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David Wastell and Susan White (2017). *Blinded by science: The social implications of epigenetics and neuroscience*. London: Policy Press.

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Are we sleepwalking into a new era of state-sanctioned epi-eugenics? This ominous question hangs like a shadow over David Wastell and Sue White's new book, whose technical-sounding title belies the fierce critique between the covers. Their target is not the brutal sterilisation and extermination programmes that Spencerian eugenics helped to unleash in the 20th century. Instead, they are concerned with a contemporary and rather murky confluence of science and politics: neuroscience and child welfare, epigenetics and poverty. Some quick definitions are probably in order.

Neuroscience is the study of the development and functioning of the brain at the molecular level of neurones and synapses. Epigenetics is the study of environmental influences on gene expression that leads to changes in organisms. Both fields – as the authors go on to demonstrate – are not even in their infancy but rather at an embryonic stage of knowledge and explanatory power. In other words, we don't really understand how the brain works, or how personality and behaviour are shaped by biological mechanisms. Nonetheless, Wastell and White contend that findings from these nascent bodies of research are being combined to support a bio-medical theory with growing political and institutional clout. This is the Developmental Origins of Health and Disease (DOoHD) model, which underlies early intervention to protect young children from abuse and neglect, but also public health programmes targeting the 'uterine environment' (i.e. pregnant women's wombs).

Readers who are familiar with the authors' previous work (e.g. Wastell and White, 2012) will already know one aspect of the argument, namely that findings from neuroscience research – abetted by some dubious brain scan images – are being bowdlerised and selectively interpreted by policymakers and campaigners in order to push an agenda of early intervention in child welfare cases. Increasingly, social workers and other children's practitioners are led to believe that they must protect children's brains from potentially irreversible damage incurred by neglect and emotional abuse – attachment theory with neurones, as it were. The research on epigenetic mechanisms, mostly based on laboratory experiments on rats, is designed to explore how the experience of adversity and stress might be transmitted to the developing foetus as hardwired propensities for illness and cognitive impairment. For Wastell and White, this is problematic not just because it is a bad use of science – and indeed just bad science in some cases – but because of its troubling social implications. In effect, efforts to improve society are slowly (and again) becoming conflated with another longstanding modernist project, namely to improve the human race. Instead of ethics, we get epigenetics: a utopian project going wrong.

It is an ambitious thesis, and Wastell and White necessarily have to cover a lot of ground to make their case. They do not pull any intellectual punches, and happily invite readers to look back on social theories of utopia, delve into the complexity of DNA methylation, engage in a critical review of sociogenic literature, and ponder the relative importance of effect size estimates vs measures of statistical significance. It is a deliberate tactic: this is how scientists talk and write, which sometimes almost seems designed to put people off. Wastell and White are not put off, and repeatedly

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demonstrate why it pays to look at the primary research on which seemingly plausible ‘evidence-based’ policy prescriptions are based. Through their efforts, we find out about the studies that make inferences about parental neglect in humans on the basis of ‘rat mums’ tortured in a laboratory swim-test; or the study that makes inferences about epigenetic transmission during pregnancy without having actually studied any pregnant women. Part of the appeal of the book is the unique constellation of expertise and interests that the authors bring to their topic - it is not often you get a neuroscientist and a sociologist working together on a detailed synthesis of their respective fields.

This book is essentially a critique and so readers will need to look elsewhere for an alternative vision of how to approach the social problems to which they suggest the DOoHD model is unsuited (e.g. Featherstone, White and Morris, 2014). The authors are careful to avoid polemical or ‘slippery slope’ type arguments, preferring instead to expose the gaps and fallacies in the scientific evidence and its selective interpretation by think-tanks, campaign groups and policymakers. In the end, their contention that psychosocial phenomena are generally best understood through psychosocial explanations – and therefore addressed through psychosocial interventions – is convincingly made. But the implicit warning is there: if we allow ourselves to be blinded by science, we won’t see where it’s taking us.

References

Wastell, D., & White, S. (2012). Blinded by neuroscience: Social policy, the family and the infant brain. *Families, Relationships and Societies*, 1(3), 397-414.

Featherstone, B., White, S., & Morris, K. (2014). *Re-imagining child protection: Towards humane social work with families*. Bristol: Policy Press.