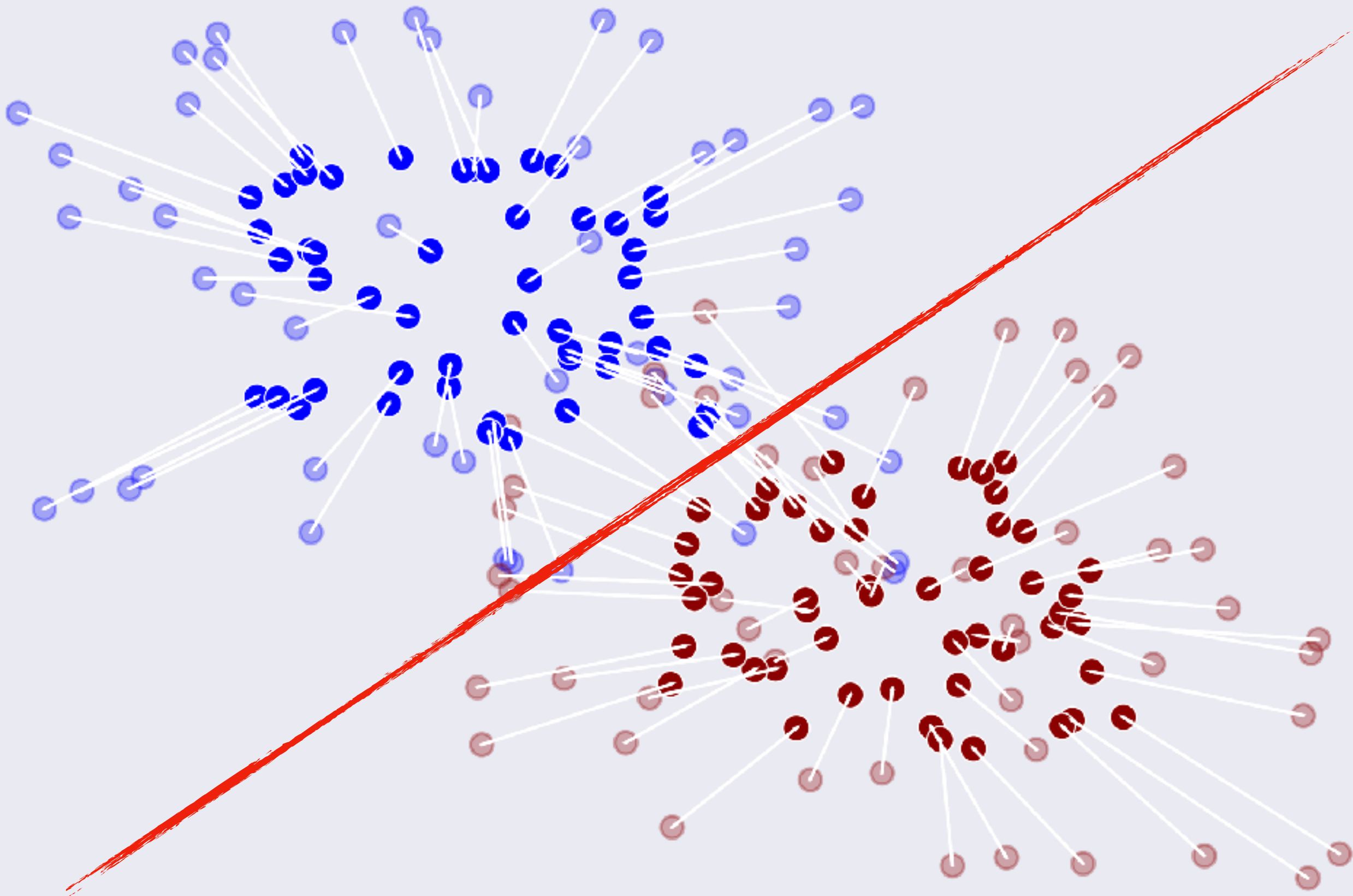




Increasing In-Class Similarity by Retrofitting Embeddings

Dirk Hovy - Tommaso Fornaciari
Bocconi University - Milan

Classification



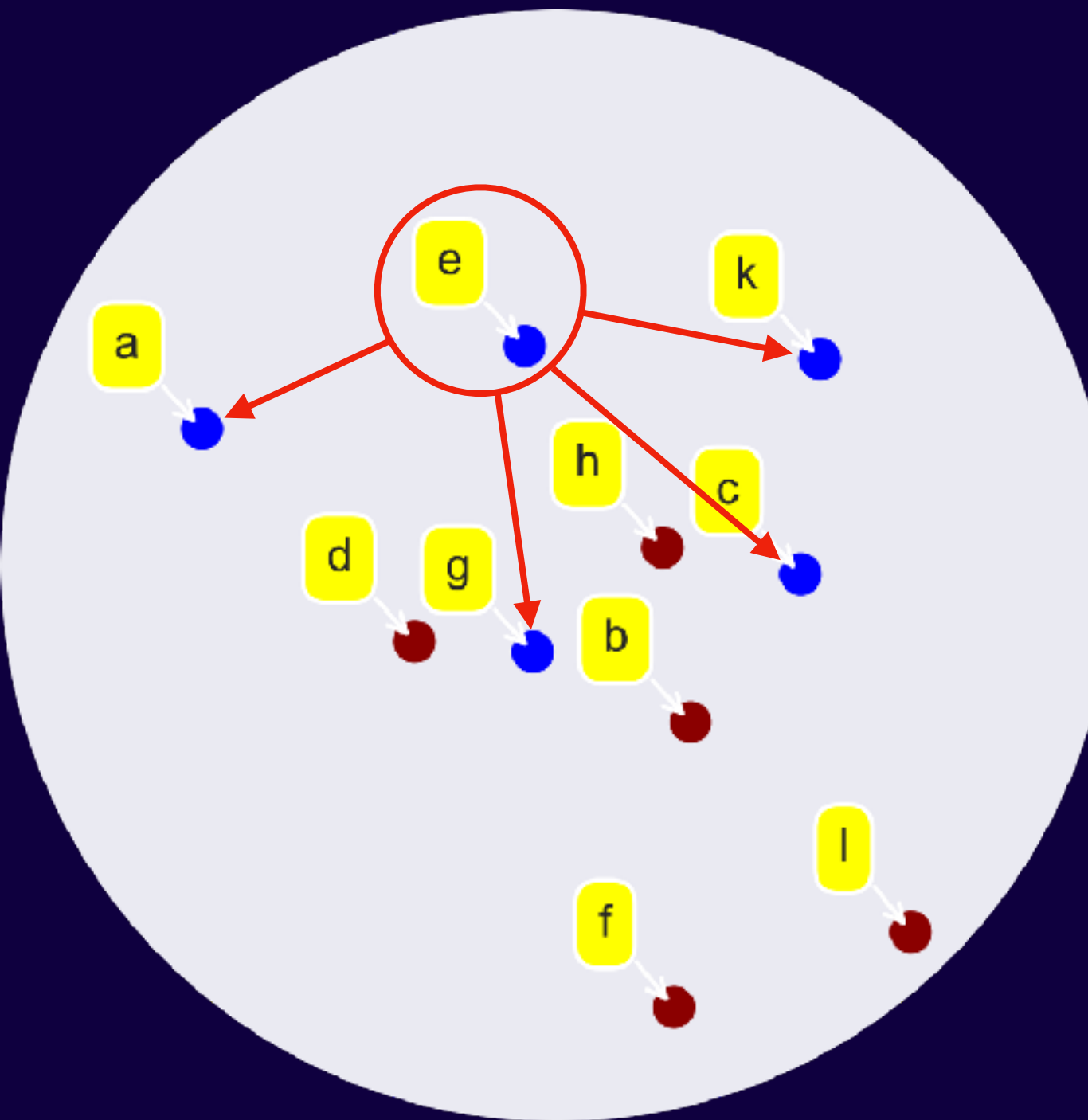
The opportunity

Homophily

<https://www.youtube.com/watch?v=xas1EJRnF1M>



Extracting the graph



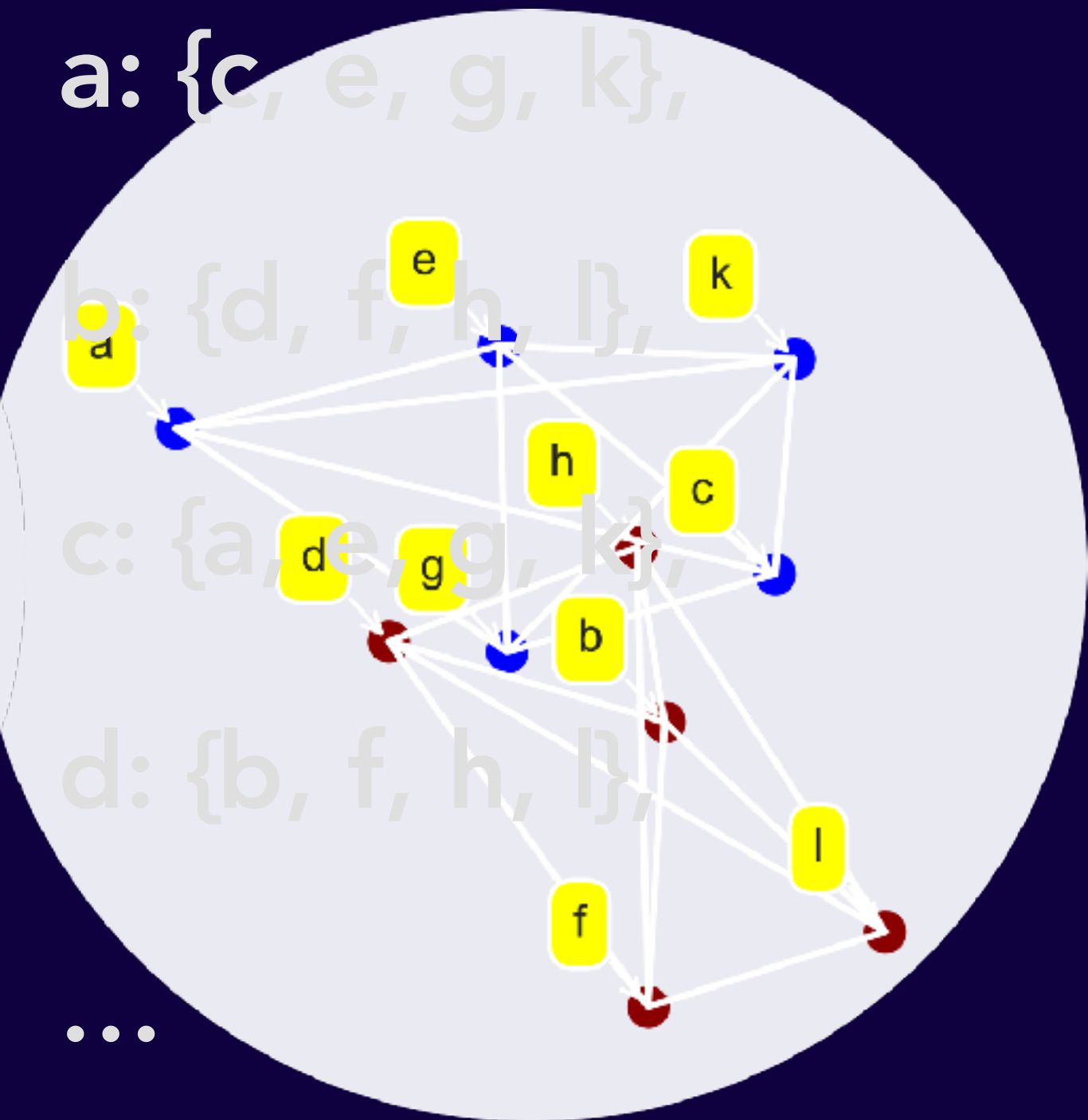
a: {c, e, g, k},

b: {d, f, h, l},

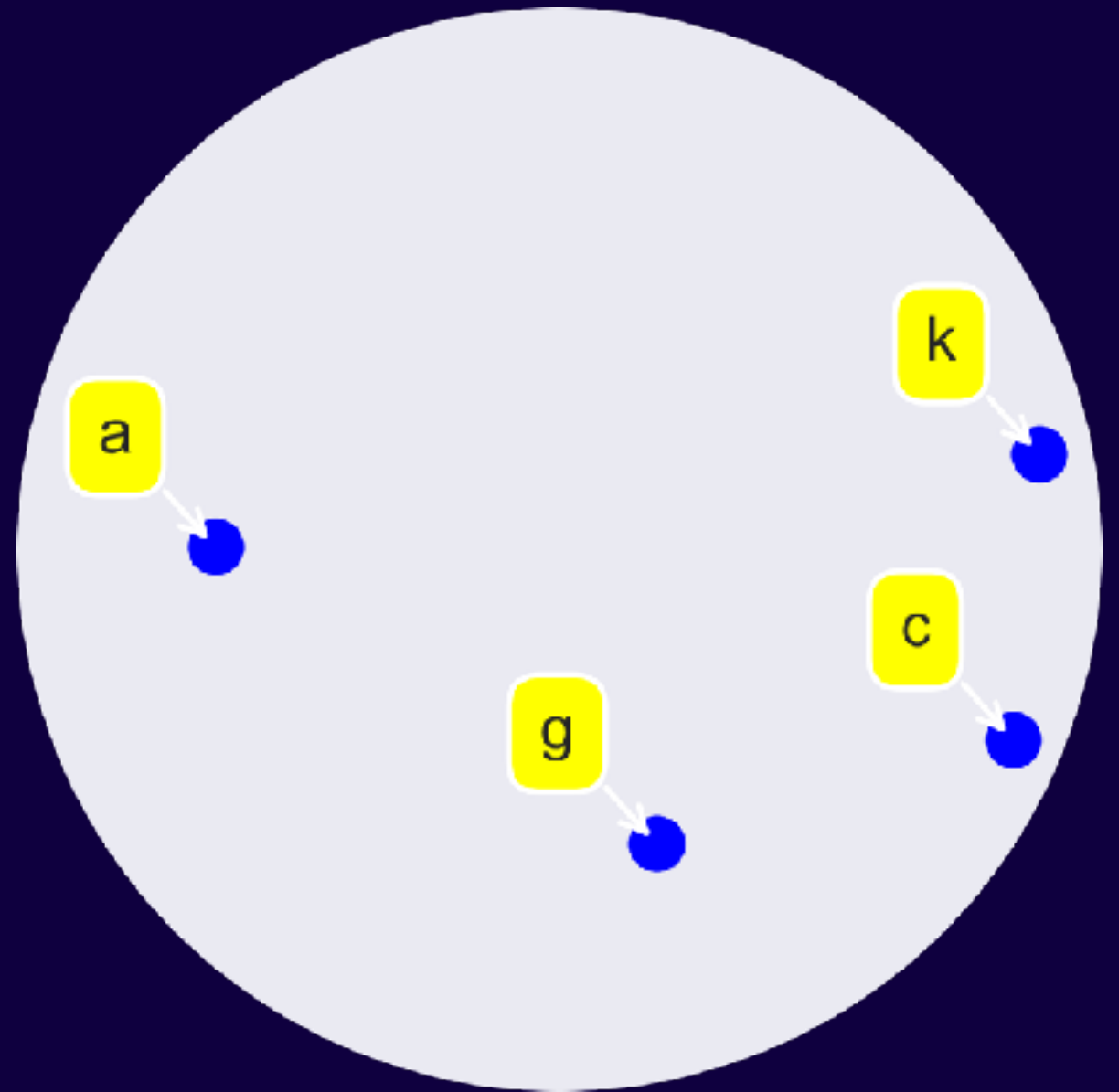
c: {a, d, e, g, k},

d: {b, f, h, l},

...

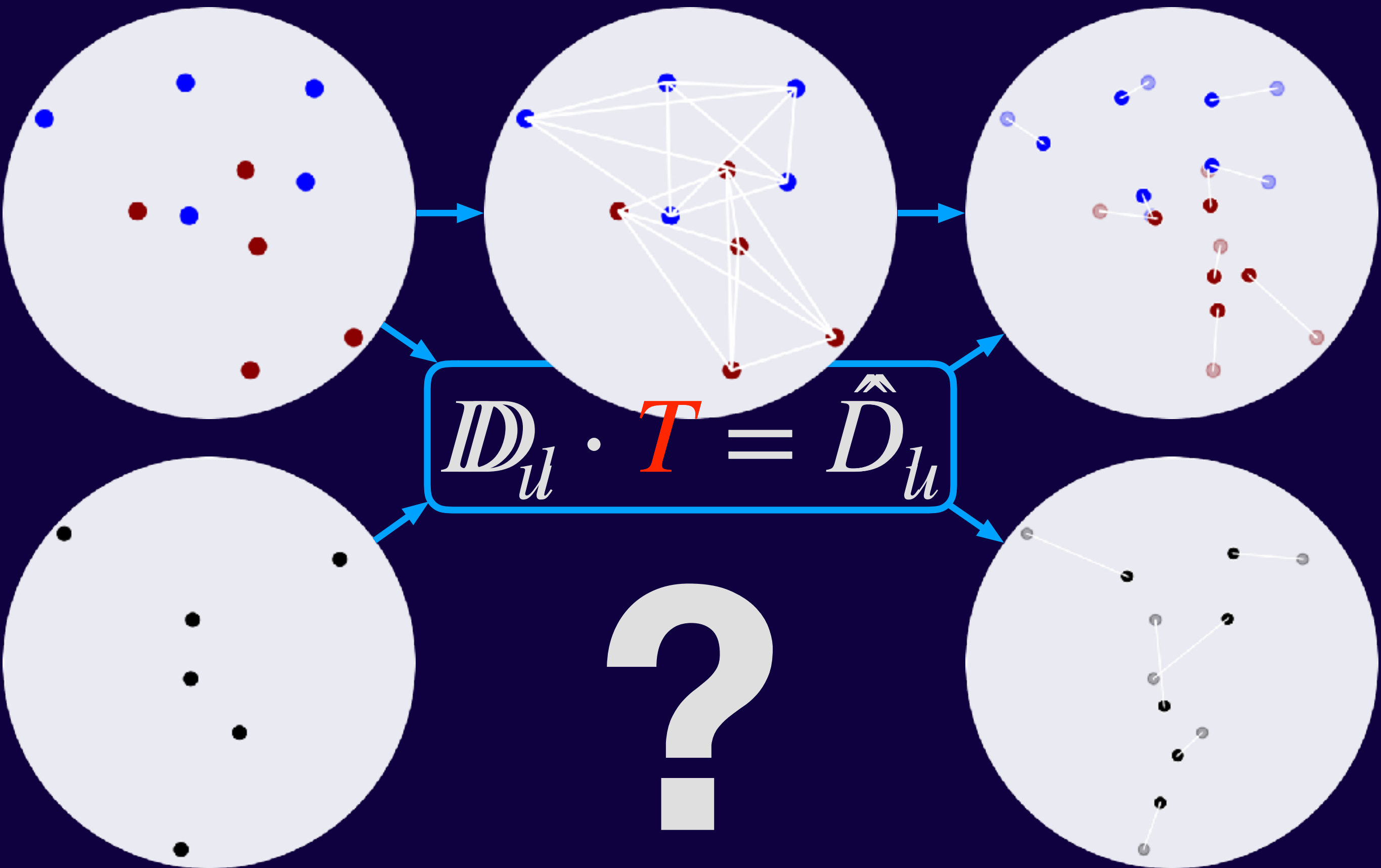


Retrofitting

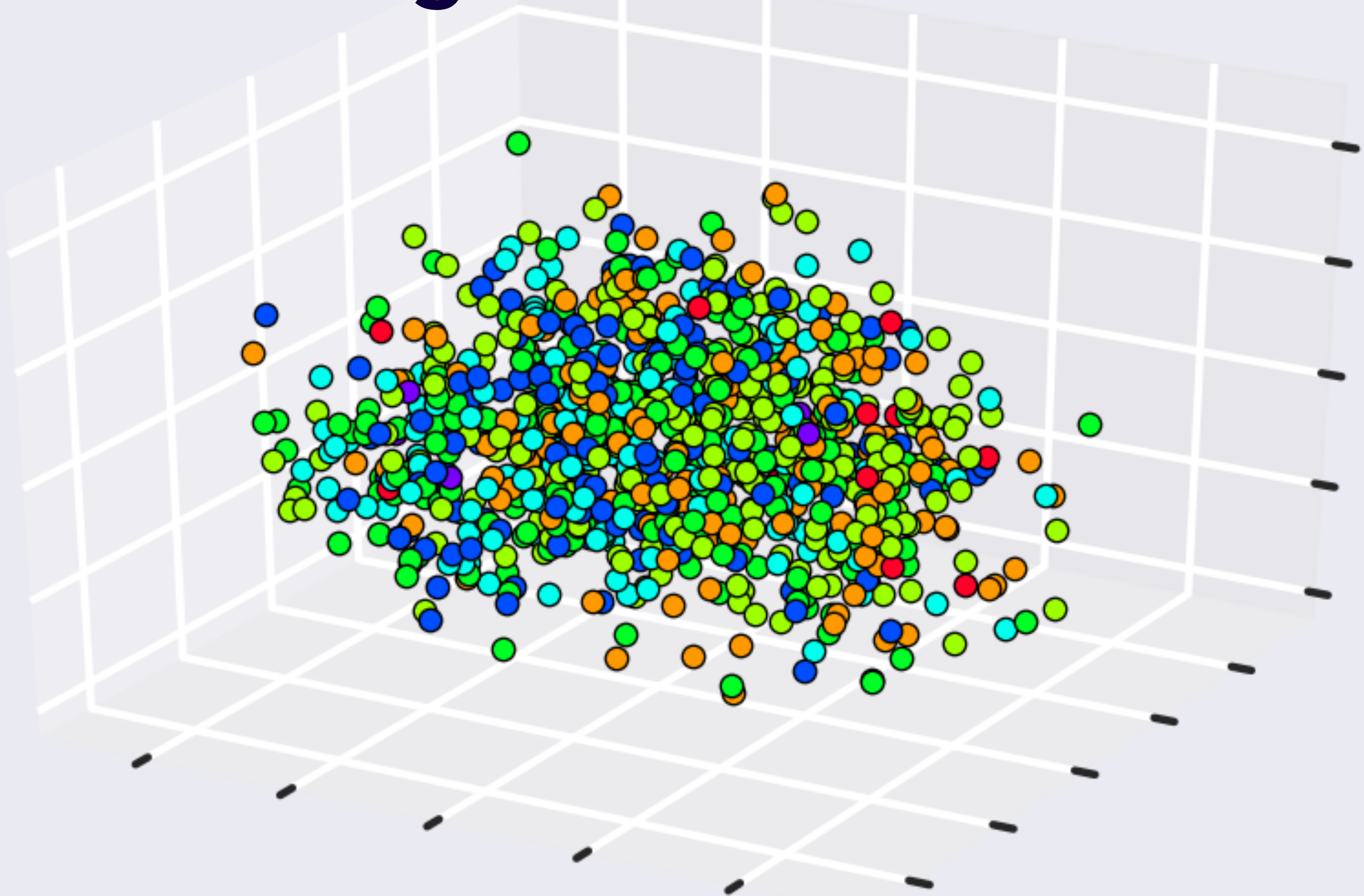


$$\beta = 1 - \alpha$$

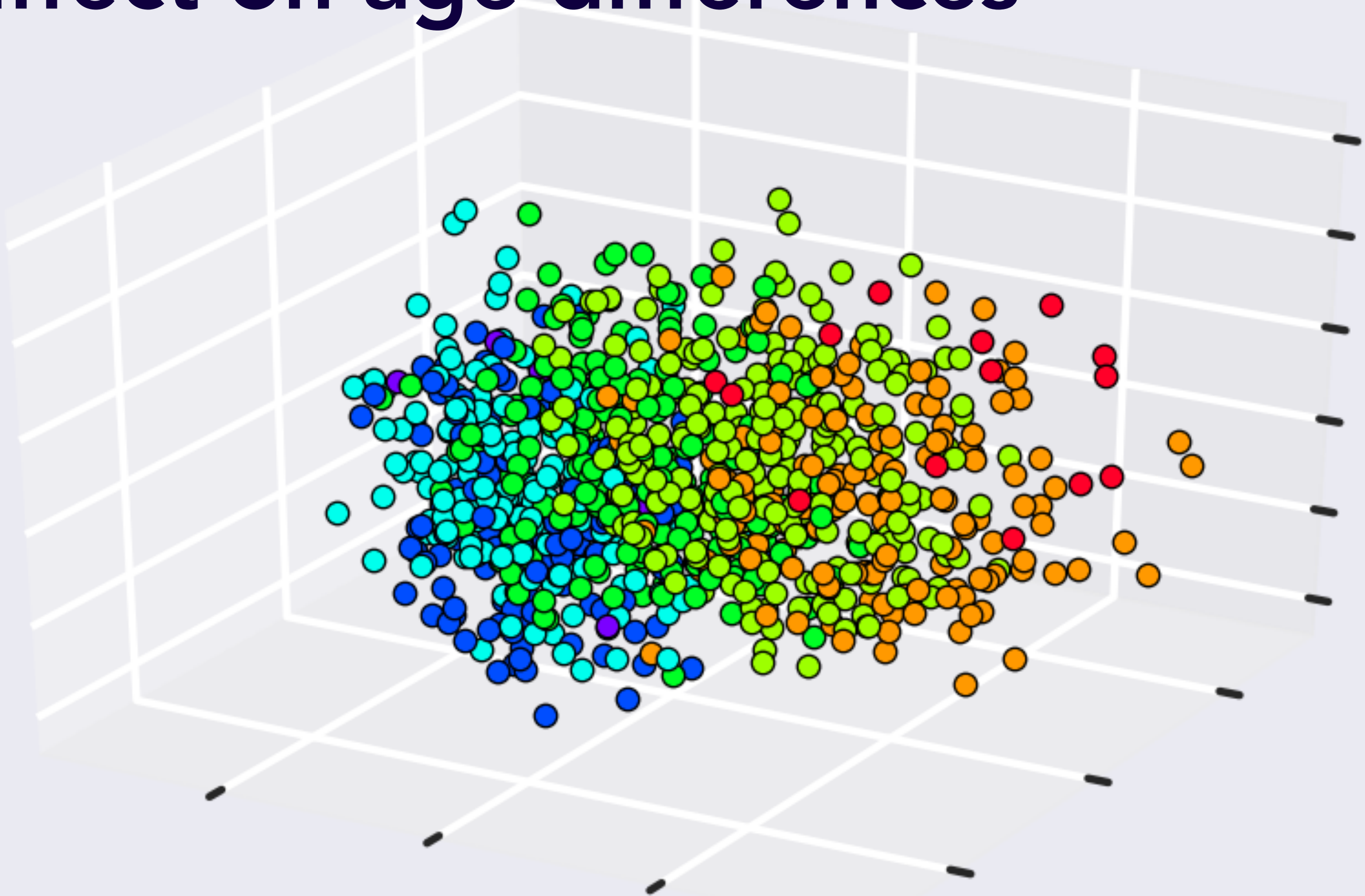
The induction



Effect on age differences



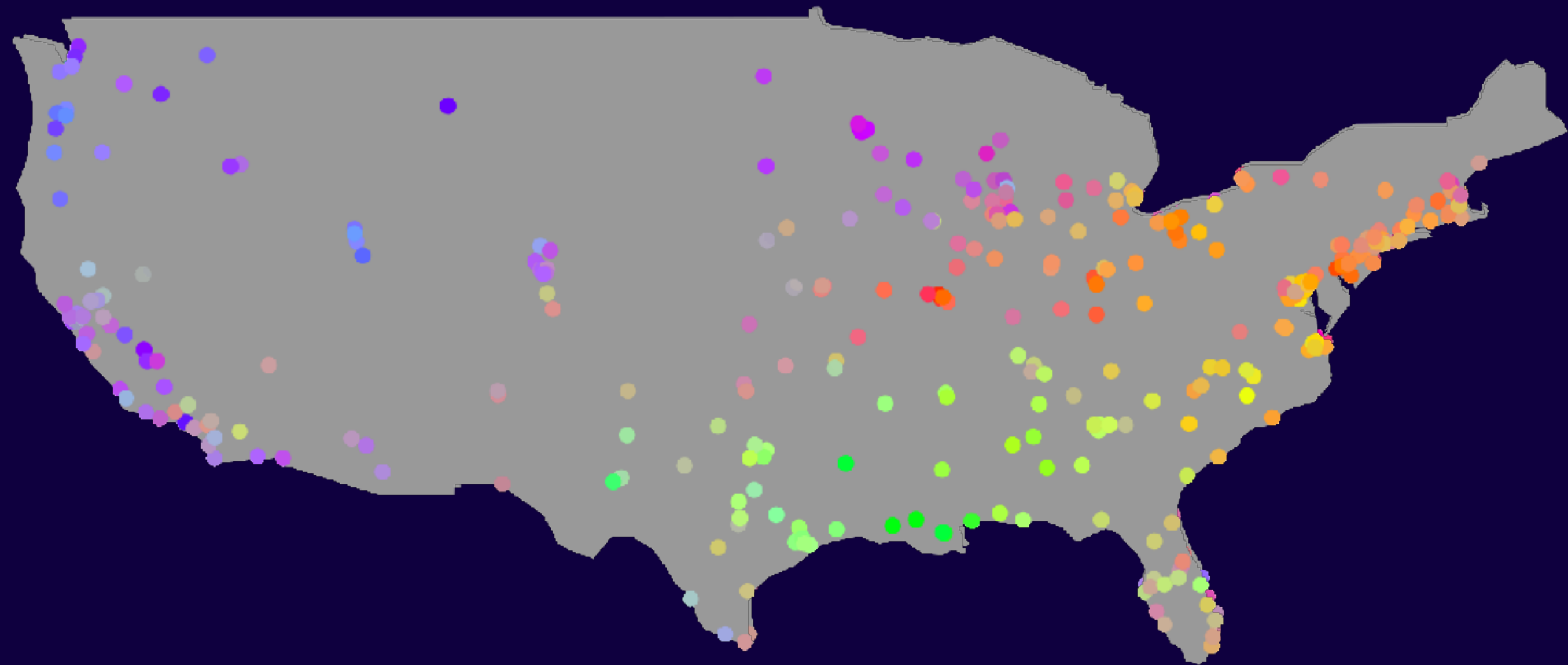
Effect on age differences



MNIST



Geolocation



See also talk on Sunday, session 10 D, 11:36

Conclusion

- Wide applicability
- Computational scalability
- Effectiveness with few data

Thanks!

*Pares cum paribus
facillime congregantur.*

Cicero, De Senectute, III

