The new hybrid

Imagine if... machines could read (or write!) our DNA

Hyper connectivity

Artificial intelligence

By 2071, machines can quickly sequence and analyze DNA, and then write new DNA to transform our gene sequence or manufacture tailored proteins. Nanopore technology helps sequence millions of bases. Gene splicing selectively modifies human RNA/DNA. Fast protein synthesis technologies have also advanced.

Norms over the use of such technologies are slow to develop and societal debates over the acceptable norms of generic manipulation continue. Rich individuals and "rogue" states will test the boundaries. We are entering a time of designer humans, but also a time of medical advances which act to extend life and hold back ageing.

DNA data has become ubiquitous with such data readily acquired leading to derivation of highly sensitive information on generic disease and modelling of biological characteristics. Privacy concerns over such data have grown given the potential for exploitation, for targeting of individuals and even for engineering of biological weapons tailored to their genome.

The manipulation and tampering with genetic engineering systems creates significant risks – and may lead to creation of tailored bio weapons or lethal modification of medical systems/processes.