



The boundaries of ethics

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The boundaries of ethics-He Jiankui, who claims to have made the world's first gene-edited babies, deserves to be rapped but not condemned

- In November, Chinese researcher He Jiankui set off a storm when he claimed that he had created the world's first babies, a pair of twin girls, genetically edited with CRISPR-cas9.
- He Jiankui said that the twins had genes now that protected them from HIV
- Ideally this should have been a laudable scientific advancement.
- But Mr. He has been condemned, not only by peers in China but by geneticists, biotechnologists and ethicists worldwide.
- Mr. He broke the scientific and regulatory protocol by not vetting his experiments, which involved embryos and hopeful parents, by his organisation's ethics committees.
- These are enough grounds to invalidate any medico-scientific investigation, however novel and groundbreaking.
- Yet the greater consternation is that an ethical red line has been transgressed.

Defining what is permissible

- The current international consensus is that editing 'germ line' (or reproductive) cells of healthy humans is unethical and should only be used as a last resort as it could mean introducing unknown and potentially harmful changes in subsequent generations and even entire populations.
- While the principle of 'do no harm' pervades scientific practice, particularly in light of the early 20th century's European and American experiments with eugenics, it shouldn't be forgotten that ethical norms in science aren't framed in a higher moral plane.
- What is permissible and ethical is also influenced by business interests, concerns among countries that they might lose a competitive advantage,

and how medical advances have actually progressed.

Various scientific experiments

- Harvard geneticist George Church is on a project to resurrect a version of the extinct woolly mammoth.
- Before Robert Edwards and Patrick Steptoe were awarded the 2010 Nobel Prize for pioneering the technique of In Vitro Fertilisation (IVF), they were accused of meddling with nature, and no further public funding for their research was allowed.
- The New York Times reported that a 'three-parent baby' (incorporating DNA from three people) was first created in the U.S. in the 1990s and no permissions were granted by the authorities for this.
- The doctors were denied public funding but there was no worldwide condemnation and no compelling reason other than infertility in some patients and educated guesses that motivated the doctors.
- Assuming that Mr. He's done what he claims, he deserves to be rapped but not condemned or vilified.

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