No time to waste on the road to a liberal eugenics?

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Comment on: **AL Caplan et al** (November 2015)

In their article “No time to waste”, Arthur L. Caplan, Brendan Parent, Michael Shen and Carolyn Plunkett make a valid point that there is “no time to waste” to regulate the application of CRISPR and other tools for genome editing [1]. Preventing the misuse of this new technology requires time for open discussions and should not be driven by the results of applying this technology, which cannot be justified in hindsight [2].

We first need to get a better understanding of how genome editing by CRISPR or any other technology would interfere with intricate regulatory networks and natural genome editing. This refers to the “deep grammar” of

the genetic text beyond the sequence of nucleotides, which is represented by epigenetic mechanisms, long-range interactions of genes, gene clusters, and networks of regulatory elements such as non-coding RNAs, persistent viruses, and mobile genetic elements. There are currently investigations of how artificial genome editing could interfere with these complex and sophisticated mechanisms.

Second, the genetic engineering of the human germ line opens the door to downgrading humans from individual subjects to objects of technical applications and thereby objects of interests of his or her parents [3]. A human thus conceived would lose his or her status of autonomy, equality, and liberty if their genome is no longer the result of contingency but of genetic engineering and,

as an adult, may develop identity problems. How do we justify this later on to the adult person who has been object to genetic manipulation in his pre-personal developmental stage? How to justify the fact that these manipulations will be part of his or her children too? There is indeed “No time to waste” to regulate these techniques; not doing so is similar to driving a car too fast into a curve hoping that no other car will come. Would we think this responsible?

References

1. Baltimore D, Berg P, Botchan M *et al* (2015) *Science* 348: 36–38
2. Lanphier E, Urnov F, Haecker SE *et al* (2015) *Nature* 519: 410–411
3. Henrich DC (2011) *Eth Persp* 18: 249–268