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|  |  | Faculty of Social Sciences School of Economics  University of East Anglia  Norwich Research Park  Norwich NR4 7TJ  United Kingdom  Email:davidhughjones@gmail.com  Or: D.Hugh-Jones@uea.ac.uk  Tel: +44 (0) 7586 453311 |
| 26 January 2022 |

Dear Editors,

I write to submit a manuscript, “Human capital mediates natural selection in contemporary humans”. My coauthor is Abdel Abdellaoui. Our contact details are:

* David Hugh-Jones, School of Economics, University of East Anglia, Norwich, UK; [D.Hugh-Jones@uea.ac.uk](mailto:D.Hugh-Jones@uea.ac.uk) or [davidhughjones@gmail.com](mailto:davidhughjones@gmail.com)
* Abdel Abdellaoui, Department of Psychiatry, Amsterdam UMC, University of Amsterdam; [a.abdellaoui@amsterdamumc.nl](mailto:a.abdellaoui@amsterdamumc.nl)

This paper examines natural selection in contemporary humans. A small set of papers have found evidence for contemporary natural selection (e.g. Beauchamp 2016). However, as yet there is no overarching theory explaining what drives natural selection. Our contribution is to remedy that. We estimate natural selection on 33 polygenic scores, over 2 generations, extending the range and timescale of previous work. We find surprising patterns in the data, with effect sizes being smaller or even reversed among different social groups. We show that these patterns can be explained by the economic theory of fertility, first developed by Becker (1960). And we test the theory, by showing that human capital mediates the relationship between polygenic scores and fertility. Lastly, we show that our results can increase genetic inequality and the unfairness of the “genetic lottery” (Harden 2021).

Some possible reviewers:

* Jonathan Beauchamp wrote the major paper on contemporary natural selection on educational attainment. He is an economist with interests in genetics.
* David Laibson is a senior economist with serious interests in genetics.
* Augustine Kong is first author of another paper on contemporary natural selection.
* Aysu Okbay has published several important papers in human genomics. She’s also an economist.

Jonathan Beauchamp, David Laibson and Aysu Okbay would all be helpful in reviewing the economic model as well as the empirics. Other possibilities might be Dan Benjamin or David Cesarini. Note that any of these may have reviewed previous versions of this paper.

Yours faithfully,

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David Hugh-Jones  
Associate Professor  
School of Economics  
University of East Anglia