```python
import numpy as np
import pandas as pd

#from models import model_selection, get_best_crit
from extreme.estimators import evt_estimators, real_estimators
from extreme import visualization as statsviz

import matplotlib.pyplot as plt
from pathlib import Path

%load_ext autoreload
%autoreload 2
```

Entrée [1]:

1 Simulated data

Entrée [86]:

```python
evt_estimators(n_replications=1000, params={"evi":1., "rho": -1.},
               distribution="burr",
               n_data=500, n_quantile="2n")
```
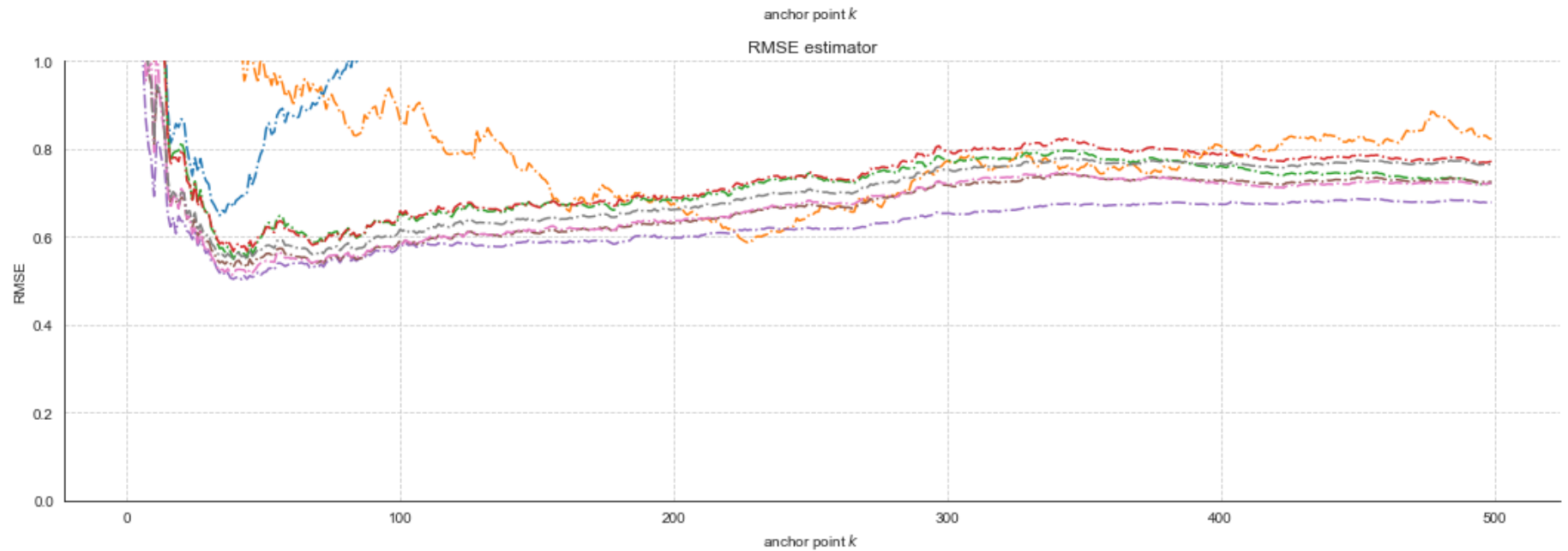
Out[86]:

	W	RW	CW	CH	CHp	PRBp	CHps	PRBps
RMSE	15.3051	0.7812	1.134	1.1197	2.1258	1.1807	1.0212	1.0697

Entrée [11]:
```
statsviz.evt_quantile_plot(n_replications=1000, params={"evi":0.5, "rho": -0.125},
                           distribution="nhw",
                           n_data=500, n_quantile="2n")
```
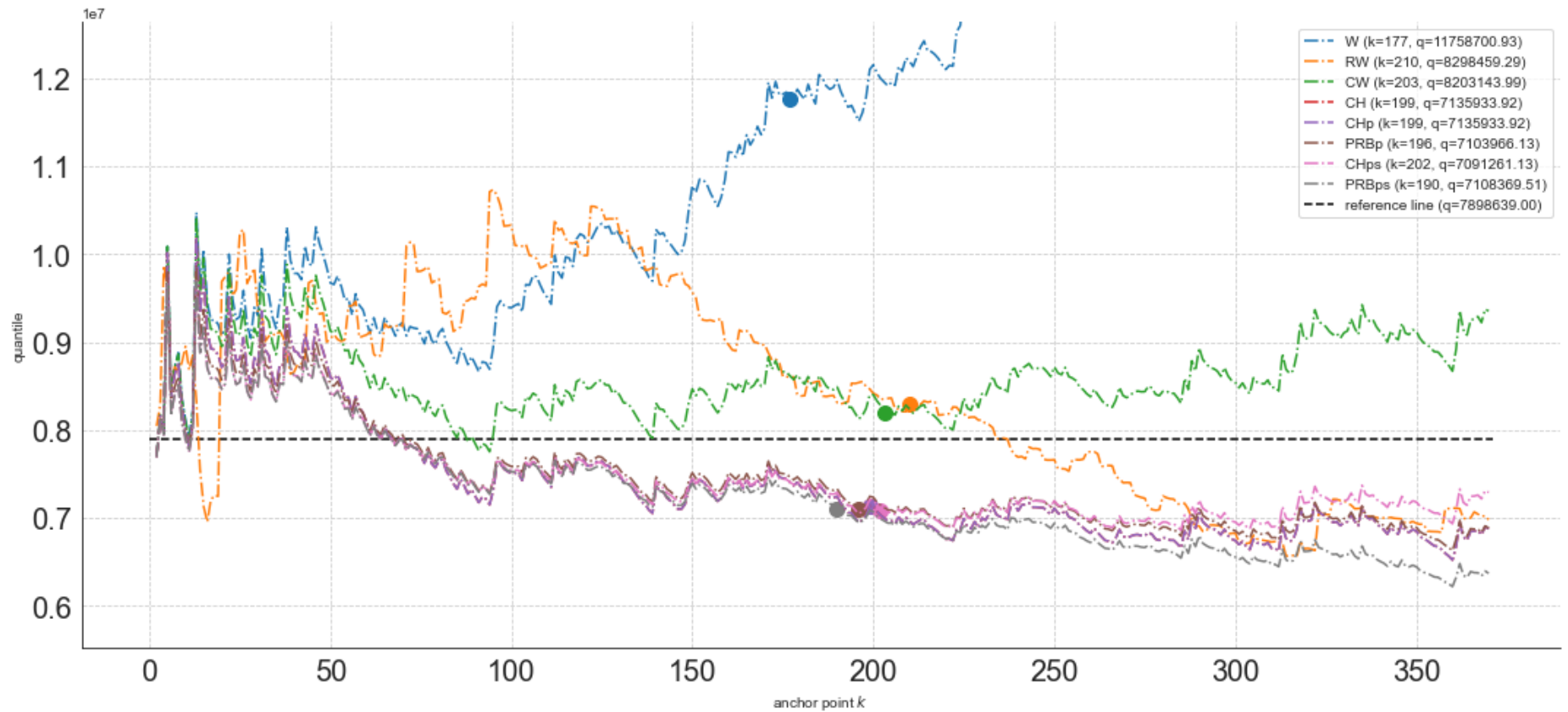
Estimator plot
NHW: {'EVI': 0.5, 'RHO': -0.125}

Bias estimator

Variance estimator

anchor point k

RMSE estimator

2 Real data

Entrée [32]:
```
# seed 42
real_estimators()
```

Out[32]:

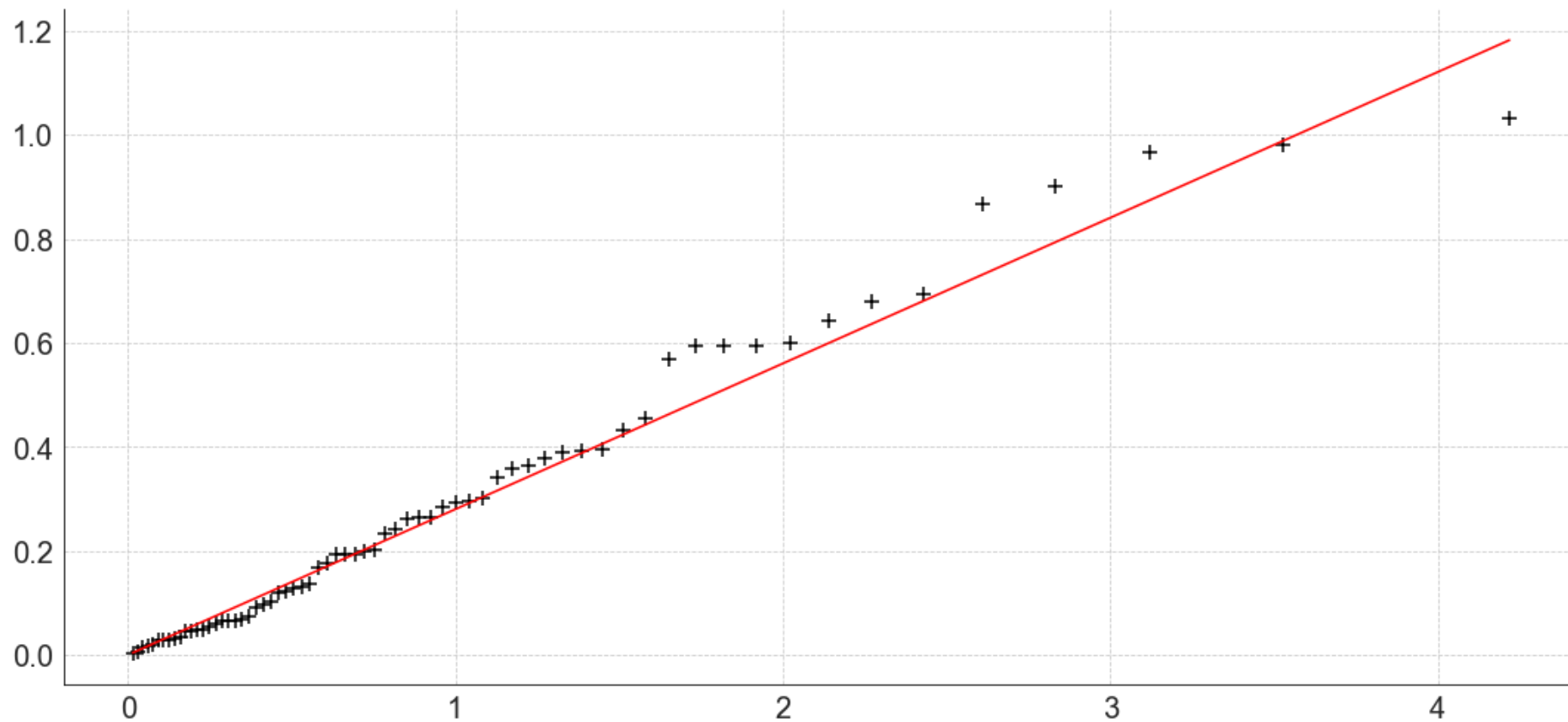|	W	RW	CW	CH	CHp	PRBp	CHps	PRBps
quantile	11.7587	8.2985	8.2031	7.1359	7.1359	7.104	7.0913	7.1084
k	177	210	203	199	199	196	202	190

Entrée [33]:
```
# seed 42
statsviz.real_quantile_plot()
```

Entrée [2]: `statsviz.real_hill_plot()`

R[write to console]: Le chargement a nécessité le package : evd
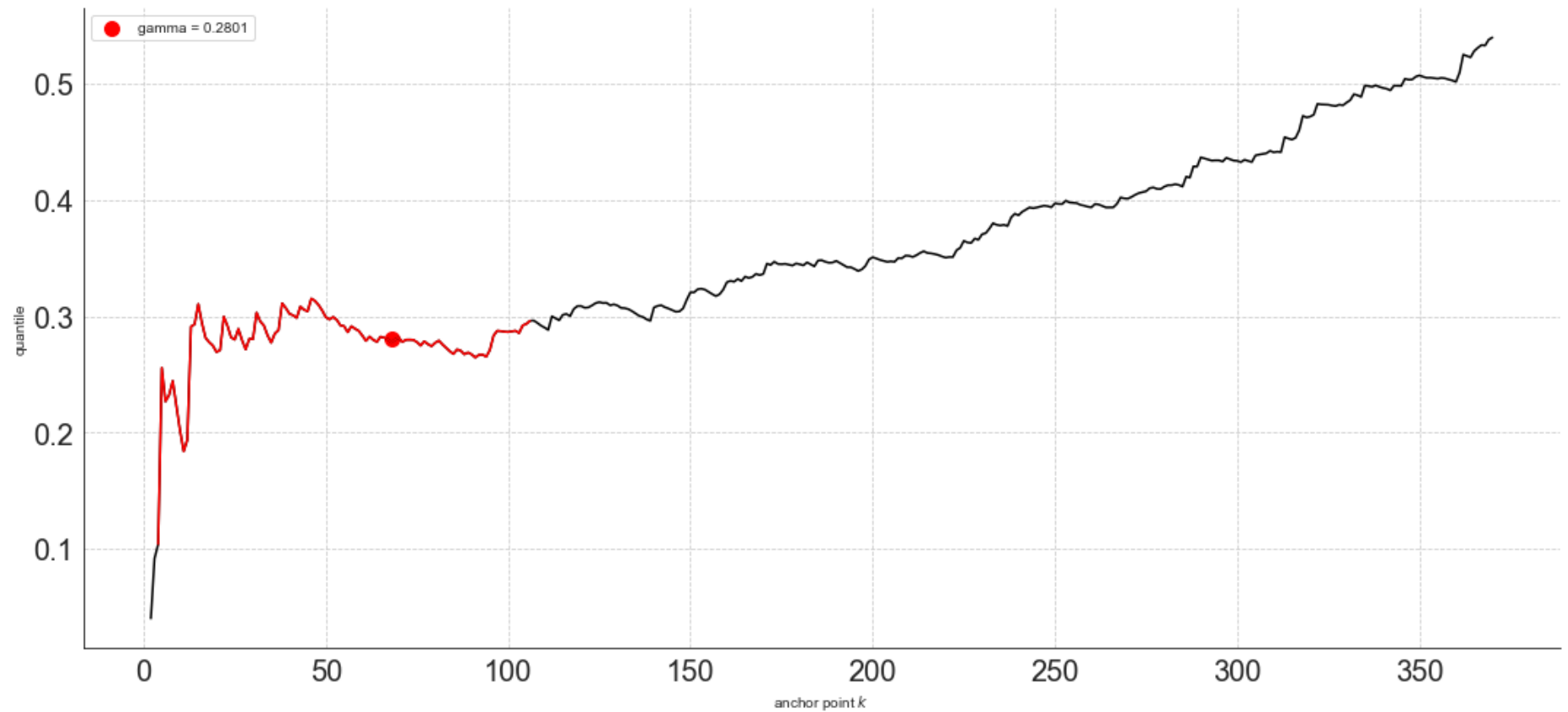
Entrée [9]: `statsviz.real_loglog_plot()`

Entrée [31]:
```python
# seed 43
"""
Leger decalage pour les estimateurs CH, CHp, PRBp CHps, PRBps avec une autre seed sur l'algo de choix de k ..
"""
real_estimators()
```

Out[31]:

	W	RW	CW	CH	CHp	PRBp	CHps	PRBps
quantile	11.7587	8.2985	8.2031	6.9685	6.9685	7.119	7.0654	6.9684
k	177	210	203	203	203	202	203	196