



From
PageRank

To
Diffusion

Supercomputing in Our Daily Life



Google



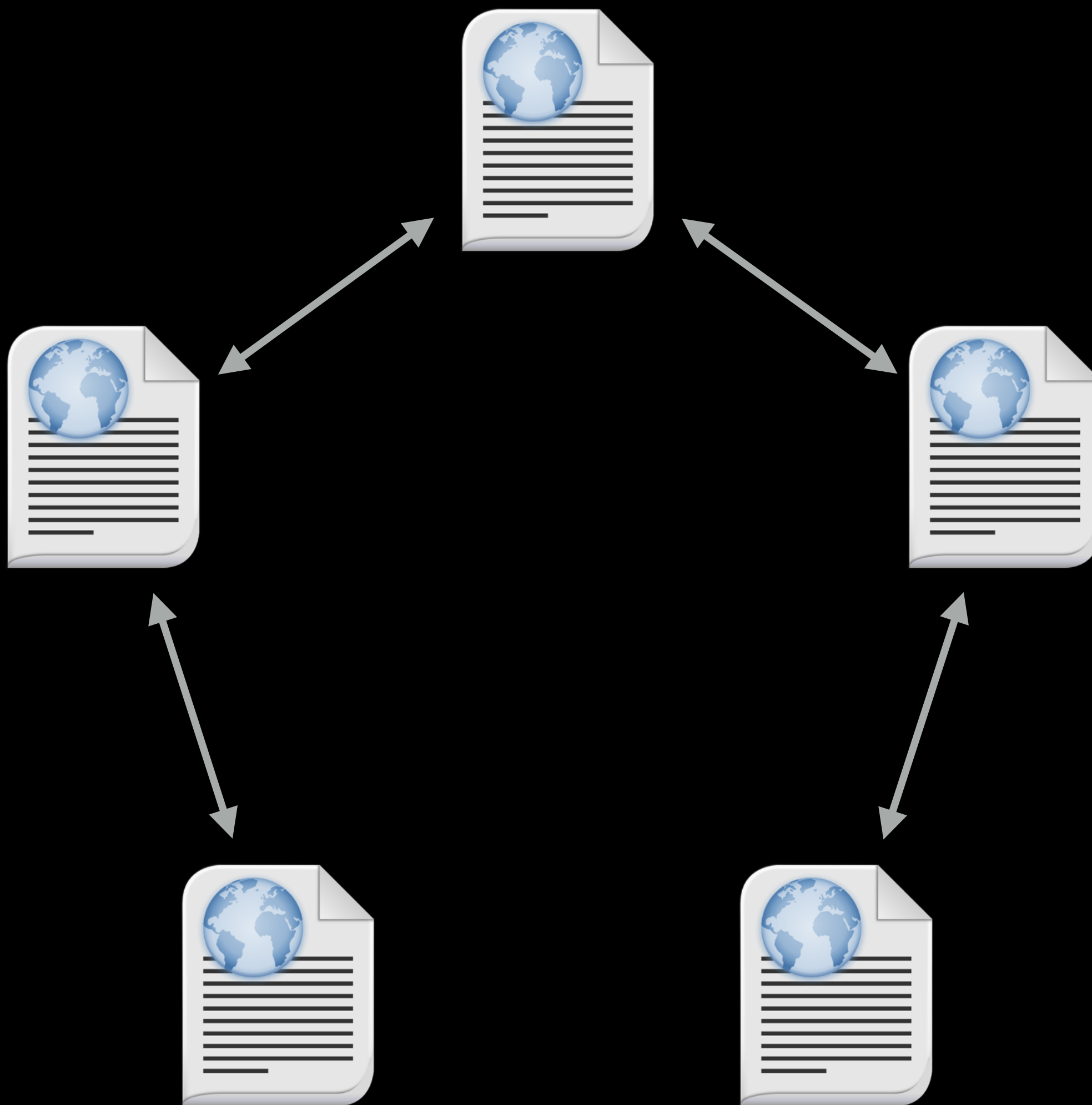
Los Alamos
NATIONAL LABORATORY

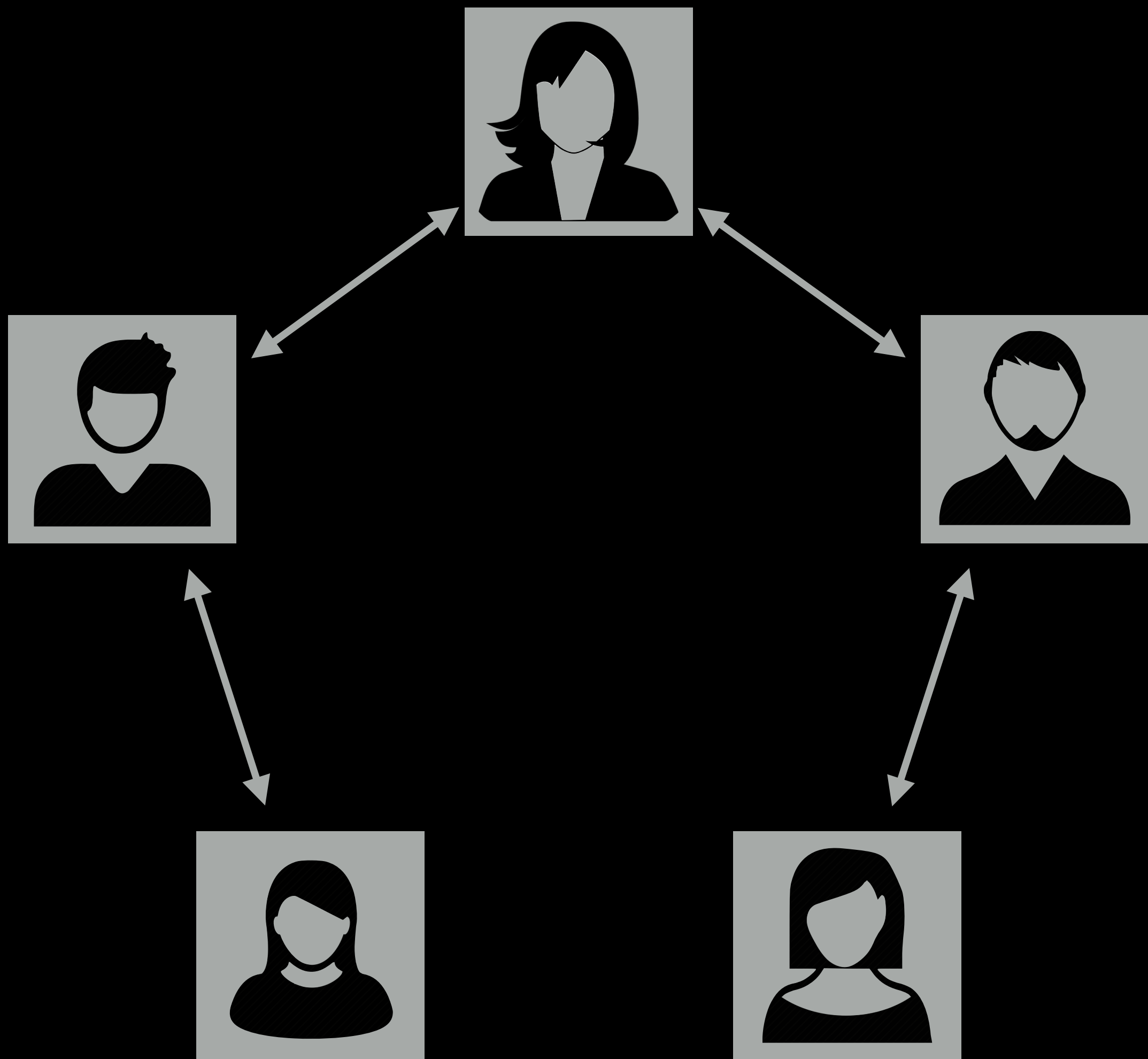


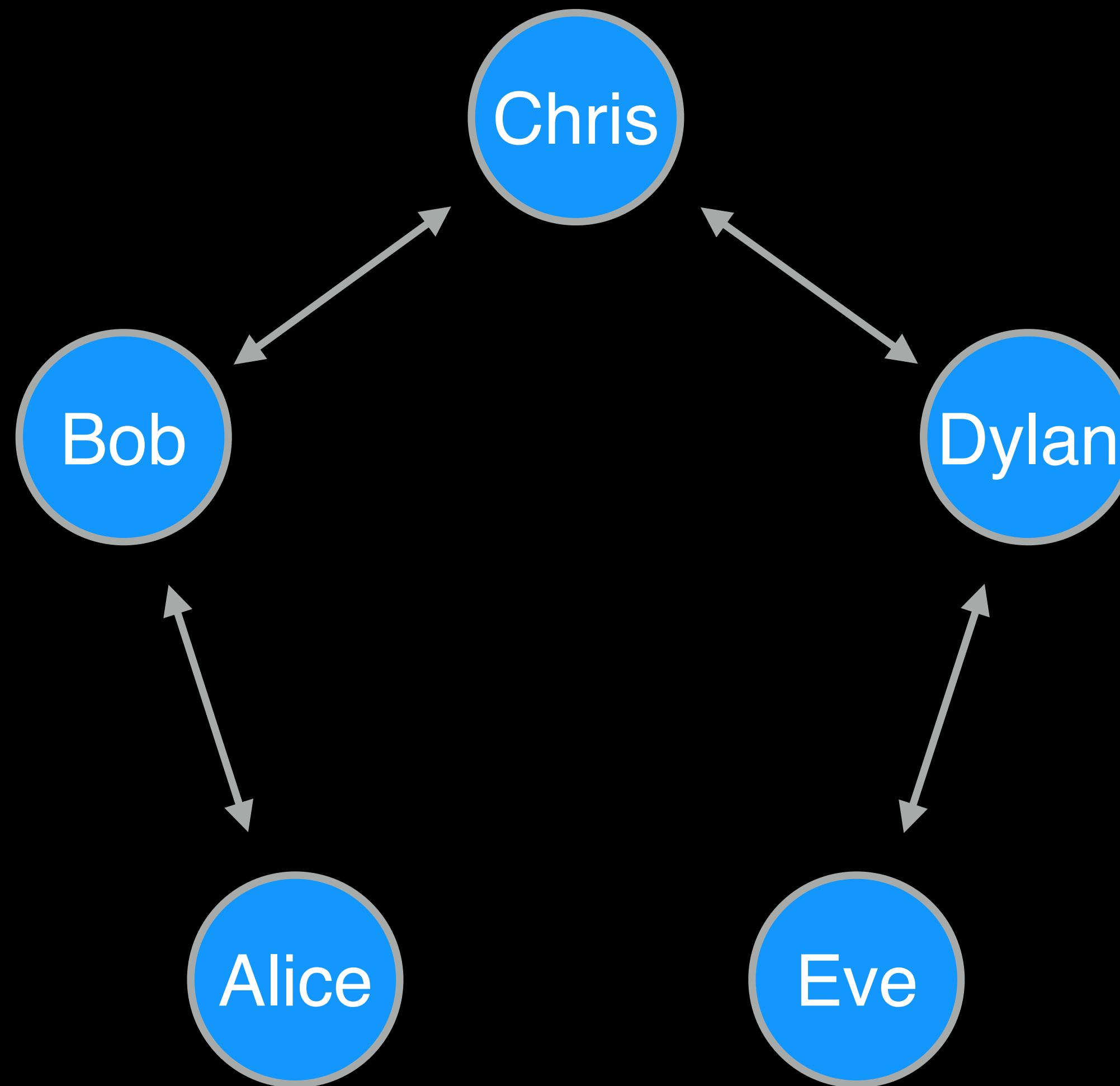
**You shall love
each other!!!**













1.000

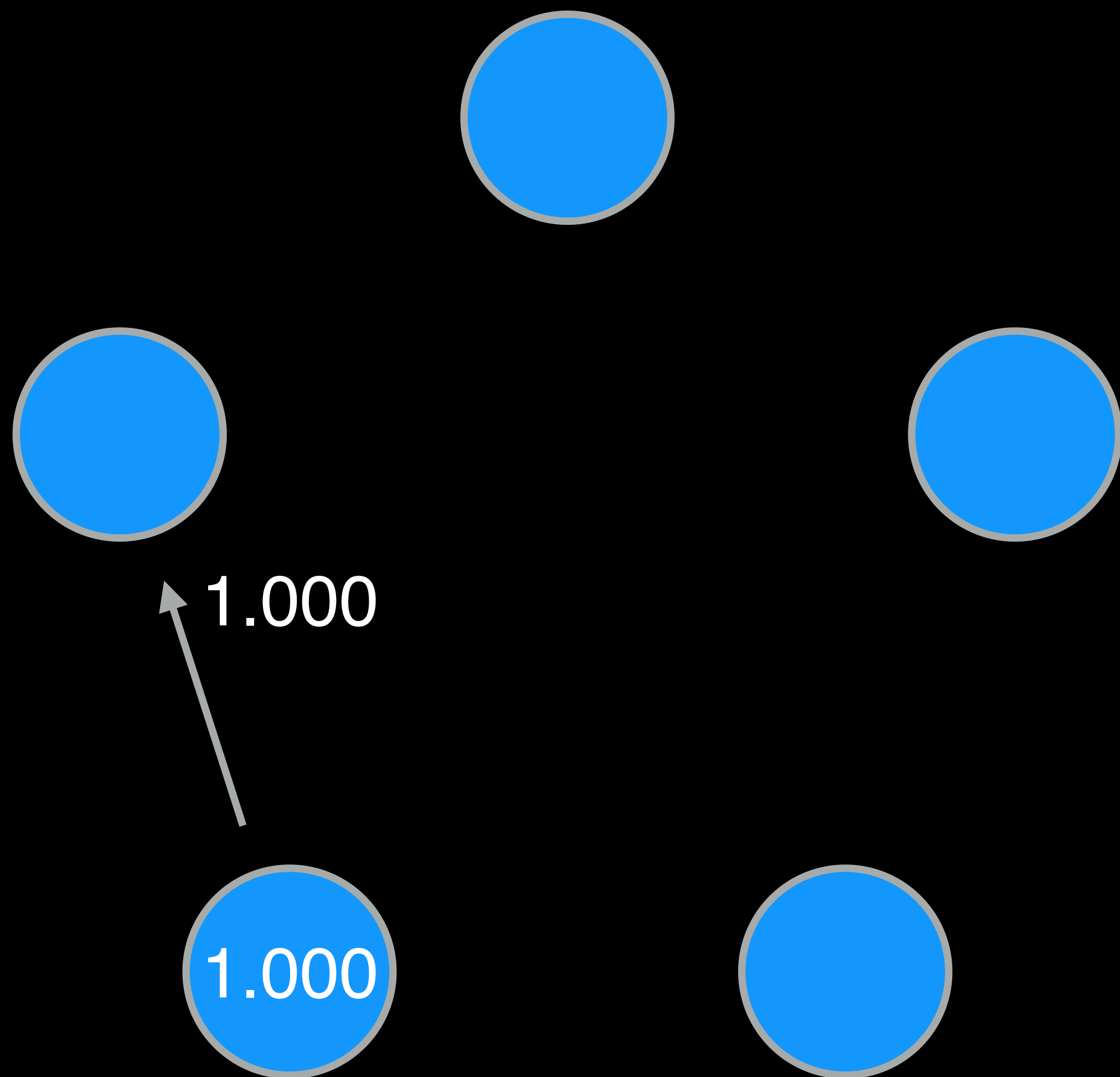
1.000

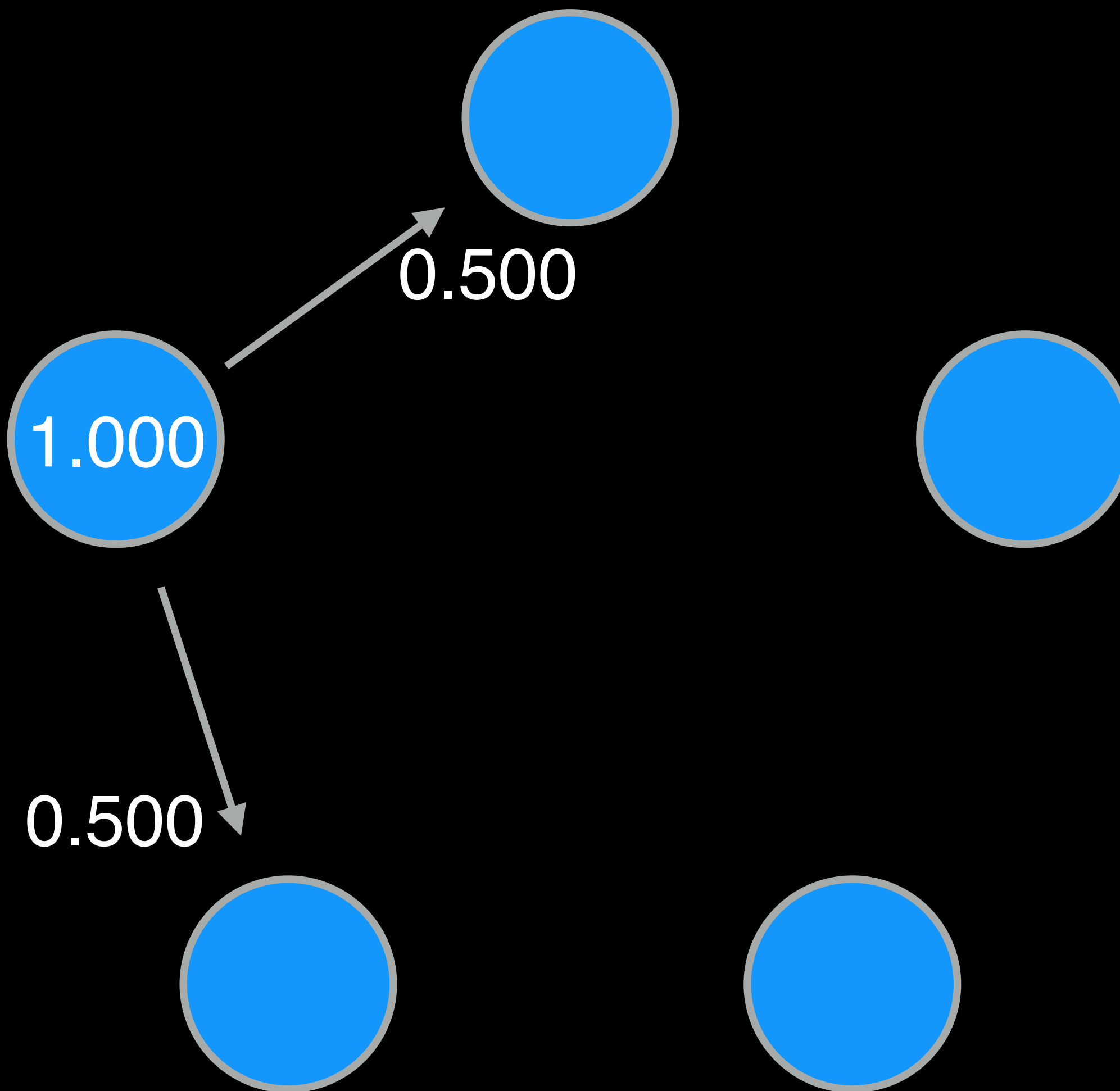
1.000

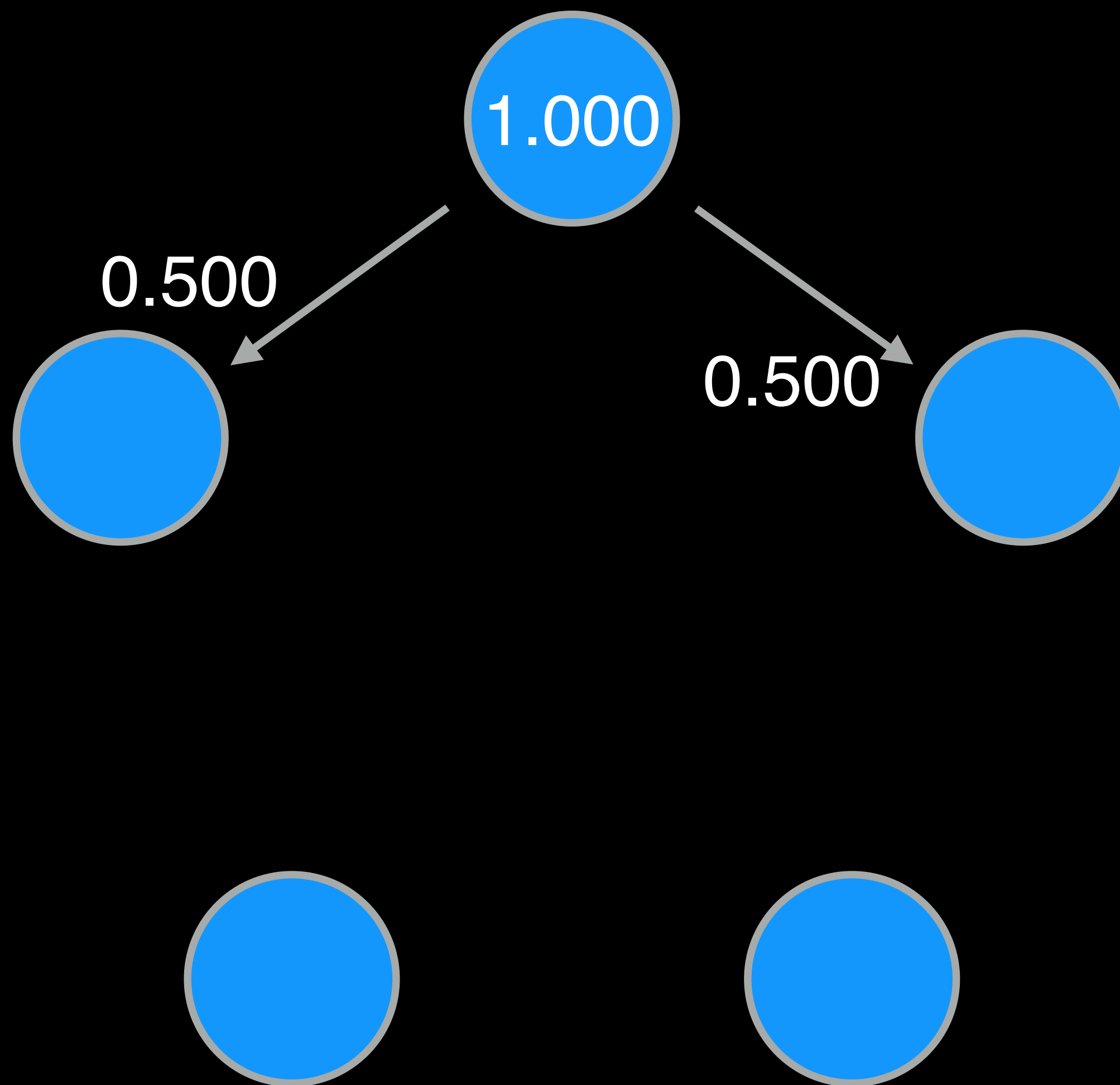
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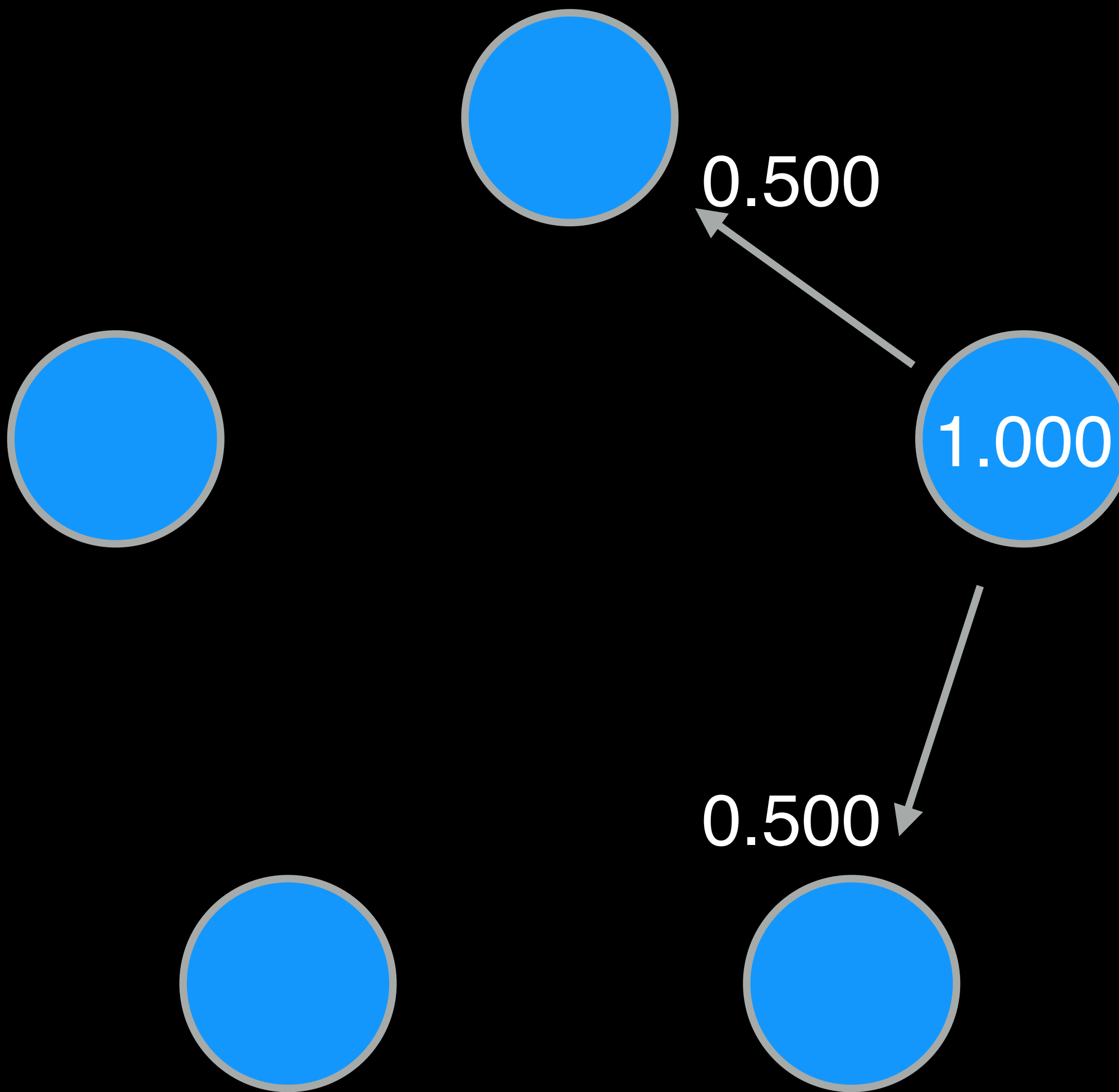
1.000

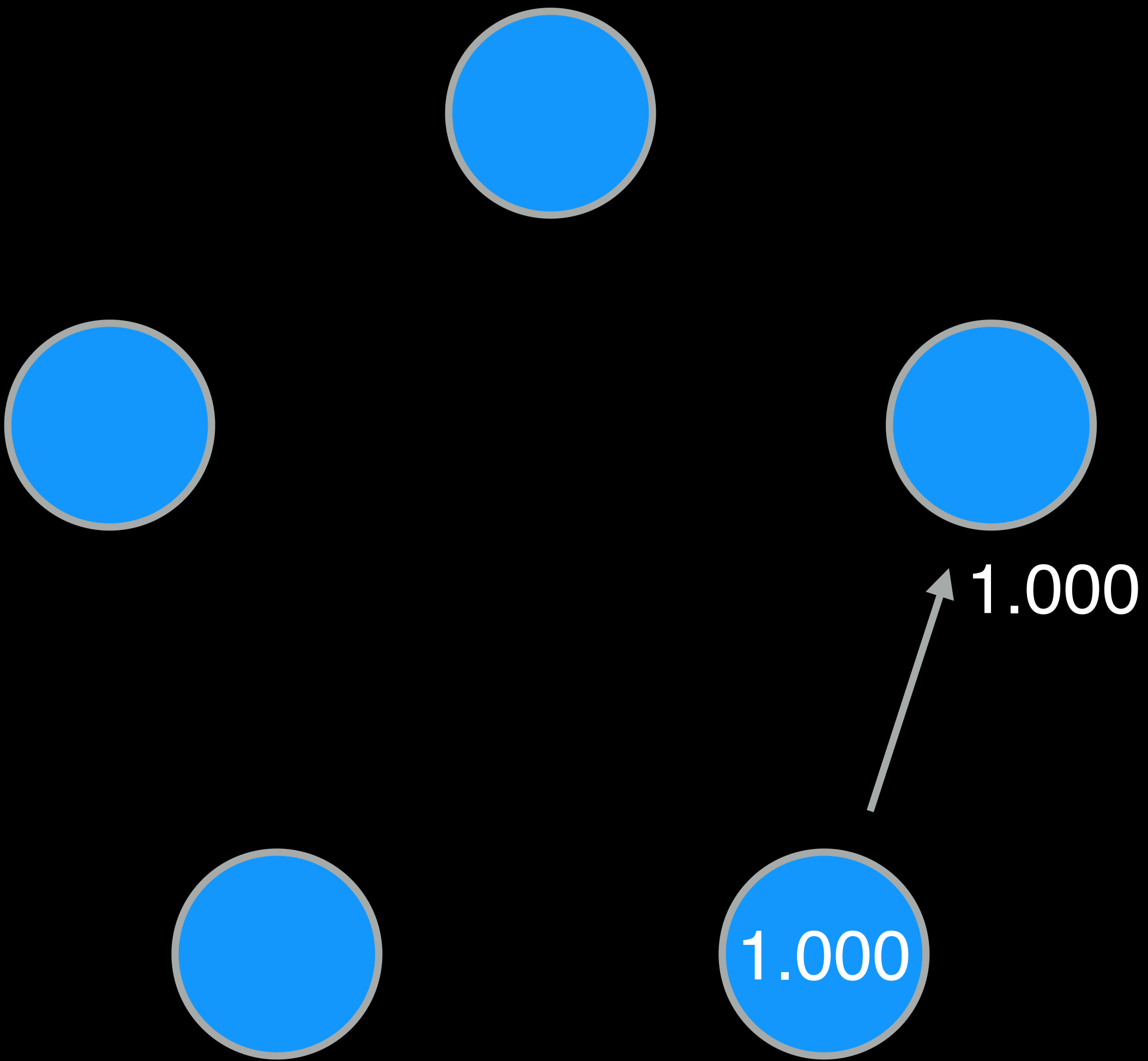


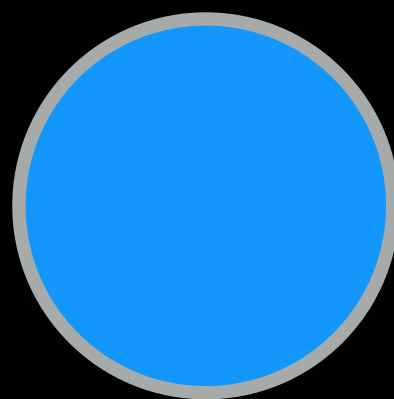
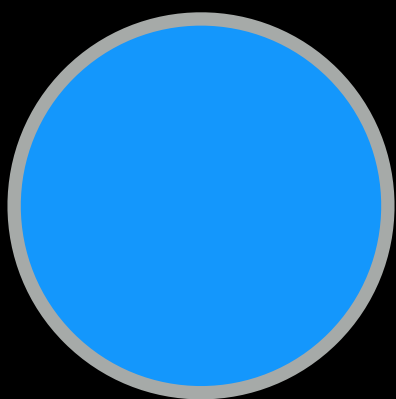
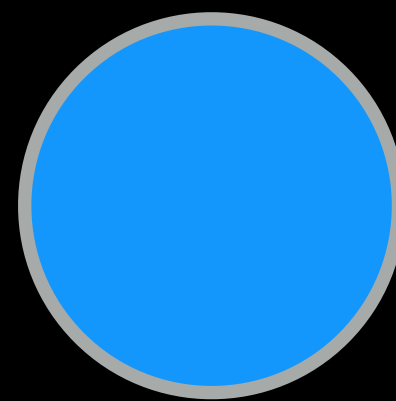
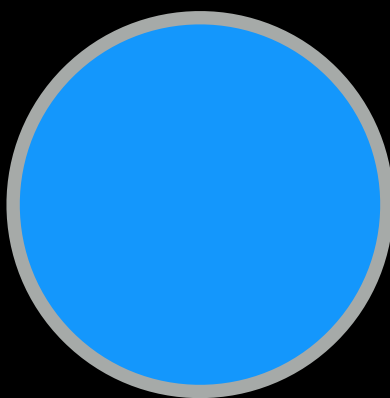
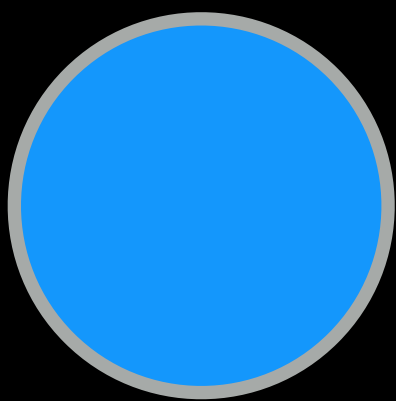


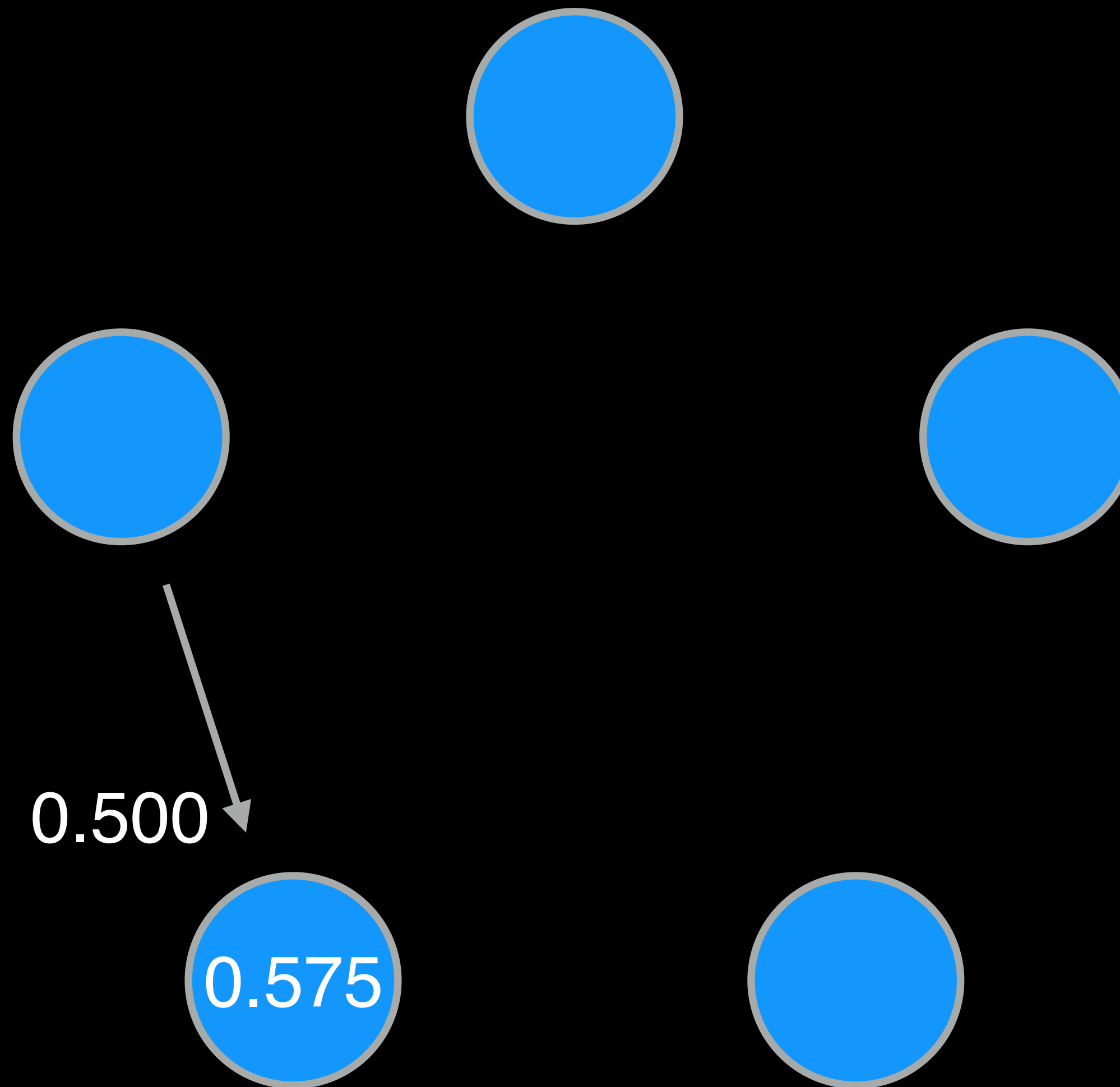






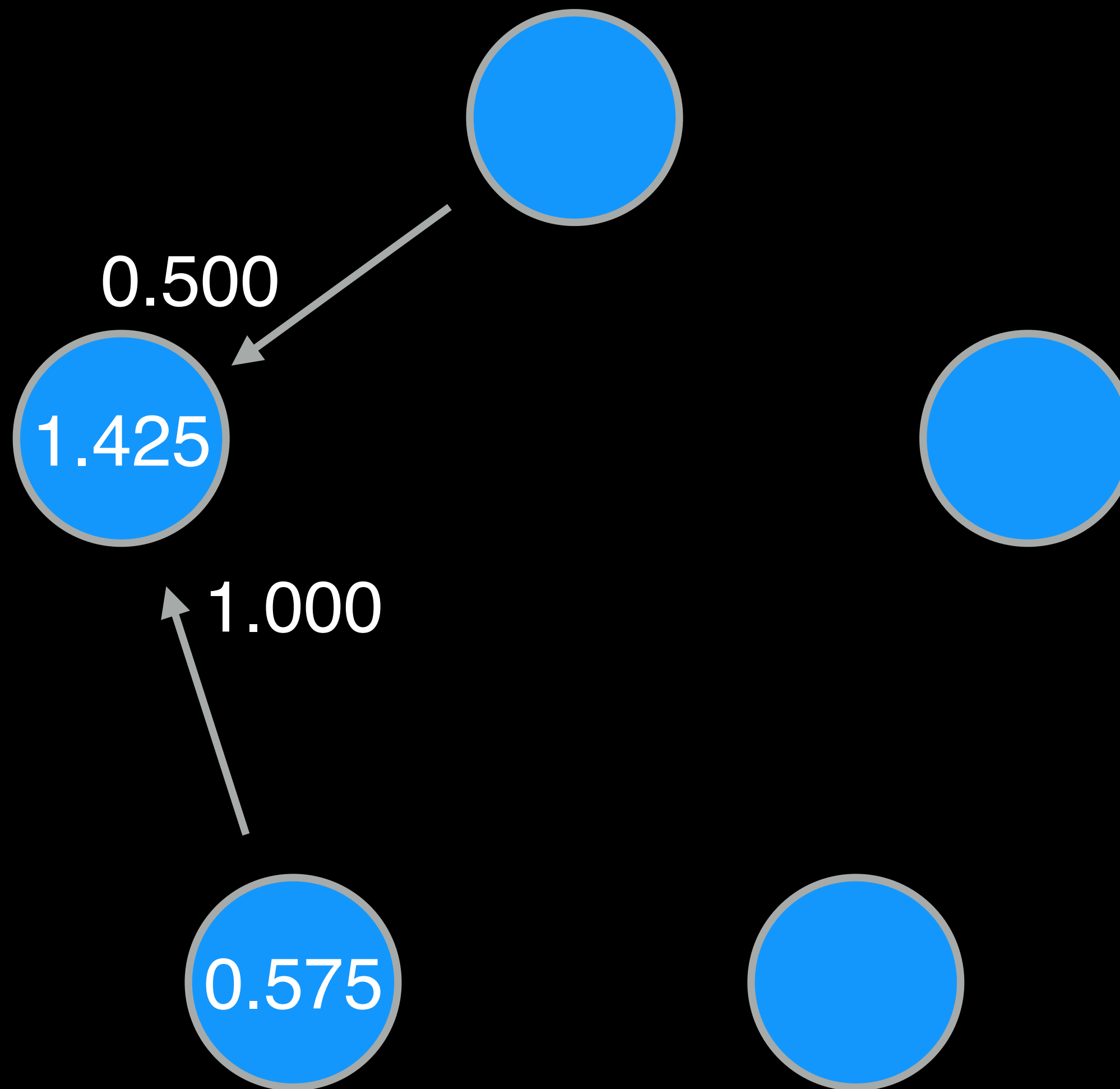






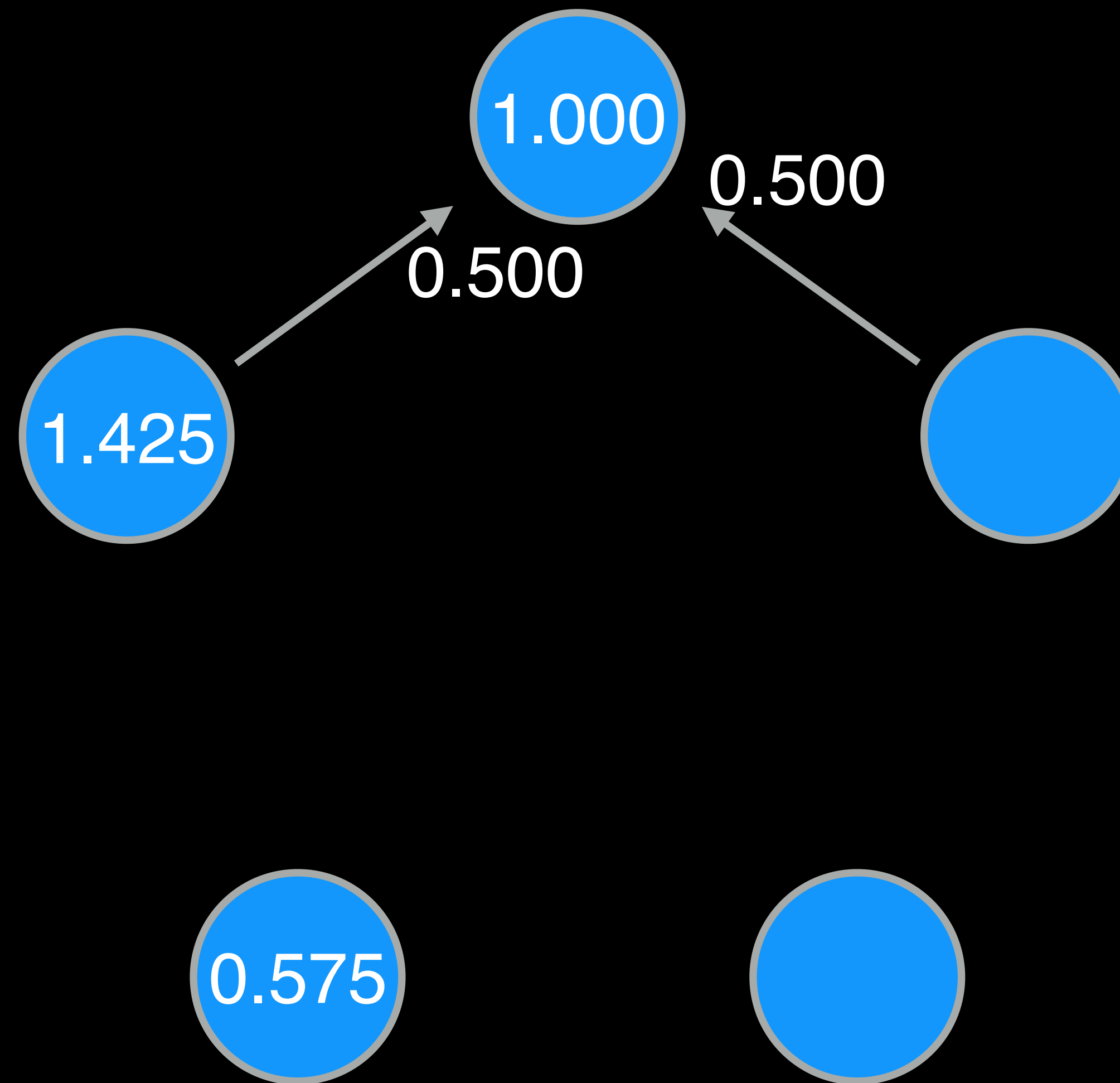
$$0.15 + 0.85 * 0.500 = 0.575$$





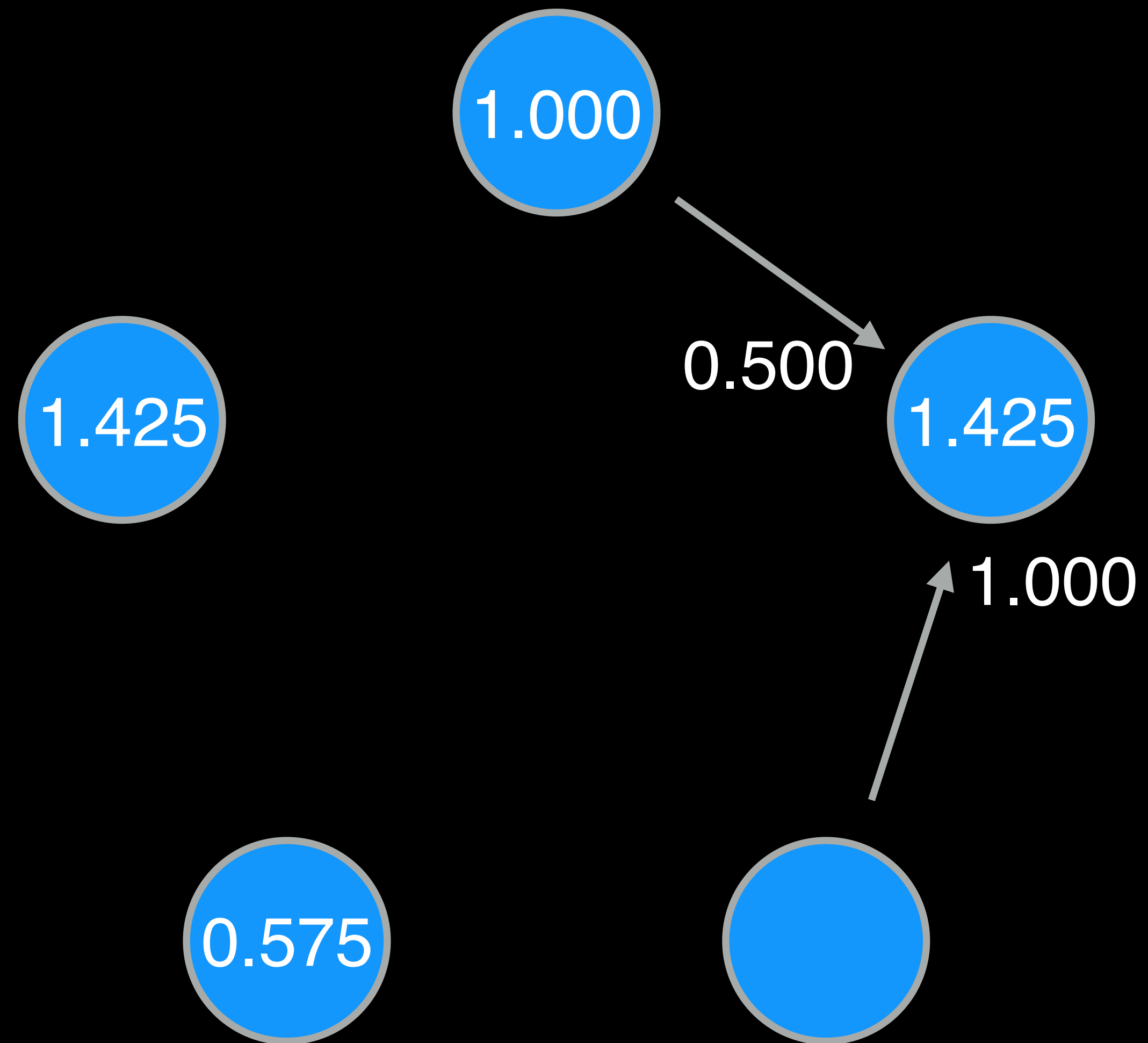
$$0.15 + 0.85 * (1.000 + 0.500) = 1.425$$





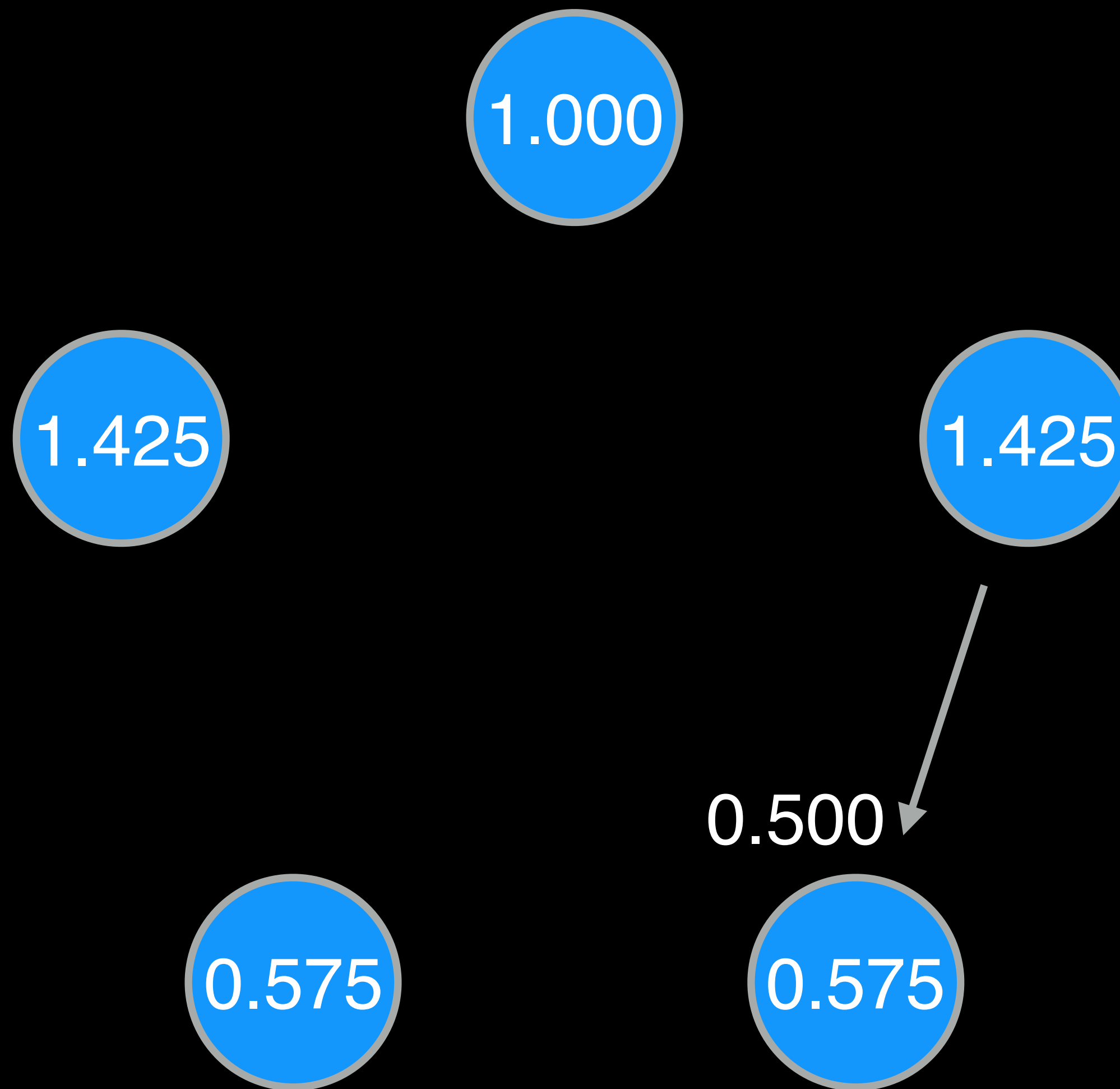
$$0.15 + 0.85 * (0.500 + 0.500) = 1.000$$





$$0.15 + 0.85 * (1.000 + 0.500) = 1.425$$





$$0.15 + 0.85 * 0.500 = 0.575$$





1.000

1.425

1.425

0.575

0.575





1.000

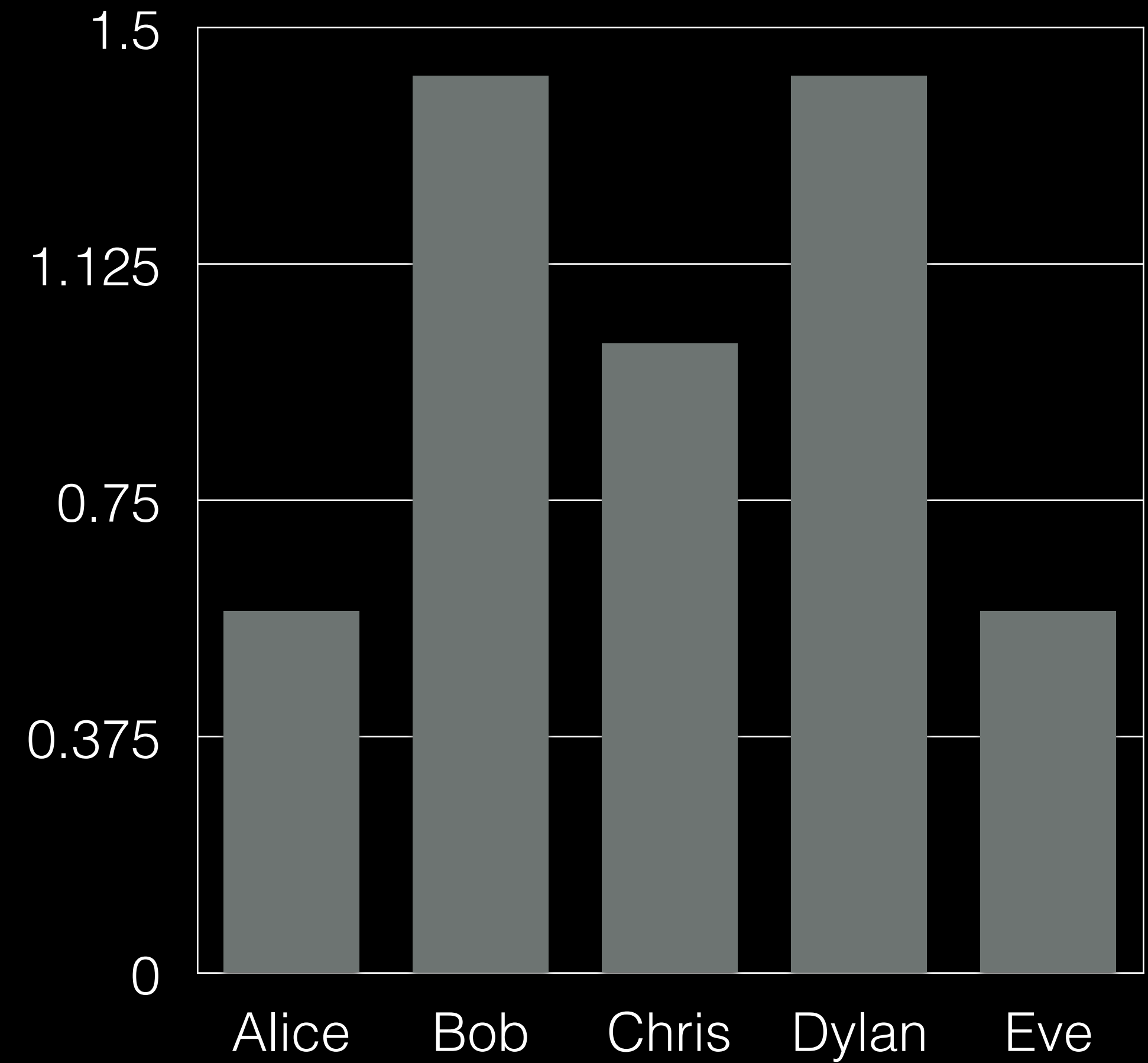
1.425

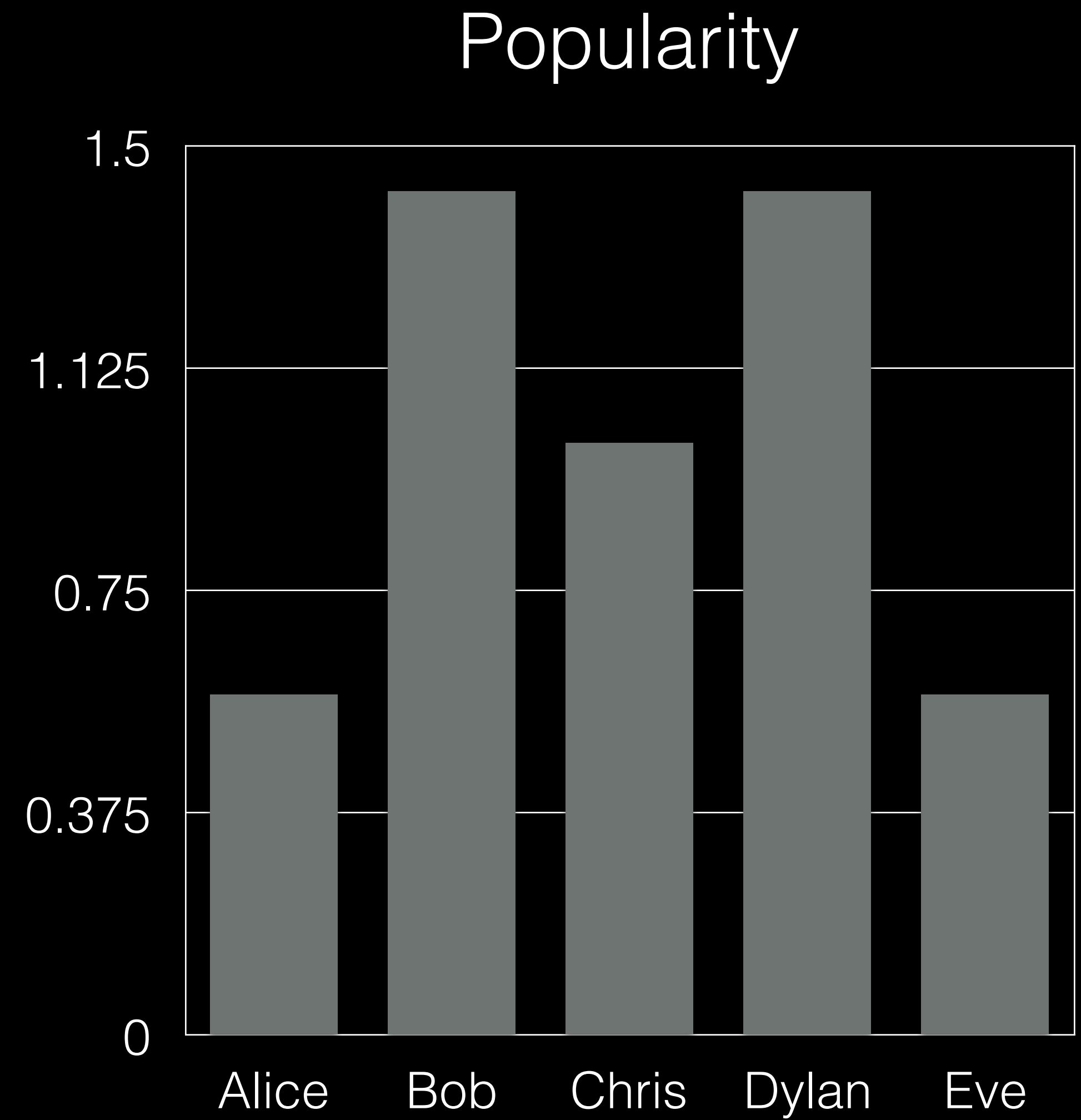
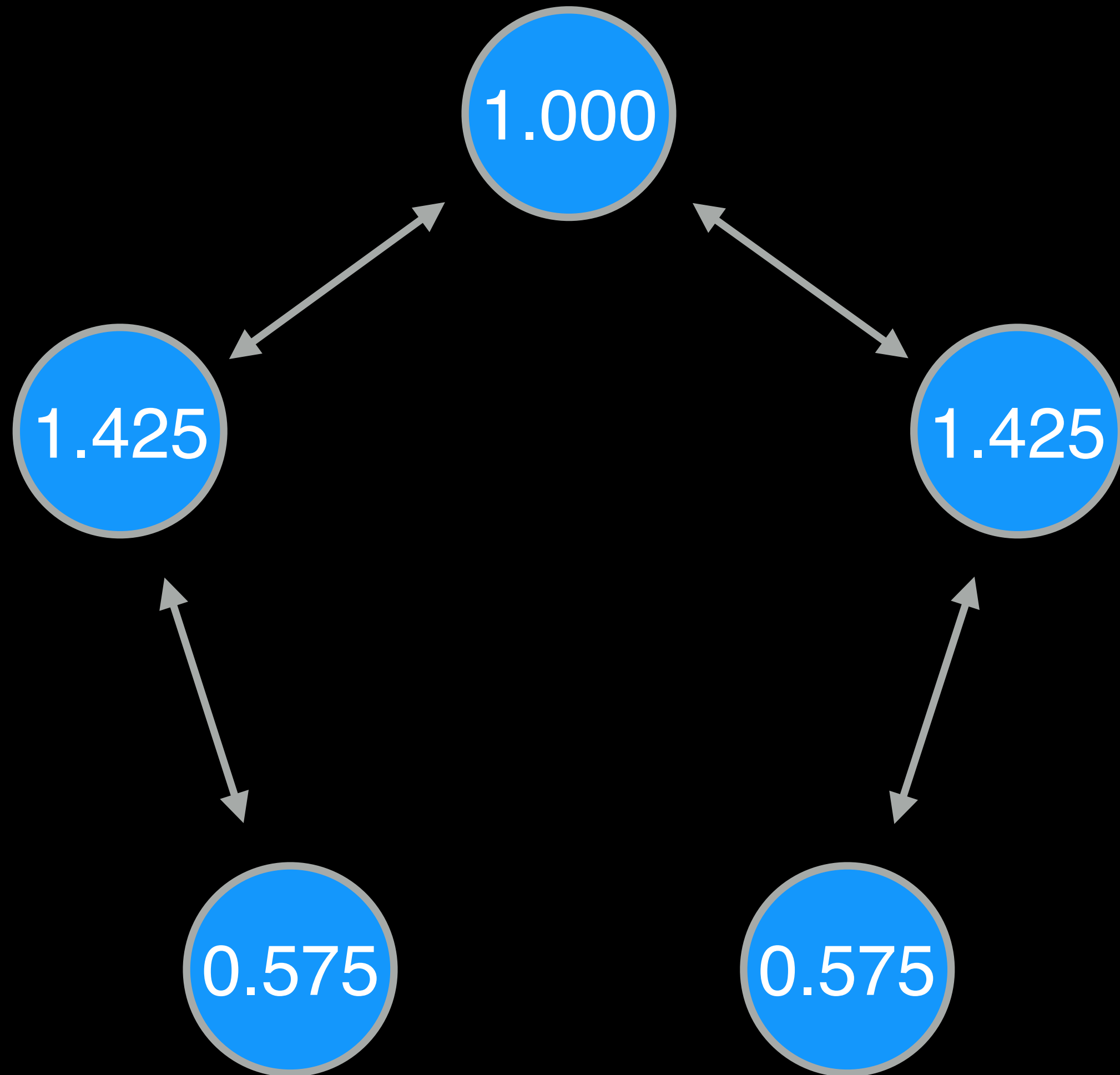
1.425

0.575

0.575

Popularity







1.361

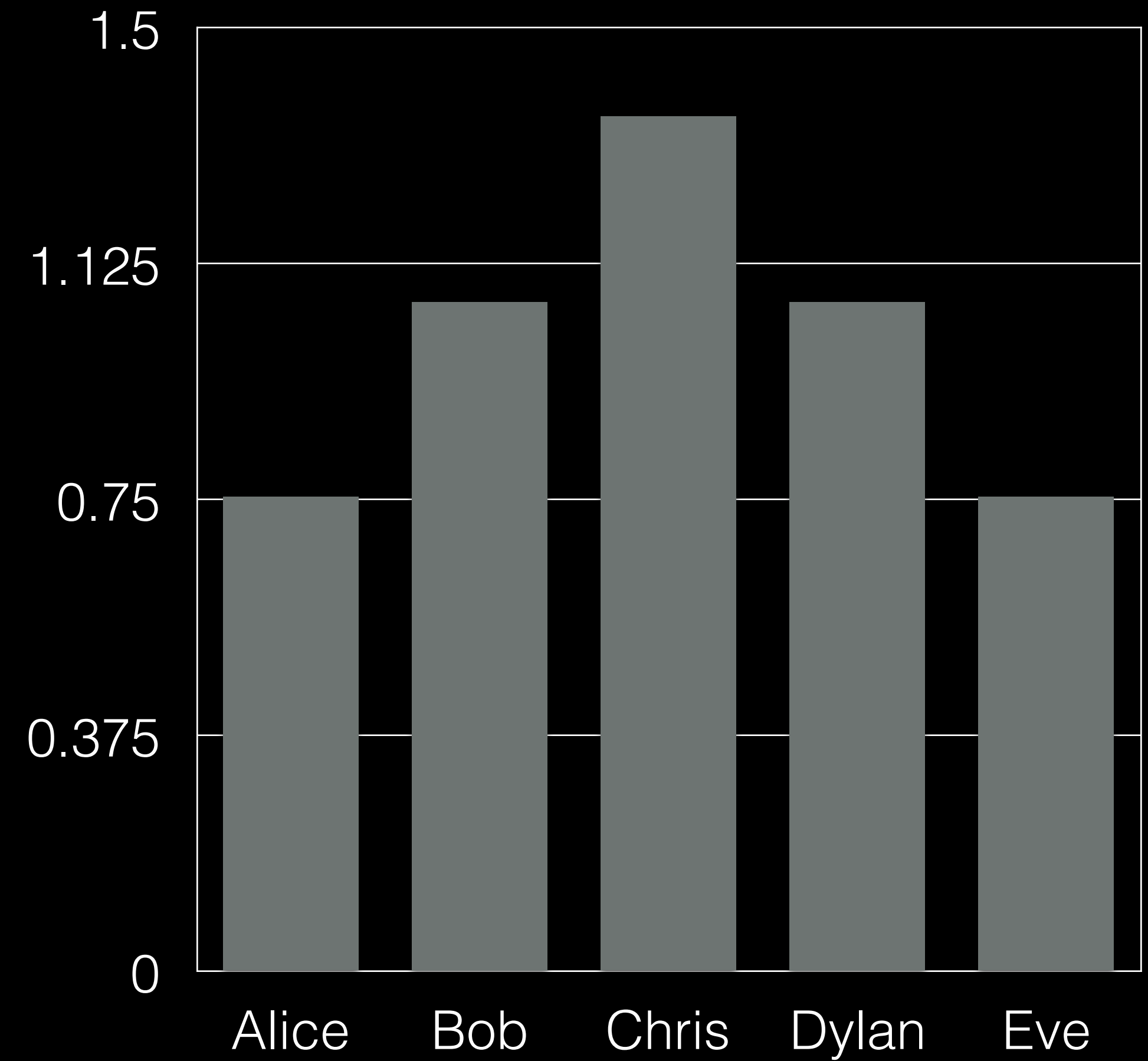
1.064

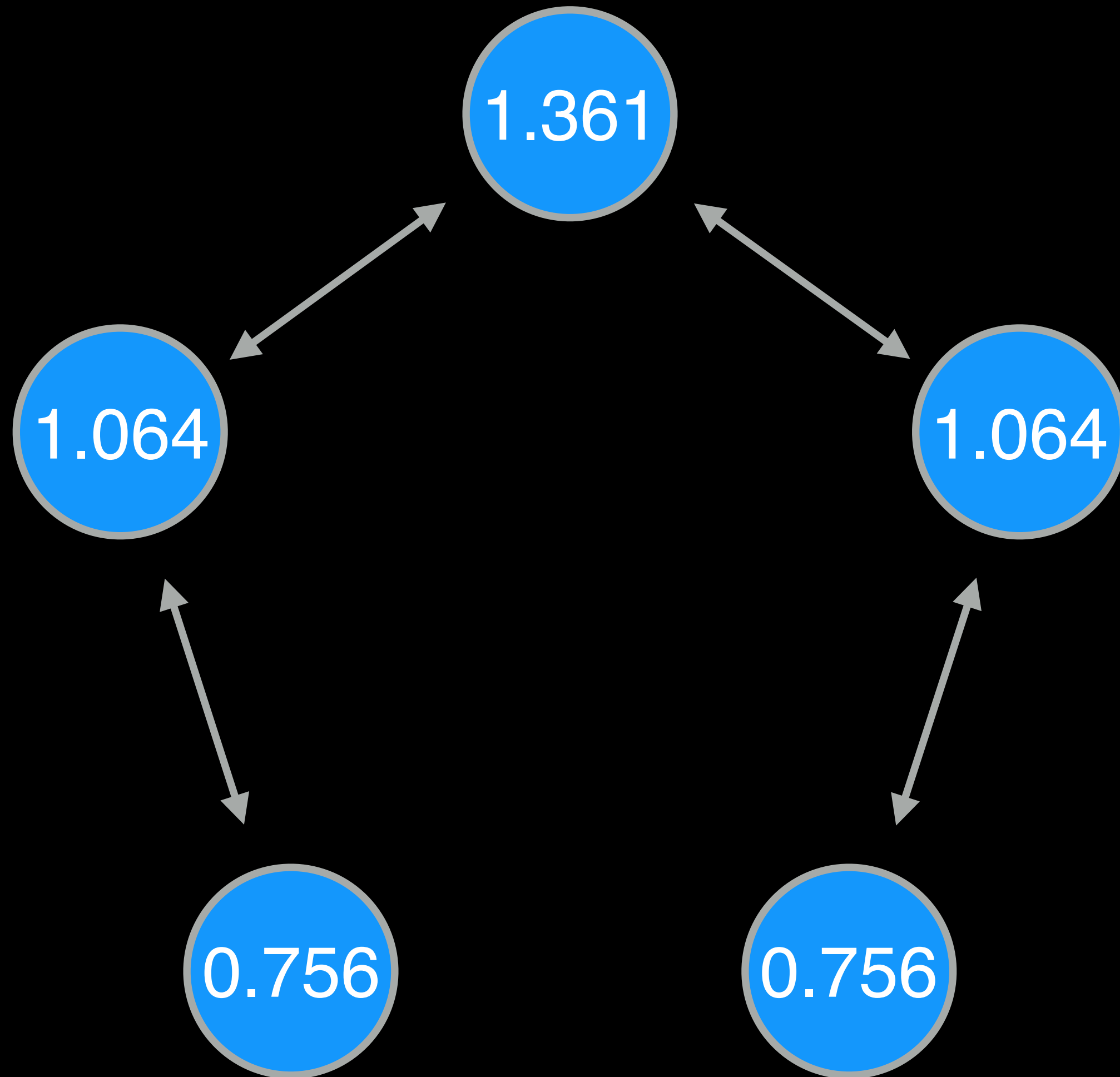
1.064

0.756

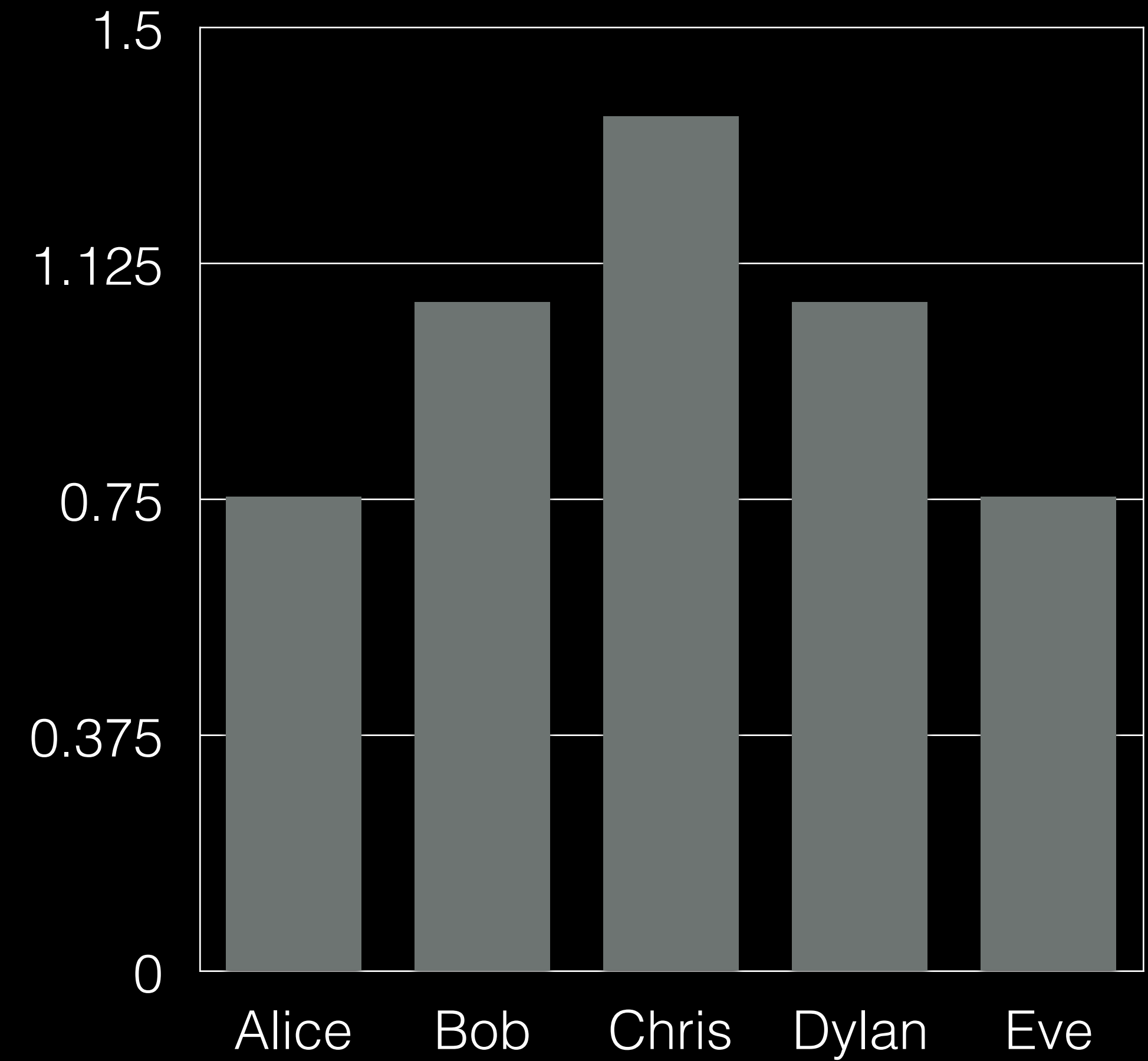
0.756

Popularity





Popularity





1.054

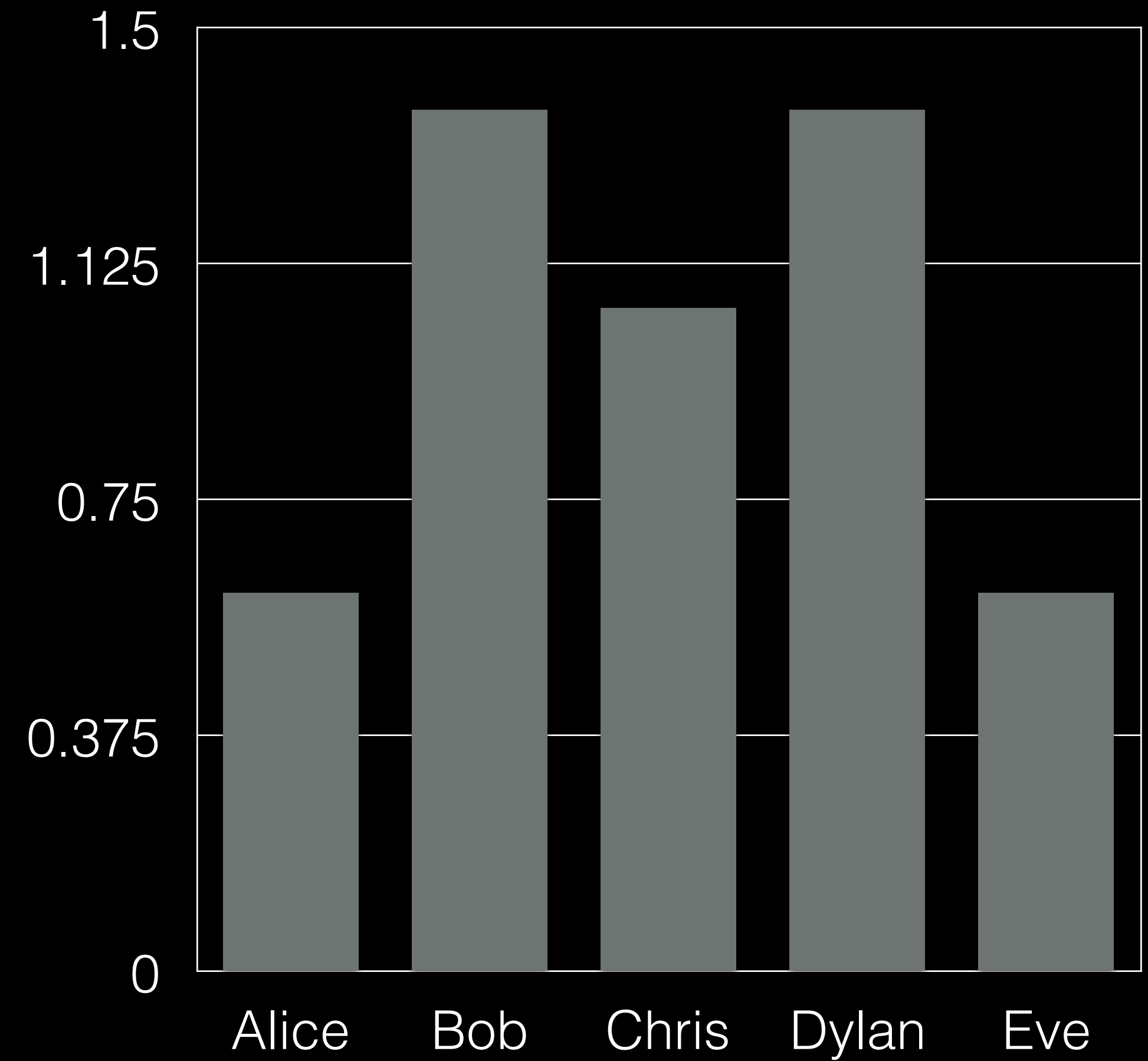
1.371

1.371

0.602

0.602

Popularity





1.195

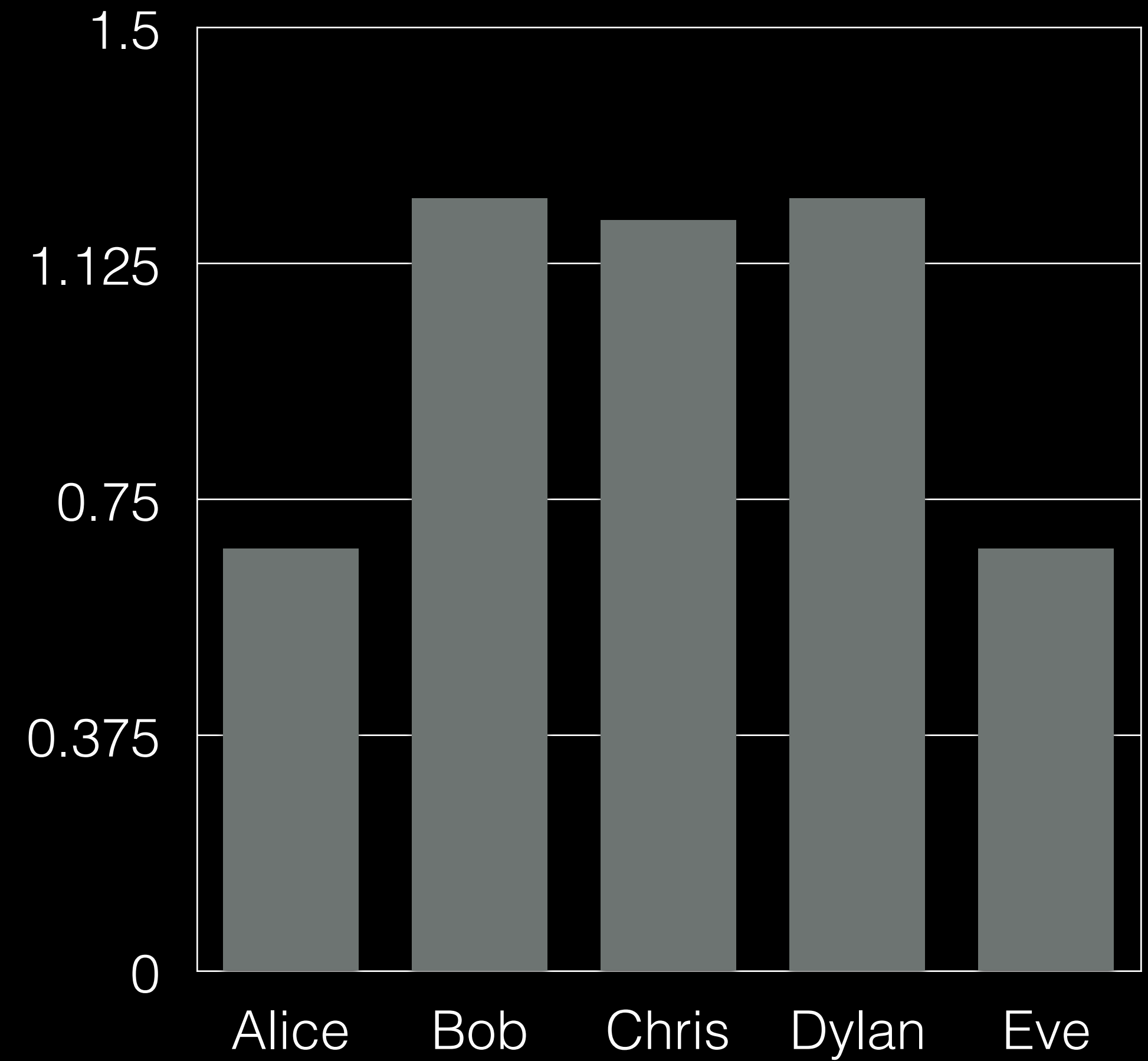
1.229

1.229

0.673

0.673

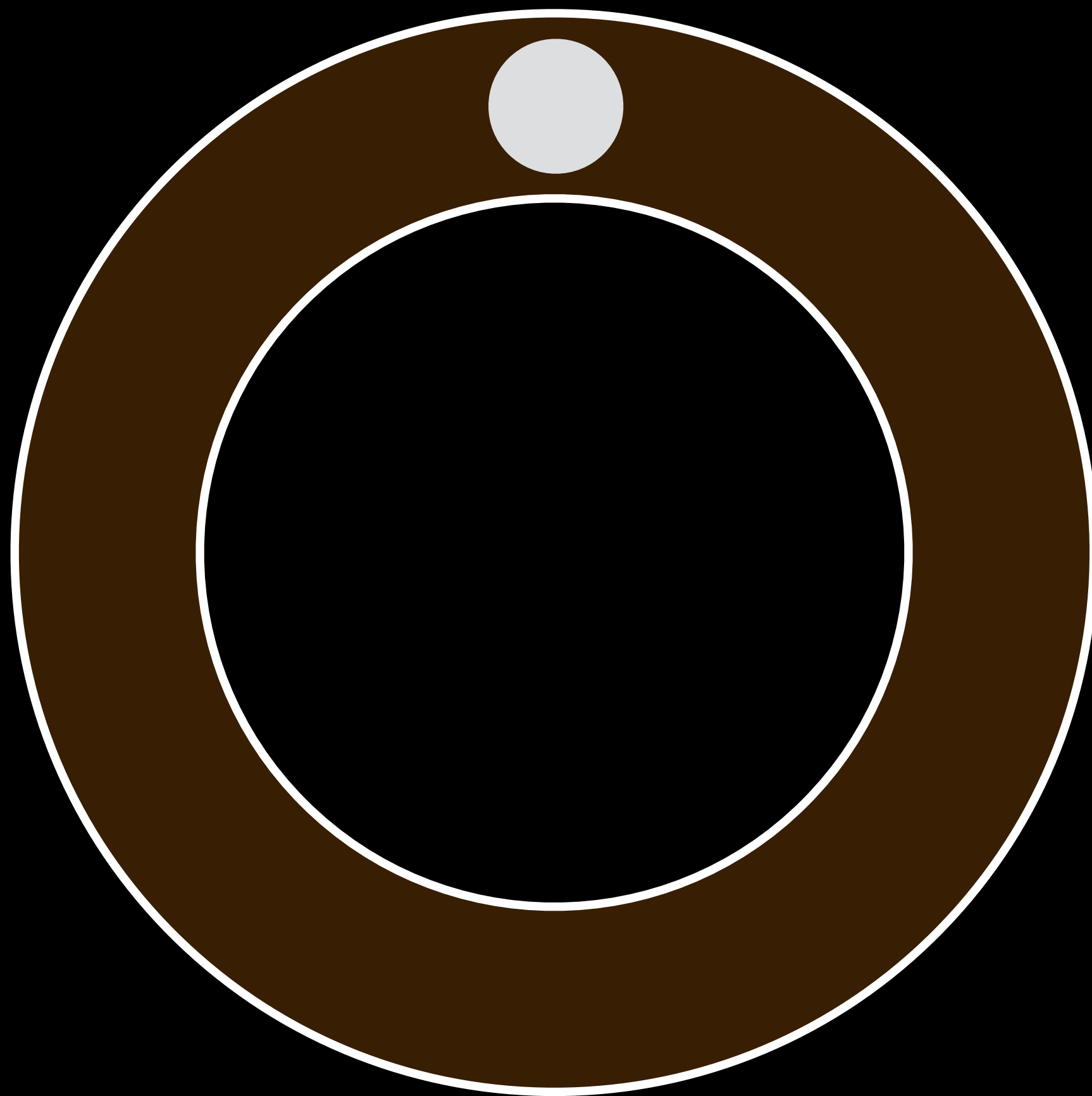
Popularity

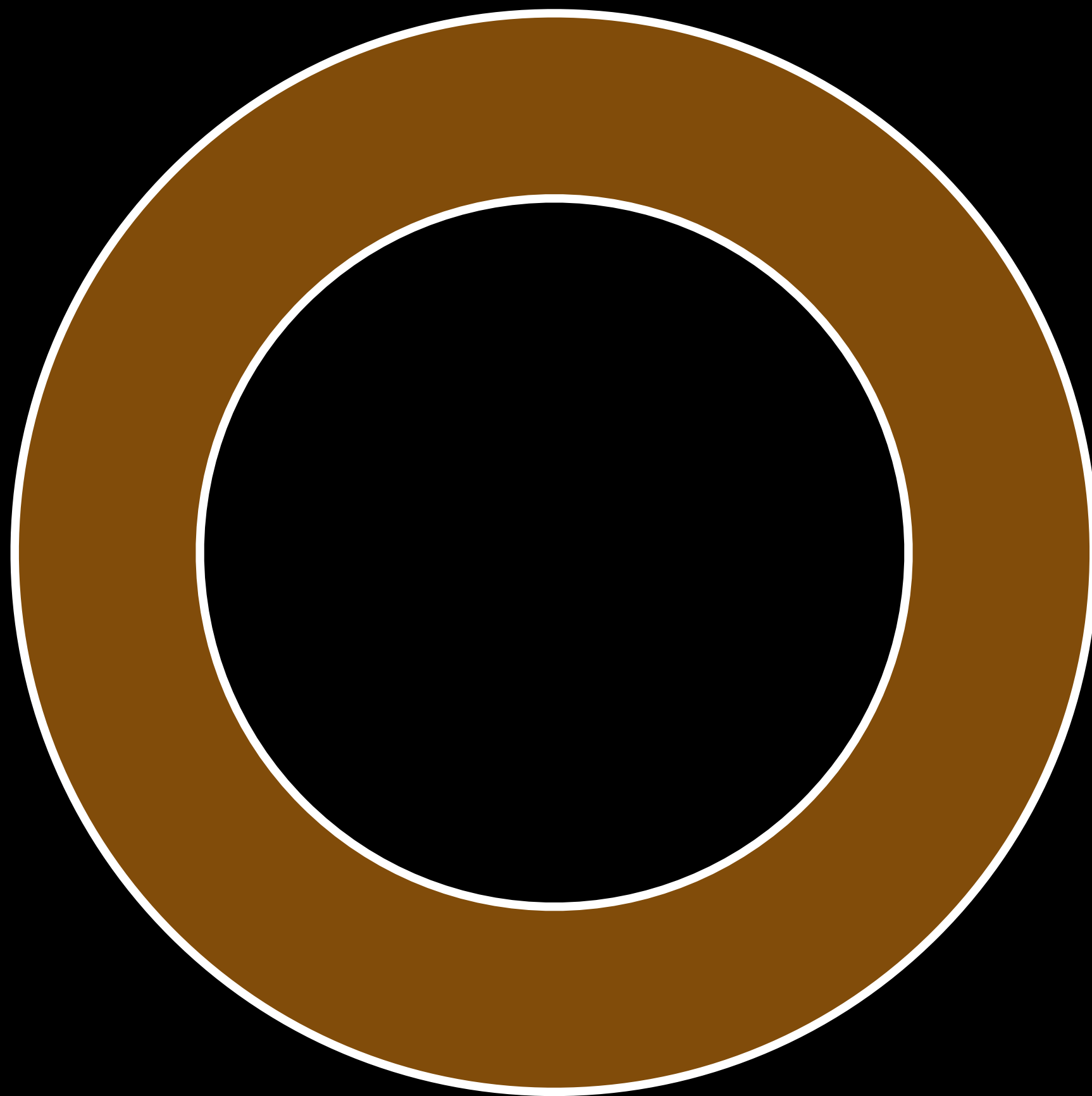


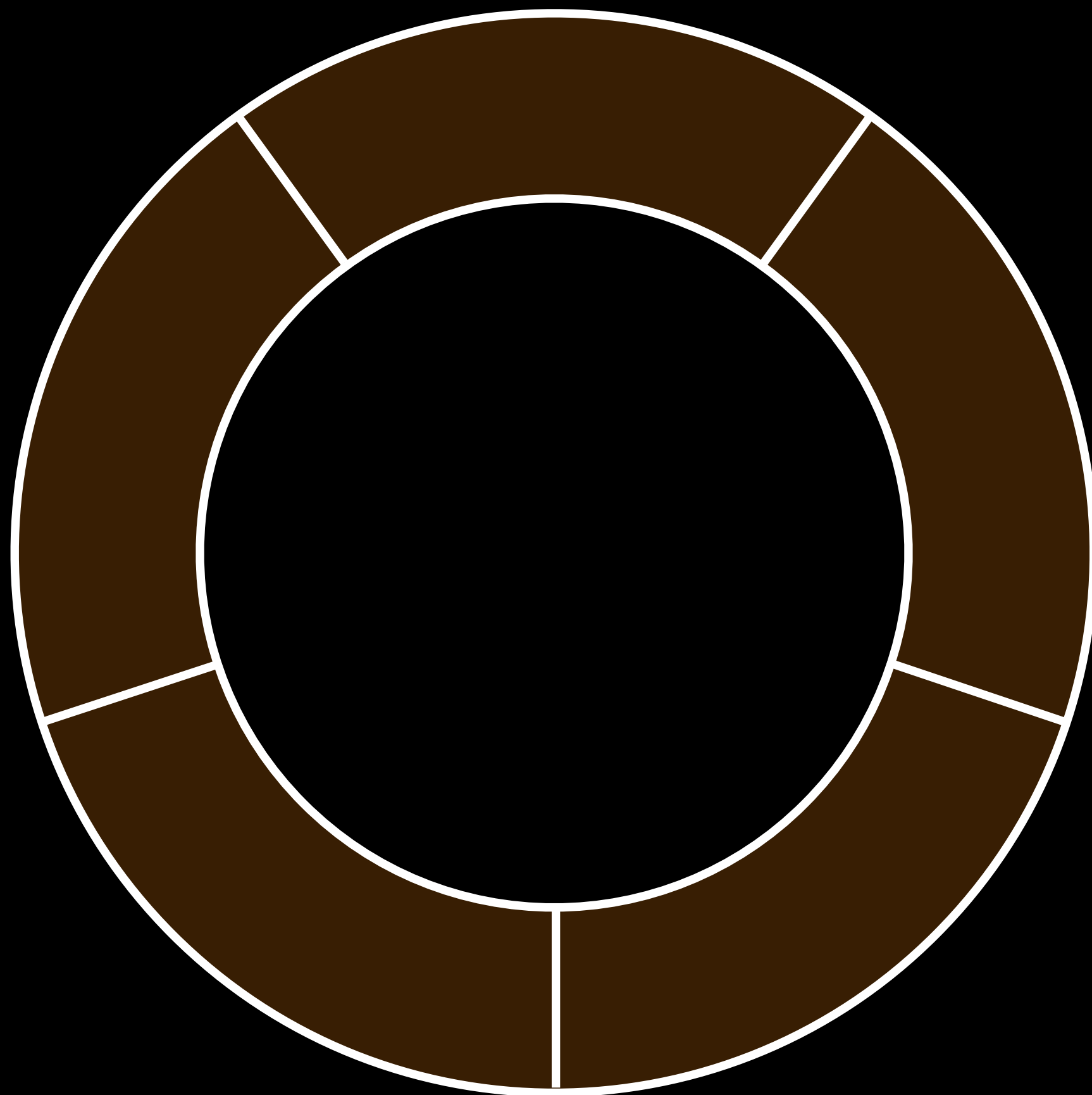


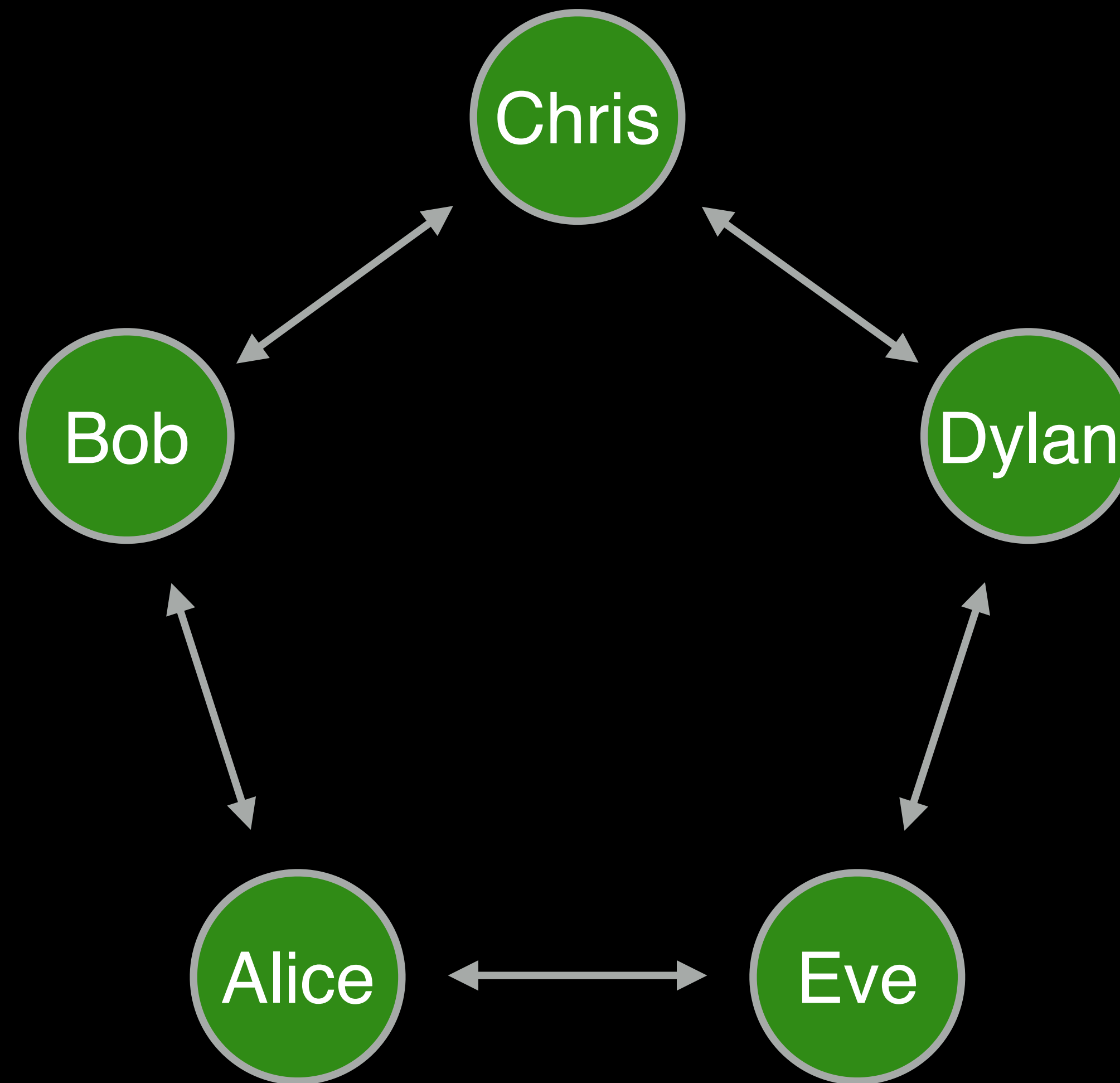
**Are you sure it is
not a Diffusion
process?**













1.000

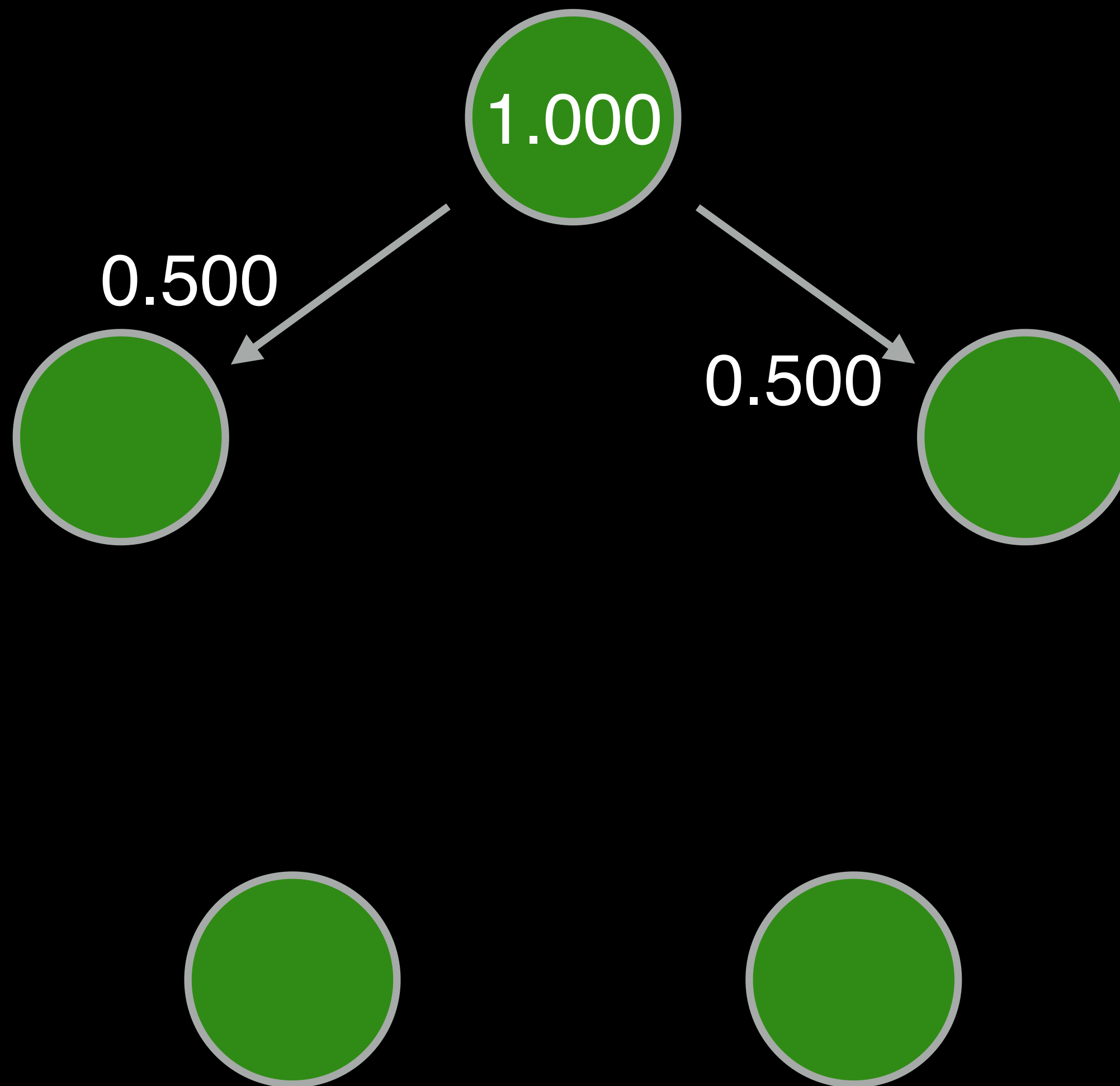
0.000

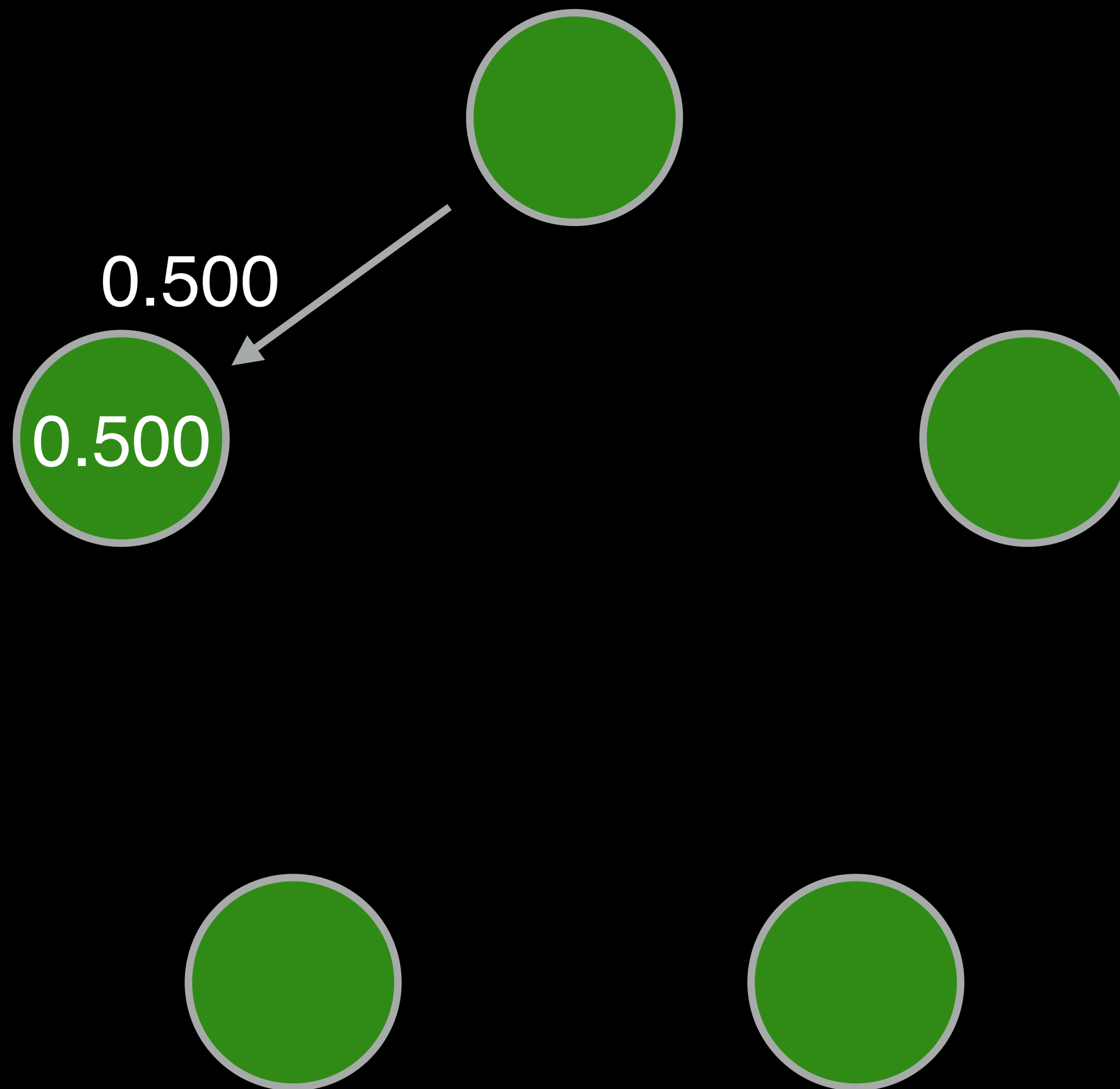
0.000

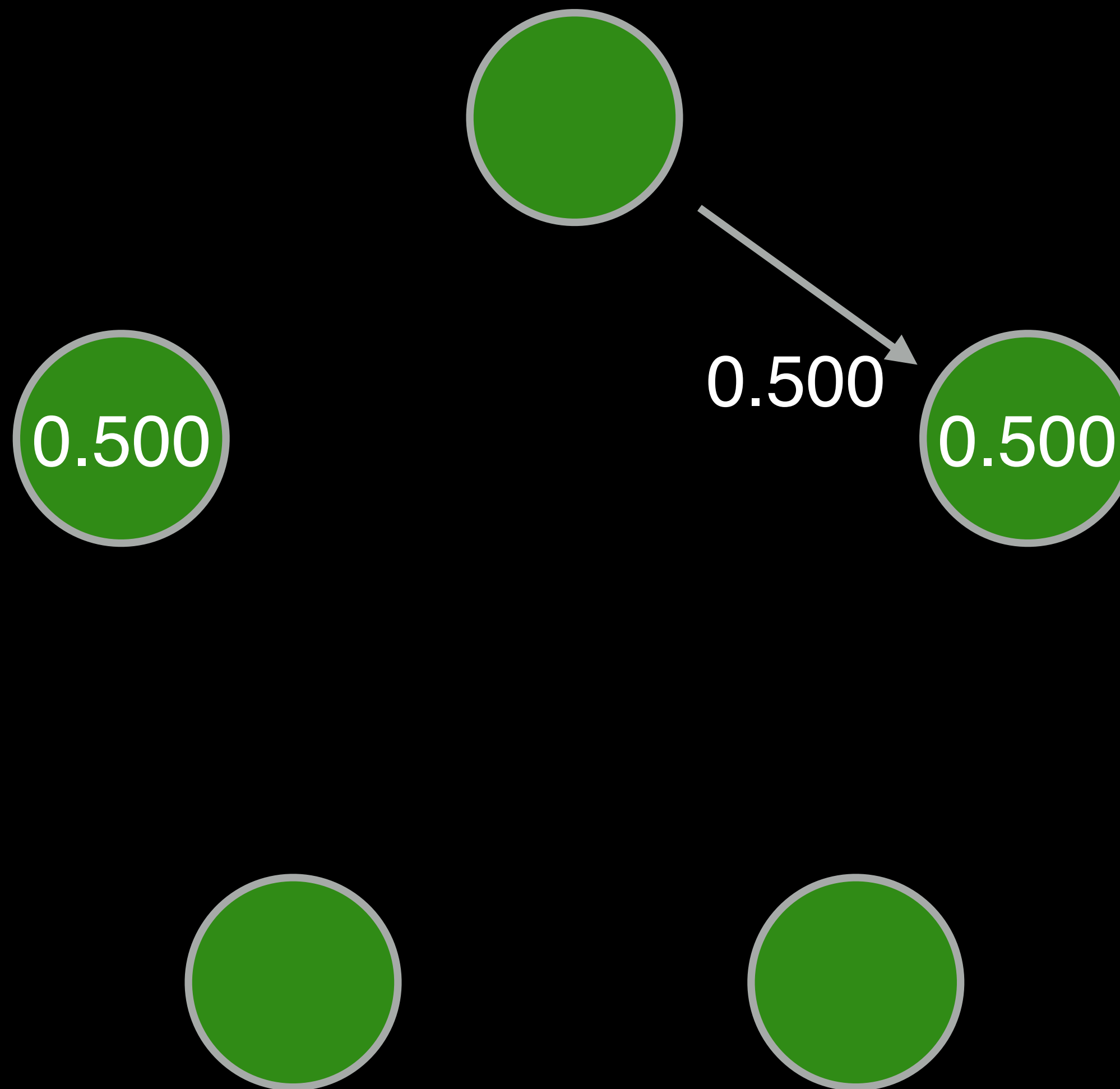
0.000

0.000











0.000

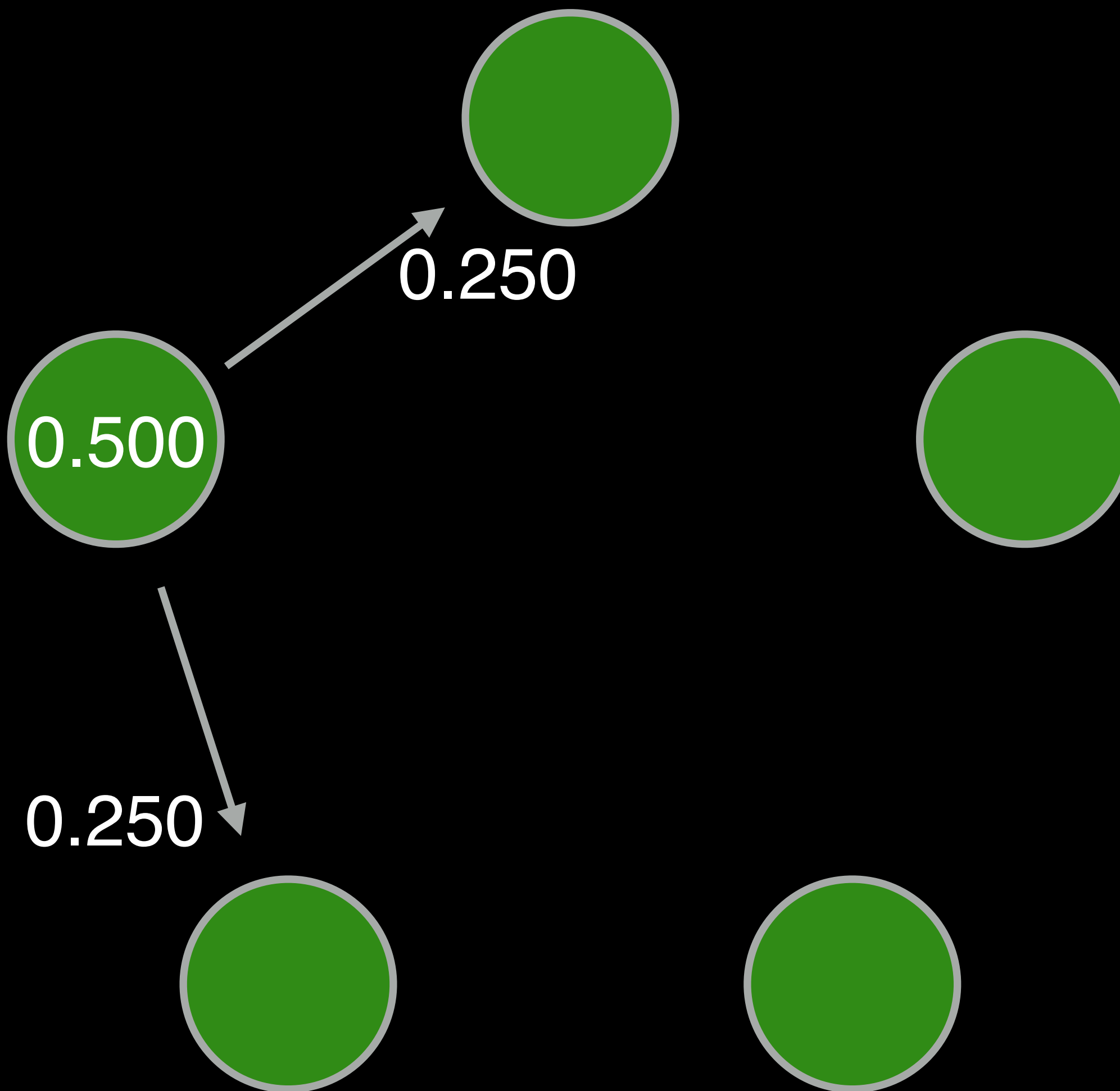
0.500

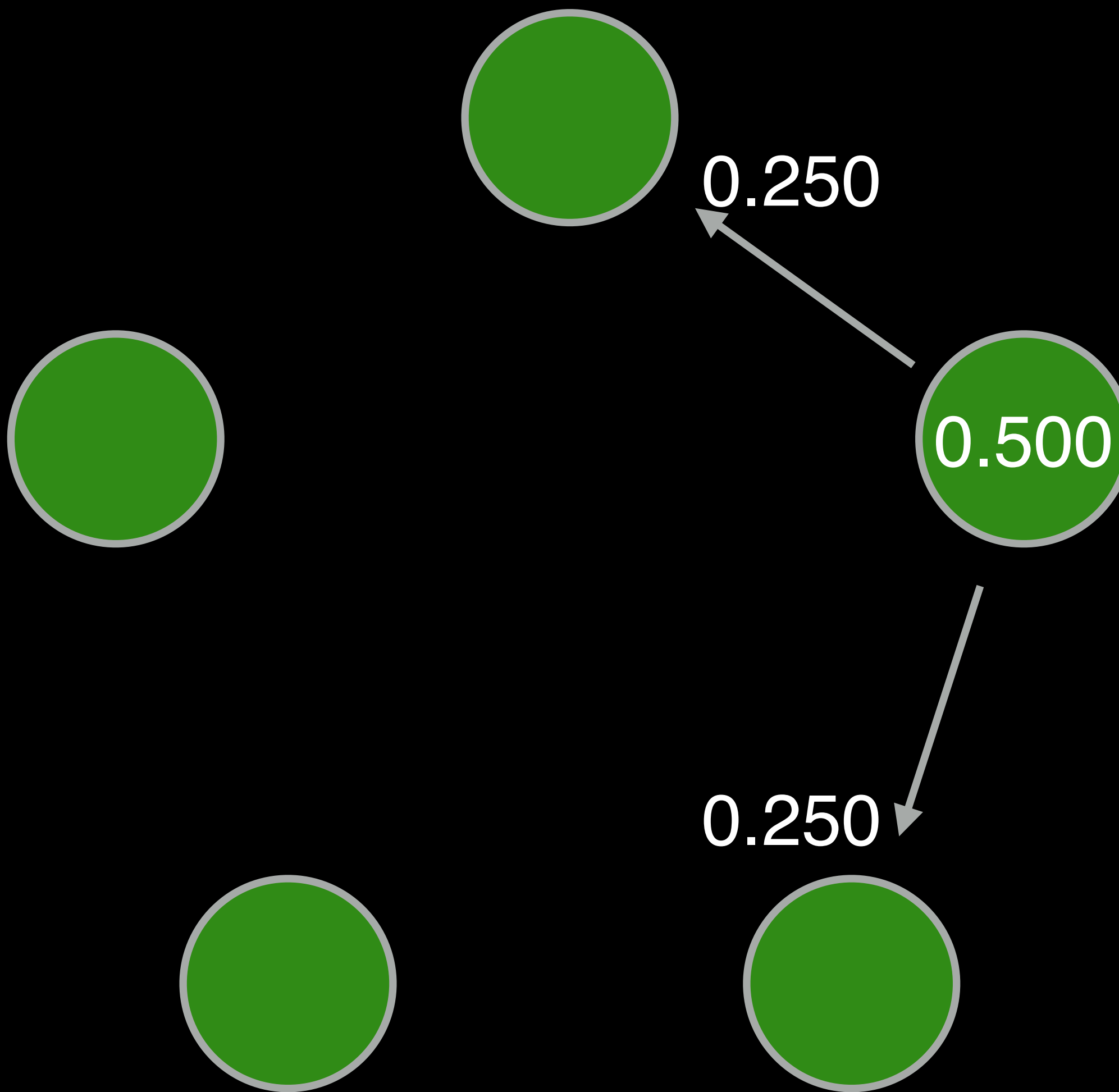
0.500

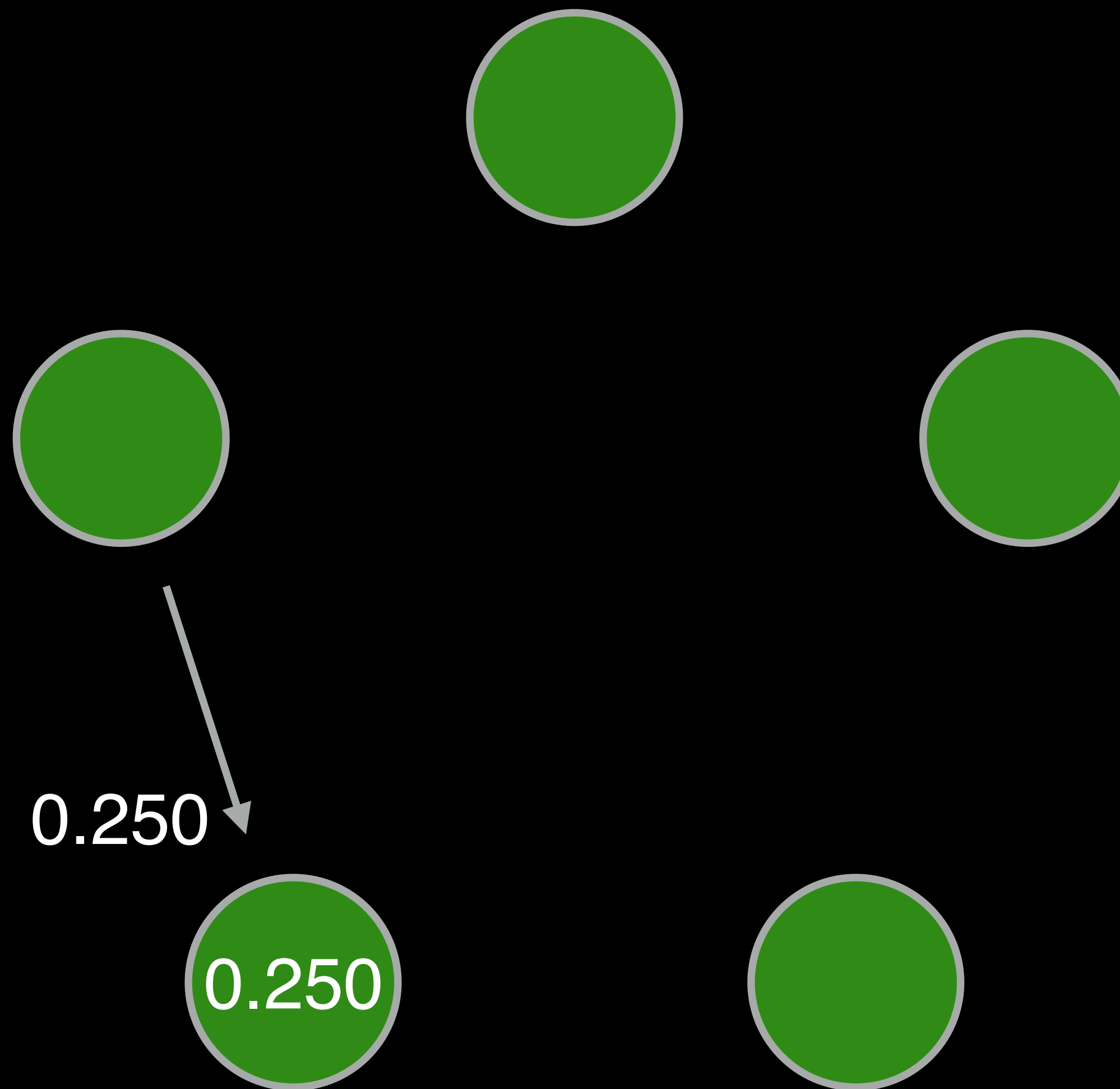
0.000

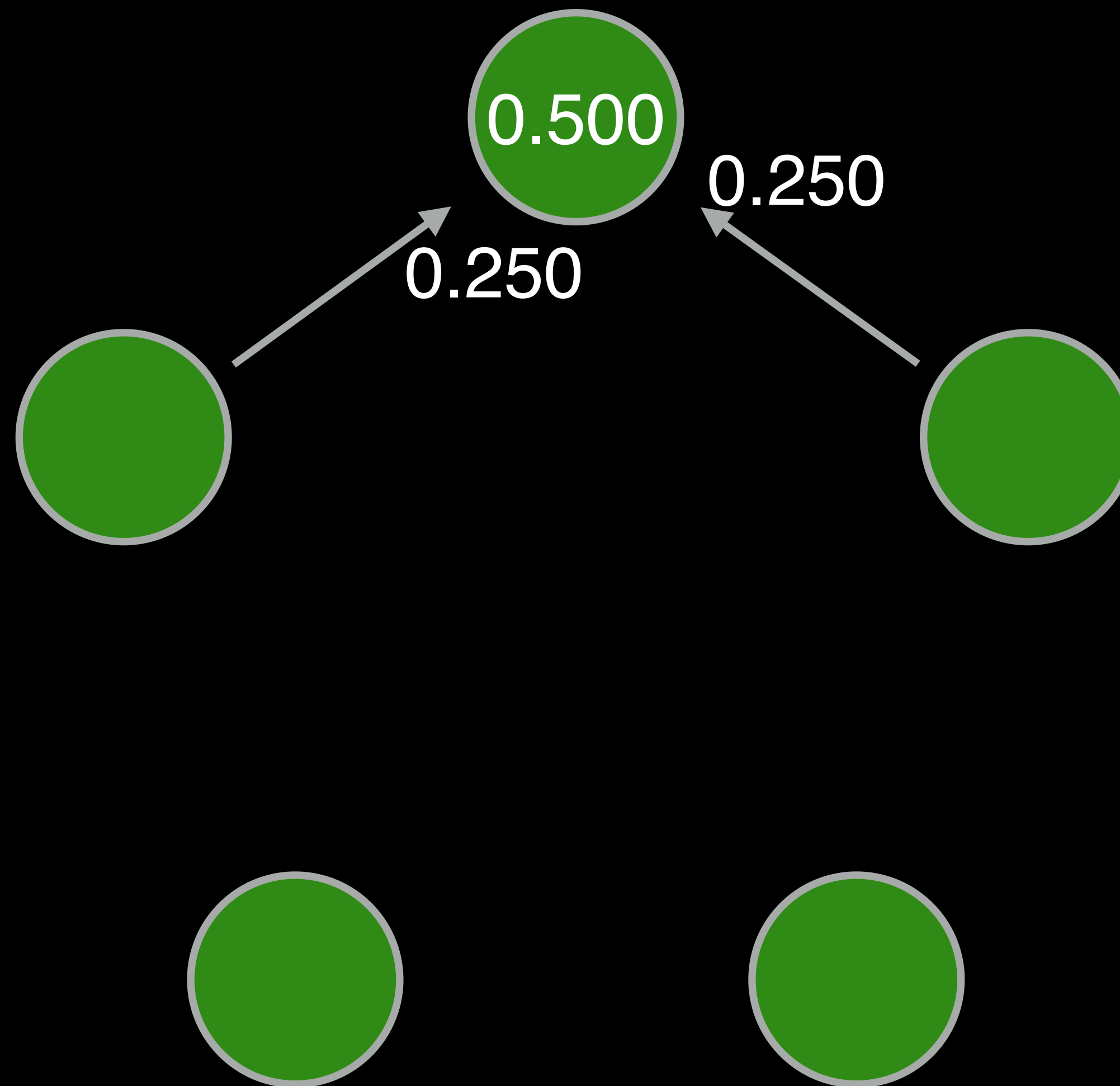
0.000





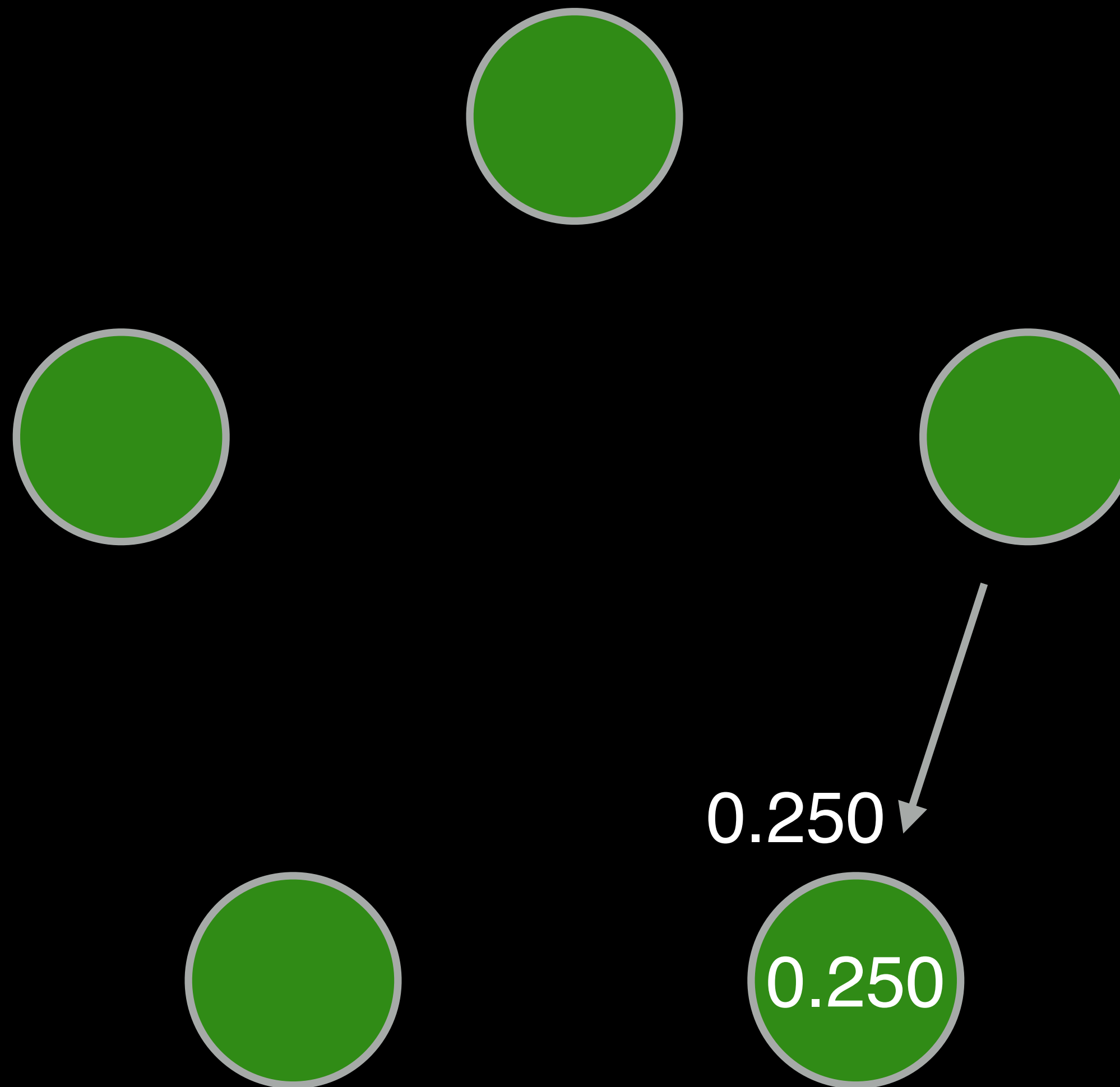






$$0.00 + 1.00 * (0.250 + 0.250) = 0.500$$







0.500

0.000

0.000

0.250

0.250





0.500

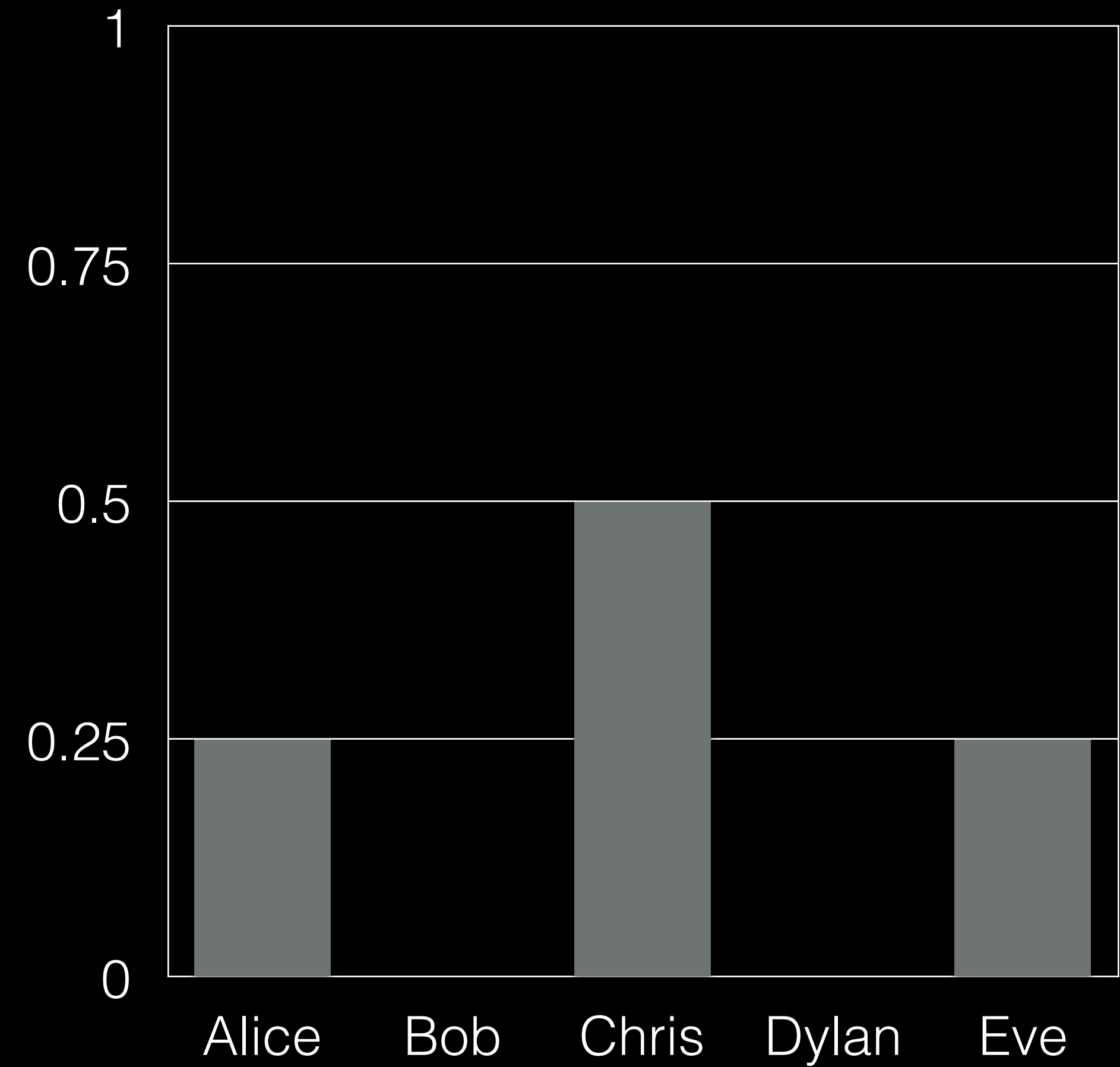
0.000

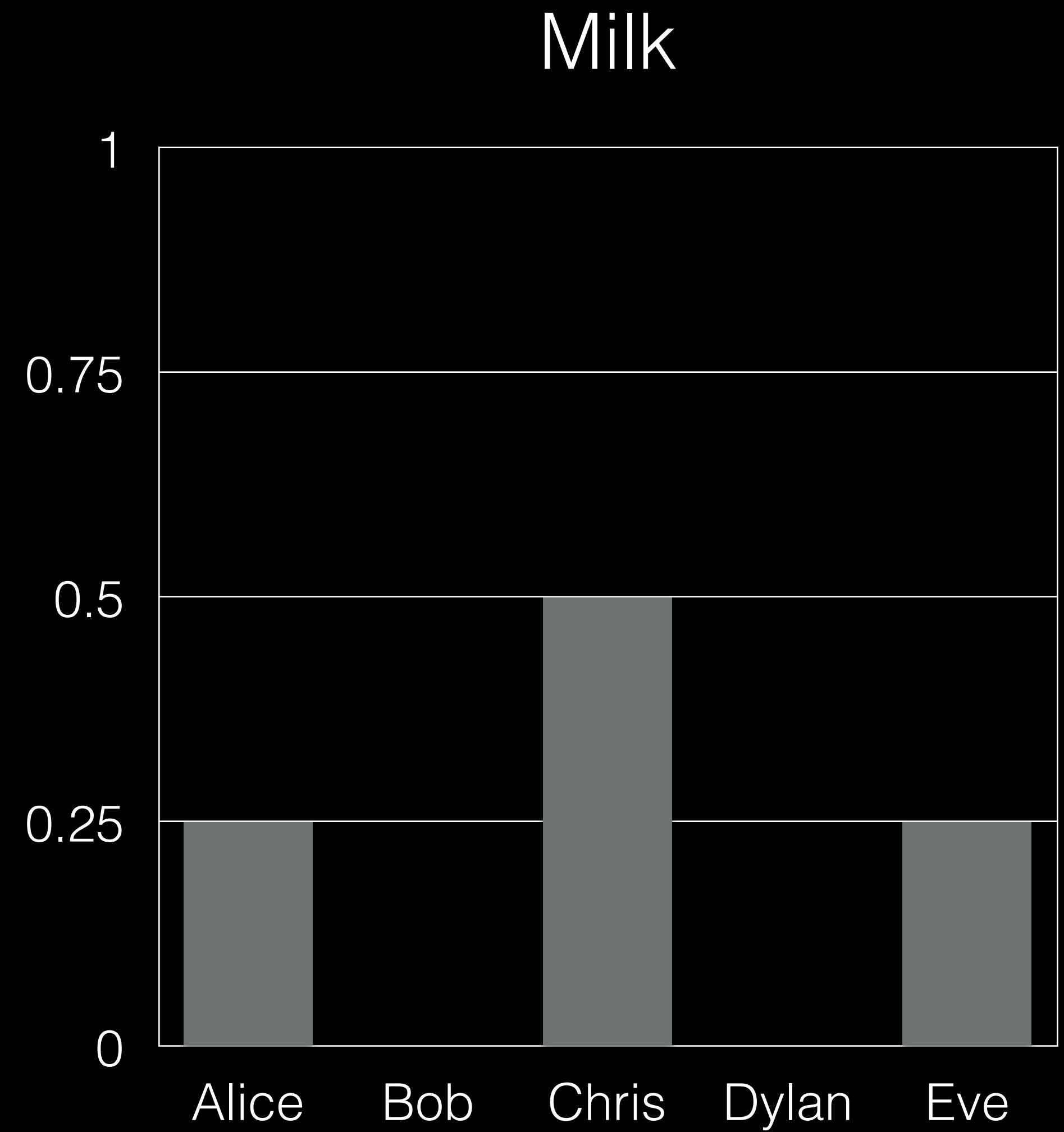
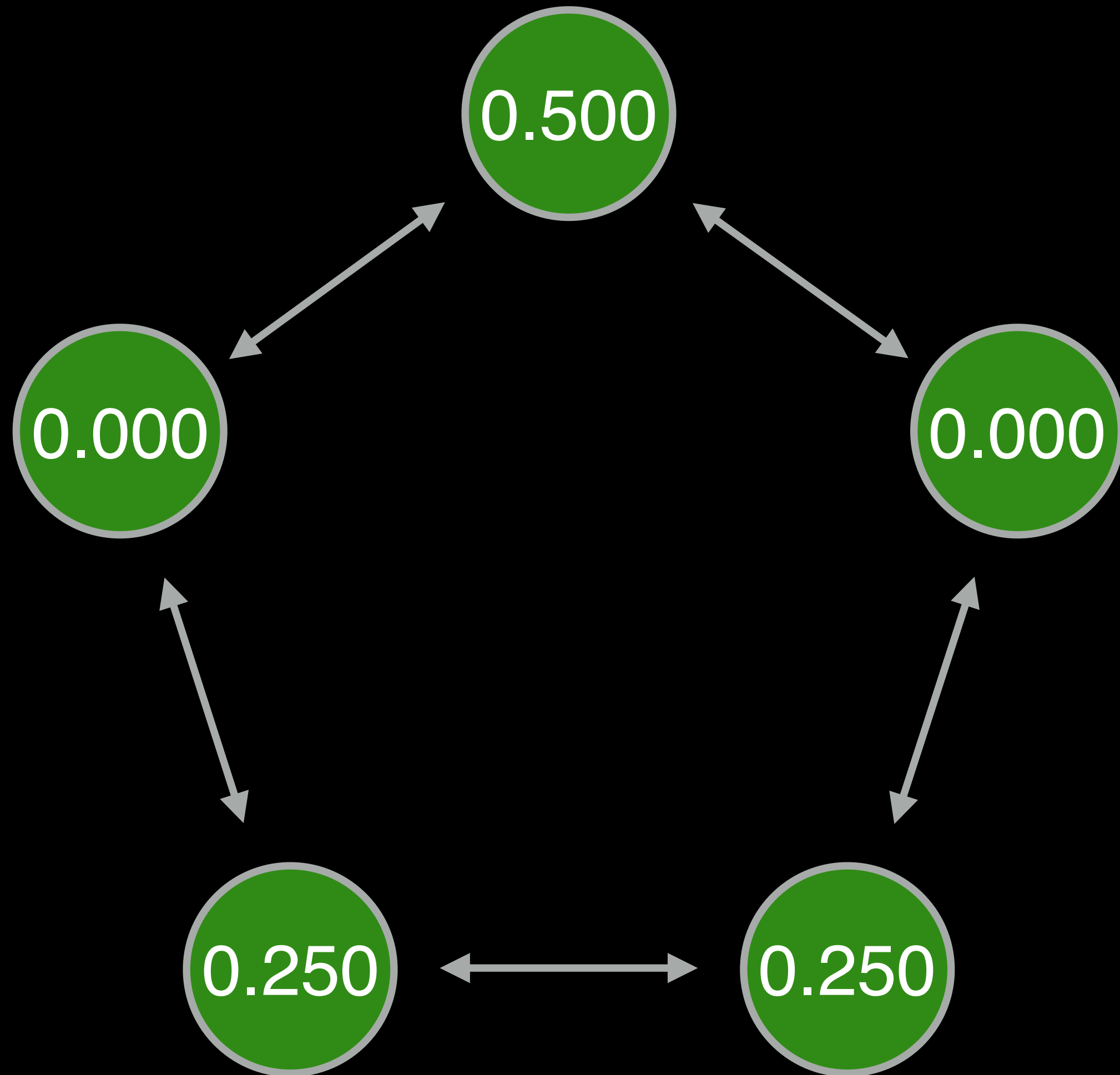
0.000

0.250

0.250

Milk







0.000

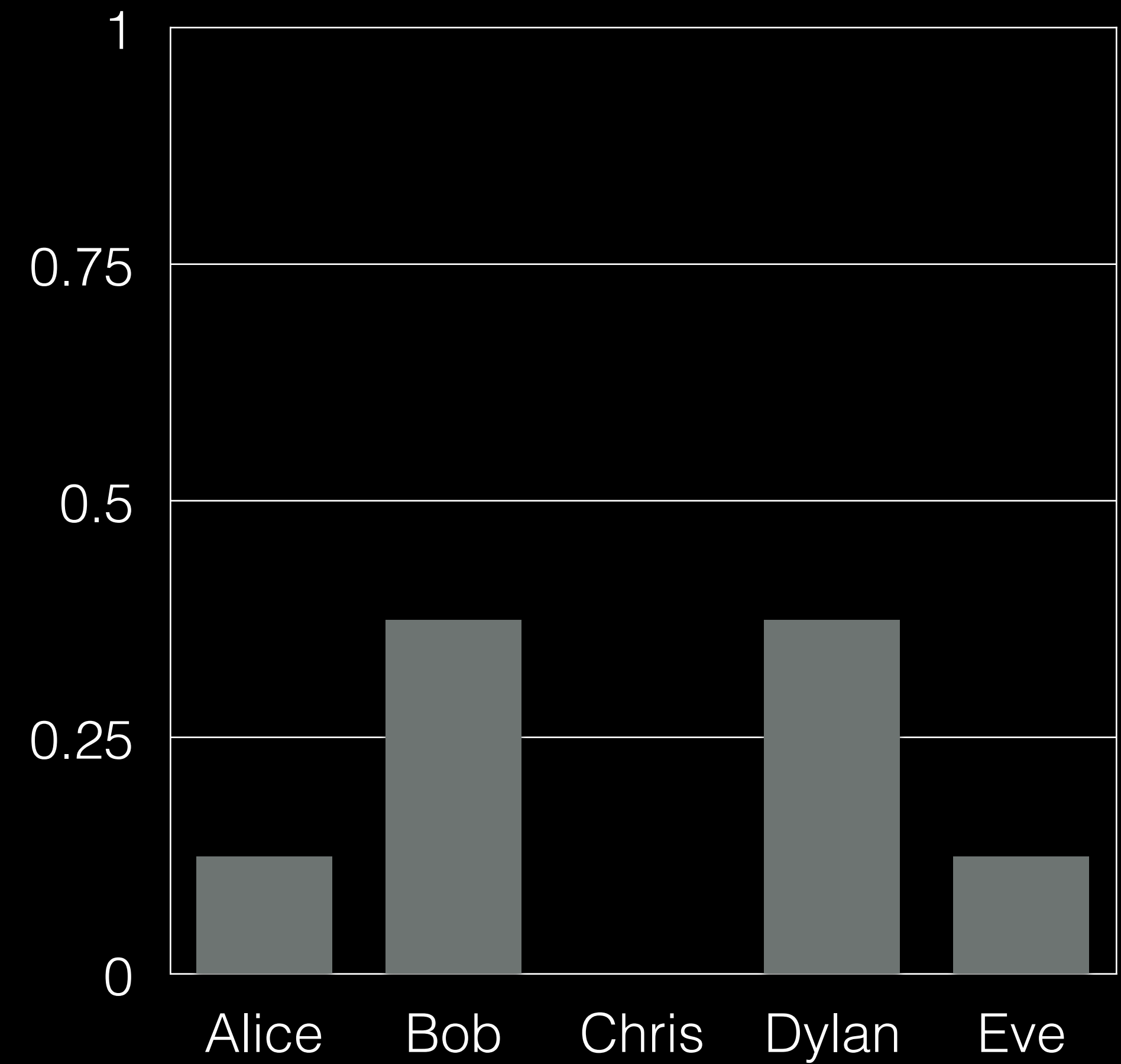
0.375

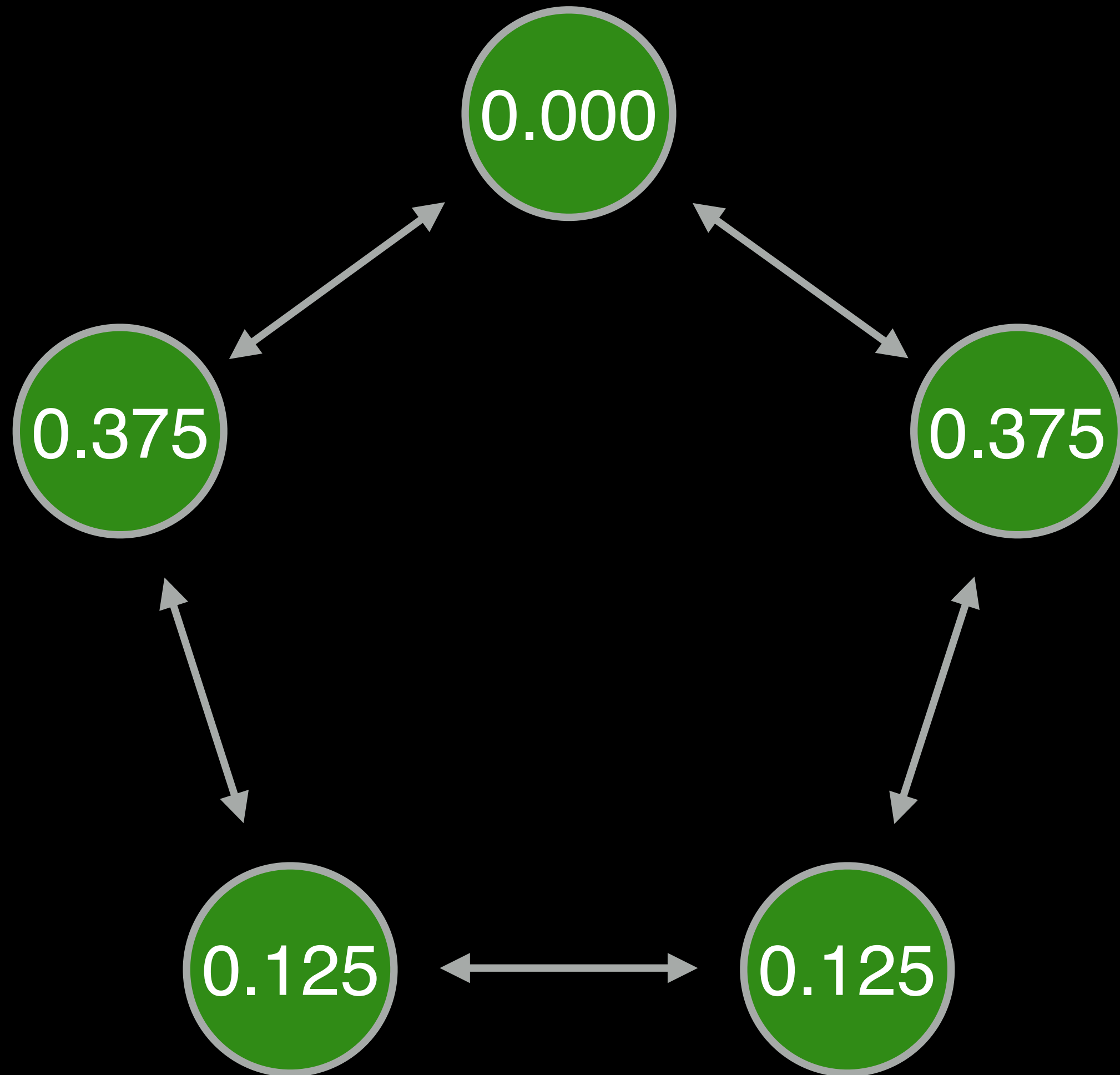
0.375

0.125

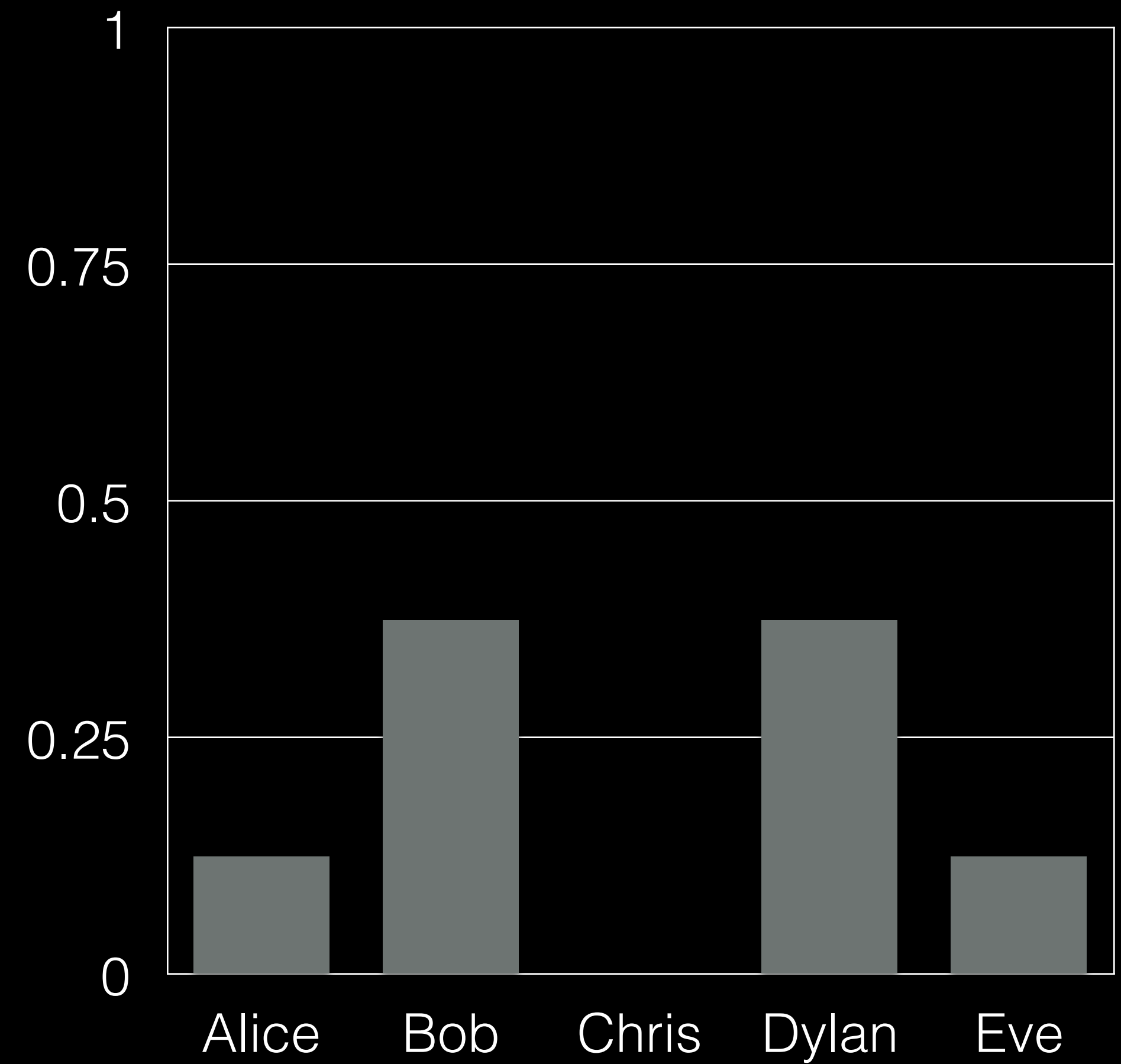
0.125

Milk





Milk





0.375

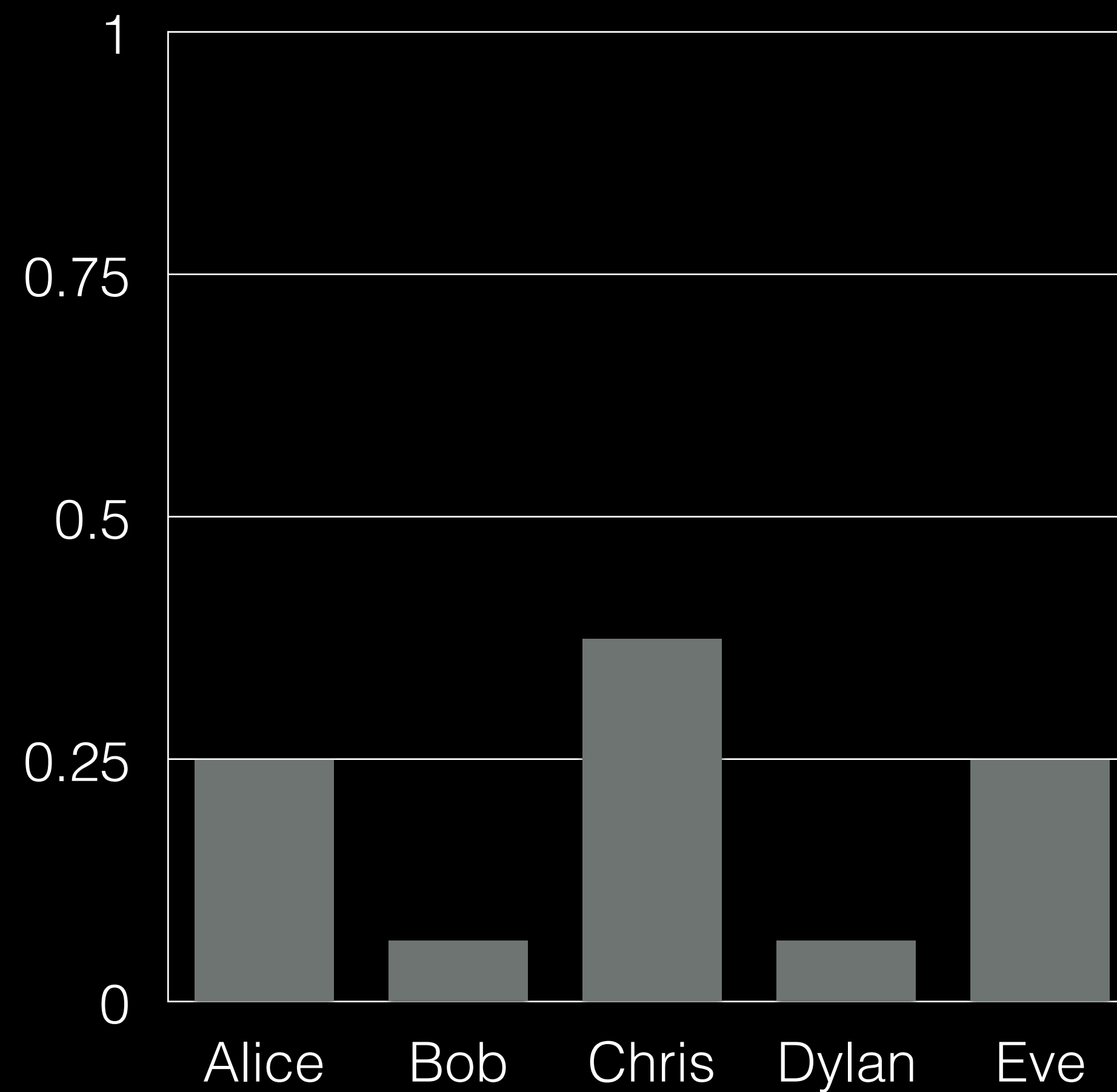
0.0625

0.0625

0.250

0.250

Milk





0.200

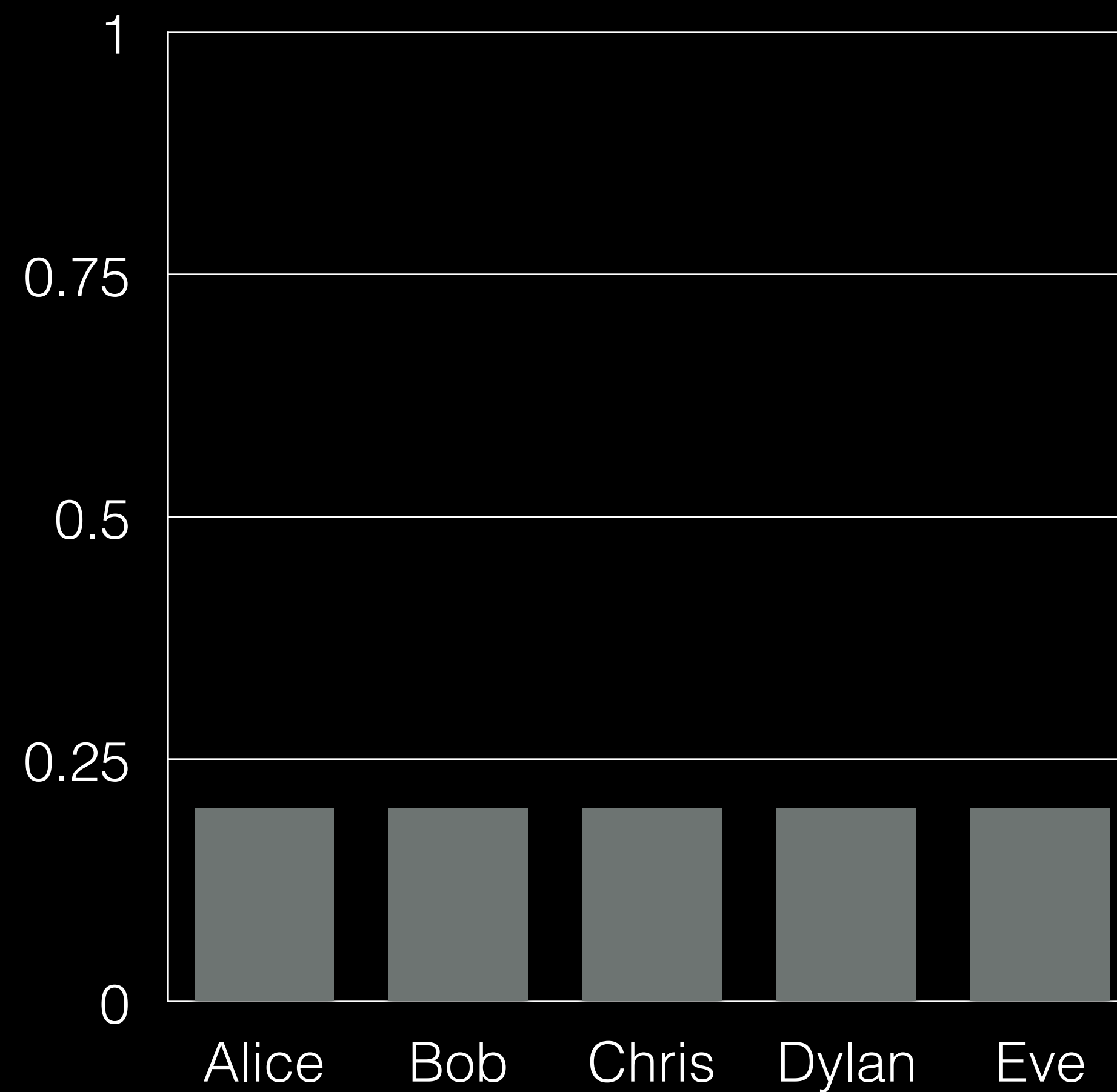
0.200

0.200

0.200

0.200

Milk





**We are not that
much different,
after all.**





They lived happily ever after



*All models are **wrong**
but some are more
useful — George Box*