

# Book Review

## *The Gene Illusion*

Jay Joseph

Ross-on-Wye, UK: PCCS., 2003, [www.pccs-books.co.uk](http://www.pccs-books.co.uk)

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Jay Joseph's book entitled *The Gene Illusion* was published three years ago, and a review seems long overdue. I believe this book to be a brilliant compilation that axes the very essence of biologically-based arguments used to imprison the field of social science and the mental health professions. Joseph offers clear and accurate rationale against accepted twin research theory, method, and findings. As such, Joseph's book challenges the biological basis for mental disorders, genetic determinism, medical treatment approaches favored in much of the current literature, and practice requirements of third-party/insurance reimbursers. The points presented and clarified by Joseph are critical to mental health clinicians, academics, students, researchers, and clients.

In Chapter One (Introduction), Joseph discusses research as the crux of the genetic model and, therefore, critical to debunk. He states that, with respect to the twin and adoption studies and the nature-nurture debate, "This book provides an alternative view of this body of literature" and "... that family, twin, and adoption studies are plagued by researcher bias, unsound methodology, and a reliance on unsupported theoretical assumptions" (p. 1).

Joseph indulges the reader in Chapter Two (Twin Research) with a history of twin research from "Galton to the 21st century." In this chronological overview, Joseph includes the work of Galton, Thorndike, Siemens, Rudin, Luxemburger, Schulz, Kallmann, and more. Joseph notes that bias in twin research has occurred as a result of the social and political context of the time and of the researchers. He states that "The history of twin research is usually told by twin researchers..." (p. 12), and that "...three generations of twin researchers have failed to document the 'appalling' history of their discipline" (p. 50). It is in this bias of researchers and untold history that the flaws in twin research theory, method, and conclusions are revealed.

Joseph examines twin research methodology in Chapter Three (The Twin Method: An environmentally confounded research method). Specifically, he details the equal environment assumption (EEA) and the trait-relevant equal environment assumption (Trait-Relevant EEA) of twin

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research, including inconsistencies in definition and theory. Joseph looks at leading twin researchers and concludes that "...the twin method is an environmentally confounded research technique which is unable to disentangle possible genetic and environmental factors" (pp. 81 - 82).

In Chapter Four (Genetic Studies of Twins Reared Apart: A critical review) Joseph takes on the folklore stream and the scientific stream of the twins reared apart model. As folklore, the two main questions Joseph brings to the fore are: (1) Why do most pairs of twins come to our attention, and (2) Do these twin pairs represent most pairs of twins.

Joseph's answers to these questions (respectively, because they are similar, and no) speak to the research confounds related to twins reared apart studies.

Joseph discusses heritability in Chapter Five (The Heritability Concept: A measure of inheritance or inherently misleading?) including definitions, origins and purposes. He maintains that between the confounds of gene-environment interactions and twin research, the "...heritability concept has little or no value in helping us understand the origins of human trait differences, but to the extent that it is widely misunderstood and misused, it is best irrelevant"(p. 131).

Joseph utilizes Chapter Six (The Genetics of Schizophrenia I: Overview) to outline the history, genetic theory, genetic predisposition, and twin studies associated with schizophrenia. He notes that studies of twins and families do not establish genetic influence on schizophrenia, merely the possibility of such. In his lengthy Chapter Seven (The Genetics of Schizophrenia II: Adoption studies) Joseph details the research flaws in schizophrenic adoption studies. He discusses two main problems: Selective placement and methodological/bias errors, and concludes that "...the results from family, twin, and adoption studies do not support the position that genes influence the appearance of a set of behaviors given the name 'schizophrenia'" (p. 230).

Joseph addresses criminal behavior in Chapter Eight (Is Criminal behavior in the Genes?), and intelligence in Chapter Nine (Genetics and IQ). As with Schizophrenia, Joseph concludes that evidence from twin, adoption, and family studies does not support genetic influence for criminal behavior nor intelligence. Poor research methodology, environmental confounds, and contextual biases (political, social, and researcher) are the now familiar factors de-legitimizing these bodies of literature.

Given the previous nine chapters, the idea of identifying specific genes responsible for psychiatric/psychological traits seems a moot point. Yet Joseph continues to pound away at the establishment in Chapter Ten

(Molecular Genetic Research in Psychiatry and Psychology). He states that because molecular research accepts that (1) family, twin, adoption studies demonstrate the role of genetic factors; and that (2) there appears no practical benefit to identifying genes, molecular genetic research in psychiatry or psychology will not produce useful information. Joseph looks at segregation analysis in this chapter, noting the flaw of assuming a genetic basis for a condition. Joseph specifically discusses schizophrenia, attention-deficit hyperactivity disorder, IQ, and behavior as areas "...of psychiatry where methodologically unsound research on twins and adoptees has led to erroneous conclusion..." (p. 283).

Joseph wraps up his book with Chapter Eleven (Where Do We Go from Here?) restating the main points of the book and offering alternatives to data collection, publication, and approach in research. He closes by noting that the future role of genetic influences in shaping human differences may be "...of interest only to historians" (p. 303).

Jay Joseph's book *The Gene Illusion* debunks the research literature that touts genetic/medical models as accurate and legitimate. In doing so, he debases mental health approaches based on long-standing genetic/medical models. His book challenges "... positions that are very well established and ...defended by internationally respected researchers" (p. 96).

It is essential reading for academics serving as an excellent literature reference and source. It is essential for students attempting to make an informed decision about their theoretical orientation to the mental health field. It is essential for researchers offering insights into areas of research theory folklore and methodological flaw. It is essential for PCA Clinicians offering ammunition/rationale for what we do and why it is effective. *The Gene Illusion* is a critical piece in advocating for other-than-medicine mental health approaches and for the PCA; it is a powerful and brilliant book!

### References

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