

# **Who stands to benefit from genetic enhancement, and why does it matter?**

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Workshop on the ethics of genetic enhancement

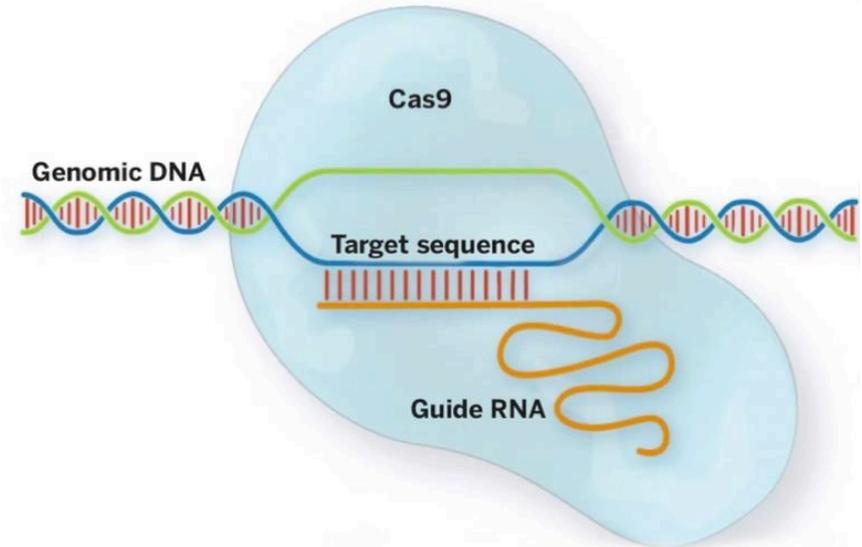
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**ACT**

# Characterizing genetic enhancement (GE)

- Starting point: gene editing technology (e.g. Crispr-Cas9)
- Pre- vs post-natal (former most controversial)
- Person-affecting ( $\neq$ PGD)?

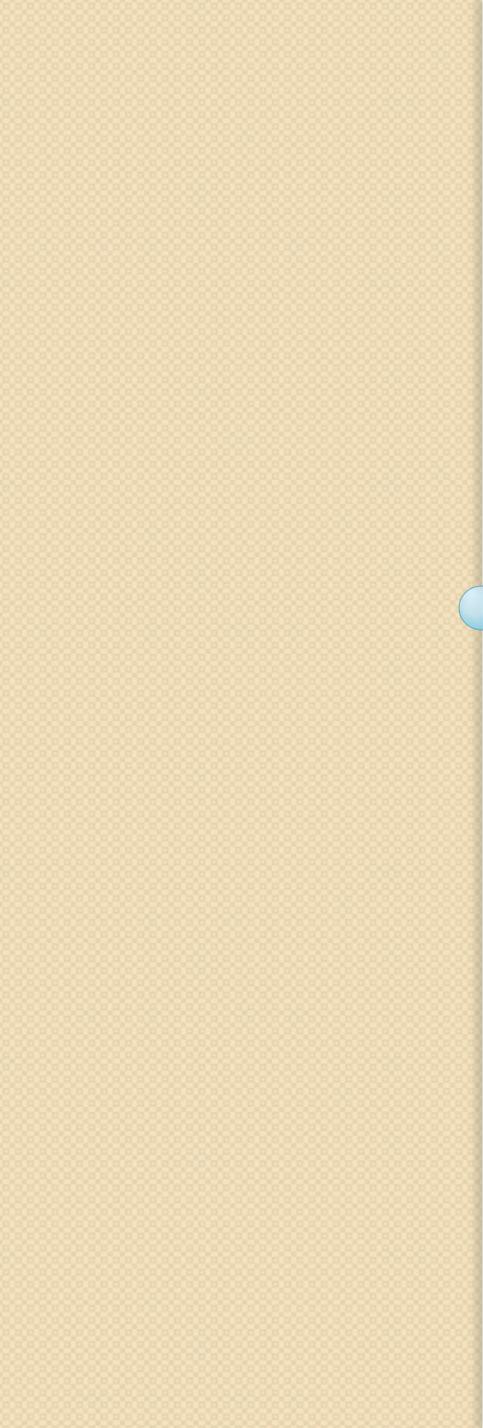


# The treatment-enhancement distinction

- GE: altering the genome to improve form or function beyond the restoration (& maintenance?) of health/normal function
- Therapeutic promise of gene editing: e.g. Huntington's disease, cystic fibrosis
- Candidates traits for GE: healthy lifespan, happiness set point, personality, intelligence, beauty, athletic/musical ability
- With caveats: a) Safety; b) Polygenic traits; c) Genes  $\neq$  destiny

# Who stands to benefit from GE?

- Three candidates:
- 1) The child's parents
- 2) The child herself
- 3) Society as a whole
- 4) Specific interests groups (biotech companies)
- Question: which of these count, and how do we balance them when they conflict?
- Public regulation vs parental ethics



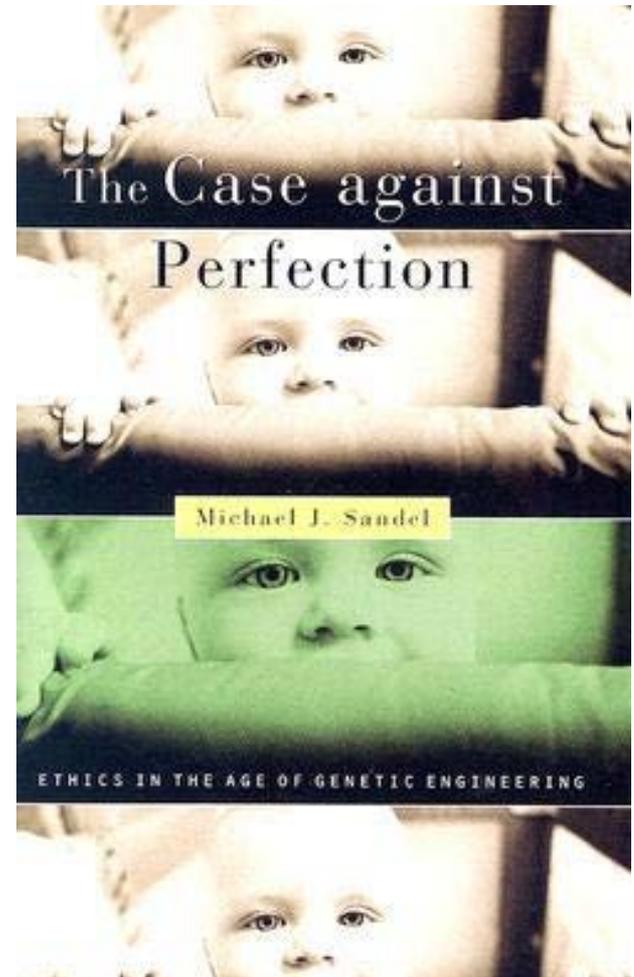
# **I) Parental interests**

# Parental interests

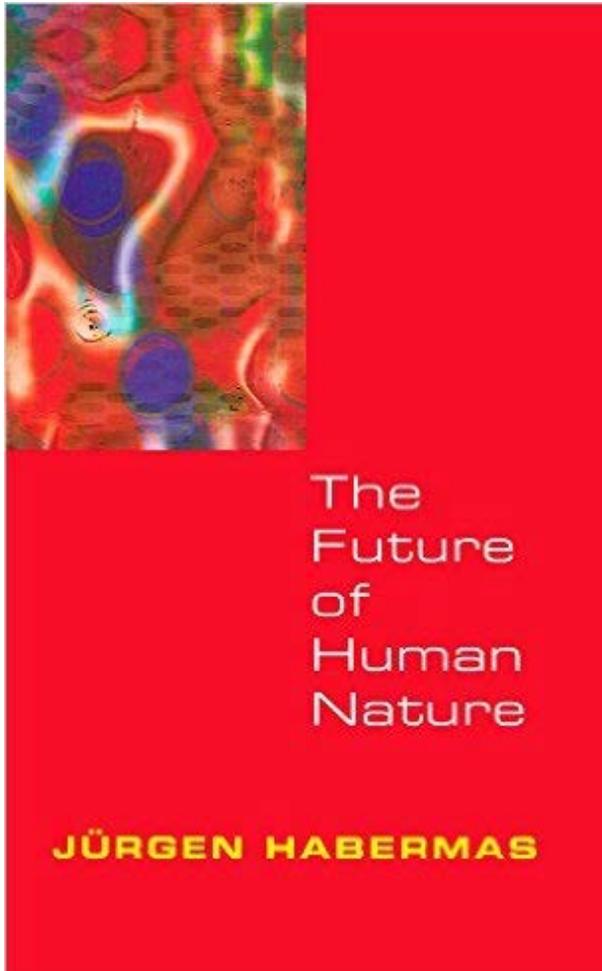
- GE might help satisfy certain desires & preferences of parents
- Importance of reproductive autonomy
- But distinguish between:
  - A) *Actual* GE
  - B) Mere *selection* of genetic determinants of some traits (which parents might view as GE): e.g. eye/hair/skin colour
- GE could also thwart interests of parents who can't afford it or are opposed to it

# Parental interests: objection I

- Michael Sandel: GE threatens parents' "openness to the unbidden" and would "disfigure the relation between parent and child"



# Parental interests: objection 2



- Jürgen Habermas: GE constitutes form of “programming” that would prevent children from seeing themselves as authors of their own life histories

# Provisional assessment

- These objections neglect:
- A) Potential benefits of GE for children & society
- B) Differential impact of different GEs
- C) Potential altruistic motives of parents
- But do hint at true concerns (for parental ethics, but also potentially regulation)

# Provisional assessment

- Concern 1: commodification of children (e.g. Darnovsky, 2001)
- Concern 2: child's right to an open future (Feinberg, 1980; Buchanan et al., 2000)





# Do some have their concerns backwards?

## 'Designer Babies:' Patented Process Could Lead to Selection of Genes for Specific Traits

Frontiers of Genetic Enhancement Continue to Advance

edge, widening societal divisions. Others worry about the "slippery slope" consequences: while it may relatively be harmless to choose a child's hair or eye color, what if genetic breakthroughs allowed parents to enhance a child's intelligence or athletic ability? But



## **2) The interests of the child**

# The interests of the child

- GE could benefit the (future) child, *if* person-affecting
- Room for *limited* reasonable disagreement (cf. different accounts of well-being)
- Sparrow's challenge: potential net harm (if inescapable obsolescence)
- Nuance: only applies to
- A) Positional goods; B) With no *de facto* upper limit; C) Scenario where "one-shot" GE remains only/main enhancement tool

# “General-purpose means”

- Cf. Buchanan et al., 2000: useful for carrying out almost any plan of life
- Potential candidates: health; longevity; intelligence? Memory? Impulse control?
- Procreative beneficence: Savulescu, 2001
- Implies that parents have a strong ethical reason to help their child secure GPMs
- Which would imply reason to use GE
- Equivalent reason at societal level?

# “Discretionary advantages”

- All the capacities/talents one can choose not to exercise (at least later in life)
- Concern: that ability to engineer such traits might exacerbate parental pressures
- Valid concern, but:
- A) Equally likely that future individuals might resent not having been enhanced
- B) Risk of being pushed in one specific direction might be reduced if *multiple* talents can be engineered

# The child's right to an open future

- Entails parental obligation to ensure reasonable array of future life options
- Forms of GE that violate the CROF are arguably ethically problematic
- But unclear many could do so without accompanying environmental engineering
- Reject genetic determinism
- Banning GE to protect the CROF would entail large opportunity cost

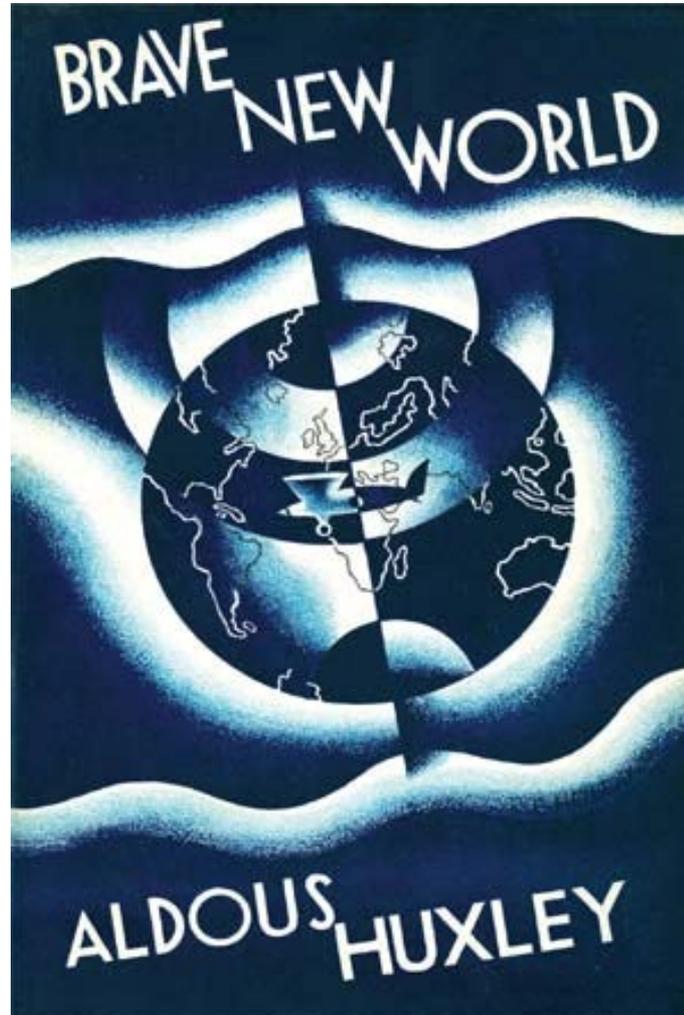


## **3) The interests of society**

# The interests of society

- Possible benefits of GE for society:
- 1) Smarter society: benefits for science, culture and the economy (Bostrom and Roache, 2009)
- 2) Reducing susceptibility to disease and aging might boost general quality of life while reducing healthcare costs
- 3) Moral enhancement could help solve global problems like climate change, reduce crime, etc.

# The eugenics objection



# The eugenics objection

- Merely considering societal interests as reason to promote GE viewed as suspect
- *But:* problems with traditional eugenics =
- A) Killing of innocent people (cf. Nazis)
- B) Violation of reproductive autonomy
- C) “Breeder mentality”
- Taking societal interests into account need not entail any of these

# Ways in which GE might go vs. societal interests

- Exacerbating inequality
  - Solution: taxation and public subsidies
- Promoting suspect social norms
  - Solution: anti-discrimination policies, education, no public funding for relevant GEs, use GE to reduce prejudice!
- Reducing human diversity
  - Unclear how much force this concern has (cf. previous medical advances; dying languages)

# Suggestions:

- Under certain hypothetical conditions:
- It can be permissible (even required?) of parents to have their children undergo GE
- Society should permit and even encourage *some* forms of GE
- Societal interests can count, but only if no rights/deontological constraints violated
- Reproductive rights of parents forbid coercive state intervention, except to prevent great harm to future children

# Reminders

- Main ethical concerns:
- Commodification of the child
- Violation of the CROF
- Exacerbation of inequality
- Promotion of suspect social norms
- But GE need not lead to any of these pitfalls



Thank you!

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