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Germline genetic engineering for cognitive enhancement: an argument for better people and a better society

Gantsho, Luvuyo

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Abstract

Molecular genetic engineering technologies such as CRISPR/Cas9 have made the accurate, safe and reliable genetic engineering of human embryos possible. Further advances in genomics have isolated genes that predict qualities and traits associated with intelligence. Given these advances, prospective parents could use these biotechnologies to genetically engineer future children for genes that promote their wellbeing. While Julian Savulescu's Principle of Procreative Beneficence (PPB) argued for the moral obligation of prospective parents to use in vitro fertilization (IVF) and preimplantation genetic diagnosis (PGD) to make eugenic selections of embryos for intelligence, in principle the PPB could imply obligations to genetically engineer selected embryos for intelligence as well. Given the constraints on IVF's ability to make eugenic selections that do not apply to genetic engineering, an extension of the PPB to include genetic engineering would serve as a normative justification for the further enhancement of the prospective child's intelligence.

I argue that Savulescu's Principle of Procreative Beneficence implies an additional moral obligation for prospective parents to genetically engineer the embryonic germline identity of selected embryos for genes that predict intelligence. Implications of and objections to my argument for the PPB's extension to include germline gene engineering for cognitive enhancement (GGECE) are discussed.