

Cambridge University Press
0521605040 - Creativity and Reason in Cognitive Development
Edited by James C. Kaufman and John Baer
Frontmatter
[More information](#)

Creativity and Reason in Cognitive Development

To what extent do creativity and imagination decline in childhood? What factors might influence a decline? Theories of cognitive development show only unidirectional progress (although theorists may disagree whether such progress occurs steadily in small continuous improvements or comes in stages separated by plateaus during which developmental gains are consolidated). Declines in levels of skill are quite uncommon, yet many have observed just such an unusual pattern with regard to the development of creativity and of the imagination. Is there something about the development of one kind of thinking that undermines imaginative and creative thinking? Is it perhaps the process of schooling itself, with its focus on the acquisition of knowledge and the production of correct (rather than imaginative) answers, that promotes this decline? This book explores these questions from a variety of perspectives. Essays from psychologists and educators from diverse backgrounds discuss the relationships among creativity, reason, and knowledge.

James C. Kaufman is an assistant professor of Psychology at the California State University at San Bernardino, where he is also the director of the Learning Research Institute. He received his B.A. in psychology from the University of Southern California and his Ph.D. from Yale University in cognitive psychology, where he worked with Robert J. Sternberg. Kaufman's main area of expertise is creativity. With Sternberg and Jean Pretz, he developed the propulsion model of creative contributions, outlined in *The Creativity Conundrum* (2002). He coined "the Sylvia Plath Effect," based on an analysis of female poets, in an article in *Journal of Creative Behavior*, and his recent work on poets dying young has been featured in the *New York Times*, on NPR, BBC, and CNN, and in newspapers and magazines across the world. His other books include *International Handbook of Creativity*, *Intelligence Applied*, *Psychology and Free Will*, *Creativity Across Domains: Faces of the Muse*, *Gender Differences in Mathematics*, and *The Evolution of Intelligence*.

John Baer (Ph.D.) is professor of educational psychology at Rider University. He earned his B.A. at Yale, where he double majored in psychology and Japanese studies and graduated magna cum laude. He received his Ph.D. from Rutgers in developmental and cognitive psychology. He won the American Psychological Foundation's Berlyne Prize for his research on creativity in 1993, and in 1997 the Eighth National Conference on College Teaching and Learning presented Dr. Baer with its annual Award for Innovative Excellence in Teaching, Learning, and Technology. He has published seven books, including *Creativity and Divergent Thinking: A Task-Specific Approach*; *Creative Teachers, Creative Students*; and *Creativity Across Domains: Faces of the Muse* (with James C. Kaufman).

Cambridge University Press
0521605040 - Creativity and Reason in Cognitive Development
Edited by James C. Kaufman and John Baer
Frontmatter
[More information](#)

Creativity and Reason in Cognitive Development

Edited by

JAMES C. KAUFMAN

California State University, San Bernardino

JOHN BAER

Rider University, New Jersey



CAMBRIDGE
UNIVERSITY PRESS

Cambridge University Press
 0521605040 - Creativity and Reason in Cognitive Development
 Edited by James C. Kaufman and John Baer
 Frontmatter
[More information](#)

CAMBRIDGE UNIVERSITY PRESS
 Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo

Cambridge University Press
 40 West 20th Street, New York, NY 10011-4211, USA
www.cambridge.org
 Information on this title: www.cambridge.org/9780521843850

© Cambridge University Press 2006

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2006

Printed in the United States of America

A catalog record for this publication is available from the British Library.

Library of Congress Cataloging in Publication Data

Creativity and reason in cognitive development / edited by James C. Kaufman, John Baer.

p. cm.

Includes bibliographical references and index.

ISBN-13: 978-0-521-84385-0 (hardback)

ISBN-10: 0-521-84385-5 (hardback)

ISBN-13: 978-0-521-60504-5 (pbk.)

ISBN-10: 0-521-60504-0 (pbk.)

1. Creative thinking in children. 2. Creative ability in children.

3. Learning, Psychology of. 4. Cognition in children.

I. Kaufman, James C. II. Baer, John. III. Title.

BF723.C7C74 2006

153.3'5 - dc22

2005021613

ISBN-13 978-0-521-84385-0 hardback

ISBN-10 0-521-84385-5 hardback

ISBN-13 978-0-521-60504-5 paperback

ISBN-10 0-521-60504-0 paperback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party Internet Web sites referred to in this publication and does not guarantee that any content on such Web sites is, or will remain, accurate or appropriate.

Cambridge University Press
0521605040 - Creativity and Reason in Cognitive Development
Edited by James C. Kaufman and John Baer
Frontmatter
[More information](#)

This is for Joshua Butler, who hails from a long line of familial creative accomplishments and has embraced the life of being a creative artist, a movie director, with all of its joys and struggles. His capacity for ingenious wit, rigorous analysis, and bursts of imagination could serve as its own chapter of this book.

– JCK

For Sylvia, whose creativity never ceases to amaze and inspire me.

– JB

Contents

<i>List of Contributors</i>	page ix
<i>Acknowledgments</i>	xv
Introduction	1
<i>James C. Kaufman and John Baer</i>	
COGNITIVE PERSPECTIVES	
1. Expertise and Reason in Creative Thinking: Evidence from Case Studies and the Laboratory	7
<i>Robert W. Weisberg</i>	
2. Creative Genius, Knowledge, and Reason: The Lives and Works of Eminent Creators	43
<i>Dean Keith Simonton</i>	
3. Dynamic Processes Within Associative Memory Stores: Piecing Together the Neural Basis of Creative Cognition	60
<i>Adam S. Bristol and Indre V. Viskontas</i>	
4. The Creativity of Everyday Moral Reasoning: Empathy, Disgust, and Moral Persuasion	81
<i>David A. Pizarro, Brian Detweiler-Bedell, and Paul Bloom</i>	
5. Reasoning and Personal Creativity	99
<i>Mark A. Runco</i>	
6. Alternative Knowledge Structures in Creative Thought: Schema, Associations, and Cases	117
<i>Michael D. Mumford, Cassie S. Blair, and Richard T. Marcy</i>	
7. The Role of the Knowledge Base in Creative Thinking	137
<i>John F. Feldhusen</i>	
8. The Role of Domain Knowledge in Creative Problem Solving	145
<i>Richard E. Mayer</i>	
	vii

viii	<i>Contents</i>
9. Creative Thinking and Reasoning: Can You Have One Without the Other? <i>Daniel Fasko, Jr.</i>	159
10. From Alexithymia, Borne of Trauma and Oppression, to Symbolic Elaboration, the Creative Expression of Emotions, and Rationality <i>Warren D. TenHouten</i>	177
11. Opening up Creativity: The Lenses of Axis and Focus <i>Mia Keinänen, Kimberly Sheridan, and Howard Gardner</i>	202
DEVELOPMENTAL AND EDUCATIONAL PERSPECTIVES	
12. Creativity in Young Children's Thought <i>Susan A. Gelman and Gail M. Gottfried</i>	221
13. A Young Artist's Story: Advancing Knowledge and the Development of Artistic Talent and Creativity in Children <i>Susan M. Rostan</i>	244
14. Is It Reasonable to Be Creative? <i>Jacques-Henri Guignard and Todd Lubart</i>	269
15. Does Culture Always Matter: For Creativity, Yes, for Deductive Reasoning, No! <i>Weihua Niu, John X. Zhang, and Yingrui Yang</i>	282
16. Higher Level Thinking in Gifted Education <i>Joyce VanTassel-Baska</i>	297
17. The Relationship Among Schooling, Learning, and Creativity: "All Roads Lead to Creativity" or "You Can't Get There from Here"? <i>Ronald A. Beghetto and Jonathan A. Plucker</i>	316
18. How Early School Experiences Impact Creativity: An Ecological Perspective <i>Cynthia Paris, Nancy Edwards, Ellyn Sheffield, Maureen Mutinsky, Terri Olexa, Susan Reilly, and John Baer</i>	333
19. Conclusions <i>John Baer and James C. Kaufman</i>	351
<i>Author Index</i>	357
<i>Subject Index</i>	367

Cambridge University Press
0521605040 - Creativity and Reason in Cognitive Development
Edited by James C. Kaufman and John Baer
Frontmatter
[More information](#)

Contributors

John Baer
Rider University
Lawrenceville, New Jersey

Ronald A. Beghetto
College of Education
University of Oregon
Eugene, Oregon

Cassie S. Blair
Department of Psychology
University of Oklahoma
Norman, Oklahoma

Paul Bloom
Department of Psychology
Yale University
New Haven, Connecticut

Adam S. Bristol
Department of Neurobiology
Stanford University School of Medicine
Stanford, California

Brian Detweiler-Bedell
Department of Psychology
Lewis and Clark College
Portland, Oregon

Nancy Edwards
Individual and Family Studies Department
University of Delaware
Newark, Delaware

Cambridge University Press
0521605040 - Creativity and Reason in Cognitive Development
Edited by James C. Kaufman and John Baer
Frontmatter
[More information](#)

x

List of Contributors

Daniel Fasko, Jr.
Division of Educational Foundations & Inquiry
Bowling Green State University
Bowling Green, Ohio

John F. Feldhusen
Department of Educational Psychology
Purdue University
West Lafayette, Indiana

Howard Gardner
Harvard Graduate School of Education
Cambridge, Massachusetts

Susan A. Gelman
Department of Psychology
University of Michigan
Ann Arbor, Michigan

Gail M. Gottfried
Pomona College
Claremont, California

Jacques-Henri Guignard
Institute de Psychologie
Laboratoire Cognition et Développement
Université René Descartes, Paris

James C. Kaufman
Learning Research Institute
Department of Psychology
California State University
San Bernardino, California

Mia Keinänen
Department of Physical Education
Norges idrettshøgskole
Norwegian School of Sports Sciences
Oslo, Norway

Todd Lubart
Laboratoire Cognition et Développement, UMR 8605
Université René Descartes, Paris

Cambridge University Press
0521605040 - Creativity and Reason in Cognitive Development
Edited by James C. Kaufman and John Baer
Frontmatter
[More information](#)

List of Contributors

xi

Richard T. Marcy
Department of Psychology
University of Oklahoma
Norman, Oklahoma

Richard E. Mayer
Department of Psychology
University of California at Santa Barbara
Santa Barbara, California

Michael D. Mumford
Department of Psychology
University of Oklahoma
Norman, Oklahoma

Maureen Mutinsky
Arcola Elementary School
Leesburg, Virginia

Weihua Niu
Department of Psychology
Pace University
New York, New York

Terri Olexa
Ben Franklin Elementary School
Lawrenceville, New Jersey

Cynthia Paris
Department of Individual and Family Studies
University of Delaware
Newark, Delaware

David A. Pizarro
Department of Psychology
Cornell University
Ithaca, New York

Jonathan A. Plucker
Indiana University
Bloomington, Indiana

Susan Reilly
Slackwood School
Lawrenceville, New Jersey

Cambridge University Press
0521605040 - Creativity and Reason in Cognitive Development
Edited by James C. Kaufman and John Baer
Frontmatter
[More information](#)

xii

List of Contributors

Susan M. Rostan
Hofstra University
Rostan Art School
Woodbury, New York

Mark A. Runco
Department of Child and Adolescent Studies
California State University at Fullerton
Fullerton, California, and
The Norwegian School of Education and Business
Administration Bergen, Norway

Ellen Sheffield
Psychology Department
Salisbury University
Salisbury, Maryland

Kimberly Sheridan
Harvard Graduate School of Education
Cambridge, Massachusetts

Dean Keith Simonton
Department of Psychology
University of California at Davis
Davis, California

Warren D. TenHouten
Department of Sociology
University of California at Los Angeles
Los Angeles, California

Joyce VanTassel-Baska
School of Education
College of William and Mary
Williamsburg, Virginia

Indre V. Viskontas
Department of Psychology
University of California at Los Angeles
Los Angeles, California

Robert W. Weisberg
Psychology Department
Temple University
Philadelphia, Pennsylvania

Cambridge University Press
0521605040 - Creativity and Reason in Cognitive Development
Edited by James C. Kaufman and John Baer
Frontmatter
[More information](#)

List of Contributors

xiii

Yingrui Yang
Department of Cognitive Science and Psychology
Rensselaer Polytechnic Institute
Troy, New York

John X. Zhang
Department of Psychology
The University of Hong Kong
Pok Fu Lam Road, Hong Kong

Acknowledgments

We thank the following:

- Philip Laughlin at Cambridge University Press for his support, guidance, and friendship.
- Our colleagues at California State University at San Bernardino and Rider University. James specifically thanks Mark Agars, his primary partner in crime, and Joanna Worthley, his chair. In his position as director of the Learning Research Institute, James gets to work with a lot of cool people; first and foremost is his assistant and person-who-has-to-deal-with-everything-but-handles-it-all Roja Dilmore-Rios. Thanks also to Melanie Bromley, his terrific research manager.
- Our colleagues in the study of creativity, many of whom are included in this book. James had the particularly good fortune to have Robert J. Sternberg as his mentor in graduate school, which is sort of like having Placido Domingo as a voice coach or Bob Fosse as a dance instructor.
- Our friends and family. James has been blessed with a wonderful support system of friends and family; he has the added bonus that all are not just great people but are also brilliant and creative and provide a wonderful sounding board for ideas: Talia Ben Zeev, Joshua Butler, Wind and Esme Cowles, Michelle and Jose Freire, David Hecht, Nicole Hendrix, Alan and Nadeen Kaufman, Jack Naglieri, Jennie Kaufman Singer, and Nathan Stone. And, to top it off, James has a terrific wife, Allison B. Kaufman, and two great dogs. Life is good.

Cambridge University Press
0521605040 - Creativity and Reason in Cognitive Development
Edited by James C. Kaufman and John Baer
Frontmatter
[More information](#)

Creativity and Reason in Cognitive Development