

Review of "Are We Hardwired?" by Clark & Grunstein Oxford (2000)

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ABSTRACT

This is an excellent review of gene/environment interactions on behavior and, in spite of being a bit dated, is an easy and worthwhile read. They start with twin studies which show the overwhelming impact of genetics on behavior. They note the increasingly well known studies of Judith Harris which extend and summarize the facts that shared home environment has almost no effect on behavior and that adopted children grow up to be as different from their stepbrothers and sisters as people chosen at random. One basic point that they (and nearly all who discuss behavioral genetics) fail to note is that the hundreds (thousands depending on your viewpoint) of human behavioral universals, including all the basics of our personalities, are 100% determined by our genes, with no variation in normals. Everyone sees a tree as a tree and not a stone, seeks and eats food, gets angry and jealous etc. So, what they are mostly talking about here is how much environment (culture) can affect the degree to which various traits are shown, rather than their appearance.

Finally, they discuss eugenics in the usual politically correct fashion, failing to note that we and all organisms are the products of nature's eugenics and that attempts to defeat natural selection with medicine, agriculture, and civilization as a whole, are disastrous for any society that persists. As much as 50% of all conceptions, or some 100 million/year, end in early spontaneous abortion, nearly all without the mother being aware. This natural culling of defective genes drives evolution, keeps us relatively genetically sound and makes society possible. However, it is now clear that overpopulation will destroy the world before dysgenics has a chance.

Those wishing a comprehensive up to date framework for human behavior from the modern two systems view may consult my article *The Logical Structure of Philosophy, Psychology, Mind and Language as Revealed in Wittgenstein and Searle* 59p(2016). For all my articles on Wittgenstein and Searle see my e-book *'The Logical Structure of Philosophy, Psychology, Mind and Language in Wittgenstein and Searle* 367p (2016). Those interested in all my writings in their most recent versions may consult my e-book *Philosophy, Human Nature and the Collapse of Civilization - Articles and Reviews 2006-2016'* 662p (2016).

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They start with twin studies which show the overwhelming impact of genetics on behavior. They note the increasingly well known studies of Judith Harris which extend and summarize the facts that shared home environment has almost no effect on behavior and that adopted children grow up to be as different from their stepbrothers and sisters as people chosen at random. There is lots of impact on personality (ca 50% of variation) from early environment, presumably peer interaction, TV etc., but we really don't know.

They summarize the genetics of behavior in the earliest true animals, the protozoa, and note that many of the genes and mechanisms underlying our behavior are already present. There is strong selective advantage to identifying the genes of one's potential mates and even protozoa have such mechanisms. There is data showing that people tend to pick out mates with different HLA types but the mechanism is obscure. They present various lines of evidence that we communicate unconsciously with pheromones via the vomeronasal organs and not mediated by smell neurons.

One chapter reviews the biology of the nematode *C. elegans*, noting the fact that it shares many mechanisms and genes with protozoa and with us due to the extreme conservatism of evolution.

Some human genes have been inserted into it with apparent preservation of their function in us. Moreover, they show what seem to be mechanisms of long term and short term memory controlled by genes in a fashion similar to that in higher organisms.

They note the general similarity of the nonvisual cryptochrome mediated regulation of circadian rhythms in yeasts and fruitflies to those in higher animals and even to those in plants. It has been shown that both cry-1 and cry-2 cryptochrome genes are present in fruit flies, mice and humans and that the photoreceptor system is active in many body cells other than the retina, and researchers have even been able to trigger circadian rhythms from light shined on our leg!

After a brief survey of work on the famous slug *Aplysia* and the cAMP and Calmodulin systems, they review the data on human neurotransmitters. The chapter on aggression notes the impulsive aggression of low serotonin mice and the effects on aggressive behavior of mutations/drugs that effect the chemistry of nitric oxide— recently, to the amazement of all, identified as a major neurotransmitter.

In a chapter on consumption, they recount the now well known story of leptin and its role in regulation food intake. Then a summary of the genetics of sexual behavior.

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genes, with no variation in normals. Everyone sees a tree as a tree and not a stone, seeks and eats food, gets angry and jealous etc. So, what they are mostly talking about here is how much environment (culture) can affect the degree to which various traits are shown, rather than their appearance.

There are also highly active fields studying human behavior which they barely mention— evolutionary psychology, cognitive psychology, parts of sociology, anthropology and behavioral economics—which are casting brilliant lights on behavior and showing that it is to a large extent automatic and unconscious with little voluntary awareness or control. The authors bias towards biology is a huge defect.

Finally, they discuss eugenics in the usual politically correct fashion, failing to note that we and all organisms are the products of nature's eugenics and that attempts to defeat natural selection with medicine, agriculture, and civilization as a whole, are disastrous for any society that persists. As much as 50% of all conceptions, or some 100 million/year, end in early spontaneous abortion, nearly all without the mother being aware. This natural culling of defective genes drives evolution, keeps us relatively genetically sound and makes society possible. However, it is now clear that overpopulation will destroy the world before dysgenics has a chance.