

ARE WE SLAVES TO OUR GENES?

There is a common misconception that our genomes – all unique, except for those in identical twins – have the upper hand in controlling our destiny. The latest genetic discoveries, however, do not support that view. Although genetic variation does influence differences in various human behaviours to a greater or lesser degree, most of the time this does not undermine our genuine free will. Genetic determinism comes into play only in various medical conditions, notably some psychiatric syndromes. Denis R. Alexander here demonstrates that we are not slaves to our genes. He shows how a predisposition to behave in certain ways is influenced at a molecular level by particular genes. Yet a far greater influence on our behaviours are our world views that lie beyond science – and that have an impact on how we think the latest genetic discoveries should, or should not, be applied. Written in an engaging style, Alexander's book offers tools for understanding and assessing the latest genetic discoveries critically.

DENIS R. ALEXANDER is the Founding Director (Emeritus) of The Faraday Institute for Science and Religion and Emeritus Fellow of St Edmund's College, Cambridge. The former chair of the Molecular Immunology Programme at The Babraham Institute in Cambridge, he helped to establish the National Unit of Human Genetics at the American University Hospital in Beirut, Lebanon. He is the author of *Genes, Determinism, and God*.

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DENIS R. ALEXANDER
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Contents

<i>List of Figures</i>	<i>page</i> vi
<i>Preface</i>	vii
1. Genetic Confusion	1
2. Genetic Information and How It Flows	17
3. Genes and Environments in Human Development	36
4. What Is Behavioural Genetics?	55
5. Genes and Mental Health	74
6. Genes, Education and Intelligence	94
7. Genes, Personality and Personality Disorders	111
8. Genes, Food, Exercise and Weight	130
9. Genes, Religiosity and Political Commitment	143
10. Gay Genes? Genetics and Sexual Orientation	155
11. Are We Slaves to Our Genes?	178
12. Genes and Human Identity	196
<i>Notes</i>	215
<i>Definitions of Technical Terms</i>	221
<i>References</i>	225
<i>Index</i>	239

Figures

1.1. Pedigree of a Lebanese family showing the inheritance of fructose 1,6-diphosphatase deficiency. From Alexander et al. (1985).	<i>page</i> 3
2.1. The DNA double helix. Reproduced by permission of the Templeton Press.	20
2.2. The genetic code. Reproduced from OpenStax, Biology, OpenStax CNX.	22
2.3. Reading DNA.	25
2.4. How to make messenger RNA (mRNA).	25
2.5. Transcription and translation. Reproduced by permission of the Templeton Press.	26
5.1. The role of the UBE gene in autism and Angelman syndrome. Based on data from Yi et al. (2015).	80
7.1. Genetic correlations between 23andMe individuals and psychiatric disorders. From Lo et al. (2017).	116
7.2. A Dutch family in which a mutation in the monoamine oxidase A gene causes a complete lack of the monoamine oxidase protein. From Brunner et al. (1993a).	126
9.1. A comparison between identical and non-identical twins in terms of (9.1a) their frequency of contact and (9.1b) their emotional closeness. Adapted from Figure 1 of Neyer (2002).	147
10.1. The development of same-sex attraction (SSA) in a US demographic sample. Adapted, with permission, from Pew Research Center (2013) A survey of LGBT Americans: Attitudes, Experiences and Values in Changing Times. Washington, DC: Pew Research Center.	158

Preface

The aim of this book is to investigate whether the field of behavioural genetics provides any threats or challenges to our sense of human freedom. Are we really slaves to our genes?

The book started life as the Gifford Lectures given at St Andrews University in 2012, published under the title *Genes, Determinism and God* (Cambridge University Press) in 2017. Out of that came the request to publish a popular version of similar material more accessible to the general reader without, necessarily, any background in genetics. This is that version. Those who have already read *Genes, Determinism and God* will recognise some similarities. However, this book contains several altogether new chapters, such as Chapter 1, which provides a basic introduction to DNA and genetics, Chapter 5, which describes the latest findings in the field of genetics and mental health, and Chapter 8, which looks at the role of genetic variation in differences in our physical size and shape. The science has also been updated as hundreds more papers and books continue to be published in this rapidly moving field. References are given to the relevant literature for those who wish to follow up further. The use of some technical language is inevitable when explaining some of the concepts involved, but technical terms are explained when first mentioned and are defined in a separate handy list.

A book on popular genetics touches deeply on our own human identity, so the book covers the influence, or claimed influence, of human genetic variation on differences in our mental health, intelligence, educational attainment, personality, size, weight, levels of religious and political commitments, sexual orientation and much else besides, so hopefully there is something here for everybody. And after surveying these various aspects of our well-being – or otherwise – we then tackle the philosophical question as to whether our deep sense of free will is at all threatened by genetic

determinism, finally outlining some competing world views that make a huge difference to our concept of human identity in light of the latest findings in behavioural genetics.

My thanks are due to the many friends and colleagues who have made helpful suggestions on earlier versions of the present text; in particular, my thanks go to Keith Fox, Julian Rivers and Leland Taylor. As always, the author is fully responsible for any errors that remain. I would also like to thank Chris Akhurst for his subediting and Beatrice Rehl, Caroline Morley and Gayathri Tamilselvan at Cambridge University Press for their helpful support and advice.