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Genetics and reductionism

With the advent of the Human Genome Project there have been many claims for the genetic origins of complex human behaviors including insanity, criminality, and intelligence. But what does it really mean to call a trait “genetic”? This is the fundamental question that Sahotra Sarkar’s book addresses.

The author analyzes the nature of reductionism in classical and molecular genetics. He shows that there are two radically different kinds of reductionist explanation: genetic reduction (as found in classical genetics) and physical reduction (found in molecular genetics). A behavioral trait can only be said to be genetic if genes alone provide the best explanation of its origin, and virtually all complex human behavioral traits fail this test.

This important book clarifies the meaning of the term “genetic,” shows how molecular studies have affected genetics, and provides the philosophical background necessary to understand the debates over the Human Genome Project.

It will be of particular interest to professionals and students in the philosophy of science, the history of science, and the social studies of science, medicine, and technology.

Sahotra Sarkar is a Fellow of the Wissenschaftskolleg zu Berlin.

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*To my parents, Niladri and Malabika Sarkar, for my genes and, even more
so, for my formative environment*

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