

HEALTH & SCIENCE

“One very good reason why Americans distrust scientists”



Michael Cook, editor of MercatorNet.com, published an article on 2/22/17 concerning the breakdown of the public's trust of the science/research community. The National Academy of Sciences and the National Academy of Medicine recently released a report entitled “Human Genome Editing: Science, Ethics, and Governance”. Cook states that “the central question it poses is whether eugenics is safe and ethical. Its answer is that eugenics would be ethical if it were safe. This is oversimplifying the tentative prose of this dense 300-page report, of course, but not greatly.”

Cook acknowledges that “there is an urgency to these questions. A technique has been found which can modify the human genome quickly and efficiently. Called CRISPR/Cas9, it allows scientists to snip strands of DNA, removing some genes and inserting others. The opportunities and the dangers are immense. If it is confined to non-reproductive cells, it can be used to develop therapies and cure diseases. Curing ailments in utero is particularly promising.

“But it will also be possible to modify the human germline cells, of the eggs and sperm or the resulting embryo so that genetic changes can be passed on to future generations. If this happens, society could be relieved from the burden of genetic diseases; parents will be able to design their offspring; and the dreams of transhumanists will start to unfold. In plain language, this is called eugenics.”

The authors of the report admit that it will be hard to stop the spread of ‘do-it-yourself’ eugenics in the United States. The authors stated, “Access to germline genome editing would be consistent with the broadest legal and cultural interpretations of parental autonomy rights in the United States...Precluding access to this technology could be regarded as limiting parental autonomy, depending upon the country and the culture. Indeed, some people feel they have a religious or historical mandate to have genetically related children.”

On February 18th, the Economist ran an article (Leaders section, “Sex and Science”) about the report and stated, “Happy parents and healthy children make a pretty good rule for thinking about any reproductive technology. A procedure's safety is the central concern. Proving this is a high hurdle. Researchers are, wrongly in the eyes of some, allowed to experiment on human embryos when they consist of just a few cells...Defining the limits of what should be allowed is more slippery. But again, the test of happy parents and healthy children is the right one. Growing sperm and eggs from body cells is surely

the least problematic new technique soon to be on offer...But the law should insist that two people be involved. If one person tried to be both father and mother to a child, the resulting eggs and sperm would, without recourse to wholesale gene editing, combine to concentrate harmful mutations in what would amount to the ultimate form of inbreeding...The first gene editing will eliminate genetic diseases in a way that now requires embryo selection – an advance many would applaud. Adults should be able to clone perfect copies of themselves, as an aspect of self-determination. But breeding babies with new traits and cloning other people raises questions of equality and whether it is ever right to use other people's tissues without their consent. The questions will be legion. Should bereaved parents be able to clone a lost child? Or a widow her departed husband? Should the wealthy be able to pay for their children to be intelligent and diligent, if nobody else can afford to do so? Commissions of experts will need to search for answers; and courts will need to apply the rules – to protect the interests of the unborn. They will be able to draw on precedents, such as identical twins, where society copes with clones perfectly well, or ‘savior siblings’, selected using IVF to provide stem cells that can cure a critically ill older brother or sister. Any regime must be adaptable, because opinions change as people get used to new techniques. Going by the past, though, the risk is not of people rushing headlong to the reproductive extremes, but of holding back, and leaving people to suffer out of a misplaced sense of what feels right.”

Cook stated that it was only a little over a year ago that the National Academy of Science held a summit and concluded it would be “irresponsible to proceed with any clinical use of germline editing [until it was safe and] there is a broad societal consensus.” Cook went on to say that even though these conditions have not been met the latest report recommended that “with stringent oversight, heritable germline editing clinical trials could one day be permitted for serious conditions. He notes that even though the report sounded cautious, its ethics are clear – “there is nothing intrinsically wrong with eugenics, provided it is safe and legal.”

The [National Academy] report suggests that the government needs to launch a public engagement program to overcome the public's resistance. Cook concluded, “this sounds suspiciously like what used to be called propaganda... [and was used successfully in the UK] to permit the creation of human-animal embryos and three-parent embryos...It is projects like this expensive exercise in justifying eugenics which widen the gap between the science community and the public. They strengthen the view that scientists regard ethics merely as an obstacle to progress. And that's not what most Americans believe.”

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