**The coevolution of human fertility and wealth stratification**

Fertility decline may involve quantity-quality trade-offs among children, and many studies assume this is adaptive via costs and benefits of wealth accumulation and transmission. Few models have explored these hypotheses over the long term. Here we ask: does wealth-stratification generate fertility declines when the marginal costs to reproduction (interpretable as cultural or economic perceptions) differ by class?

We develop an ABM whereby agents inherit both parental wealth and a resource allocation strategy. They allocate wealth between fertility and inheritance in: 1) a setting with density-dependent death, and 2) a setting where wealth classes experience differential costs to reproduction. Descendant wealth is determined by the combination of inheritance and a random income contribution from the environment.

Preliminary results show that parents investing more in fertility than bequests leave more descendants over time. This dynamic converges faster in the second setting. Greater stratification also leads upper-class parents to have fewer children than the middle class, consistent with arguments that the wealthiest classes lead the demographic transitions.

We suggest that wealth stratification may be crucial in explaining historical fertility declines.