result_05252023

Yifei Wang

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Bias for 500 simulations with magnitude adjustment

The adjustment is based on the estimate from the last step.

```
## [1] "Estimated value"
```

```
##         BA1         CA1         BC1         BA2         CA2         BC2
## -0.5896171 -2.0120437  1.4224266  1.6039235  2.6619408 -1.0580172
```

```
## [1] "Bias"
```

```
##    BA1    CA1    BC1    BA2    CA2    BC2
## 1.0896 3.0120 1.9224 1.6039 3.1619 1.5580
```

Large bias may cause from two perspectives:

1. We reduce the length of markov chain due to the computation burden. The markov chain is too short to run the stable distribution.
2. In the matrix $H(\cdot)$ and the matrix $J(\cdot)$, we used the estimate from the last step instead of MLE.

MC Variance for 500 simulations

```
##             BA1   CA1   BC1   BA2   CA2   BC2
## no adjust 0.129 0.151 0.250 0.147 0.115 0.214
## gemtc     0.130 0.148 0.268 0.138 0.107 0.232
## netmeta   0.110 0.118 0.168 0.111 0.104 0.135
```

Density Plot for 500 simulations