Gene editing babies is unethical: Biochemist

As human genetic engineering becomes ever more sophisticated, our policing mechanisms will need to match it.

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A Chinese research group claims it has produced a genetically-modified human baby. It was only a matter of time.

By doing so, this group — and anyone else who attempts the same — is flouting every ethical guideline and every law that currently applies within the sort of country that could support such research.

There's no good justification for bringing experimental human embryos to term. John Locke and his followers might have believed, correctly, that we have a right to life, liberty, the protection of property and the pursuit of happiness, but Locke was careful to hedge that right against corresponding rights for others: We have no right to infringe on the life, liberty, property and happiness of others; and bringing a genetically-modified human embryo to term is to risk doing just that.

If it can be done, someone will do it

But if there is an iron law of technology, it is that if something can be done, and if there is potential commercial or psychological or geopolitical advantage to it being done, then someone somewhere will do it. They might have to find a hidden island base on which to do it, and they might have to stroke a white cat while they're doing it, but they'll do it.

CRISPR (or Clustered Regularly Interspaced Short Palindromic Repeats, pronounced 'CrispAh'), a basis for specific genome editing, is still only a few years old, and as a technology for engineering DNA it is currently far too experimental to be used on human beings.

The researchers involved have apparently claimed these particular experiments to be ethical because they will allow HIV-positive fathers to sire HIV-resistant children, yet that argument

cannot outweigh the unknown number of uncertainties that still girdle the technology. These are definitely unethical procedures.

So, what to do? We can take comfort in knowing that the risk is not very scalable. Though there may soon be a number of genetically-modified human babies being born, it will not be possible for scientists to produce more than a handful without those scientists revealing their identities and locations. Even within a country like China, the necessary secrecy could not be maintained indefinitely.

It will then be for the international scientific societies and journals to ostracize these individuals. In his 1962 essay "The Republic of Science," Michael Polanyi wrote that scientists "are in fact cooperating as members of a closely knit organization … (under) the principle of spontaneous coordination," and the time has surely come for scientists to be more proactive in ostracizing offenders.

Scientific advances aren't always positive

Fritz Haber, for example, a German-Jewisg chemist, was once hailed as humanity's greatest single benefactor, as his nitrogen-fixing process doubled, tripled or even quadrupled the numbers of people the globe's agriculture could support, yet he nonetheless devoted the years 1914-18 to inventing poison gases, the better to kill French, Belgian, British, American, Italian and Russian soldiers.

But poison gases were ready to be invented and, in view of the vulnerability of French, Belgian, British, American, Italian and Russian lungs to chlorine and other killer gases, Haber obeyed the iron law and invented them. His wife (also a chemist), understandably, killed herself, yet he was nonetheless awarded the Nobel Prize in — bizarrely — 1918. In 1918, the Nobel committee chose to emphasize a message of scientific neutrality.

Alfred Nobel himself was ashamed of his reputation as an agent of death, and we should surely harness scientists' desire for recognition to ethical, not neutral, values.

No ethical system will ever be perfect, but it would surely behoove the research community to enforce a standard of conduct not dissimilar, perhaps, to a doctor’s Hippocratic Oath.

Government, too, could reinforce the message. Just as we forbid certain foreign individuals from coming to these shores so we could forbid entry to unethical foreign scientists.

There is always a tension between individual freedom and collective advantage, and we are properly reluctant to infringe too strongly on the rights of people, but as human genetic engineering becomes ever more sophisticated, our policing mechanisms will need to match it. And once an ethical standard has been agreed, we should enforce it.

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