## Genetic Engineering

















JR: INNOV IN AGRI

## It's a Girl! And That Shouldn't Come as a Surprise.



Beef-cattle ranchers are breeding for heifers to restore their herds. BLOOMBERG NEWS

By MARSHALL ECKBLAD

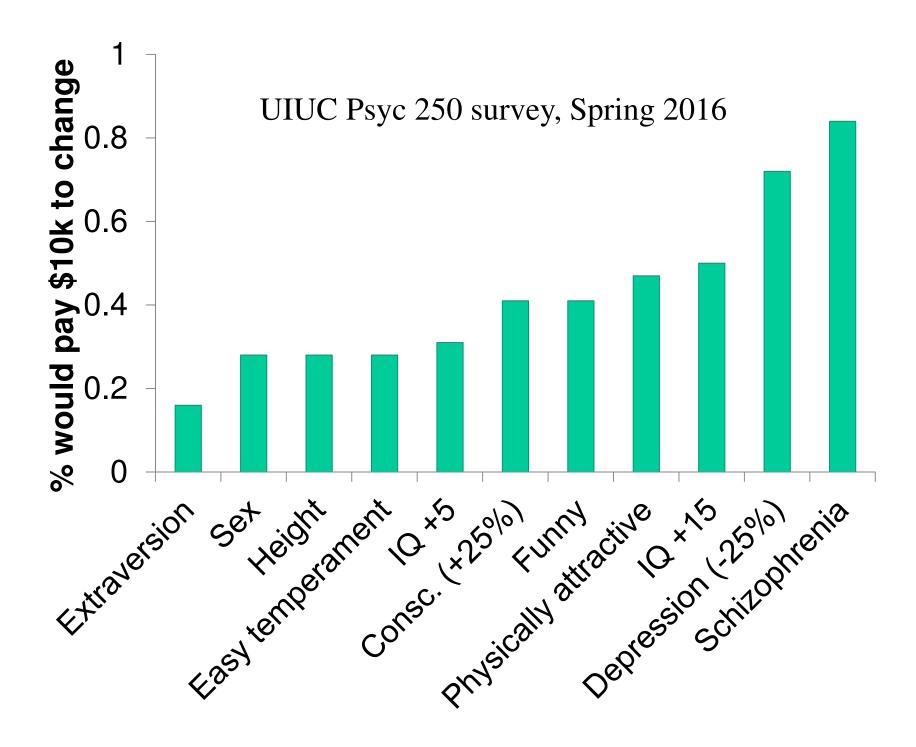
October 15, 2012

### Shulman & Bostrom (2014) Embryo Selection for Cognitive Enhancement: Curiosity or Game-changer?

Table 2. US IVF and embryo selection attitudes				
	Approve/Yes	Disapprove/No	Do not know	
Personally use IVF for infertility? (Harris, 1969)	18 per cent	76 per cent	6 per cent	
Approve IVF for disease/disability? (Harris, 1969)	35 per cent	55 per cent	10 per cent	
Personally use IVF for infertility? (1978 Gallup survey post Louise Brown (Mason, 2003))	53 per cent	35 per cent	11 per cent	
Approve embryo selection to avert fatal childhood disease? (Kalfoglou et al., 2004)	68 per cent	<b>Table 1.</b> How the maximum amount of IQ gain (assuming a Gaussian distribution of predicted IQs among the embryos with a standard deviation of 7.5 points <sup>3</sup> ) might depend on the number of embryos used in selection		
Approve embryo selection for adult-onset cancer? (Kalfoglou et al., 2004)	58 per cent			
Approve embryo selection for strength or intelligence? (Kalfoglou et al., 2004)	28 per cent	Selection	IQ points gained	

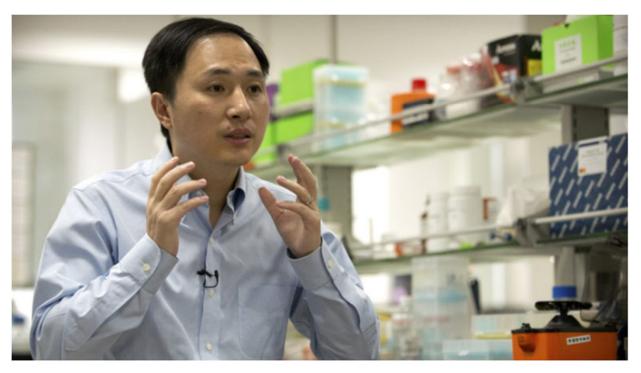
with a standard deviation of 7.5 points <sup>3</sup> ) might depend on the number of embryos used in selection			
Selection	IQ points gained		
1 in 2	4.2		
1 in 10	11.5		
1 in 100	18.8		
1 in 1000	24.3		
5 generations	< 65 [b/c		
of 1-in-10	diminishing		
	returns]		
10 generations	< 130 [b/c		
of 1-in-10	diminishing		
	returns]		
Cumulative limits	100 + (< 300 [b/c		
(additive variants	diminishing		
optimized for cognition)	returns])		





# Chinese researcher claims birth of first gene-edited babies — twin girls

By ASSOCIATED PRESS / NOVEMBER 25, 2018



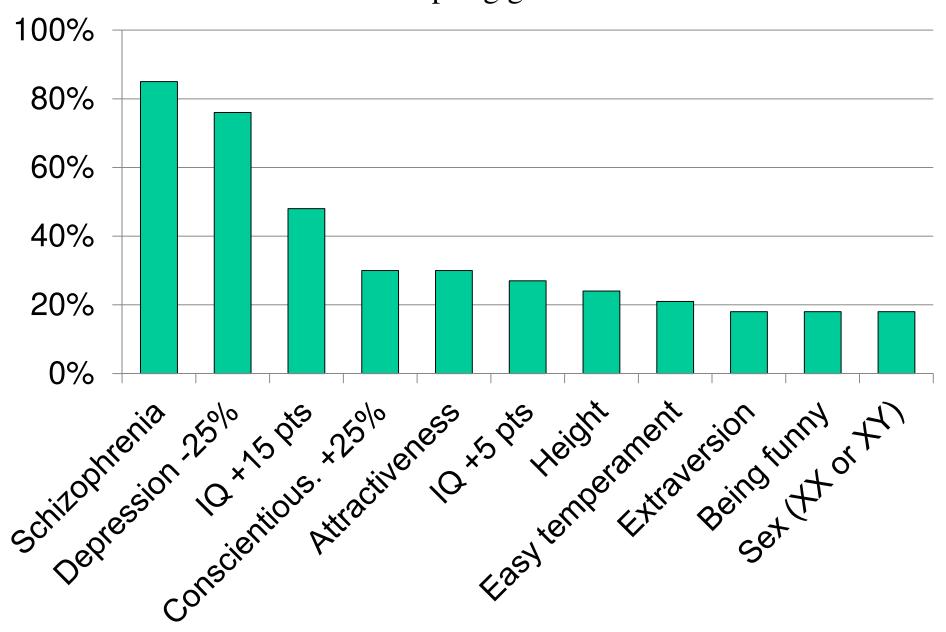
Chinese scientist He Jiankui claims he helped make world's first genetically edited babies: twin girls whose DNA he said he altered.

MARK SCHIEFELBEIN/AP



ONG KONG — A <u>Chinese researcher claims</u> that he helped make the world's first genetically edited babies — twin girls born this month whose DNA he said he altered with a powerful new tool capable of rewriting the

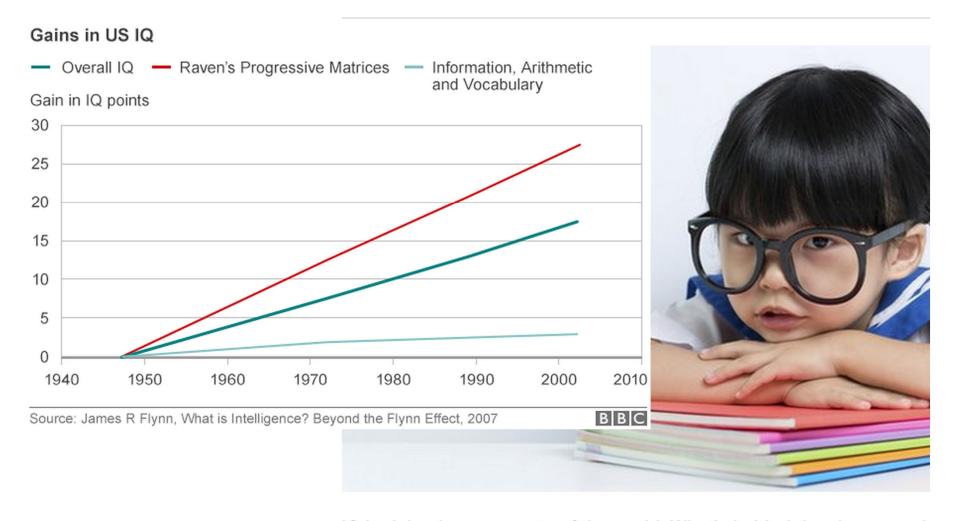
% (Fall 2019) would pay \$10k to edit offspring genes for...



### Are humans getting cleverer?

#### By William Kremer

**BBC World Service** 



IQ is rising in many parts of the world. What's behind the change and does it really mean people are cleverer than their grandparents?