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0521809886 - The Psychology of Abilities, Competencies, and Expertise

Edited by Robert J. Sternberg and Elena L. Grigorenko

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The Psychology of Abilities, Competencies, and Expertise

The goal of this book is to characterize the nature of abilities, competencies, and expertise and to understand the relations among them. The book therefore seeks to integrate into a coherent discipline what formerly have been, to a large extent, three separate disciplines. Such integration makes both theoretical and practical sense because abilities represent potentials to achieve competencies and, ultimately, expertise. Chapter authors (a) present their views on the nature of abilities, competencies, and expertise; (b) present their views on the interrelationships among these three constructs; (c) state their views on how these three constructs can be assessed and developed; (d) present empirical data supporting their positions; (e) compare and contrast their positions to alternative positions, showing why they believe their positions to be preferred; and (f) speculate on the implications of their viewpoints for science, education, and society.

Robert J. Sternberg is IBM Professor of Psychology and Education and Director of the Center for the Psychology of Abilities, Competencies, and Expertise (PACE Center), Department of Psychology, Yale University. He is currently President of the American Psychological Association and Editor of *The APA Review of Books: Contemporary Psychology*. The author of more than 900 published works, including multiple books and articles, Sternberg has won numerous awards for his work.

Elena L. Grigorenko holds a Ph.D. in general psychology from Moscow State University and a Ph.D. in developmental psychology and genetics from Yale University. Dr. Grigorenko has published more than 100 books and articles and has won a dissertation award and three early career awards. She has worked with American, Russian, Indian, and African children in multiple countries around the world. Her main interests are individual differences, child development, and exceptional children. Currently, Dr. Grigorenko is Associate Professor of Child Studies and Psychology at Yale and at Moscow State University.

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Edited by

ROBERT J. STERNBERG

Yale University

ELENA L. GRIGORENKO

Yale University and

Moscow State University



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Contents

<i>Preface</i>	<i>page</i> vii
<i>List of Contributors</i>	xi
1 Trait Complexes, Cognitive Investment, and Domain Knowledge <i>Philip Ackerman and Margaret E. Beier</i>	1
2 Intelligence as Adaptive Resource Development and Resource Allocation: A New Look Through the Lenses of SOC and Expertise <i>Ralf T. Krampe and Paul B. Baltes</i>	31
3 Developing Childhood Proclivities into Adult Competencies: The Overlooked Multiplier Effect <i>Stephen J. Ceci, Susan M. Barnett, and Tomoe Kanaya</i>	70
4 The Search for General Abilities and Basic Capacities: Theoretical Implications from the Modifiability and Complexity of Mechanisms Mediating Expert Performance <i>K. Anders Ericsson</i>	93
5 On Abilities and Domains <i>Michael W. Connell, Kimberly Sheridan, and Howard Gardner</i>	126
6 Expertise and Mental Disabilities: Bridging the Unbridgeable? <i>Elena L. Grigorenko</i>	156
7 The Early Progress of Able Young Musicians <i>Michael J. A. Howe and Jane W. Davidson</i>	186

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Frontmatter
[More information](#)

vi		<i>Contents</i>
8	Expertise, Competence, and Creative Ability: The Perplexing Complexities <i>Dean Keith Simonton</i>	213
9	Biological Intelligence <i>Robert J. Sternberg</i>	240
10	What Causes Individual Differences in Cognitive Performance? <i>Richard E. Mayer</i>	263
	<i>Index</i>	275

Preface

Some people study abilities, some study expertise, but few study both. Traditionally, the study of abilities has been seen as relatively distinct from the study of expertise, and the literatures that have developed in these two areas are largely distinct as well.

Ability theorists have argued about alternative factorial, process, biological, contextual, or other models of expertise, but, with few exceptions (such as Howard Gardner), have drawn only sparse links between their studies and studies of expert performance. Individuals with high levels of expertise are simply assumed to have developed these high levels of expertise as a function of their high levels of abilities.

Expertise theorists have argued about what it is that makes someone an expert, such as outstanding information processing or a highly organized knowledge base, or they have argued about how expertise is acquired, for example, through deliberate practice or skilled apprenticeship. They have failed to consider fully the role of expertise in the development and maintenance of expertise, and indeed, few expertise theorists have used any tests of abilities in their research.

Competencies often have been viewed as an endpoint in the study of abilities (for example, as providing criteria against which measures of abilities are validated) or as a beginning point in the study of expertise (for example, as providing a baseline for novices, or at least, nonexperts, against which expertise performance can be compared). Competency theorists have sometimes linked their work to abilities, and sometimes to expertise, but rarely to both.

The result of this separation among the studies of abilities, competencies, and expertise is that the field of psychology lacks relatively

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[More information](#)

comprehensive accounts of how abilities, competencies, and expertise relate, for example, through the development of abilities into competencies and later into varying levels of expertise.

The mission of this book is to present alternative viewpoints of the relationships among abilities, competencies, and expertise. The book therefore seeks to integrate into a coherent discipline what formerly have been, to a large extent, separate disciplines. Such an integration makes both theoretical and practical sense, because abilities are of interest because they represent potentials to achieve competencies and, ultimately, expertise.

Psychology students often wonder how there can exist within the field of psychology widely discrepant theories of the same phenomenon. They also wonder how theories can be so well able to account for certain kinds of facts pertaining to a given phenomenon, but not for other kinds of facts. One of the reasons that such puzzles arise is that investigators tend to limit their research to particular paradigms, to particular aspects of phenomena, or both.

For example, one might argue that *g* (general intelligence) theorists tend to rely on studies showing the internal and external validities of measures of the so-called general factor of intelligence, but largely discount many studies that show discriminant validity for other, non-*g*-based measures. At the same time, multiple-intelligence theorists largely discount the voluminous evidence that seems to favor a general factor. More generally, abilities theorists largely ignore the literature on expertise that shows the importance of deliberate practice in the development of expertise, whereas expertise theorists largely ignore the literature on abilities showing how much difference abilities can make to the attainment of expert levels of performances of diverse kinds. This book integrates both paradigms and multiple facets of what we believe to be three highly interrelated phenomena that force psychological researchers as well as consumers of such research to confront other paradigms and aspects of phenomena that they may not have fully confronted in their past thinking.

The book may be of interest to differential, cognitive, educational, school, industrial/organizational, counseling, and biological psychologists who wish to learn about the relations among abilities, competencies, and expertise. It may also be of interest to educators, cognitive scientists, and cognitive neuroscientists interested in questions related to these constructs. The book has been written at a level comprehensible to advanced undergraduate students.

Authors of chapters have been asked to do six things in their individual chapters:

1. To present their views on the nature of abilities, competencies, and expertise (including its nature and development)
2. To present their views on the interrelationships among these three constructs
3. To state their views on how these three constructs can be assessed and developed
4. To present empirical data supporting their position
5. To compare and contrast their position to alternative positions, showing why they believe their position to be preferred
6. To speculate on the implications of their viewpoint for science, education, and society

This book is dedicated to the memory of our contributor, colleague, and friend, Michael Howe.

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Contributors

Philip Ackerman, *Georgia Institute of Technology*

Paul B. Baltes, *Max Planck Institute for Human Development and Education, Berlin, Germany*

Susan M. Barnett, *Cornell University*

Margaret E. Beier, *Georgia Institute of Technology*

Stephen J. Ceci, *Cornell University*

Michael W. Connell, *Harvard University*

Jane W. Davidson, *Sheffield University, United Kingdom*

K. Anders Ericsson, *Florida State University*

Howard Gardner, *Harvard University*

Elena L. Grigorenko, *Yale University and Moscow State University*

Michael J. A. Howe (deceased), *University of Exeter*

Tomoe Kanaya, *Cornell University*

Ralf T. Krampe, *Max Planck Institute for Human Development and Education, Berlin, Germany*

Richard E. Mayer, *University of California, Santa Barbara*

Kimberly Sheridan, *Harvard University*

Dean Keith Simonton, *University of California, Davis*

Robert J. Sternberg, *Yale University*

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