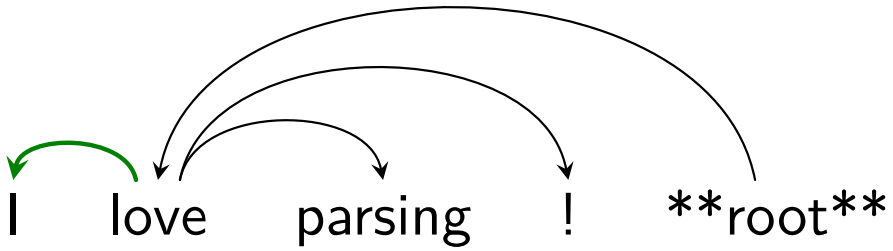


[I] [love parsing ! **root**]

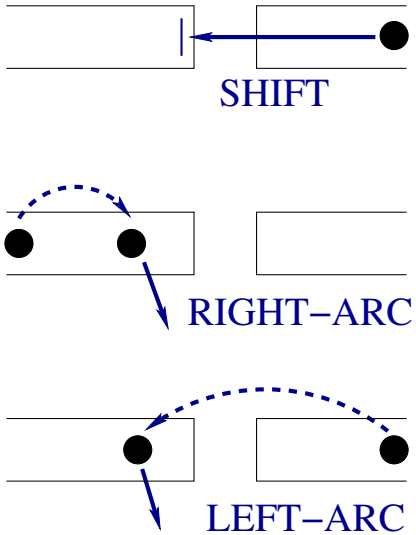


Quiz - solution

LEFT-ARC

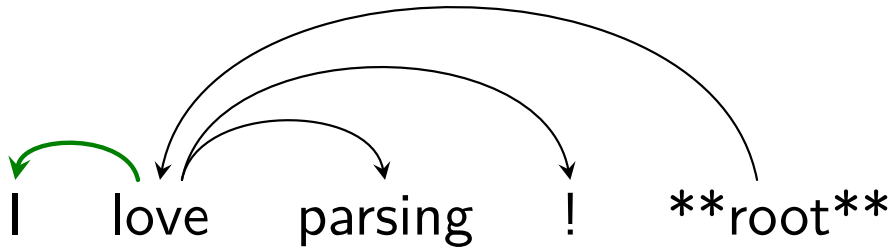


[ ] [love parsing ! **root**]

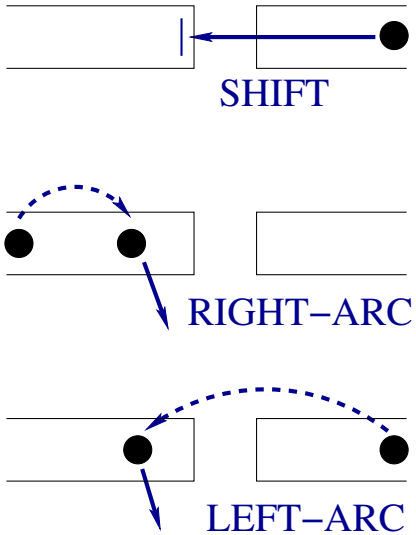


Quiz - solution

SHIFT

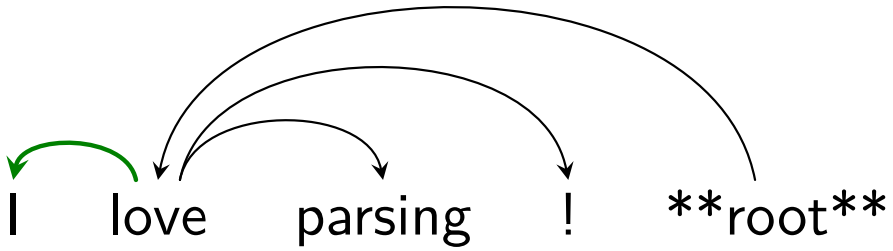


[love] [parsing ! **root**]

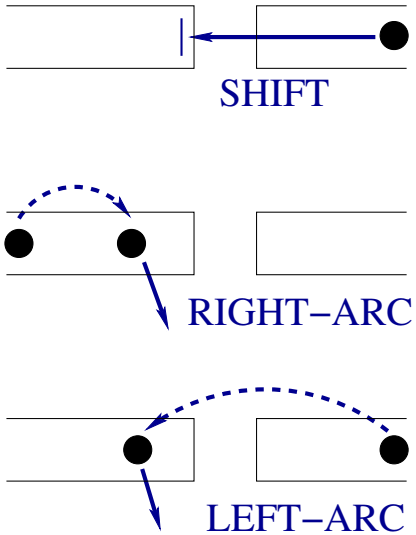


Quiz - solution

SHIFT

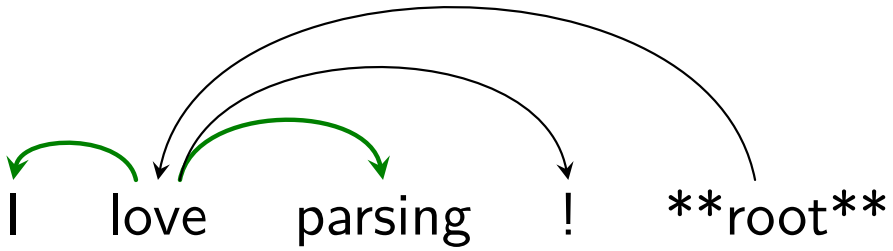


[love parsing] [! **root**]

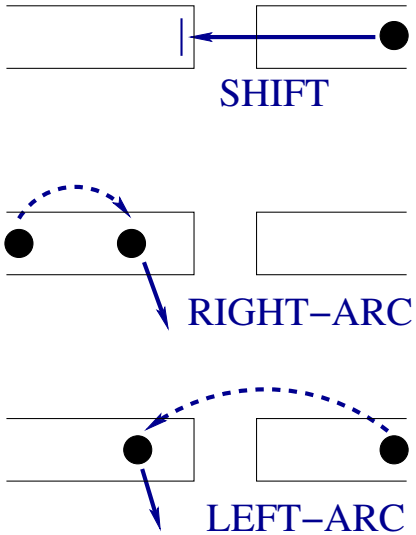


Quiz - solution

RIGHT-ARC

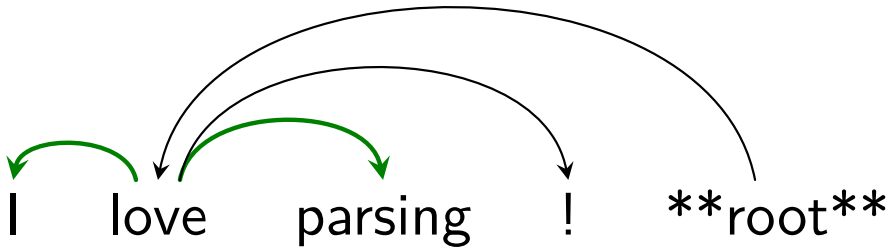


[love] [! **root**]

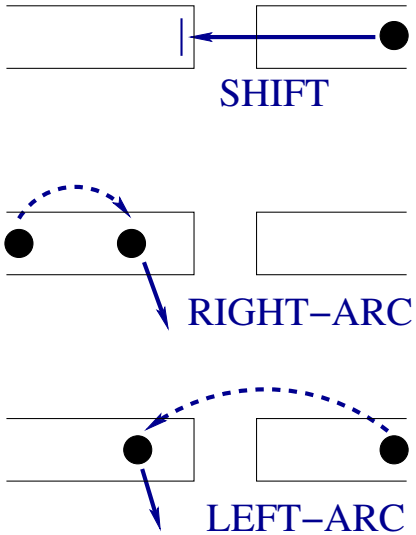


Quiz - solution

SHIFT

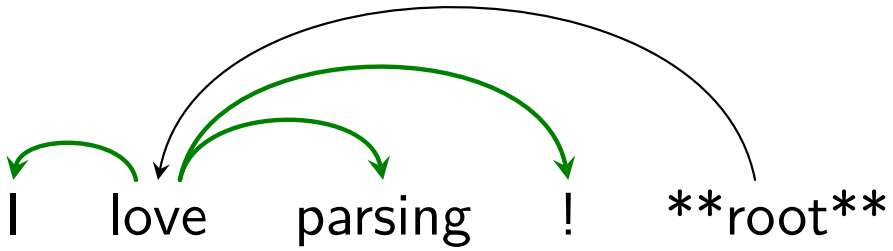


[love !] [**root**]

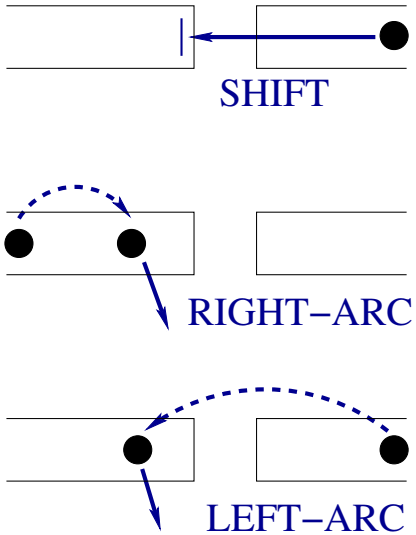


Quiz - solution

RIGHT-ARC

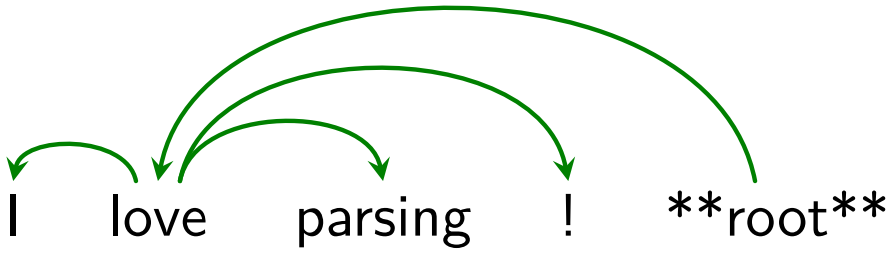


[love] [**root**]

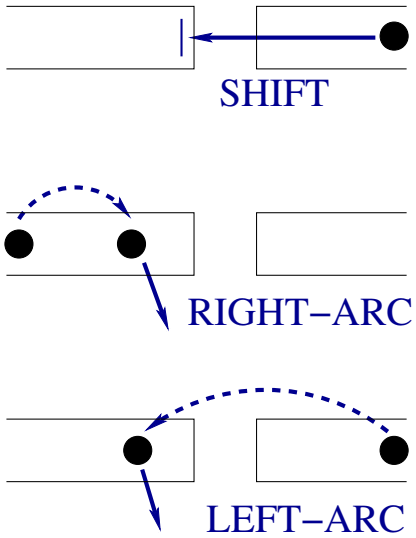


Quiz - solution

LEFT-ARC



[ ] [**root**]



References

Marco Kuhlmann, Carlos Gómez-Rodríguez, and Giorgio Satta. 2011. Dynamic programming algorithms for transition-based dependency parsers. In *Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics: Human Language Technologies*, pages 673–682.