

“Can You Tell Me How to Get to Carnegie Hall?”

A review of



The Complexity of Greatness: Beyond Talent or Practice

by Scott Barry Kaufman (Ed.)

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Reviewed by

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As New Yorkers and musicians know, the punch line of the titular joke is, “Practice, practice, practice.” That is one answer to the apparently perennial question of whether high accomplishment is the result of nature—inborn talent—or nurture, broadly defined as environmental conditions. *The Complexity of Greatness: Beyond Talent or Practice* takes yet another look at this issue. Actually, it takes 18 looks, the number of contributed chapters.

The contributions include a wide range of positions on the fundamental question. However, although they differ in ascribing different weights to the two sources of greatness, most authors commit themselves to a belief that both are important. This conclusion is no surprise. Most psychology students get acquainted early with Kurt Lewin’s 1936 formulation of behavior as the function of the person *and* his or her environment: $B = f(P,E)$. More recently, *and* has been clarified as “interacting with”; but the point is the same. *Person*

includes genetic, neurobiological, physiological, motivational, and personality factors (comprehensively reviewed in the chapter on cognitive ability by Heiner Rindermann, Stephen J. Ceci, and Wendy M. Williams). Still, one of the interesting aspects of this book is the variety of stations that the authors pass before reaching that terminus.

For example, Wendy Johnson discusses experience-producing drive theory (EPD), that the genetic component works by directing people's attention and learning to different areas that allow them to express their genetic potential. This in turn leads to changes in the brain and body, making possible increased expertise in those particular domains. Although the theory is difficult to test, it is a step beyond a simple "genes transmit abilities" formula.

Other chapters explore the genes versus environment debate in various specific contexts of talent and activity: science, mathematics, memory, acting, the visual arts, music, and sport. There are fascinating stories of gifted families and individuals, including child prodigies and savants in various fields (music, art, calculation, and memory). The relationship between unusual ability and various kinds of disability is explored in the case of savants, who "know things they never learned" (p. 103), leading Darold A. Treffert to posit the existence of innate genetic memory in human beings.

On the other side of the argument, theoretically oriented chapters examine how self-evaluation can affect the development of malleable intelligence and other competencies, the crucial role of long practice in producing the physiological and cognitive changes that underlie superior performance, and the relationship between talent and practice in judging (not in producing) creative work in art. Evidence is also marshaled to show the importance of an environment that offers scope for developing skill and of practice—in some areas, years of practice—to attain high levels of performance. For example, Ellen Winner and Jennifer E. Drake show that some children engage in long hours of practice in drawing but also that their willingness to do so may derive from an intense "rage to master" —which, in turn, derives from innate talent.

One unusual part of the book is a head-to-head confrontation in two successive chapters. In one, François Gagné argues that innate abilities do exist and proposes a five-component model of their further development and interaction with environmental factors. But the chapter goes further. It accuses disbelievers ("antinats"; i.e., those opposed to theories of innately or "naturally" based abilities) of scholarly misconduct: of skewing the debate by citing studies but ignoring their details, of misrepresenting the views of their opponents, and of ignoring criticisms of their own position.

The next chapter, by K. Anders Ericsson, presents research evidence that "the acquisition of superior performance across the life span" (p. 228) can be achieved by extensive practice and that it is not necessary to posit a genetic contribution except in areas related to height and weight. Ericsson criticizes the evidence presented by Gagné, expresses his own dismay at being accused of scholarly misconduct, and discusses both the criticisms and the apparent attempt to split the field into "good guys" and bad. The book ends with an epilogue comprising encomia to the late qualitative researcher Michael Howe by three of his

former students and colleagues, acknowledging their debt to and appreciation of his mentorship.

What is the reader supposed to make of all this? In the second chapter, Dean Keith Simonton foreshadows the general conclusion: “[N]ature and nurture are both intimately intertwined in the generation of greatness. The only way to deny this conclusion is somehow to make tons of sound data disappear out of the scientific records” (p. 23).

Most of the contributors agree that some innate propensity favoring specialization in a particular domain of endeavor is the foundation of skill but also that sustained practice and study are required to turn that potential into high achievement. There may be a few exceptions, as among savants, some prodigies, and perhaps among individuals who overcome a lack of the relevant genetic endowment by sheer determination, but these are outliers remote from the prototype.

The nature–nurture debate is relevant to numerous areas of psychology as well as to the topic of talent and achievement (e.g., Rutter, 2006). For that reason, although this book does not inject new data or new conclusions into this overly prolonged dispute, its wide-ranging overview will be of interest to many colleagues.

References

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