

Book Review

Long live nature via nurture!

Nature via Nurture: Genes, Experience and What Makes us Human by Matt Ridley. Fourth Estate, 2003; ISBN 1-84115-745-7 hbk

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The nature-nurture debate is one of the most heated and exciting minefields of all academic discourse. In the tradition wanting to contribute consilient (Wilson 1998) or vertically/conceptually integrated (Barkow 1989; Cosmides, Tooby, and Barkow 1992) approaches to link scientific results from different fields, Matt Ridley has presented *Nature via Nurture: Genes, Experience and What Makes us Human*. He is a superb writer, well-prepared to the task, after having presented three acclaimed and excellent books on evolutionary approaches to animal and human behavior (Ridley 1993; Ridley 1996) and genetics (Ridley 1999) in the last decade.

The main thesis of *Nature via Nurture* is that nature versus nurture is a false dichotomy. Even though all seem to acknowledge this and that humans are a product of an interaction between the two, the debate still continues. Let's stop this futile debate, get rid of the strawmen and move forward! Ridley's point is that the discovery of how genes actually influence human behavior, and how human behavior influences genes, is about to recast the debate entirely. No longer is it nature-versus-nature, but nature-via-nurture: Genes are designed to take their cues from nurture. The more we lift the lid on the genome, the more vulnerable to experience genes appear to be. Ridley explains easily that genes are not puppet masters pulling the strings of our behavior (a common misunderstanding), but are puppets at the mercy of our behavior. Instinct is *not* the opposite of learning, and environmental influences are sometimes less reversible than genetic ones.

In ten chapters, Ridley presents twelve pioneers who put together the chief theories of human nature that came to dominate the twentieth century: Charles Darwin, Francis Galton, William James, Hugo De Vries, Ivan Pavlov, John Broadus Watson, Emil Kraepelin, Sigmund Freud, Emile Durkheim, Franz Boas, Jean Piaget, and Konrad Lorenz. Ridley's claim is that all 12 men were right in

the sense that they all contributed an original idea with a germ of the truth in it. In other words, they all placed a brick in the wall. Ridley writes (p. 6):

Human nature is indeed a combination of Darwin's universals, Galton's heredity, James's instincts, De Vries's genes, Pavlov's reflexes, Watson's associations, Kraepelin's history, Freud's formative experience, Boas's culture, Durkheim's division of labour, Piaget's development and Lorenz's imprinting. You can find all these things going on in the human mind. No account of human nature would be complete without them all.

But nearly all went too far in trumpeting their own ideas and criticising each other's. And one or two of them deliberately or unintentionally gave birth to grotesque perversions of "scientific" policy that will haunt their reputations forever.

Ridley's main point is that to understand each of these topics, one needs to understand genes (p. 6):

It is genes that allow the human mind to learn, to remember, to imitate, to imprint, to absorb culture and to express instincts. Genes are not puppet masters, nor blueprints. Nor are they just the carriers of heredity. They are active during life; they switch each other on and off; they respond to the environment. They may direct the construction of the body and brain in the womb, but then they set about dismantling and rebuilding what they have made almost at once – in response to experience. They are both cause and consequence of our actions. Somehow the adherents of the 'nurture' side of the argument have scared themselves silly at the power and inevitability of genes, and missed the greatest lesson of all: the genes are on their side.

Nature via Nurture is written by a scientist and science writer (Ridley is both) in the genre for the educated part of the lay audience in addition to scientists of all stripes – in the tradition of Richard Dawkins and Stephen Jay Gould. Even technical topics in genetics and neuroscience are presented so it is easy and fun to follow Ridley on his intellectual journey. The ten chapters each start with one or two pioneers, an evaluation of their ideas and a discussion of what science has achieved to add improved insight or – in some cases - to solve certain problems and paradoxes. This is public education at its best!

Writing as a synthesising generalist has its price: Most experts will claim that certain nuances or pet theories are left out. For example, Ridley makes an argument that "supports the conclusion that the progressive evolution of culture

since the Upper Paleolithic revolution happened without altering the human mind.” (p. 228) without mentioning that another leading hypothesis claims that the opposite is most probable (Mithen 1996). I, for one, missed more about nutrition in an otherwise excellent presentation of various approaches to a very serious behavior disorder, schizophrenia. Although Ridley mentions that essential fatty acids seem to be important in explaining and treating this disease, he does not mention niacin (vitamin B₃). There are ample clinical experience (and success) in treating schizophrenia with large doses of niacin (Osmond and Smythies 1952; Hoffer, Osmond, Callbeck, and Kahan 1957; Hoffer 1998), even though this fact is ignored or neglected by many mainstream psychiatrists. Such a treatment approach has interesting implications for several other phenomena he discusses.

These remarks aside, I learned a lot from Ridley’s great synthesis and superb presentation. Our culture desperately needs persons like Ridley who uses a brilliant pen and a clear mind to make sense out of scientific contributions in many different fields. I hope all of us can agree on his conclusion (the book’s last two sentences): ”Nature versus nurture is dead. Long live nature via nurture.” But to fully grasp the implications of these statements, you simply have to read *Nature via Nurture* yourself.

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