

这些是需要知道的数据结构

```
self.rules = None # rules is a list of rule. Each rule is a triplet [weight, lhs, rhs]. rhs might also be a list
self.dict_prob = None # Given a lhs, dict_prob tells you what rhs-s does this lhs have?
self.dict_rhs = None # Given a lhs, dict_prob tells you what probs do the rhs-s have?
```

例子

```
[81]: dict_prob
[81]: defaultdict(list,
  {'ROOT': ['1', '1', '1'],
   'S': ['1'],
   'VP': ['1'],
   'NP': ['1', '1'],
   'PP': ['1'],
   'Noun': ['1', '1', '1', '1', '1', '1'],
   'Verb': ['1', '1', '1', '1', '1', '1'],
   'Det': ['1', '1', '1'],
   'Adj': ['1', '1', '1', '1'],
   'Prep': ['1', '1', '1', '1']})

[83]: dict_rhs
[83]: defaultdict(list,
  {'ROOT': [['S', '.'],
            ['S', '!'],
            ['is', 'it', 'true', 'that', 'S', '?']],
   'S': [['NP', 'VP']],
   'VP': [['Verb', 'NP']],
   'NP': [['Det', 'Noun'], ['NP', 'PP']],
   'PP': [['Prep', 'NP']],
   'Noun': [['Adj', 'Noun'],
            ['president'],
            ['sandwich'],
            ['pickle'],
            ['chief', 'of', 'staff'],
            ['floor']],
   'Verb': [['ate'],
            ['wanted'],
            ['kissed'],
            ['understood'],
            ['pickled']],
   'Det': [['the'], ['a'], ['every']],
   'Adj': [['fine'], ['delicious'], ['perplexed'], ['pickled']],
   'Prep': [['with'], ['on'], ['under'], ['in']]})

[85]: rules
[85]: [['1', 'ROOT', ['S', '.']],
  ['1', 'ROOT', ['S', '!']],
  ['1', 'ROOT', ['is', 'it', 'true', 'that', 'S', '?']],
  ['1', 'S', ['NP', 'VP']],
  ['1', 'VP', ['Verb', 'NP']],
  ['1', 'NP', ['Det', 'Noun']],
  ['1', 'NP', ['NP', 'PP']],
  ['1', 'PP', ['Prep', 'NP']],
  ['1', 'Noun', ['Adj', 'Noun']],
  ['1', 'Verb', ['ate']],
  ['1', 'Verb', ['wanted']],
  ['1', 'Verb', ['kissed']],
  ['1', 'Verb', ['understood']],
  ['1', 'Verb', ['pickled']],
  ['1', 'Det', ['the']],
  ['1', 'Det', ['a']],
  ['1', 'Det', ['every']],
  ['1', 'Noun', ['president']],
  ['1', 'Noun', ['sandwich']],
  ['1', 'Noun', ['pickle']],
  ['1', 'Noun', ['chief', 'of', 'staff']],
  ['1', 'Noun', ['floor']],
  ['1', 'Adj', ['fine']],
  ['1', 'Adj', ['delicious']],
  ['1', 'Adj', ['perplexed']],
  ['1', 'Adj', ['pickled']],
  ['1', 'Prep', ['with']],
  ['1', 'Prep', ['on']],
  ['1', 'Prep', ['under']],
  ['1', 'Prep', ['in']]]
```