

Designer babies may be good for society: geneticist

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Designer shoes, designer dog, designer baby - where do we draw the line for the next "must-have" item?

The future of humanity many have a very different face as we unravel our genetic code and make it possible to choose our children's capabilities in the future, from health through to intelligence, but what does this mean for society?

According to world-renowned geneticist and Michigan State University Professor Stephen Hsu, within the next five to 10 years, scientists will be able to map out the blueprint of humanity, understanding the genetic architecture of human intelligence, and the 10,000 or so genes that support geniuses. This will allow scientists to eventually predict - and choose - people's IQs.

And within the next 10 to 20 years, scientists believe we may even have the capacity to create "super geniuses", with those capable of funding the procedures able to custom-design their child, manipulating their embryos to make the "ideal" child.

Speaking to Australian mathematician Lily Serna in episode two of *Decoding Genius*, a new podcast from GE that explores what makes a genius, Dr Hsu said he believes the future of "designer babies" is swiftly becoming a reality, and may cause a societal rift.

"Being able to recognise which genetic patterns lead to genius is step one," Serna said. "The science to do that is pretty much already here.

"Step two is to peek into the genetic code of an embryo, and make a decision whether or not to select that [embryo] to become your child."

This has major implications for IVF, where currently embryos are overproduced - more than are needed to implant - and then picked based on their shape or morphology, or as Dr Hsu explained, "by deciding that this 'one' looks normal, and implanting it".

"With existing genetic technologies, you could genotype all of the embryos you produce and just pick the best one," he said. "You could pick on intelligence, you could pick on health, or other things too."

This will likely become common among wealthier people who can afford to have this type of selective procedure, he said. "You'll have news stories about a kid who's father is a billionaire, and this kid is a mathematical genius, world-class pianist, and also six foot six and on the national volleyball team. And people who can't afford that type of thing will be very angry."

However, while he saw issues arising from this new stratification of society, he believed that the good would outweigh the negatives for society as a whole.

"You could easily make the case that most of human progress is due to the efforts of the top one per cent," he said, adding that in certain ways the world would be better as higher intelligence - and in turn education - provided better tools for rationality and decision making, which may not be available to those below a "threshold level of IQ", and if the majority of the population was below that threshold level, you wouldn't expect a well-functioning democracy and good governance.

"For example, global warming is a giant IQ and collaboration test for the human race; we have to figure out that we are damaging our planet and have to organise ourselves to stop damaging the planet," he said.

"It's very plausible to me that we are going to fail that test. However, a group of humans with 30 points more IQ on average would possibly figure it out, organise themselves, and save themselves before destroying their environment.

"Once we have control of these genetic technologies, we will have control of our own future evolution in a very strong way.

"It's inevitable."