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Unnatural selection

Hands up who's had a Caesarean section? On average, that should be around 35% of all mothers. And, for avoidance of doubt, 0% of everyone else. But what's really interesting is why that average figure among mothers is currently increasing.

According to this BBC story, one explanation for this increase is effectively a defiance of natural selection:

'Why is the rate of birth problems, in particular what we call fetopelvic disproportion - basically that the baby doesn't fit through the maternal birth canal - why is this rate so high? Without modern medical intervention such problems often were lethal and this is, from an evolutionary perspective, selection. Women with a very narrow pelvis would not have survived birth 100 years ago. They do now and pass on their genes encoding for a narrow pelvis to their daughters.'

So says Dr Philipp Mitteroecker of the University of Vienna. On a similar theme, Dr Harvey Fineberg's 2011 TED talk considers neo-evolution; that is, how we are increasingly determining our own biological destinies via genetic engineering. It is already possible to select the gender of your next child, for example – a procedure yuckily euphemised as ' family balancing' by one of its leading proponents in California.

Fineberg goes on to consider what other modifications might be possible within a few generations – such as genetically improved longevity, fitness or creativity. This vision of evolution supplants natural selection with deliberate selection, but the underlying principle stays the same: that we are starting to control our own destinies. If you have a spare 17 minutes, I thoroughly recommend watching his talk in its entirety.

Wine is said to evolve in the bottle over time, but is it evolving in other ways too? Are we witnessing natural selection within the culture of wine?

Perhaps this is nothing new. After all, grapevines have artificially evolved through centuries of selective breeding and cultivation. All the major wine grape varieties grown today have been manipulated in some way, whether by clonal selection, mass selection or crossing.

Fineberg says that evolution favours those who are 'best adapted to their environment', but grapes are also chosen for their quality of flavour and structure, even when they aren't especially well-suited to a given environment – there would be easier varieties to ripen in Burgundy and Bordeaux than Pinot Noir and Cabernet Sauvignon, for example.

Indeed, one such is Cabernet Jura, which is now being grown by Ducourt in the Entre-Deux-Mers region of Bordeaux. It is a cross between Cabernet Sauvignon and another (undisclosed) disease-resistant variety. As technology improves, and in the context of a changing climate, might these new grapevines eventually supersede the sacrosanct noble varieties?

All the evidence would suggest that something along those lines is likely. Determining a timescale is far more tricky, however. Nothing in viticulture happens suddenly – but what if we were to imagine 200 years into the future, or 2,000? Inevitably, things will be very different – although none of us will be here to witness it. With the possible exception of Dr Fineberg.

EVOLUTION BY SELECTED BREEDING?

The possibility of genetically altered human beings evokes an uneasy fascination. It infers a classification system, the implications of which have terrible consequences – as in the 2013 film *Elysium*, in which elite humans live in outer-space luxury, leaving the poor and disadvantaged to a life of misery on a godforsaken earth.

Pifflingly unimportant by comparison, there is nonetheless a parallel to be drawn with wine. The difference between the world's most elite and most proletarian wines becomes ever more distinct - in price, at least. Perhaps this is not the specific fault of wine, but can be blamed on the nature of our global economy: as wealth continues to grow for the richest, so their spending capacity increases and the world's most valuable wines become increasingly expensive.

But where does that leave the world's under-privileged wines? In a sci-fi scenario, they would be left to degenerate into a sub-species that bears little resemblance to its most successful relations. Indeed, some might suggest this has already happened.

But that would be unfair. The quality of all wine continually improves with each generation, and standards today are higher than ever before, bringing far greater reliability and diversity to the world's wine drinkers. For as long as all wine continues to improve in this way, the idea of a genetically superior class of wine remains science fiction. Instead, a natural course of evolution will continue to see wine adapt to changing tastes and changing circumstances. The great wines of the future may be very different to what we know now.

And if that's something worth living longer for, call Dr Fineberg.