

Arc-Std and Arc-Eager Dependency Parsing

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Arc-Standard Shift-Reduce Dependency Parsing

[ROOT]

[Economic news had little effect on financial markets]

Shift

[ROOT Economic]

[news had little effect on financial markets]

ROOT Economic news had little effect on financial markets

[ROOT Economic]

[news had little effect on financial markets]

Shift

[ROOT Economic news]

[had little effect on financial markets]

ROOT Economic news had little effect on financial markets

[ROOT Economic news]

[had little effect on financial markets]

Left-arc

[ROOT news]

[had little effect on financial markets]

ROOT Economic news had little effect on financial markets

A blue left-arc arrow originates from the word 'news' and points back to the word 'Economic', indicating a left-arc dependency in a parsing task.

[ROOT news]

[had little effect on financial markets]

Shift

[ROOT news had]

[little effect on financial markets]

ROOT Economic news had little effect on financial markets



[ROOT news had]

[little effect on financial markets]

Left-arc

[ROOT had]

[little effect on financial markets]

ROOT Economic news had little effect on financial markets



The diagram illustrates left-arc dependencies in a sentence. Two blue arrows point from the word 'news' to the words 'Economic' and 'had', indicating that 'news' is the head of two phrases: 'Economic news' and 'news had'.

[ROOT had]

[little effect on financial markets]

Shift

[ROOT had little]

[effect on financial markets]

ROOT Economic news had little effect on financial markets

The diagram illustrates a syntactic shift. At the top, two phrases are shown in brackets: '[ROOT had]' and '[little effect on financial markets]'. Below these, the word 'Shift' is written. Further down, the phrases are shown again: '[ROOT had little]' and '[effect on financial markets]'. At the bottom, the full sentence 'ROOT Economic news had little effect on financial markets' is displayed. Two blue arrows originate from the word 'Economic' and point to the word 'news', indicating a shift in the structure of the first phrase.

[ROOT had little]

[effect on financial markets]

Shift

[ROOT had little effect]

[on financial markets]

ROOT Economic news had little effect on financial markets

The diagram illustrates a syntactic shift. In the first part, 'Economic news' is part of a larger clause '[ROOT had little effect on financial markets]'. In the second part, 'Economic news' is shifted to become the subject of the sentence, and the rest of the clause becomes the predicate. Blue arrows indicate the movement of the words 'Economic' and 'news' from their original position to their new position at the beginning of the sentence.

[ROOT had little effect]


[on financial markets]

Left-arc

[ROOT had effect]

[on financial markets]

ROOT Economic news had little effect on financial markets



[ROOT had effect]


[on financial markets]

Shift

[ROOT had effect on]

[financial markets]

ROOT Economic news had little effect on financial markets



[ROOT had effect on]

[financial markets]

Shift

[ROOT had effect on financial]

[markets]

ROOT Economic news had little effect on financial markets

The diagram illustrates the process of parsing the sentence "ROOT Economic news had little effect on financial markets". Blue brackets are placed above the words "Economic", "news", and "little". From each bracket, a blue arrow points downwards to the corresponding word in the sentence, highlighting the individual components being analyzed.


[ROOT had effect on financial]

[markets]

Shift

[ROOT had effect on financial markets] []

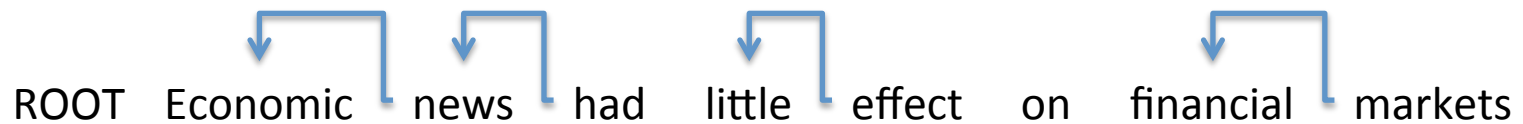
ROOT Economic news had little effect on financial markets



[ROOT had effect on financial markets] []

Left-arc

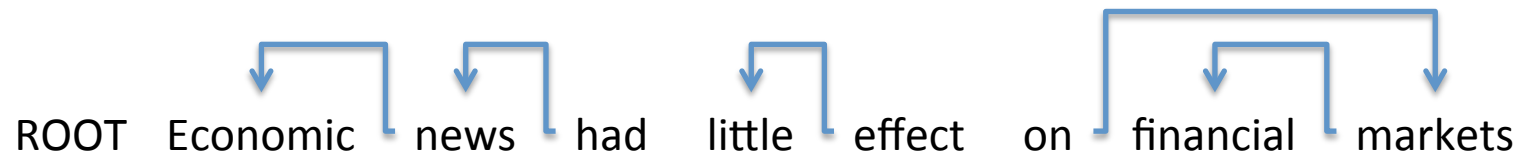
[ROOT had effect on markets] []



[ROOT had effect on markets] []

Right-arc

[ROOT had effect on] []



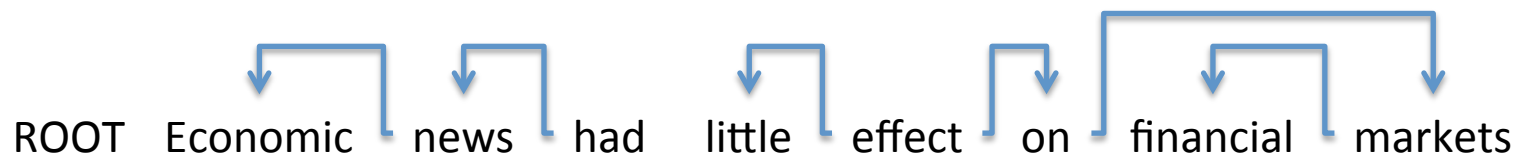
[ROOT had effect on]

[]

Right-arc

[ROOT had effect]

[]



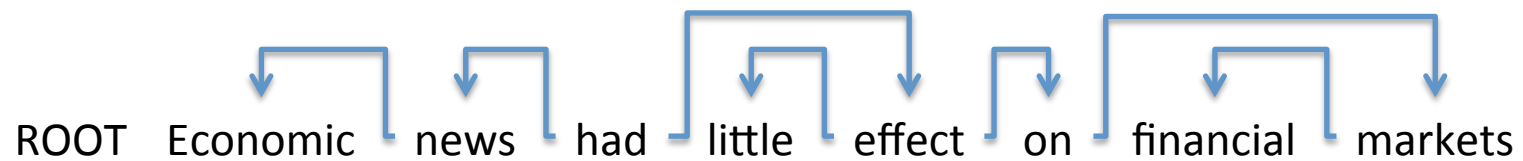
[ROOT had effect]

[]

Right-arc

[ROOT had]

[]



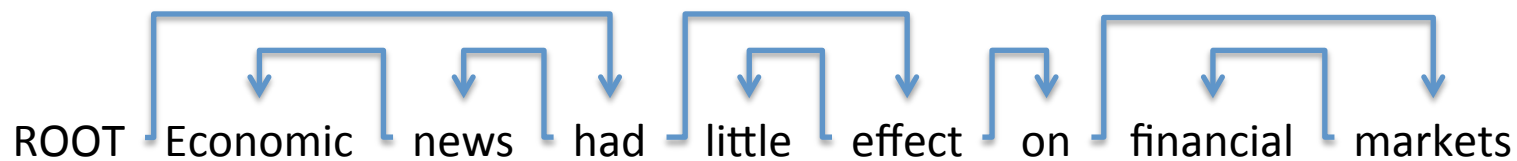
[ROOT had]

[]

Right-arc

[ROOT]

[]



Arc-Eager Shift-Reduce Dependency Parsing

[ROOT]

[Economic news had little effect on financial markets]

Shift

[ROOT Economic]

[news had little effect on financial markets]

ROOT Economic news had little effect on financial markets

[ROOT Economic]

[news had little effect on financial markets]

Shift

[ROOT Economic news]

[had little effect on financial markets]

ROOT Economic news had little effect on financial markets

[ROOT Economic news]

[had little effect on financial markets]

Left-arc

[ROOT news]

[had little effect on financial markets]

ROOT Economic news had little effect on financial markets

A blue left-arc arrow is drawn above the words 'Economic' and 'news'. The arrow starts at the top of the word 'news' and points left to the top of the word 'Economic'.

[ROOT news]

[had little effect on financial markets]

Shift

[ROOT news had]

[little effect on financial markets]

ROOT Economic news had little effect on financial markets



[ROOT news had]

[little effect on financial markets]

Left-arc

[ROOT had]

[little effect on financial markets]

ROOT Economic news had little effect on financial markets



The diagram illustrates left-arc dependencies in a sentence. Two blue arrows point from the word 'news' to the words 'Economic' and 'had', indicating that 'news' is the head of two phrases: 'Economic news' and 'news had'.

[ROOT had]

[little effect on financial markets]

Right-arc (Eager)

[ROOT had*]

[little effect on financial markets]



[ROOT had*]

[little effect on financial markets]

Shift + Shift

[ROOT had* little effect]

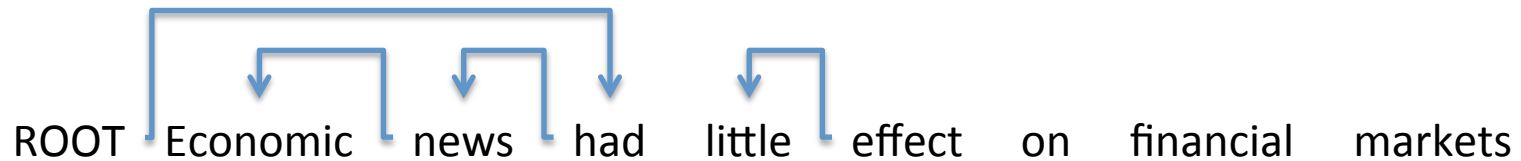
[on financial markets]



[ROOT had* little effect] [on financial markets]

Left-arc

[ROOT had* effect] [on financial markets]



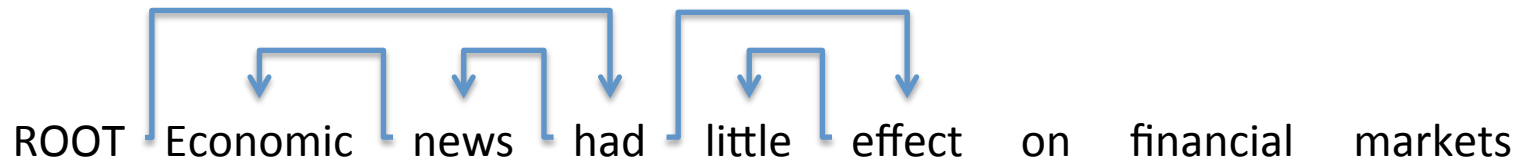
[ROOT had* effect]

[on financial markets]

Right-arc (eager)

[ROOT had* effect*]

[on financial markets]



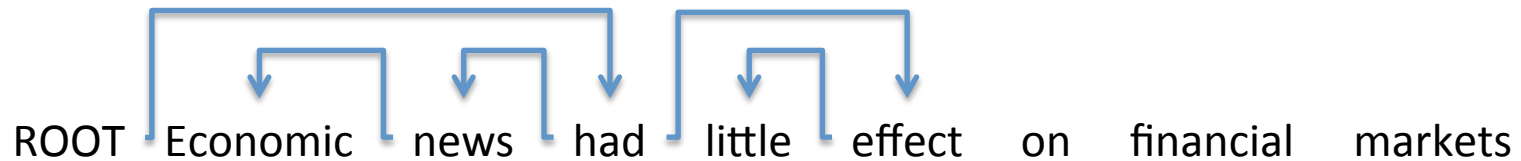
[ROOT had* effect*]

[on financial markets]

Shift

[ROOT had* effect* on]

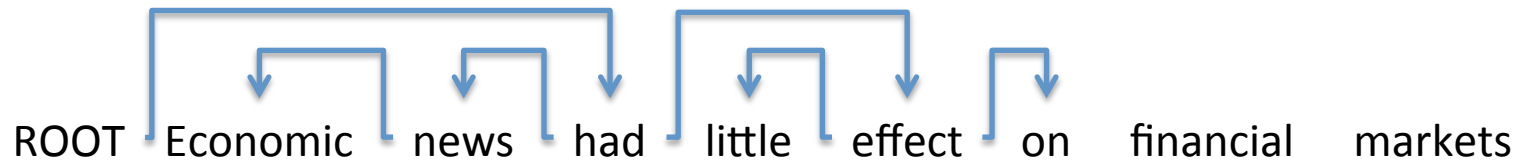
[financial markets]



[ROOT had* effect* on] [on financial markets]

Right-arc (eager)

[ROOT had* effect* on*] [financial markets]

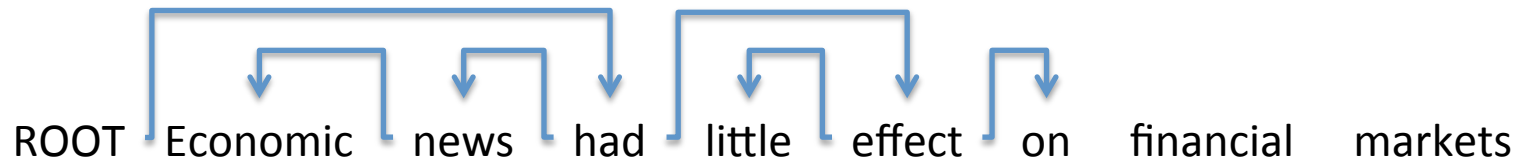


[ROOT had* effect* on*]

[financial markets]

Shift + Shift

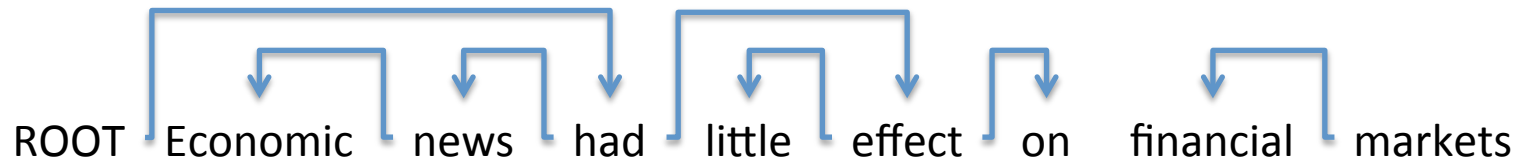
[ROOT had* effect* on* financial markets] []



[ROOT had* effect* on* financial markets] []

Left-arc

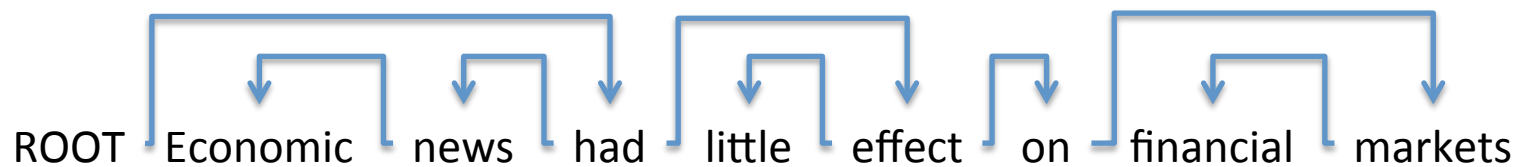
[ROOT had* effect* on* markets] []



[ROOT had* effect* on* markets] []

Right-arc (eager)

[ROOT had* effect* on*] []



[ROOT had* effect* on*] []

Reduce

[ROOT had* effect*] []

Reduce

[ROOT had*] []

Reduce

[ROOT] []

