

NO LIFEGUARDS IN THE GENE POOL

With the effects of climate change and population growth, Stephen Hawking thinks humanity's last hope is to leave the planet. But, John Baird says, there is a less drastic solution – and the only thing standing in our way is our own DNA

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The human race is in so much trouble that it needs to colonise another planet within 100 years or face extinction. So says the physicist Stephen Hawking in an upcoming BBC documentary, *Stephen Hawking: Expedition New Earth*. According to Hawking, “with climate change, overdue asteroid strikes, epidemics



and population growth, our own planet is increasingly precarious”. If this makes you nervous, it should. Colonising another planet will be much easier said than done, and lots of people would likely be left behind to face whichever disaster comes first. So is there an alternative?

You first have to appreciate that this is mainly a population issue. According to the official count, the number of humans recently passed the 7.5 billion mark. While estimates of the carrying capacity of Earth vary widely, most people would accept we are causing serious damage. And with the population set to hit nearly ten billion by 2050, that may be as much as ten times more than the planet's resources can sustain. If we could yet reverse this growth, we might be able to avoid Hawking's solution (at least if we are prepared to ride our luck over the asteroid strike). Standing in our way are two

flaws hardwired into human DNA: our genes and our inability to make rational choices. If we can overcome them, I would argue that our days on this planet may not be numbered after all.

Fatal flaws?

Our genes problem famously stems from Richard Dawkins's *The Selfish Gene*. It contains the idea that all organisms are merely conduits for genes that hop from generation to generation through different bodies. They do this purely in their own interests, not necessarily the interests of the organisms themselves. Our genes have been able to do this because our ancestors were unable or unwilling to resist the urge to procreate. We have stemmed this to some extent by teaching kids about contraception (notably by appealing to "selfish" arguments about their future happiness, not saving the planet). Nonetheless the population continues to grow.

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Also relevant is another idea in *The Selfish Gene* known as kin selection. It suggests that not only is our ultimate drive to spread the genes contained within our bodies, we are also compelled to protect and nurture the genes in our relatives – and by extension the people in our motherland.

Originally discussed by Darwin, this idea implies we are all essentially racist – consciously or sub-consciously favouring those who share our genes. It is one of the more controversial areas in *The Selfish Gene*, since it is difficult if not impossible to separate nature and nurture. All the same, the fact that we have more genes in common with people closer to home means there is at least an evolutionary argument for favouring them.

If the idea is right, it is an additional explanation for our inability to think in terms of what is best for humanity as a whole. If you were to reduce your population on behalf of humanity, for example, it might mean fewer young people – threatening economic problems. One solution is immigration from countries who have many young people. But are we prepared to supplement our own gene pool with young foreigners?

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Something else in our nature may also be driving us towards unprotected copulation. Just as we are prisoners to the desire of our selfish genes, we also find it difficult to think unemotionally. In his bestselling book from 2011, *Thinking, Fast and Slow*, the Nobel laureate Daniel Kahnemann convincingly explained why we struggle to make good choices to seemingly simple problems, particularly those with a strong emotional element. That includes resisting the urge to breed.

If he is correct, it means that even appealing to people's own rational self-interest about population control would not be enough. As for arguing it would benefit the greater good of humanity, we may as well forget it. As Kahnemann himself said in an interview, you can't learn your way out of this trap. "It's not a case of 'Read this book and then you'll think differently'. I've written this book, and I don't think differently."

What it means

Is there any hope of addressing these aspects of the human condition? Certainly there is no general acceptance that human breeding is a bad thing, and not just when other nationalities do it. Even people

who understand that there are way too many humans continue to produce their own little addition. And in our societies, we overwhelmingly celebrate births as great thing. Overriding our drive to

procreate is therefore a monumental task. We know that education can work up to a point. And in some countries birth rates are already falling, so that's a start.

Potentially we can learn from China's controversial one child policy. It did reduce the number of humans born in that country. If we could overcome the intolerable suffering that it caused by aggressively implementing a policy of true equality of opportunity for men and women at the same time, it may yet be workable.

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To help win hearts and minds for such a change, we may be able to draw on a technique called "nudge" – as described in the 2008 book of the same name by American academics Richard Thaler and Cass Sunstein. Nudging essentially persuades people to adopt behaviours that are better for either them or society as a whole. It has been shown to work on many people without them being conscious of it.

But first, it needs to become more widely recognised that we are at war with our own biological constraints. In the decades to come, it is just possible that we will be able to create a new civilisation somewhere else in the solar system or even beyond. But staring back at those settlers in the mirror will still be the same fundamentally flawed humans. Instead of running away, wouldn't it be better to stand and fight?

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