

Loss & Damage (Article 2)

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_core_web_sm-1.2.0.tar.gz

Downloading https://github.com/explosion/spacy-models/releases/download/en_core_web_sm-1.2.0/en_core_web_sm-1.2.0.tar.gz
100% || 52.2MB 97.4MB/s ta 0:00:011

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

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

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
```

```
In [4]: en_nlp=spacy.load('en')
```

```
doc =en_nlp("""2. The Warsaw International Mechanism for Loss and Damage associated with  

Climate Change Impacts shall be subject to the authority and guidance of the  

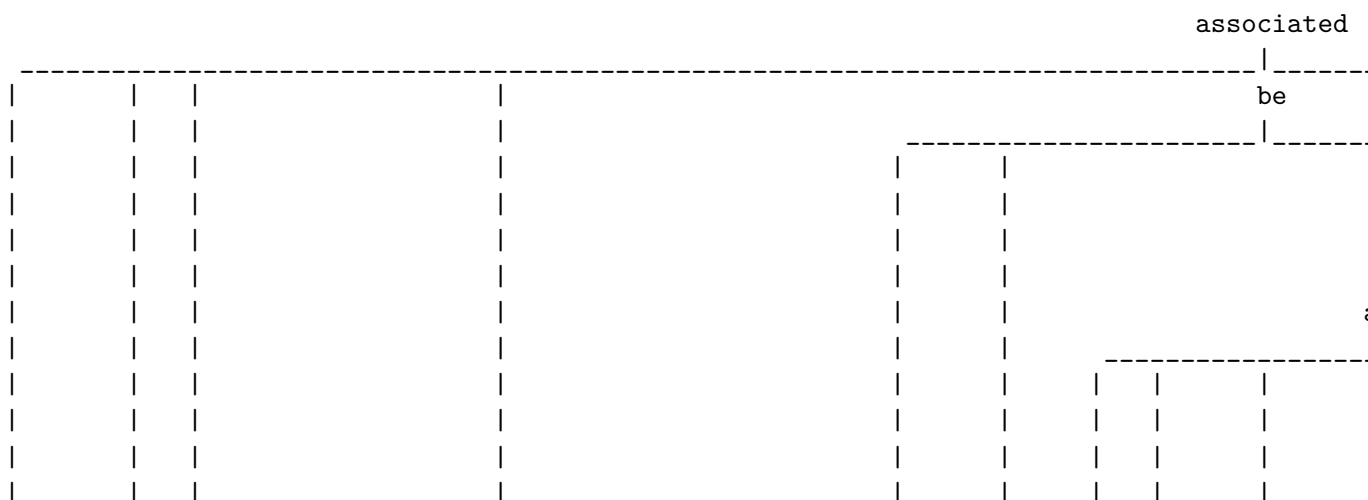
Conference of the Parties serving as the meeting of the Parties to this Agreement  

and may be enhanced and strengthened, as determined by the Conference of the  

Parties serving as the meeting of the Parties to this Agreement. """)
```

```
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]
```



Out[5]: [None, None]