

Loss & Damage (Article 1)

December 12, 2017

```
In [1]: from datascience import *
import spacy
%matplotlib inline
```

```
In [2]: !python -m spacy download en
```

Downloading en_core_web_sm-1.2.0/en_core_web_sm-1.2.0.tar.gz

Collecting [https://github.com/explosion/spacy-models/releases/download/en_core_web_sm-1.2.0/en](https://github.com/explosion/spacy-models/releases/download/en_core_web_sm-1.2.0/en_core_web_sm-1.2.0.tar.gz)

```

Downloading https://github.com/explosion/spacy-models/releases/download/en_core_web_sm-1.2.0/
100% || 52.2MB 91.6MB/s ta 0:00:011

```

```
Requirement already satisfied (use --upgrade to upgrade): en-core-web-sm==1.2.0 from https://
Requirement already satisfied: spacy<2.0.0,>=1.7.0 in /srv/app/venv/lib/python3.6/site-packages/
Requirement already satisfied: numpy>=1.7 in /srv/app/venv/lib/python3.6/site-packages (from sp
Requirement already satisfied: murmurhash<0.27,>=0.26 in /srv/app/venv/lib/python3.6/site-packa
Requirement already satisfied: cymem<1.32,>=1.30 in /srv/app/venv/lib/python3.6/site-packages
Requirement already satisfied: preshed<2.0.0,>=1.0.0 in /srv/app/venv/lib/python3.6/site-packag
Requirement already satisfied: thinc<6.6.0,>=6.5.0 in /srv/app/venv/lib/python3.6/site-packages
Requirement already satisfied: plac<1.0.0,>=0.9.6 in /srv/app/venv/lib/python3.6/site-packages
Requirement already satisfied: pip<10.0.0,>=9.0.0 in /srv/app/venv/lib/python3.6/site-packages
Requirement already satisfied: six in /srv/app/venv/lib/python3.6/site-packages (from spacy<2.
Requirement already satisfied: pathlib in /srv/app/venv/lib/python3.6/site-packages (from spacy
Requirement already satisfied: ujson>=1.35 in /srv/app/venv/lib/python3.6/site-packages (from s
Requirement already satisfied: dill<0.3,>=0.2 in /srv/app/venv/lib/python3.6/site-packages (fro
Requirement already satisfied: requests<3.0.0,>=2.13.0 in /srv/app/venv/lib/python3.6/site-pac
Requirement already satisfied: regex<2017.12.1,>=2017.4.1 in /srv/app/venv/lib/python3.6/site-p
Requirement already satisfied: ftfy<5.0.0,>=4.4.2 in /srv/app/venv/lib/python3.6/site-packages
Requirement already satisfied: wrapt in /srv/app/venv/lib/python3.6/site-packages (from thinc<
Requirement already satisfied: tqdm<5.0.0,>=4.10.0 in /srv/app/venv/lib/python3.6/site-packages
Requirement already satisfied: cytoolz<0.9,>=0.8 in /srv/app/venv/lib/python3.6/site-packages
Requirement already satisfied: termcolor in /srv/app/venv/lib/python3.6/site-packages (from th
Requirement already satisfied: chardet<3.1.0,>=3.0.2 in /srv/app/venv/lib/python3.6/site-packag
Requirement already satisfied: idna<2.7,>=2.5 in /srv/app/venv/lib/python3.6/site-packages (fro
Requirement already satisfied: urllib3<1.23,>=1.21.1 in /srv/app/venv/lib/python3.6/site-packag
Requirement already satisfied: certifi>=2017.4.17 in /srv/app/venv/lib/python3.6/site-packages
Requirement already satisfied: html5lib in /srv/app/venv/lib/python3.6/site-packages (from ftfy
```

```
Requirement already satisfied: wcwidth in /srv/app/venv/lib/python3.6/site-packages (from ftfy)
Requirement already satisfied: toolz>=0.8.0 in /srv/app/venv/lib/python3.6/site-packages (from ftfy)
Requirement already satisfied: webencodings in /srv/app/venv/lib/python3.6/site-packages (from ftfy)
Requirement already satisfied: setuptools>=18.5 in /srv/app/venv/lib/python3.6/site-packages (from ftfy)
```

Linking successful

```
/srv/app/venv/lib/python3.6/site-packages/en_core_web_sm/en_core_web_sm-1.2.0
--> /srv/app/venv/lib/python3.6/site-packages/spacy/data/en
```

You can now load the model via `spacy.load('en')`.

```
In [3]: import spacy
        from nltk import Tree
```

Loss & Damage (Final)

```
In [5]: en_nlp=spacy.load('en')
```

```
doc =en_nlp("""1. Parties recognize the importance of averting, minimizing and address
and damage associated with the adverse effects of climate change, including\
extreme weather events and slow onset events, and the role of sustainable\
development in reducing the risk of loss and damage. """)
```

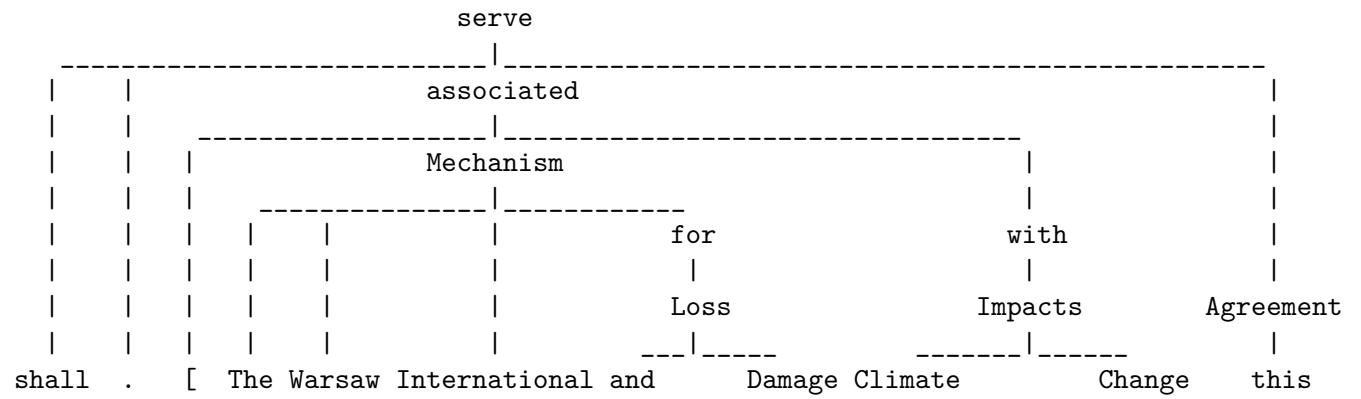
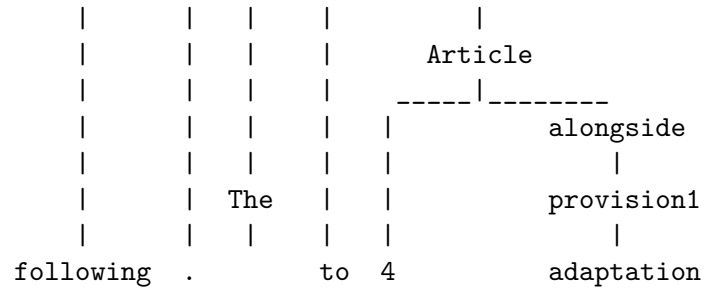
```
def to_nltk_tree(node):
    if node.n_lefts + node.n_rights > 0:
        return Tree(node.orth_, [to_nltk_tree(child) for child in node.children])
    else:
        return node.orth_
```

```
[to_nltk_tree(sent.root).pretty_print() for sent in doc.sents]
```

```

graph LR
    recognize[recognize] --- importance[importance]
    importance --- of[of]
    of --- averting[averting]
    averting --- minimizing[minimizing]
    minimizing --- end[...]

```

Out [4]: [None, None]