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Peer Review

# Review of: "Genomic Testing of Clark's Theory of the British Industrial Revolution: A Monte Carlo Analysis of Statistical Feasibility"

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The manuscript focuses on Clark's theory that the industrial revolution in the UK was facilitated by the genetic evolution of loci affecting human intelligence. Without providing actual results to support or refute this theory, the focus of this work is on investigating whether a test for an increase in polygenic index scores could have sufficient power to support Clark's hypothesis using ancient DNA samples. An additional challenge is that the death dates used to construct the time series are only known with measurement error. Under some plausible measurement error assumptions, the author concludes that sufficiently high power could be achieved with sample sizes that should be feasible. This holds under the assumption of an increase in IQ of either 1.36 (cautious scenario) or 2.72 per century.

Overall, the manuscript and the modeling assumptions concerning effect size and error variances seem reasonable, and the findings might be helpful in future investigations on the topic.

The conclusions depend on the assumption of independent random samples from the population for the ancient DNA data.

This is a limitation, but it would be difficult to explicitly model deviations from random sampling in such a preliminary investigation.

## Declarations

**Potential competing interests:** No potential competing interests to declare.



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