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TITLE: Parental Social Class, Genes and Luck: a Cohort Analysis of Equality of Opportunity in Education

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ABSTRACT:

This paper evaluates fairness in education across cohorts in the U.S through the lens of the equality of opportunity framework. It is the first study to add an explicit measure of genetic circumstances - the educational attainment polygenic score (EA PGS) - to the literature of equality of opportunity. Two ethical viewpoints are considered: one where genetic endowments a standard circumstance. The second one where genetic endowments are also perceived as circumstance, but one for which we do not wish to equalize or de-correlate educational outcomes. Testable empirical conditions of both viewpoints are derived. Results suggest a clear increase of equality of opportunity for younger cohorts (1948-1953) as compared to older cohorts (1926-1930) with respect to secondary education, irrespective of the ethical framework considered. Results with respect to higher education are nuanced; if the EA PGS is defined as a circumstances, the equality of opportunity has decreased, with the total share of explained variance by circumstances increasing from 19.7% to 24.1%. However, the conclusions differ if one considers that differences in educational outcomes due to differences in the EA PGS are fair: the explained variance of circumstances falls from 14,2% to 8,1%. Further, simply relying on the explained variance of childhood SES alone might be misleading. In particular, the seeming increase in the explained variance of childhood SES is explained by the

increasing correlation between the two circumstances; younger cohorts with higher childhood SES are also more likely to have a higher EA PGS.

(244 words)

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