

Case 3 - Rebutting the Materialist Vision

Once again consider a quote from Sam Harris' *Free Will* (page 27):

In physical terms, we know that every human action can be reduced to a series of impersonal events: Genes are transcribed, neurotransmitters bind to their receptors, muscle fibers contract, and John Doe pulls the trigger on his gun.

Before considering a counterexample it is worth a pause. Harris' genetic causal presumption was in question as he wrote this and at some level he was likely aware of that. *Free Will* appears to be largely another exercise in the presumptions of the materialist vision in which Harris also somehow concludes that the existence of a soul would not change his arguments against the existence of free will. The complicated issues associated with the concept of free will in fact overlap with the underlying mystery of self. If we ultimately are simply machines - or more accurately bio-robots - then of course we don't have free will because the whole self and self-perception ball of wax would be a molecular-mechanically-beget illusion.

Now for a counterexample, this one borrowed from my Cureus paper and ultimately from Oliver Sacks', *An Anthropologist on Mars*, via Darold Treffert's book. This involved a man named Franco Magnani who experienced an unknown serious illness which had effects including "delirium" and "perhaps seizures" [pp. 198-199]. Post recovery, "Magnani began painting immaculately accurate scenes from the village of Pontito [Italy] where he had grown up, but had left at age 18." In addition to the "digital-fidelity recall" the interest and painting skills appeared to come out of the blue. Magnani commented, "Fantastic. How could I do it? And how could I have had the gift and not known about it before?" The August 2014 issue of *Scientific American* has an article "Accidental Genius" by Treffert on such acquired savant phenomena. These phenomena clearly present a big challenge the bio-robotic vision.

From a materialist's perspective reading something like Treffert's *Islands of Genius* has to intellectually evoke something akin to the sensation of a physical jolt. If more scientists had maintained some awareness of such phenomena they would have likely acknowledged that in some scenarios their assumptions appear to be violated. Nonetheless, Treffert naturally felt obliged to come up with a scientific explanation for the origins of 'knowing without learning'. His solution is to extrapolate an amazingly optimistic 2007 *NOVA* TV episode, "Ghost in Your Genes", whose central message was that if bio-information is not found in the DNA then it is found in the associated epigenome.

For Treffert's (and also other extraordinary) epigenetic claims it is worth a some descriptive content on the epigenome. A fine description of what is known of the epigenome, its mechanics, and possible mental health implications can be found in the *Scientific American* article, "Hidden Switches in the Mind" by Eric J. Nestler (December 2011). The epigenome consists of the additional chemical markers which can indirectly effect the expression of genes by changing the packaging of the DNA (the folded-up DNA, along with supporting proteins, is called chromatin). In particular, if the epigenetic markings influence the shape of the chromatin in such a way that certain genes are tightly packaged and thus (RNA-)unreadable, then the expression of those genes will be minimized. In general as Nestler pointed out, "[t]he environment can influence gene activity by regulating the behavior of epigenetic writers and erasers - and thus the tagging, and restructuring, of chromatin". This chromatin dynamic appears to be part of normal genetic functioning - as for example in differentiating the gene expressions found in different types of cells. Also this epigenetic dynamic appears capable of long term unhealthy impacts as potentially with addiction and mental illness. The potential for any heritable effects - and thus conceivably with inexplicable learning - as pointed out by Nestler (in a related interview), though, are "controversial".

Treffert's confidant claim - "bottom line: genetic memory exists" - would presumably entail the recording or uploading of complex neural patterns associated with high level learning to the epigenome's enfoldment of the DNA; the subsequent reproductive passage of that enfoldment (including surviving the normal intervening erasure of epigenetic marks); and ultimately the downloading of that epigenetic encoding to the appropriate neural circuits to realize the otherwise inexplicable learning. More subtly, such epigenetic encoding would presumably have to not interfere with normal epigenetic functioning. If this weren't challenging enough, there would still have to be a historical reproductive lineage to support the specific learning. To explain the musical prodigy Jay with such a "genetic memory" theory, you would still have to identify some serious cello-playing and composing amongst Jay's ancestry. As Treffert pointed out, though, in the neighboring realm of prodigious savants there are some in which there appears to be no "family history of special skills". More generally, Treffert's optimism about the possibility of many or all of us having access to such buried genius is highly unlikely from this perspective as there have been so few intellectually exceptional individuals in history (and unlike bacteria we don't swap or share our DNA).