PIP INSTALL AXELROD

PRISONERS DILEMMA

- both sides are better off **Cooperating** (3)
- there is always a tempetation to **Defect** (5)

	C	D
C	3, 3	5, 0
D	0, 5	1, 1

WHEN INTERACTING WITH A SNEAKY OPPONENT

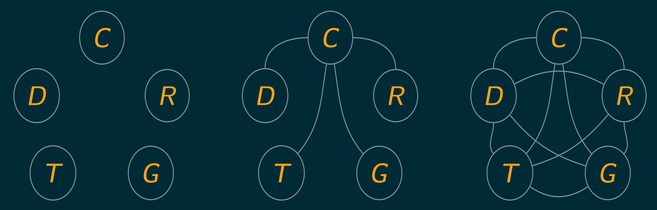
SHOULD PEOPLE HOLD A GRUDGE AGAINST THEM?

	1	2	3	4	5	6
SneakyTitForTat	C	C	D	D	C	C
Grudger	C	C	C	D	D	D

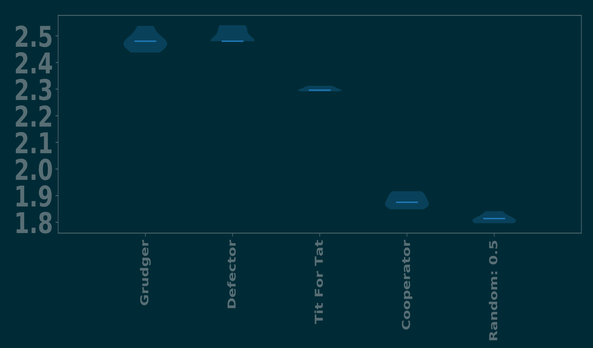
```
>>> import axelrod as axl

>>> first_match = axl.Match([
...     axl.SneakyTitForTat(),
...     axl.Grudger()], turns=20)

>>> first_match.play()[:6]
[('C', 'C'), ('C', 'C'), ('D', 'C'),
('D', 'D'), ('C', 'D'), ('C', 'D')]

>>> first_match.final_score()
(20, 55)

>>> second_match = axl.Match([
...     axl.SneakyTitForTat(),
...     axl.TitForTat()], turns=20)

>>> play = second_match.play()
>>> second_match.final_score()
(57, 57)
```

```
>>> assert axl.__version__ == "3.5.0"

$   python -m doctest poster.tex
```

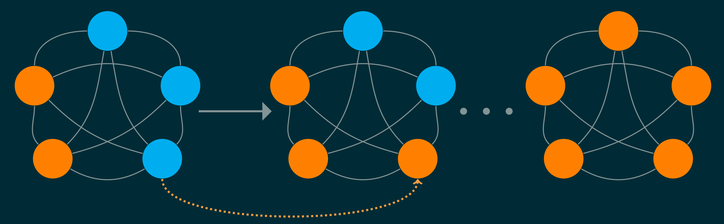
WHAT IS THE OPTIMAL STRATEGIC PLAY AGAINST THE MANY FACES OF WAR?




```
>>> import axelrod as axl

>>> axl.seed(0)
>>> players = [axl.Cooperator(), axl.Random(),
...            axl.TitForTat(), axl.Grudger(),
...            axl.Defector()]

>>> tournament = axl.Tournament(players)
>>> results = tournament.play()
>>> results.ranked_names
['Grudger', 'Defector', 'Tit For Tat',
'Cooperator', 'Random: 0.5']

>>> plot = axl.Plot(results)
>>> p = plot.boxplot()
>>> p.show()
```

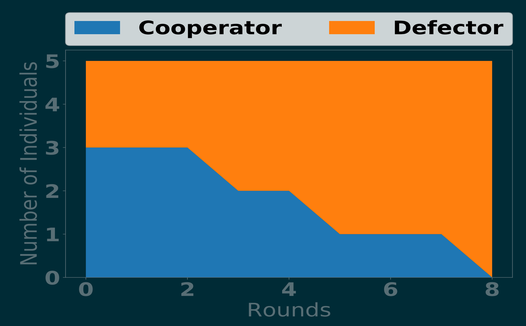


SHOULD THE NORTH JOIN HANDS WITH THE SOUTH TO DEFEAT THE NIGHT KING?



selection \ replacement

```
>>> import axelrod as axl
>>> import random

>>> N = 5
>>> players = []
>>> axl.seed(5)
>>> for _ in range(N):
...     player = random.choice([axl.Defector,
...                             axl.Cooperator])
...     players.append(player())

>>> mp = axl.MoranProcess(players=players, turns=200)
>>> mp.play()
[Counter({'Cooperator': 3, 'Defector': 2}),
 Counter({'Cooperator': 3, 'Defector': 2}),
 Counter({'Cooperator': 3, 'Defector': 2}),
 Counter({'Cooperator': 2, 'Defector': 3}),
 Counter({'Cooperator': 2, 'Defector': 3}),
 Counter({'Cooperator': 1, 'Defector': 4}),
 Counter({'Cooperator': 1, 'Defector': 4}),
 Counter({'Cooperator': 1, 'Defector': 4}),
 Counter({'Defector': 5})]
```



NikoletaGlyn **In case you missed me:** nikoleta-v3.github.io/blog/2017/08/23/grudges-war-GoT.html Nikoleta-v