

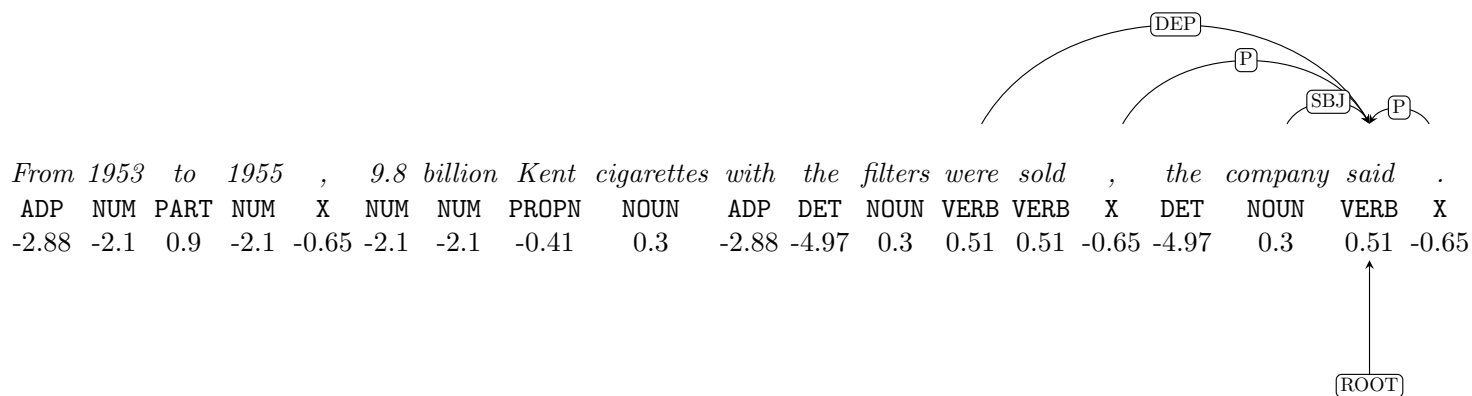
# Dependency Tree Comparison

February 11, 2022

## Memory Baseline (dlg, wtembdep, ldep) + spearman allwords

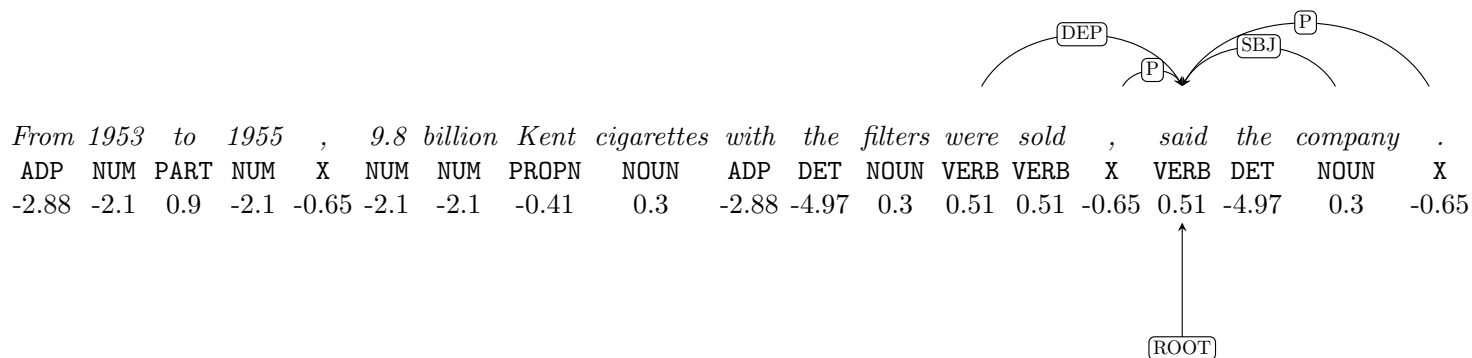
wsj\_0003.12.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0003.12.1

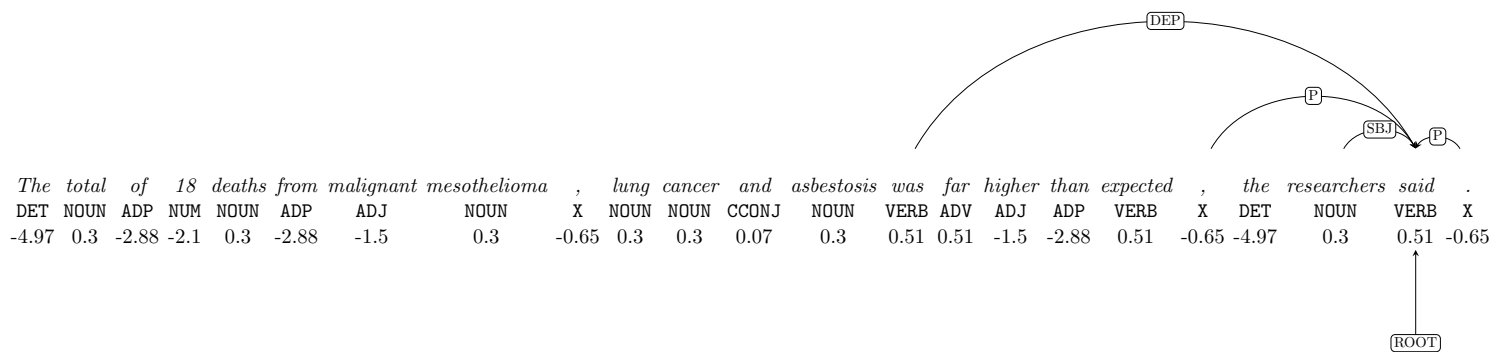
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dlg = 1.0 wtembdep = 51.95 ldep = -3.0

wsj\_0003.15.0

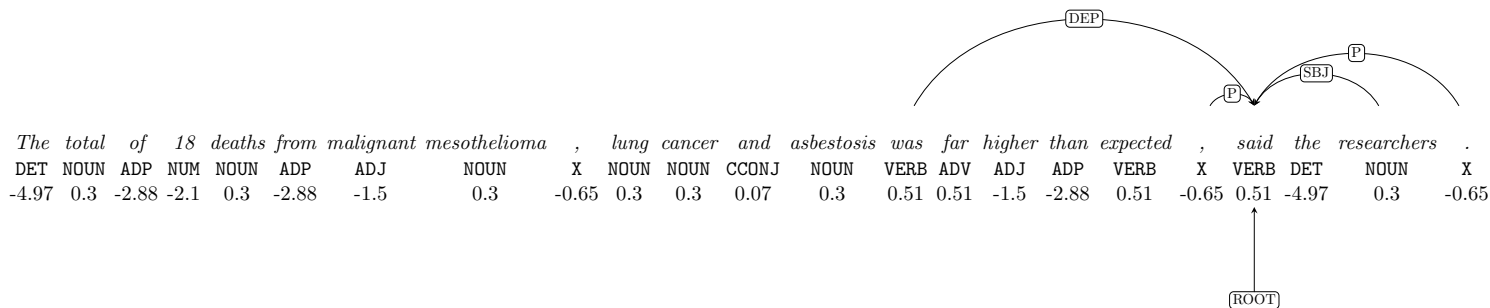
Reference Sentence  
spearman allwords = 0.0



wsj\_0003.15.1

# Variant Sentence

spearman allwords = -1.0

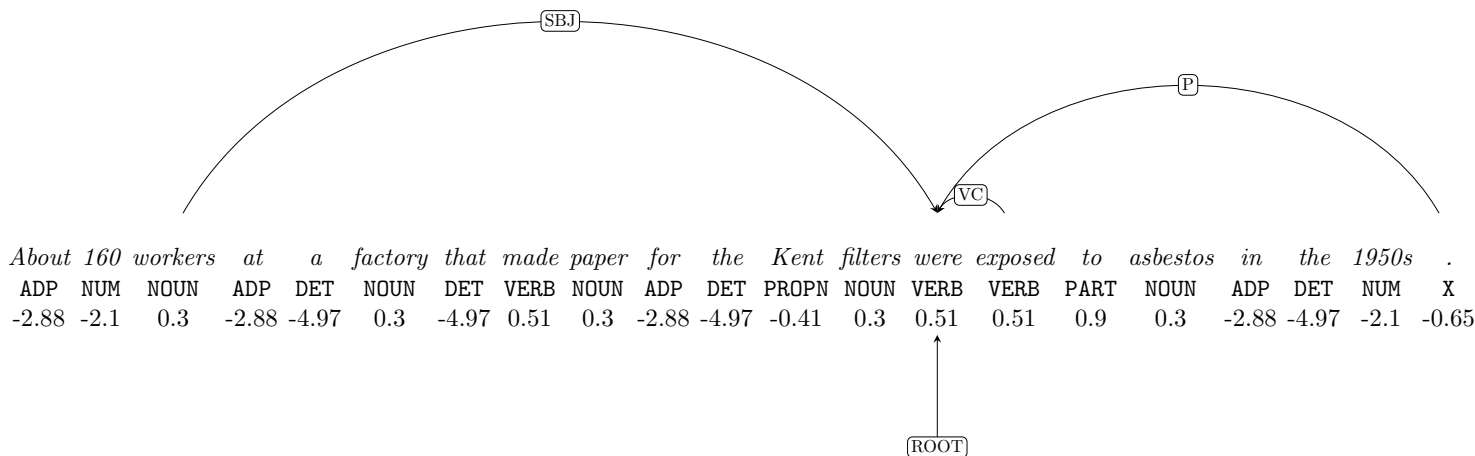


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = 108.26 ldep = 2.0

wsj\_0003.24.0

# Reference Sentence

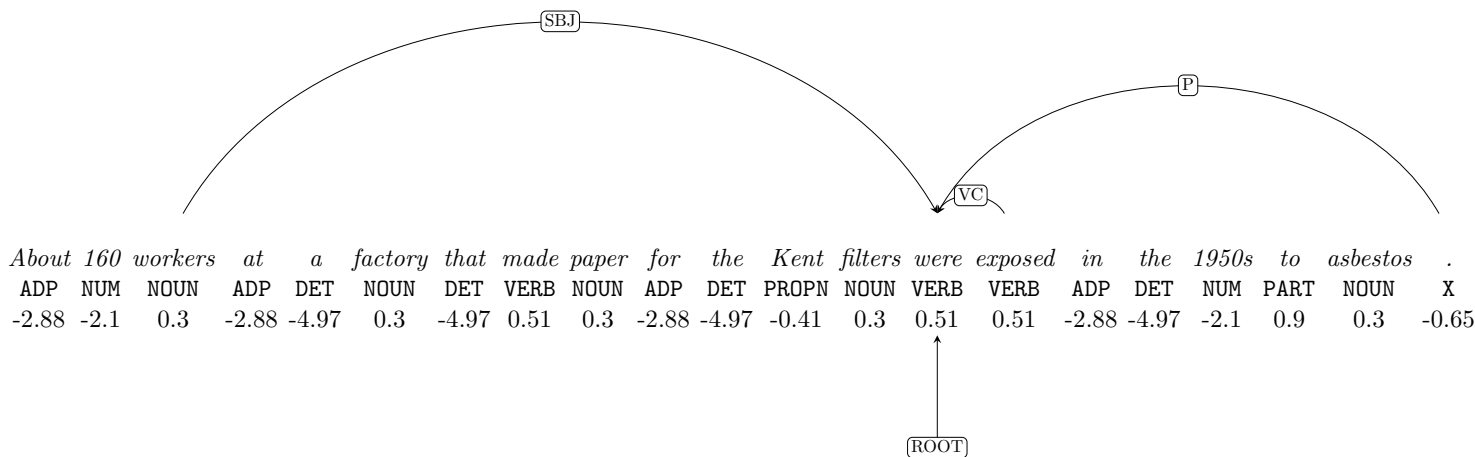
spearman allwords = 0.77



wsj\_0003.24.1

# Variant Sentence

spearman allwords = -0.26

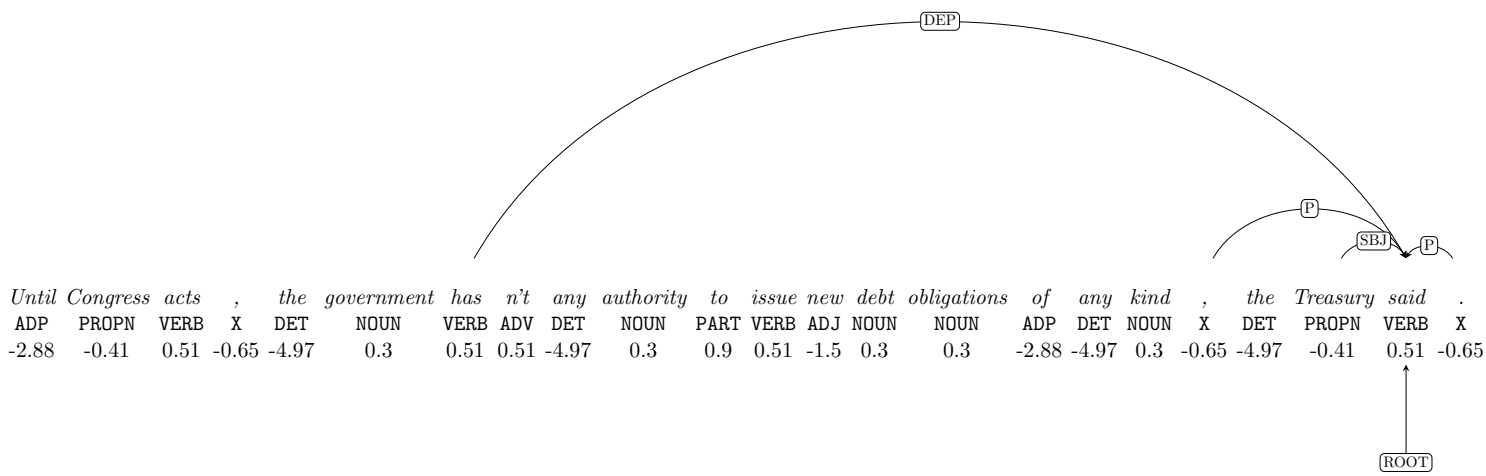


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = 47.94 ldep = -0.0

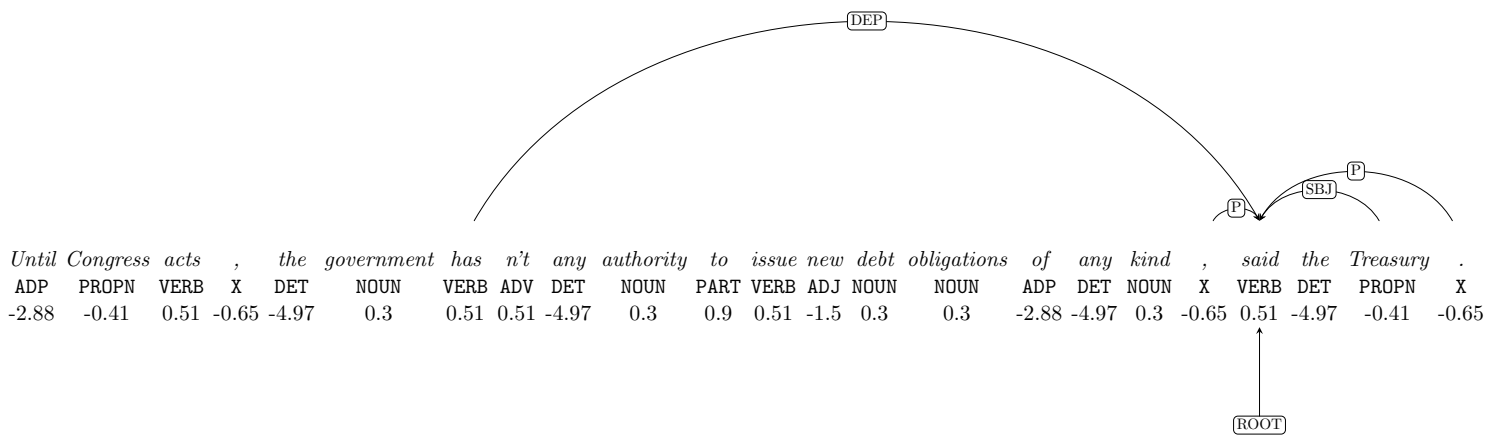
wsj\_0008.2.0

# Reference Sentence

spearman allwords = 0.0



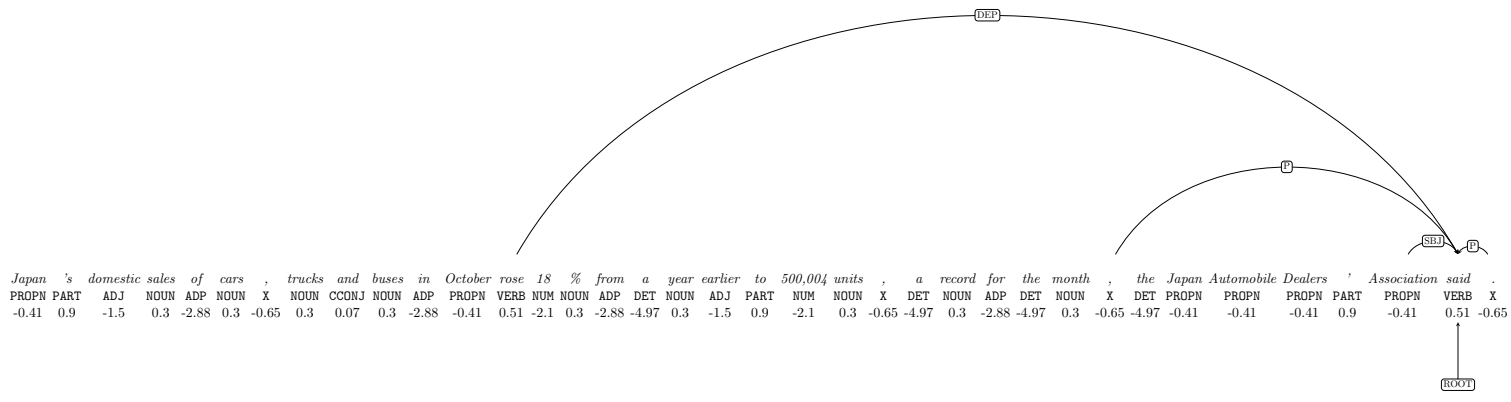
Variant Sentence  
spearman allwords = -1.0



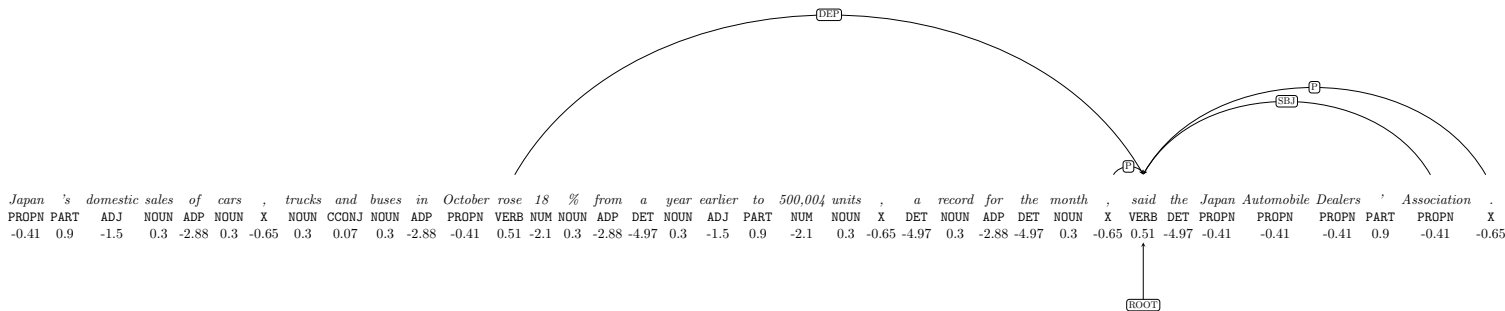
$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = 27.73 ldep = 3.0

wsj\_0016.1.0

Reference Sentence  
spearman allwords = 0.0



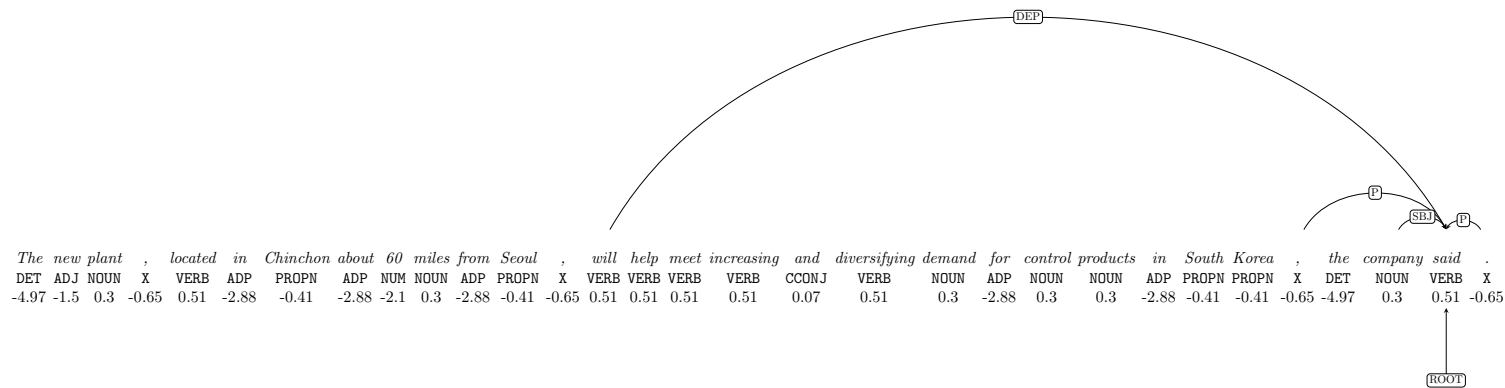
Variant Sentence  
spearman allwords = -0.71



$$\phi(\text{ref}) - \phi(\text{var}): \text{dlg} = 1.0 \quad \text{wtempdep} = 350.88 \quad \text{ldep} = -4.0$$

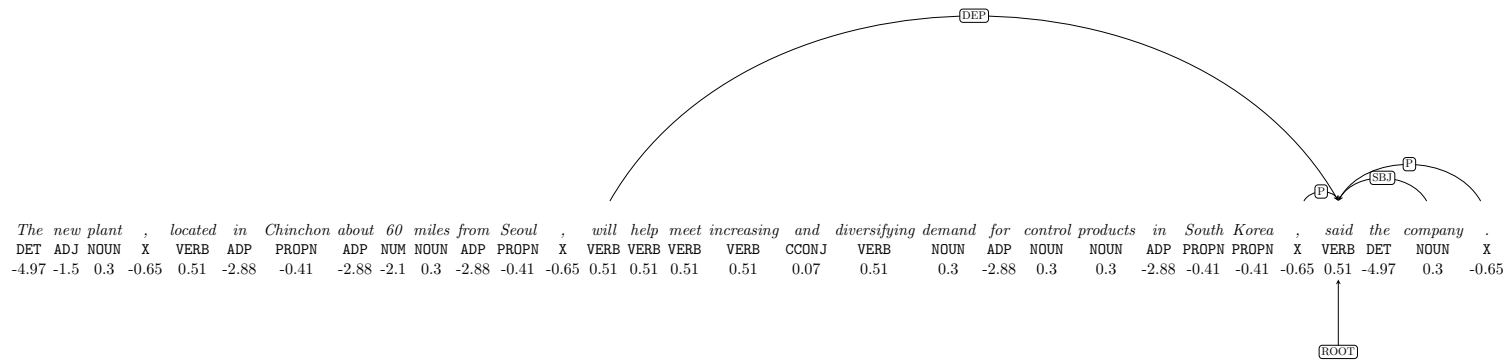
wsj\_0017.2.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0017.2.1

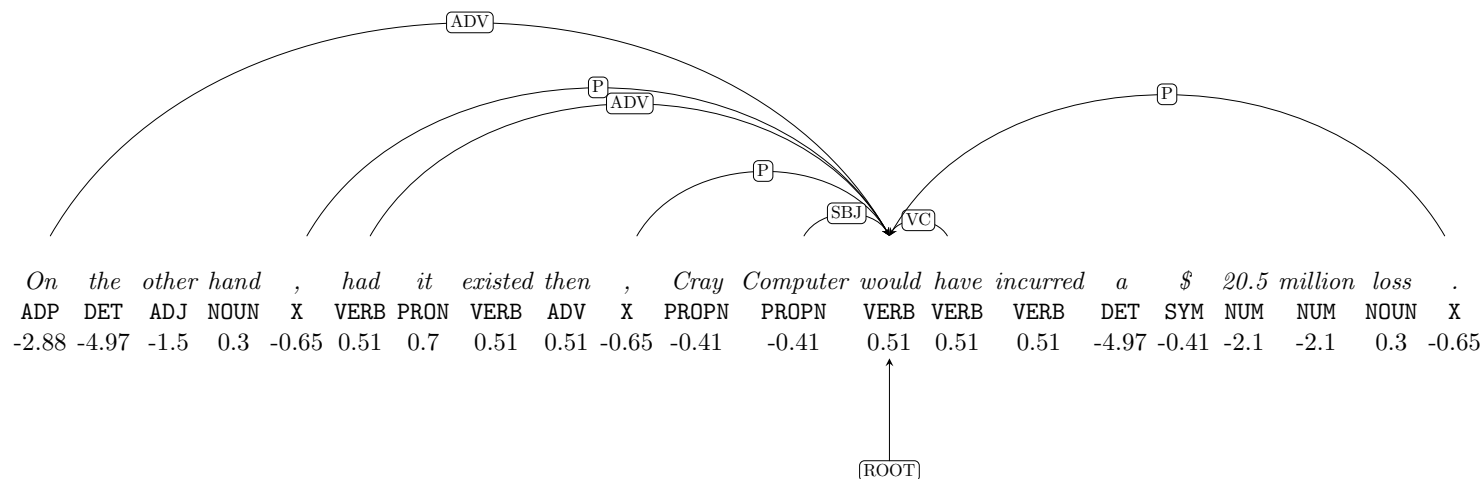
Variant Sentence  
spearman allwords = -1.0



$$\phi(\text{ref}) - \phi(\text{var}): \text{dlg} = 1.0 \quad \text{wtempdep} = 174.67 \quad \text{ldep} = 1.0$$

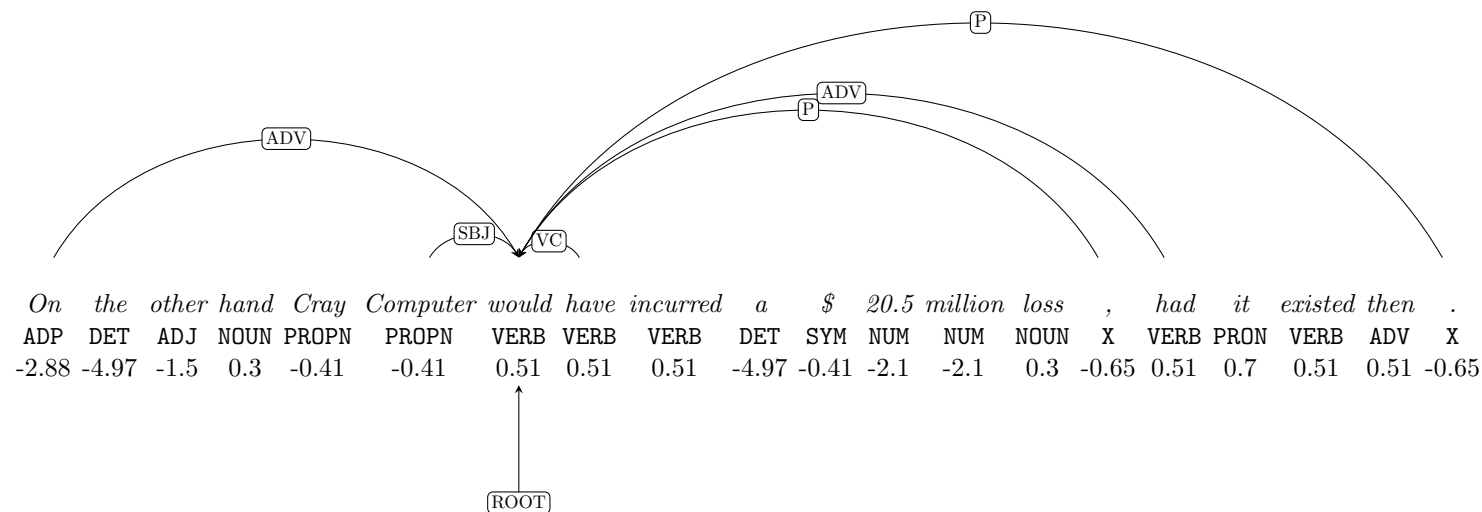
wsj\_0018.31.0

Reference Sentence  
spearman allwords = 0.56



wsj\_0018.31.1

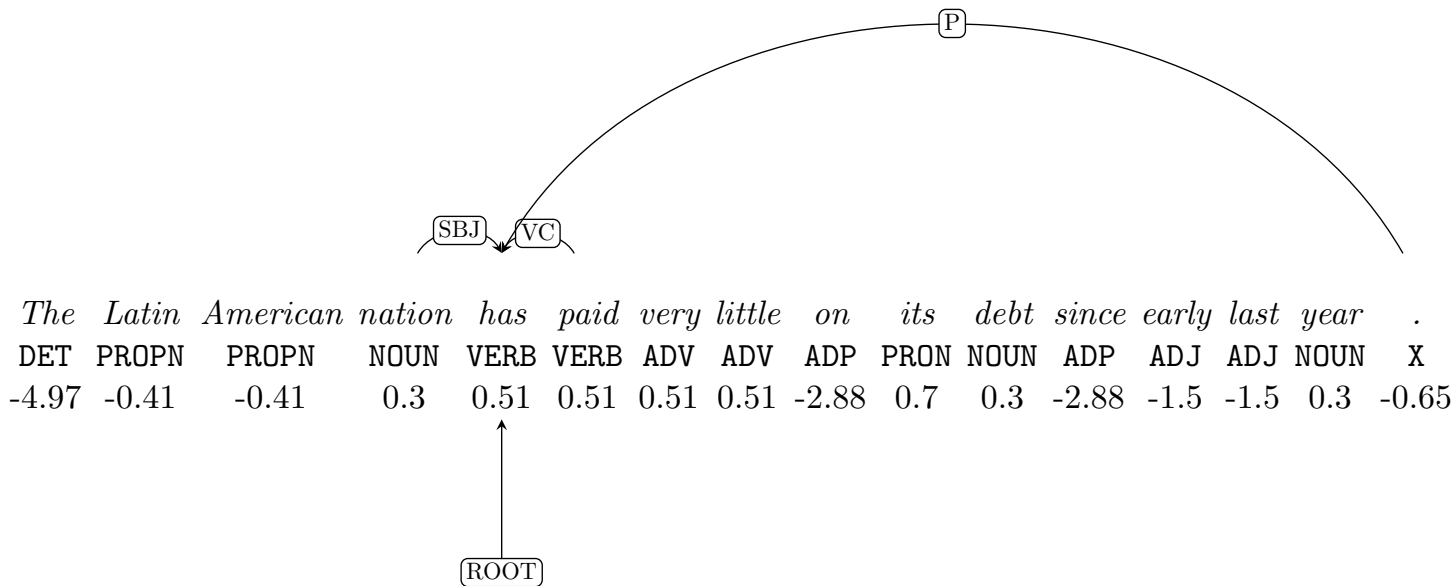
Variant Sentence  
spearman allwords = -0.51



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 3.0 wtembdep = -324.08 ldep = -5.0

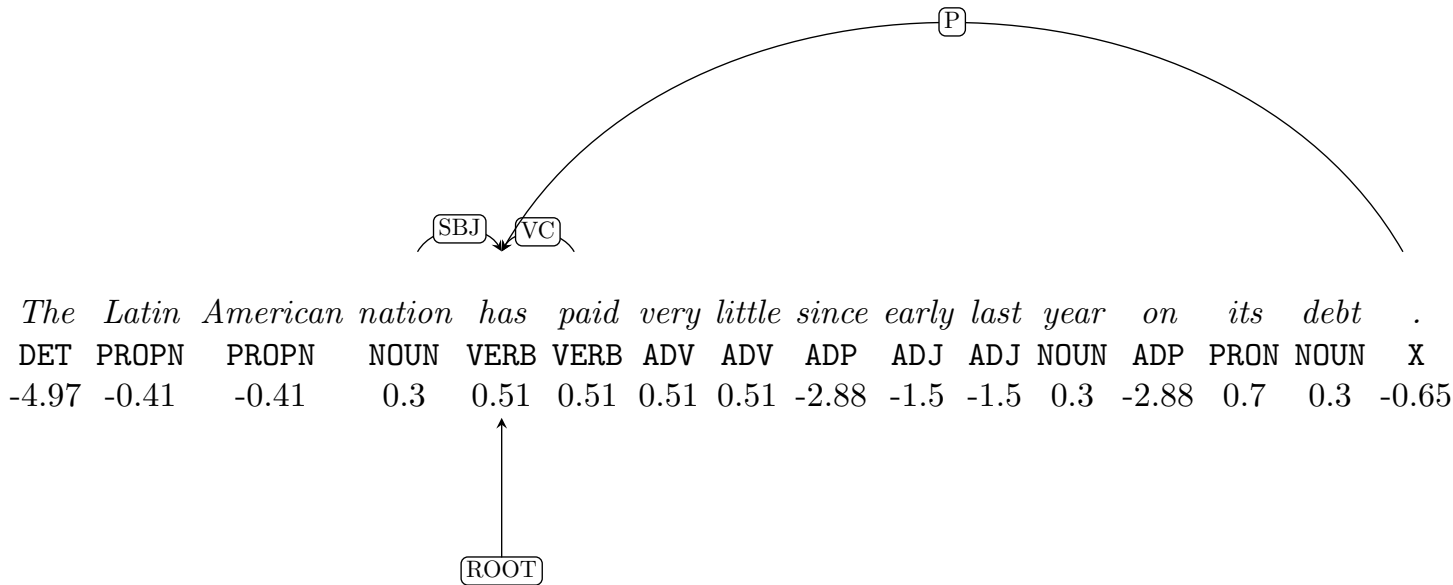
wsj\_0021.3.0

Reference Sentence  
spearman allwords = 0.48



wsj\_0021.3.1

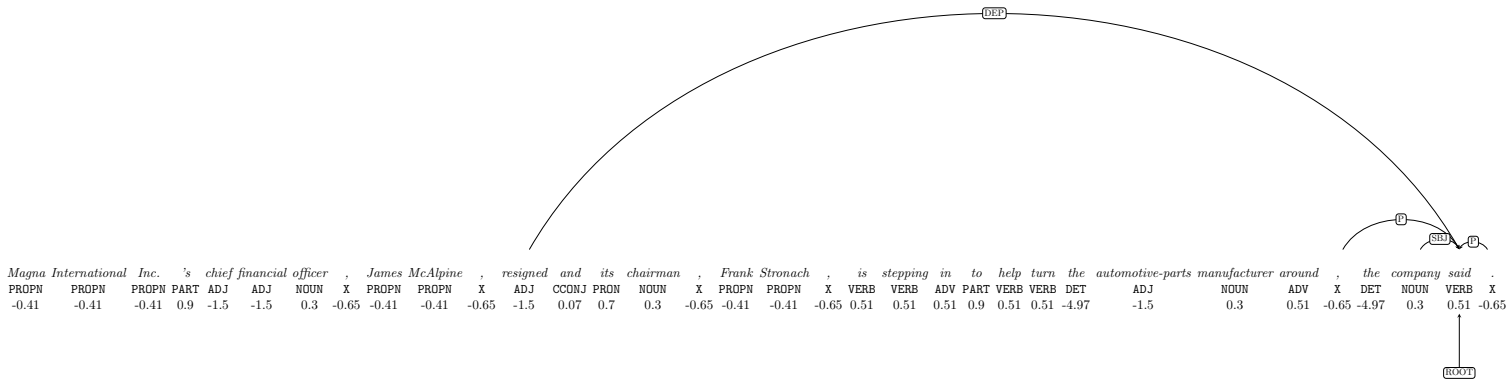
Variant Sentence  
spearman allwords = 0.16



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = -0.0   wtembdep = 65.87   ldep = 19.0

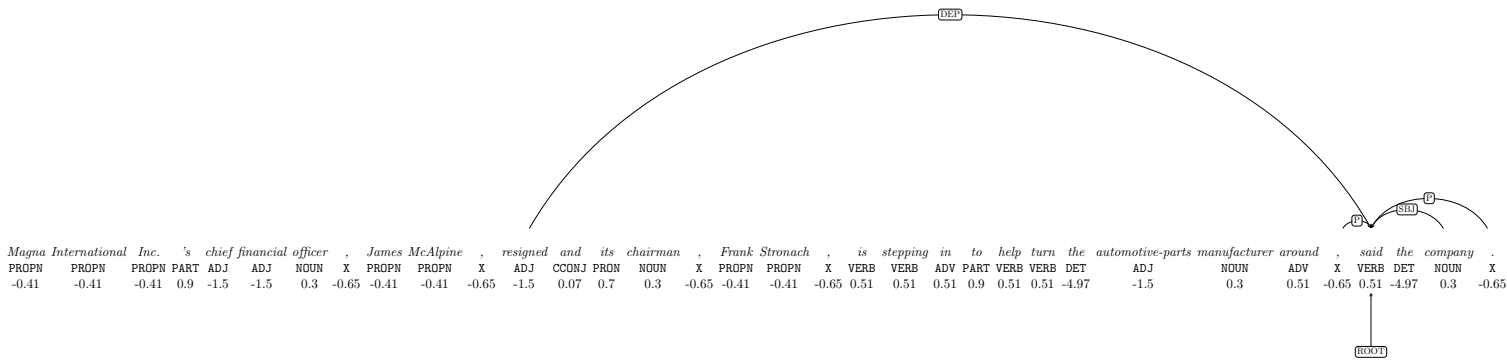
wsj\_0027.1.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0027.1.1

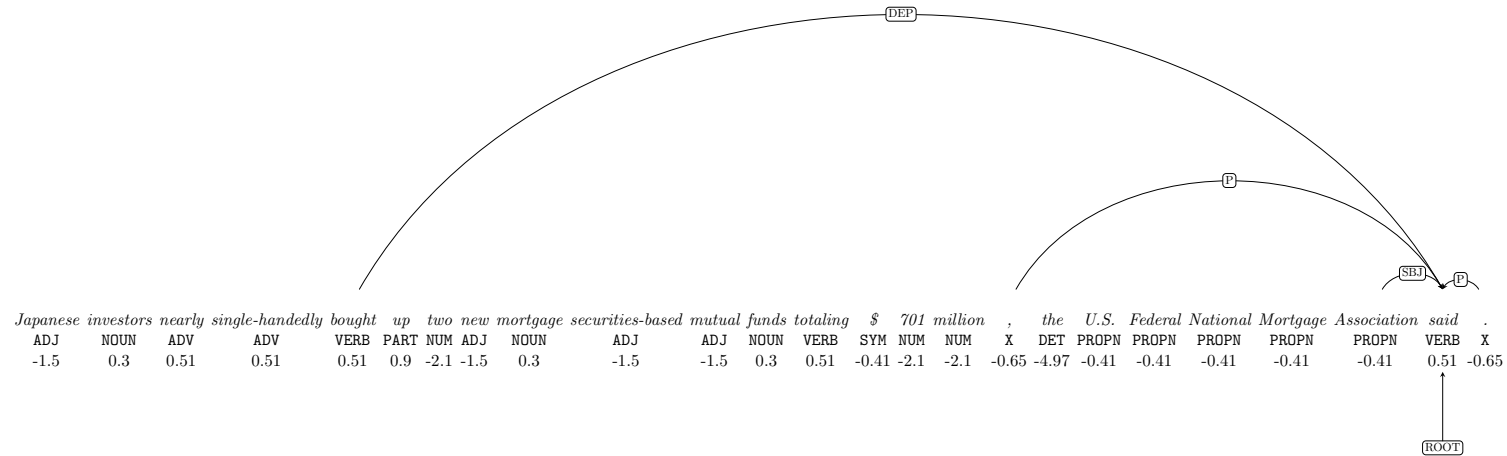
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtempdep = 195.84   ldep = -0.0

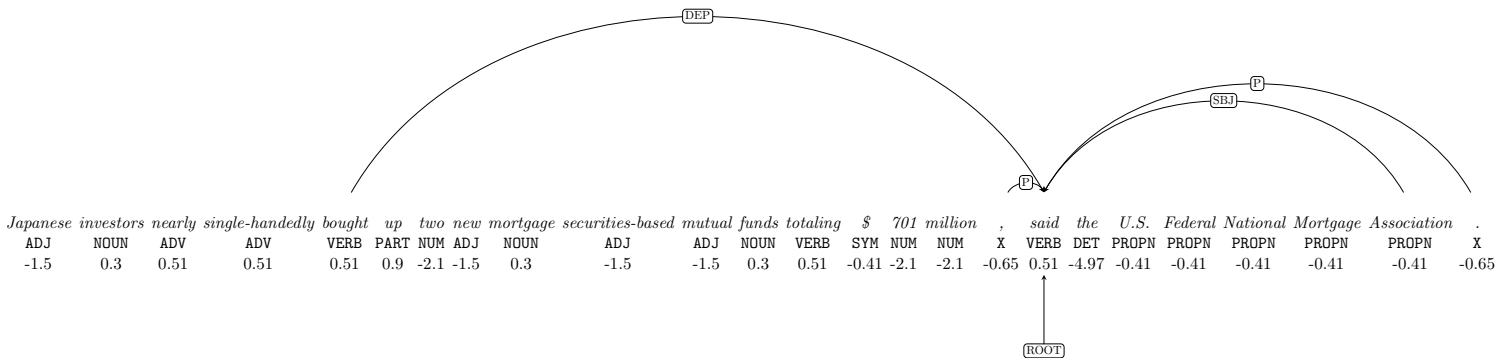
wsj\_0029.1.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0029.1.1

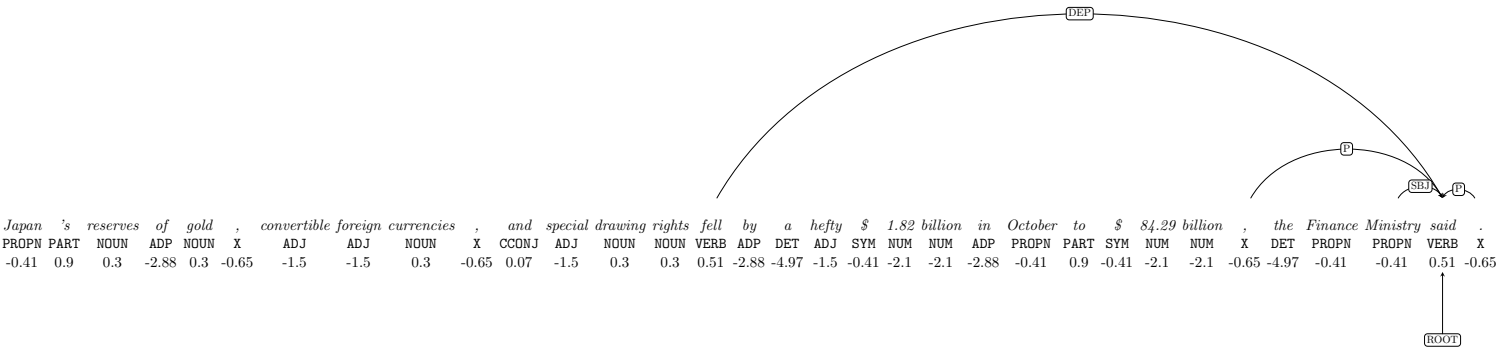
Variant Sentence  
spearman allwords = -0.65



$$\phi(\text{ref}) - \phi(\text{var}): \text{dlg} = 1.0 \quad \text{wtembdep} = -403.66 \quad \text{ldep} = -4.0$$

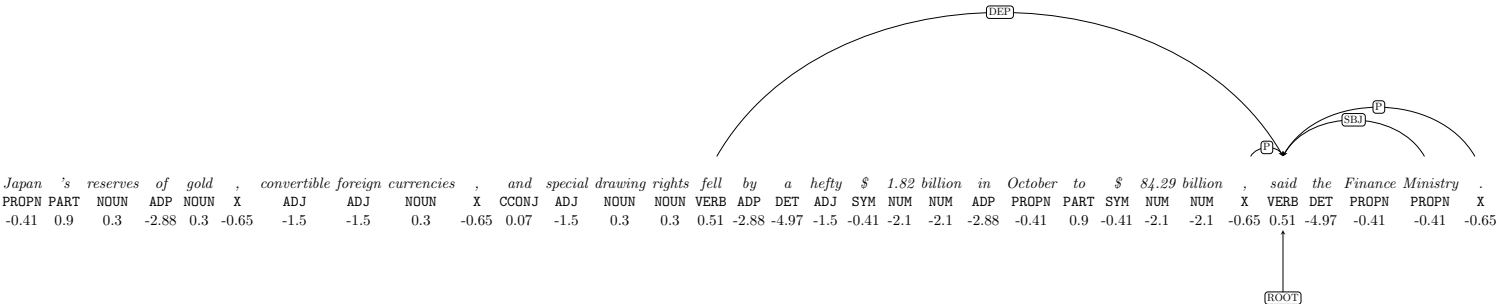
wsj\_0033.1.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0033.1.1

Variant Sentence  
spearman allwords = -0.87

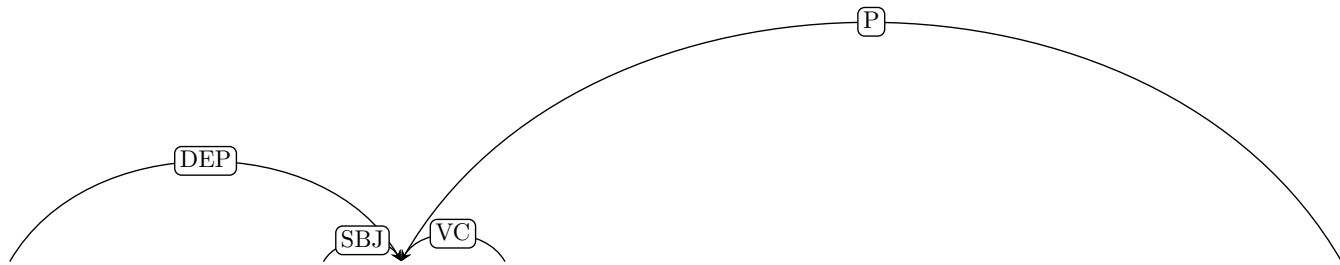


$$\phi(\text{ref}) - \phi(\text{var}): \text{dlg} = 1.0 \quad \text{wtembdep} = 116.7 \quad \text{ldep} = -8.0$$

wsj\_0034.24.0

Reference Sentence  
spearman allwords = 0.53





*And most country funds were clobbered more than most stocks after the 1987 crash .*

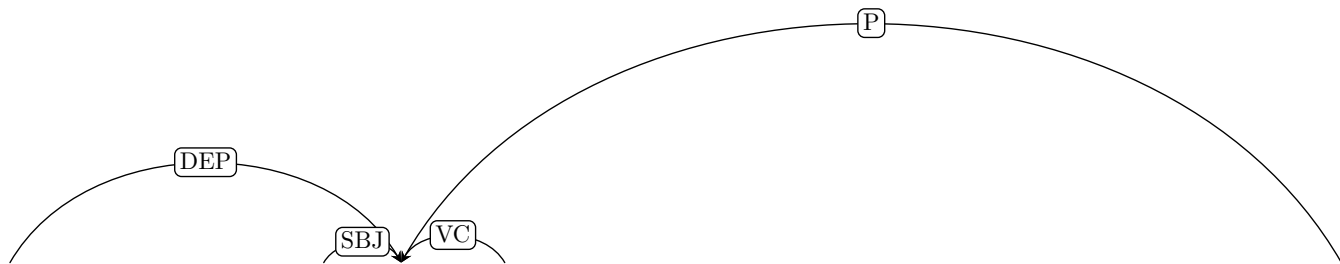
CCONJ	ADJ	NOUN	NOUN	VERB	VERB	ADV	ADP	ADJ	NOUN	ADP	DET	NUM	NOUN	X
0.07	-1.5	0.3	0.3	0.51	0.51	0.51	-2.88	-1.5	0.3	-2.88	-4.97	-2.1	0.3	-0.65



ROOT

wsj\_0034.24.1

Variant Sentence  
spearman allwords = -0.05



*And most country funds were clobbered after the 1987 crash more than most stocks .*

CCONJ	ADJ	NOUN	NOUN	VERB	VERB	ADP	DET	NUM	NOUN	ADV	ADP	ADJ	NOUN	X
0.07	-1.5	0.3	0.3	0.51	0.51	-2.88	-4.97	-2.1	0.3	0.51	-2.88	-1.5	0.3	-0.65

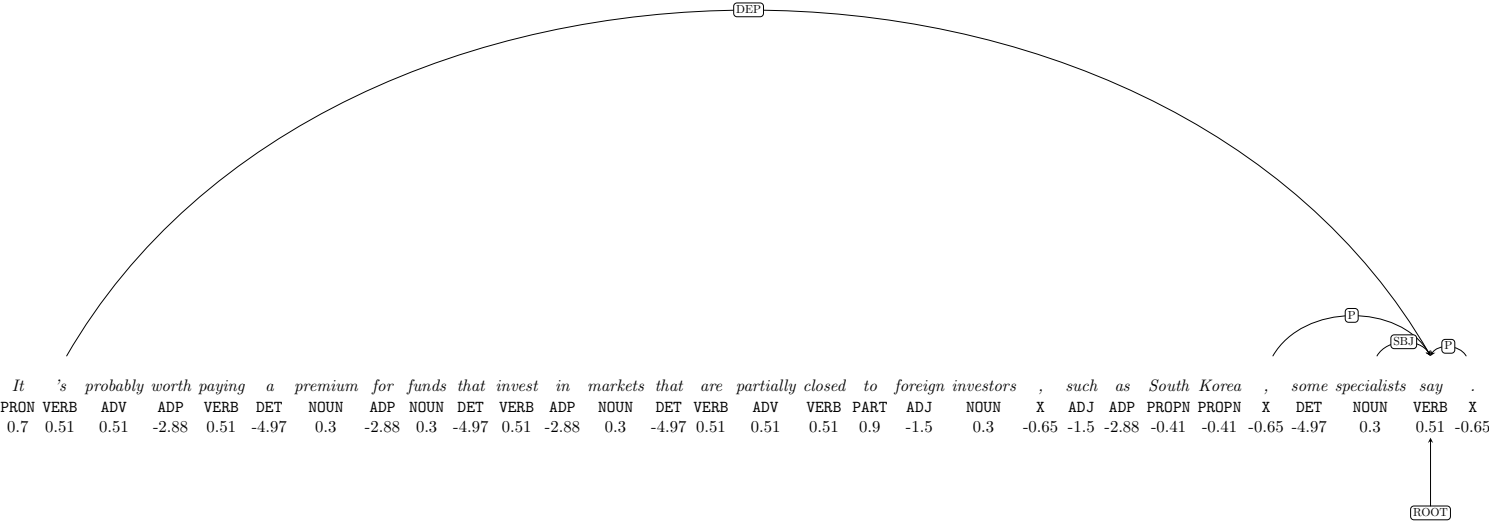


ROOT

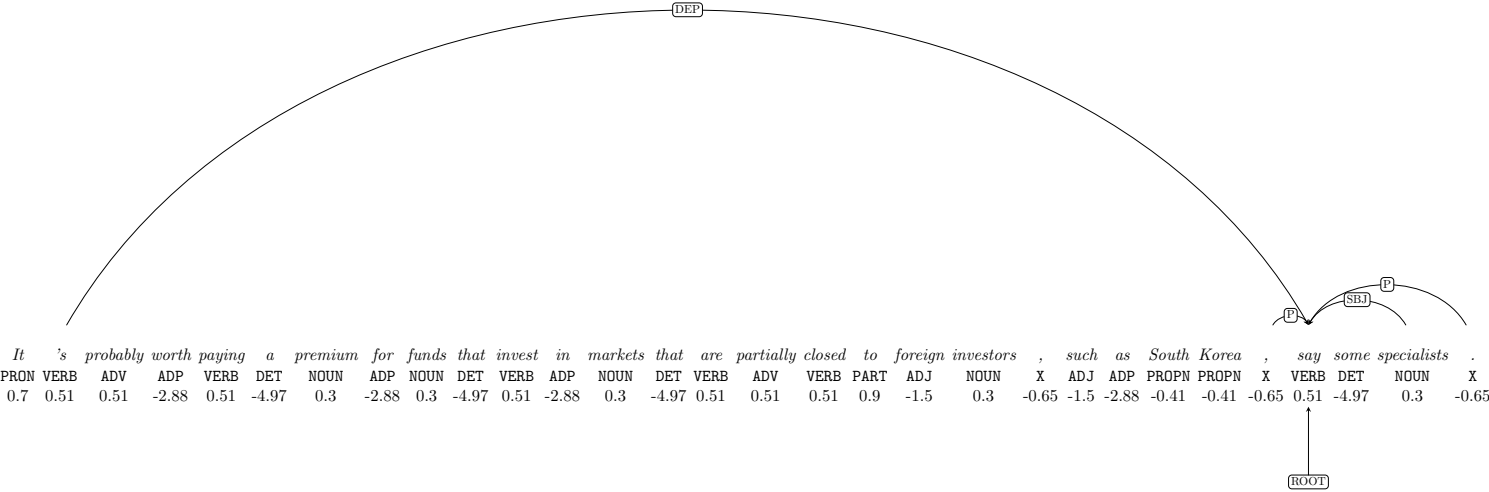
$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 0.0   wtembdep = 134.89   ldep = 0.0

wsj\_0034.28.0

Reference Sentence  
spearman allwords = 0.0

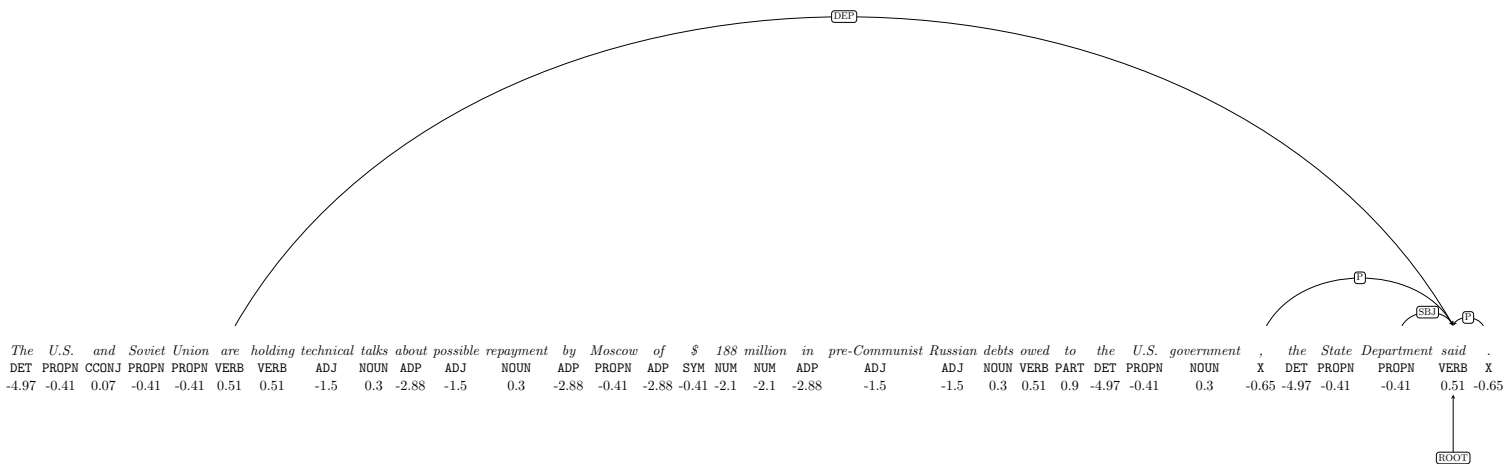


Variant Sentence  
spearman allwords = -1.0

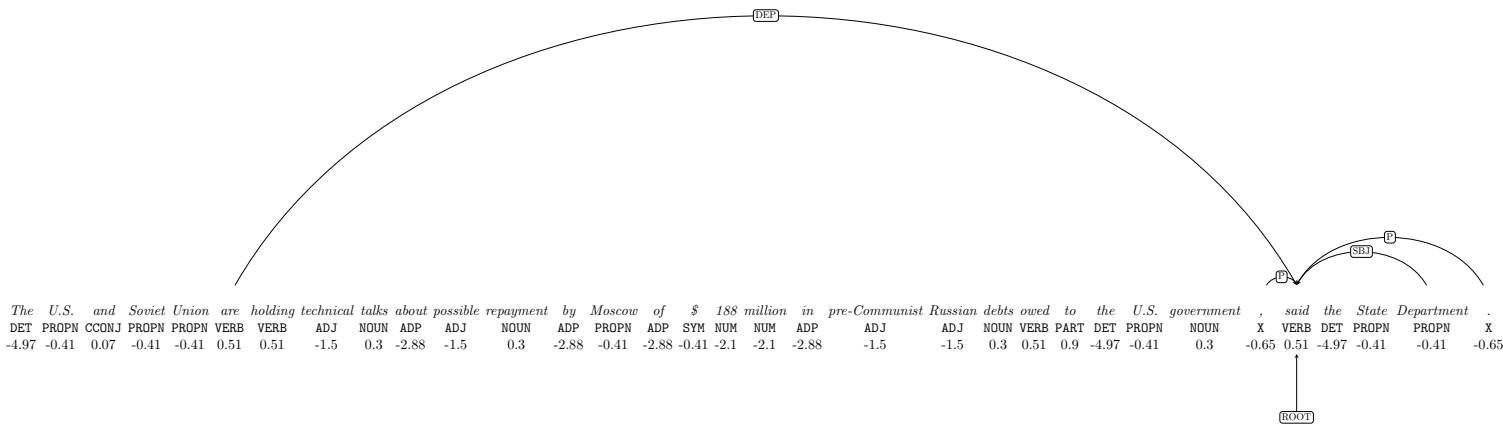


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = -57.47   ldep = -2.0

Reference Sentence  
spearman allwords = 0.0



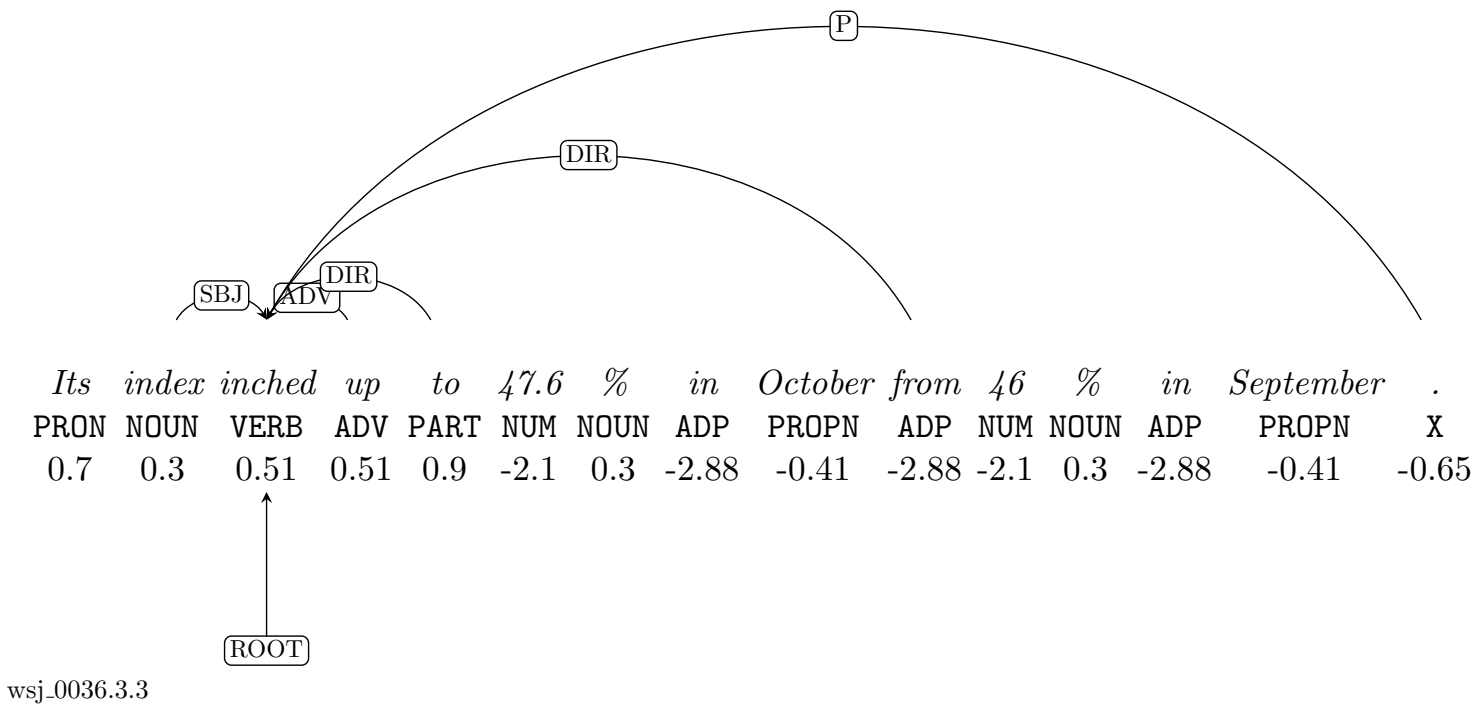
Variant Sentence  
spearman allwords = -0.87



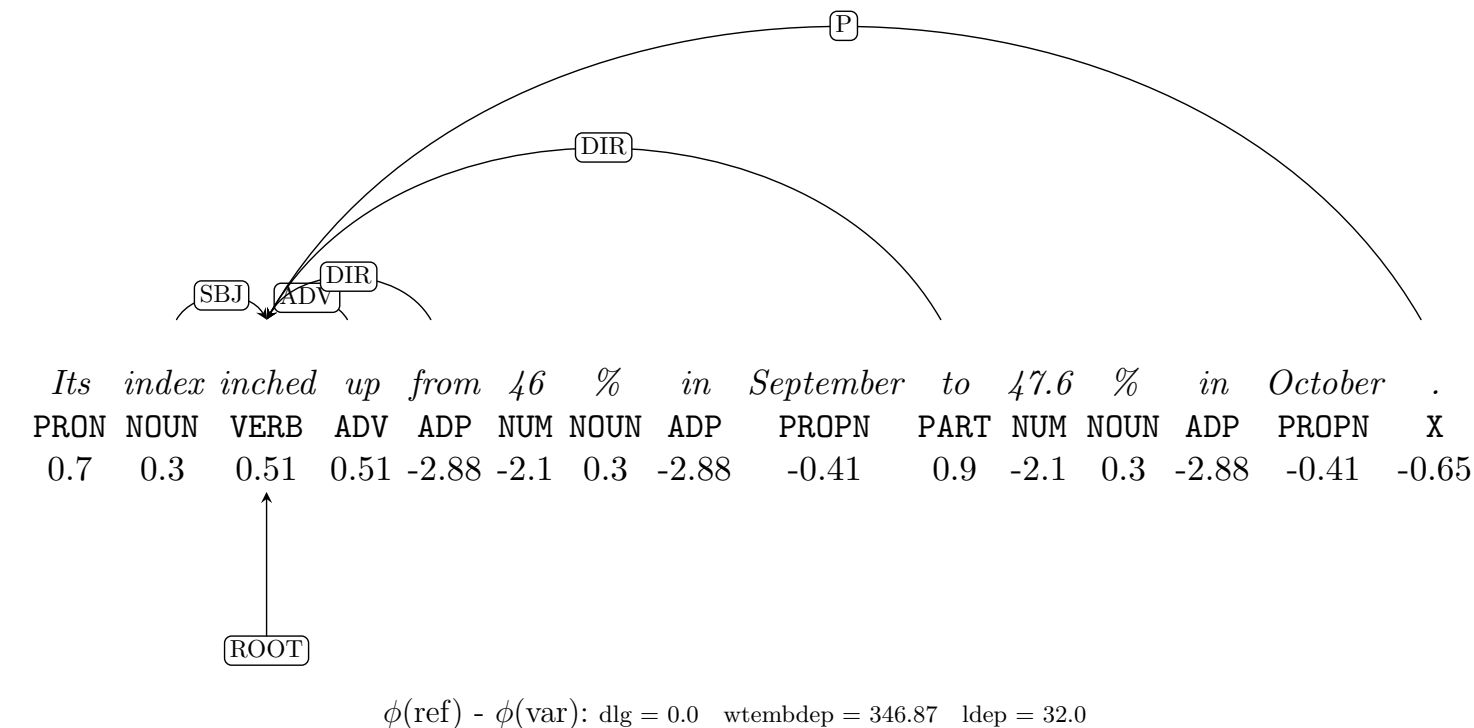
$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = 197.48 ldep = 0.0

wsj\_0036.3.0

Reference Sentence  
spearman allwords = 0.54

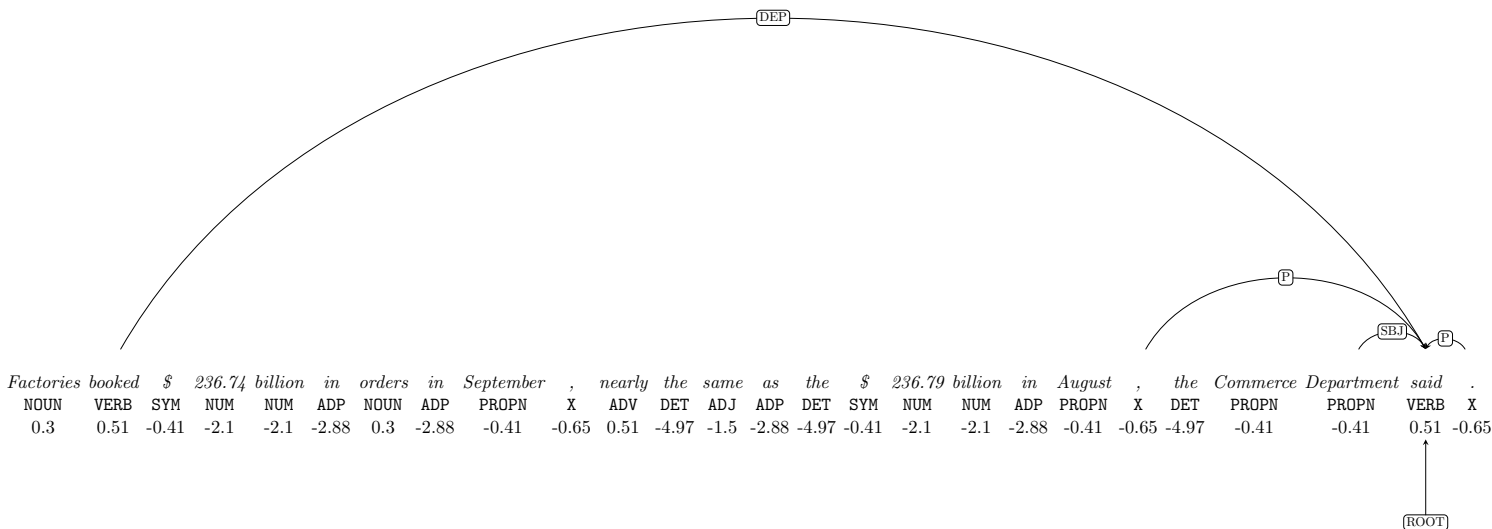


Variant Sentence  
spearman allwords = -0.02



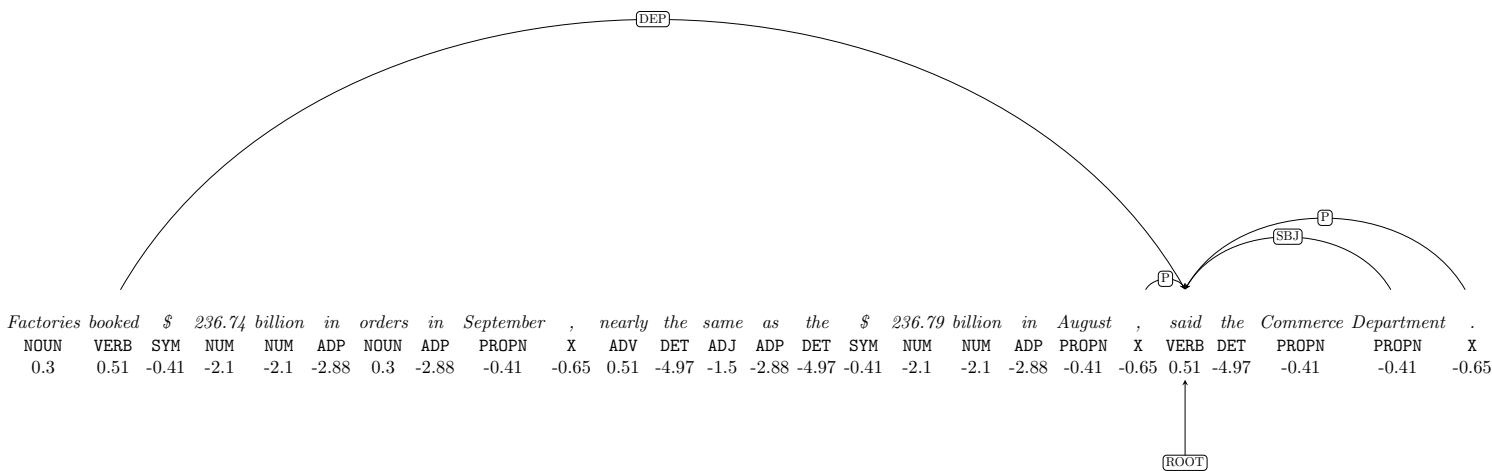
wsj\_0036.6.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0036.6.1

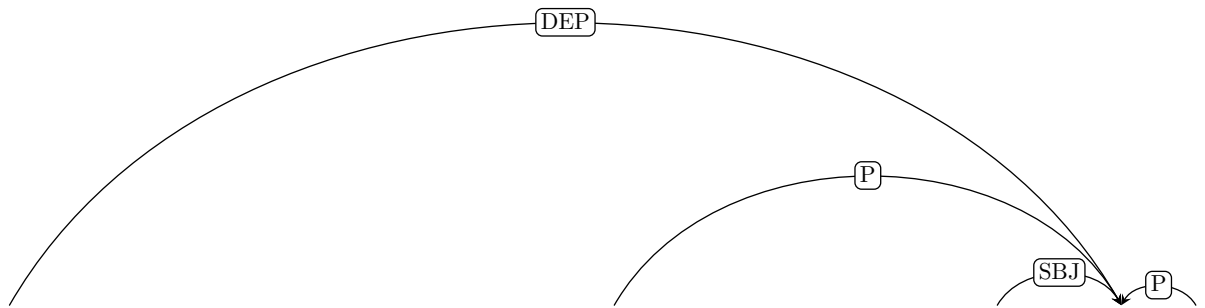
Variant Sentence  
spearman allwords = -0.87



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = -8.74 ldep = 4.0

wsj\_0036.30.0

Reference Sentence  
spearman allwords = 0.0



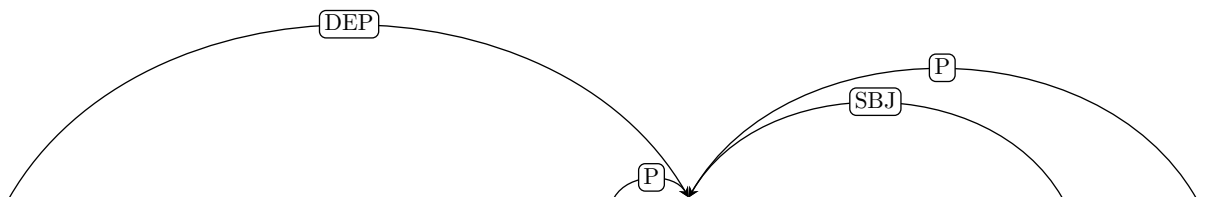
*Shipments have been relatively level since January , the Commerce Department noted .*

NOUN	VERB	VERB	ADV	ADJ	ADP	PROPN	X	DET	PROPN	PROPN	VERB	X
0.3	0.51	0.51	0.51	-1.5	-2.88	-0.41	-0.65	-4.97	-0.41	-0.41	0.51	-0.65

ROOT

wsj\_0036.30.1

Variant Sentence  
spearman allwords = -0.87



*Shipments have been relatively level since January , noted the Commerce Department .*

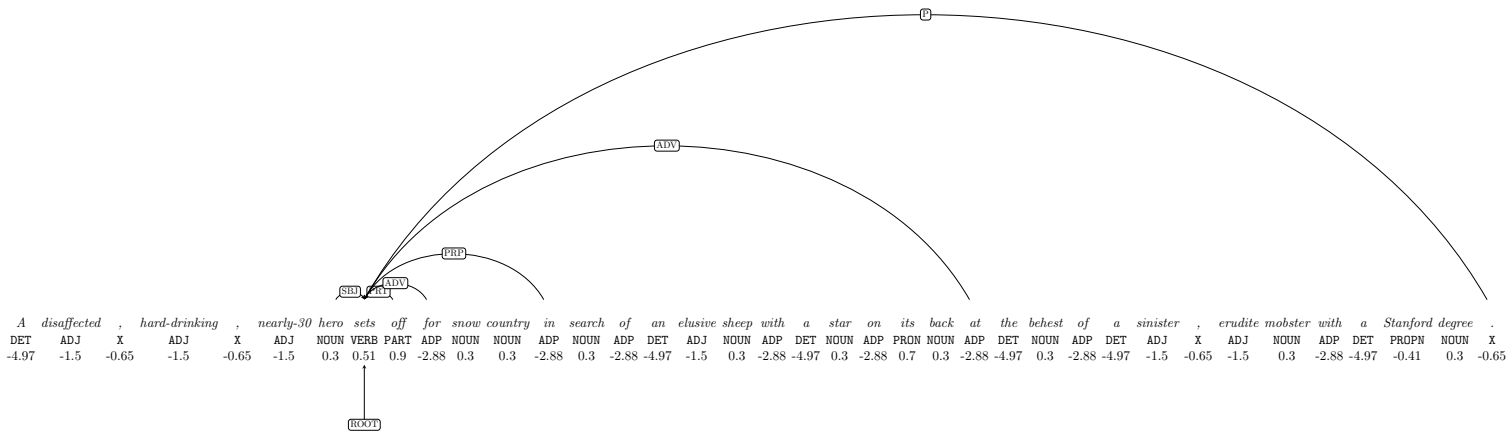
NOUN	VERB	VERB	ADV	ADJ	ADP	PROPN	X	VERB	DET	PROPN	PROPN	X
0.3	0.51	0.51	0.51	-1.5	-2.88	-0.41	-0.65	0.51	-4.97	-0.41	-0.41	-0.65

ROOT

$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 38.51   ldep = -3.0

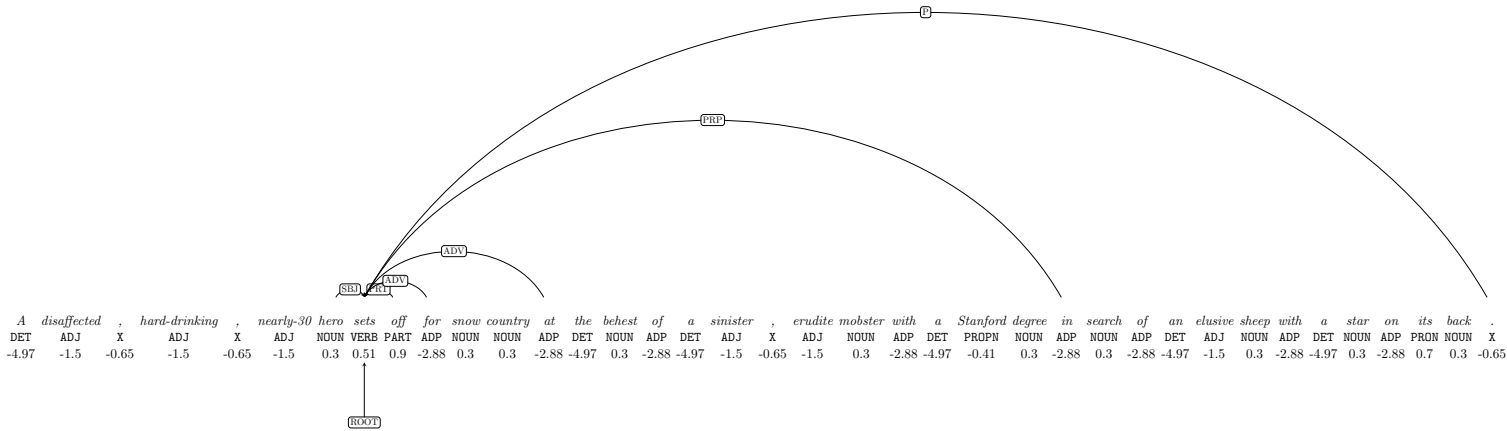
wsj\_0037.12.0

Reference Sentence  
spearman allwords = 0.15



wsj\_0037.12.1

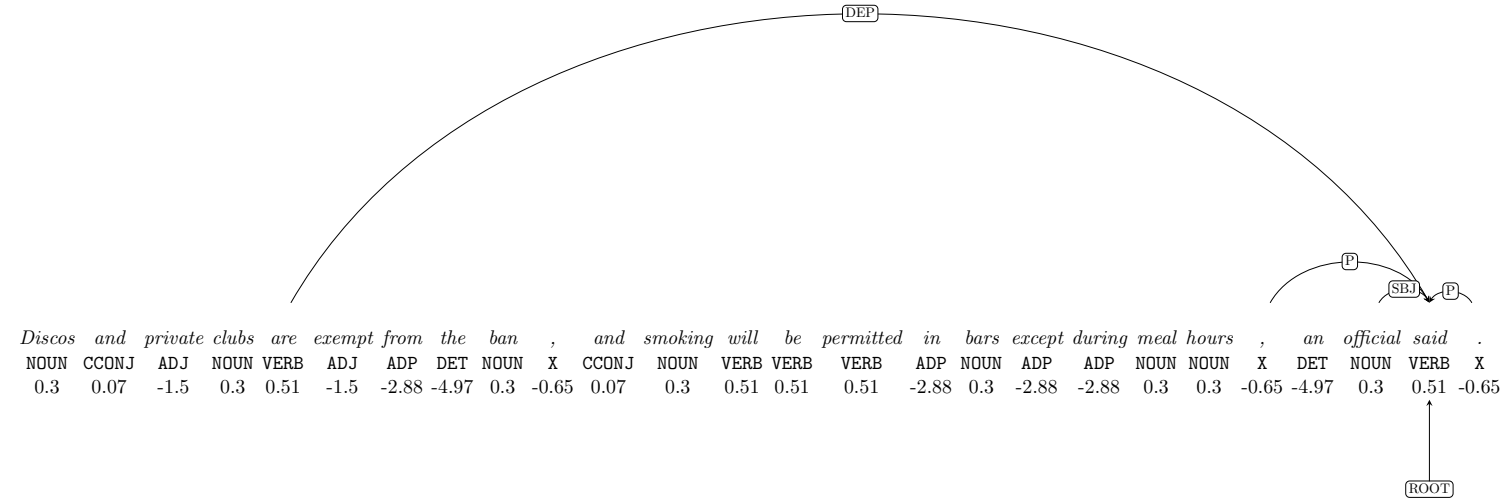
Variant Sentence  
spearman allwords = -0.01



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 0.0   wtembdep = -20.02   ldep = 0.0

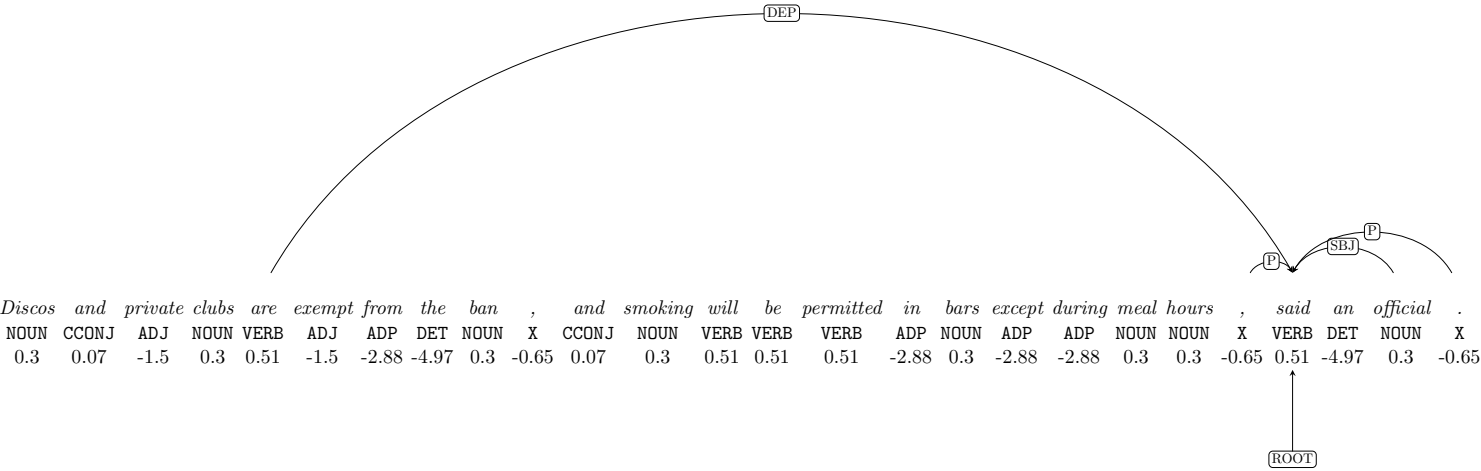
wsj\_0037.39.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0037.39.1

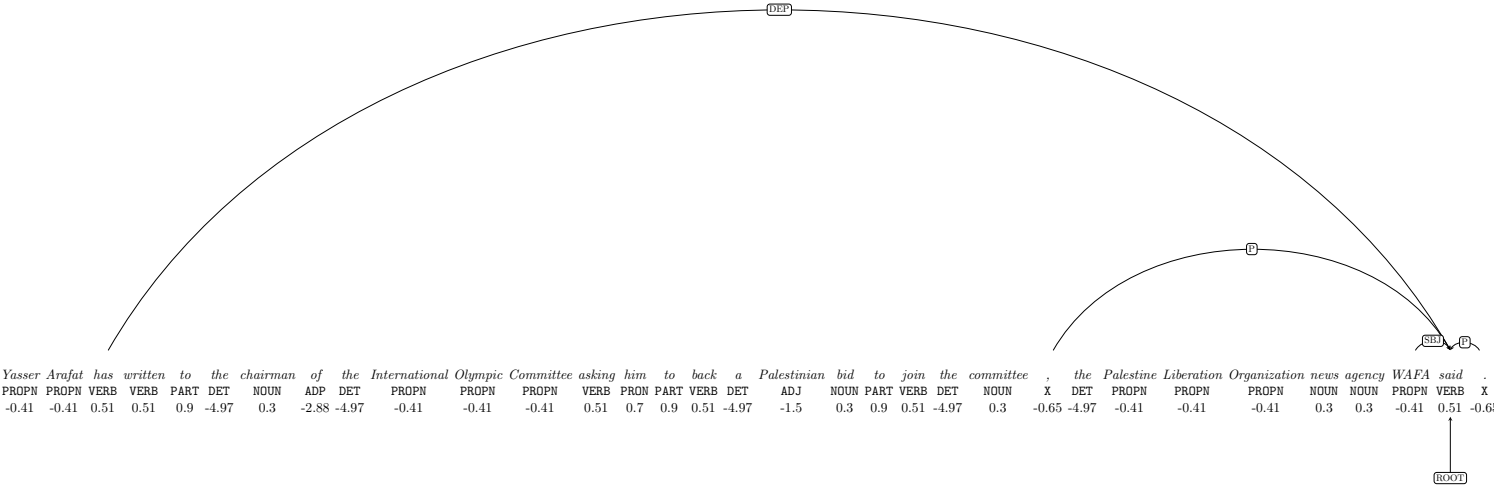
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = 38.18 ldep = -2.0

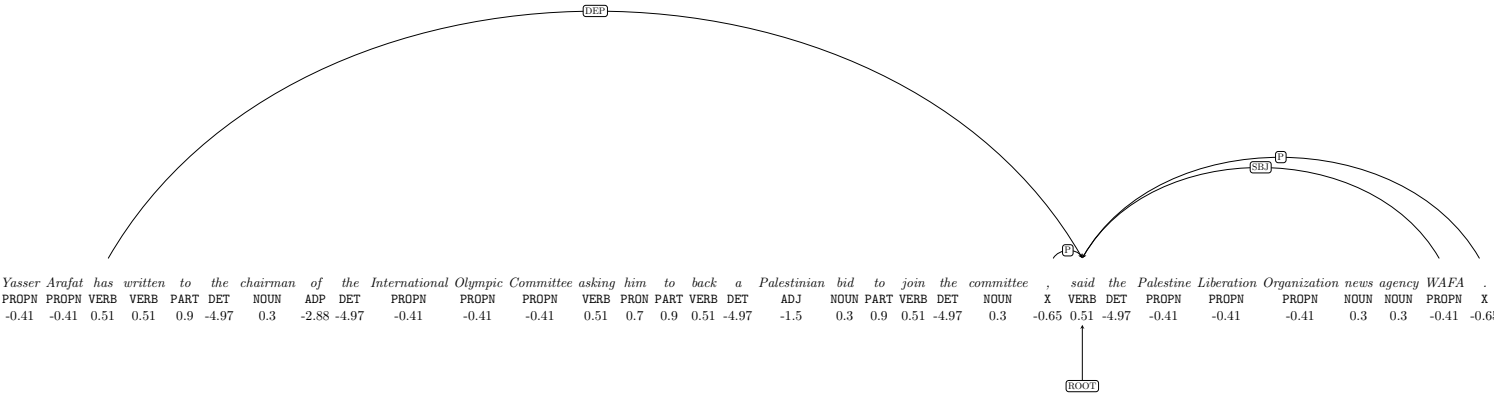
wsj\_0037.52.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0037.52.1

Variant Sentence  
spearman allwords = -0.66



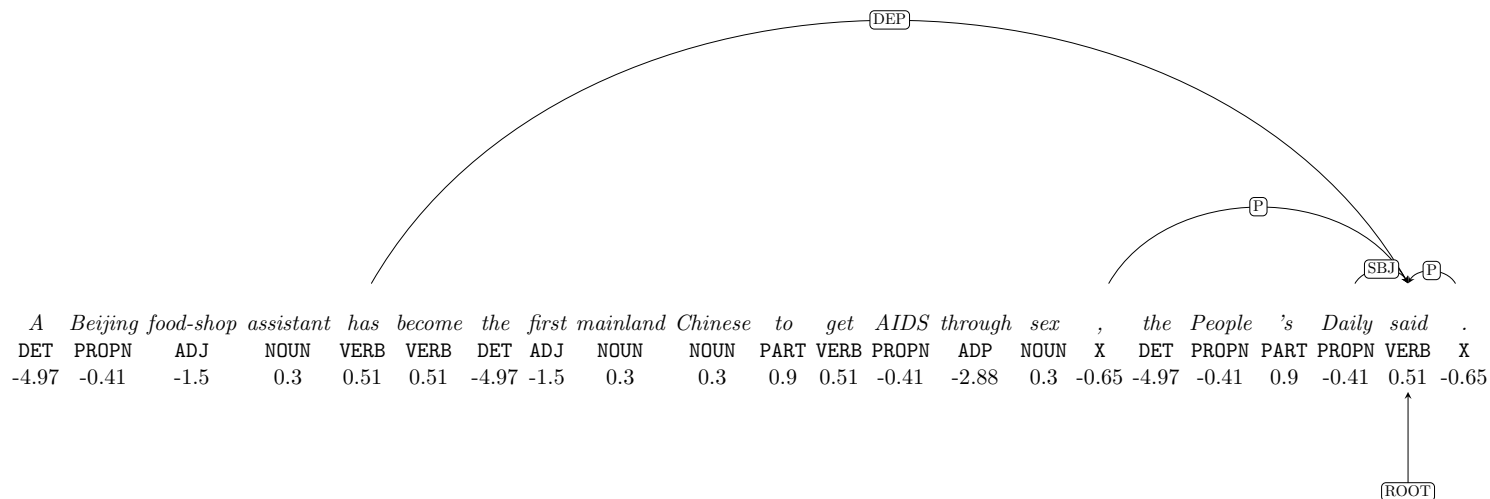


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = -1637.9   ldep = -2.0

wsj\_0037.55.0

### Reference Sentence

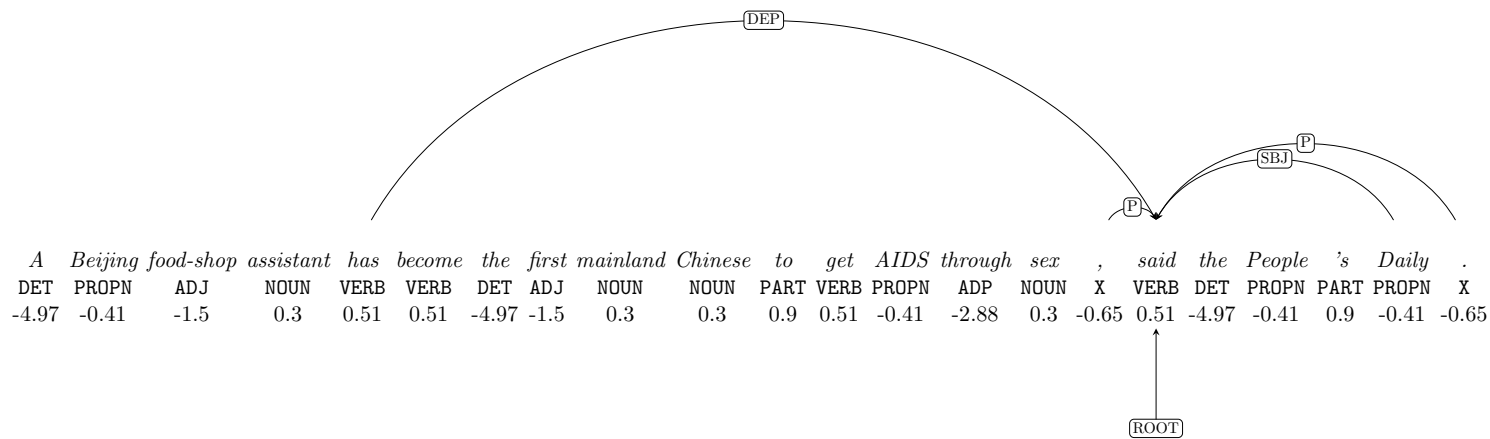
spearman allwords = 0.0



wsj\_0037.55.1

### Variant Sentence

spearman allwords = -0.63

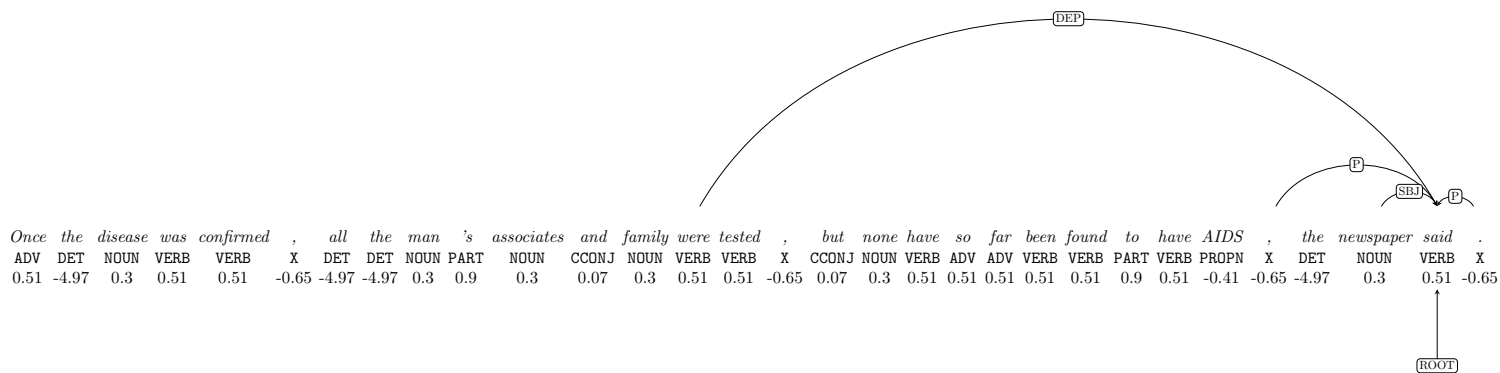


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = -25.93   ldep = -4.0

wsj\_0037.57.0

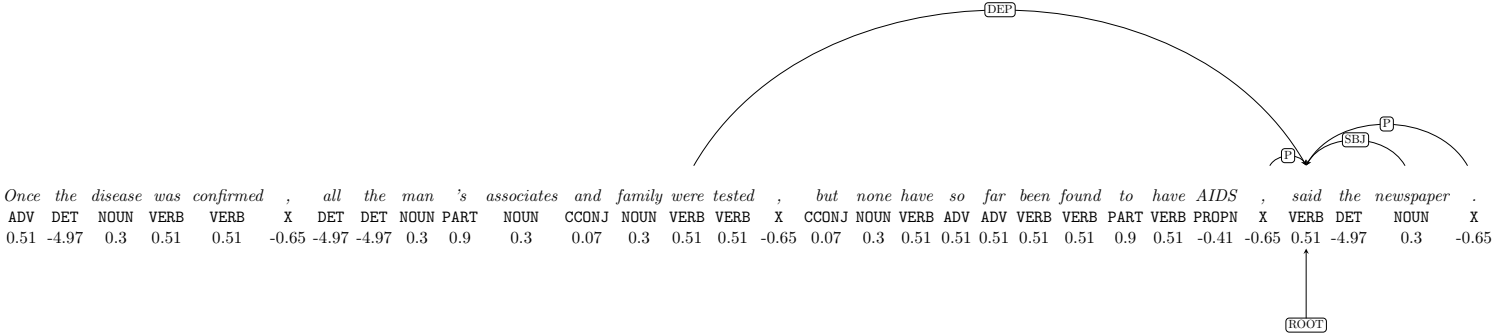
### Reference Sentence

spearman allwords = 0.0



wsj\_0037.57.1

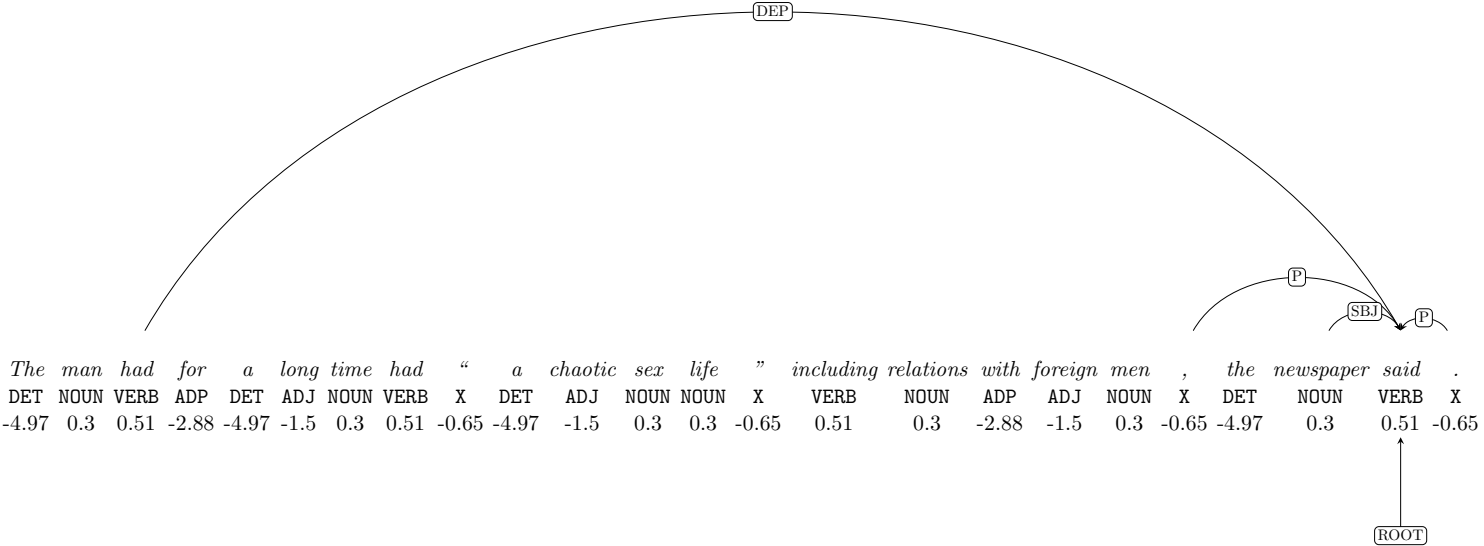
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = 80.48 ldep = 2.0

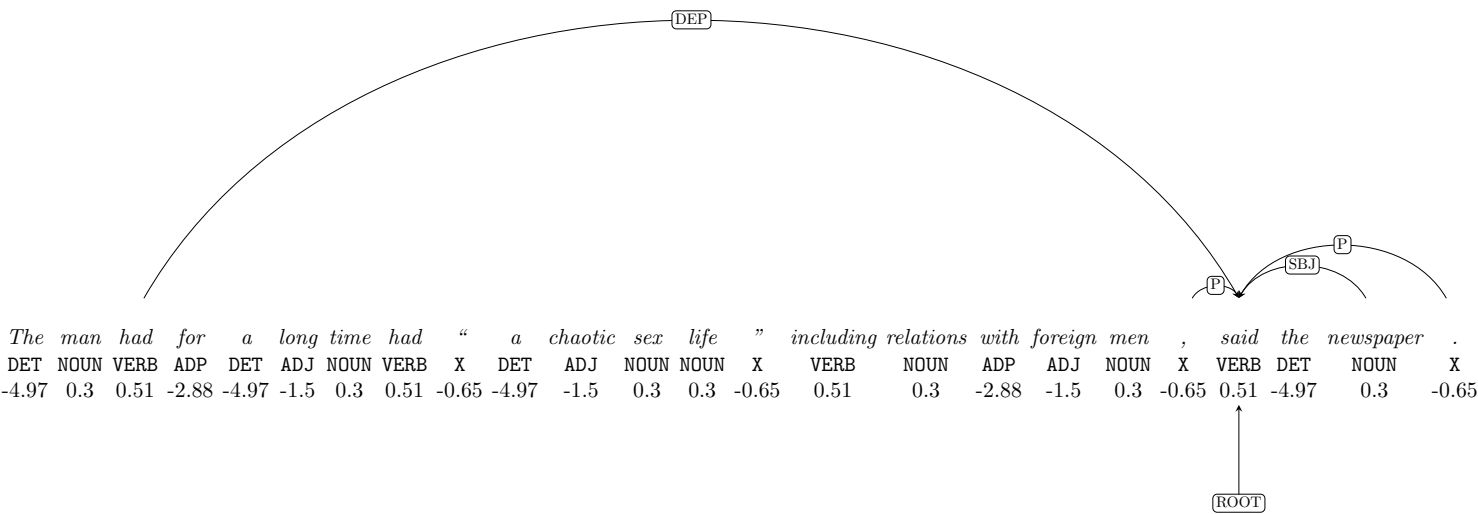
wsj\_0037.58.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0037.58.1

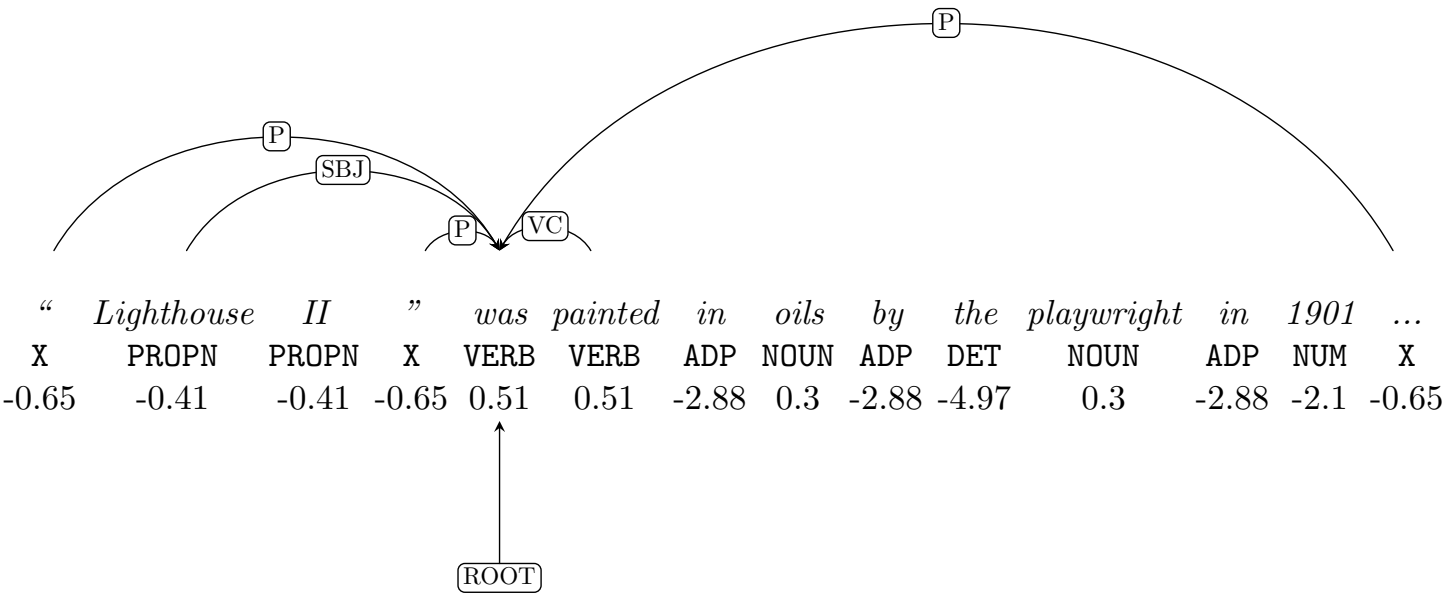
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 84.42   ldep = -18.0

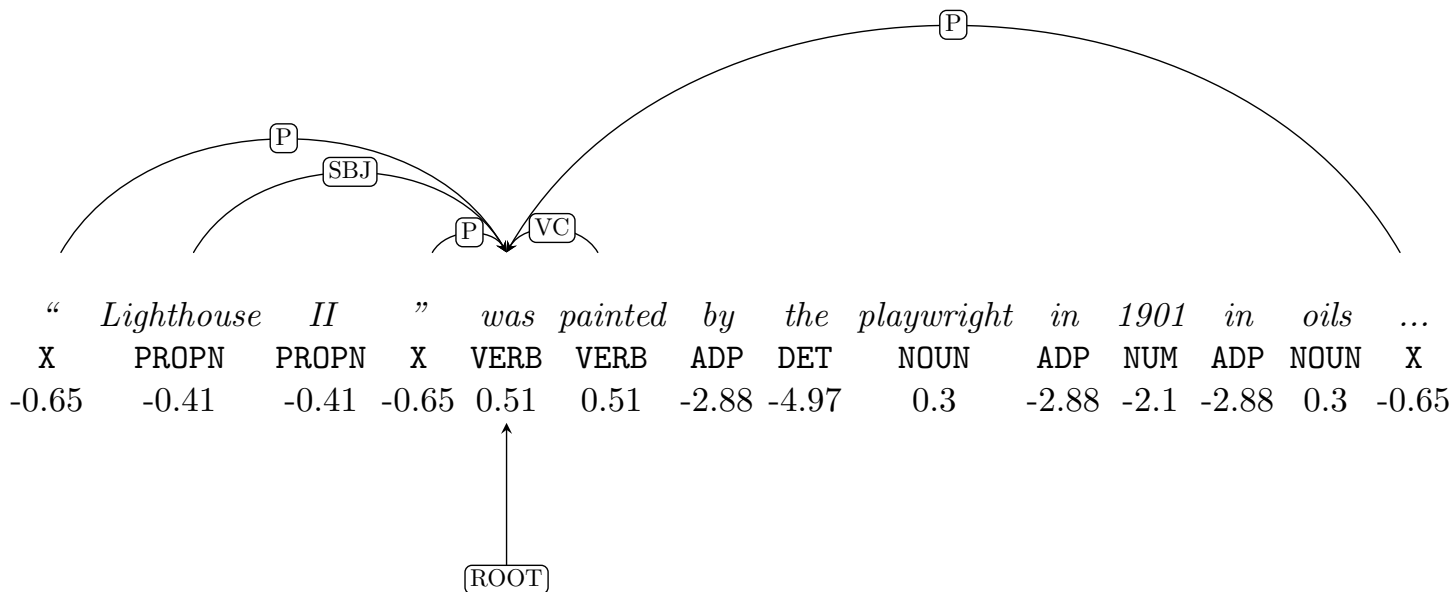
wsj\_0037.69.0

Reference Sentence  
spearman allwords = 0.43



wsj\_0037.69.5

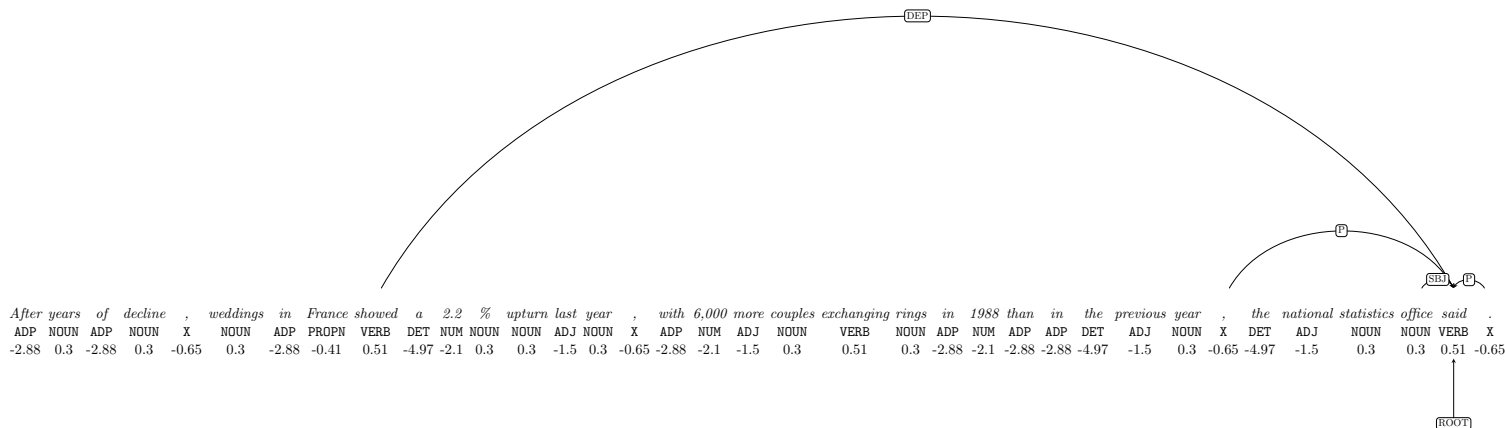
Variant Sentence  
spearman allwords = 0.09



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 6.63   ldep = 8.0

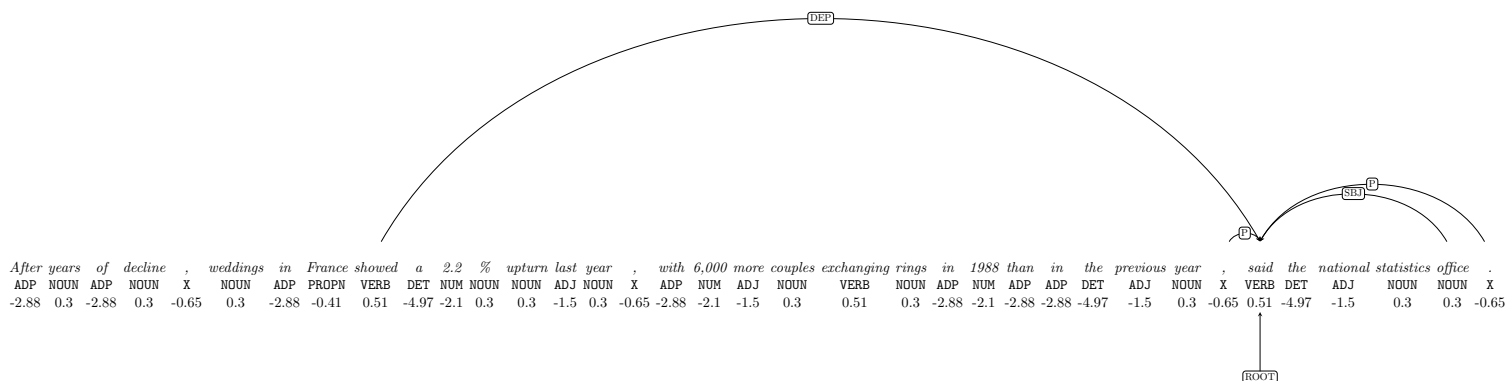
wsj\_0037.70.0

Reference Sentence  
spearman allwords = 0.0



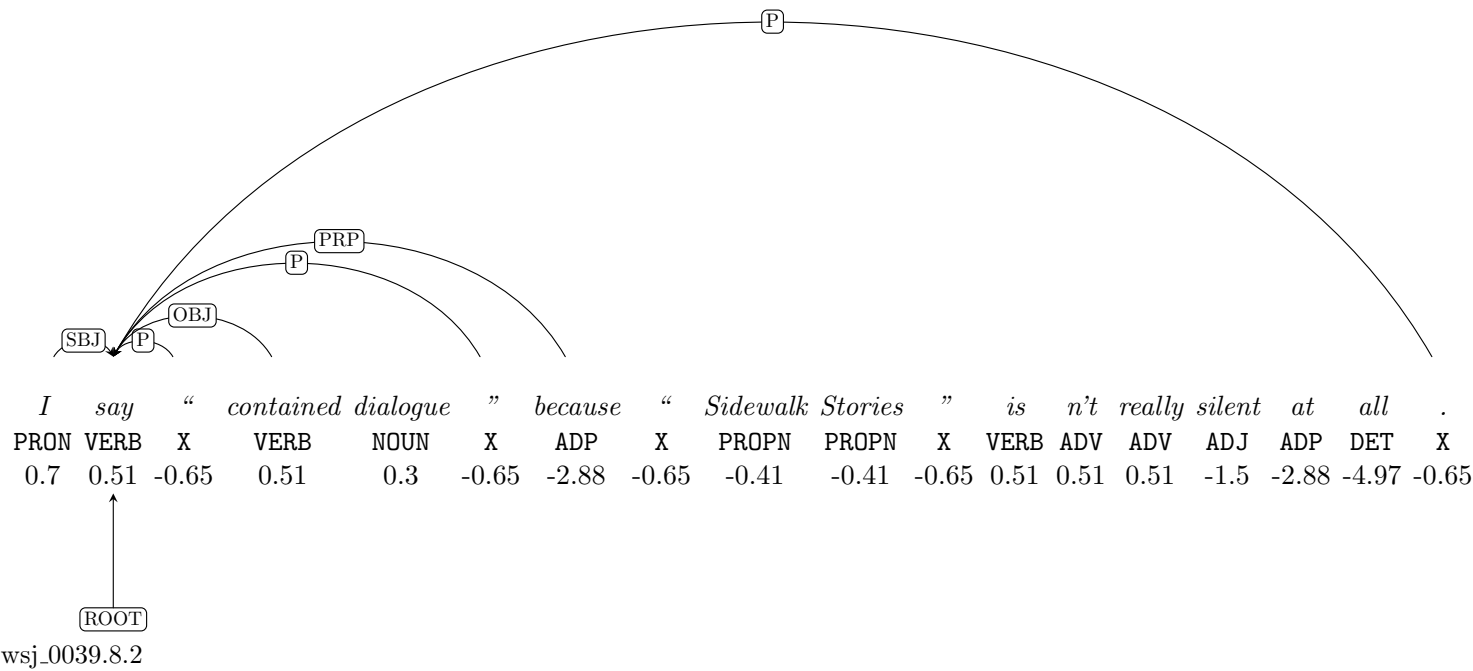
wsj\_0037.70.2

Variant Sentence  
spearman allwords = -0.95

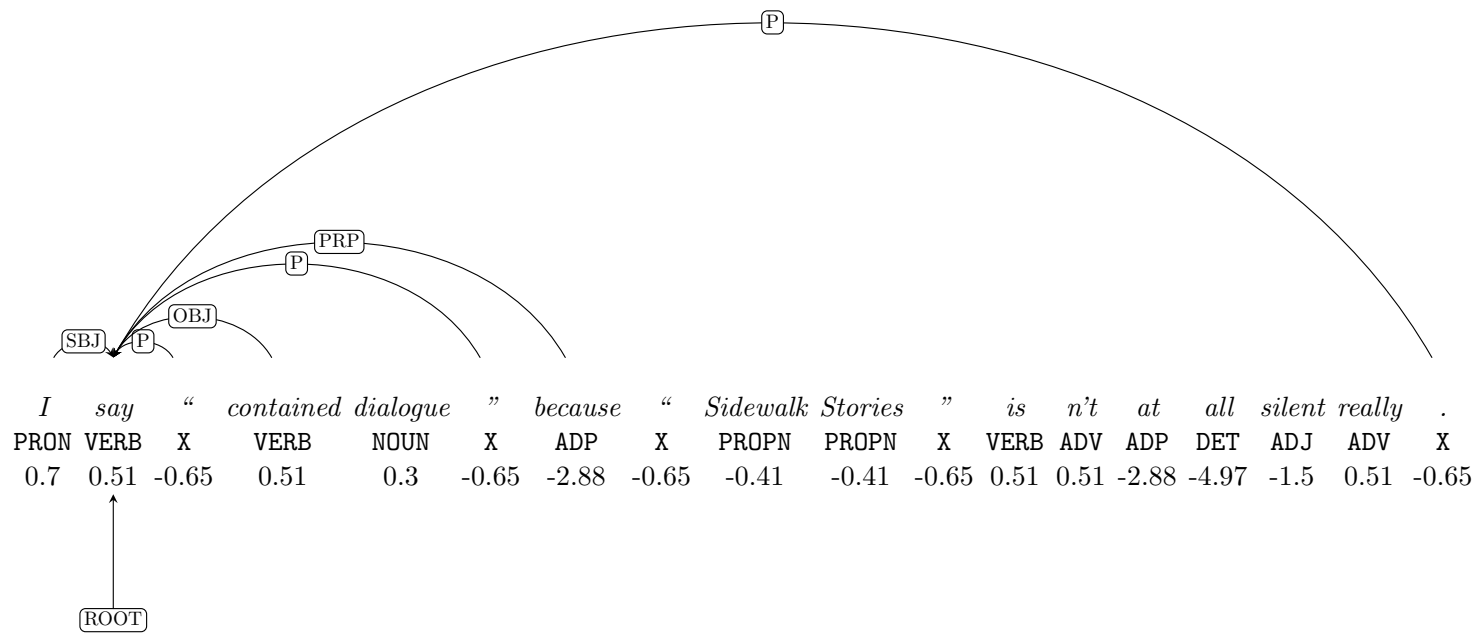


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 214.66   ldep = -1.0

Reference Sentence  
spearman allwords = 0.33

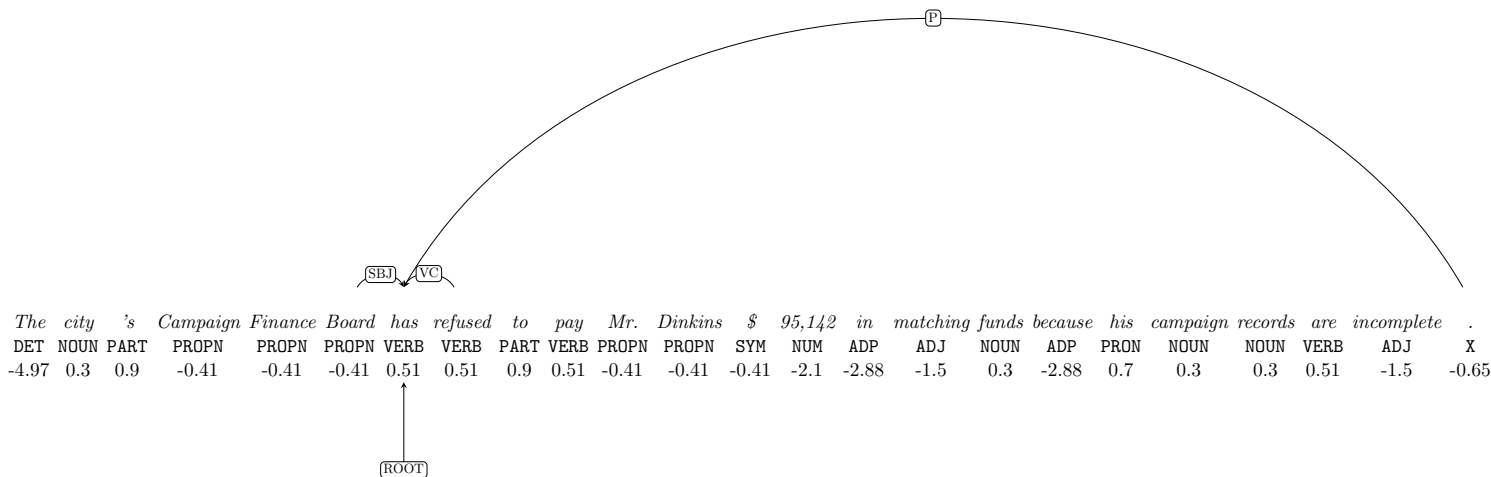


Variant Sentence  
spearman allwords = 0.07



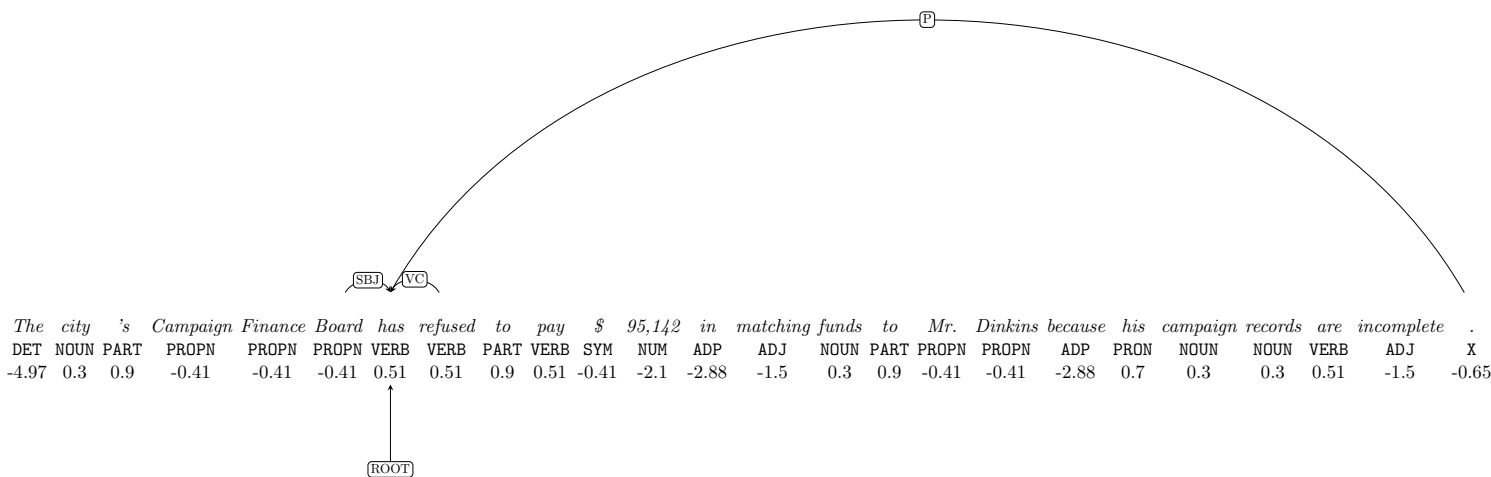
$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 0.0   wtembdep = 73.07   ldep = 28.0

Reference Sentence  
spearman allwords = 0.22



wsj\_0041.30.1

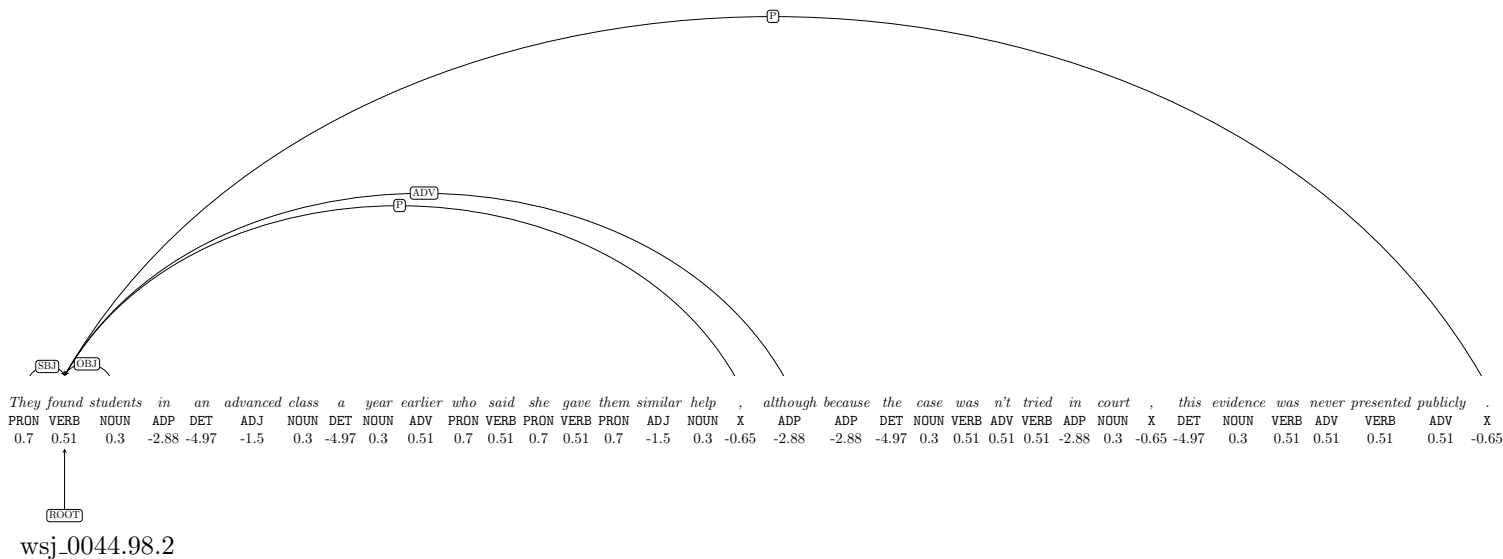
Variant Sentence  
spearman allwords = 0.2



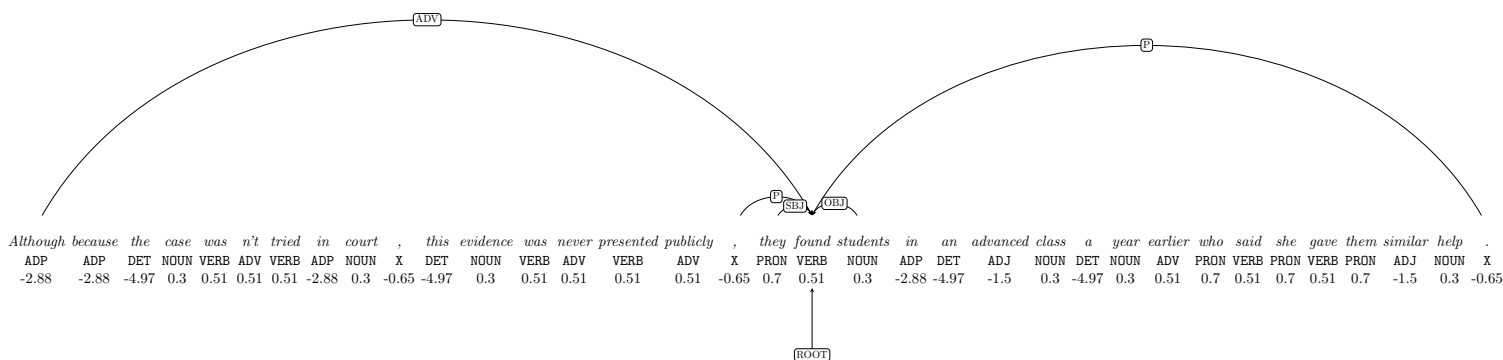
$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 0.0   wtembdep = 275.25   ldep = 3.0

wsj\_0044.98.0

Reference Sentence  
spearman allwords = -0.21



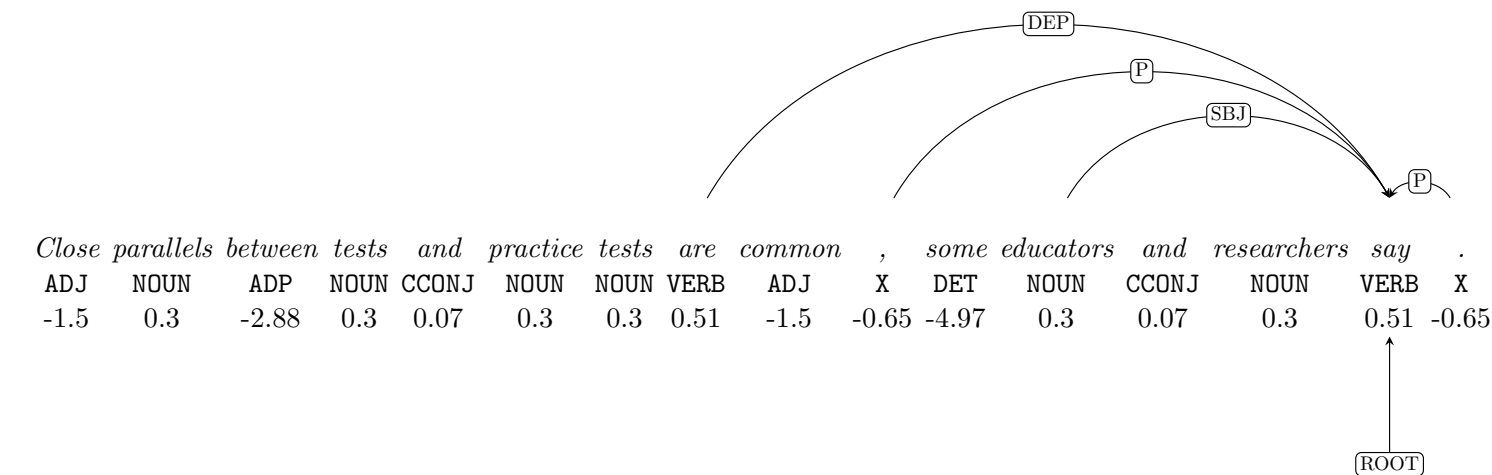
Variant Sentence  
spearman allwords = -0.51



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = -1.0 wtembdep = -248.81 ldep = 31.0

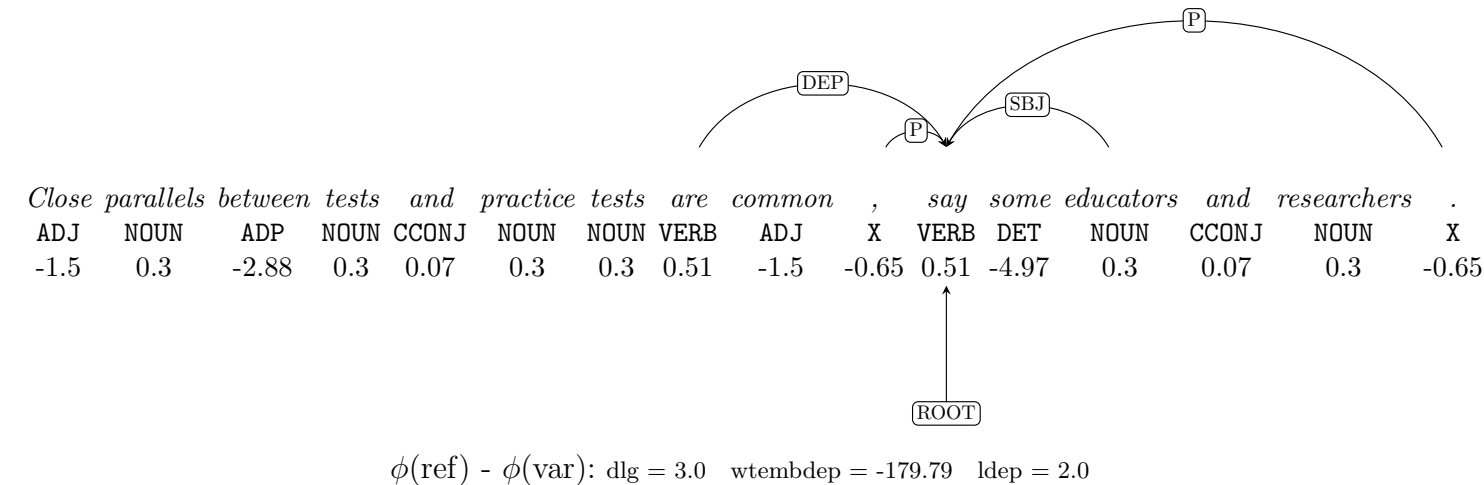
wsj\_0045.8.0

Reference Sentence  
spearman allwords = 0.0



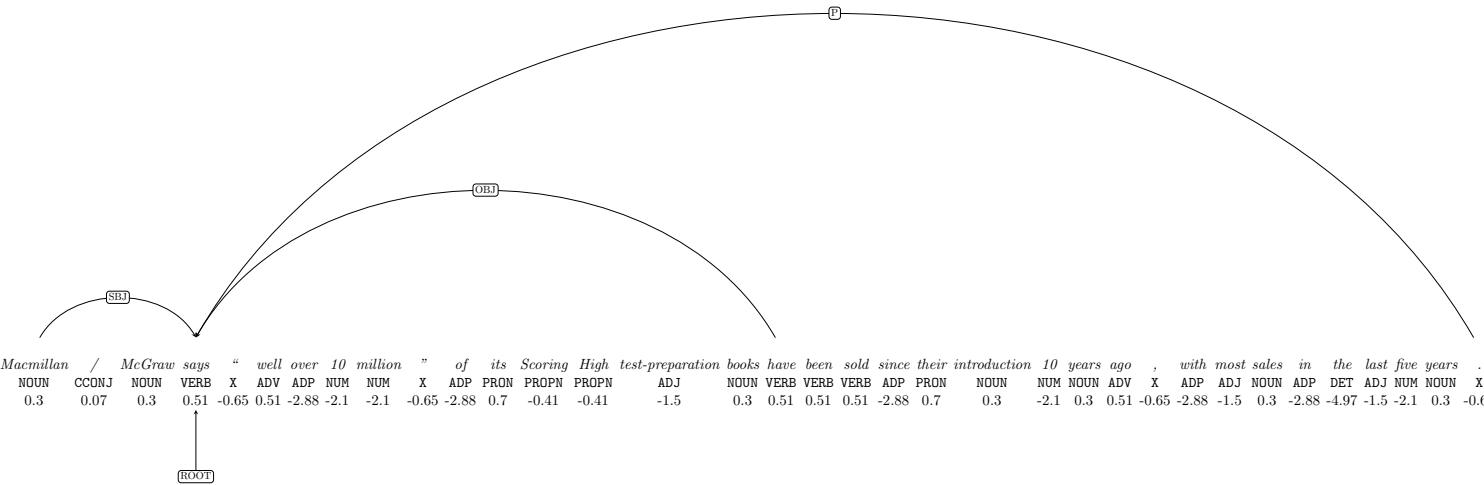
wsj\_0045.8.1

Variant Sentence  
spearman allwords = -0.63



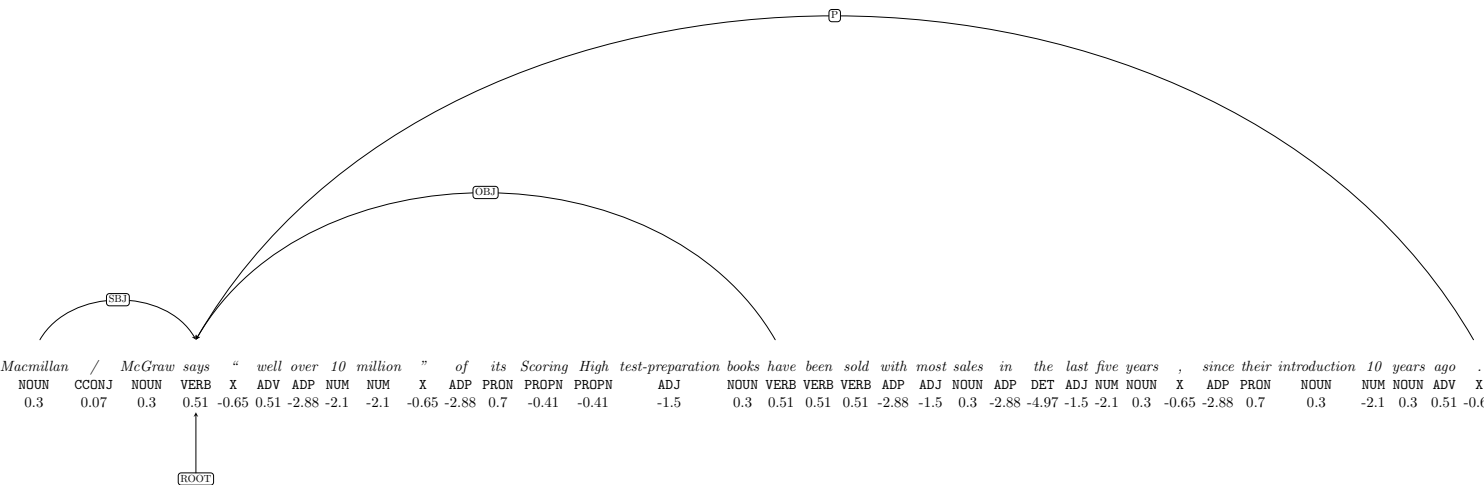
wsj\_0045.18.0

Reference Sentence  
spearman allwords = 0.17



wsj\_0045.18.1

Variant Sentence  
spearman allwords = -0.08

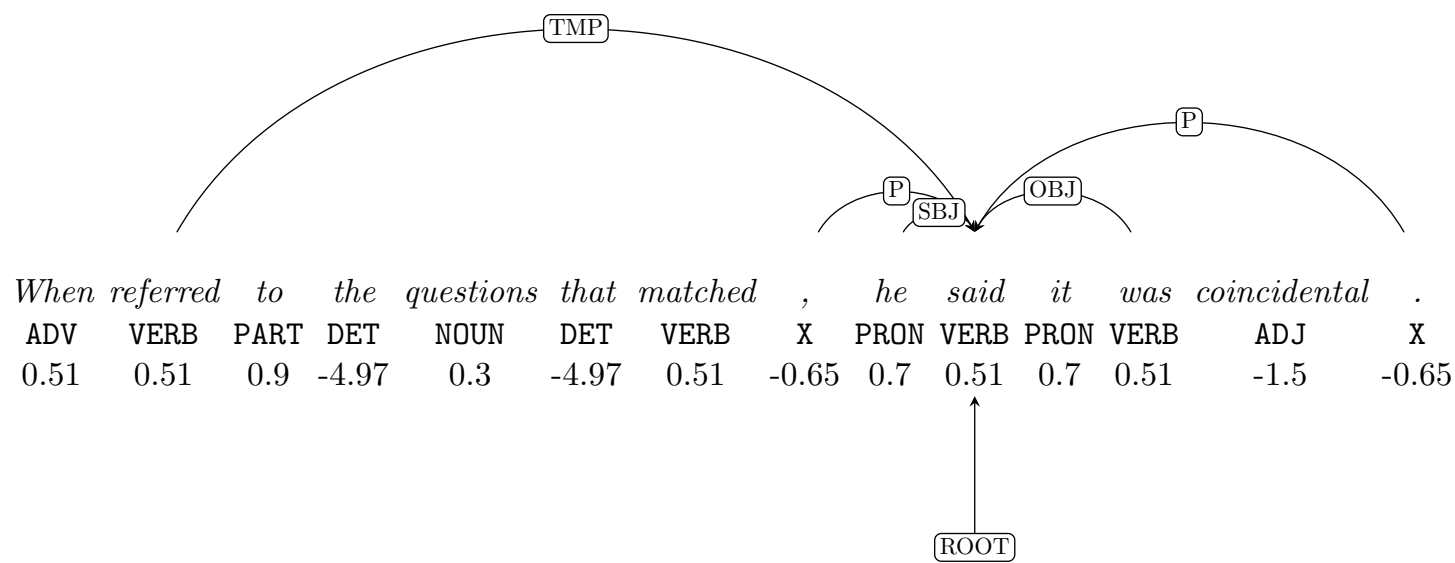


$\phi(\text{ref}) - \phi(\text{var})$ : dlg = -0.0   wtembdep = -474.89   ldep = 4.0



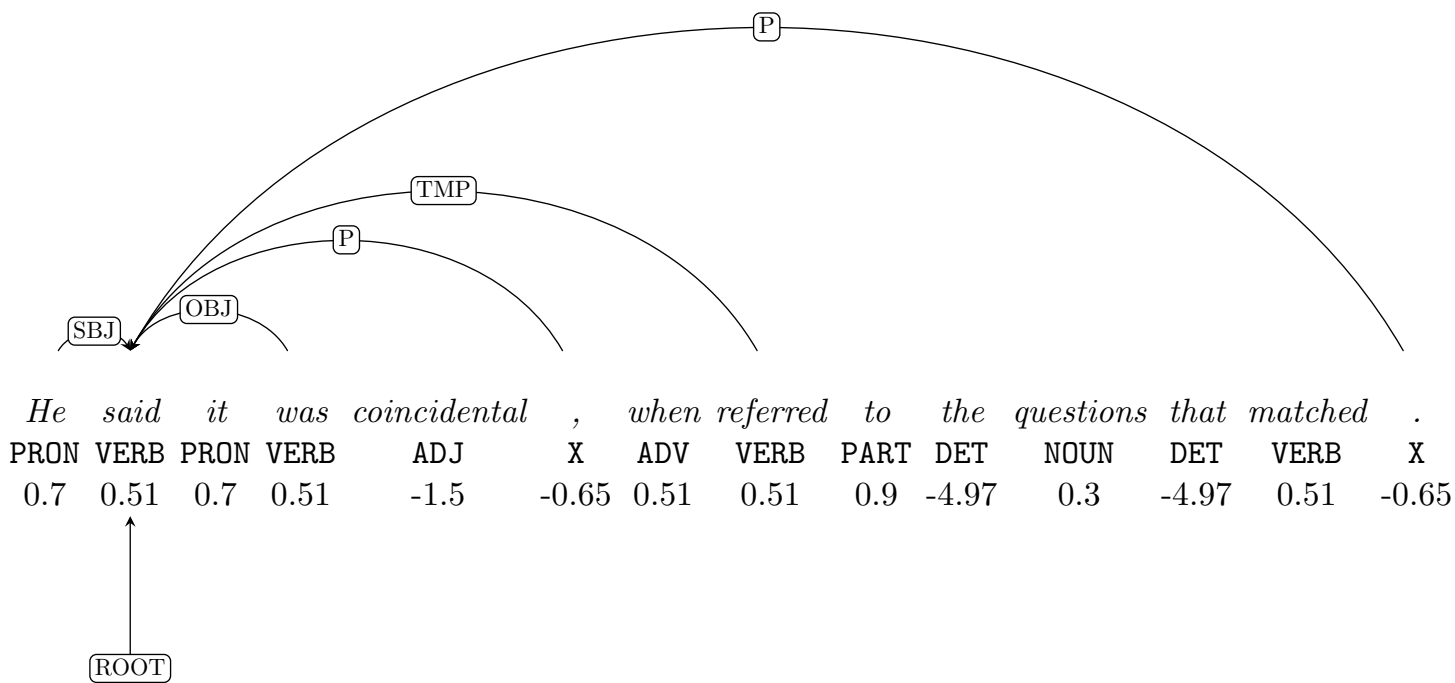
wsj\_0045.24.0

Reference Sentence  
spearman allwords = 1.0



wsj\_0045.24.1

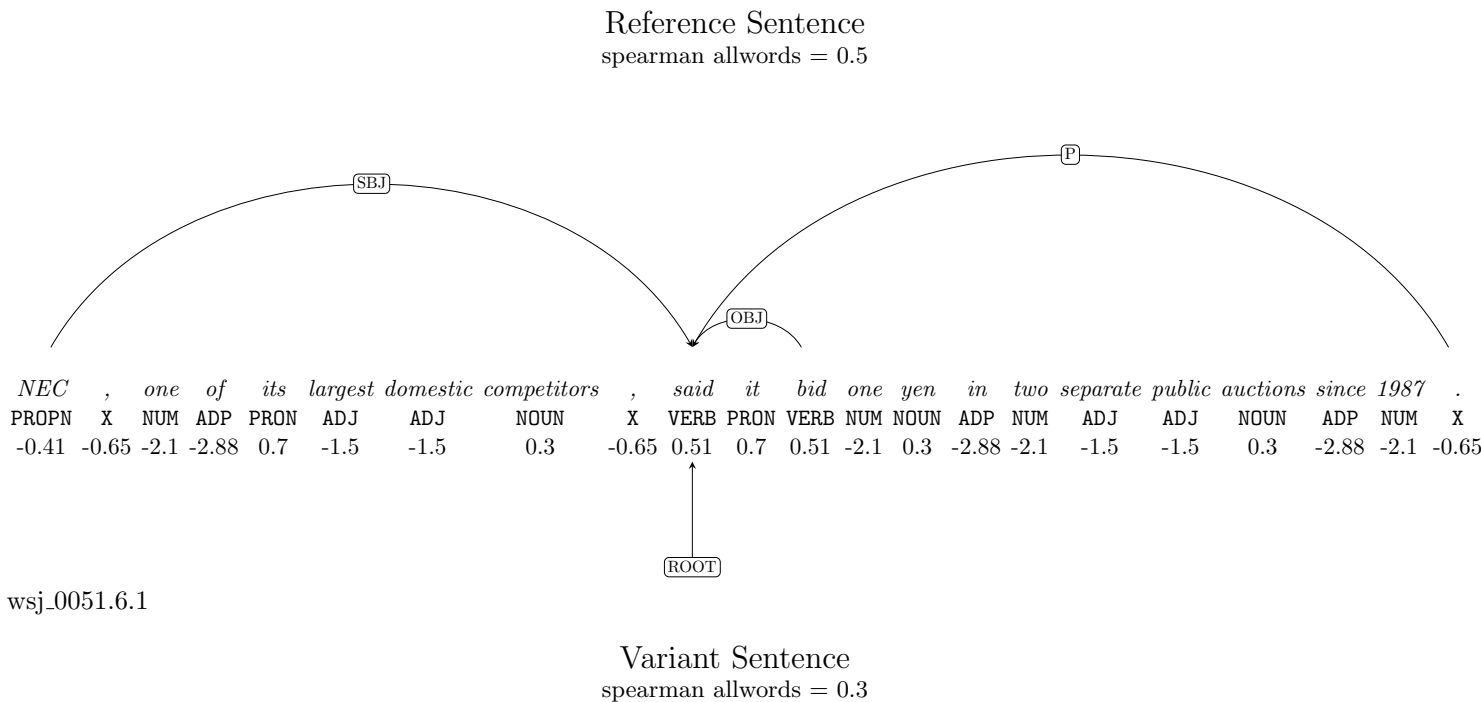
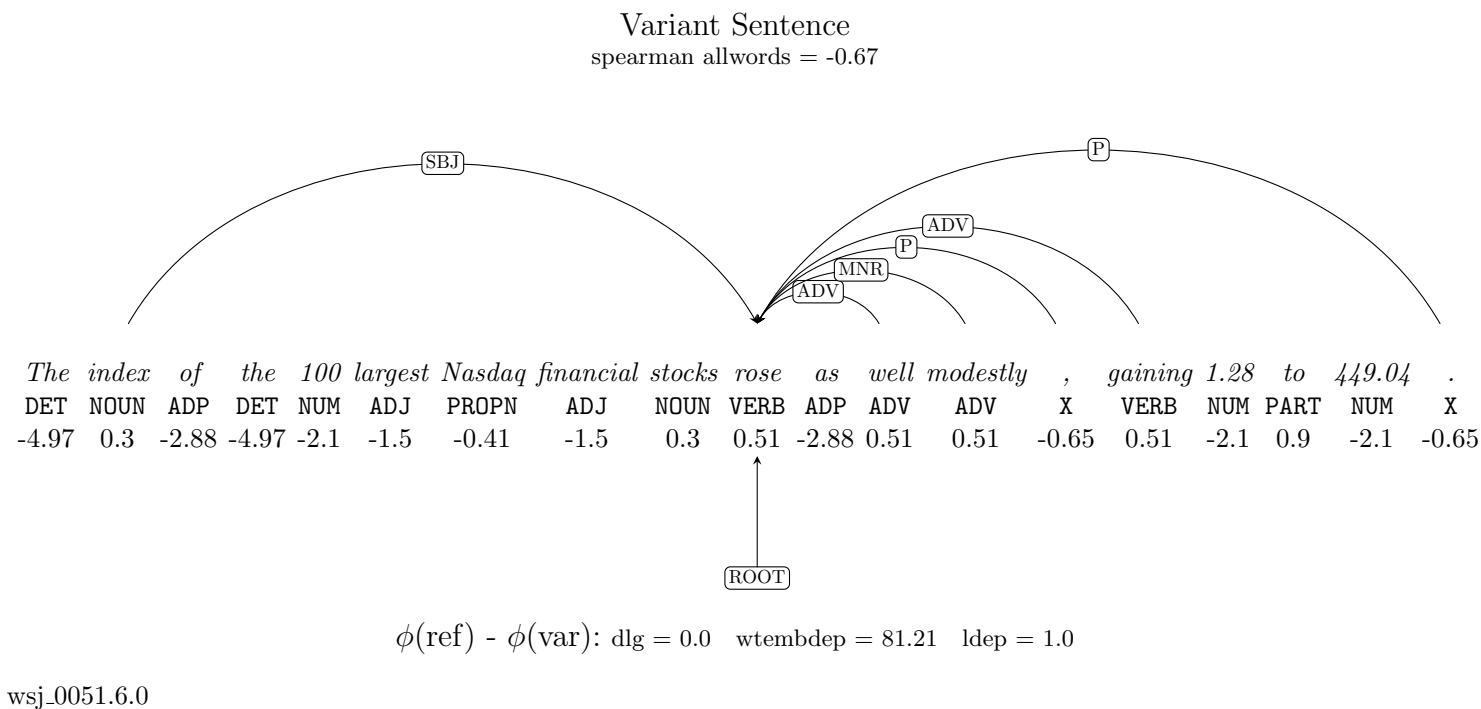
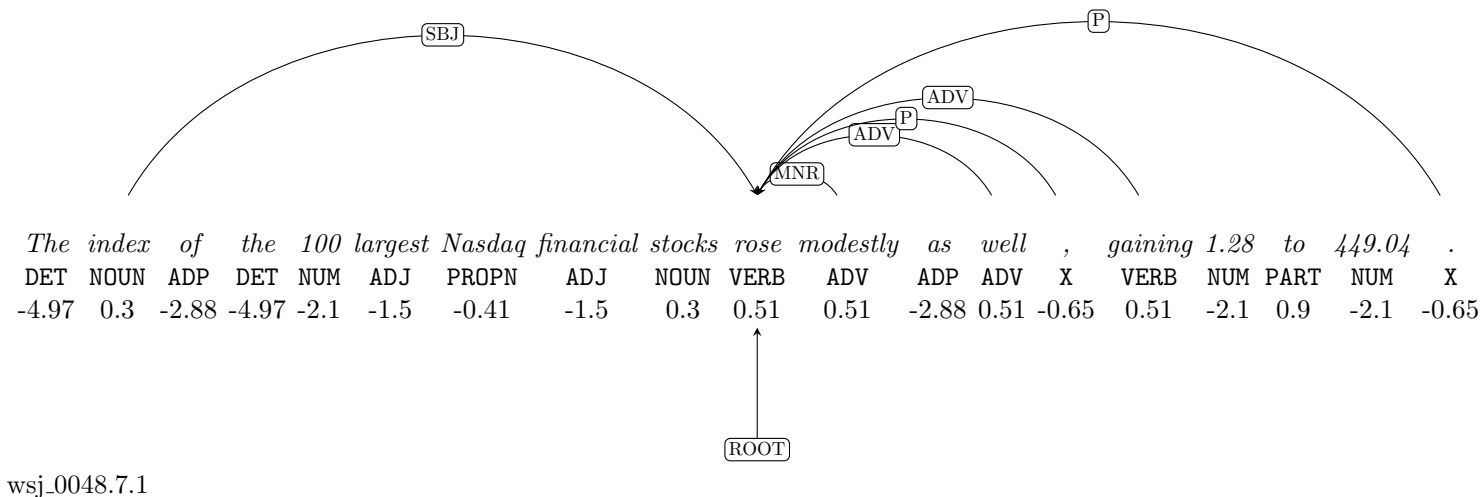
Variant Sentence  
spearman allwords = 0.42

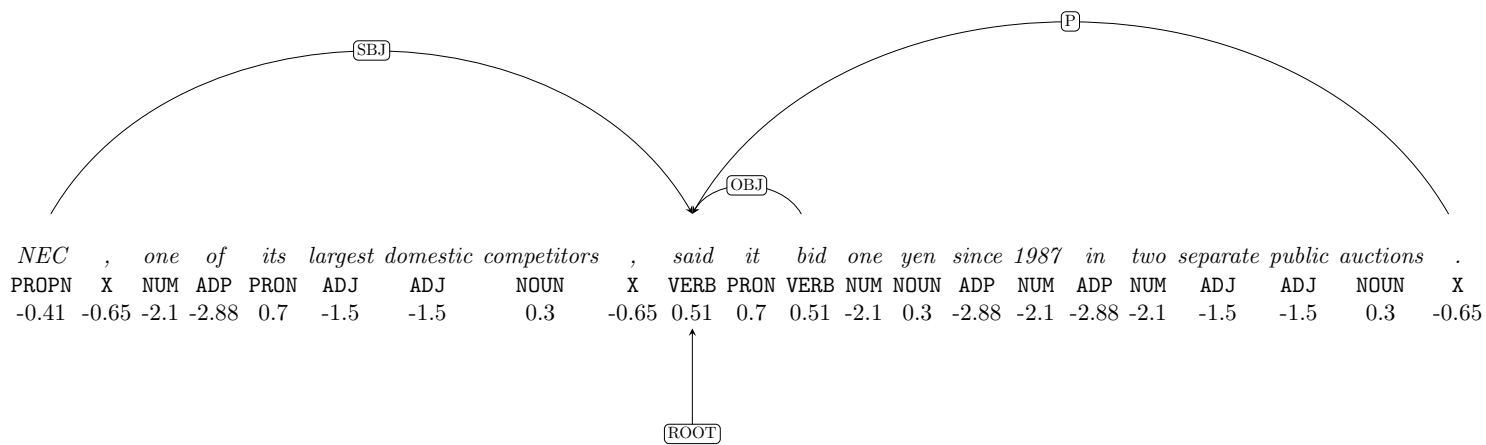


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 72.95   ldep = 5.0

wsj\_0048.7.0

Reference Sentence  
spearman allwords = -0.41

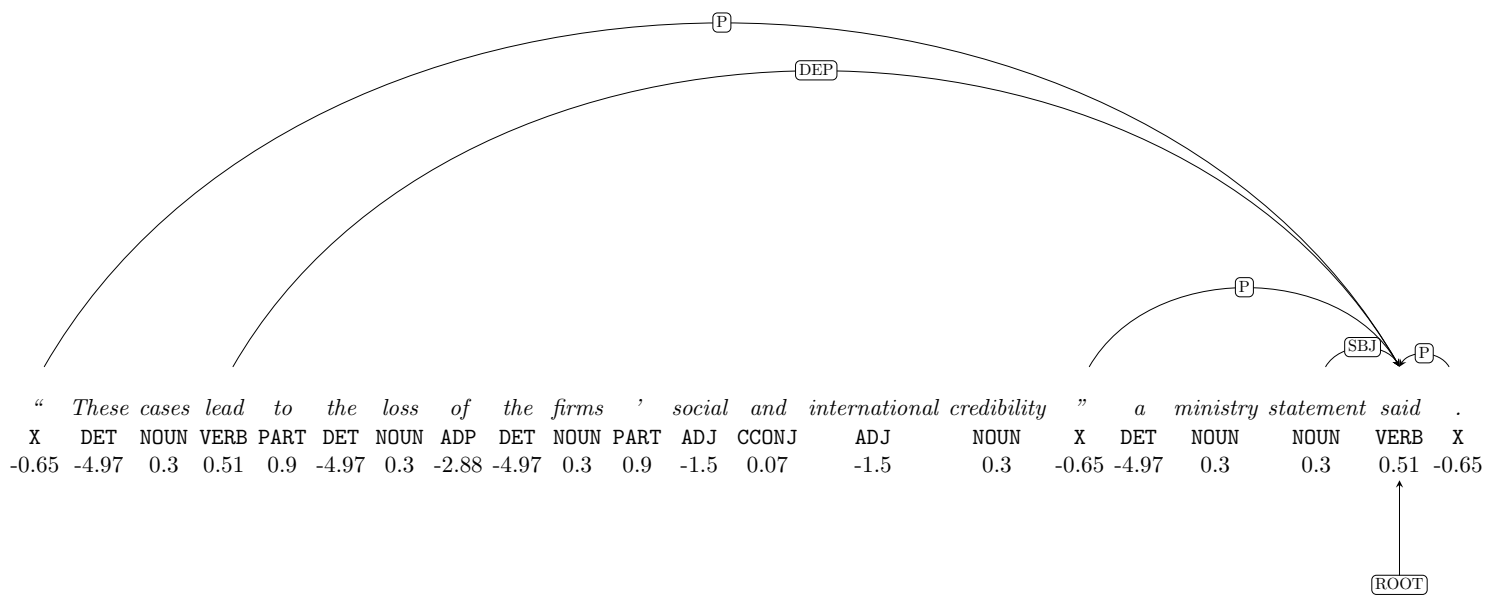




$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 33.21   ldep = -10.0

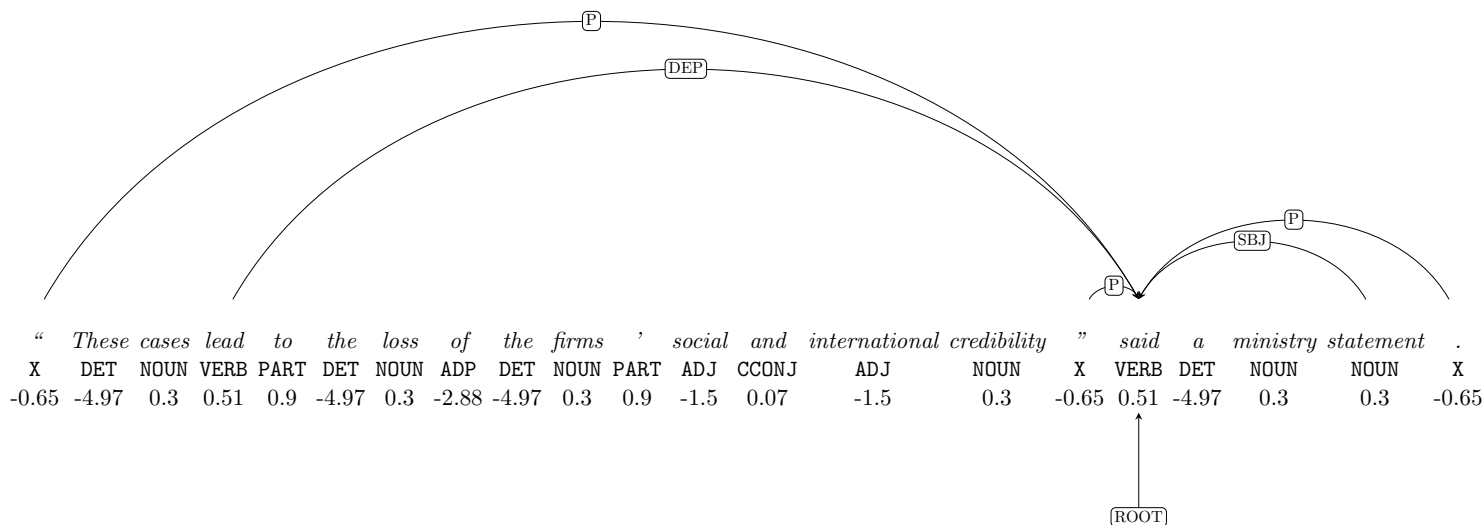
wsj\_0051.10.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0051.10.1

Variant Sentence  
spearman allwords = -0.87

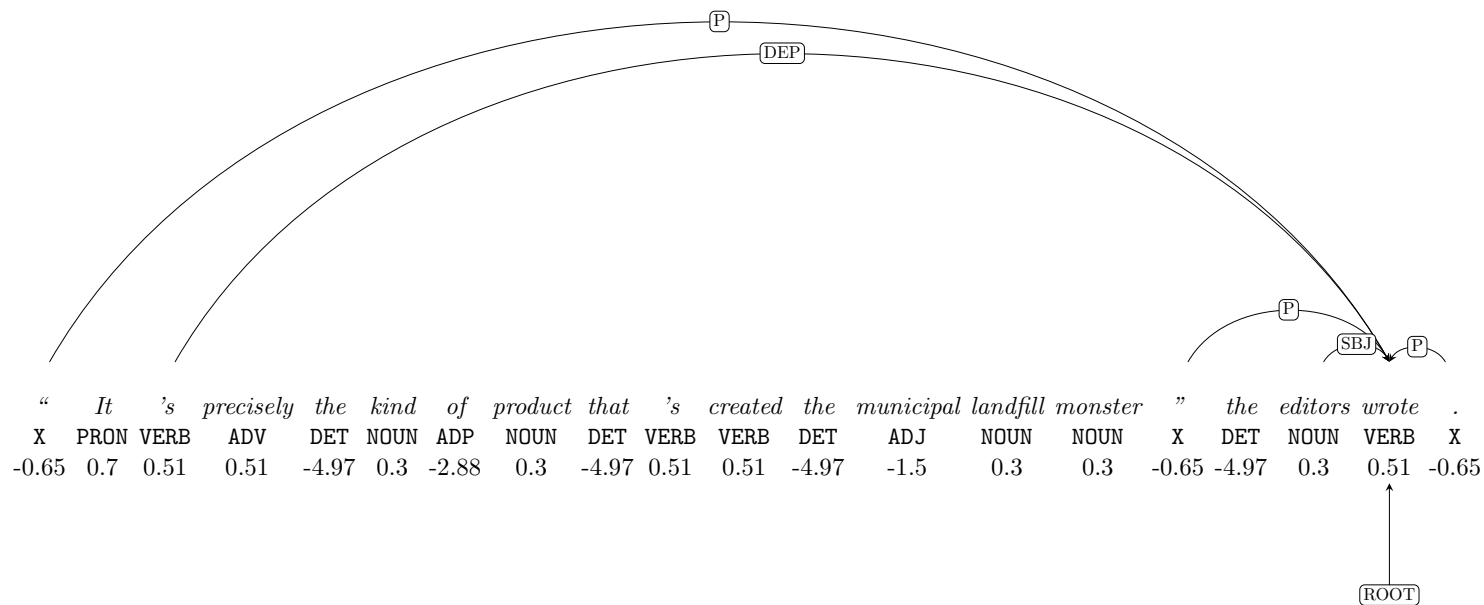


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = -103.13   ldep = 7.0

wsj\_0062.12.0

### Reference Sentence

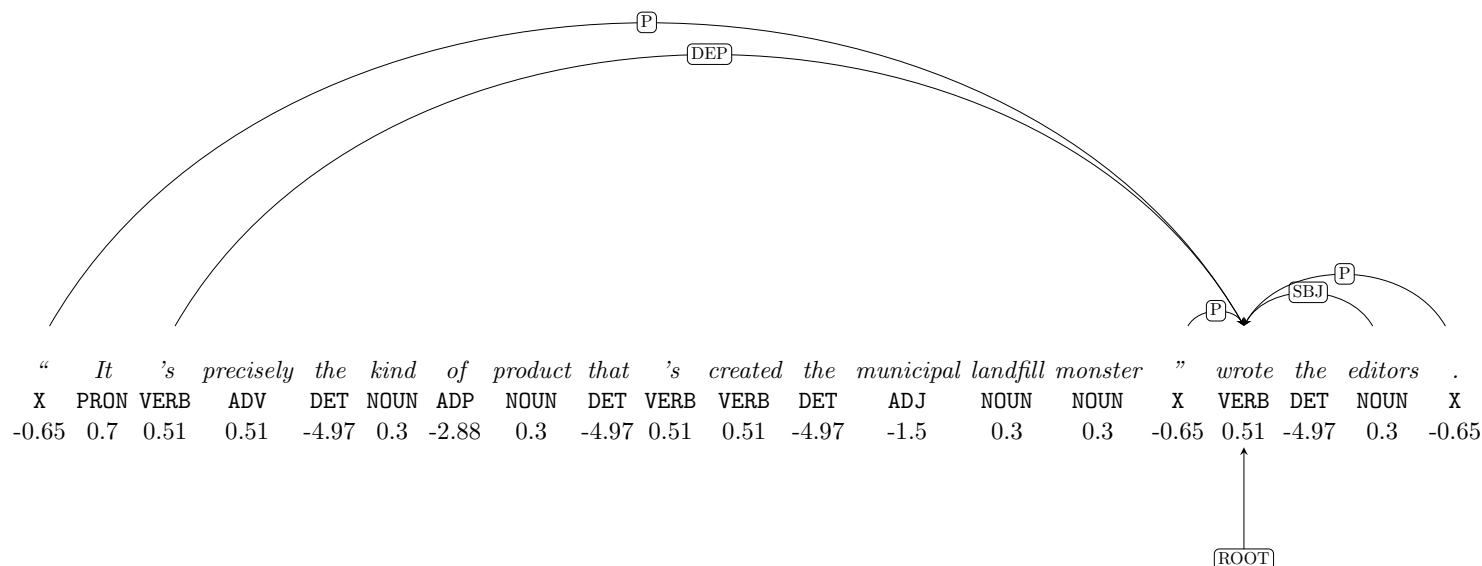
spearman allwords = 0.0



wsj\_0062.12.1

### Variant Sentence

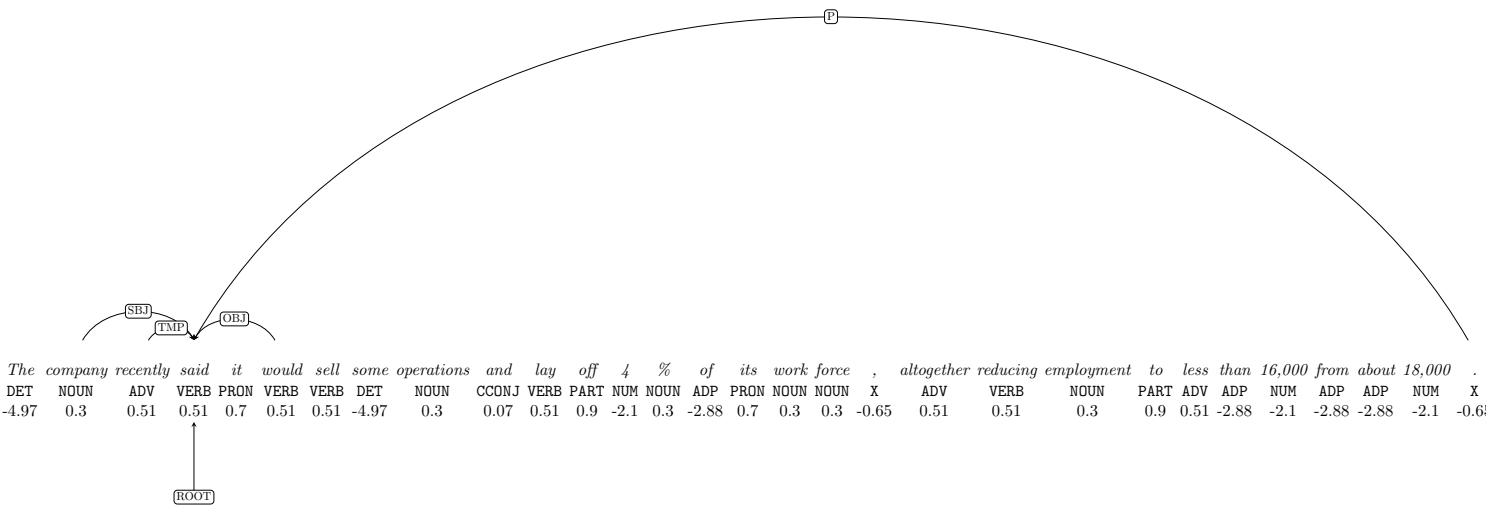
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = -187.76   ldep = -3.0

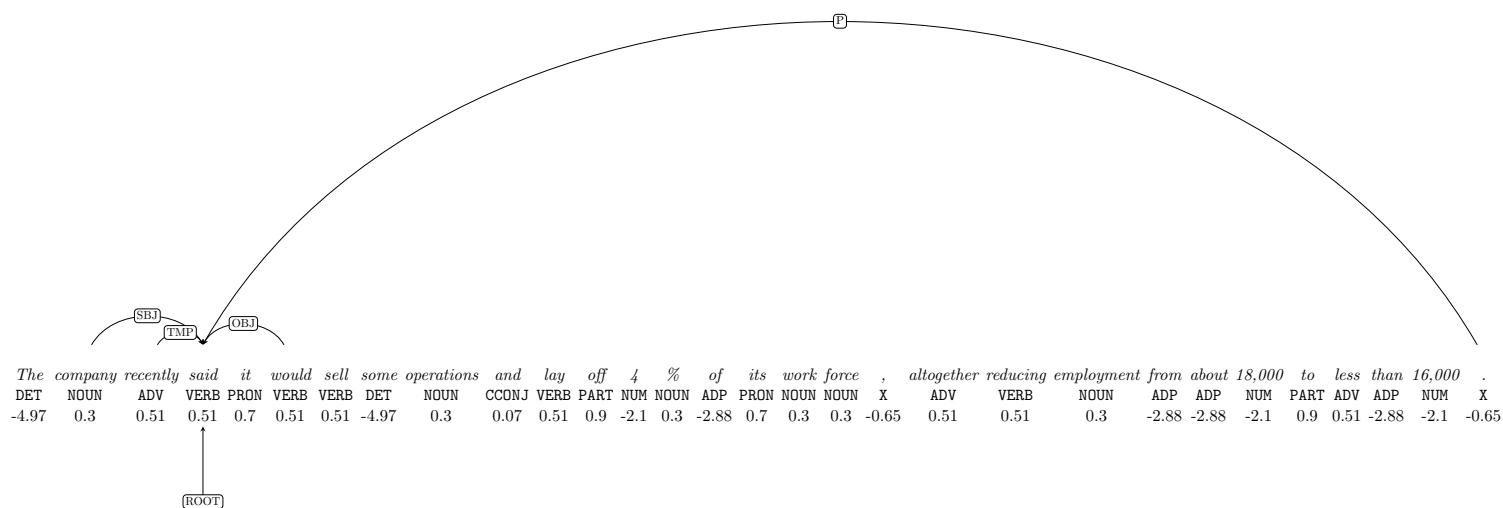
wsj\_0067.11.0

Reference Sentence  
spearman allwords = 0.18



wsj\_0067.11.1

Variant Sentence  
spearman allwords = 0.09

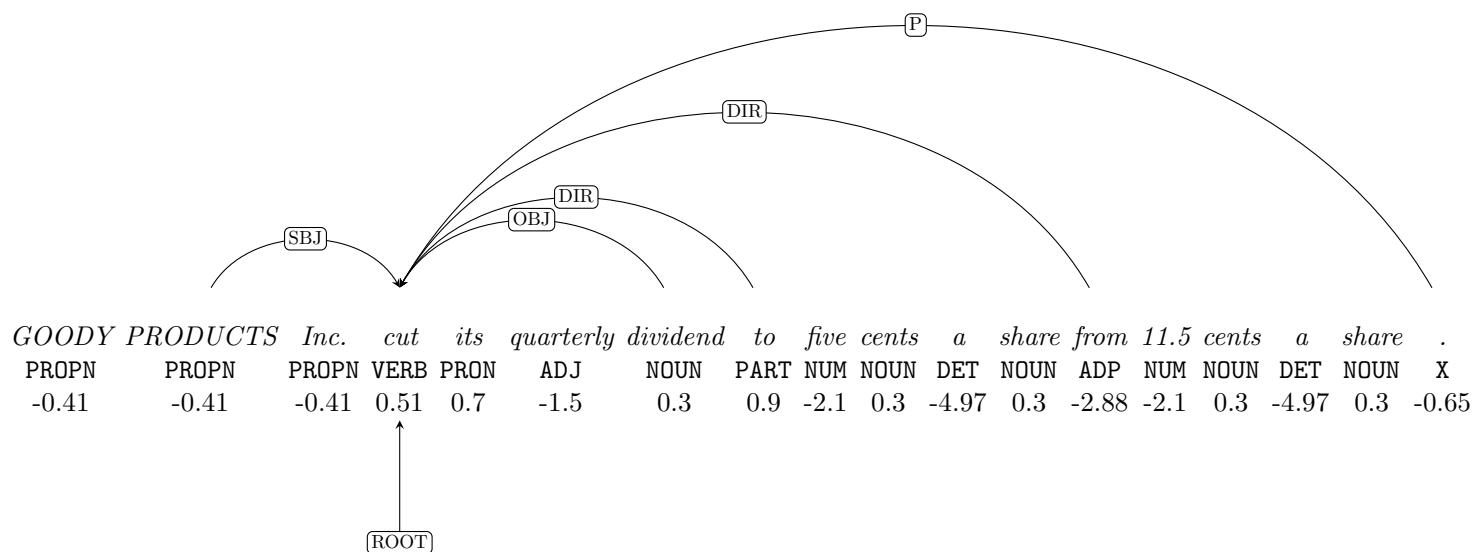


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = -0.0   wtembdep = -88.94   ldep = 9.0

wsj\_0068.1.0

Reference Sentence

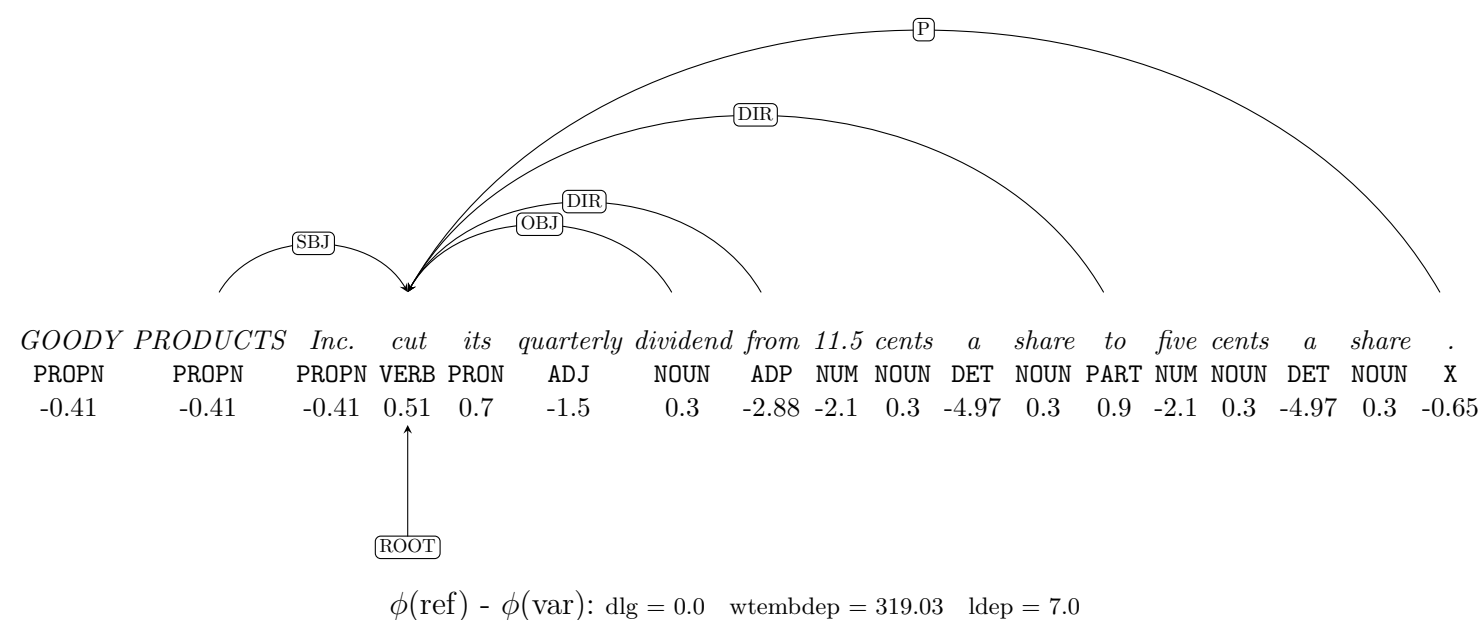
spearman allwords = 0.38



wsj\_0068.1.1

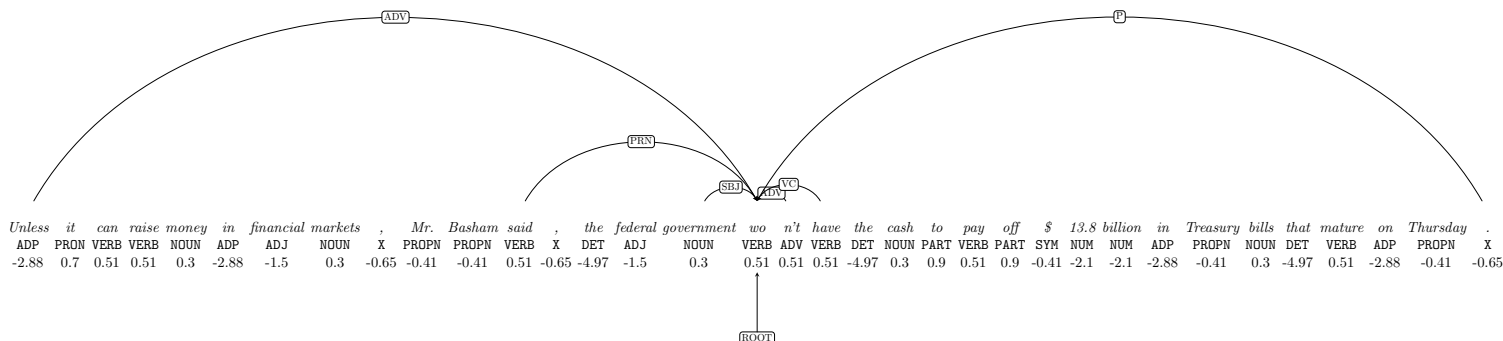
Variant Sentence

spearman allwords = 0.15



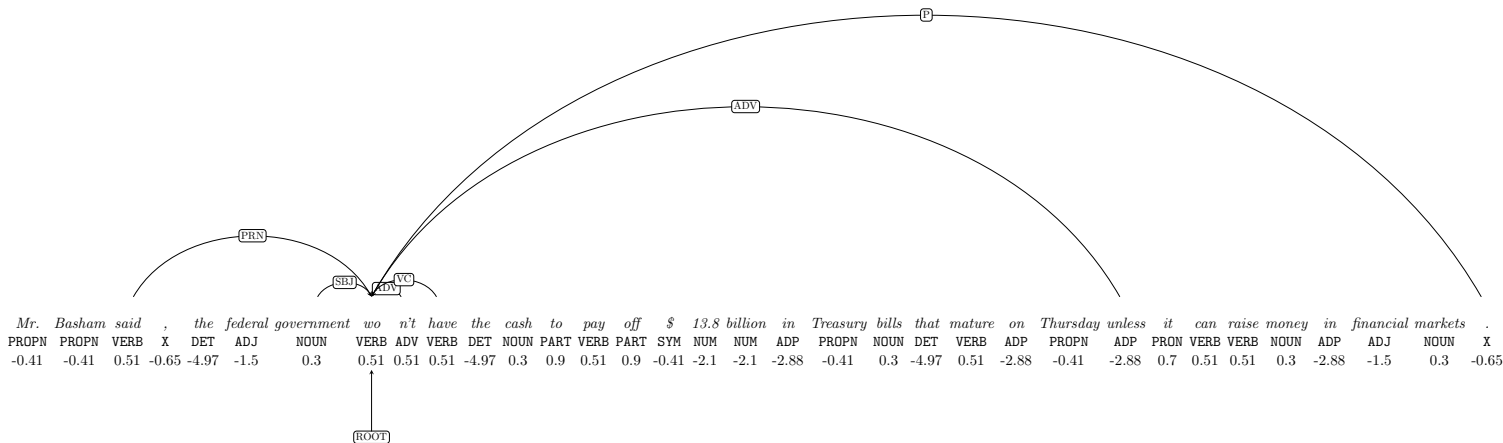
wsj\_0075.3.0

Reference Sentence  
spearman allwords = 0.39



wsj\_0075.3.1

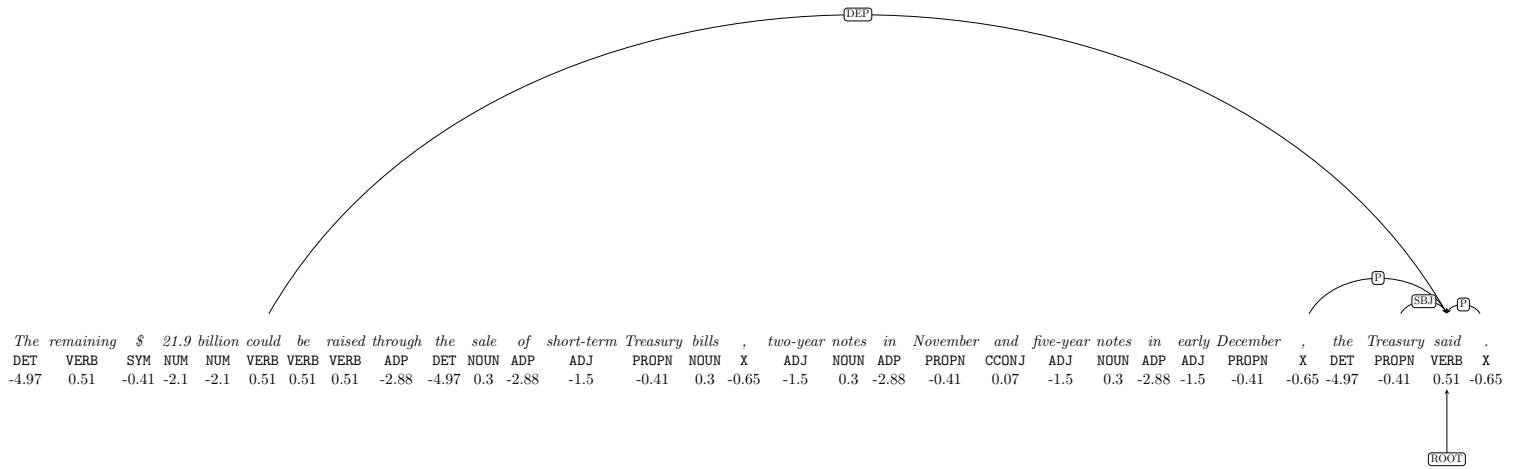
Variant Sentence  
spearman allwords = 0.19



wsj\_0075.18.0

# Reference Sentence

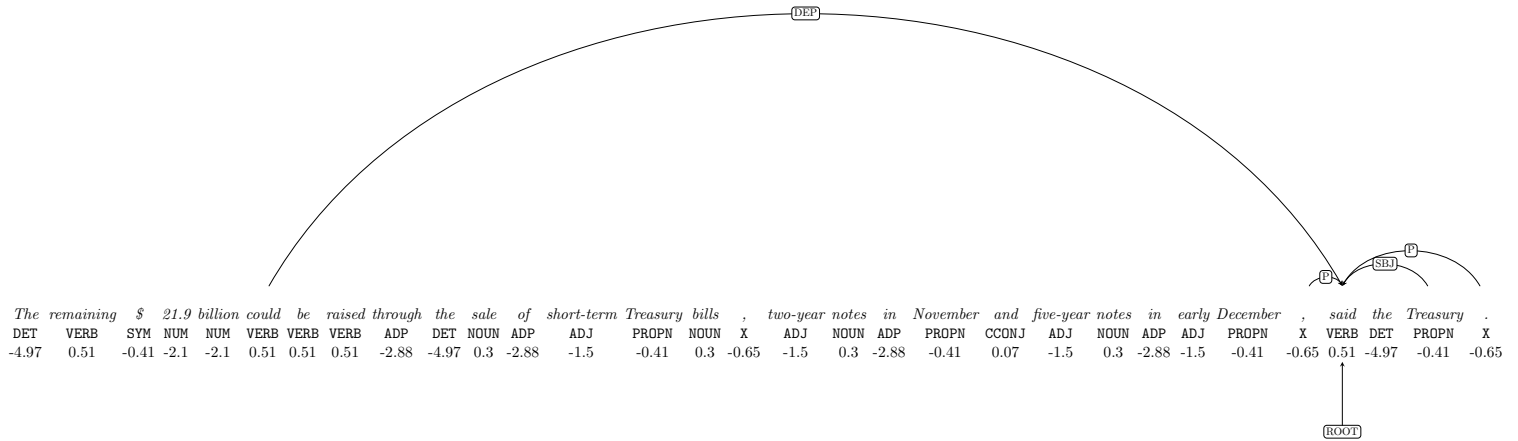
spearman allwords = 0.0



wsj\_0075.18.1

# Variant Sentence

spearman allwords = -1.0

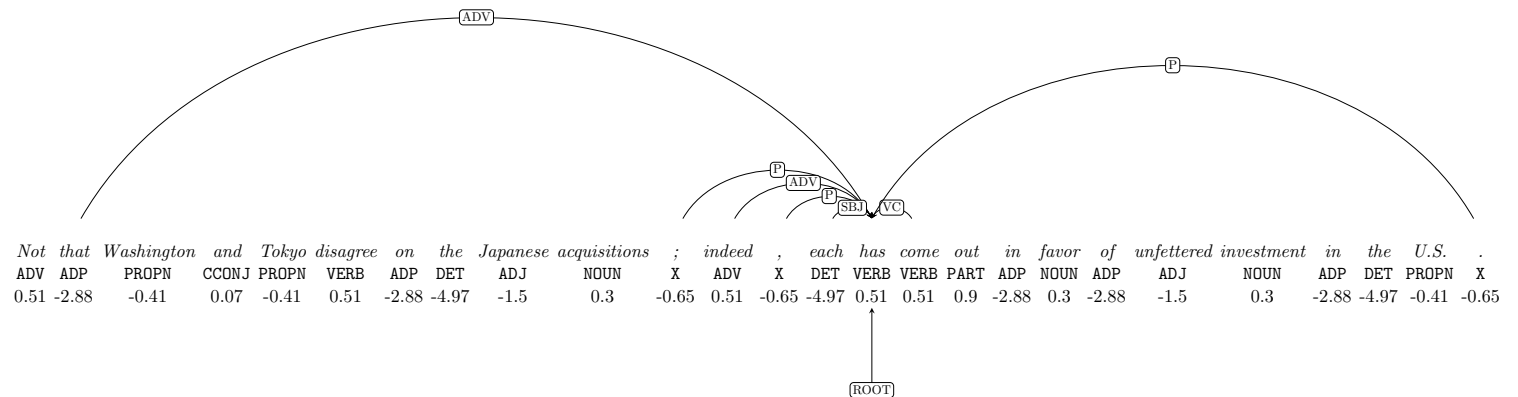


$$\phi(\text{ref}) - \phi(\text{var}): \text{dlg} = 1.0 \quad \text{wtembdep} = 65.51 \quad \text{ldep} = -2.0$$

wsj\_0082.3.0

# Reference Sentence

spearman allwords = 0.54

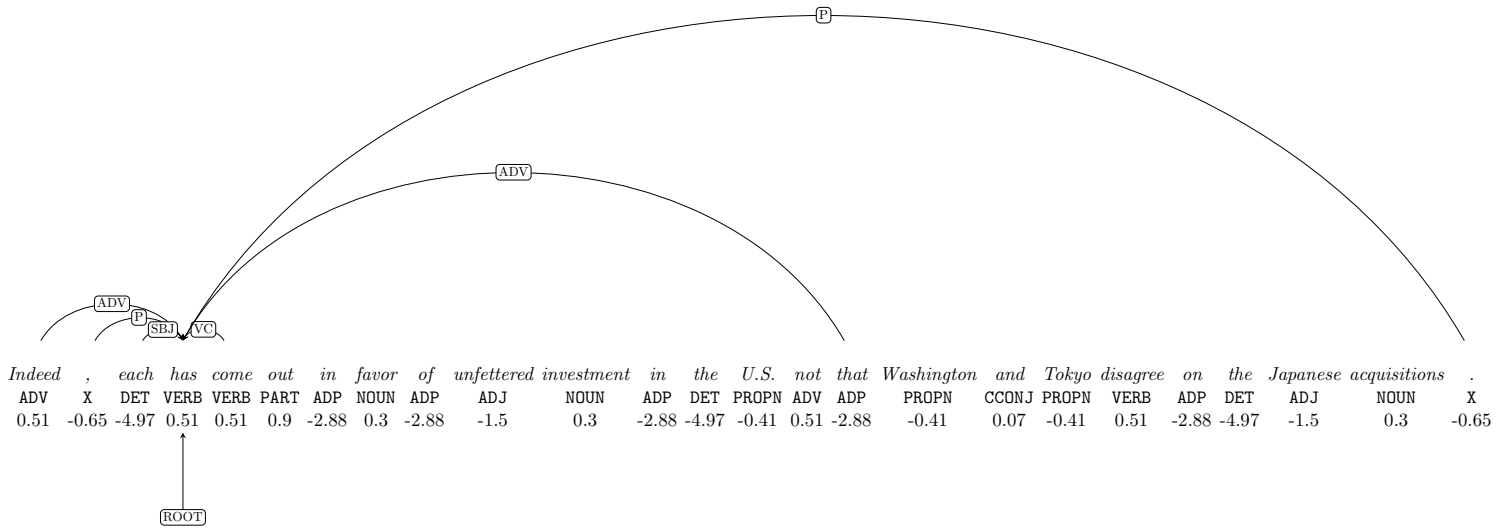


wsj\_0082.3.1



# Variant Sentence

spearman allwords = 0.18

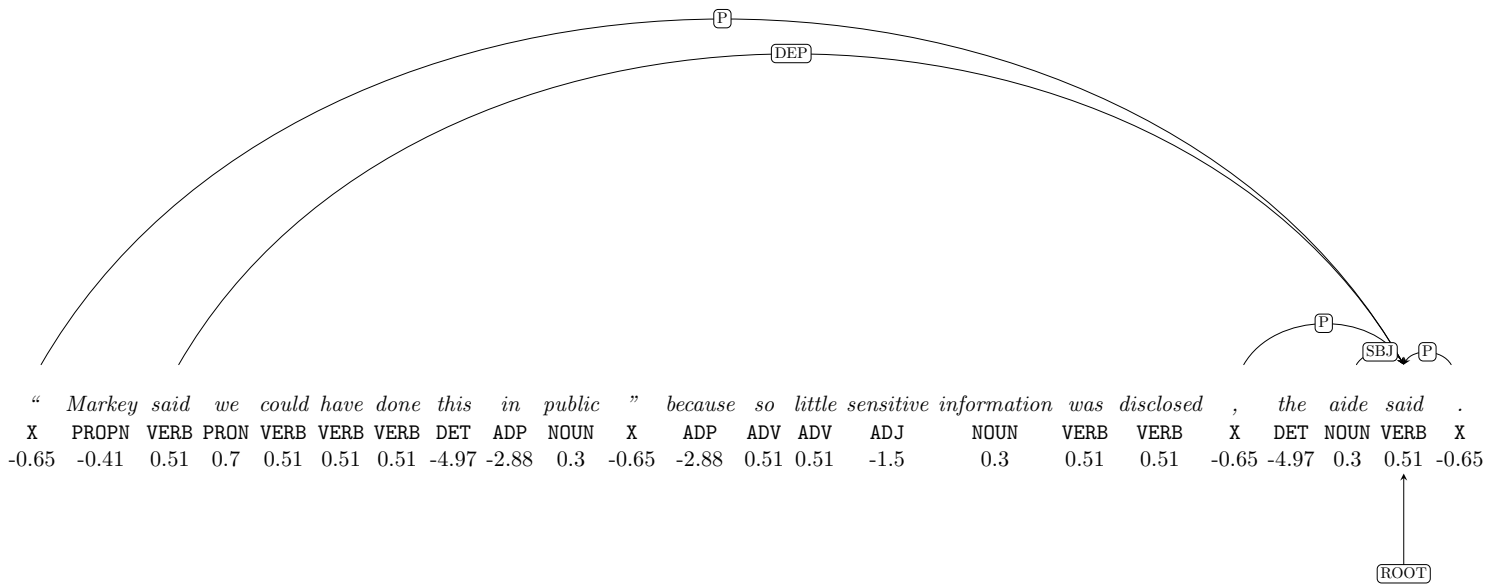


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 w<sub>tembdep</sub> = -470.23 l<sub>dep</sub> = -0.0

wsj\_0088.25.0

# Reference Sentence

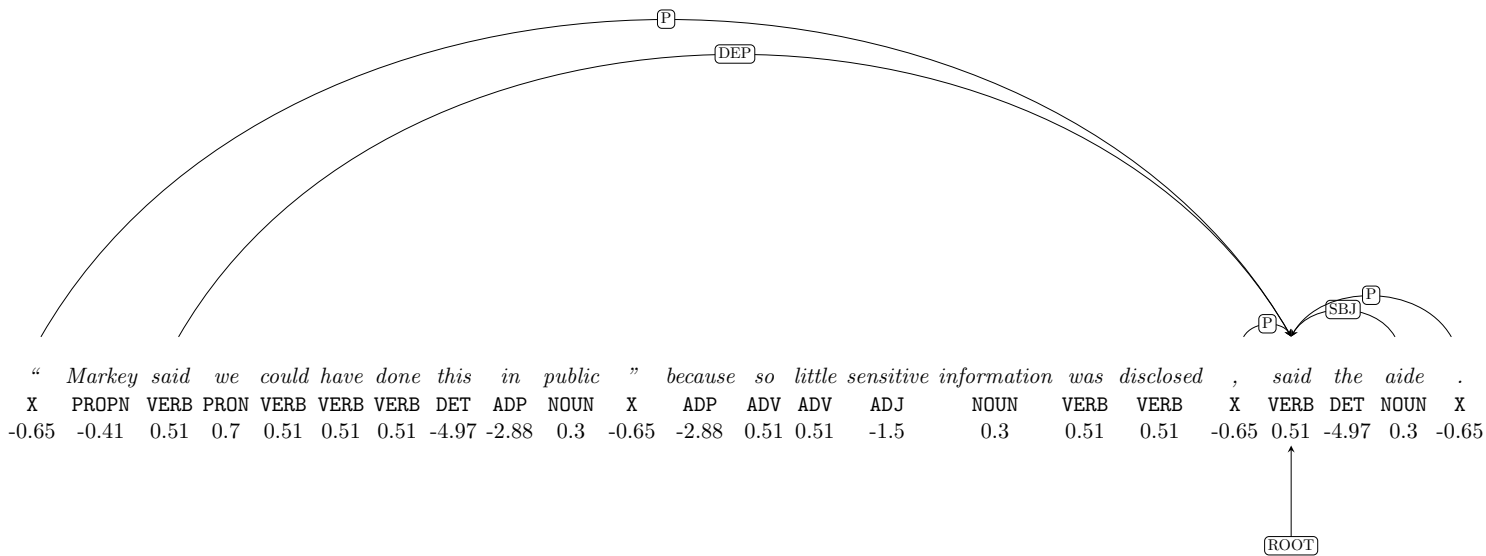
spearman allwords = 0.0



wsj\_0088.25.2

# Variant Sentence

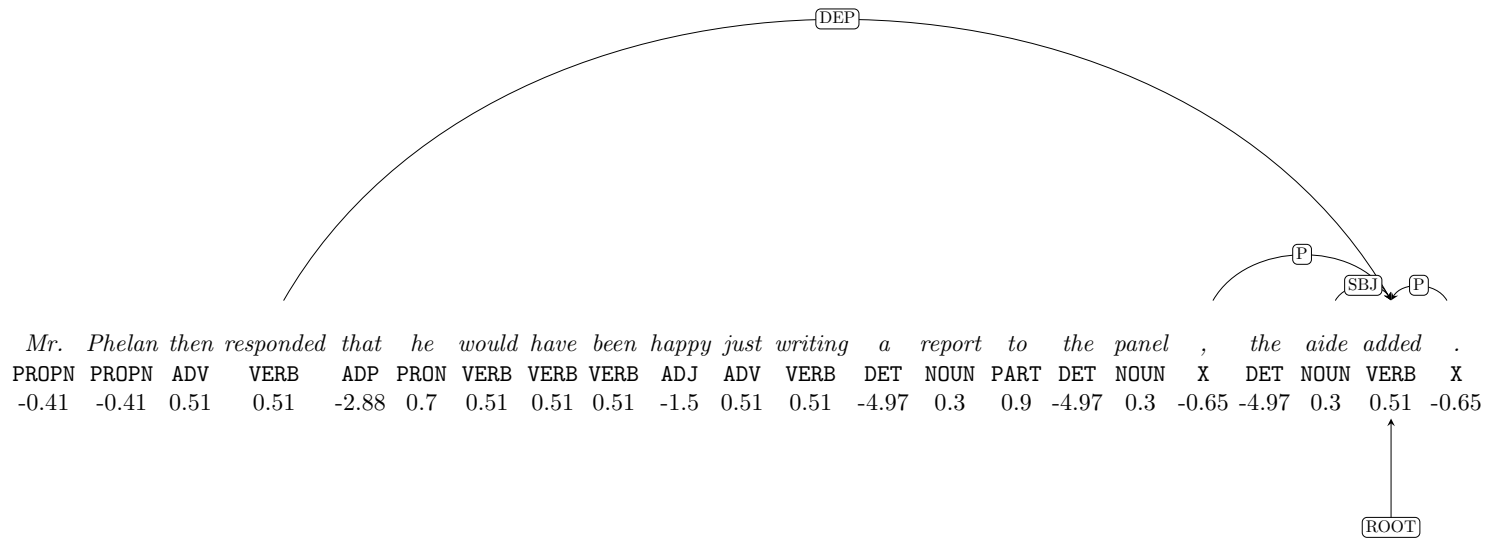
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 94.83   ldep = 14.0

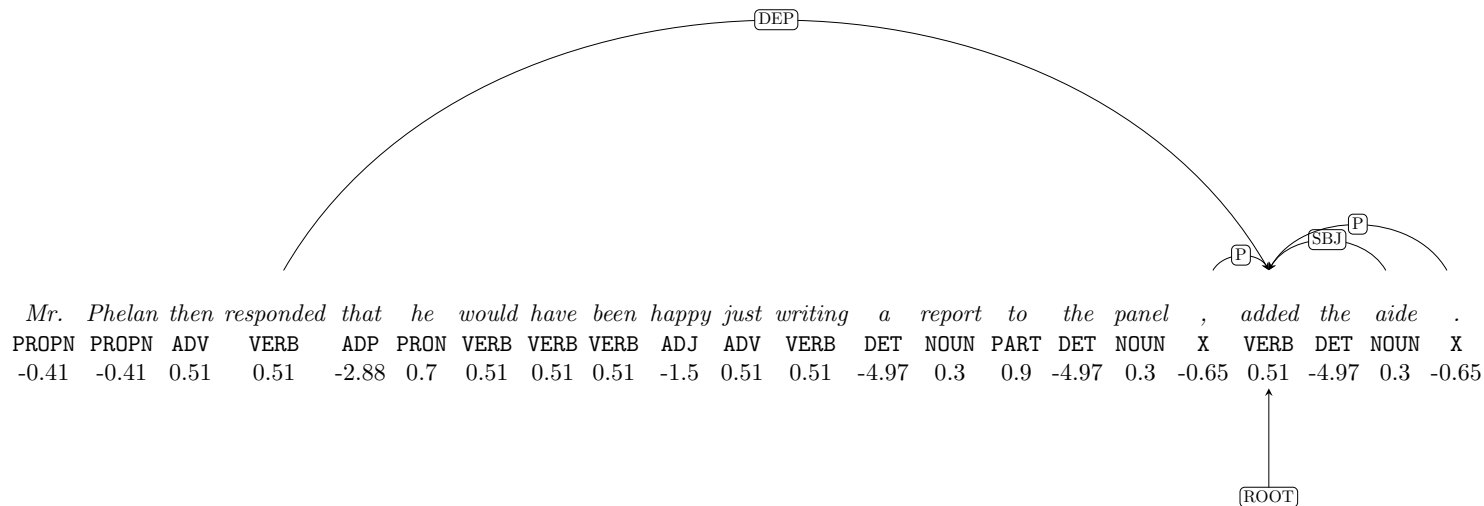
wsj\_0088.26.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0088.26.1

Variant Sentence  
spearman allwords = -1.0

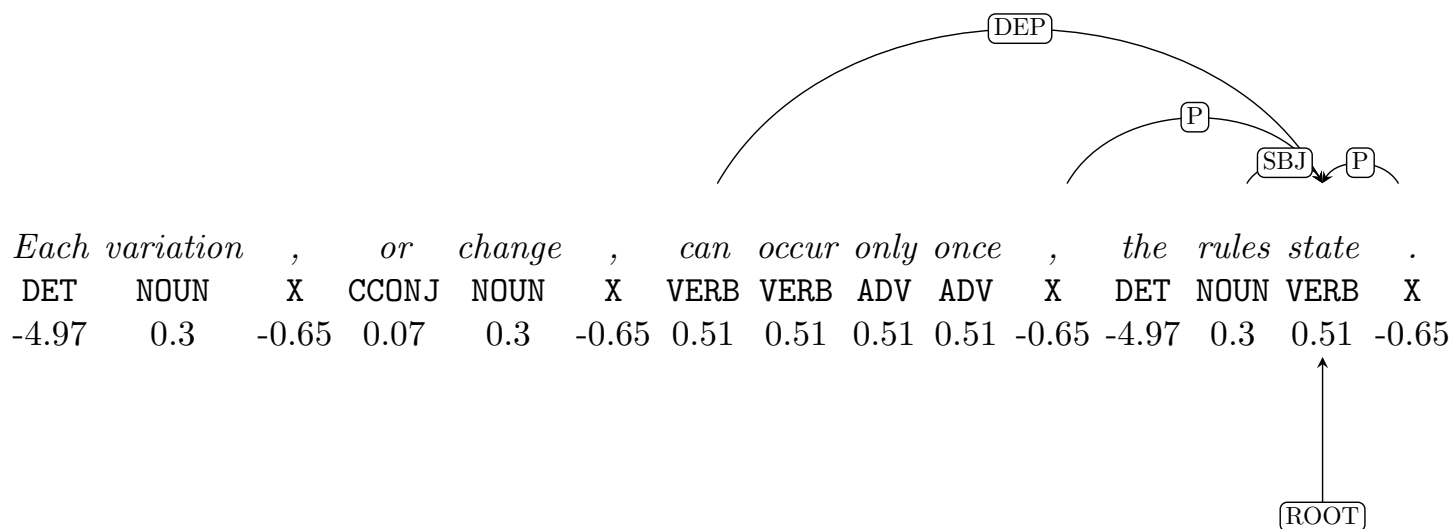


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = 68.2 ldep = 18.0

wsj\_0089.22.0

### Reference Sentence

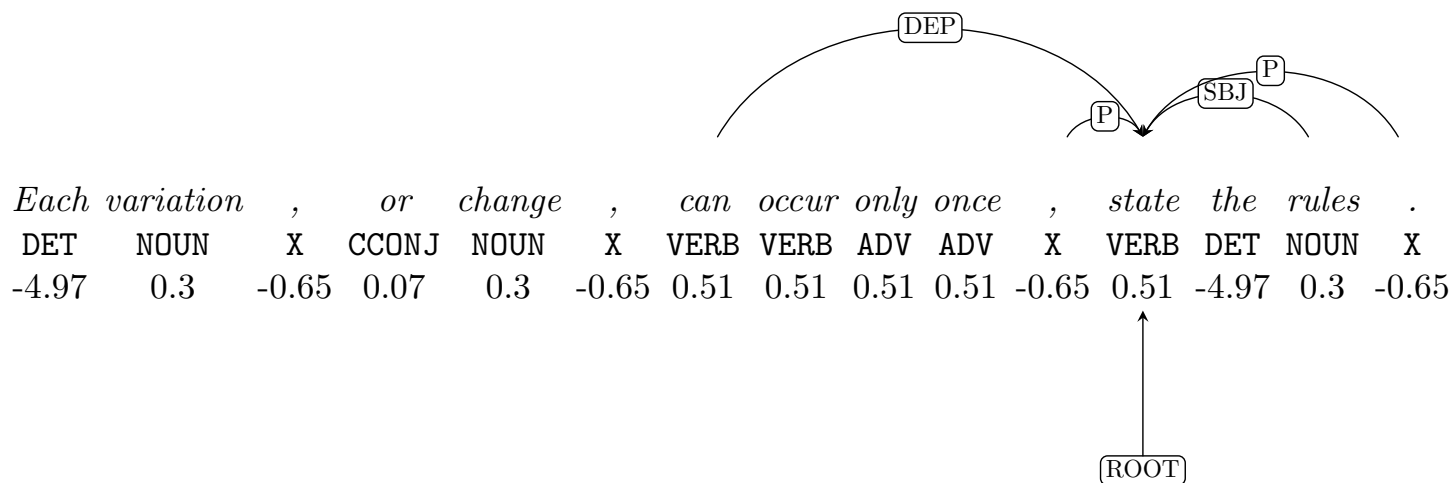
spearman allwords = 0.0



wsj\_0089.22.1

### Variant Sentence

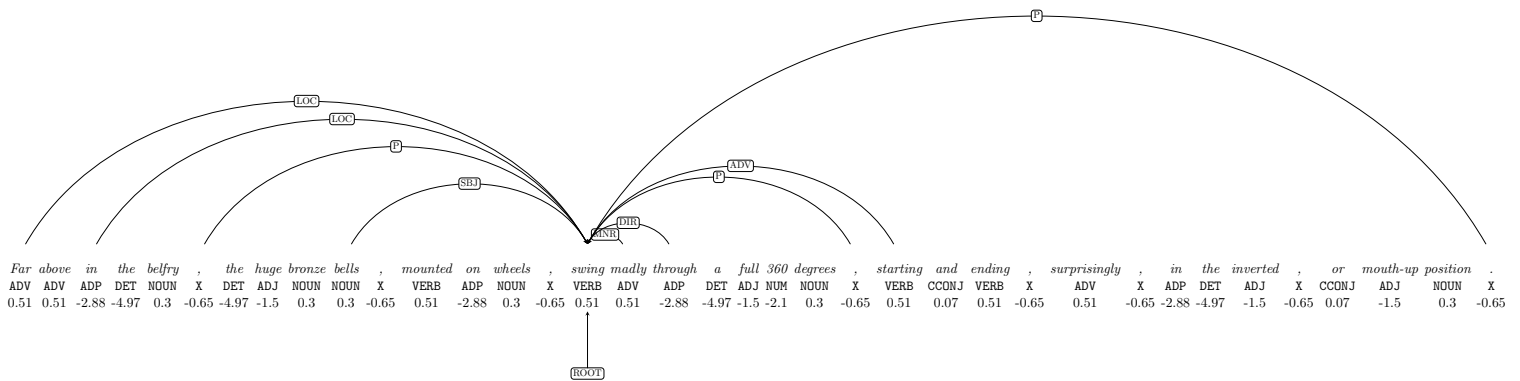
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 45.19   ldep = -8.0

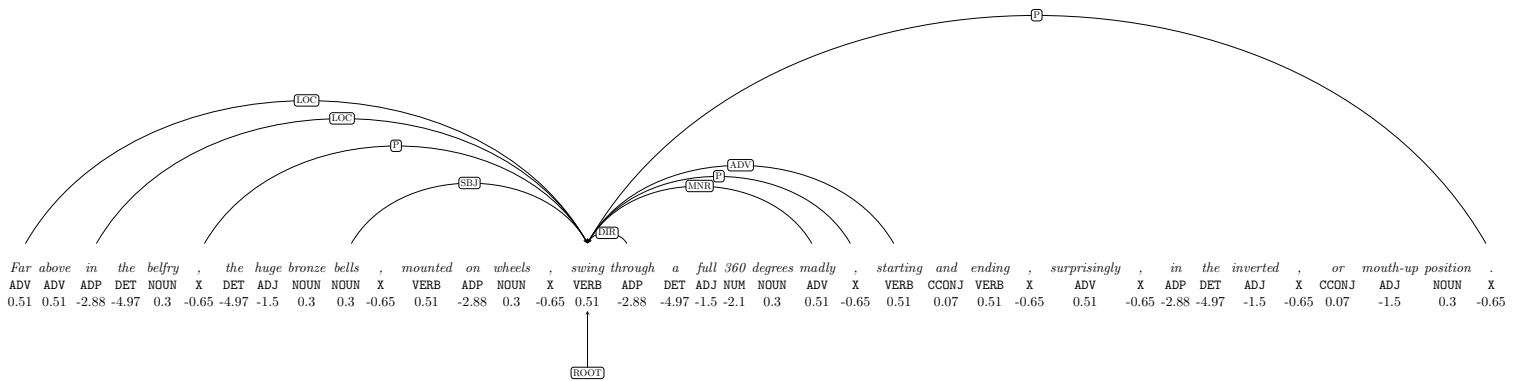
wsj\_0089.29.0

Reference Sentence  
spearman allwords = 0.06



wsj\_0089.29.2

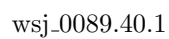
Variant Sentence  
spearman allwords = -0.07



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = -1.0   wtembdep = 351.56   ldep = 41.0

wsj\_0089.40.0

Reference Sentence  
spearman allwords = 0.0



“ They were a self-perpetuating club that treated the tower as sort of a separate premises ” says the Vicar Hummerstone .

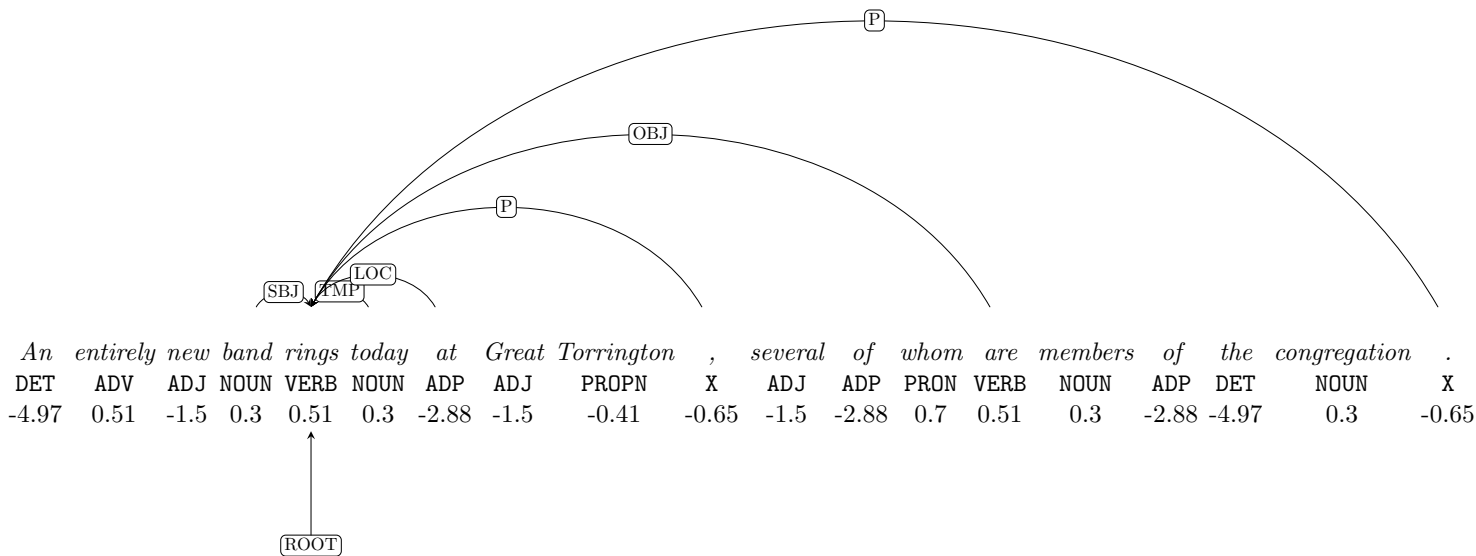
X PRON VERB DET ADJ NOUN DET VERB DET NOUN ADP NOUN ADP DET ADJ NOUN X VERB DET PROPN PROPN X

-0.65 0.7 0.51 -4.97 -1.5 0.3 -4.97 0.51 -4.97 0.3 -2.88 0.3 -2.88 -4.97 -1.5 0.3 -0.65 0.51 -4.97 -0.41 -0.41 -0.65

$$\phi(\text{ref}) - \phi(\text{var}): \text{dlg} = 1.0 \quad \text{wtembdep} = -588.64 \quad \text{ldep} = -9.0$$

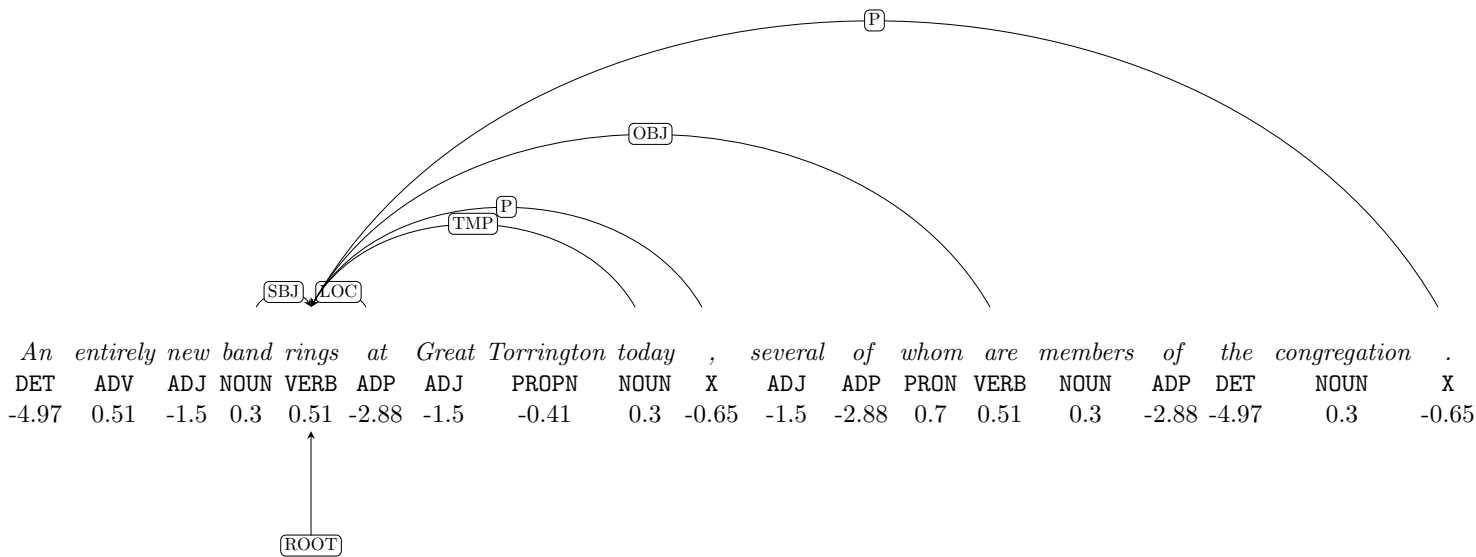
wsj\_0089.41.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0089.41.1

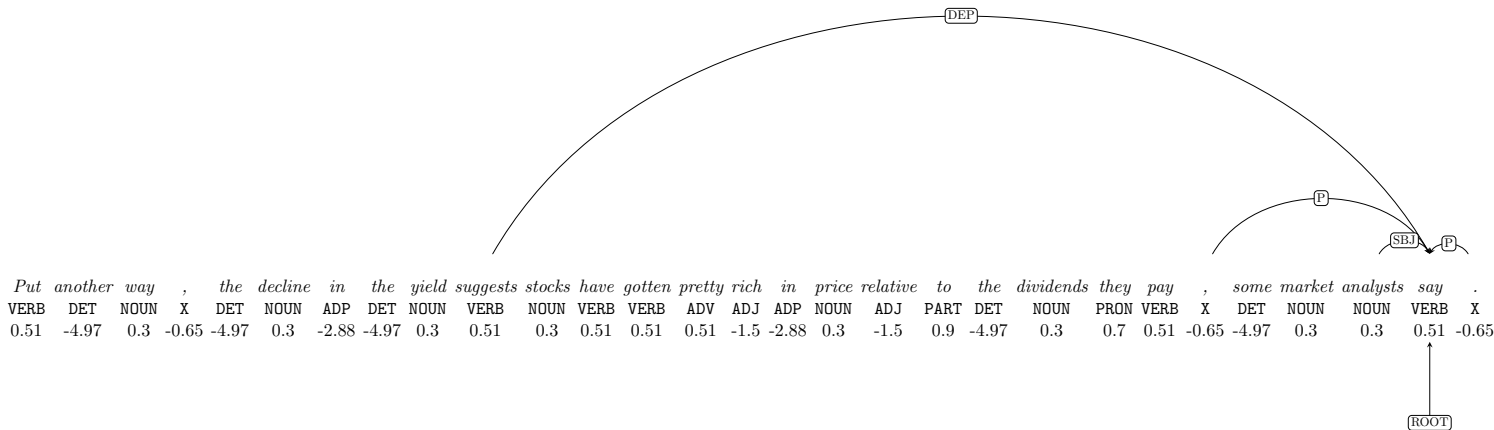
Variant Sentence  
spearman allwords = -0.08



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = -0.0   wtembdep = -420.06   ldep = -2.0

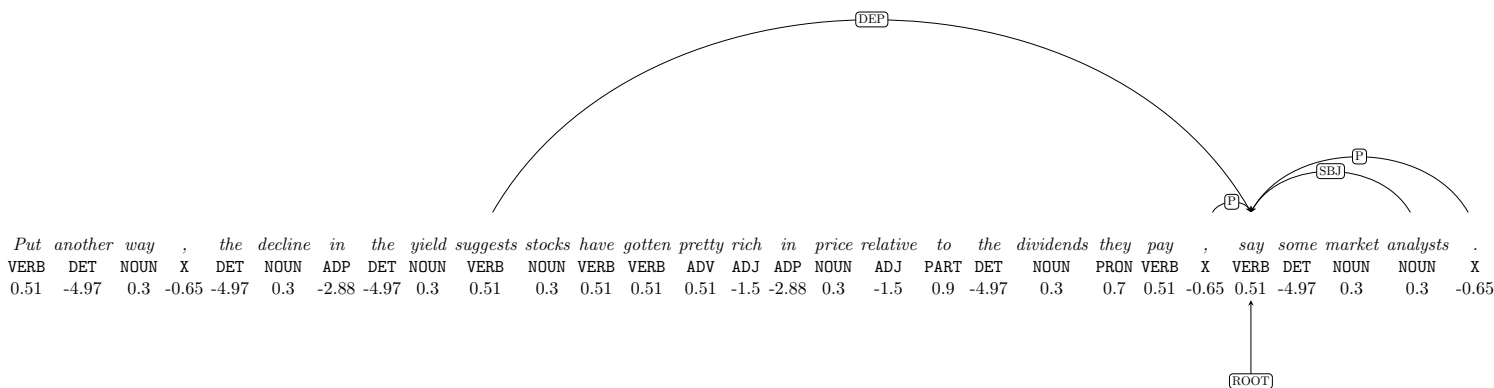
wsj\_0090.18.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0090.18.1

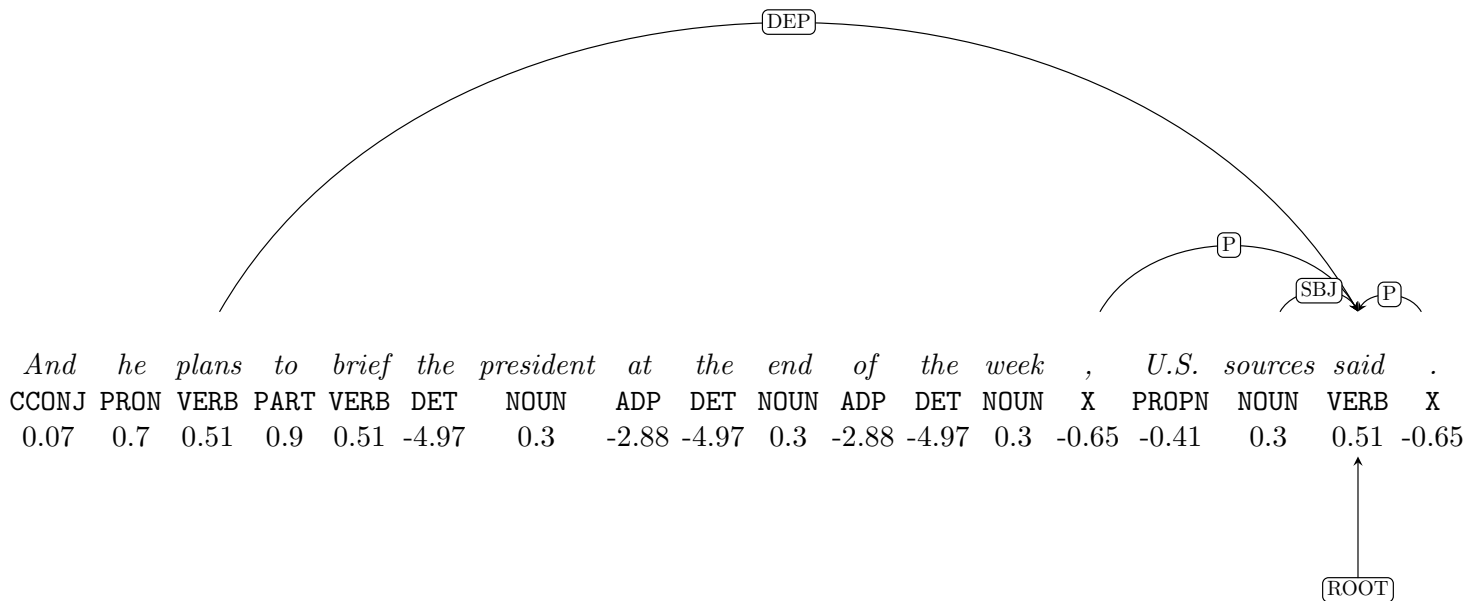
Variant Sentence  
spearman allwords = -0.87



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = -45.9 ldep = 1.0

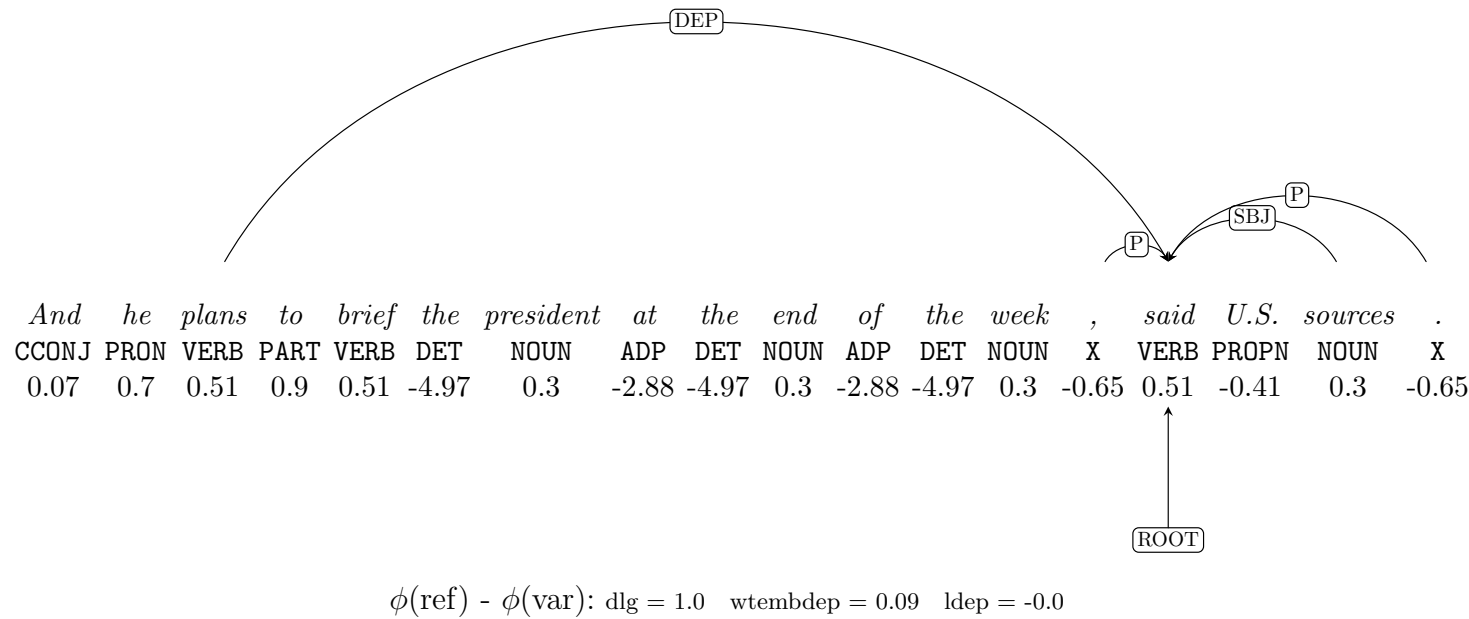
wsj\_0093.21.0

Reference Sentence  
spearman allwords = 0.0



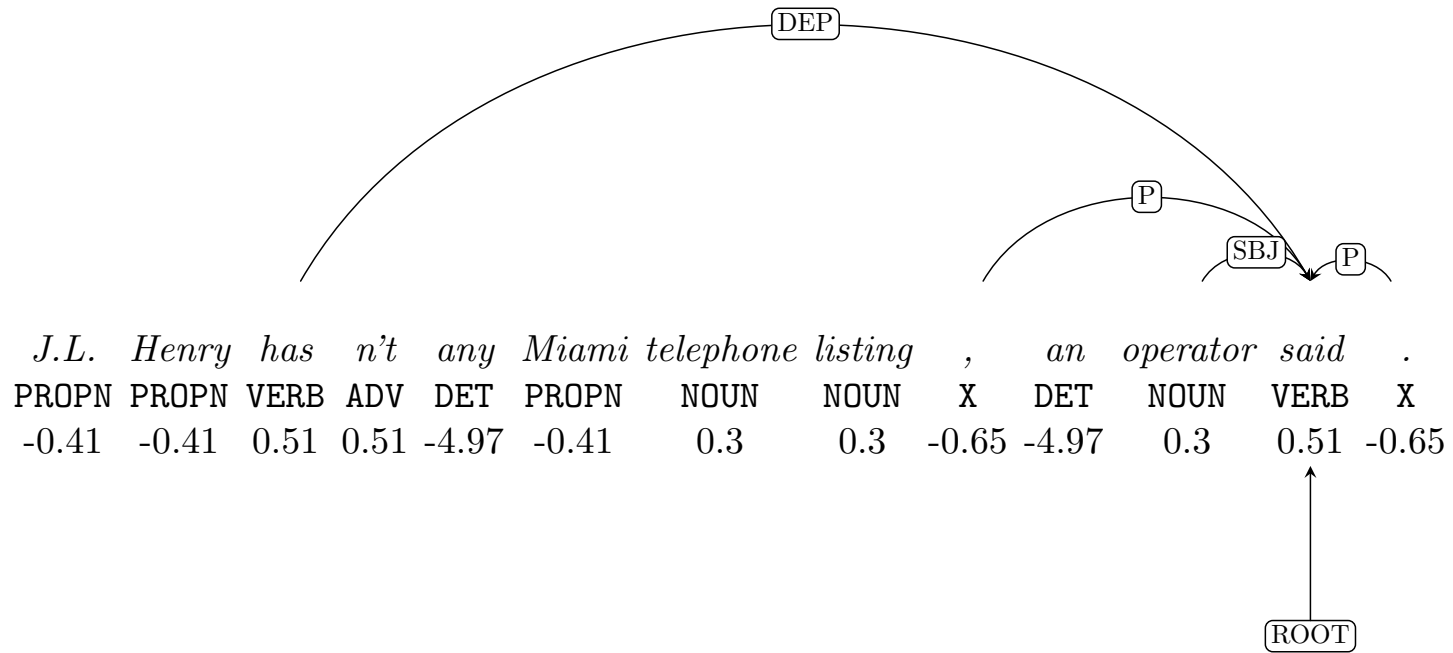
wsj\_0093.21.1

Variant Sentence  
spearman allwords = -1.0



wsj\_0096.9.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0096.9.1

Variant Sentence  
spearman allwords = -1.0







*Biscayne has n't any telephone listing , said an operator .*

PROPN	VERB	ADV	DET	NOUN	NOUN	X	VERB	DET	NOUN	X
-0.41	0.51	0.51	-4.97	0.3	0.3	-0.65	0.51	-4.97	0.3	-0.65

ROOT

$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 58.28   ldep = 1.0

wsj\_0100.34.0

Reference Sentence  
spearman allwords = 0.72



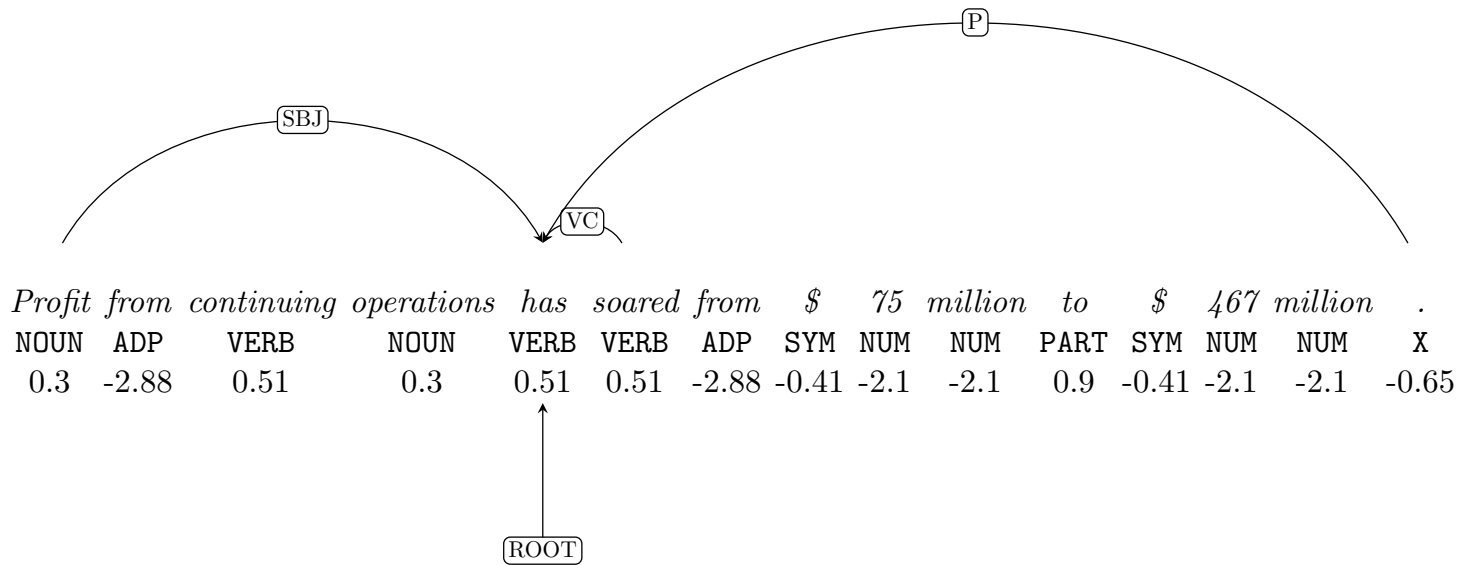
*Profit from continuing operations has soared to \$ 467 million from \$ 75 million .*

NOUN	ADP	VERB	NOUN	VERB	VERB	PART	SYM	NUM	NUM	ADP	SYM	NUM	NUM	X
0.3	-2.88	0.51	0.3	0.51	0.51	0.9	-0.41	-2.1	-2.1	-2.88	-0.41	-2.1	-2.1	-0.65

ROOT

wsj\_0100.34.1

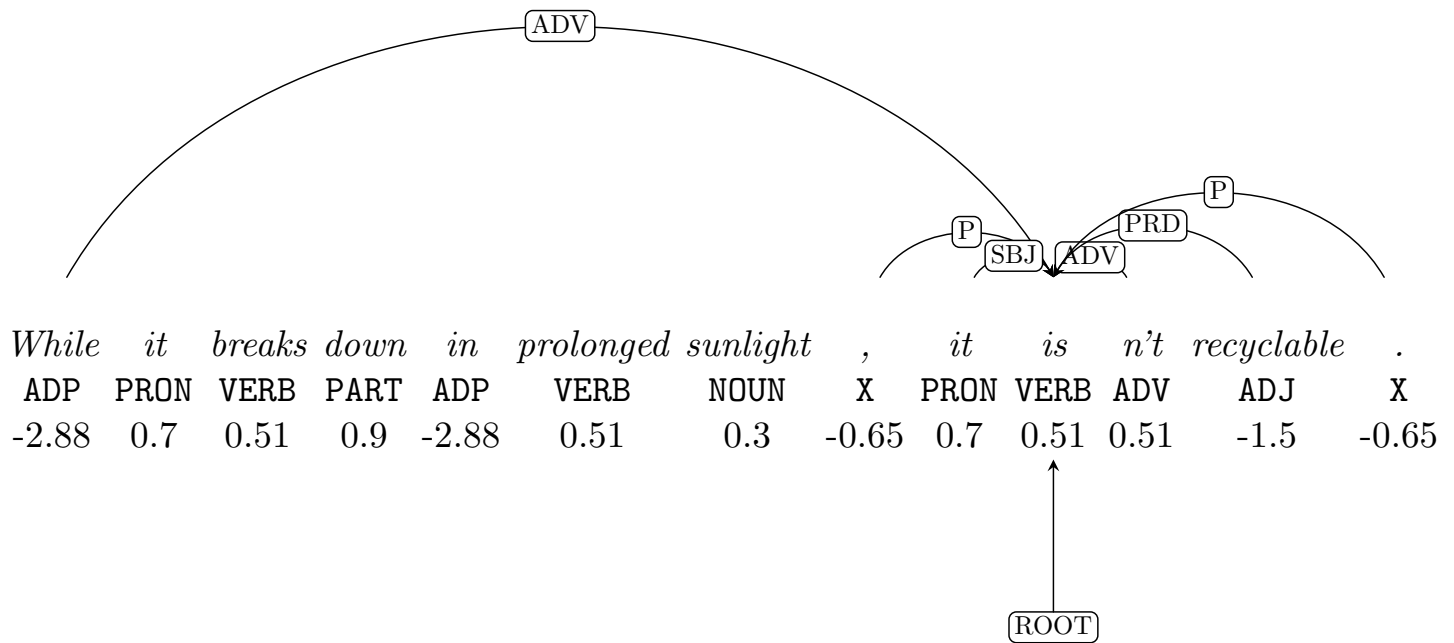
Variant Sentence  
spearman allwords = -0.1



$\phi(\text{ref}) - \phi(\text{var})$ : dlg = -0.0 wtembdep = -244.6 ldep = 9.0

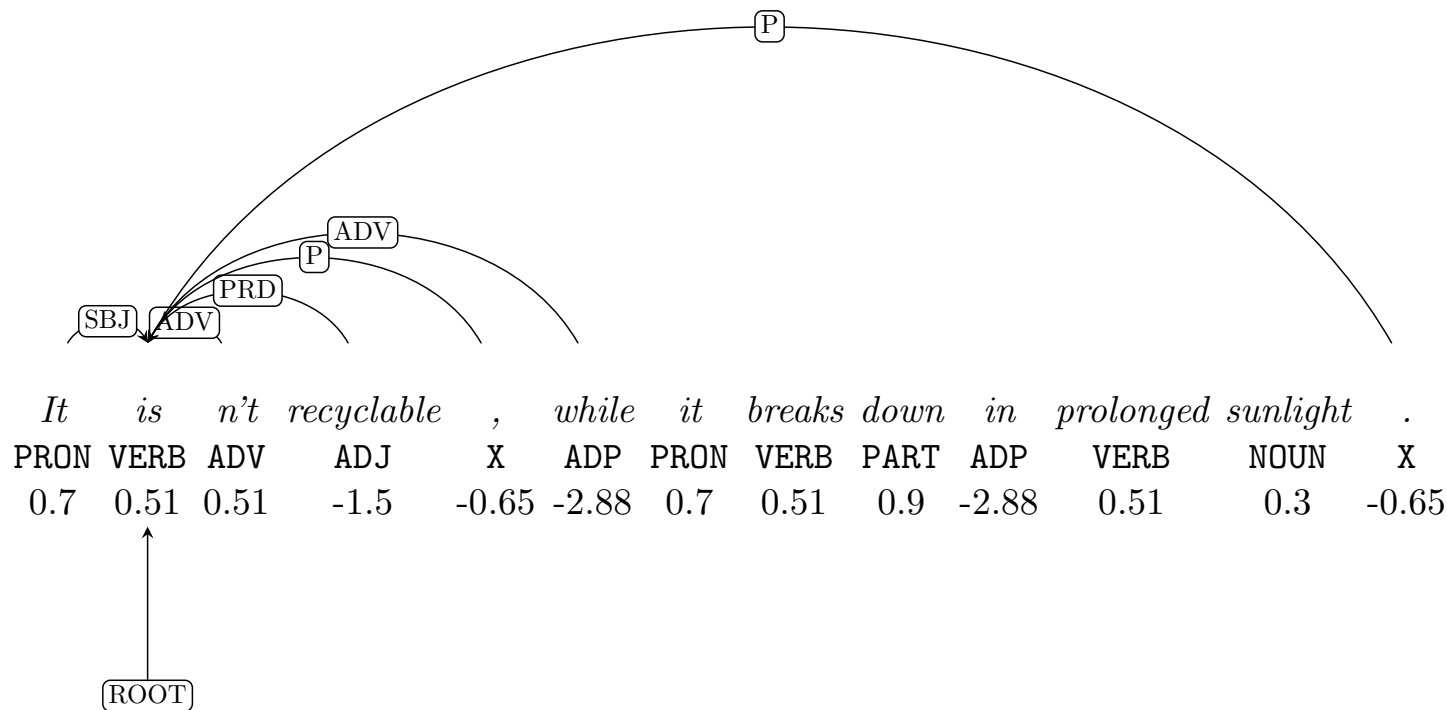
wsj\_0102.25.0

Reference Sentence  
spearman allwords = 1.0



wsj\_0102.25.1

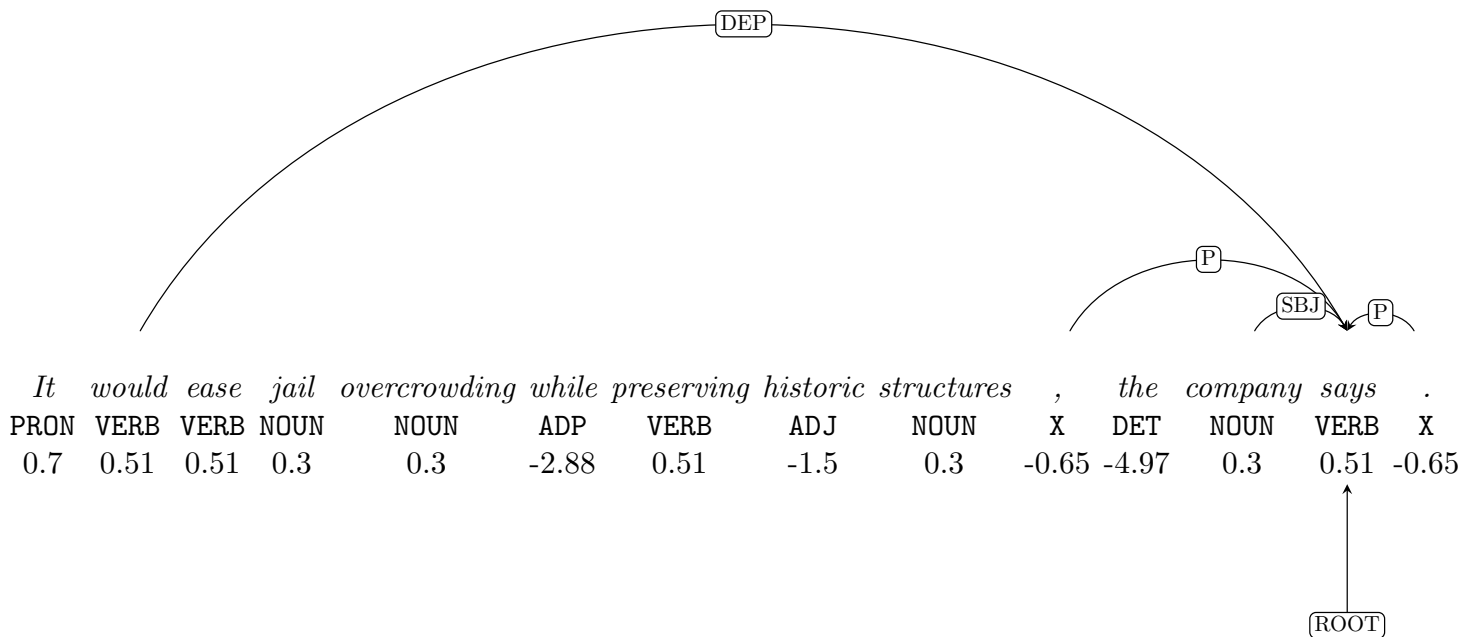
Variant Sentence  
spearman allwords = 0.06



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 3.0 wtembdep = 142.31 ldep = -3.0

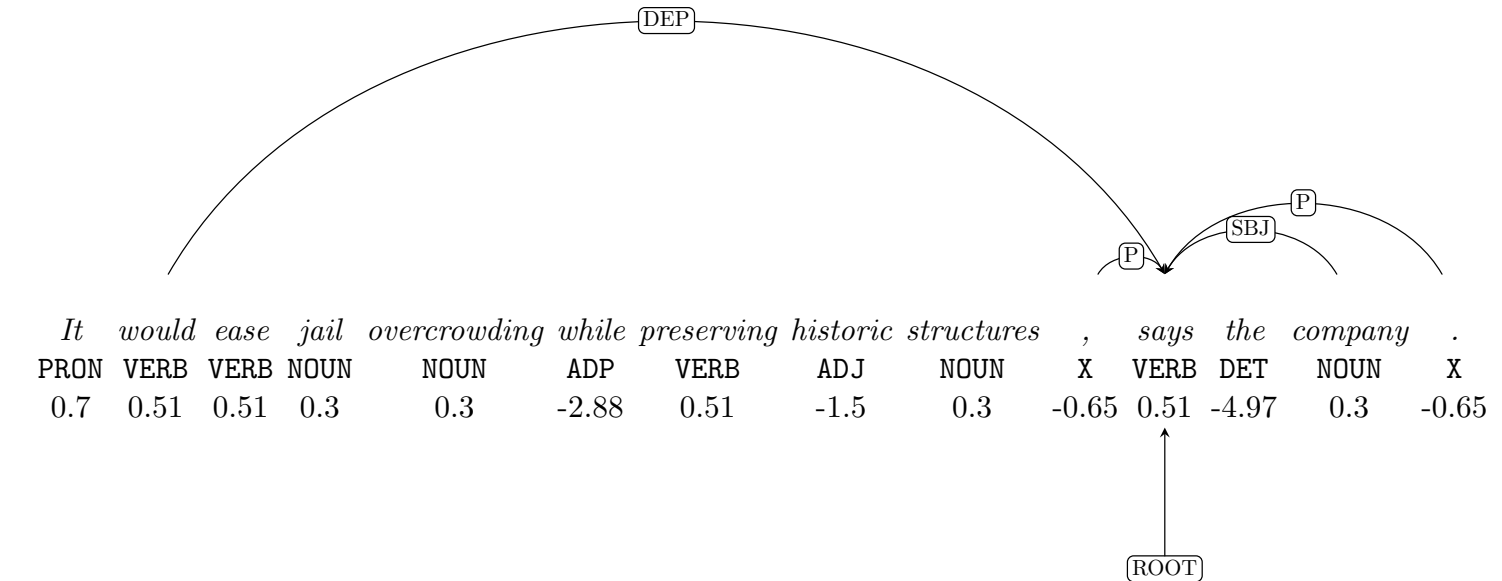
wsj\_0102.40.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0102.40.2

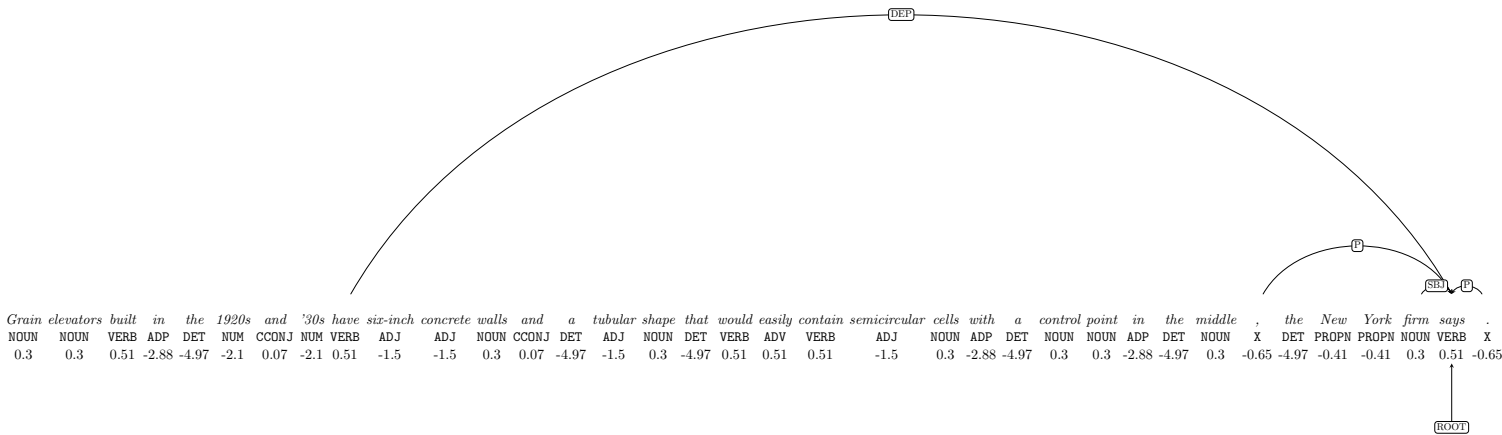
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 81.3   ldep = -26.0

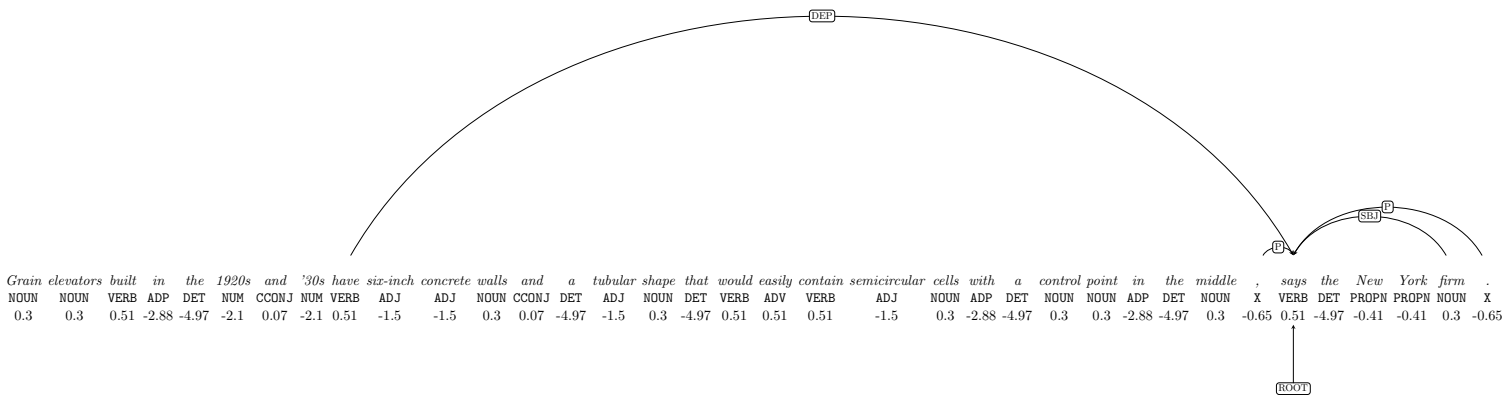
wsj\_0102.42.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0102.42.1

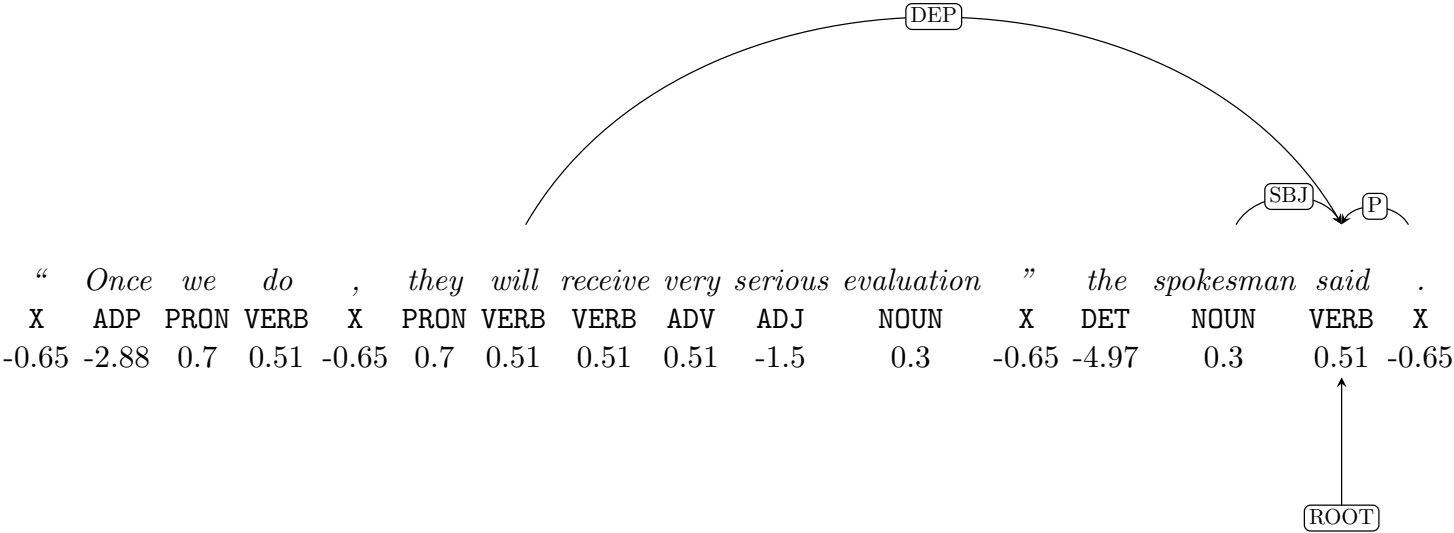
Variant Sentence  
spearman allwords = -0.95



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 663.52   ldep = 41.0

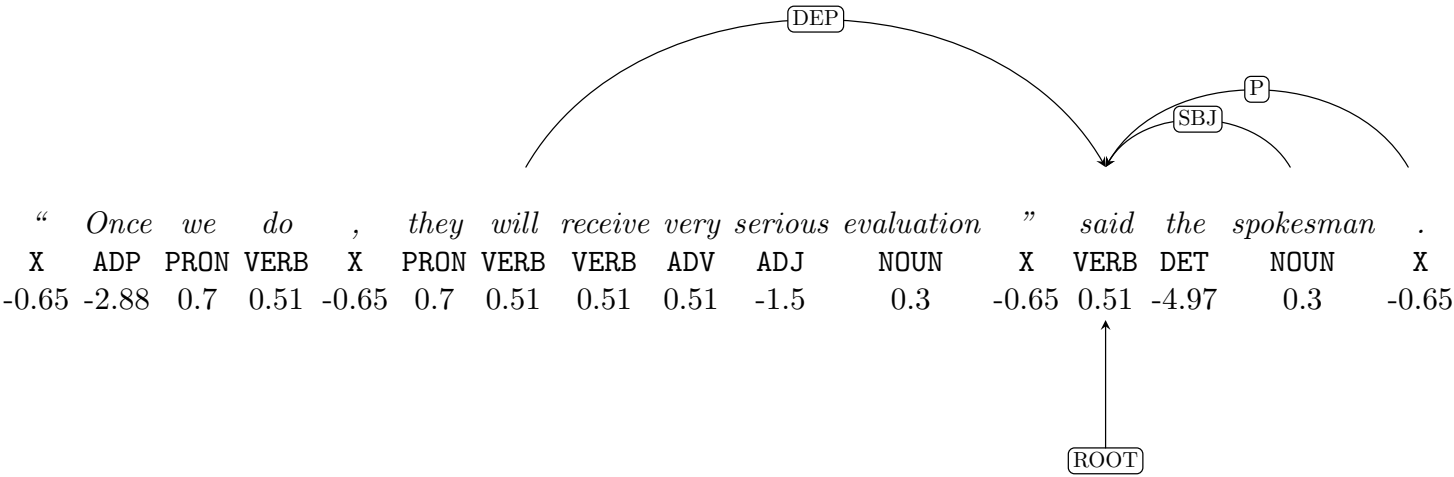
wsj\_0103.11.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0103.11.1

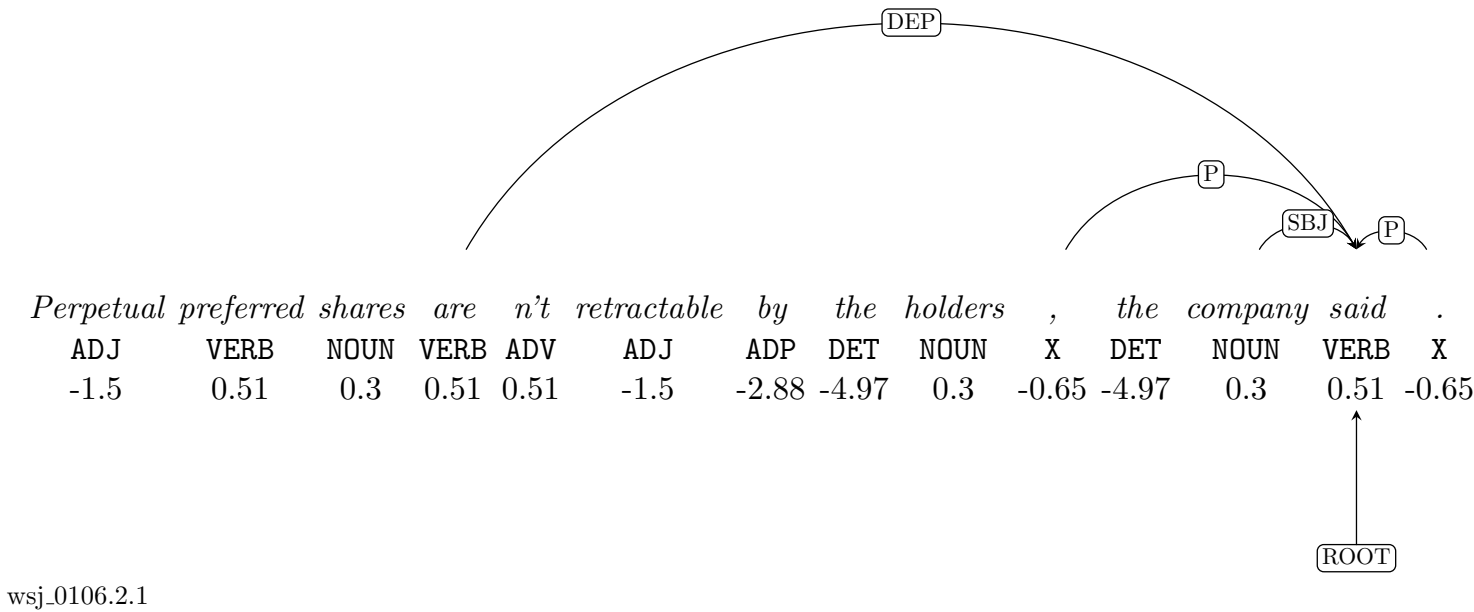
Variant Sentence  
spearman allwords = -1.0



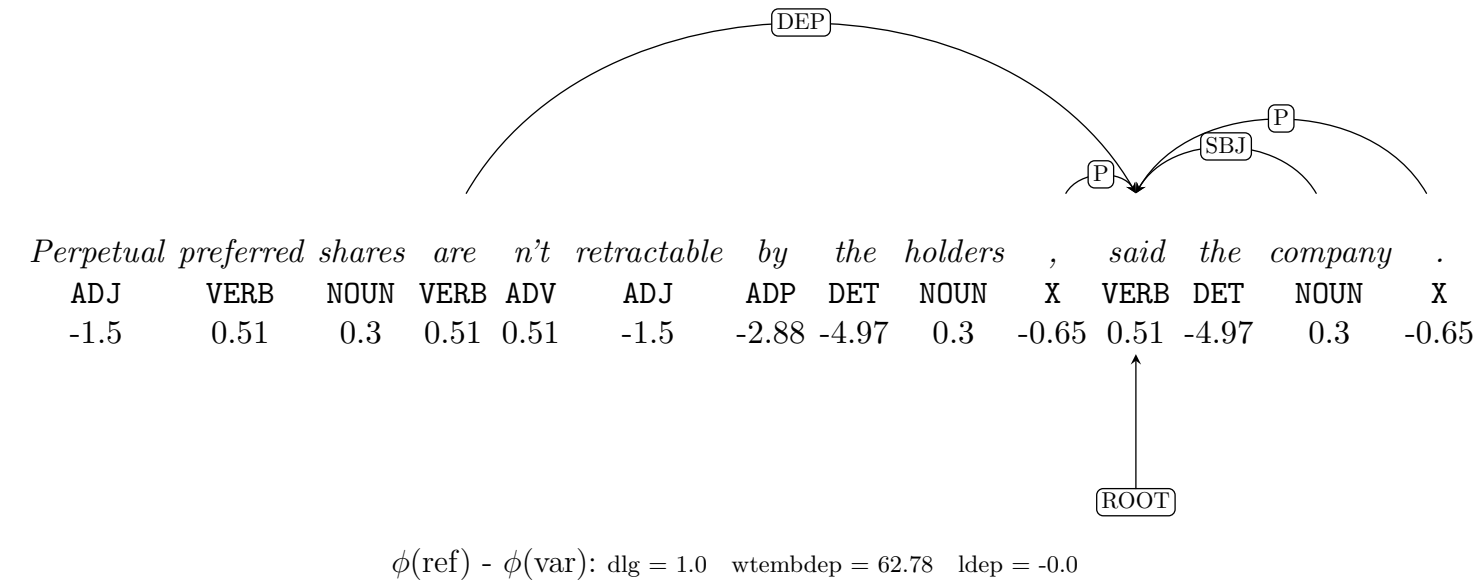
$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 55.85   ldep = 2.0

wsj\_0106.2.0

Reference Sentence  
spearman allwords = 0.0

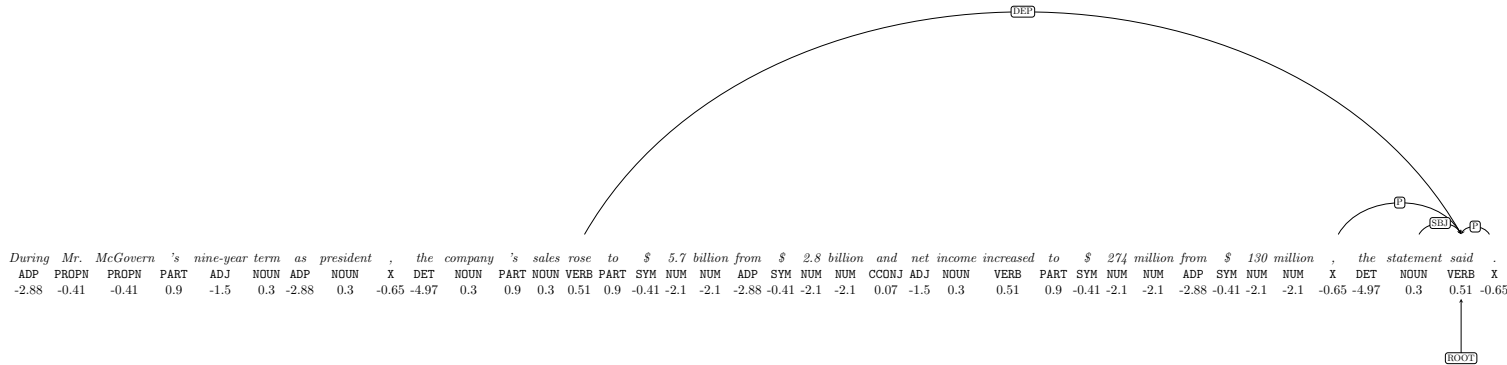


Variant Sentence  
spearman allwords = -1.0



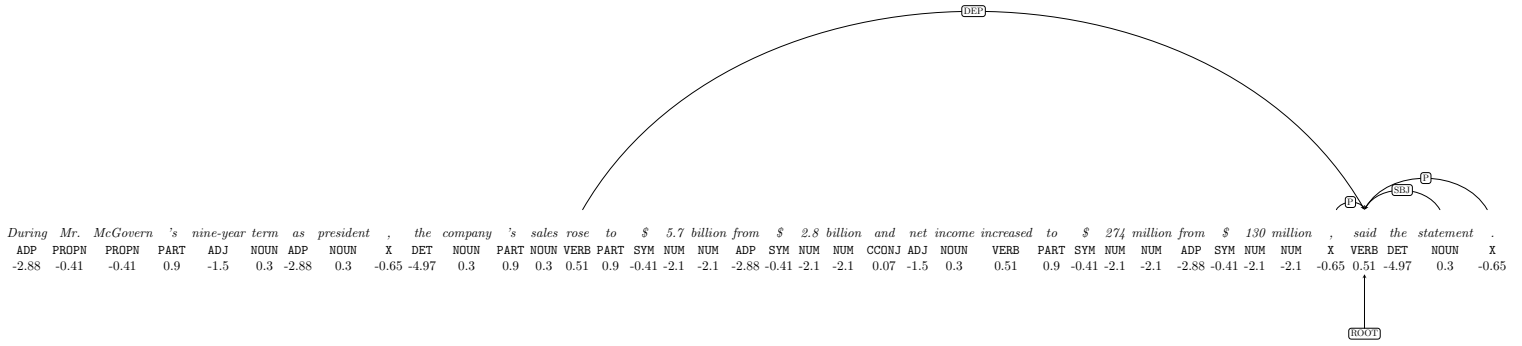
wsj\_0109.33.0

Reference Sentence  
spearman allwords = 0.0



# Variant Sentence

spearman allwords = -1.0

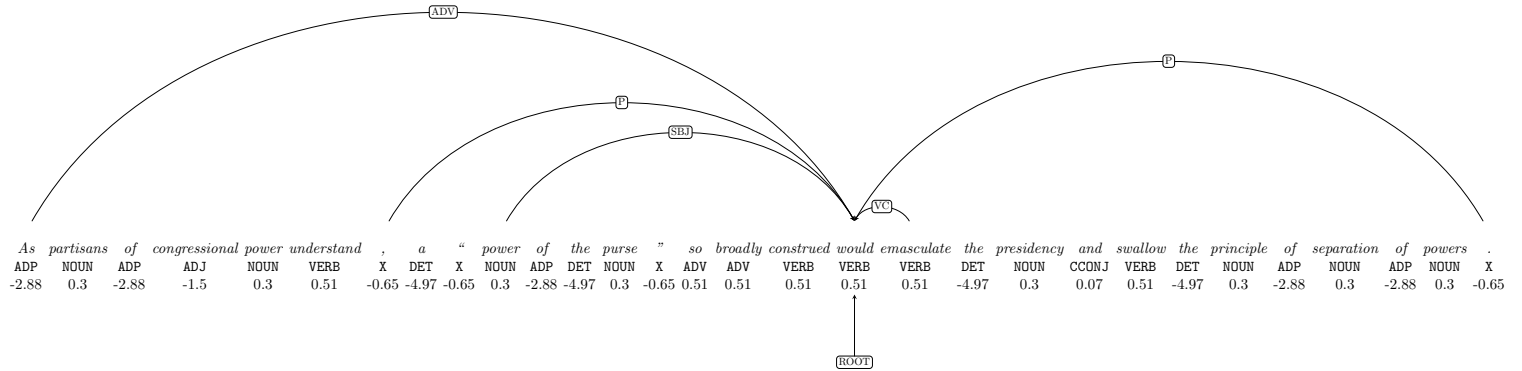


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = 202.24 ldep = -16.0

wsj\_0112.8.0

# Reference Sentence

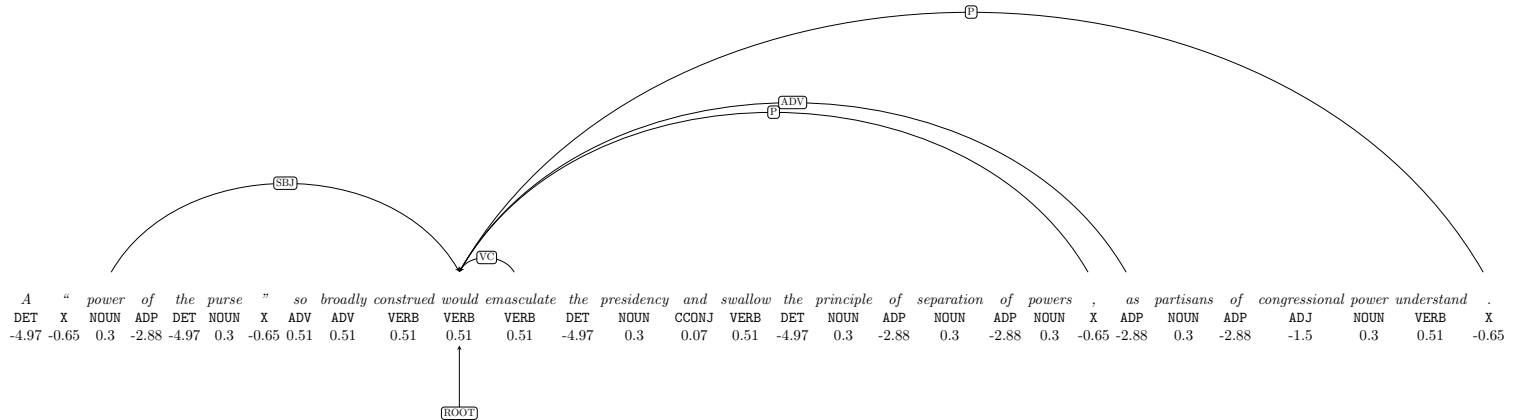
spearman allwords = 0.12



wsj\_0112.8.1

# Variant Sentence

spearman allwords = -0.04



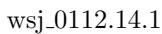
$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 0.0 wtembdep = -735.17 ldep = -2.0

wsj\_0112.14.0

# Reference Sentence

spearman allwords = -0.24





wsj\_0114.30.0

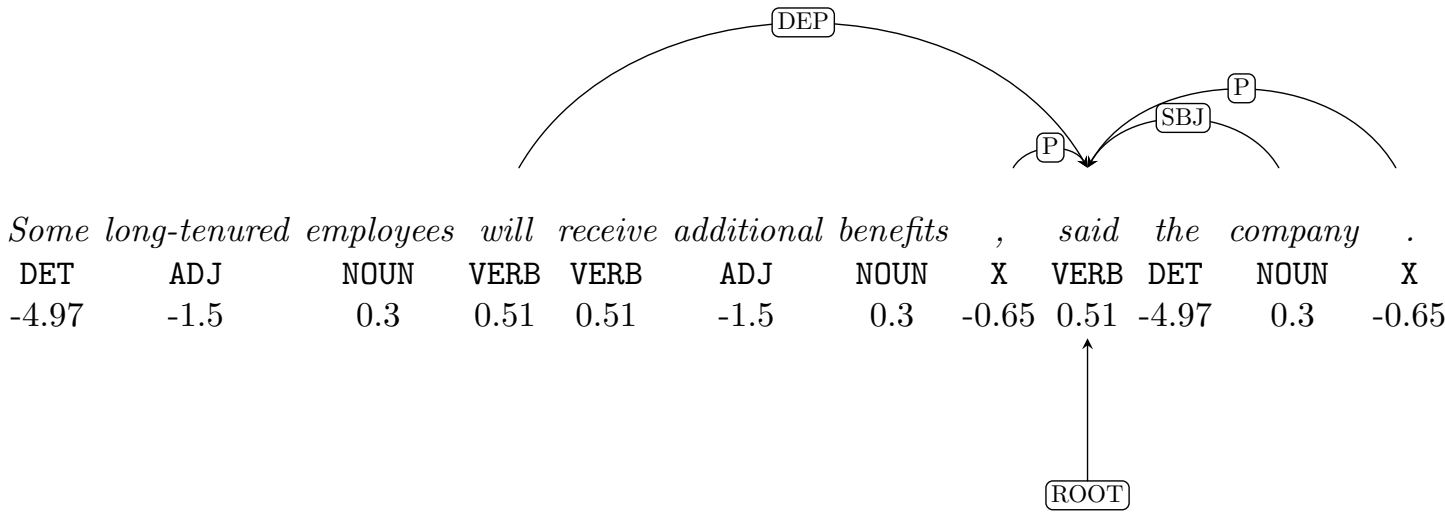
Some long-tenured employees will receive additional benefits , the company said .

DET	ADJ	NOUN	VERB	VERB	ADJ	NOUN	X	DET	NOUN	VERB	X
-4.97	-1.5	0.3	0.51	0.51	-1.5	0.3	-0.65	-4.97	0.3	0.51	-0.65

↑  
[ROOT]

wsj\_0114.30.1

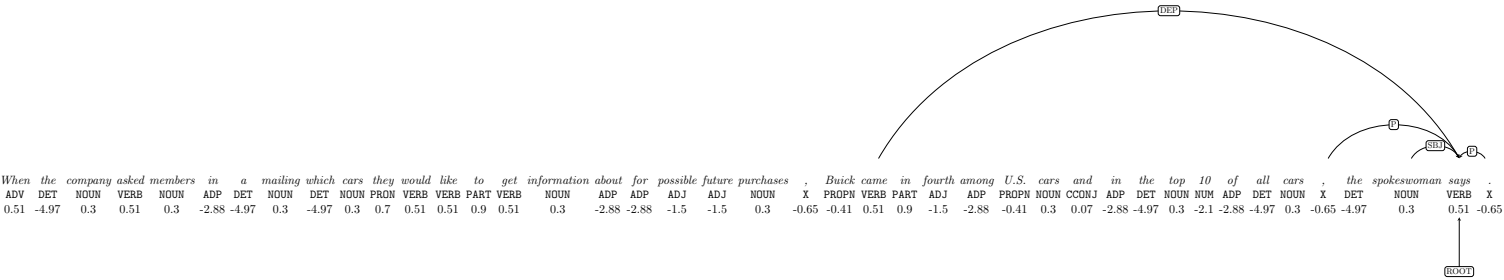
Variant Sentence  
spearman allwords = -1.0



$$\phi(\text{ref}) - \phi(\text{var}): \text{dlg} = 1.0 \quad \text{wtembdep} = 47.3 \quad \text{ldep} = -13.0$$

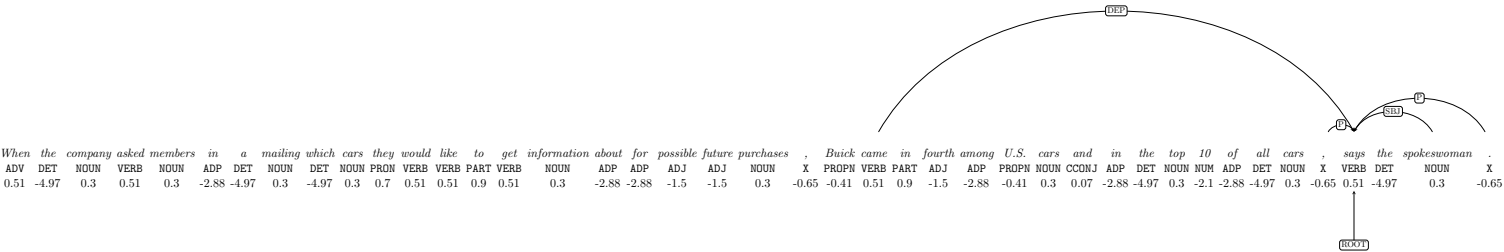
wsj\_0116.21.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0116.21.1

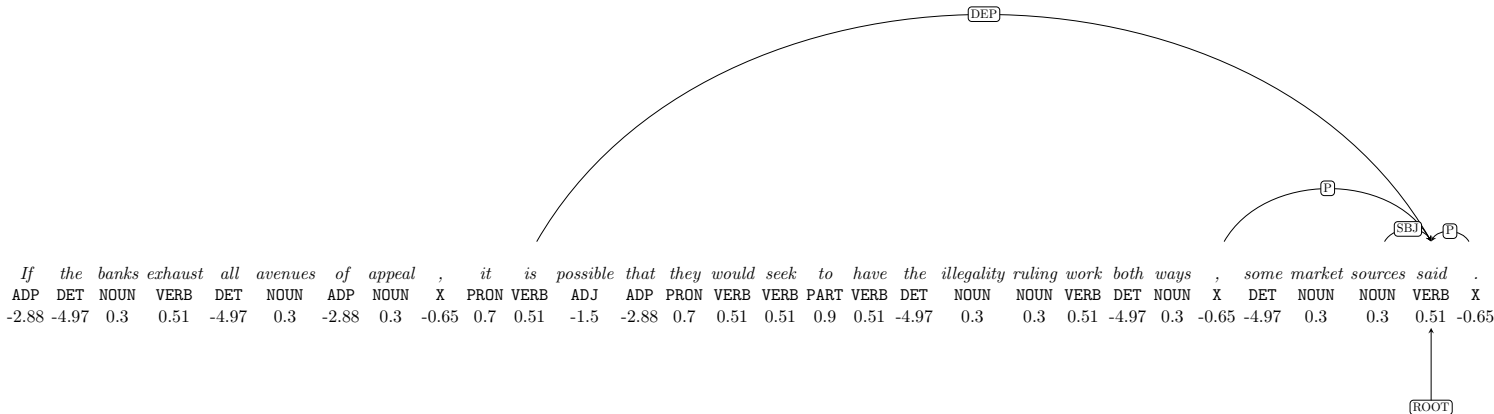
Variant Sentence  
spearman allwords = -1.0



$$\phi(\text{ref}) - \phi(\text{var}): \text{dlg} = 1.0 \quad \text{wtembdep} = -131.81 \quad \text{ldep} = -2.0$$

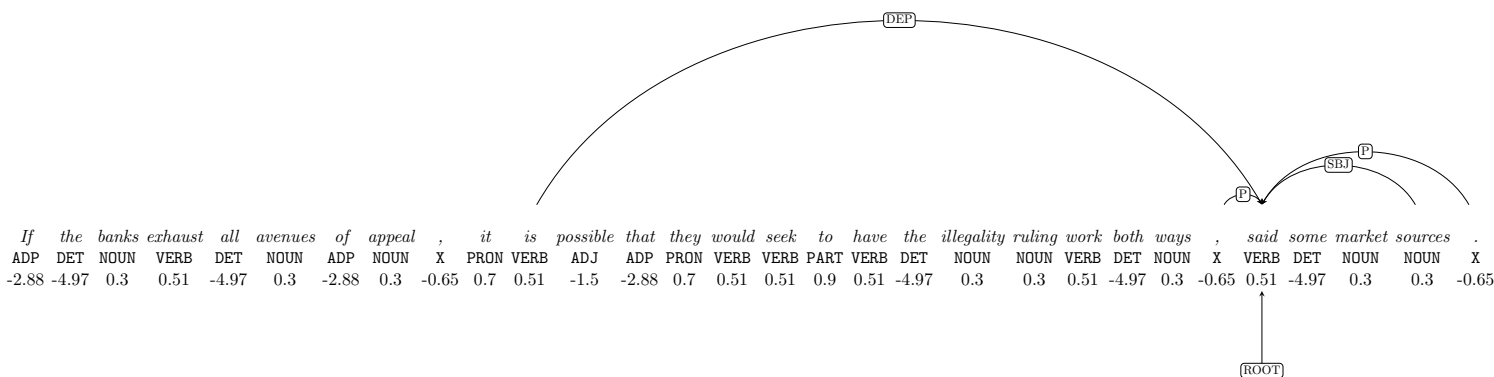
wsj\_0117.19.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0117.19.1

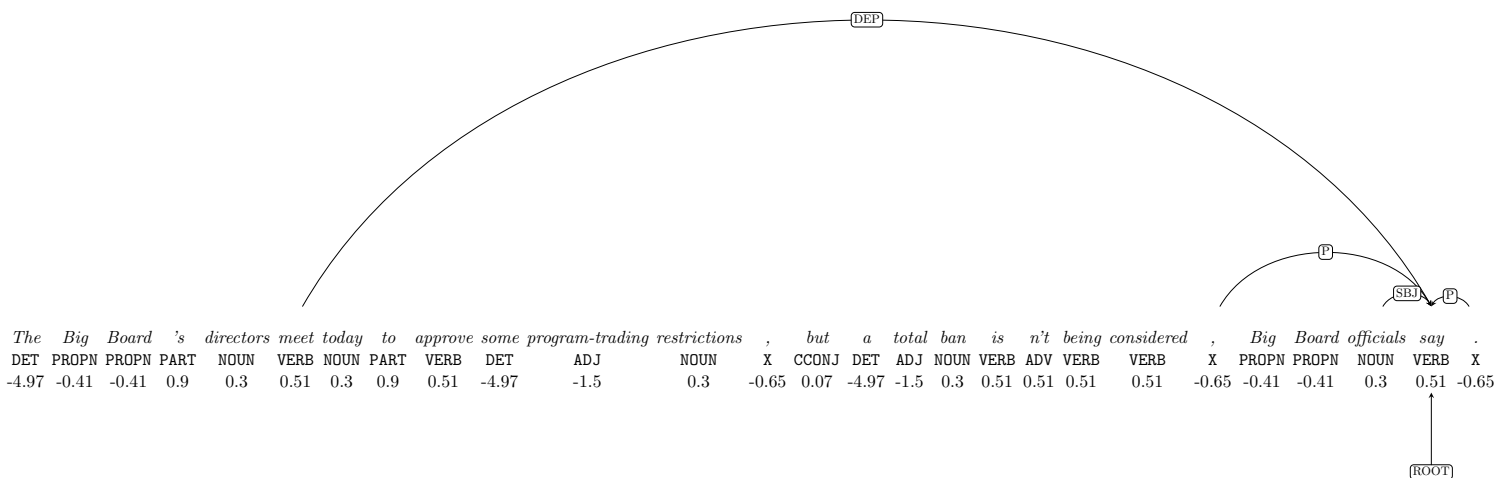
Variant Sentence  
spearman allwords = -0.87



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = -98.82 ldep = 4.0

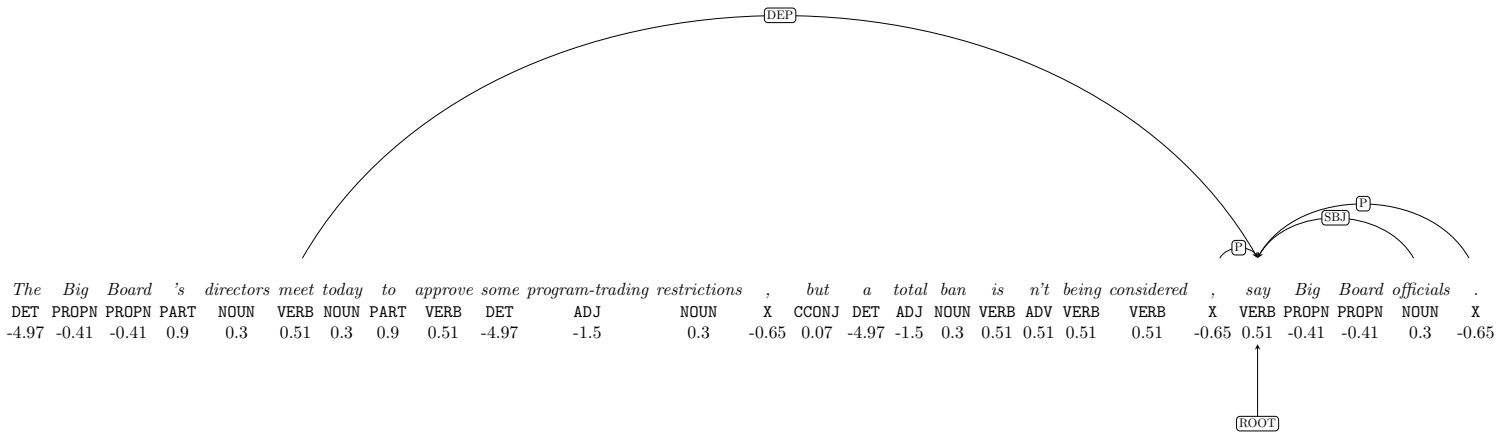
wsj\_0118.106.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0118.106.1

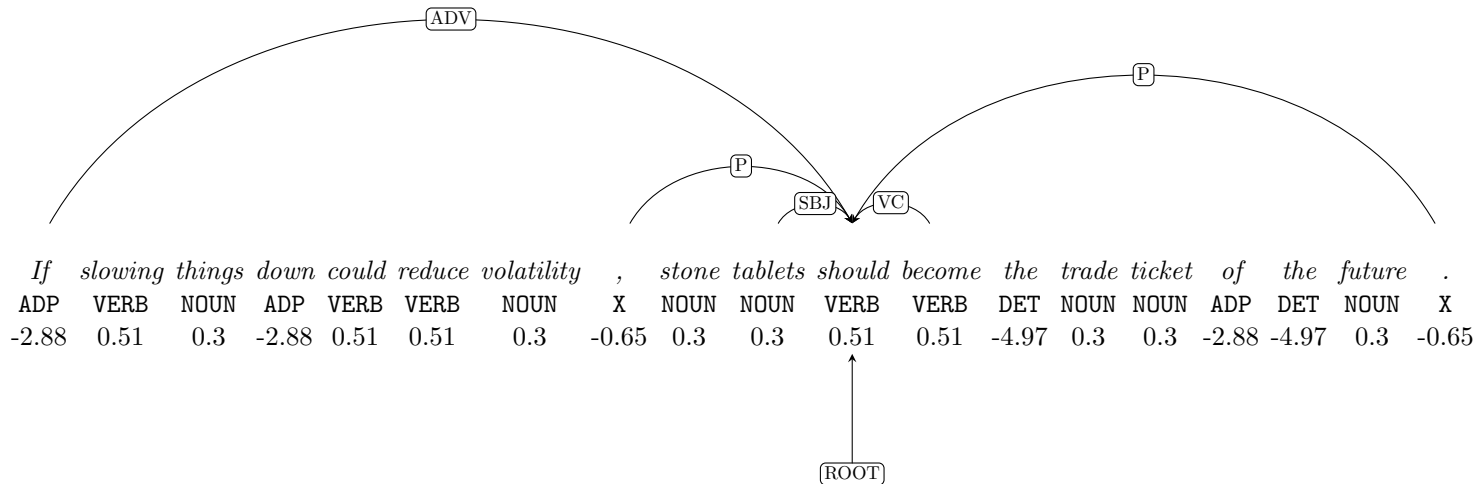
Variant Sentence  
spearman allwords = -0.87



$$\phi(\text{ref}) - \phi(\text{var}): \text{dlg} = 1.0 \quad \text{wtembdep} = -305.32 \quad \text{ldep} = 3.0$$

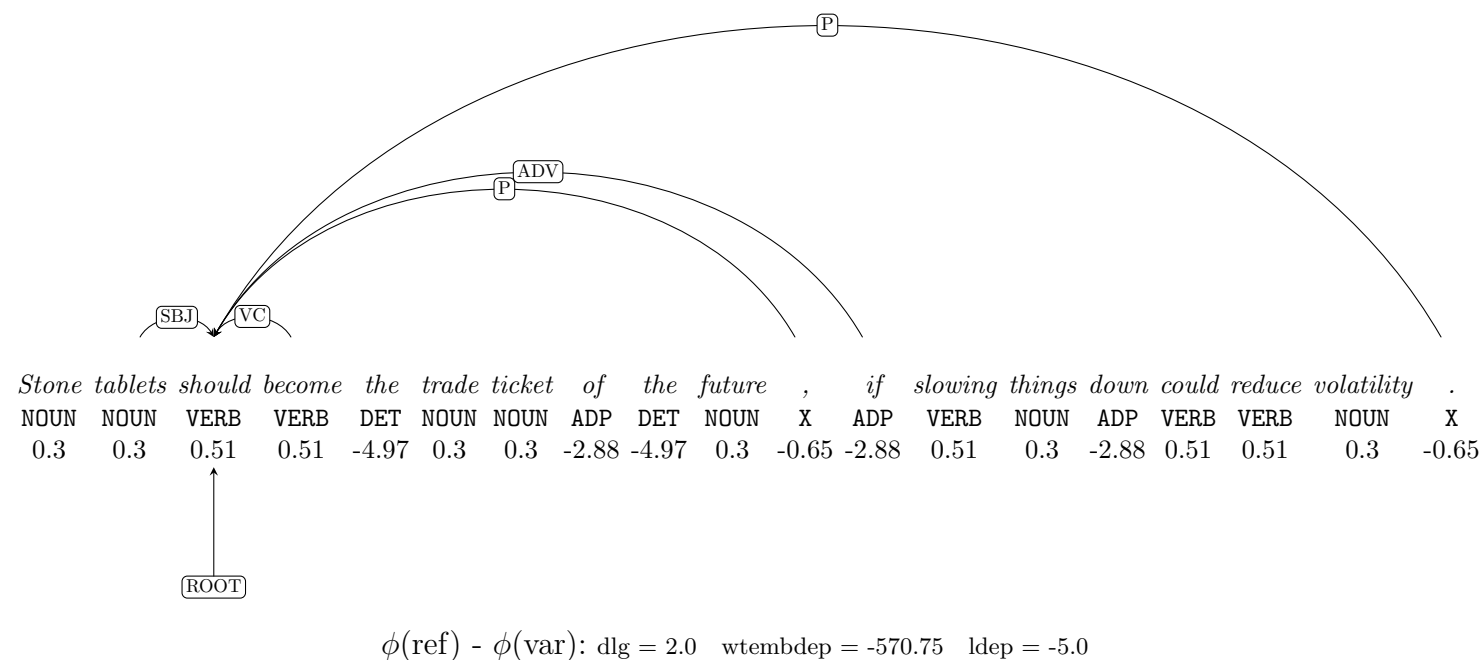
wsj\_0118.153.0

Reference Sentence  
spearman allwords = 0.3



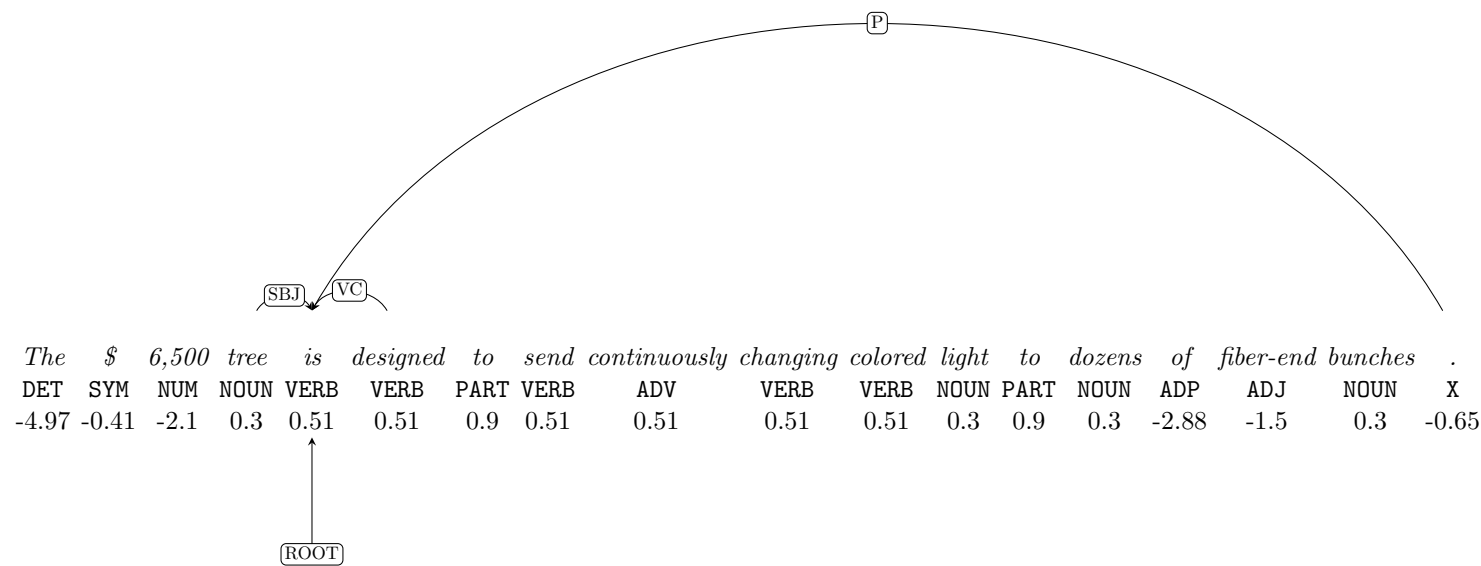
wsj\_0118.153.1

Variant Sentence  
spearman allwords = -0.28



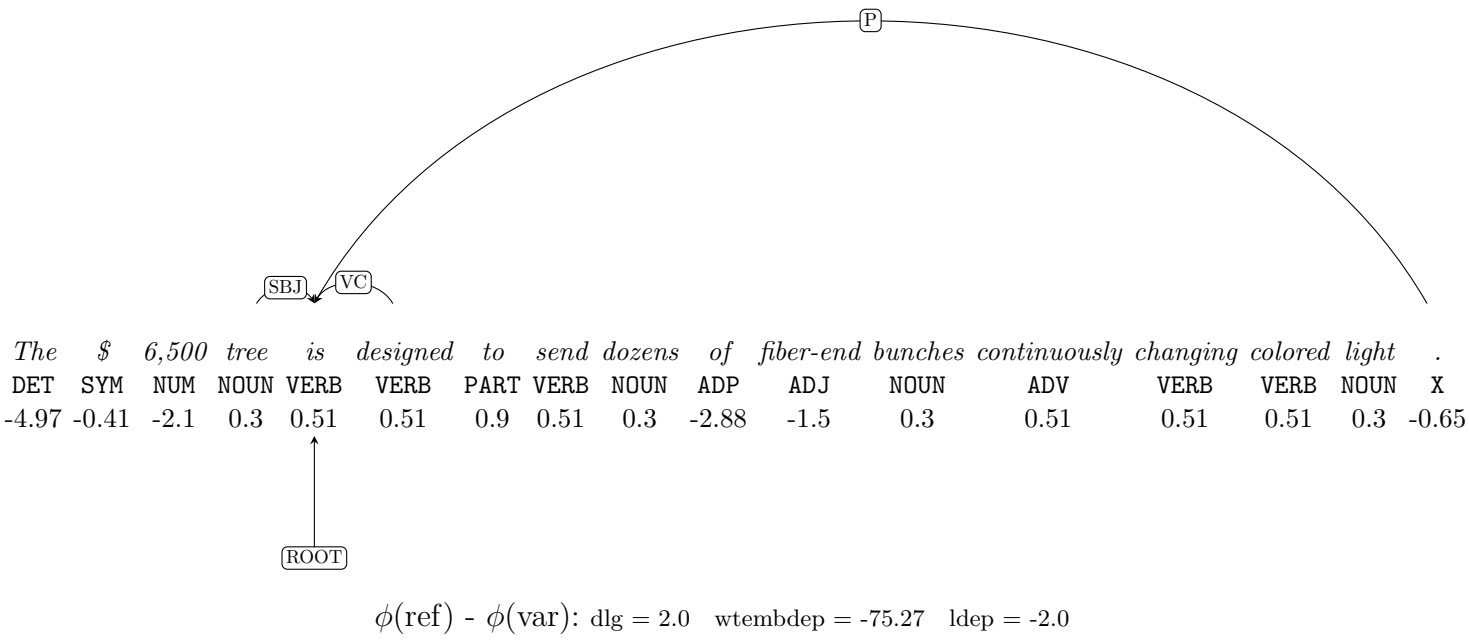
wsj\_0120.35.0

Reference Sentence  
spearman allwords = 0.69



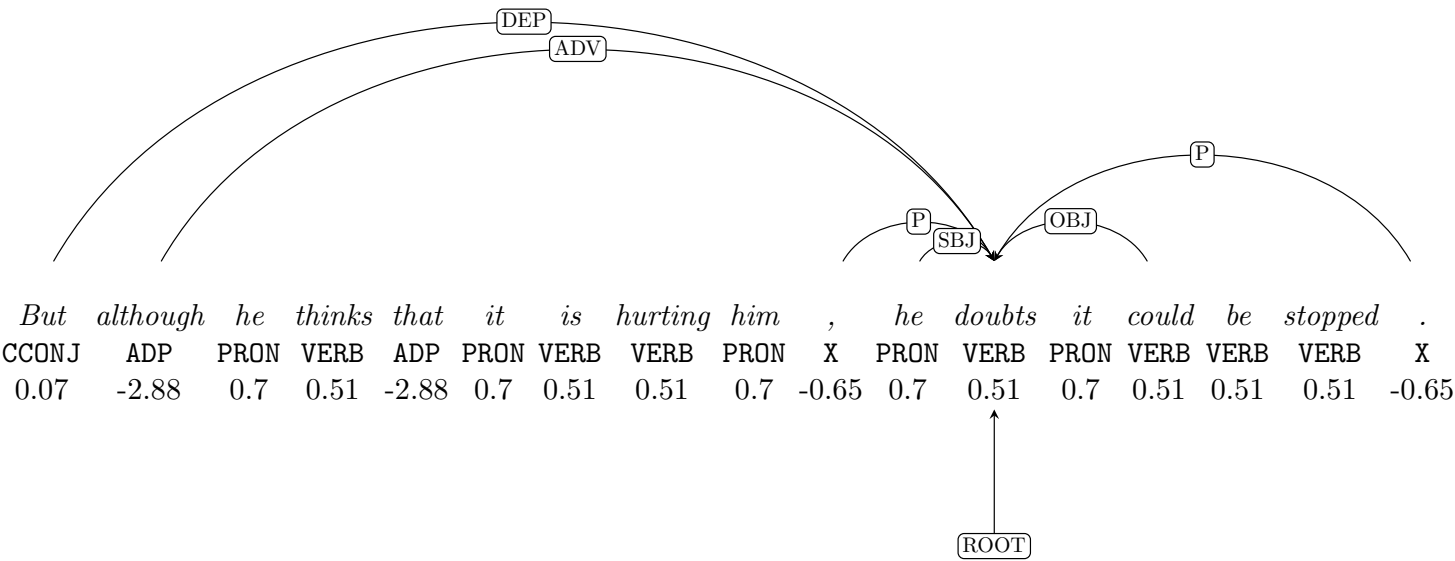
wsj\_0120.35.1

Variant Sentence  
spearman allwords = 0.16



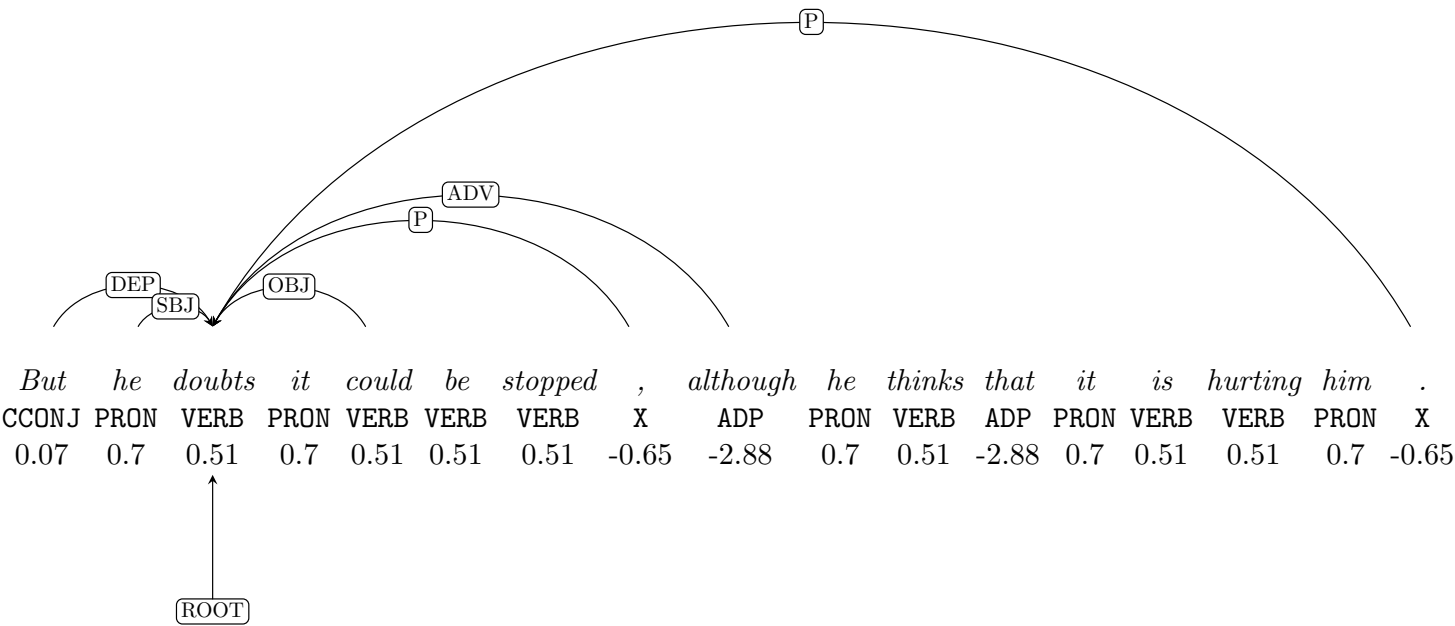
wsj\_0121.2.0

Reference Sentence  
spearman allwords = 0.77



wsj\_0121.2.1

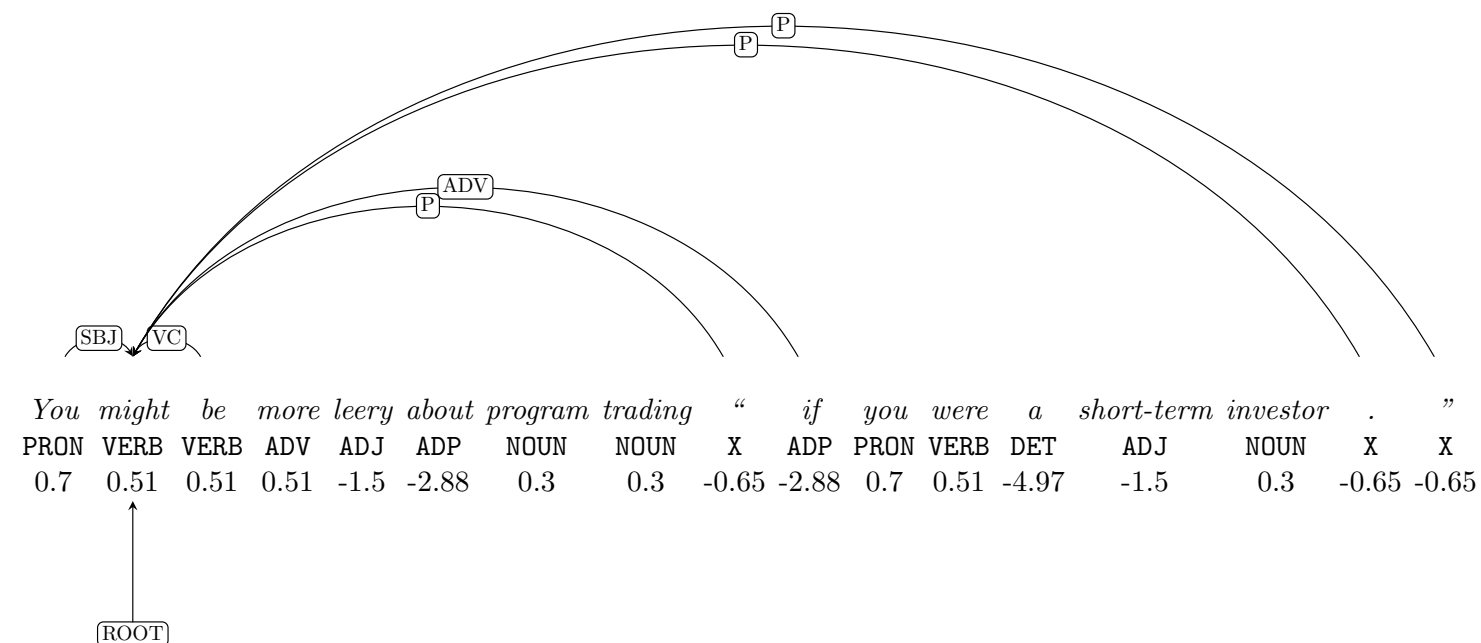
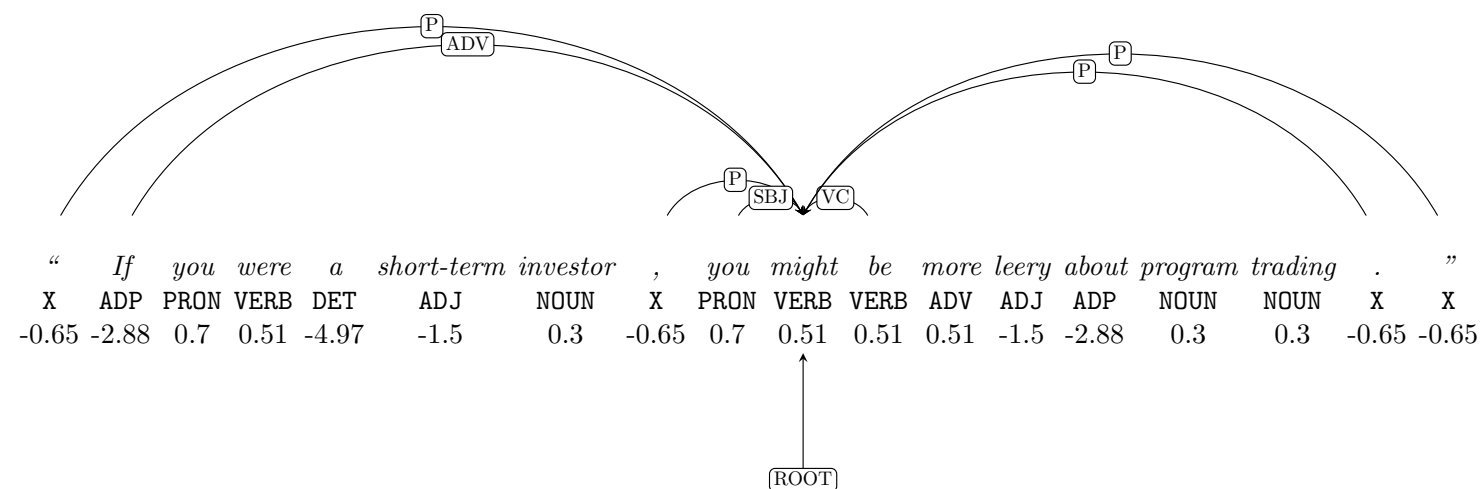
Variant Sentence  
spearman allwords = -0.08



$\phi(\text{ref}) - \phi(\text{var})$ : dlg = 4.0 wtembdep = -741.98 ldep = -33.0

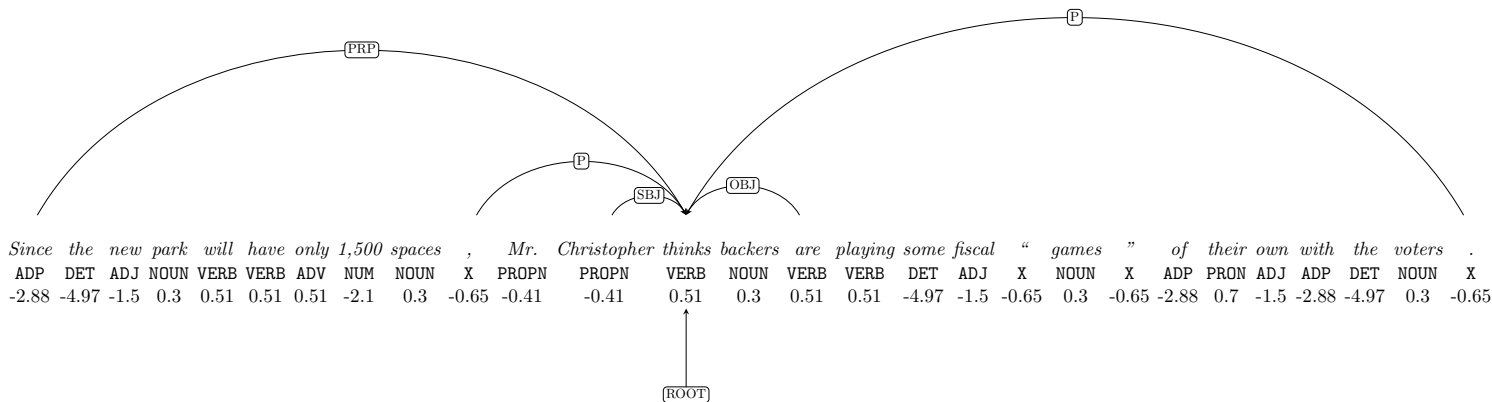
wsj\_0121.35.0

Reference Sentence  
spearman allwords = 0.46



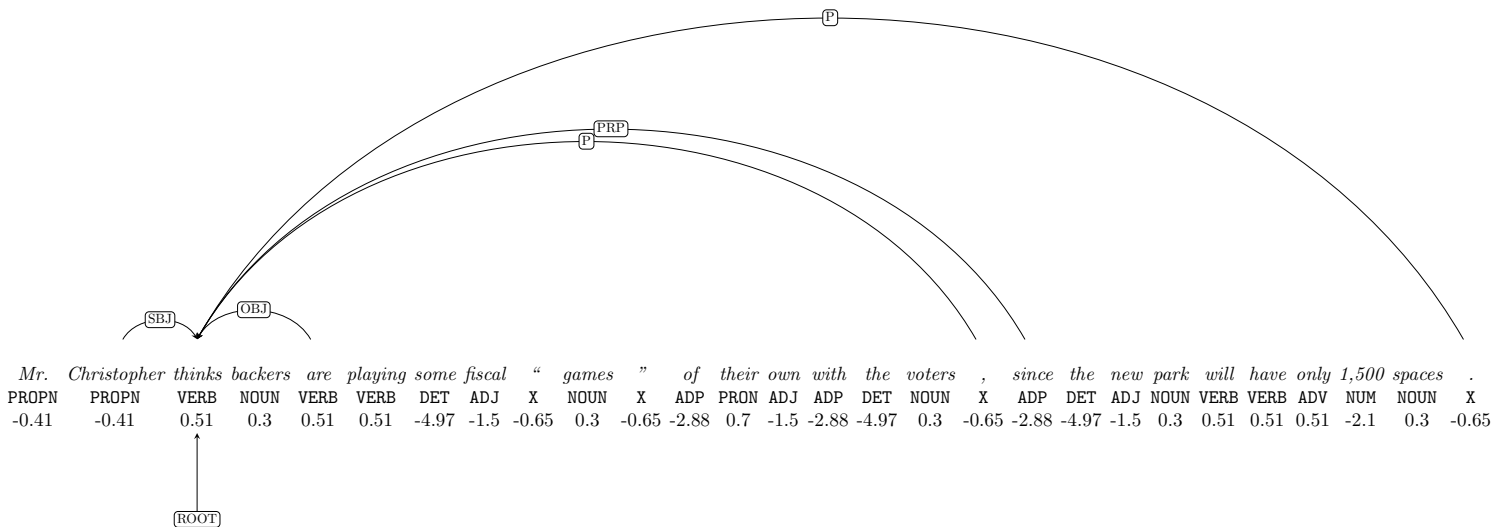
$\phi(\text{ref}) - \phi(\text{var})$ : dlg = 0.0 wtembdep = -804.96 ldep = 0.0





wsj\_0126.20.1

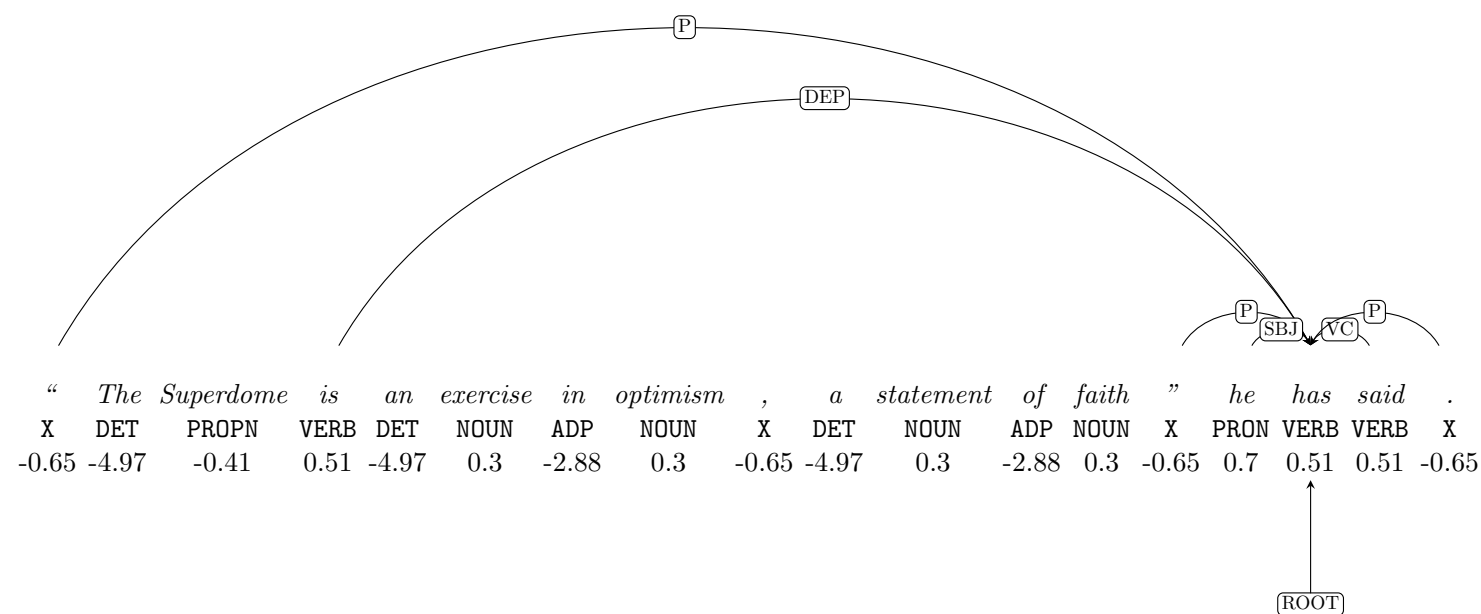
Variant Sentence  
spearman allwords = -0.12



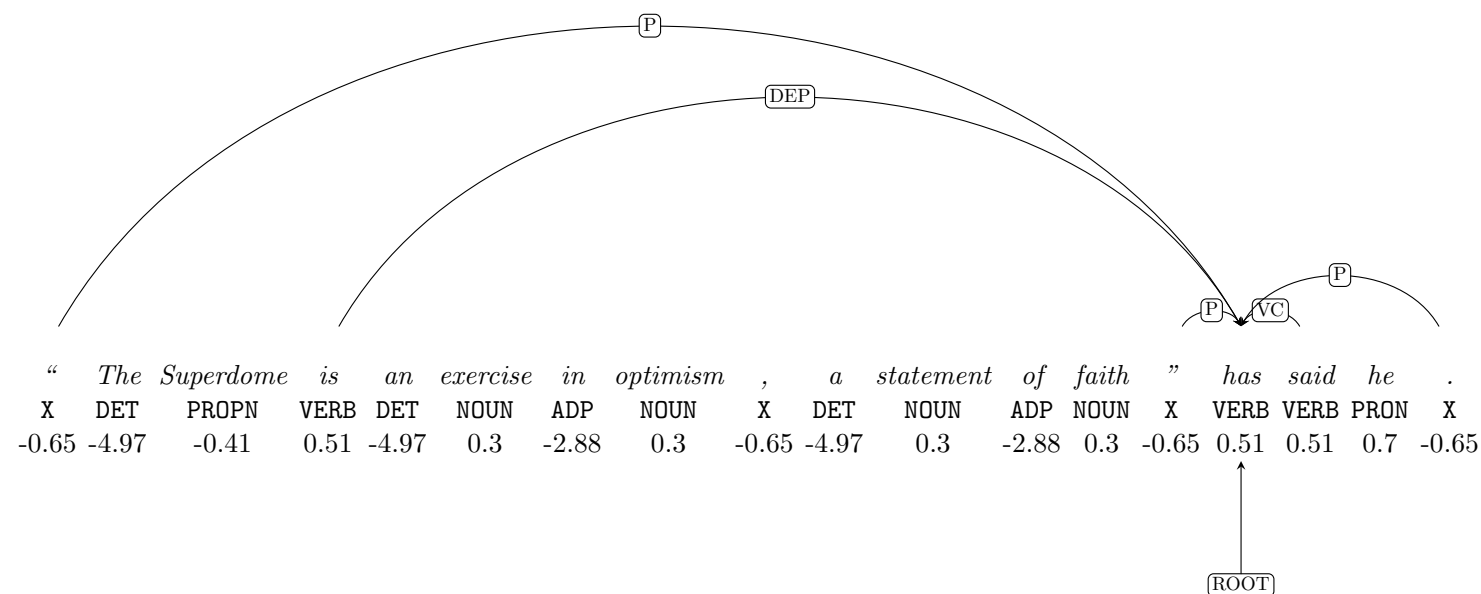
$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 0.0 wtembdep = 132.0 ldep = 0.0

wsj\_0126.27.0

Reference Sentence  
spearman allwords = 0.0

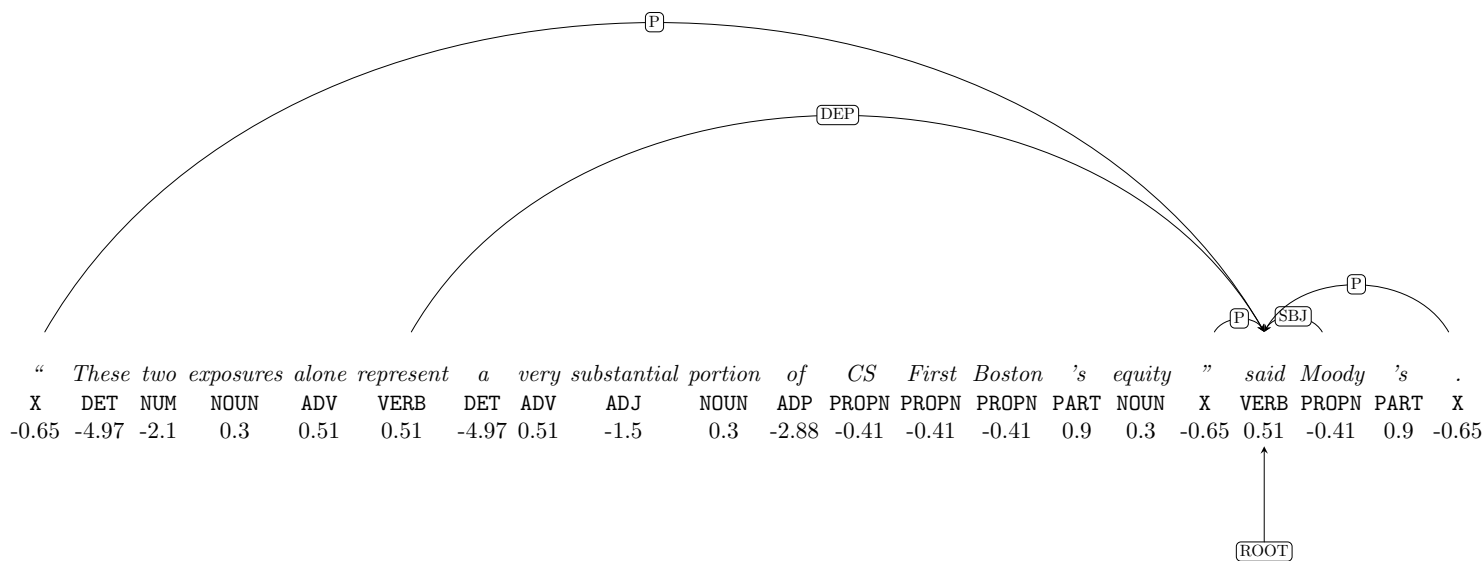
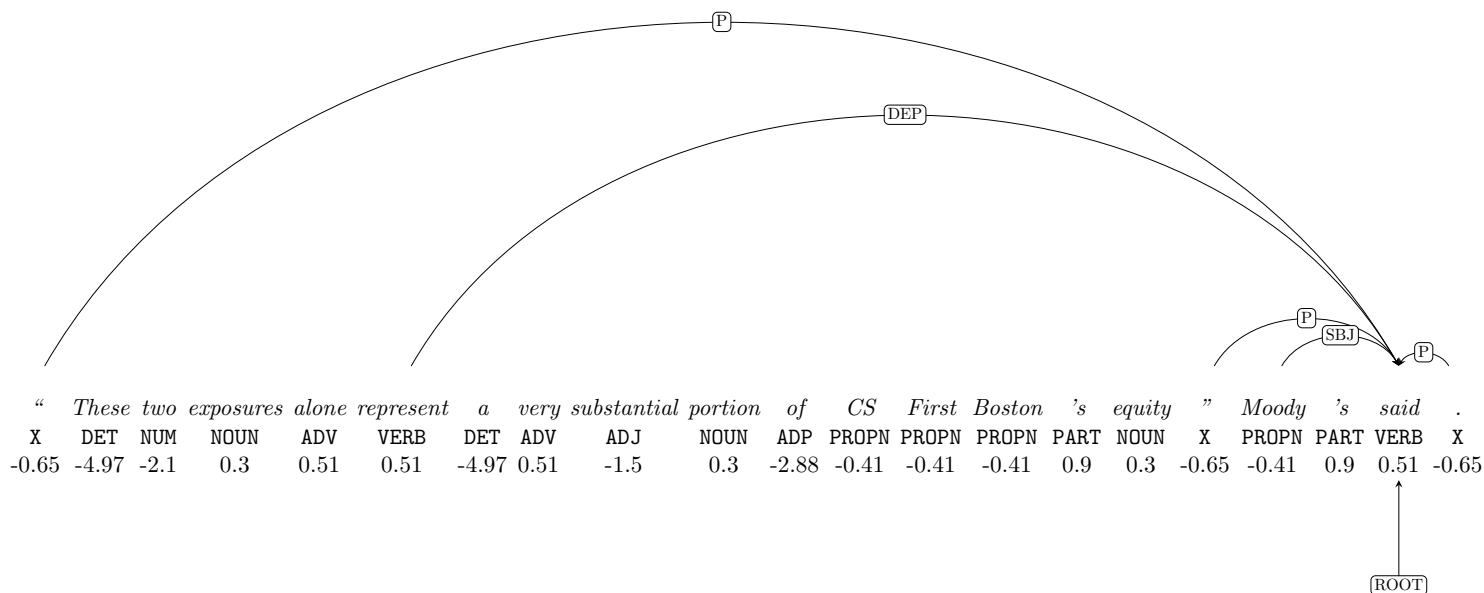


Variant Sentence  
spearman allwords = -1.0

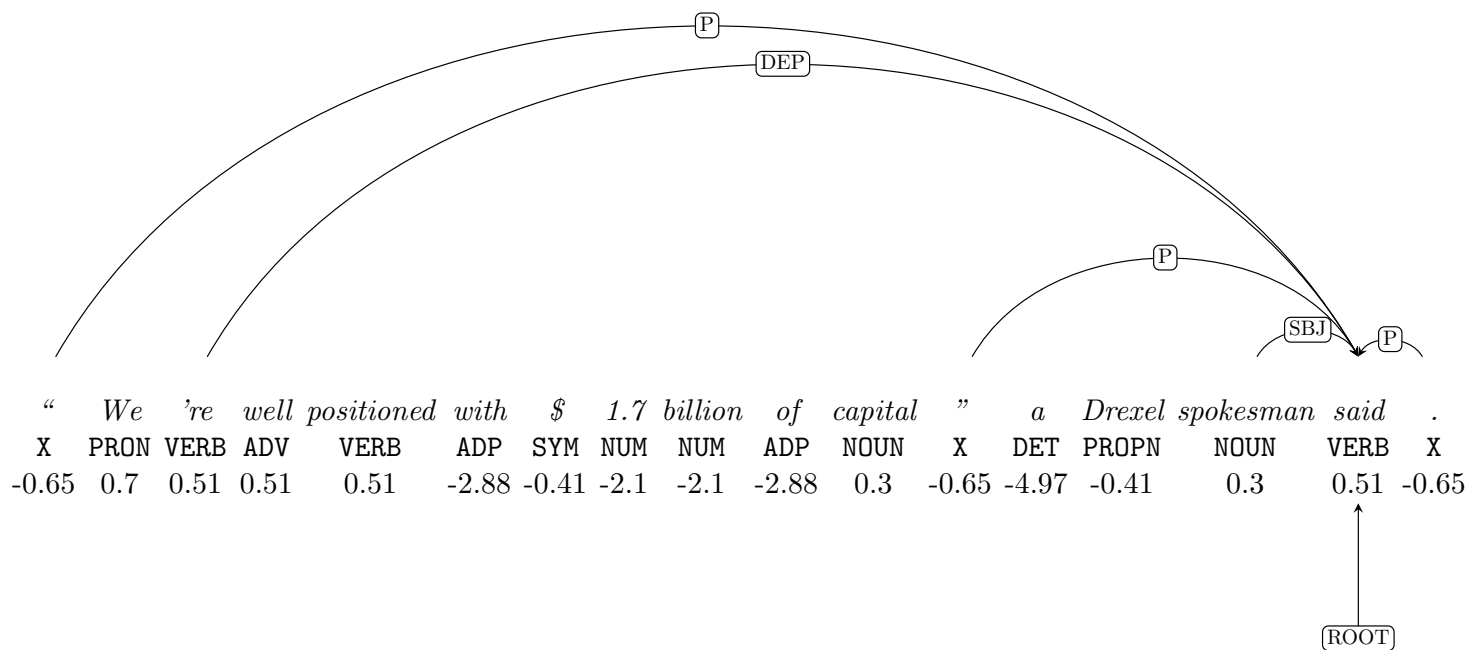


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 0.0 wtembdep = 74.39 ldep = -3.0

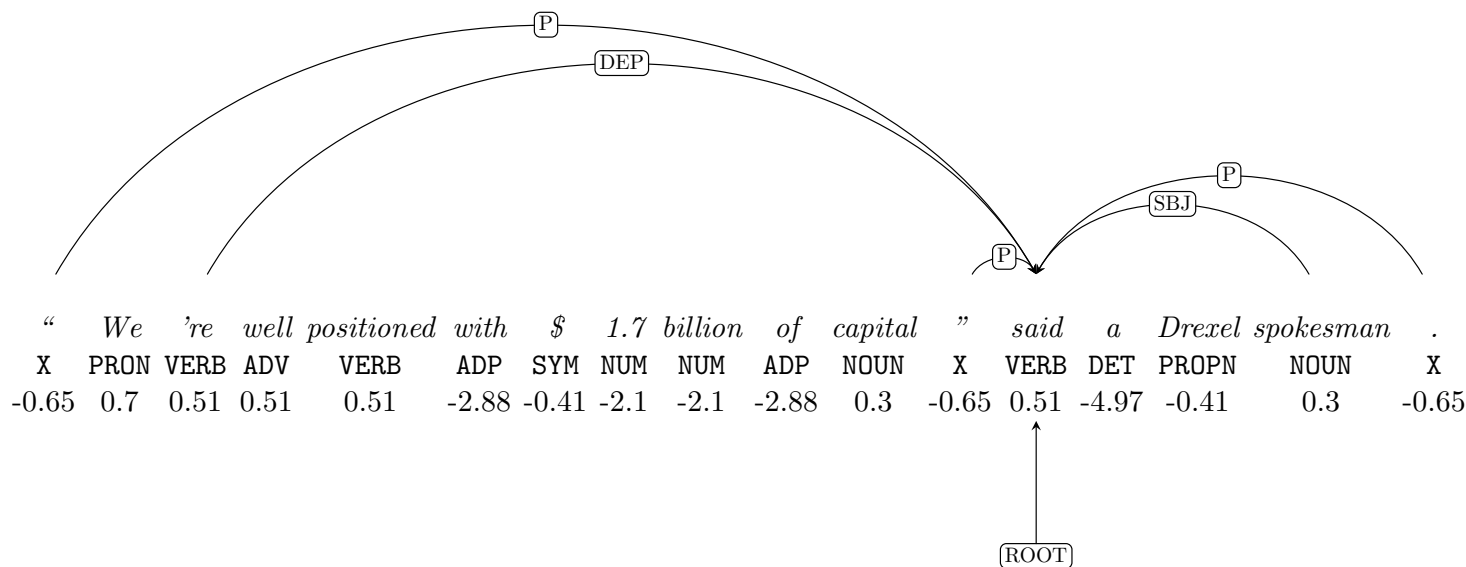
Reference Sentence  
spearman allwords = 0.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = -86.51   ldep = -1.0

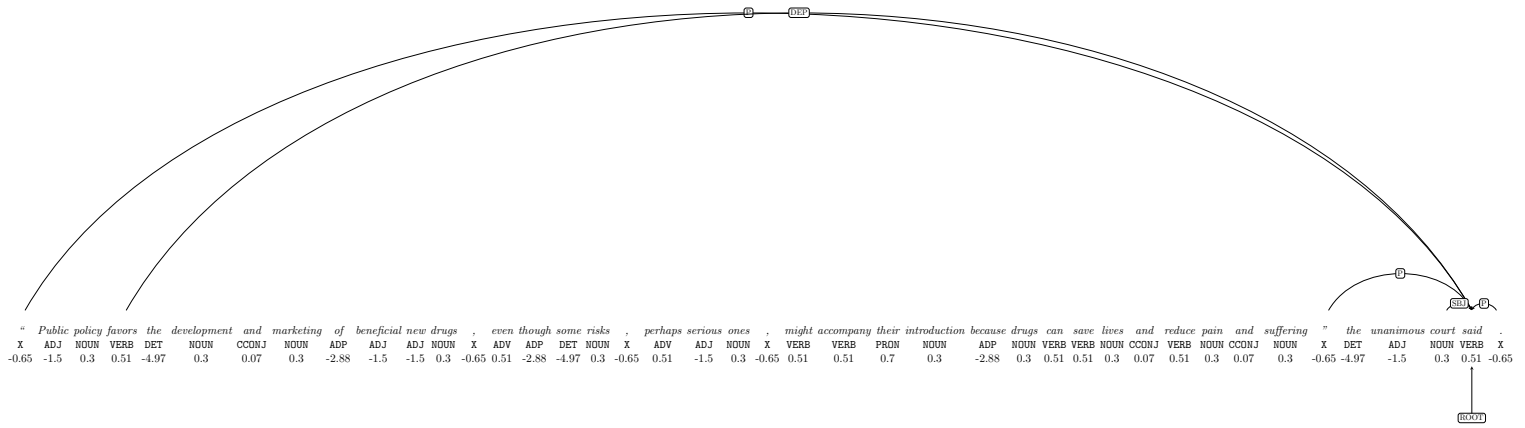


Variant Sentence  
spearman allwords = -1.0

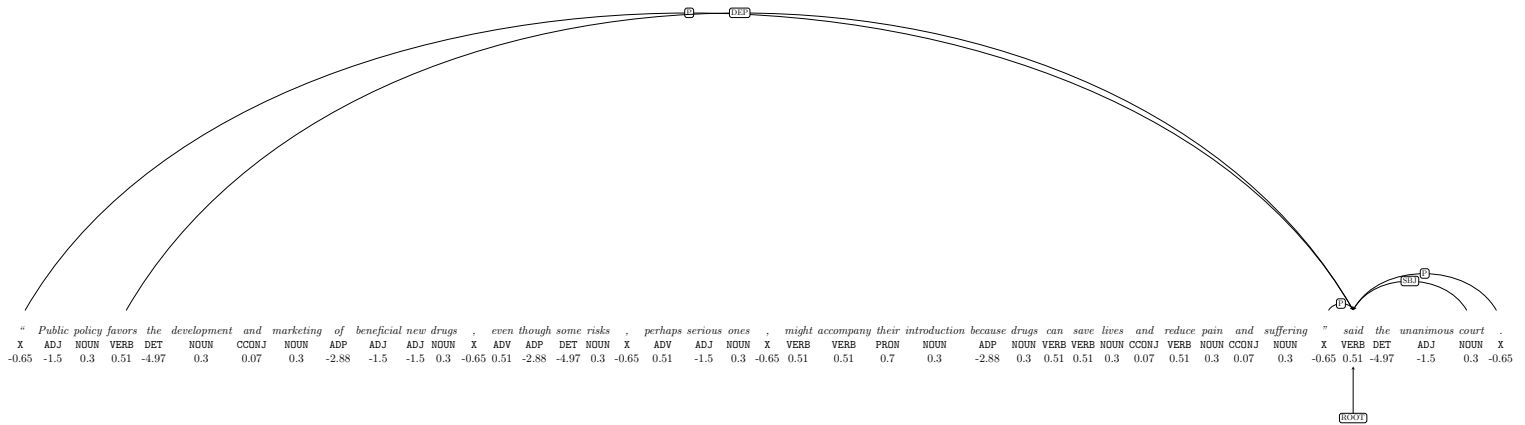


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = -174.48 ldep = 12.0

Reference Sentence  
spearman allwords = 0.0

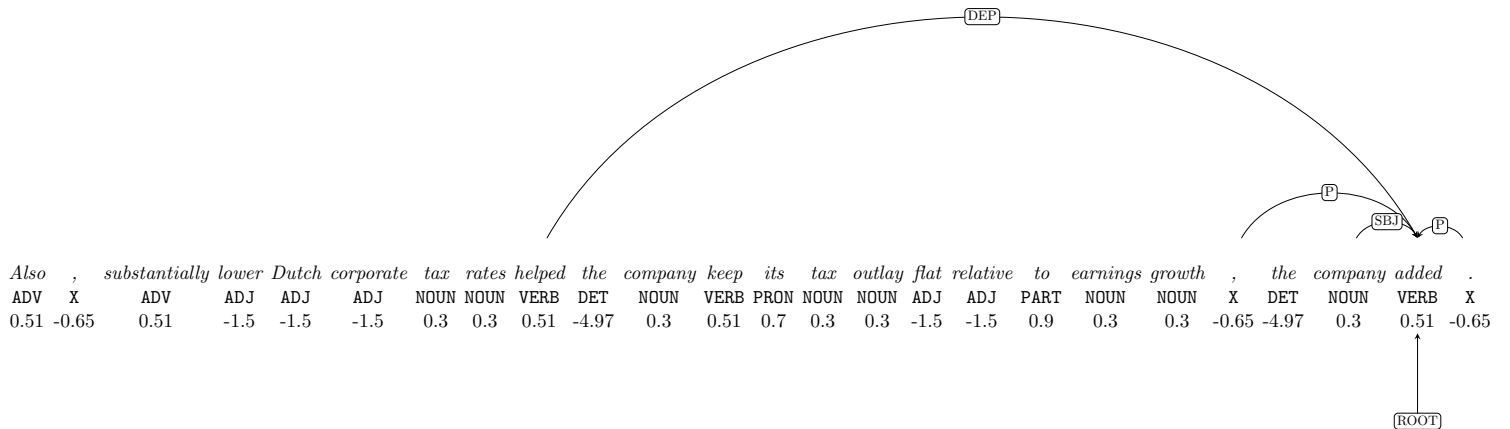


Variant Sentence  
spearman allwords = -1.0

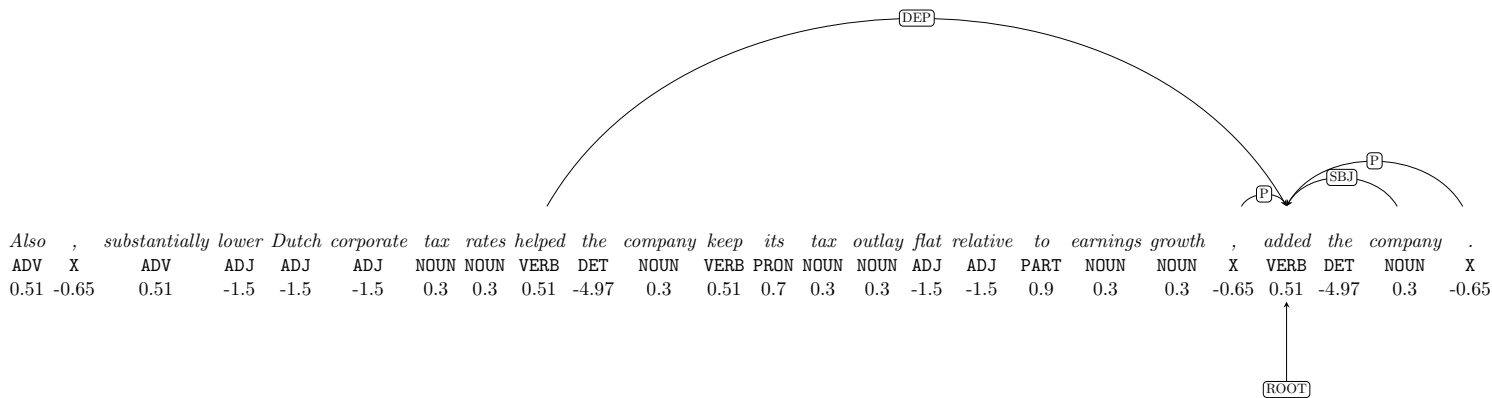


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = -483.82 ldep = 24.0

Reference Sentence  
spearman allwords = 0.0



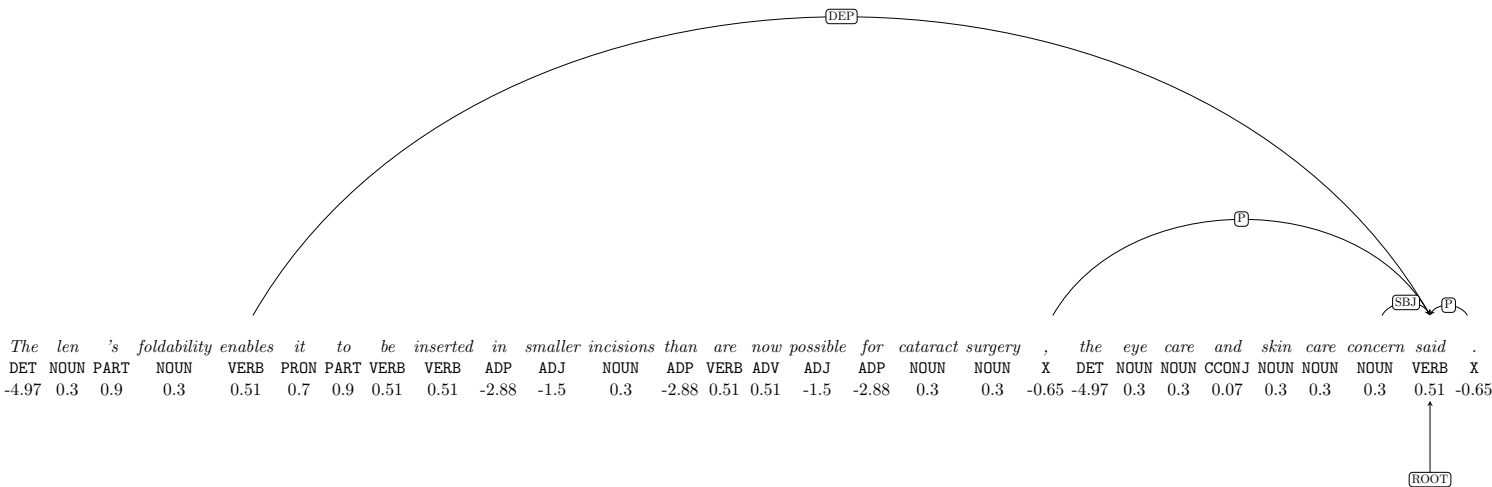
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 190.61   ldep = -11.0

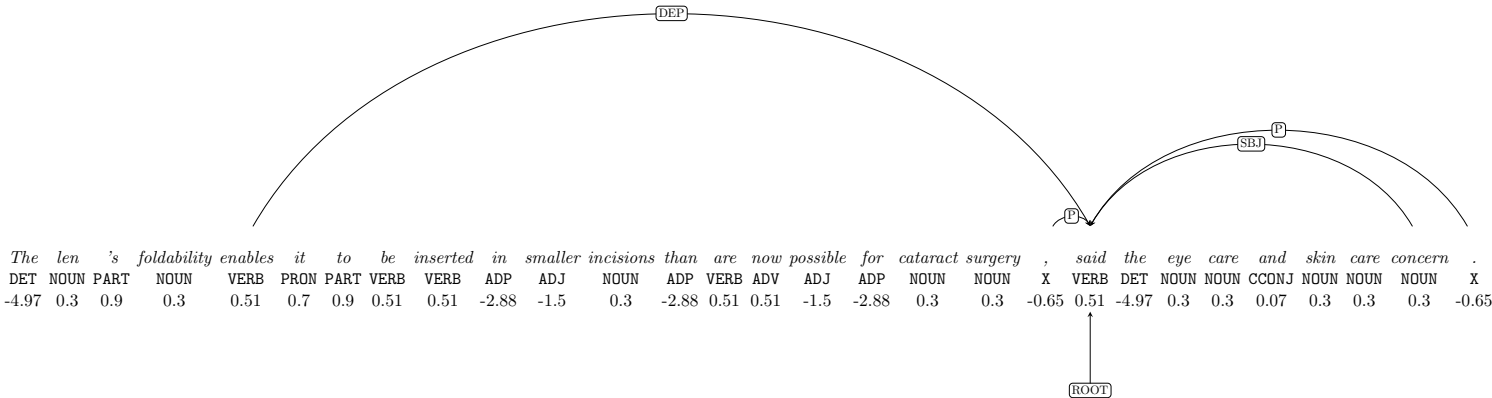
wsj\_0133.2.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0133.2.1

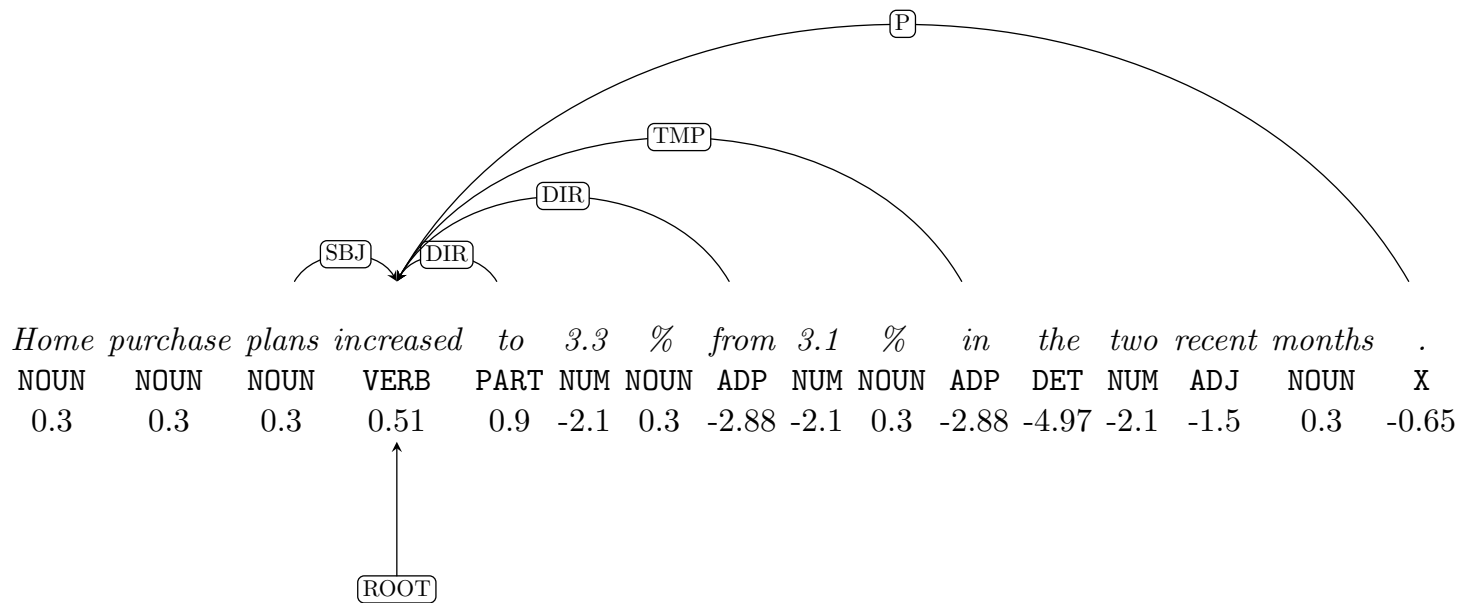
Variant Sentence  
spearman allwords = -0.53



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 64.18   ldep = -10.0

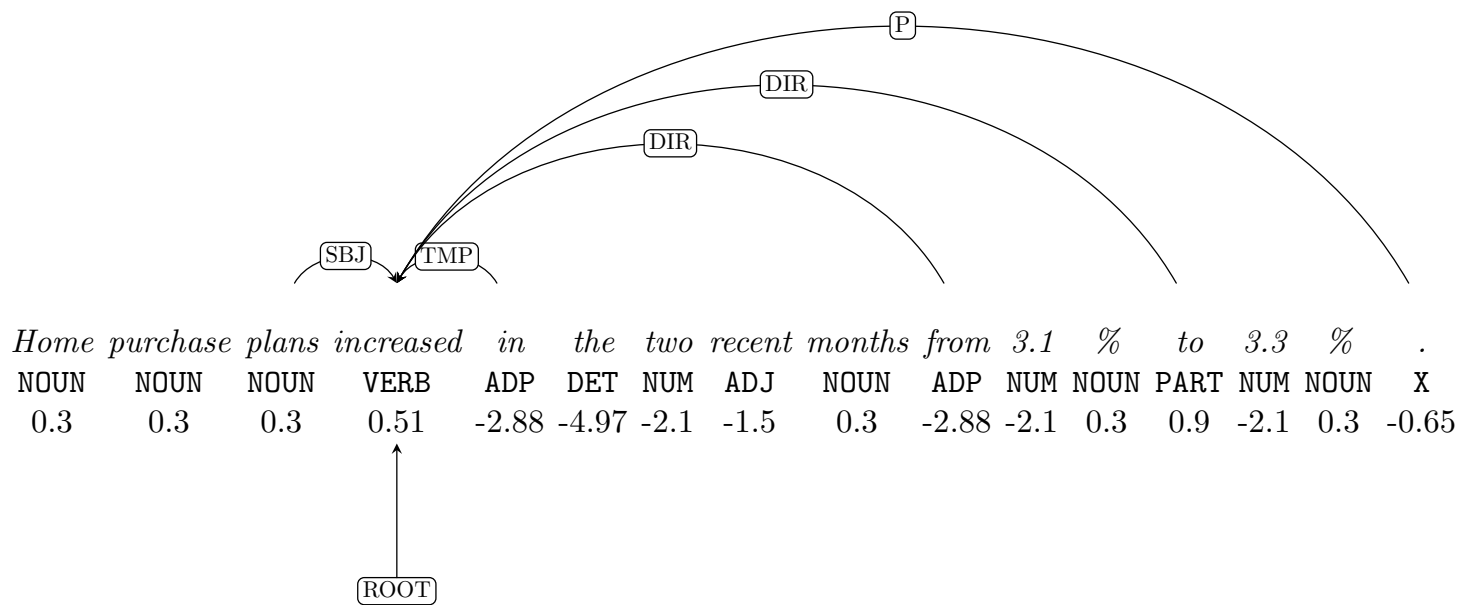
wsj\_0141.21.0

Reference Sentence  
spearman allwords = -0.13



wsj\_0141.21.2

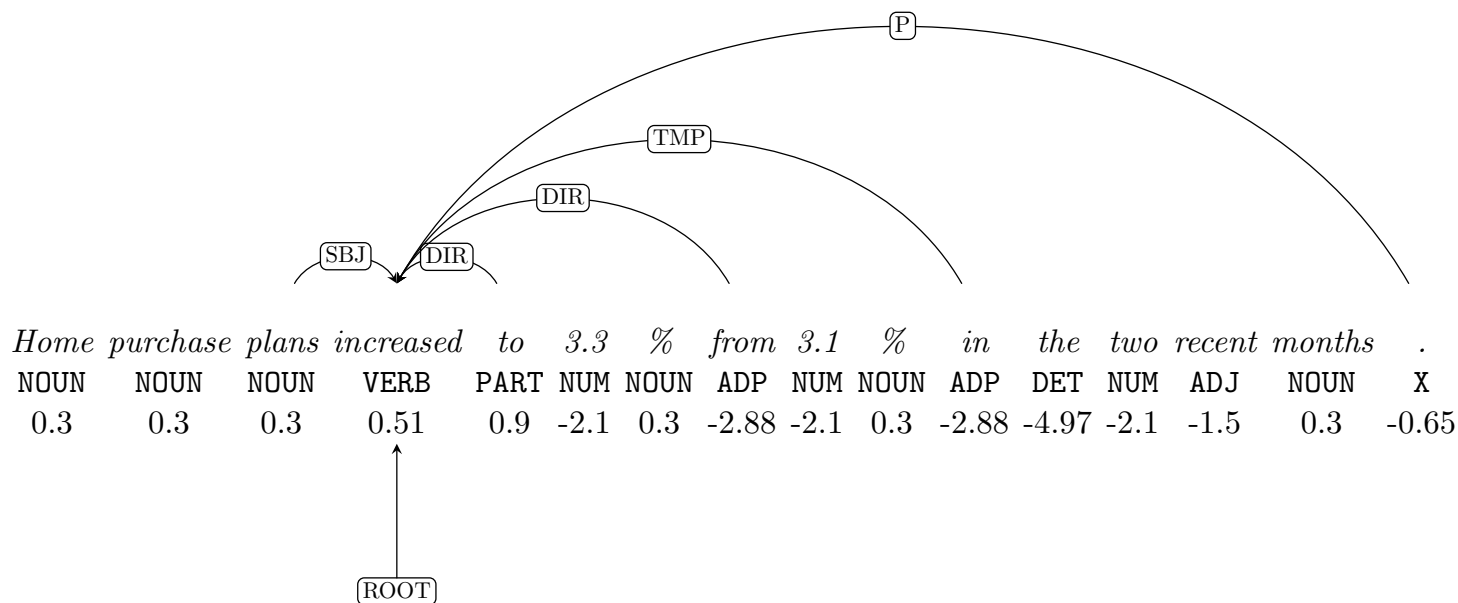
Variant Sentence  
spearman allwords = -0.67



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 0.0   wtembdep = 151.51   ldep = 13.0

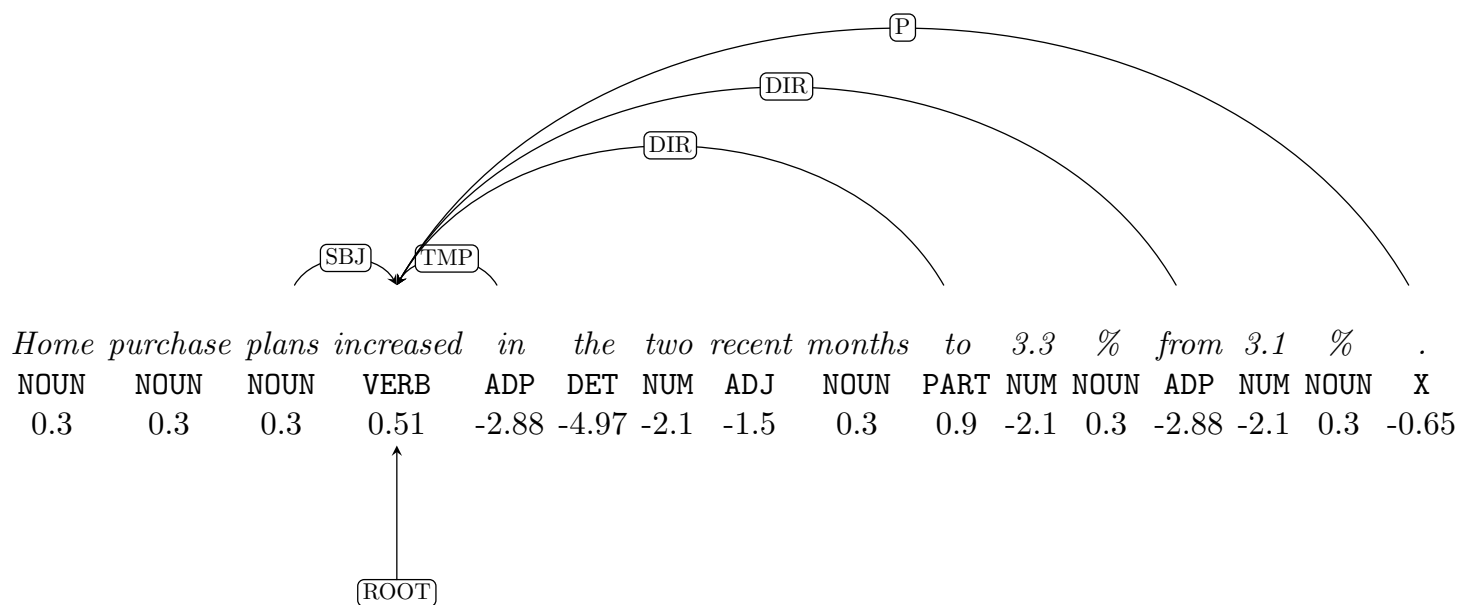
wsj\_0141.21.0

Reference Sentence  
spearman allwords = -0.13



wsj\_0141.21.4

Variant Sentence  
spearman allwords = -0.5

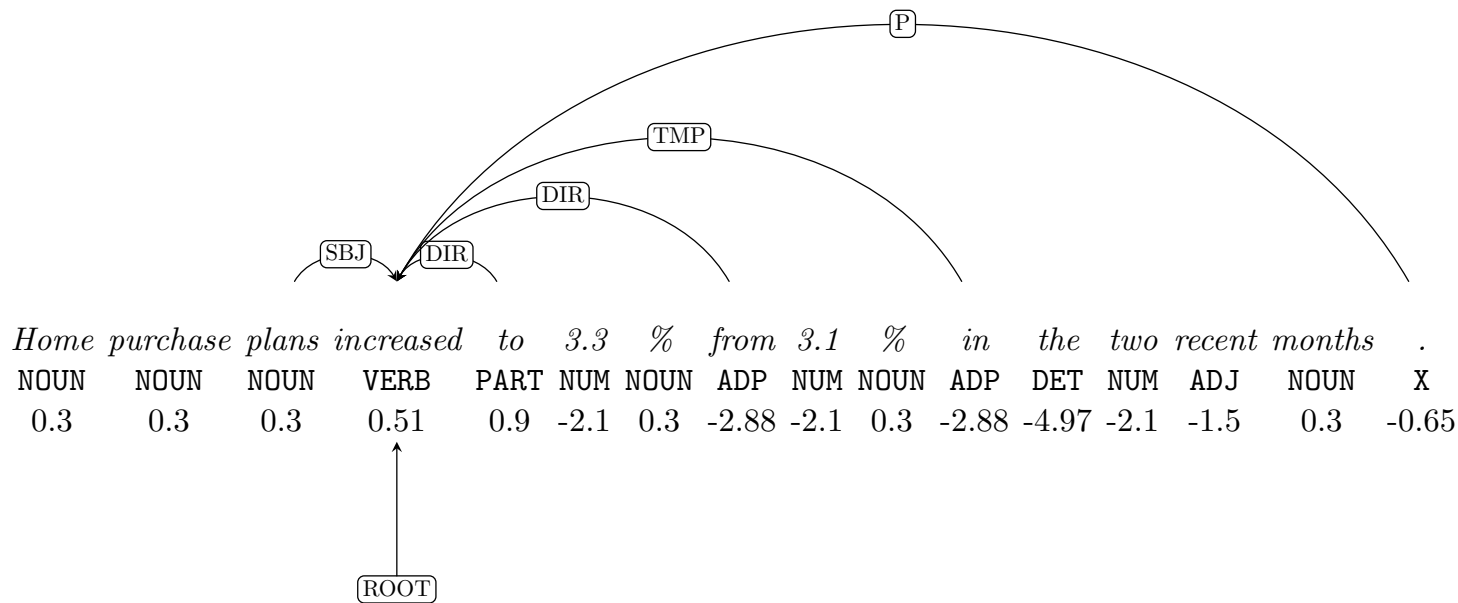


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 0.0   wtembdep = 308.72   ldep = 45.0

wsj\_0141.21.0

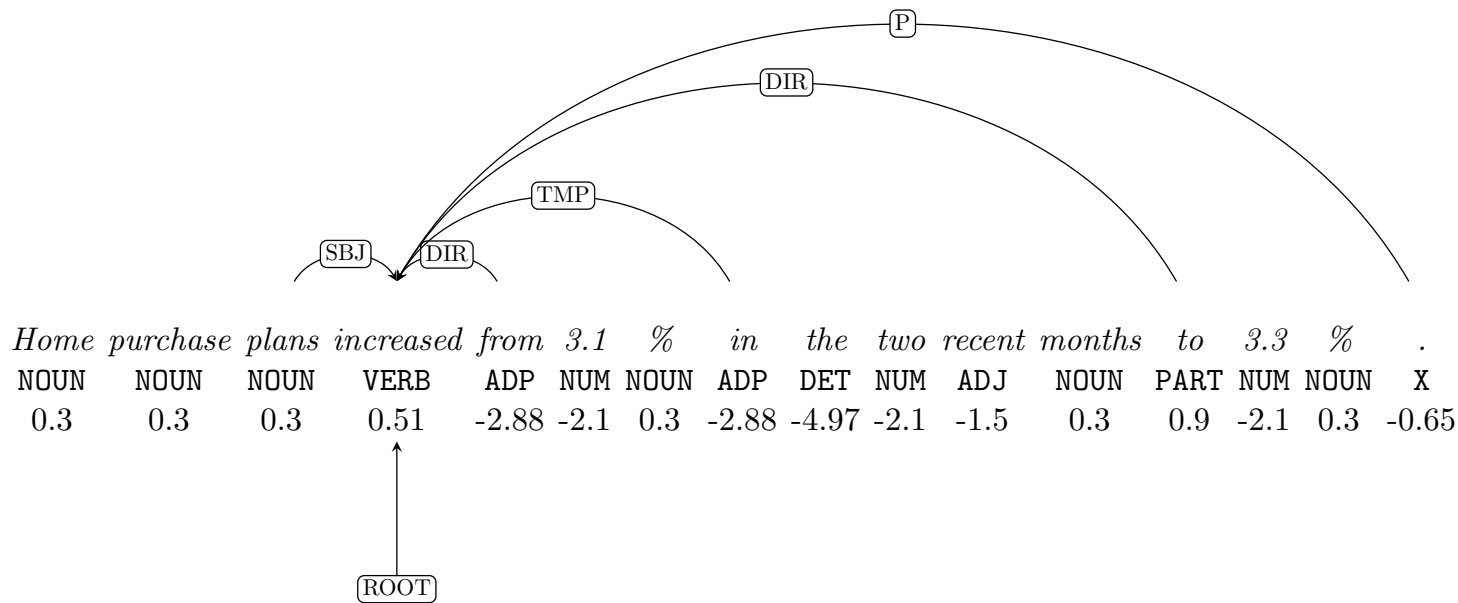
Reference Sentence  
spearman allwords = -0.13





wsj\_0141.21.5

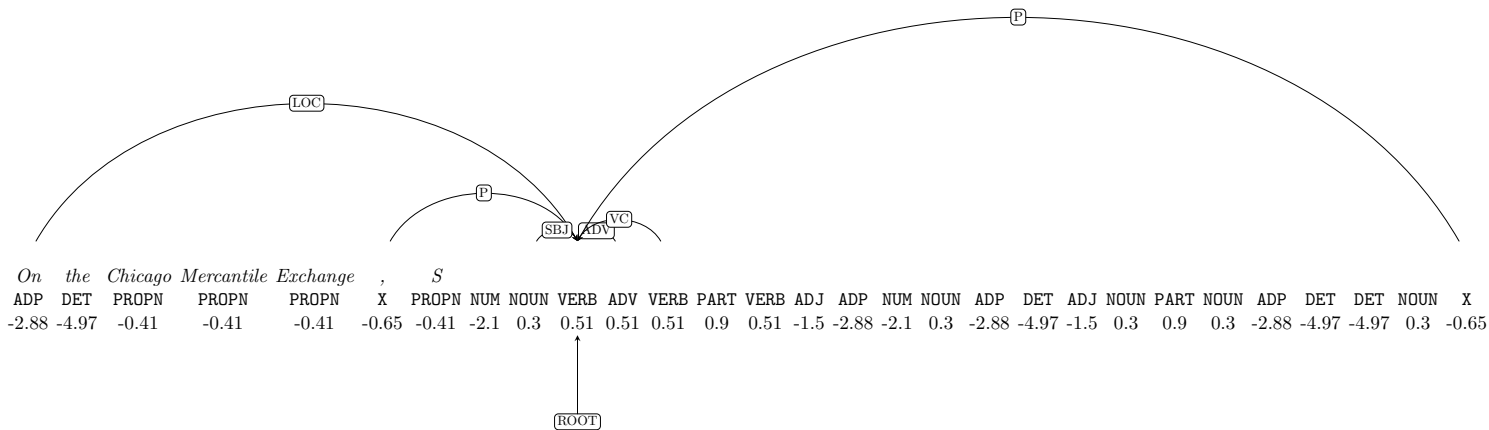
Variant Sentence  
spearman allwords = -0.88



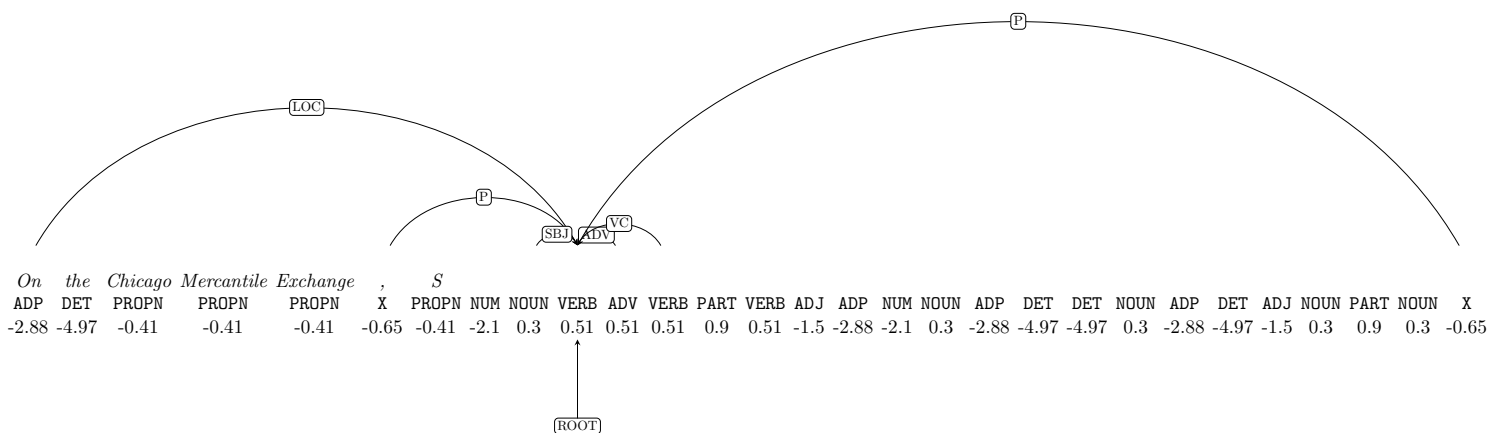
$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = -0.0   wtembdep = 455.62   ldep = 42.0

wsj\_0148.5.0

Reference Sentence  
spearman allwords = 0.49

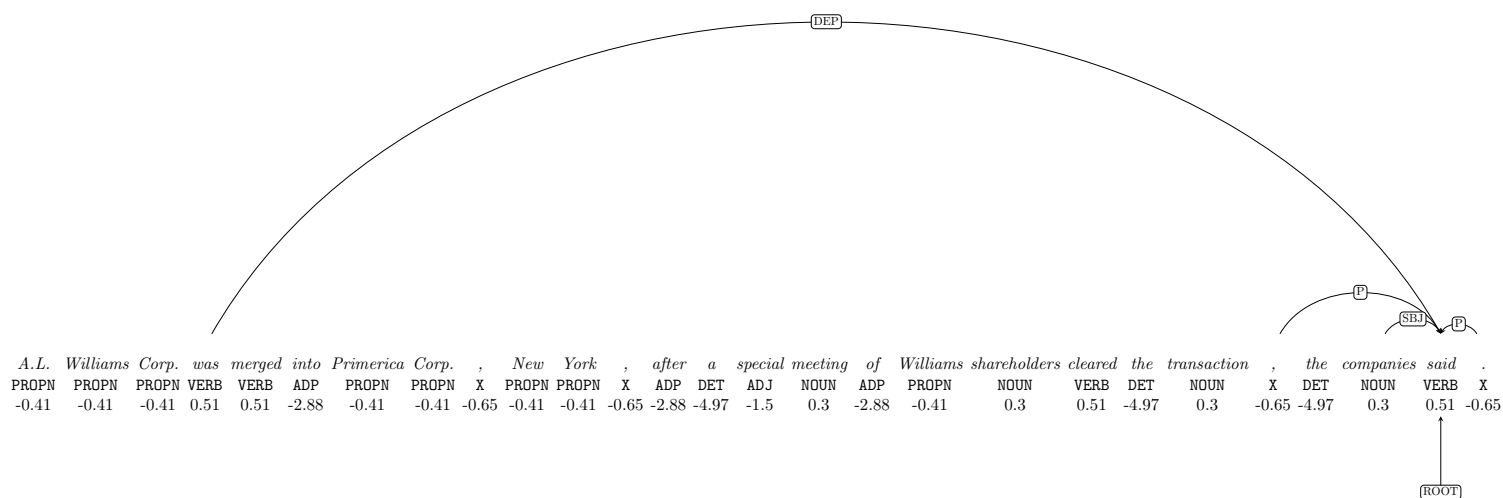


Variant Sentence  
spearman allwords = 0.26

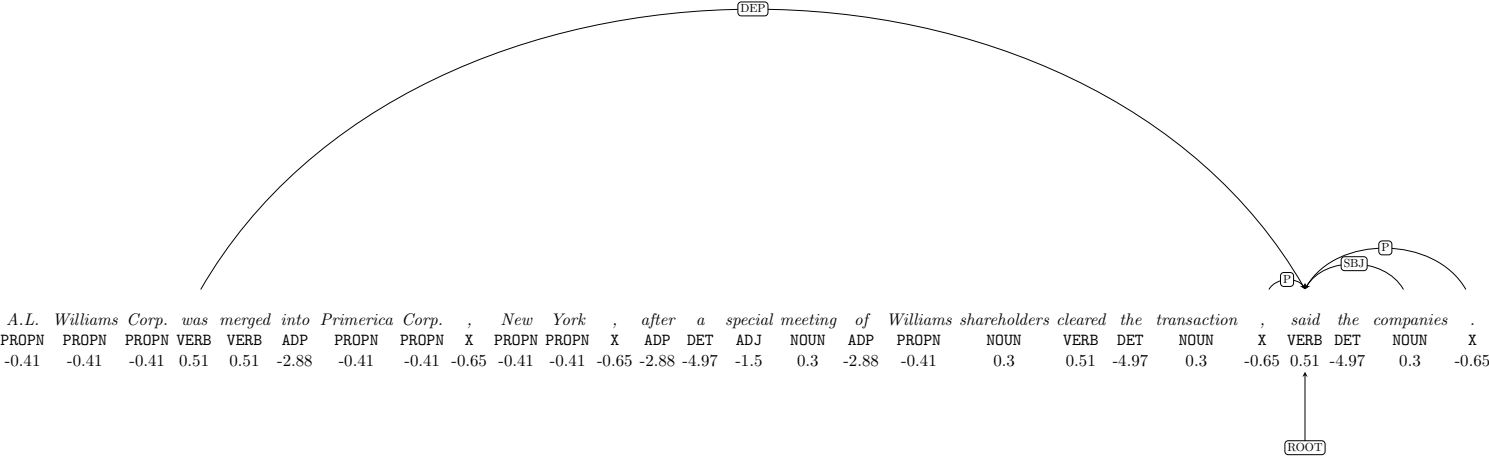


wsj\_0150.1.0

Reference Sentence  
spearman allwords = 0.0



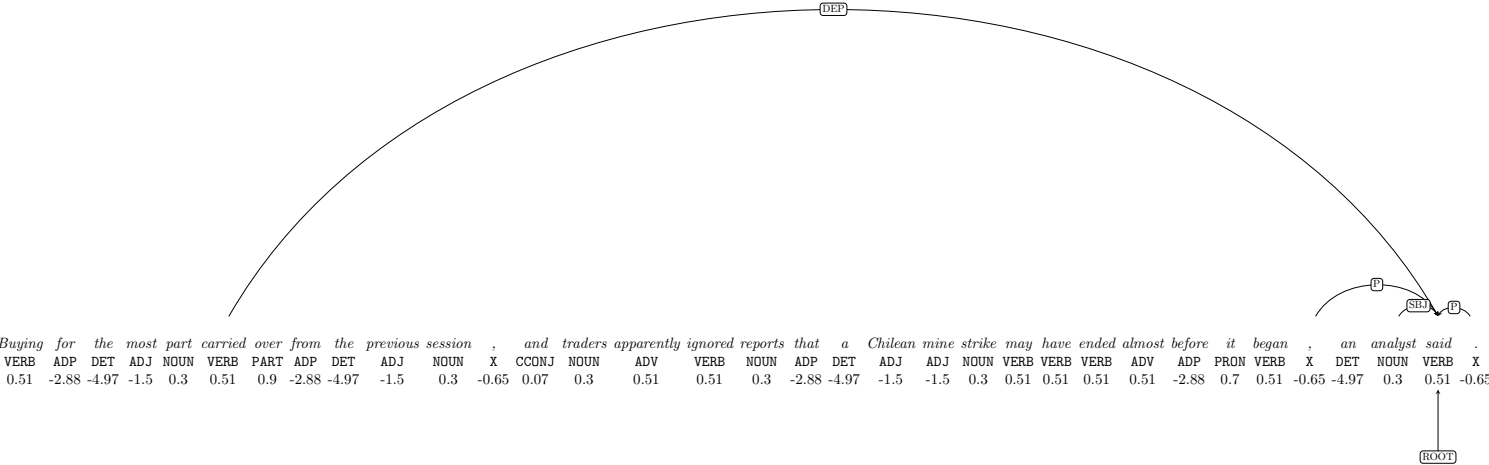
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dlg = 1.0   wtembdep = -78.66   ldep = 77.0

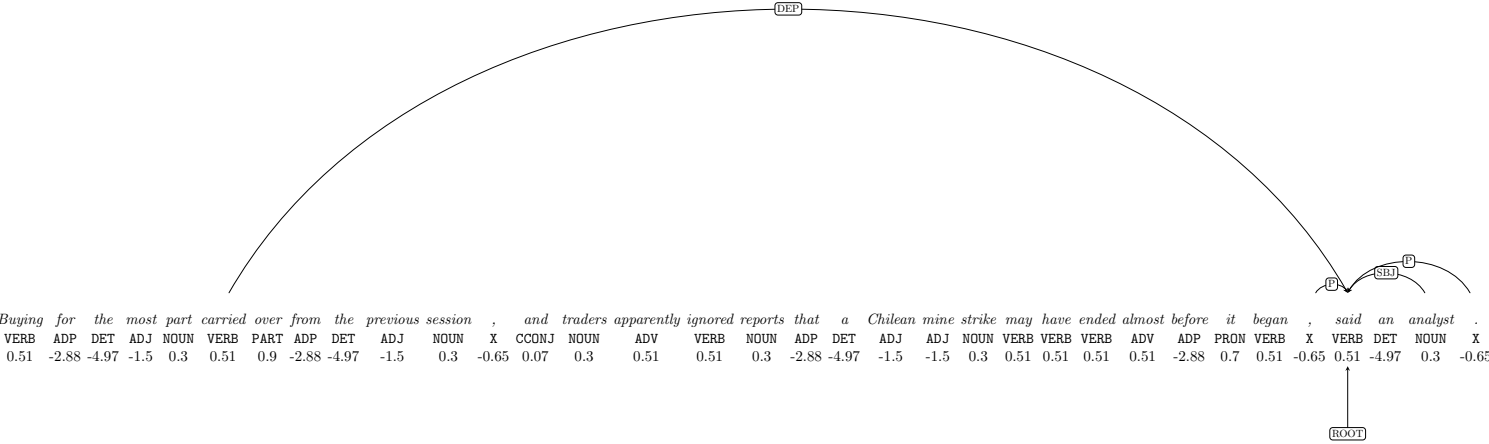
wsj\_0155.50.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0155.50.2

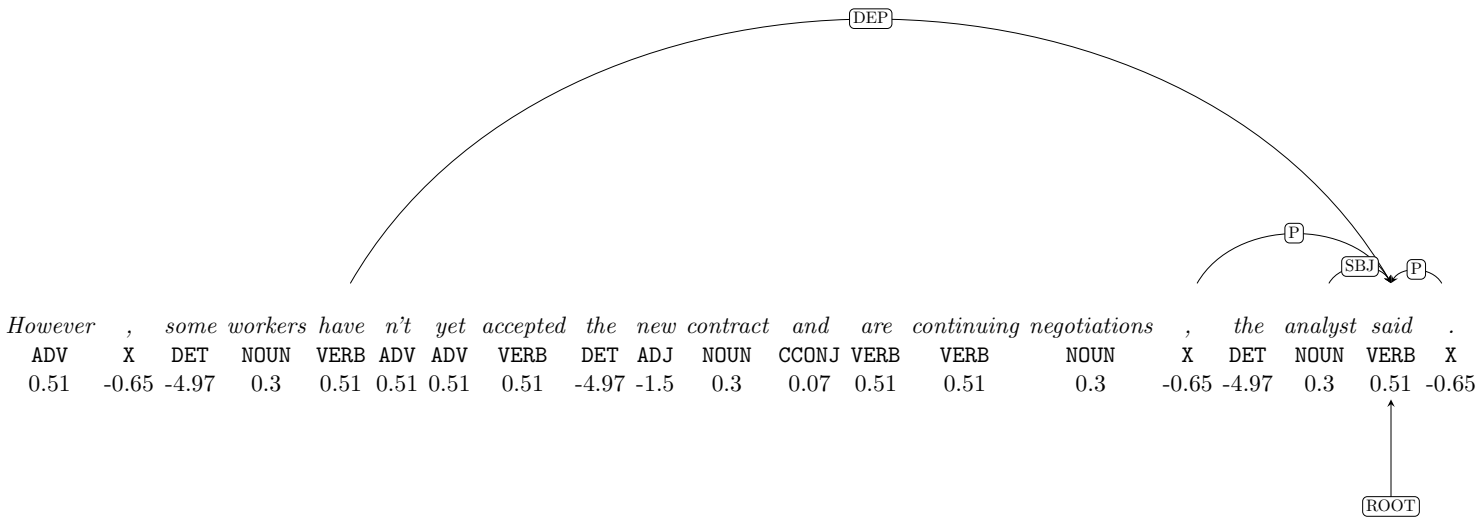
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0    wtembdep = 220.35    ldep = 17.0

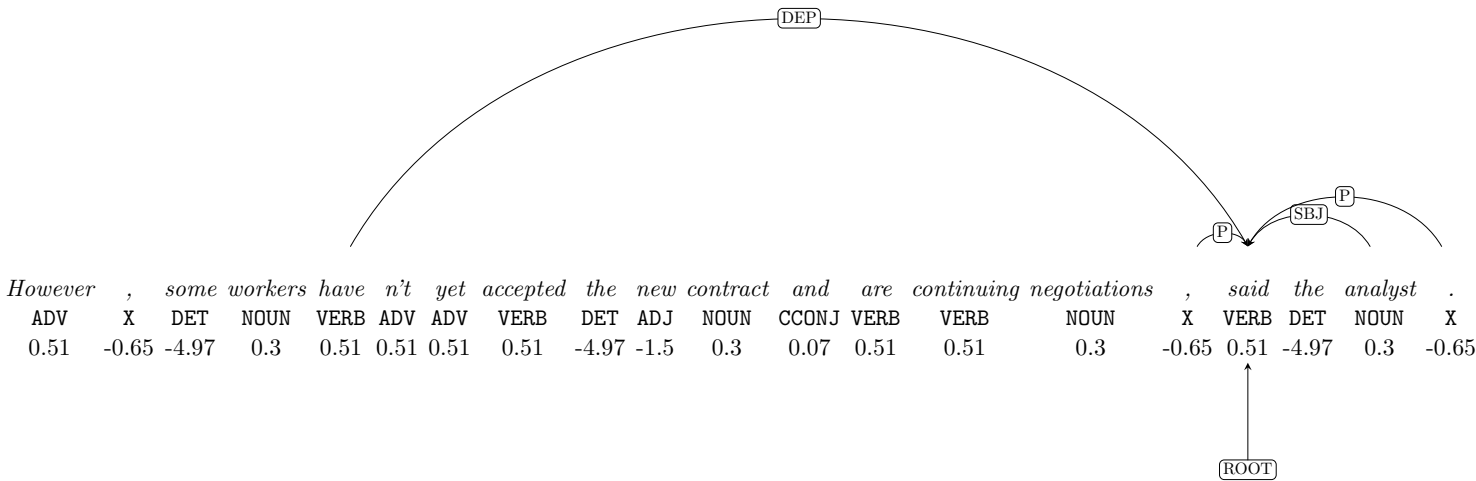
wsj\_0155.52.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0155.52.1

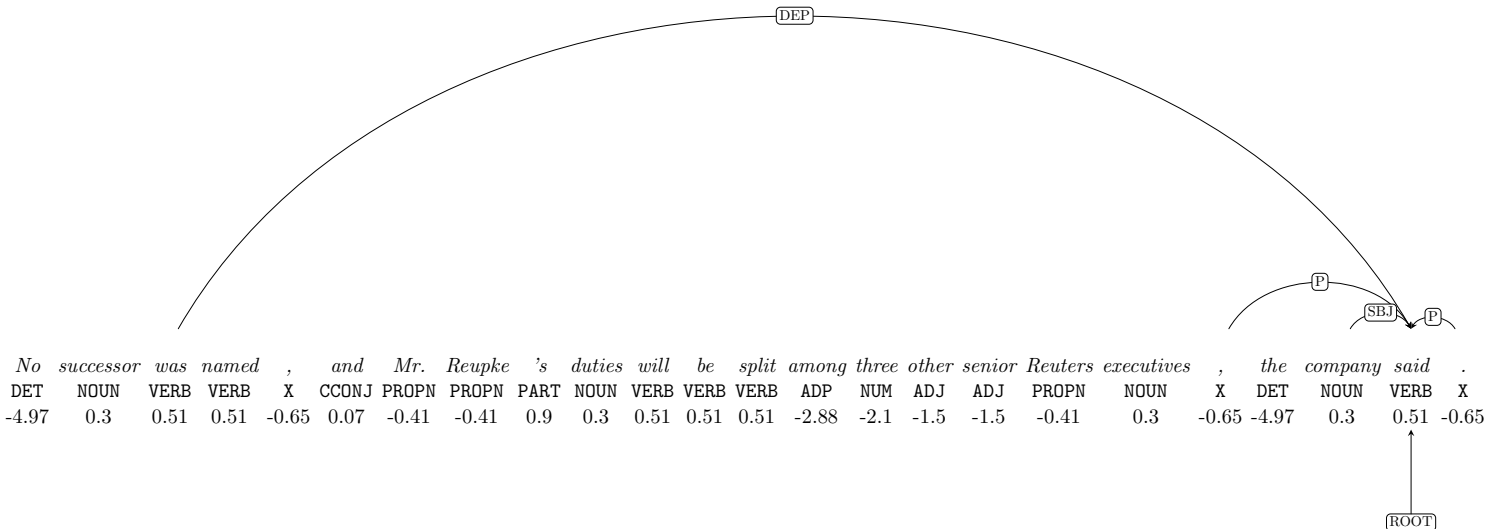
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0    wtembdep = 65.38    ldep = -14.0

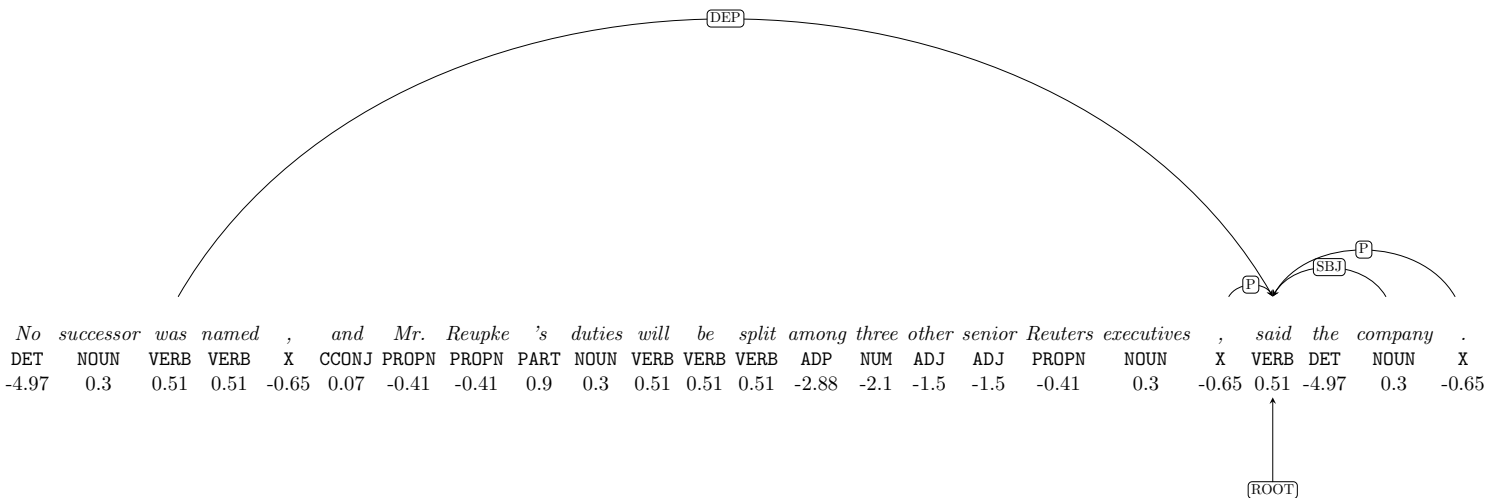
wsj\_0158.4.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0158.4.1

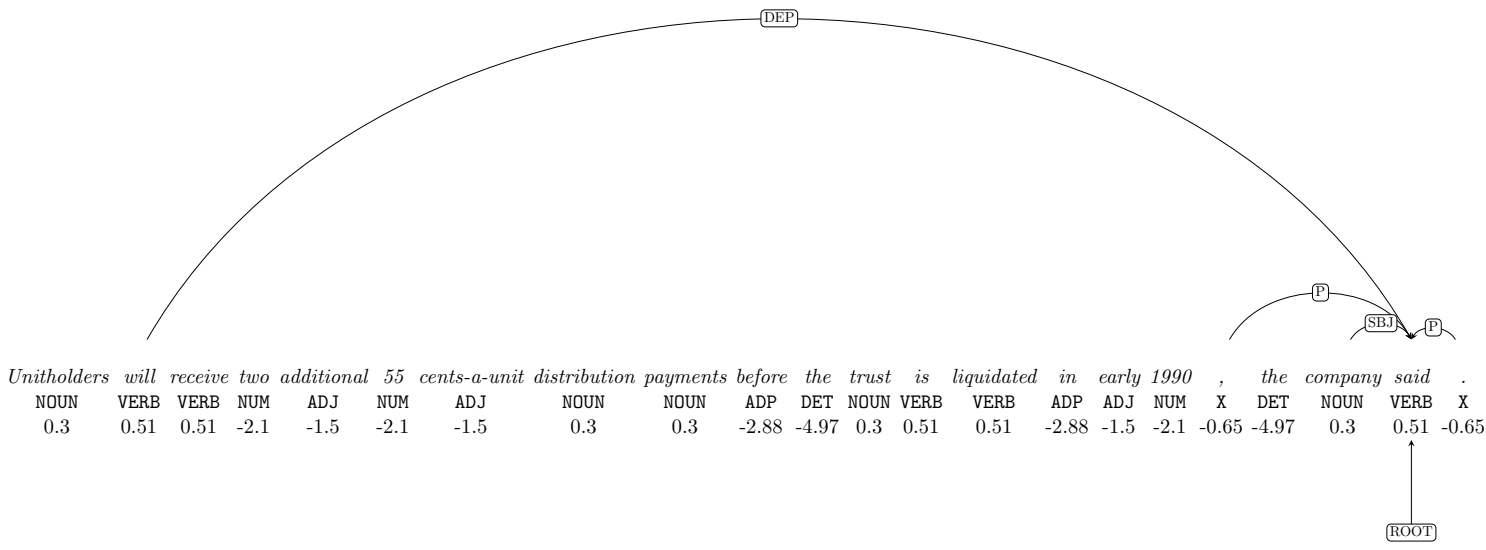
Variant Sentence  
spearman allwords = -1.0



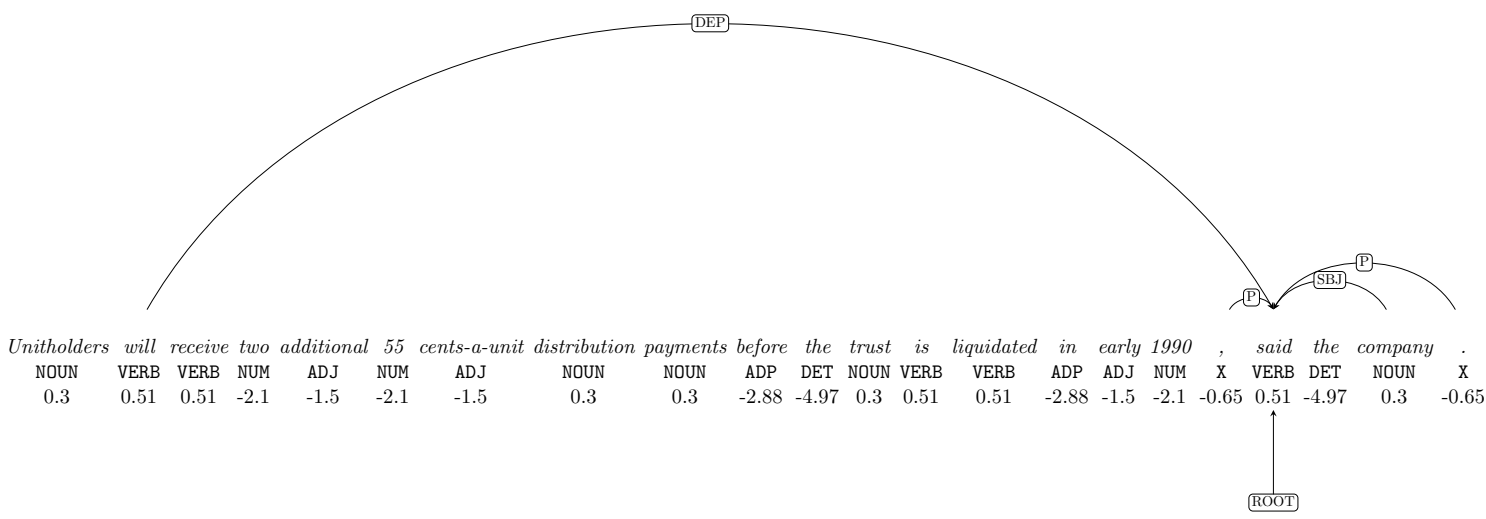
$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 55.28   ldep = -7.0

wsj\_0163.5.0

Reference Sentence  
spearman allwords = 0.0



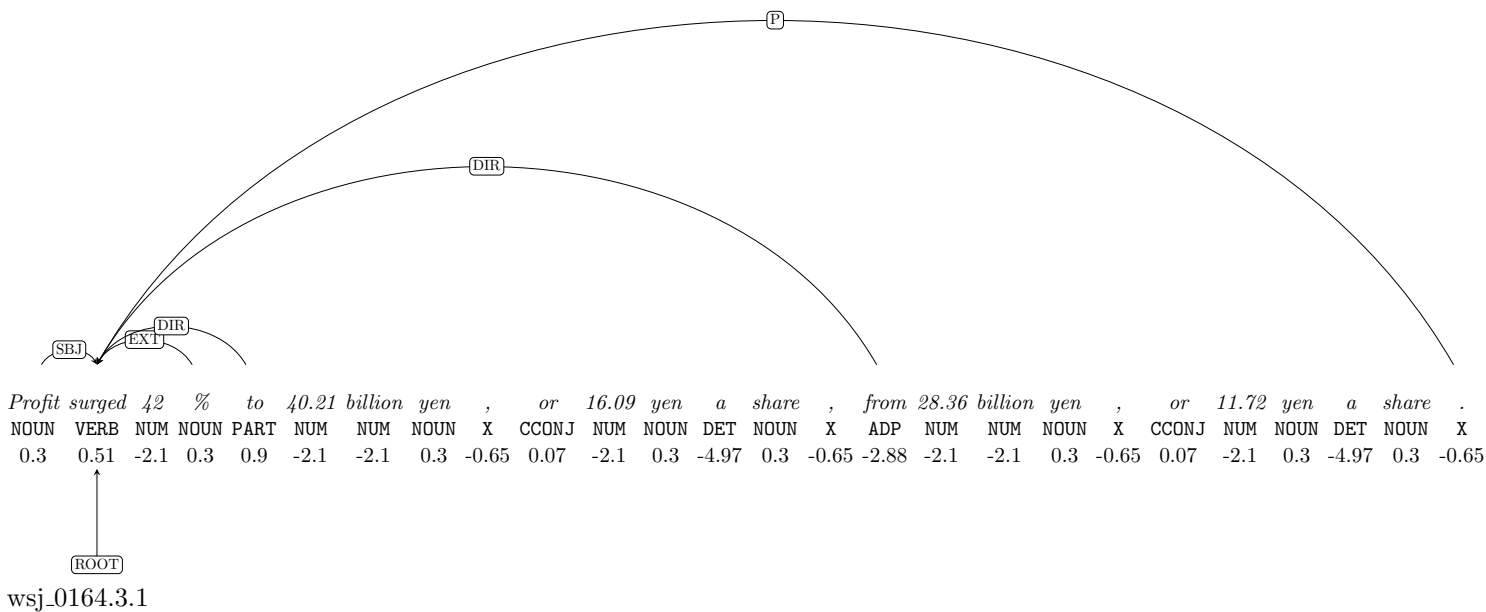
Variant Sentence  
spearman allwords = -1.0



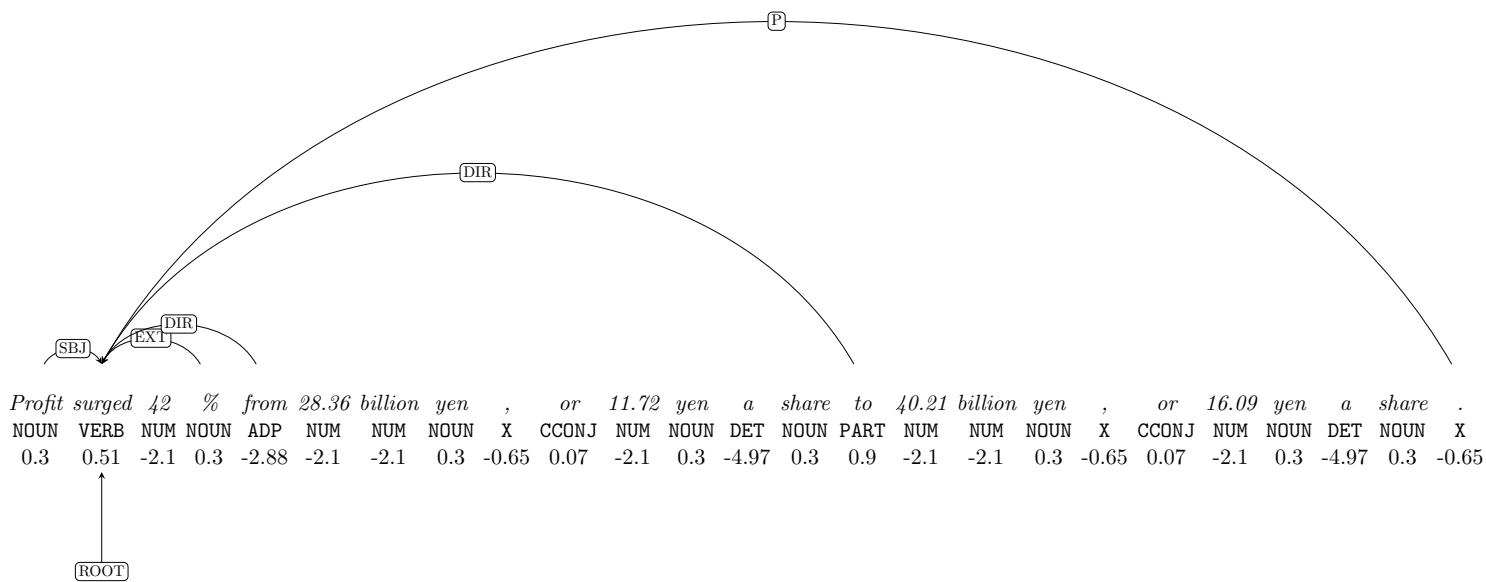
$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 12.55   ldep = 2.0

wsj\_0164.3.0

Reference Sentence  
spearman allwords = 0.18

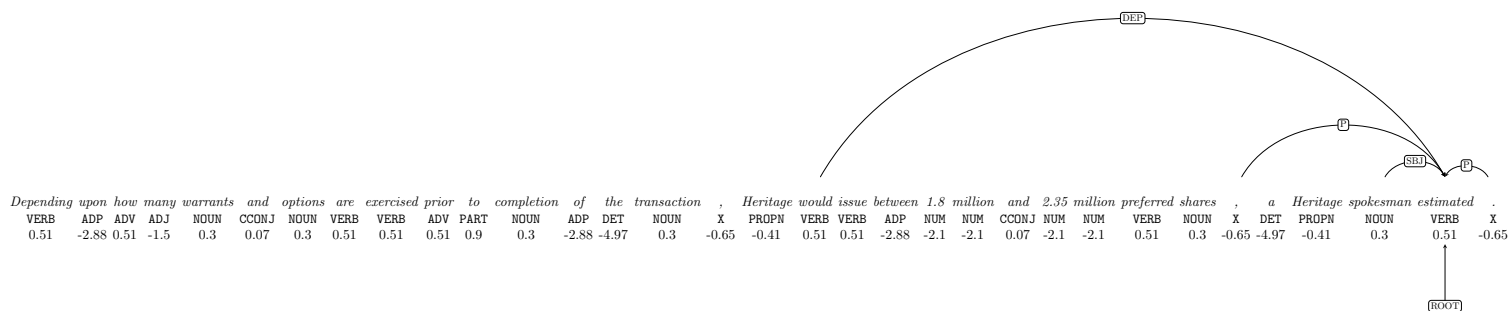


Variant Sentence  
spearman allwords = -0.18

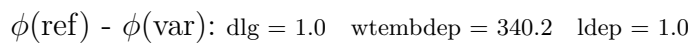


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = 468.84 ldep = -21.0

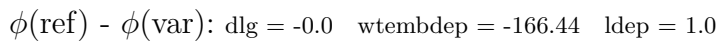
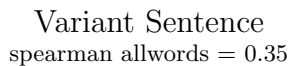
Reference Sentence  
spearman allwords = 0.0



Variant Sentence  
spearman allwords = -1.0



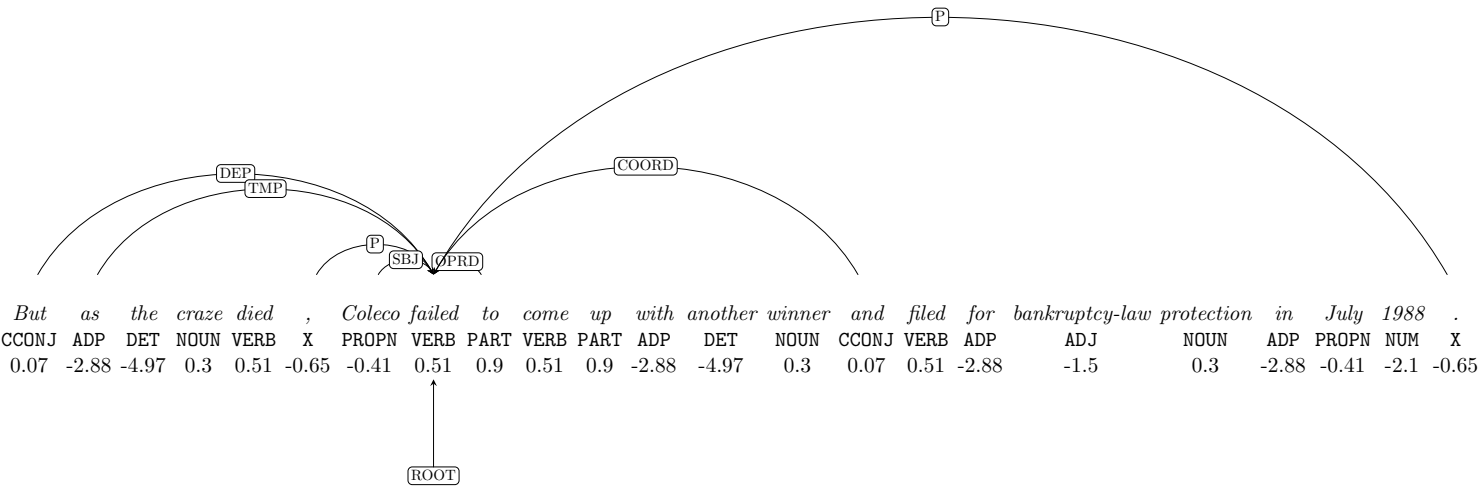
Reference Sentence  
spearman allwords = 0.44





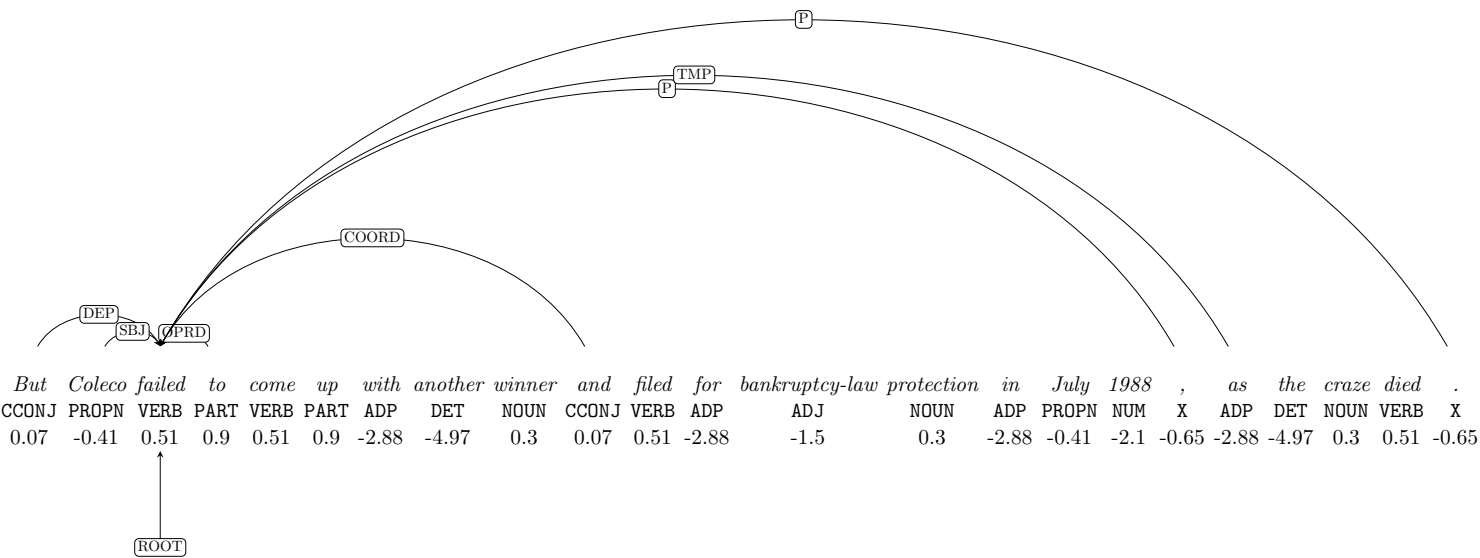
wsj\_0173.7.0

Reference Sentence  
spearman allwords = 0.45



wsj\_0173.7.1

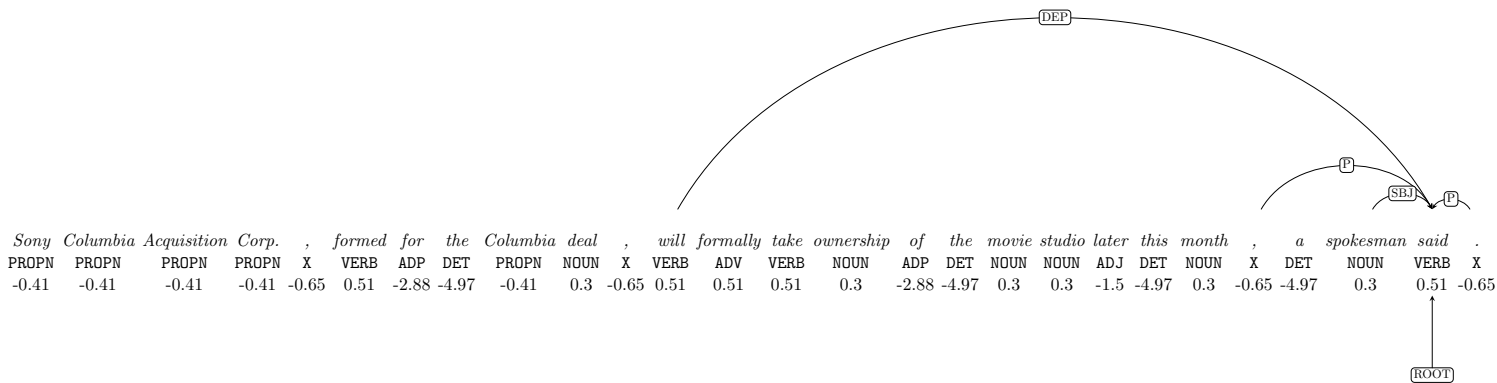
Variant Sentence  
spearman allwords = 0.32



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 0.0   wtembdep = -148.67   ldep = -4.0

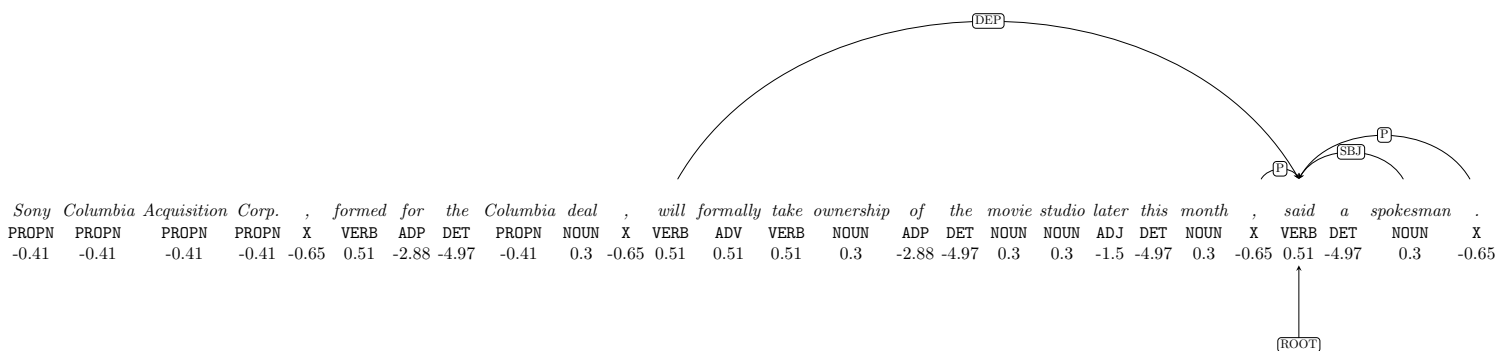
wsj\_0175.2.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0175.2.2

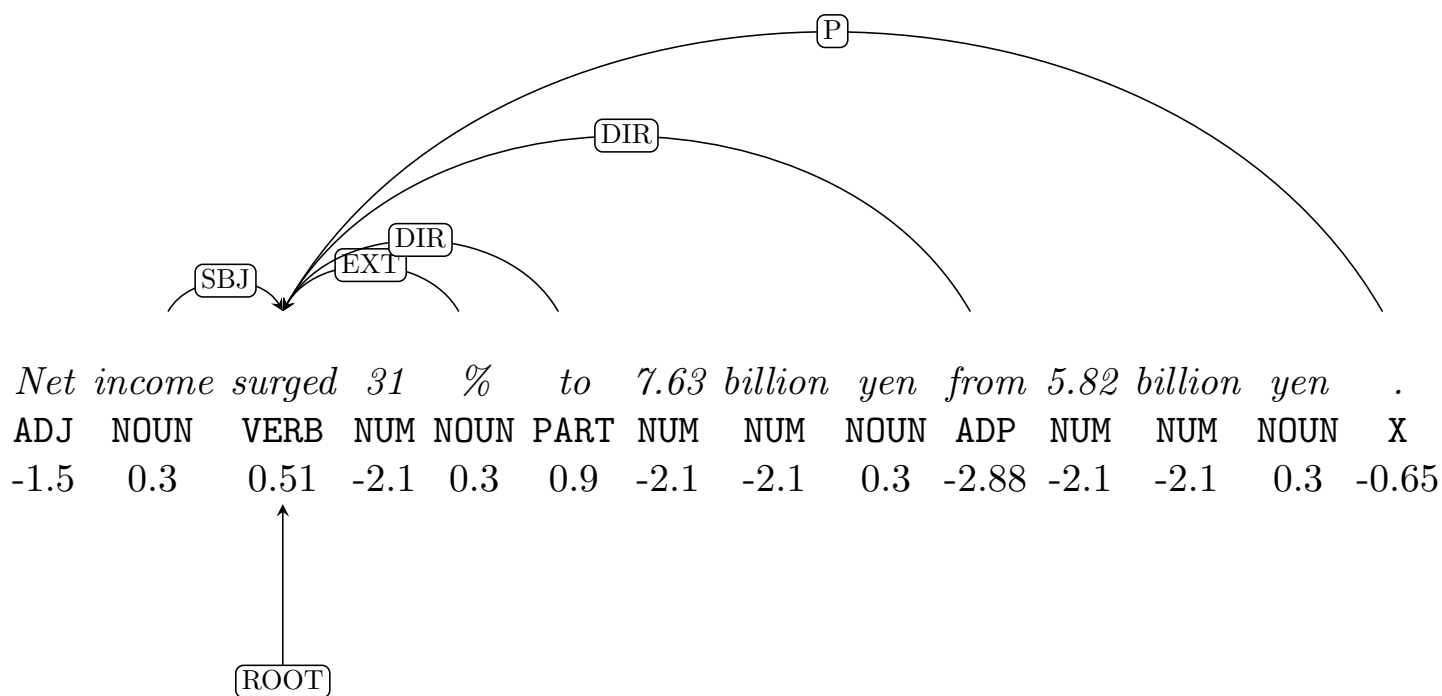
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = 163.86 ldep = 19.0

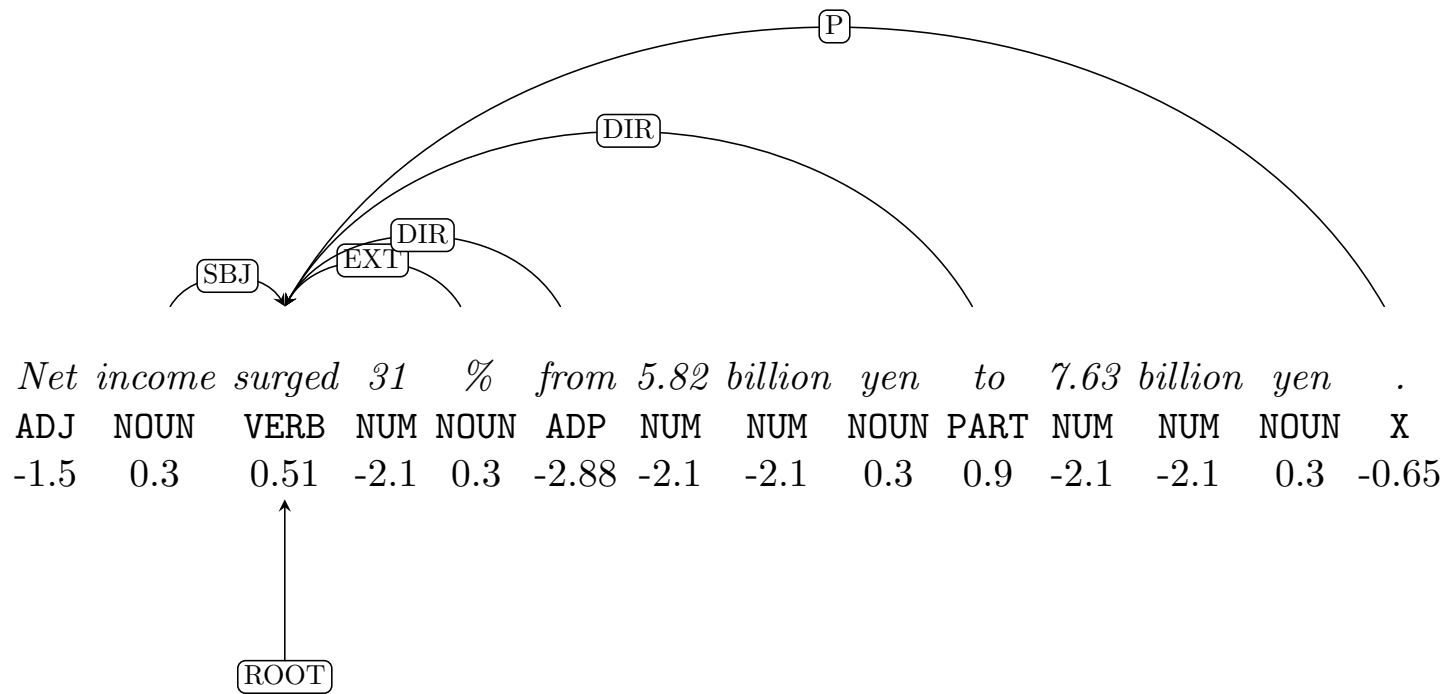
wsj\_0177.4.0

Reference Sentence  
spearman allwords = 0.32



wsj\_0177.4.1

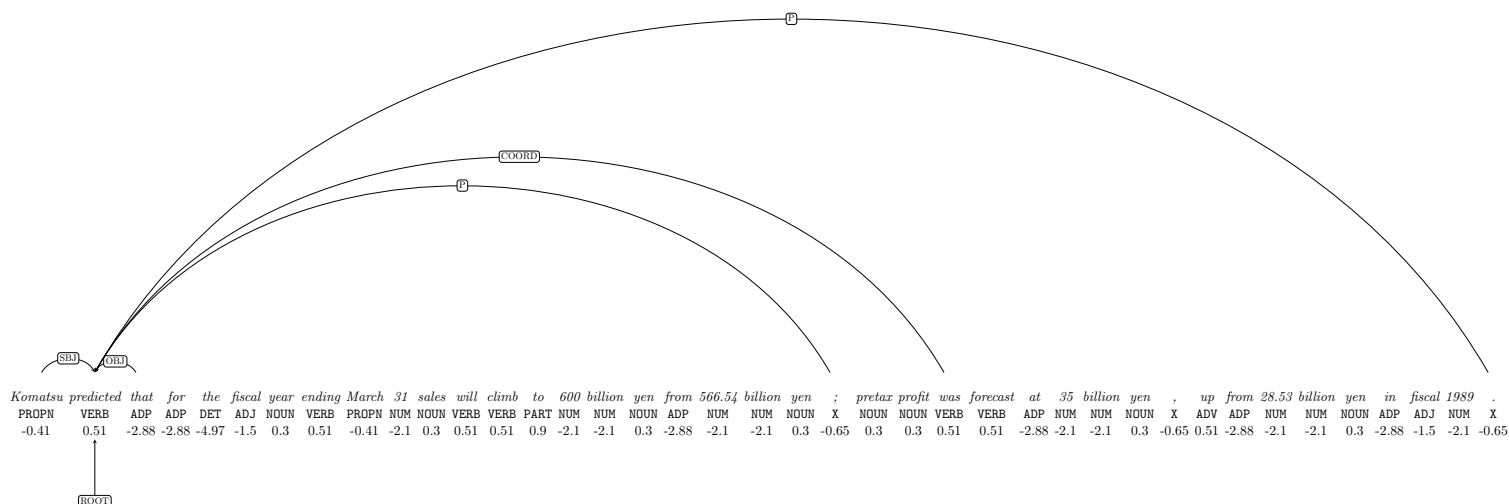
Variant Sentence  
spearman allwords = -0.56



$\phi(\text{ref}) - \phi(\text{var})$ : dlg = 0.0 wtembdep = 200.26 ldep = 7.0

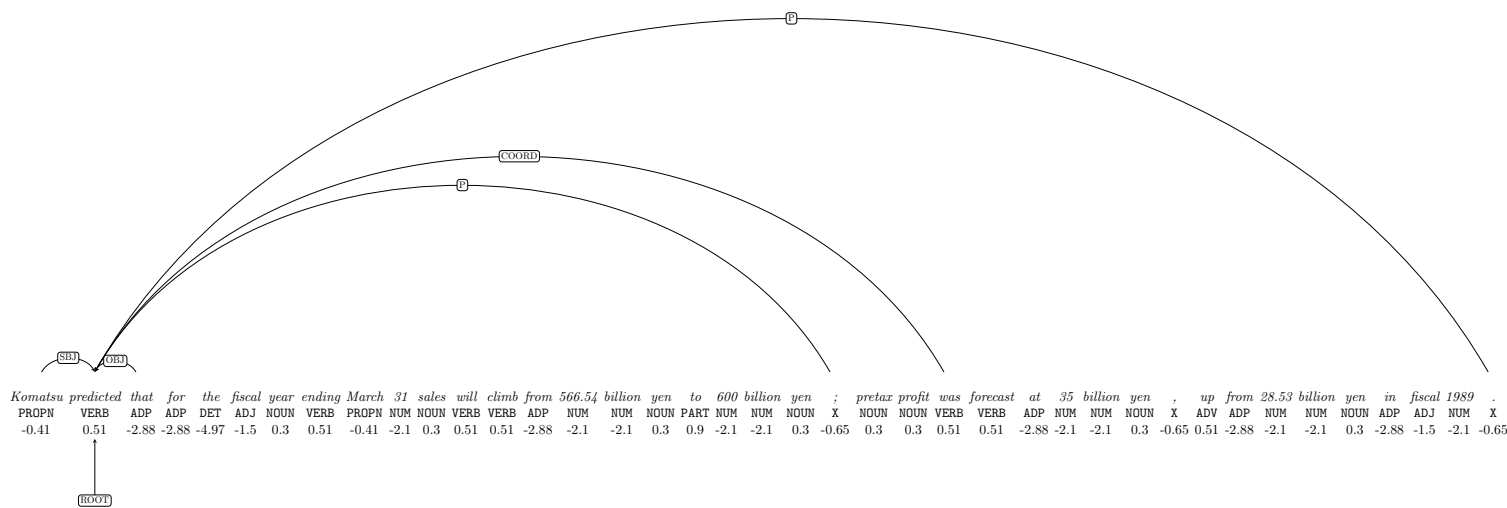
wsj\_0177.9.0

Reference Sentence  
spearman allwords = -0.03



wsj\_0177.9.1

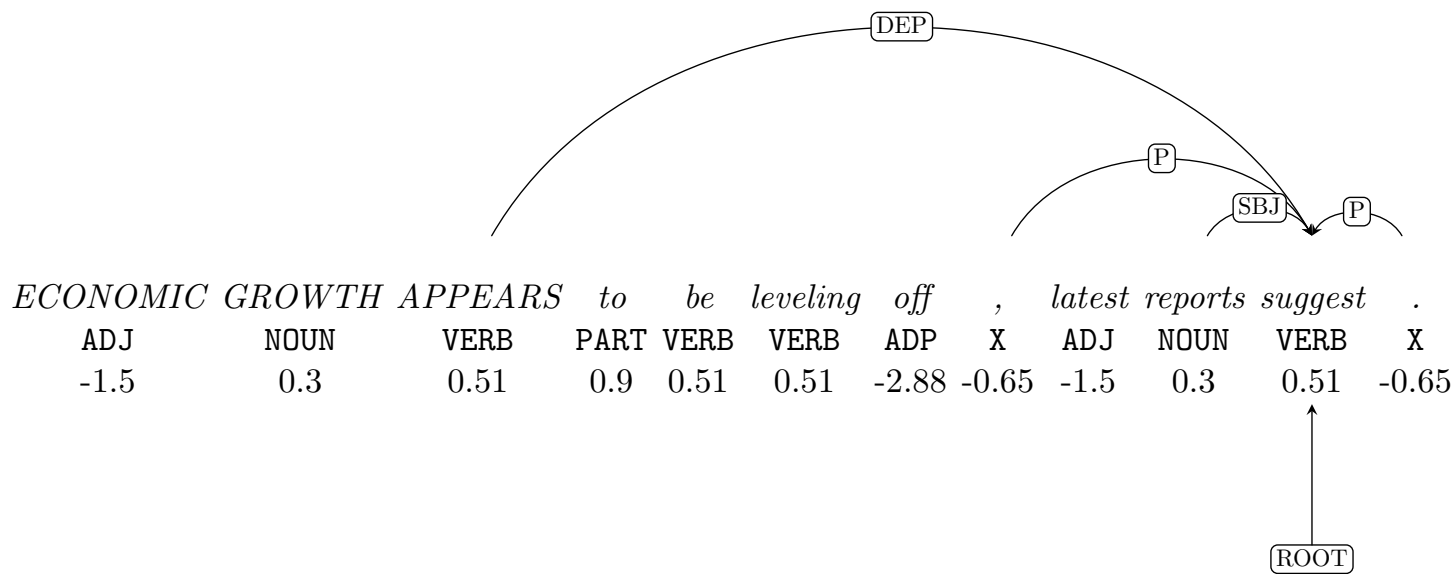
Variant Sentence  
spearman allwords = -0.06



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 0.0   wtembdep = -114.91   ldep = -5.0

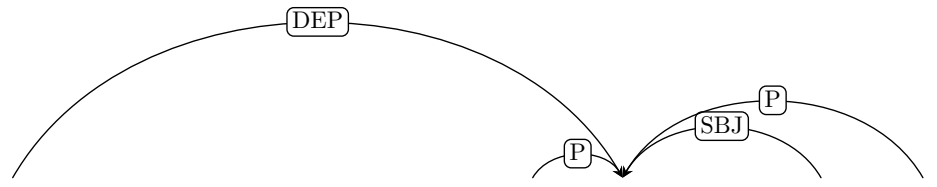
wsj\_0178.1.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0178.1.1

Variant Sentence  
spearman allwords = -1.0



*ECONOMIC GROWTH APPEARS to be leveling off, suggest latest reports.*

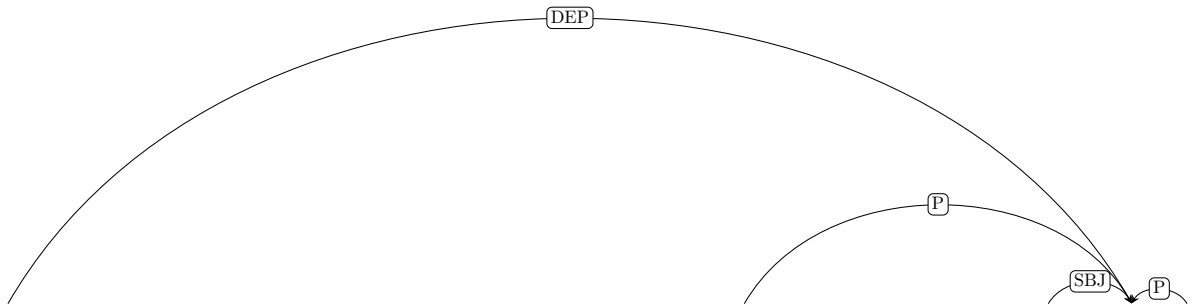
ADJ	NOUN	VERB	PART	VERB	VERB	ADP	X	VERB	ADJ	NOUN	X
-1.5	0.3	0.51	0.9	0.51	0.51	-2.88	-0.65	0.51	-1.5	0.3	-0.65

ROOT

$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = 69.84 ldep = 1.0

wsj\_0179.29.0

Reference Sentence  
spearman allwords = 0.0



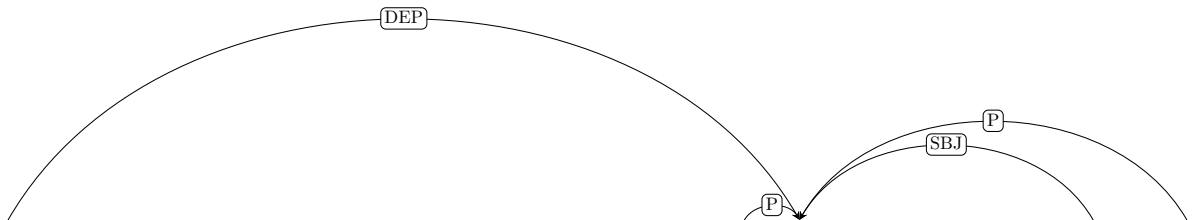
*The thrift surely could be sold for more than the value of its equity, financial industry executives say.*

DET	NOUN	ADV	VERB	VERB	VERB	ADP	ADJ	ADP	DET	NOUN	ADP	PRON	NOUN	X	ADJ	NOUN	NOUN	VERB	X
-4.97	0.3	0.51	0.51	0.51	0.51	-2.88	-1.5	-2.88	-4.97	0.3	-2.88	0.7	0.3	-0.65	-1.5	0.3	0.3	0.51	-0.65

ROOT

wsj\_0179.29.1

Variant Sentence  
spearman allwords = -0.87



*The thrift surely could be sold for more than the value of its equity, say financial industry executives.*

DET	NOUN	ADV	VERB	VERB	VERB	ADP	ADJ	ADP	DET	NOUN	ADP	PRON	NOUN	X	VERB	ADJ	NOUN	NOUN	X
-4.97	0.3	0.51	0.51	0.51	0.51	-2.88	-1.5	-2.88	-4.97	0.3	-2.88	0.7	0.3	-0.65	0.51	-1.5	0.3	0.3	-0.65

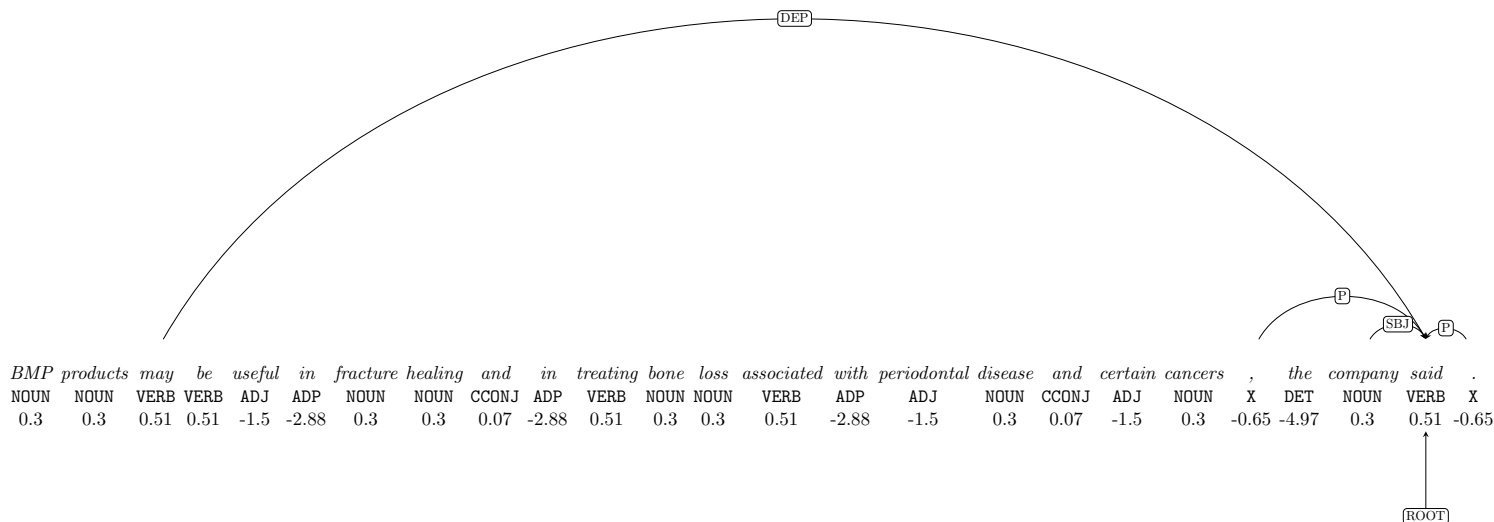
ROOT

$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   w<sub>tembdep</sub> = -85.17   l<sub>dep</sub> = 12.0

wsj\_0180.8.0

### Reference Sentence

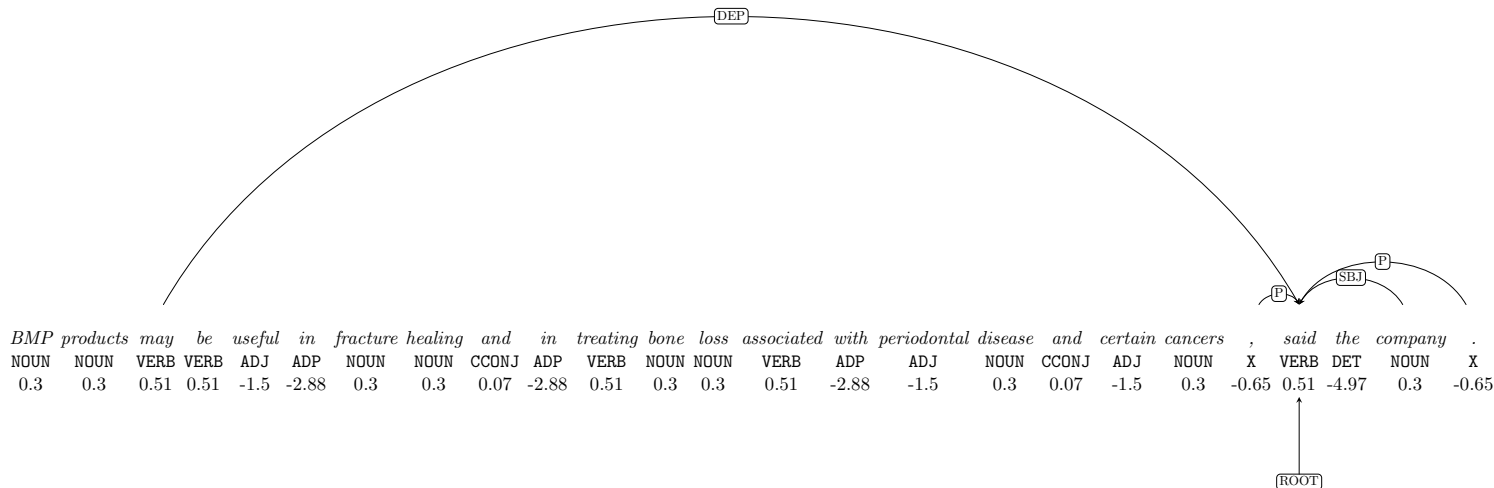
spearman allwords = 0.0



wsj\_0180.8.1

### Variant Sentence

spearman allwords = -1.0

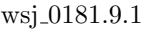


$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   w<sub>tembdep</sub> = 43.94   l<sub>dep</sub> = -0.0

wsj\_0181.9.0

### Reference Sentence

spearman allwords = 0.29



In contrast, the lawyers' association gives those "regarded as one of the best available for the vacancy a "well qualified" rating.

ADP NOUN X DET NOUN PART NOUN VERB DET X VERB ADP NUM ADP DET ADJ ADJ ADP DET NOUN DET X ADV VERB X NOUN X

-2.88 0.3 -0.65 -4.97 0.3 0.9 0.3 0.51 -4.97 -0.65 0.51 -2.88 -2.1 -2.88 -4.97 -1.5 -1.5 -2.88 -4.97 0.3 -4.97 -0.65 0.51 0.51 -0.65 0.3 -0.65

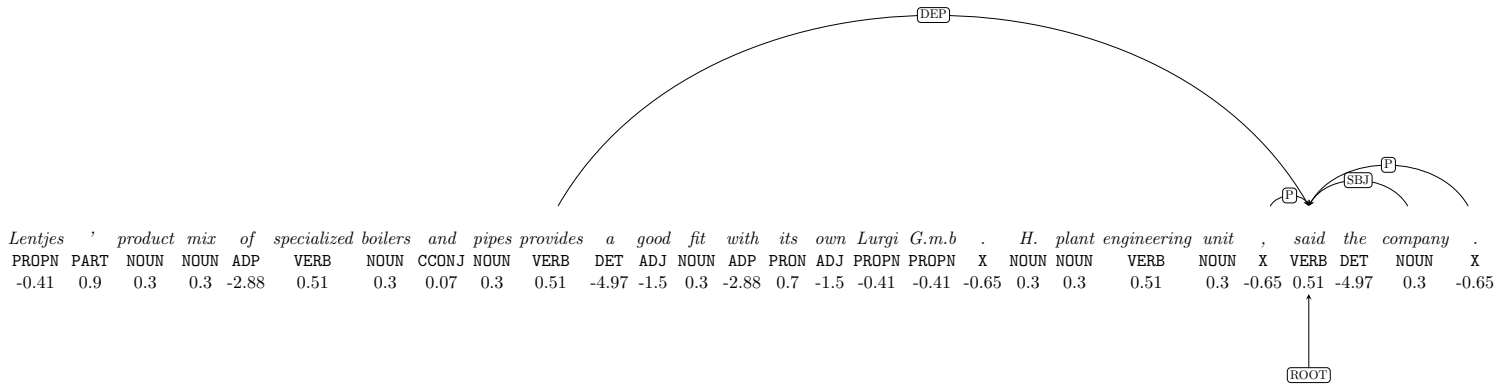
ROOT

wsj\_0182.4.0

The figure displays a dependency parse tree for the sentence: "Lentjes ' product mix of specialized boilers and pipes provides a good fit with its own Lurgi G.m.b . H. plant engineering unit , the company said .". The words are arranged in a single line, with their corresponding part-of-speech (POS) tags in parentheses below them. The words are color-coded: blue for nouns, green for verbs, red for adjectives, and black for other parts of speech. The POS tags are: PROPN, PART, NOUN, NOUN, ADP, VERB, NOUN, CONJ, NOUN, VERB, DET, ADJ, NOUN, ADP, PRON, ADJ, PROPN, PROPN, X, NOUN, NOUN, VERB, NOUN, X, DET, NOUN, VERB, X. Above the words, a dependency tree is shown. The root node is 'ROOT' at the bottom, which points to the word 'said'. From 'said', a 'SUBJ' (subject) arc points to 'provides'. A 'P' (predicate) arc points from 'said' to 'Lurgi'. Another 'P' arc points from 'Lurgi' to 'H.'. A long 'DEP' (dependency) arc connects 'provides' to 'Lurgi'. The tree structure illustrates the grammatical relationships between the words in the sentence.

wsj\_0182.4.1

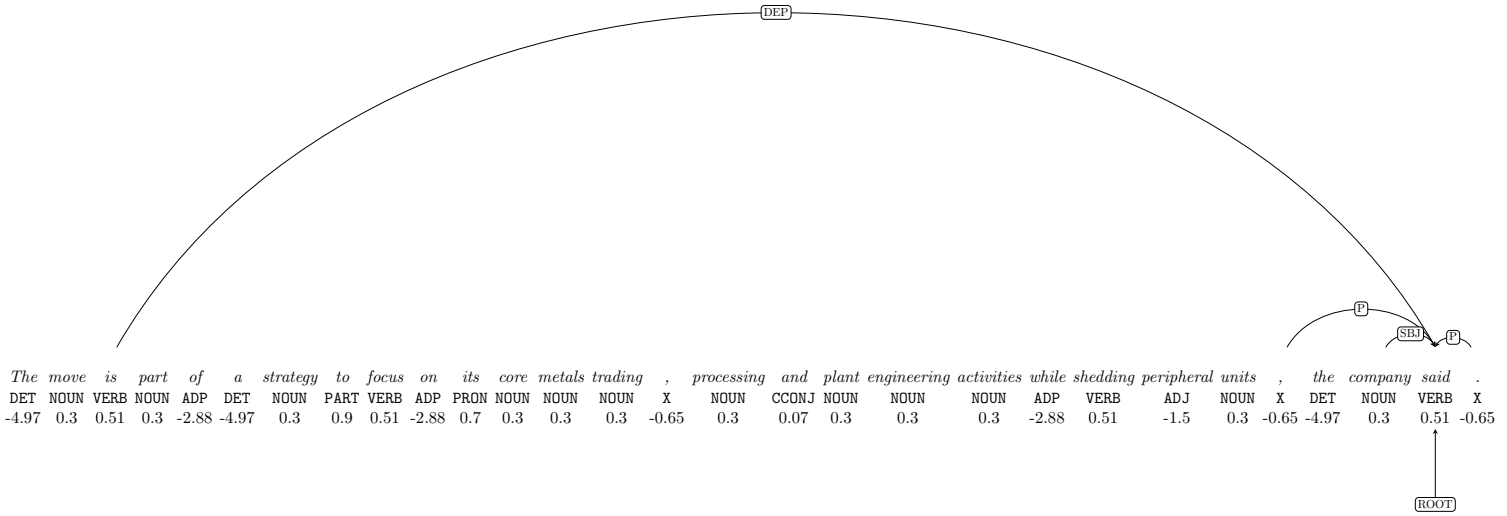
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 98.19   ldep = -5.0

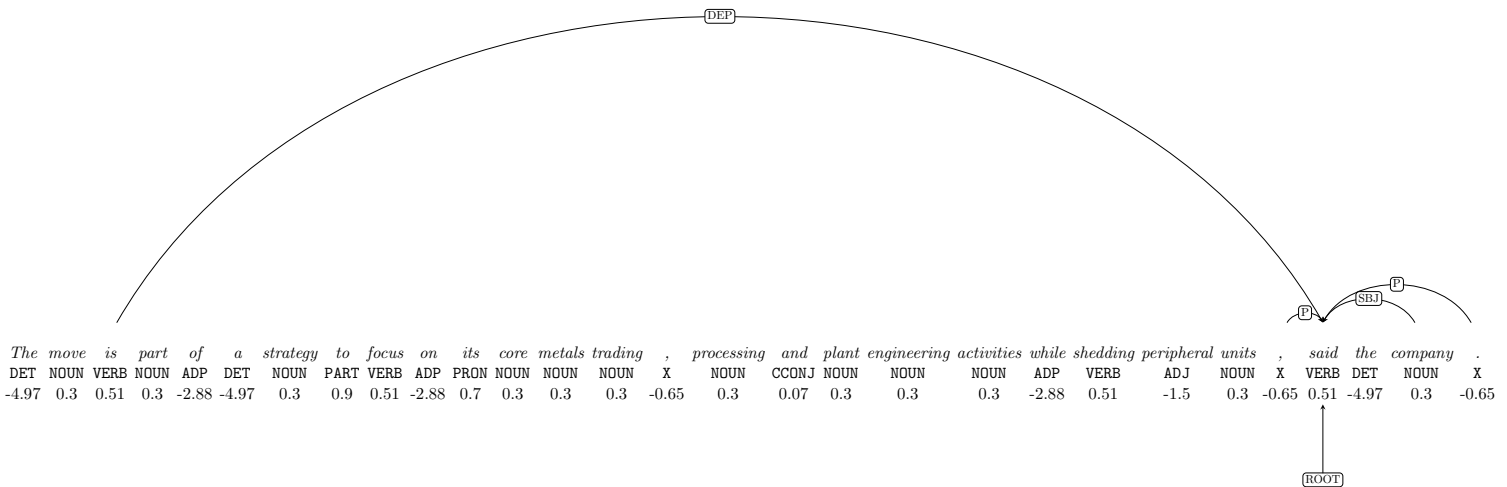
wsj\_0182.5.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0182.5.2

Variant Sentence  
spearman allwords = -1.0

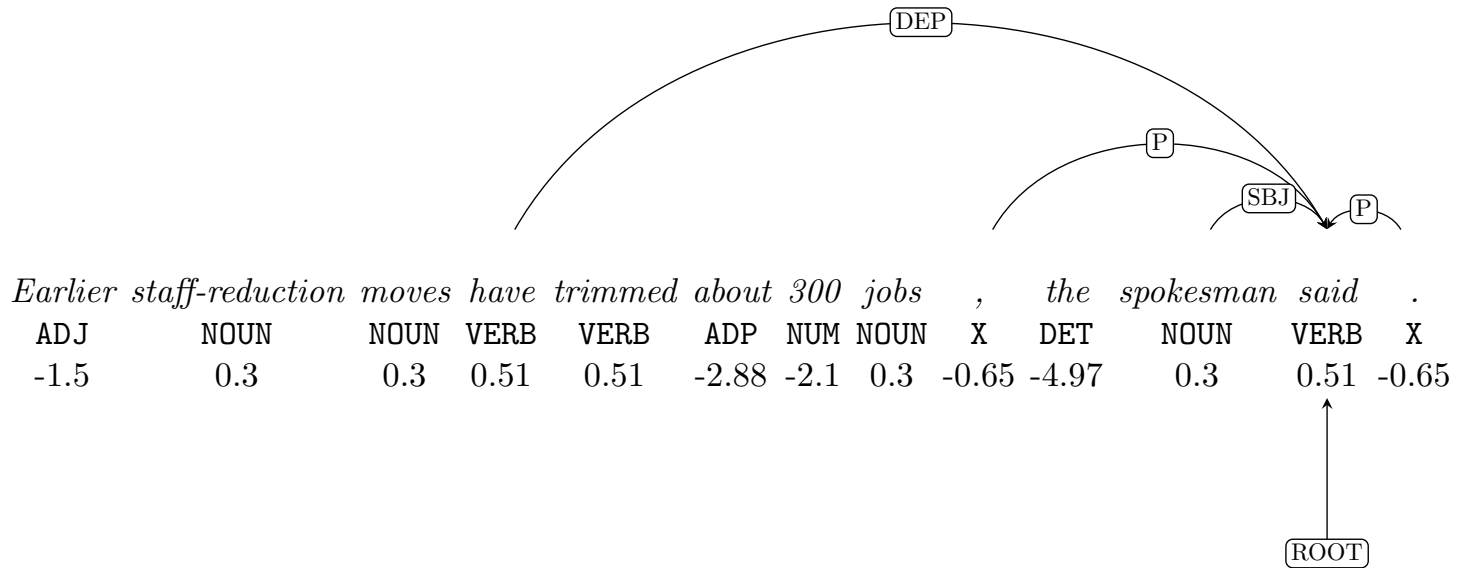




$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = -9.08   ldep = -0.0

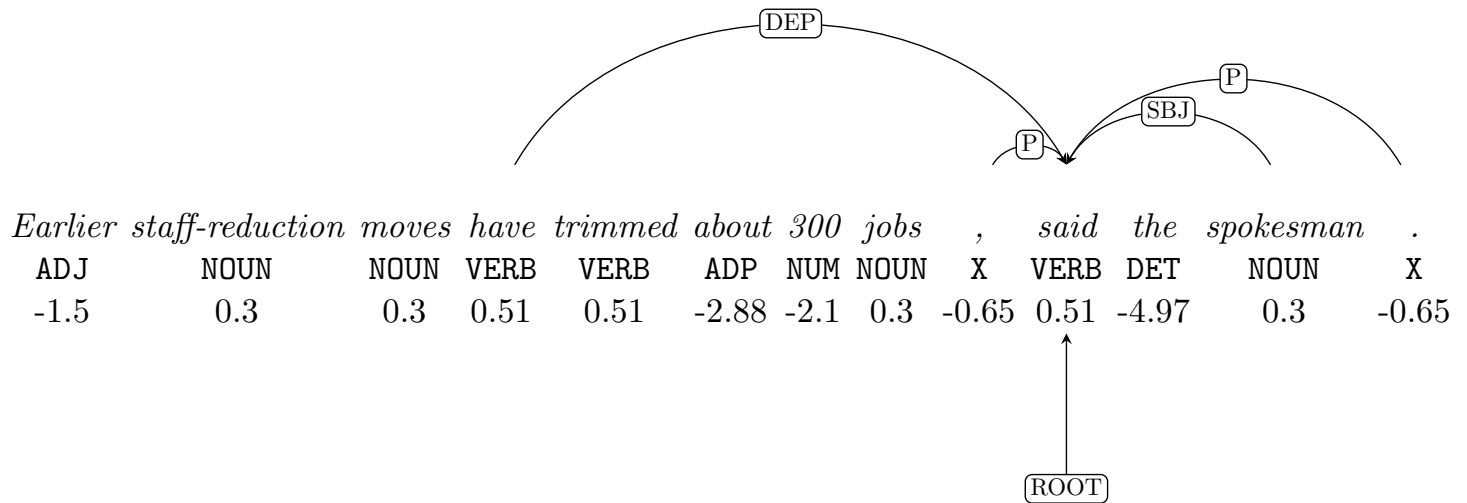
wsj\_0184.16.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0184.16.1

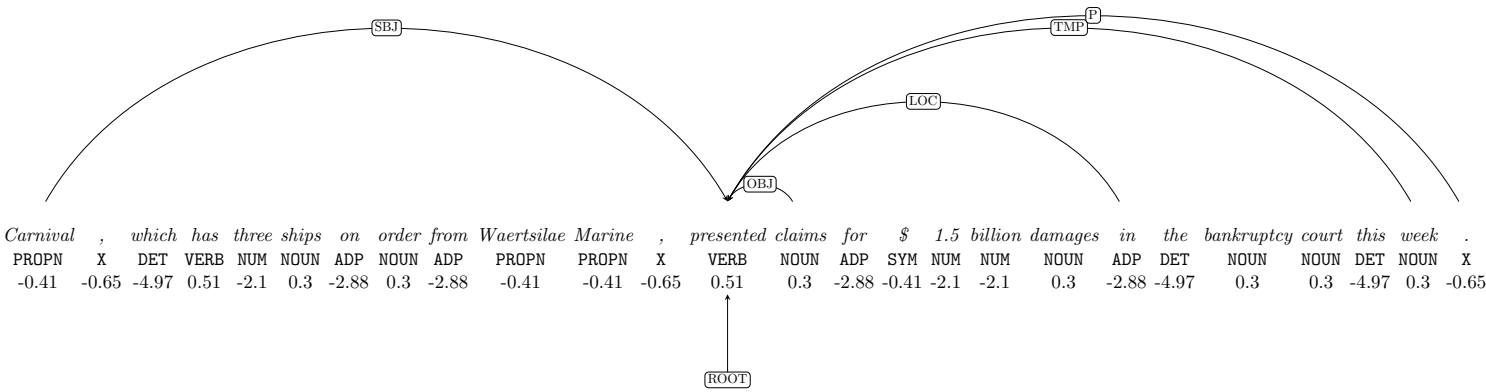
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = -79.88   ldep = -4.0

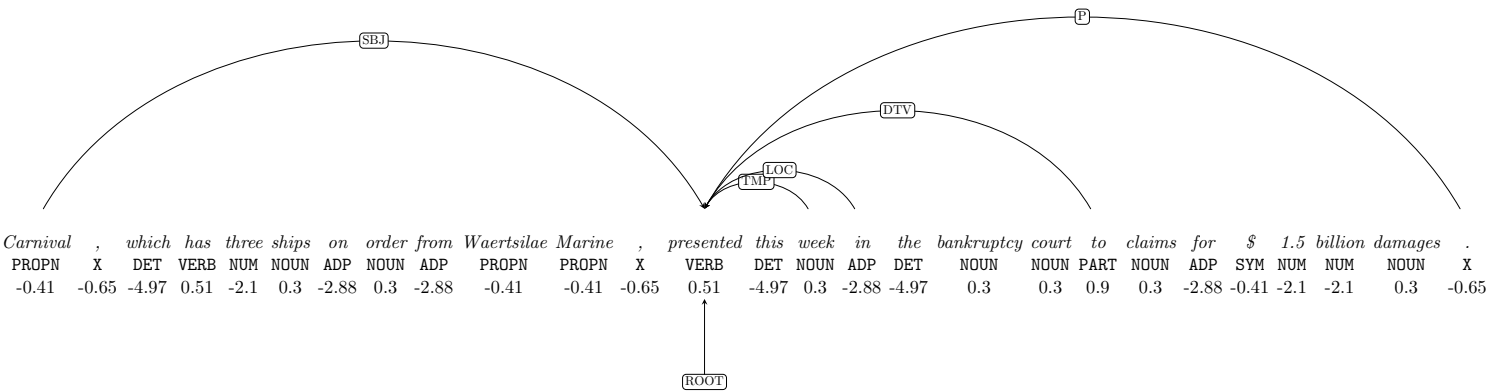
wsj\_0187.11.0

Reference Sentence  
spearman allwords = 0.01



wsj\_0187.11.1

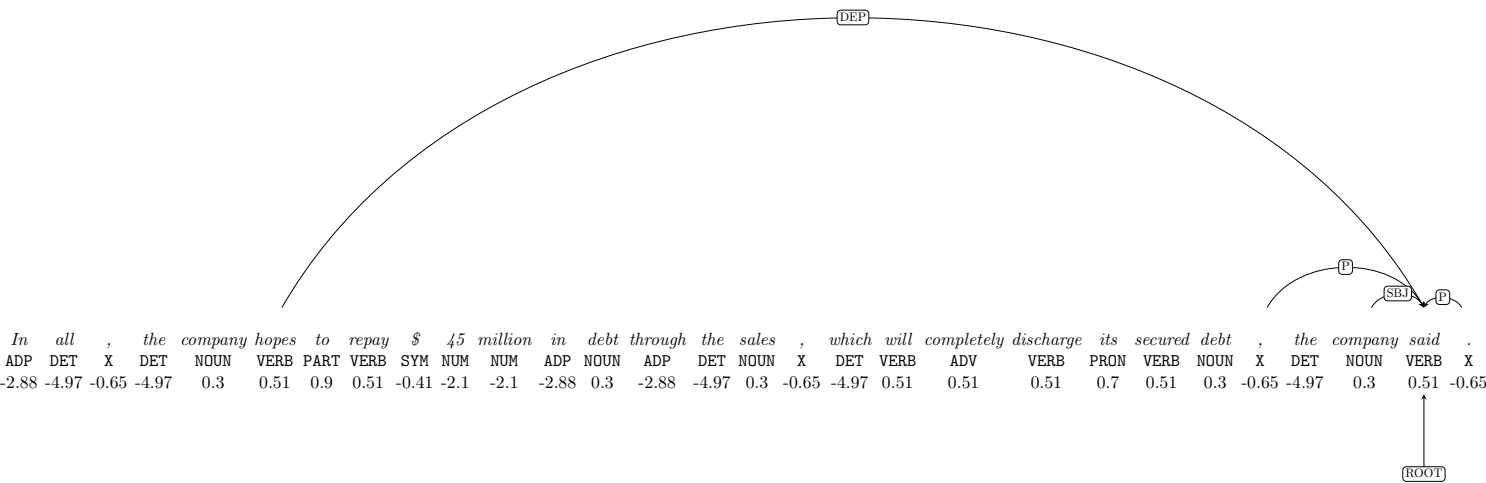
Variant Sentence  
spearman allwords = -0.35



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = 465.1 ldep = -0.0

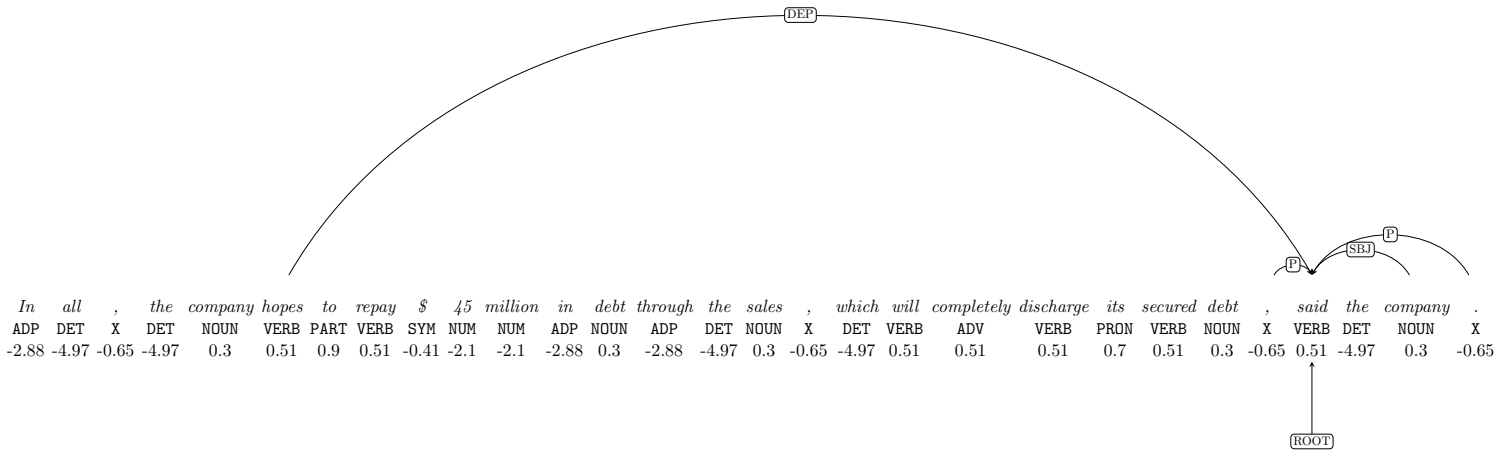
wsj\_0188.2.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0188.2.1

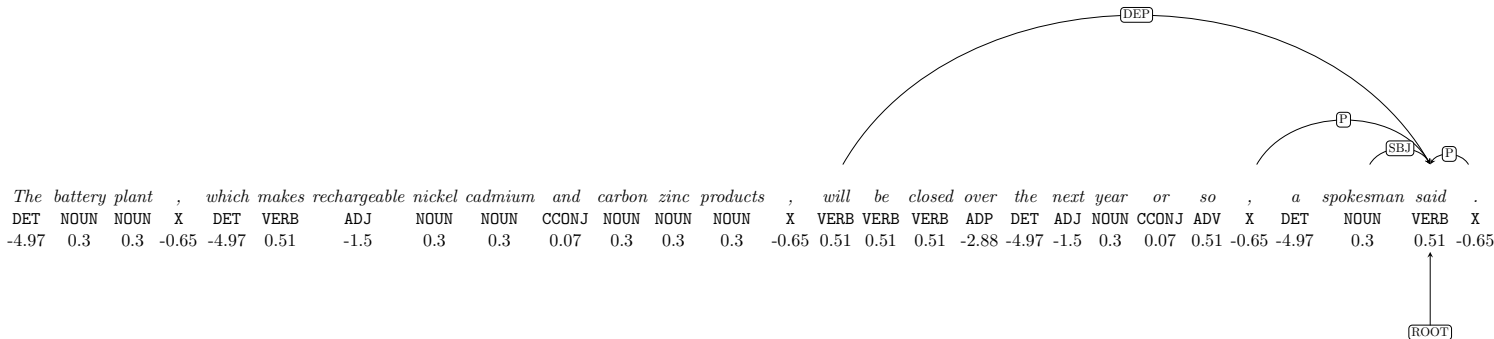
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 46.84   ldep = 1.0

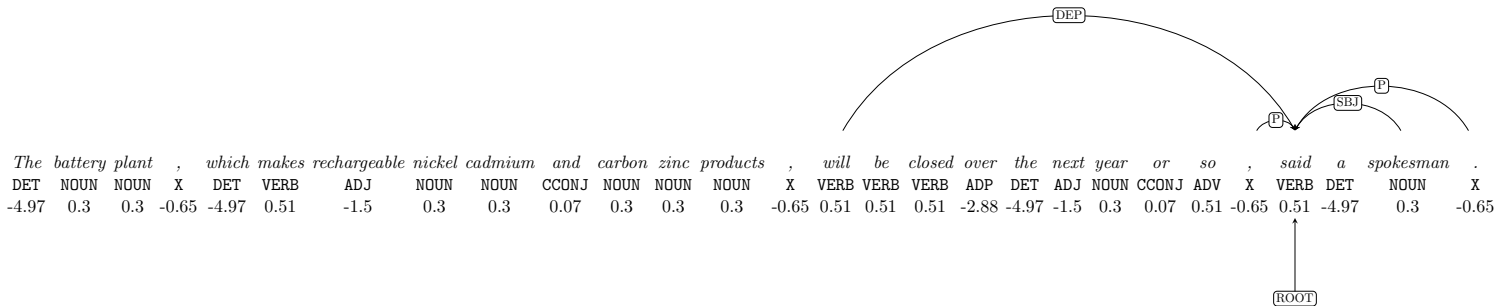
wsj\_0189.8.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0189.8.1

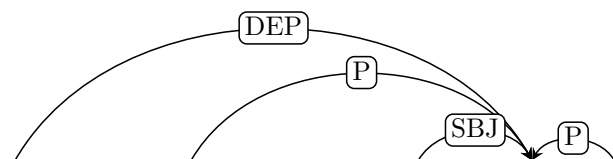
Variant Sentence  
spearman allwords = -1.0



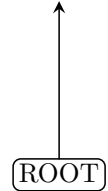
$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0   wtembdep = 254.89   ldep = 2.0

wsj\_0189.10.0

Reference Sentence  
spearman allwords = 0.0

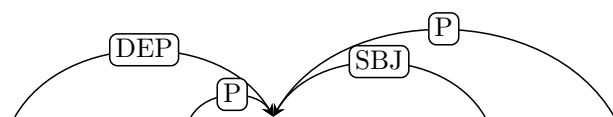


For the year , pet food volume was flat , the company said .  
 ADP DET NOUN X NOUN NOUN NOUN VERB ADJ X DET NOUN VERB X  
 -2.88 -4.97 0.3 -0.65 0.3 0.3 0.3 0.51 -1.5 -0.65 -4.97 0.3 0.51 -0.65

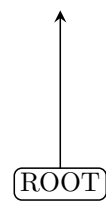


wsj\_0189.10.1

Variant Sentence  
 spearman allwords = -1.0



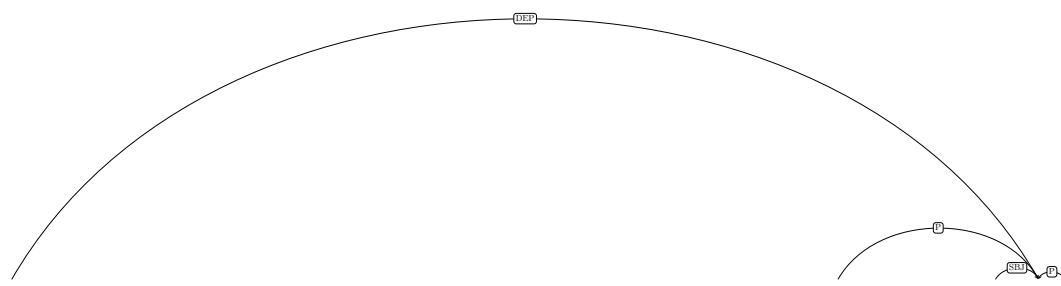
For the year , pet food volume was flat , said the company .  
 ADP DET NOUN X NOUN NOUN NOUN VERB ADJ X VERB DET NOUN X  
 -2.88 -4.97 0.3 -0.65 0.3 0.3 0.3 0.51 -1.5 -0.65 0.51 -4.97 0.3 -0.65



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = -5.81 ldep = -4.0

wsj\_0192.16.0

Reference Sentence  
 spearman allwords = 0.0

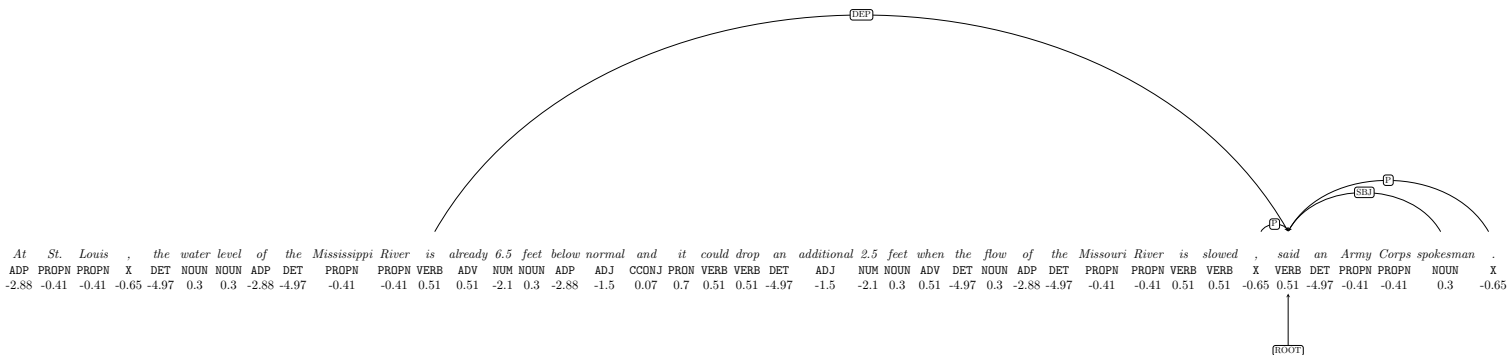


At St. Louis , the water level of the Mississippi River is already 6.5 feet below normal and it could drop an additional 2.5 feet when the flow of the Missouri River is slowed , an Army Corps spokesman said .  
 ADP PROPN PROPN X DET NOUN NOUN ADP DET PROPN PROPN VERB ADV NUM NOUN ADP ADJ CONJ PRON VERB VERB DET ADJ NUM NOUN ADV DET NOUN ADP DET PROPN PROPN VERB VERB X DET DET PROPN PROPN NOUN VERB X  
 -2.88 -0.41 -0.41 -0.65 -4.97 0.3 0.3 -2.88 -4.97 -0.41 -0.41 0.51 0.51 -2.1 0.3 -2.88 -1.5 0.07 0.7 0.51 0.51 -4.97 -1.5 -2.1 0.3 0.51 -4.97 0.3 -2.88 -4.97 -0.41 -0.41 0.51 0.51 -0.65 -4.97 -0.41 -0.41 0.3 0.51 -0.65



wsj\_0192.16.2

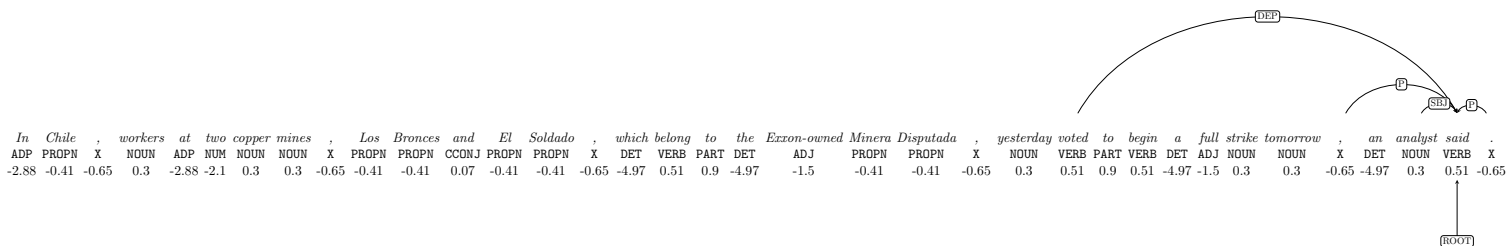
Variant Sentence  
 spearman allwords = -0.95



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = -404.73 ldep = 20.0

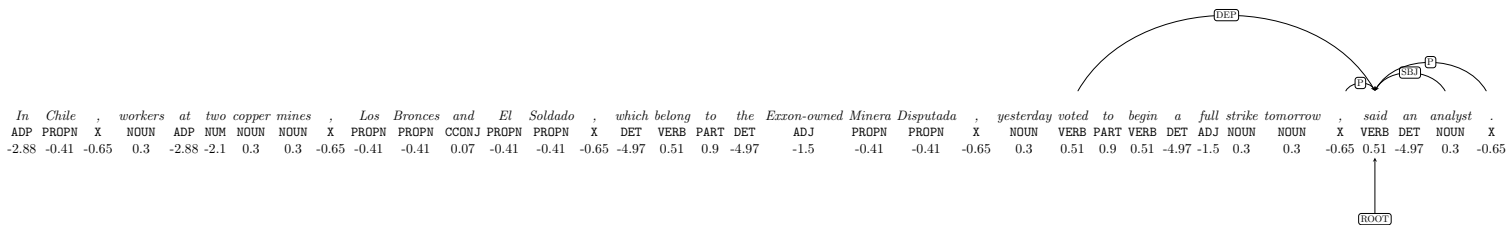
wsj\_0192.56.0

Reference Sentence  
spearman allwords = 0.0



wsj\_0192.56.1

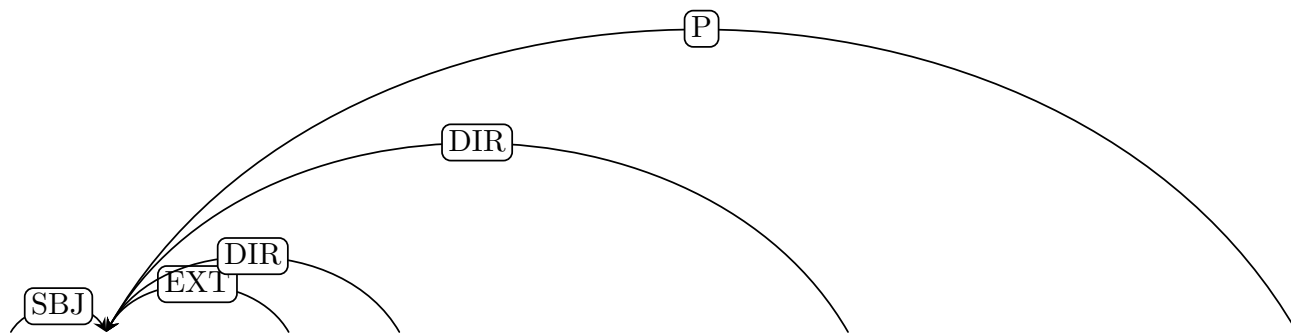
Variant Sentence  
spearman allwords = -1.0



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = 61.41 ldep = -1.0

wsj\_0194.5.0

Reference Sentence  
spearman allwords = 0.63

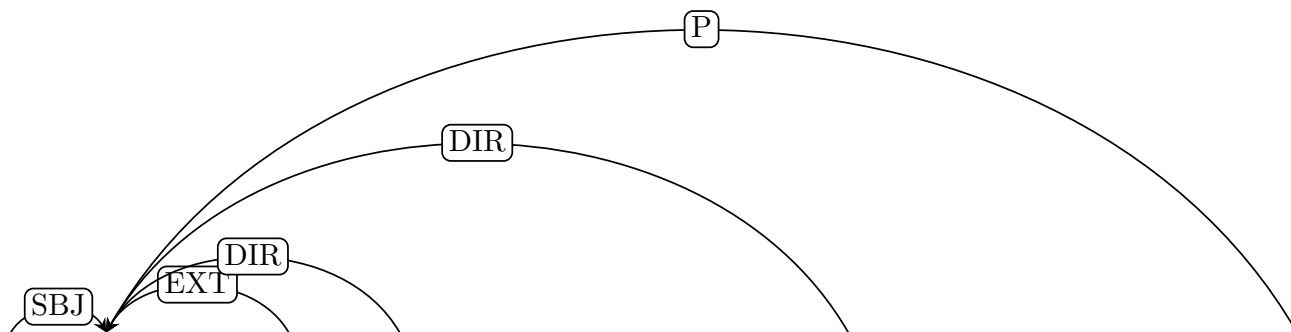


*Sales rose 5 % to \$ 4.4 billion from \$ 4.2 billion .*  
 NOUN VERB NUM NOUN PART SYM NUM NUM ADP SYM NUM NUM X  
 0.3 0.51 -2.1 0.3 0.9 -0.41 -2.1 -2.1 -2.88 -0.41 -2.1 -2.1 -0.65

ROOT

wsj\_0194.5.1

Variant Sentence  
 spearman allwords = -0.63



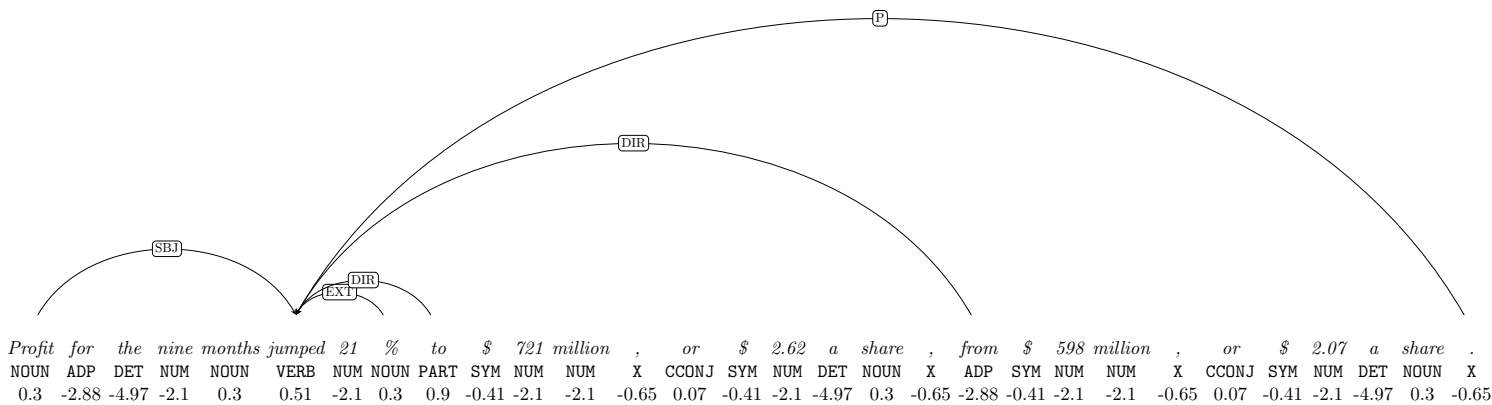
*Sales rose 5 % from \$ 4.2 billion to \$ 4.4 billion .*  
 NOUN VERB NUM NOUN ADP SYM NUM NUM PART SYM NUM NUM X  
 0.3 0.51 -2.1 0.3 -2.88 -0.41 -2.1 -2.1 0.9 -0.41 -2.1 -2.1 -0.65

ROOT

wsj\_0194.28.0

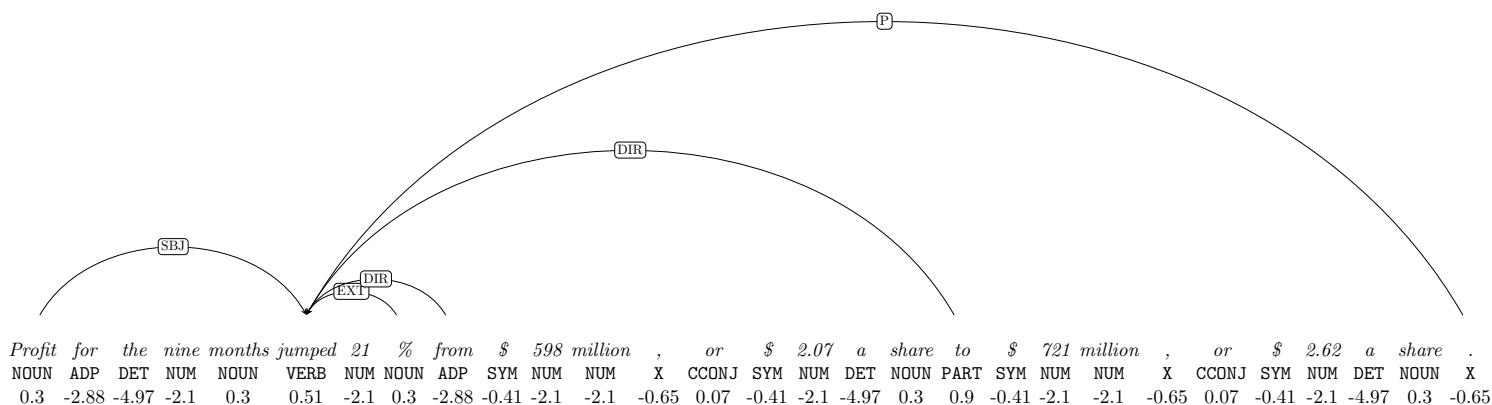
$\phi(\text{ref}) - \phi(\text{var})$ : dlq = 0.0 wtembdep = 148.29 ldep = 6.0

Reference Sentence  
 spearman allwords = 0.19



wsj\_0194.28.1

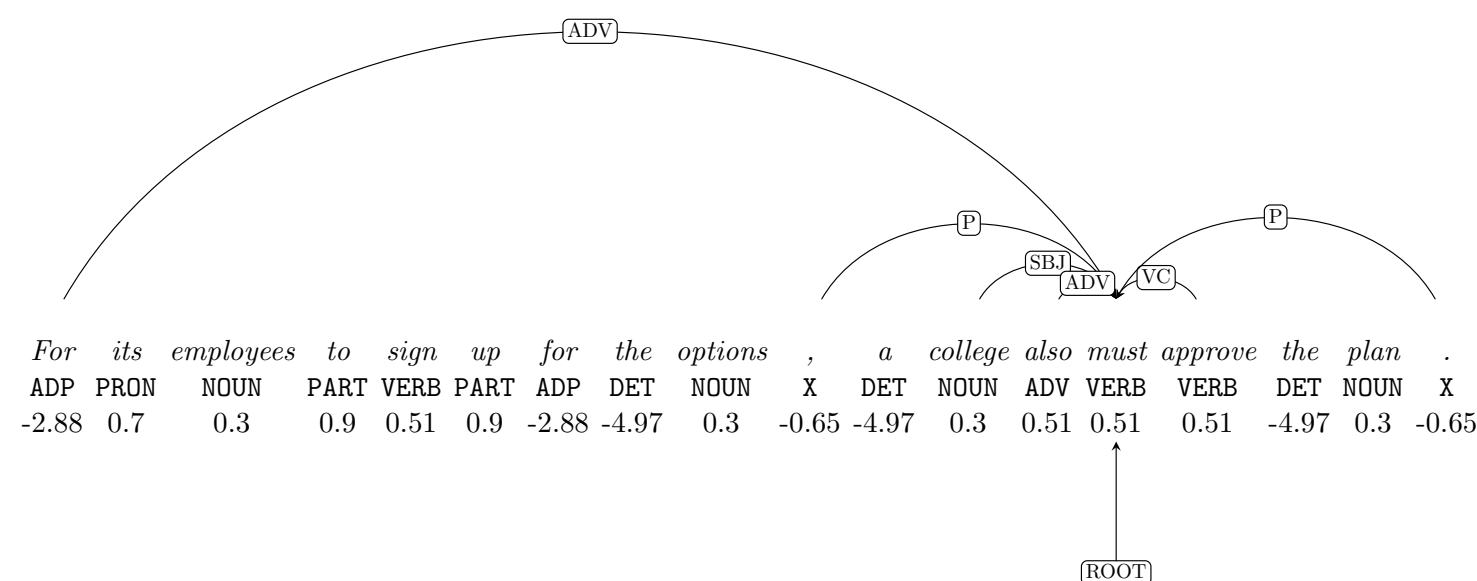
Variant Sentence  
spearman allwords = -0.24



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 1.0 wtembdep = 463.35 ldep = 0.0

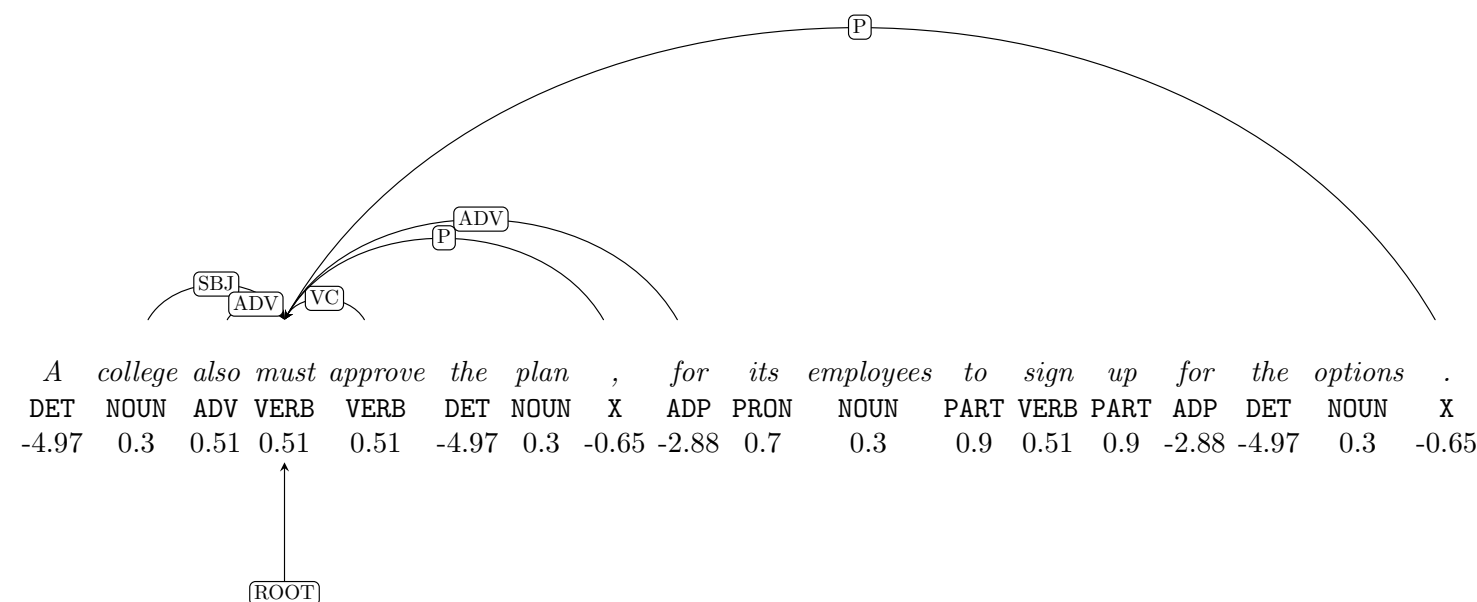
wsj\_0204.4.0

Reference Sentence  
spearman allwords = 0.5



wsj\_0204.4.1

Variant Sentence  
spearman allwords = 0.01



$\phi(\text{ref}) - \phi(\text{var})$ : dl<sub>g</sub> = 2.0   wtembdep = 107.48   ldep = -0.0