

Gender Differences in Aspirations and Attainment

What is the role of parents, peers and teachers in shaping school experiences and informing the career choice of males and females? Does the school context matter, and to what extent do educational experiences influence young people's self-concept, values and their outlook to the future? Do teenage aspirations influence later outcomes regarding educational attainment and the assumption of work and family related roles? These questions and more are addressed in the chapters of this book, following lives over time and in context. The book is both innovative and timely, moving the discussion of gender inequalities forward, providing a dynamic and contextualized account of the way gendered lives evolve. Chapters address the role of institutional structures and the wider socio-historical context in helping young men and women to realize their ambitions. A unique feature is the longitudinal perspective, examining the role of multiple interlinked influences on individual life planning and attainment.

INGRID SCHOON is Professor of Human Development and Social Policy in the Institute of Education, University of London.

JACQUELYNNE S. ECCLES is McKeachie/Pintrich Distinguished University Professor in the School of Education, University of Michigan.

Gender Differences in Aspirations and Attainment

A Life Course Perspective

Edited by

INGRID SCHOON

*Institute of Education
University of London*

JACQUELYNNE S. ECCLES

University of Michigan



CAMBRIDGE
UNIVERSITY PRESS

Cambridge University Press
 978-1-107-02172-3 — Gender Differences in Aspirations and Attainment
 Edited by Ingrid Schoon, Jacquelynne S. Eccles
 Frontmatter
[More Information](#)

CAMBRIDGE UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom
 One Liberty Plaza, 20th Floor, New York, NY 10006, USA
 477 Williamstown Road, Port Melbourne, VIC 3207, Australia
 314-321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre, New Delhi - 110025, India
 103 Penang Road, #05-06/07, Visioncrest Commercial, Singapore 238467

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning and research at the highest international levels of excellence.

www.cambridge.org

Information on this title: www.cambridge.org/9781107021723

© Cambridge University Press 2014

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 2014

A catalogue record for this publication is available from the British Library

Library of Congress Cataloging in Publication data

Gender differences in aspirations and attainment : a life course perspective / edited by Ingrid Schoon, Jacquelynne S. Eccles.

pages cm

Includes bibliographical references and index.

ISBN 978-1-107-02172-3 (hardback)

1. Student aspirations—Sex differences. 2. Educational attainment—Sex differences.
 3. Level of aspiration—Sex differences. 4. Achievement motivation—Sex differences.
 5. Career development—Sex differences. I. Schoon, Ingrid. II. Eccles, Jacquelynne S.
 LB1027.8.G46 2014
 370.15'1—dc23
 2014020403

ISBN 978-1-107-02172-3 Hardback

ISBN 978-1-107-64519-6 Paperback

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

Contents

<i>List of figures</i>	<i>page</i> ix
<i>List of tables</i>	xiii
<i>Notes on contributors</i>	xvii
<i>List of abbreviations (selected)</i>	xxviii
Part I Introduction	1
Introduction: conceptualizing gender differences in aspirations and attainment – a life course perspective	3
INGRID SCHOON AND JACQUELYNNE S. ECCLES	
Part II The early school years	27
1 Peer influences on gender differences in educational aspiration and attainment	29
RICHARD A. FABES, SARAH HAYFORD, ERIN PAHLKE, CARLOS SANTOS, KRISTINA ZOSULS, CAROL LYNN MARTIN AND LAURA D. HANISH	
2 Beginning school transition and academic achievement in mid-elementary school: does gender matter?	53
IRENE KRIESI AND MARLIS BUCHMANN	
3 Gender differences in teachers’ perceptions and children’s ability self-concepts	79
KATJA UPADYAYA AND JACQUELYNNE S. ECCLES	
4 Emerging gender differences in times of multiple transitions	101
JENNIFER E. SYMONDS, MAURICE GALTON AND LINDA HARGREAVES	

Part III Career planning during adolescence	123
5 What should I do with my life? Motivational, personal, and contextual factors in mastering the transition of graduating from high school	125
DAVID WEISS, BETTINA S. WIESE AND ALEXANDRA M. FREUND	
6 Gendered happiness gap? Adolescents' academic wellbeing pathways	146
KATARIINA SALMELA-ARO	
7 Uncertainty in educational and career aspirations: gender differences in young people	161
LESLIE MORRISON GUTMAN, RICARDO SABATES AND INGRID SCHOON	
8 The challenges facing young women in apprenticeships	182
ALISON FULLER AND LORNA UNWIN	
Part IV Choosing a science career	201
9 Do teenagers want to become scientists? A comparison of gender differences in attitudes toward science, career expectations, and academic skill across 29 countries	203
JOHN JERRIM AND INGRID SCHOON	
10 Predicting career aspirations and university majors from academic ability and self-concept: a longitudinal applications of the internal–external frame of reference model	224
PHILIP PARKER, GABRIEL NAGY, ULRICH TRAUTWEIN AND OLIVER LÜDTKE	
11 Does priority matter? Gendered patterns of subjective task values across school subject domains	247
ANGELA CHOW AND KATARIINA SALMELA-ARO	
12 Gender differences in personal aptitudes and motivational beliefs for achievement in and commitment to math and science fields	266
MING-TE WANG AND SARAH KENNY	

13	What happens to high-achieving females after high school? Gender and persistence on the postsecondary STEM pipeline	285
	LARA PEREZ-FELKNER, SARAH-KATHRYN MCDONALD AND BARBARA SCHNEIDER	
14	Young people, gender, and science: does an early interest lead to a job in SET? A longitudinal view from the BHPS youth data	321
	ANNA BAGNOLI, DIETER DEMEY AND JACQUELINE SCOTT	
15	Motivational affordances in school versus work contexts advantage different individuals: a possible explanation for domain-differential gender gaps	346
	JUTTA HECKHAUSEN	
	Part V Longer-term consequences of early experiences	363
16	The life course consequences of single-sex and co-educational schooling	365
	ALICE SULLIVAN AND HEATHER JOSHI	
17	Pathways to educational attainment in middle adulthood: the role of gender and parental educational expectations in adolescence	389
	MIIA BASK, LAURA FERRER-WREDER, KATARIINA SALMELA-ARO AND LARS R. BERGMAN	
18	How gender influences objective career success and subjective career satisfaction: the impact of self-concept and of parenthood	412
	ANDREA E. ABELE	
	Part VI The role of context	427
19	Gender differences in attainment across generations from a historical perspective	429
	ANNE MCMUNN, ELIZABETH WEBB, MEL BARTLEY, DAVID BLANE AND GOPAL NETUVELI	
20	Gender inequality by choice? The effects of aspirations on gender inequality in wages	456
	SILKE AISENBREY AND HANNAH BRÜCKNER	

Cambridge University Press
978-1-107-02172-3 — Gender Differences in Aspirations and Attainment
Edited by Ingrid Schoon , Jacquelynne S. Eccles
Frontmatter
[More Information](#)

viii CONTENTS

21	Comparing young people’s beliefs and perceptions of gender equality across 28 different countries	475
	BRYONY HOSKINS AND JAN GERMEN JANMAAT	
	<i>Index</i>	495

Figures

1.1A	Percentage of block play: by sex, peer context, and semester	<i>page 39</i>
1.1B	Percentage of language play: by sex, peer context, and semester	40
2.1	Conceptual model of the interrelationship between social background, children’s competencies, their transition quality, and academic achievement	62
2.2	Path effects on girls’ and boys’ transition quality and academic achievement	65
3.1	A basic model of the study	84
3.2	The standardized estimates for the models of teachers’ ability and effort perceptions and children’s self-concept of math ability at Wave 3 and Wave 4	90
3.3	The standardized estimates for the models of teachers’ ability and effort perceptions and children’s self-concept of reading ability at Wave 3 and Wave 4	91
4.1	Model of working groups	112
5.1	Psychological factors relevant to mastering the transition from high school to college or an apprenticeship	127
5.2	Discrepancies between actual and ideal parental workforce participation during the preschool years (based on data from Wiese & Freund, 2011)	137
5.3	Female adolescents’ preferred future workforce participation for themselves and their future partners when they have preschool children (based on data from Wiese & Freund, 2011)	138

5.4	Male adolescents' preferred future workforce participation for themselves and their future partners when they have preschool children (based on data from Wiese & Freund, 2011)	138
8.1	Key stakeholder priorities	193
9.1	Difference between boys' and girls' average scores on the PISA 2006 science test	207
9.2	Difference between boys' and girls' average scores on the PISA 2006 reading test	209
9.3	A comparison of the importance and value boys and girls place upon science	210
9.4	A comparison of how important boys and girls think different academic subjects are	211
9.5	Estimated odds ratio of whether boys are more likely than girls to expect to become a science professional	214
10.1	Internal/external model	228
10.2	Extended <i>I/E</i> model	229
10.3	<i>I/E</i> factor profiles for career aspiration groups	234
10.4	<i>I/E</i> factor profiles for university major groups	235
10.5	Profile of standardized multinomial regression weights for career aspiration groups	241
10.6	Profile of standardized multinomial regression weights for university major groups	241
11.1	Subjective task-value scores of the three groups across the subject domains	255
12.1	Predicting STEM vs. non-STEM college major from math and verbal scores	275
14.1	Aspiration for SET, breakdown by SET groups and gender (N = 6,703)	329
14.2	Trends in aspiration for SET over time, by gender, for strict and wide definitions (N = 6,703)	331
14.3	Aspiration for SET, by gender and age (11–15) (wide SET definition) (N = 3,201)	332

14.4	Change in aspiration for SET across 3-year intervals, by gender for strict and wide definitions (N = 1,511)	333
15.1	Hypothetical life-span trajectories for primary control potential and primary and secondary control striving (from Heckhausen, 1999)	349
15.2	Age-graded sequencing of opportunities to realize various developmental goals (from Heckhausen, 2000)	349
15.3	Striving for gains and avoiding losses in developmental goals across age groups (from Heckhausen, 1997)	350
15.4	Action-phase model of developmental regulation (from Heckhausen, 1999)	355
16.1	Pupils' responses to "I do not like school," at age 16 (1974)	371
16.2	Percentage liking school at age 16 by type of school	371
16.3	Self-concept in math, English, and science	373
16.4	Five or more O-level passes	375
16.5	O-level subject passes	376
16.6	A-level subject passes	377
16.7	Sex composition of highest qualification age 33	378
16.8	Divorce or separation by age 42, by gender and school sector	380
16.9	Social class of cohort member at current or most recent job by age 42 by gender	382
16.10	Occupational segregation (Hakim's classification) at current or most recent job by age 42	383
16.11	Hourly wages (£) of those employed at 42	384
18.1	Average work hours of women and men with and without children across waves 2 to 5	418
18.2	Path models on the influences of the self-concept, parenthood, and average work hours on objective career success at wave 5 for men and women	418

18.3	Path models on the influences of the self-concept, parenthood, and average work hours on career satisfaction at wave 5 for men and women	420
19.1	Gender differences in having a university degree or some higher education by decade of birth	431
19.2	Gender differences in lifetime number of cohabiting partnerships or marriages (as of 2006) by decade of birth	435
19.3	Number of children by gender and decade of birth	436
19.4	Absolute gender gap in proportion in professional or managerial occupation by severe financial hardship	443
19.5	Absolute gender gap in proportion in professional or managerial occupation by father's occupation at age 14: % male excess	443
19.6	Gender differences in mean quality of life score and mean life satisfaction score by age	445
19.7	Gender difference in likelihood of having depressive symptoms by age	445
19.8	Gender differences in the prevalence of limiting long-standing illnesses and difficulties with activities of daily living by age	448
20.1	Estimated aspired and achieved wages	465
20.2	Estimated aspired and achieved gender wage gap	465
21.1	The construction of the four measurement categories that combine responses to the two variables on beliefs in and perceptions of gender equality	482

Tables

2.1	Correlations, means and standard deviations for all covariates	<i>page 66</i>
2.2	Direct, indirect, and total effects (standardized) of parental highest education and an emotionally supportive parenting style on boys’ and girls’ academic achievement	68
2.3	Covariate means by highest parental education and sex	69
3.1	Means and standard deviations	87
3.2	Pearson correlation coefficients between teachers’ ability and effort perceptions, children’s ability self-concepts and performance in math and reading, and gender and cohort status separately at Wave 3 and at Wave 4 (below diagonal related to math and above diagonal related to reading)	89
3.3	Goodness-of-fit summary for the tested within-level path models of teachers’ perceptions and children’s ability self-concepts in math and reading	96
4.1	Summary of in-depth studies used for this chapter	105
4.2	Trends in gender differences	117
5.1	Examples of specific SOC-related strategies in the context of the transition from high school to college or an apprenticeship	130
7.1	Descriptive statistics for all variables in analysis	168
7.2	Predicting uncertain educational aspirations (odds ratios contrasting uncertainty relative to aspiring to stay in education in LSYPE and BCS70)	173

7.3	Predicting career aspirations (odds ratio for uncertainty relative to aspiring for a professional or managerial job in LSYPE and BCS70)	174
7.4	Odds ratio (standard error) for association of uncertainty in aspirations and NEET status in LSYPE and BCS70	175
8.1	Starts in the 10 most populated apprenticeship sectors by gender (England 2008/2009–2010/2011)	187
8.2	Percentage of female apprentices in five sectors	188
8.3	Modern Apprenticeship Scotland: 16–19, top 11 frameworks and gender – in training, 2008–2009	189
8.4	Modern Apprenticeship Scotland: aged 20+, top 11 frameworks and gender – in training, 2008–2009	189
8.5	Sector subject area by MA/FMA and gender in Wales (2007–2008)	190
9.1	Expectations of entering a health or physical science occupation versus a non-science profession (odds ratios)	216
10.1	Gender differences in self-concept and achievement	232
10.2	Time 1 career aspirations and Time 2 university majors	234
10.3	Multinomial logit odds ratios for career aspirations	237
10.4	Loglikelihood difference test of constrained multinomial logit models versus free model	239
11.1	Correlations among measures	252
11.2	Fit indices for latent profile analysis models	254
11.3	Mean differences in subject task values and grade point average across the three groups	255
11.4	Gender distribution and grade point average of girls and boys from the three subjective task-value groups	256
11.5	Regression analysis predicting educational aspirations for physical and IT-related science fields	257
12.1	Descriptive characteristics of the study sample	274

12.2	Logistic regression analysis predicting individual STEM versus non-STEM college major from aptitude, motivational beliefs, course enrollment, and family socioeconomic status at 12th grade	277
13.1	Descriptive characteristics of sample population by STEM pipeline course taking	295
13.2	Descriptive characteristics of sample population by STEM pipeline course taking and gender	301
13.3	Odds of declaring a STEM major 2 years after high school by STEM pipeline and gender	308
14.1	Sample size for each wave, Youth Study, British Household Panel Survey 1994–2005	327
14.2	Most frequent SET occupations by gender, based on first mentions of those aspiring to SET careers (N = 1,721)	330
14.3	Cross-tabulation of SET aspirations and SET occupations (N = 1,832)	333
16.1	Attendance at a single-sex school, contrasted with attendance at a mixed school, binary logistic regression	370
16.2	Economic activity at 42, by gender	381
17.1	Correlations (Pearson's r) between the main study variables	400
17.2	Association between gender and parental expectations (N = 894)	401
17.3	Parental educational expectations in Grades 6 and 9. Relation to gender and adolescent/family characteristics (N = 789/701)	402
17.4	Multiple regression analyses separated by gender for adolescent/family characteristics predicting parental educational expectations in Grade 6	402
17.5	Middle adult educational attainment in relation to gender and adolescent/family characteristics (N = 559)	403
17.6	Multiple regression analyses separated by gender for adolescent/family characteristics, parental educational expectations predicting middle adult educational attainment	404

18.1	Descriptive statistics: gender differences (N = 1,015)	417
18.2	Objective career success at wave 5 regressed on parenthood and workload	419
19.1	Gender differences in socioeconomic attainment by decade of birth	433
19.2	Odds ratios for having access to higher education by indicators of family formation in men and women	437
19.3	Regression coefficients for number of years in paid work by indicators of family formation among men and women	439
19.4	Odds ratios of being in a managerial or professional occupation by indicators of family formation among men and women	440
19.5	Gender differences in having been in a managerial or professional occupation	442
19.6	Wellbeing by indicators of family formation among men and women	446
19.7	Limiting long-standing illness by indicators of family formation among men and women	449
19.8	Physical functioning by indicators of family formation among men and women	451
20.1	Concepts and indicators	461
20.2	Cohorts 1960–1964: means and percentages, standard deviation in parenthesis	467
20.3	Coefficients from regression of wages (logged)	469
20.4	Decomposition of the gender wage gap	471
21.1	Descriptive statistics for participation	485
21.2	Size of the four gender-attitude groups	485
21.3	Four gender-attitude groups by country and gender	486
21.4	Levels of prosperity and gender equality across 25 countries	487
21.5	Correlations between GEM, GDP, and attitudes on gender equality	488
21.6	Determinants of participation	490

Contributors

ANDREA E. ABELE is a Professor of Social Psychology at the University of Erlangen-Nürnberg, Germany. Her research interests include career psychology and gender research.

SILKE AISENBREY is an Associate Professor of Sociology at Yeshiva University in New York. She conducted research as a postdoctoral associate at the Center for Research on Inequality and the Life Course (CIQLE) at Yale University and obtained her PhD at the Ludwig-Maximilian University of Munich. Her research interests lie in the areas of social inequality, welfare states, the life course, gender inequality, and sociology of education. She works mainly with quantitative methods, with a particular interest in longitudinal data analysis.

ANNA BAGNOLI is a Fellow of Wolfson College, Cambridge, where she currently works as a Tutor. She is Associate Researcher at the Department of Sociology of the University of Cambridge, where she contributes to the teaching of qualitative research methods. Her PhD, which she carried out at the Centre for Family Research (University of Cambridge, 2001), investigated the identities of young people in England and Italy, with the involvement of a sample of young first generation migrants between the two countries. The chapter she co-authored for this book presents the results of a project investigating girls' and boys' interest in SET careers through secondary analysis of British Household Panel Survey data, for which Dr. Bagnoli and Prof. Scott were awarded a small grant by the Nuffield Foundation.

MEL BARTLEY is Professor Emerita of Medical Sociology in the Department of Epidemiology and Public Health at UCL. She was Coordinator of the ESRC Research Priority Network on Human Capability and Resilience from 2003 to 2006 and Director of the ESRC International Centre for Lifecourse Studies in Society and Health (ICLS) from 2008 to 2012.

MIIA BASK is a Postdoctoral Fellow at the University of Bergen in the Department of Sociology. Her research interests are social inequality and stratification from a longitudinal perspective, mathematical sociology, and social capital and social networks. Her previous publications include studies in social exclusion especially among immigrants and different family constellations. She was a Fellow of the Jacobs Foundation postdoctoral PATHWAYS to Adulthood program and is currently a Visiting Scholar at the Institute for Research in the Social Sciences at Stanford University.

LARS R. BERGMAN is Professor Emeritus in Research Methodology at the Department of Psychology, Stockholm University. His research interests include statistical methods and measurement in longitudinal research, especially concerning the person-oriented approach. His research also includes the study of adaptation in a life-span perspective.

DAVID BLANE is Professor Emeritus of Imperial College London (Department of Primary Care and Public Health) and Professorial Research Associate of University College London (Department of Epidemiology and Public Health). He was formerly (2008–2012) Deputy Director of the ESRC International Centre for Life Course Studies in Society and Health.

HANNAH BRÜCKNER taught at the Ludwig-Maximilian University of Munich and at Yale University before signing on as Professor of Social Research and Public Policy at New York University–Abu Dhabi. She works on a wide range of topics related to the life course, inequality, health, gender, and sexuality. She has published numerous chapters and articles about gender inequality in the labor force, the integration of women in academic workplaces, and adolescent health and sexual behavior. Current research projects focus on timing and sequencing of family formation and career development, as well as gender construction on Wikipedia.

MARLIS BUCHMANN is Professor of Sociology and Director of the Jacobs Center for Productive Youth Development at the University of Zurich. Her research interests include social inequality and the life course, with a special emphasis on childhood and the life stage youth, school-to-work transition and the transition to adulthood, socialization, and competence development.

ANGELA CHOW is a Banting postdoctoral fellow in the Department of Psychology, University of Alberta. Her research focuses on task values and work values, and how these values in adolescence shape developmental pathways to young adulthood and midlife, with particular emphasis on outcomes related to education, career, and wellbeing. Previously she was a Fellow of the Jacobs Foundation postdoctoral PATHWAYS to Adulthood program.

DIETER DEMEY is a Senior Research Assistant at the Economic and Social Research Council (ESRC) Centre for Population Change at the University of Southampton, UK. He works within the thematic area of “household dynamics and living arrangements across the life course,” with a focus on living arrangements in mid-life. He conducted his PhD research at the University of Cambridge from 2006 to 2011, investigating the impact of education on the transition to parenthood by analyzing Belgian and British panel data.

JACQUELYNNE ECCLES is the McKeachie/Pintrich Distinguished University Professor of Psychology and Education and Director of the Achievement Research Program at the University of Michigan, editor of *Developmental Psychology*, past president of the Society of Research on Adolescence (SRA),

and currently president elect of the Developmental Psychology of the American Psychological Association (APA). She also is a founding member of the Jacobs Foundation postdoctoral Fellowship program PATHWAYS to Adulthood. She has spent the last 35 years studying both group and individual differences in life choices and motivation, identity formation, gender-role socialization, and both family and classroom influences on social development. Her work has been honored by several awards including life-time achievement awards from the Society for Research on Adolescents, the American Psychological Association, the American Psychological Science Society, the Society for the Study of Human Development, and the Self Society, as well as from the Educational and Developmental Psychology divisions of the APA. She has received honorary degrees from the Catholic University of Louvain, Belgium, and the University of Laval in Quebec City, Canada. She is a member of the National Academy of Education, a World Scholar and Fellow at the Institute of Education at the University of London, and Visiting Professor at the University of Tübingen, Germany.

RICHARD A. FABES is the John O. Whiteman Dean's Distinguished Professor of Child Development in the T. Denny Sanford School of Social and Family Dynamics at Arizona State University. He is also one of the Executive Directors of the Lives of Girls and Boys Enterprise, which is an interdisciplinary set of initiatives that are designed to promote innovative research and its application to the real-life issues and challenges facing girls and boys as they develop. He is also one of the Principal Directors of the Sanford Harmony Program, which is designed to enhance male–female communication and relationships. He has published over 150 peer-reviewed articles, chapters, and books. His most recent projects involve a longitudinal study of gender-related attitudes and beliefs across elementary school, several large-scale studies of teachers' roles in gender socialization, and exploring the dynamics of gender development, as well as a major project on the importance of kindergarten in children's social and academic development.

LAURA FERRER-WREDER, PHD, is an Associate Professor of Psychology at Stockholm University in the Department of Psychology. Her research involves better understanding human development and culture through programs of applied and basic research. Her applied intervention research, for example, has dealt with the design of positive youth development and prevention interventions. She has been an investigator on over 13 intervention efficacy and effectiveness trials. She is presently an associate editor for the journal *Child & Youth Care Forum* and assistant editor of the *Journal of Adolescence*. Dr. Ferrer-Wreder has published widely, including an authored book entitled *Successful Prevention and Youth Development Programs: Across Borders*.

ALEXANDRA M. FREUND is a Professor of Psychology at the University of Zürich, Department of Psychology. She studied psychology at the University

of Heidelberg and the Free University of Berlin, where she also received her PhD. She was a postdoctoral fellow at Stanford University and returned to the Max Planck Institute for Human Development in Berlin as a research scientist. After that, she was an Assistant Professor and later an Associate Professor at Northwestern University before she took over the chair for “Applied Psychology: Life-Management” at the University of Zurich. Elected one of the founding members of the Young Academy of Sciences, Professor Freund is also an associate editor of the APA journal *Psychology and Aging* and serves on several editorial boards. Her main research interests focus on the processes of developmental regulation and motivation across the life-span.

ALISON FULLER is Chair in Vocational Education and Work at the Institute of Education, University of London. Previously she was Professor of Education and Work and Director of Research in Southampton Education School, University of Southampton. Alison is currently undertaking research for the Nuffield Foundation on Adult Apprenticeships (with Lorna Unwin, Pauline Leonard, and Gayna Davey) and is a project leader in the ESRC LLAKES Centre focusing on employee-driven innovation, learning, and work organization in the healthcare sector (with Susan Halford and Kate Lyle). She has published widely, including her most recent book *Contemporary Apprenticeship: International Perspectives on an Evolving Model of Learning* (co-authored with Lorna Unwin and published in 2012).

MAURICE GALTON is currently Associate Director of Research in the Faculty of Education at the University of Cambridge and a former Dean of Education at the University of Leicester in the UK. He is best known for his observational studies of primary (elementary) classrooms and is currently involved in looking at the impact on pupils’ wellbeing during transition to the secondary (junior high) phase.

LESLIE MORRISON GUTMAN is Research Director at the Department of Quantitative Social Science at the Institute of Education, University of London. Her main research interests include risk and resilience, the formation of educational and career aspirations, and the relationship between wellbeing and educational outcomes from childhood to adolescence. She led an ESRC study examining the linkages among uncertain aspirations, parental expectations, school engagement, self-perception of ability, and later educational outcomes. She is also co-director of an evaluation of a school for vulnerable children. Previously, she was Research Director of the Centre for Research on the Wider Benefits of Learning at the IoE, where she led a number of research projects including risk and protective factors in children’s wellbeing, pupil and school effects on children’s achievement, the relationship between aspirations and attainment, parenting capabilities, and children’s friendships. She was a National Academy of Education/Spencer Foundation Post-Doctoral Fellow and recipient of the Sims Medal for her doctoral thesis examining resilience in children living

in poverty, undertaken at the University of Michigan. She has published widely in peer-reviewed journals and books.

LAURA D. HANISH, PHD, is a Professor of Child Development in the T. Denny Sanford School of Social and Family Dynamics at Arizona State University. Key themes in her research include gender, peer relationships, and school-related contexts and outcomes. She is an Enterprise Leader for the Lives of Girls and Boys Enterprise, which is an interdisciplinary set of research and translational initiatives regarding girls' and boys' interactions, relationships, and school success.

LINDA HARGREAVES is Reader in Classroom Learning and Pedagogy at the Faculty of Education, University of Cambridge, UK, where she teaches master's and doctoral students in primary education, and psychology and education. Her research interests center on classroom processes – teacher and pupil interaction, typically involving systematic observation in classrooms – and how these vary across schools (primary/secondary; rural/urban) and different classroom organizations. Major projects include the Teacher Status Project, the Cambridge Primary Review (Director Robin Alexander) and, currently, an ESRC-funded UK–Hong Kong bilateral, “Social Pedagogic Contexts in the Teaching of Mathematics” (SPeCTRM) codirected with Peter Kutnick (The University of Hong Kong), and “Children's Personal Epistemologies: capitalizing on children's and families' beliefs about knowledge for effective teaching and learning,” with Dr. Rocio Garcia-Carrion (EC Marie Curie Research Fellow) and Ruth Kershner.

SARAH HAYFORD is a social demographer in the T. Denny Sanford School of Social and Family Dynamics at Arizona State University. Her areas of study include childbearing, family, and social change in the United States and in sub-Saharan Africa. Recent work examines gender differences in adolescent goals for work and family, changes in the timing of first births within marriage, and the childbearing plans of HIV-positive women.

JUTTA HECKHAUSEN grew up in Germany and received her PhD from the University of Strathclyde in Glasgow, Scotland. She joined the Max-Planck-Institute for Human Development in Berlin in 1984 and then became a post-doctoral fellow, junior and senior scientist. In 1995/1996 she was a fellow at the Center for Social and Behavioral Science at Stanford and in 1999 she received the Max Planck Research Award. In 2000, she was offered a professorship and joined the Department of Psychology and Social Behavior at the University of California Irvine. She served as Chair of the Academic Senate at UC Irvine in 2008–2009. Her work is widely published, including articles in *Developmental Psychology*, *Psychology and Aging*, *Journal of Personality and Social Psychology*, and *Psychological Review*. Her most recent book is *Motivation and Action*, published by Cambridge University Press.

BRYONY HOSKINS is Senior Lecturer in Education at the University of Southampton. She is an internationally renowned expert on Active Citizenship

and has published widely in this field. Recent EU-funded research projects include the ‘Effects of Austerity on Active Citizenship in Europe’. In addition to her research, she leads various modules on globalization, comparative education, and statistics.

JAN GERMEN JANMAAT is Reader of Comparative Social Science at the Centre on Learning and Life Chances in Knowledge Economies and Societies (LLAKES), Institute of Education, London (UK). He teaches on the MA in Comparative Education and has published widely on the relation between education, civic values, and social cohesion. His latest book is *Regimes of Social Cohesion: Societies and the Crisis of Globalization* (co-authored with Andy Green).

JOHN JERRIM is a Lecturer in Economics and Social Statistics at the Institute of Education, University of London. Jerrim’s research interests include the economics of education, access to higher education, intergenerational mobility, cross-national comparisons, and educational inequalities. He has worked extensively with the OECD Programme for International Student Assessment (PISA) data, with this research being reported widely in the British media. Jerrim was the recipient of an ESRC Research Scholarship (2006–2010), and was awarded the prize as the “most promising PhD student in the quantitative social sciences” at the University of Southampton. He was a Fellow of the Jacobs Foundation postdoctoral PATHWAYS to Adulthood program, and in October 2011 he was awarded a prestigious ESRC postdoctoral fellowship to continue his research into the educational and labor market expectations of adolescents and young adults. Since then he has won the inaugural ESRC Early Career Outstanding Impact award and has just received an ESRC grant to study cross-national comparisons of educational attainment and social mobility.

HEATHER JOSHI is Professor Emerita at the Institute of Education, University of London, having been the Director of the Centre for Longitudinal Studies and of the Millennium Cohort Study in particular. She was also president of the European Society for Population Economics, of the British Society for Population Studies and the founder president of the Society for Lifecourse and Longitudinal Studies. She was a co-investigator on the project about single-sex schooling summarized here, which was led by the late Diana Leonard.

SARAH KENNY was a research assistant at the University of Michigan, focusing primarily on gender differences in STEM. She is currently an MA student at the London School of Economics, and plans to pursue a doctorate focusing on children and young people’s experiences of digital media at home and school.

IRENE KRIESI is a sociologist who currently heads a research section at the Swiss Federal Institute of Vocational Education and Training. Her research, on topics such as social and gender inequality, the transition from childhood and youth to adulthood, education and labor market careers, has been widely published.

OLIVER LÜDTKE is a Professor of Psychological Research Methods at the Humboldt University of Berlin. He received his PhD in Psychology from the Free University of Berlin and worked as a research scientist at the Center for Educational Research at the Max-Planck-Institute for Human Development. His main research interests include the application of multilevel modeling in psychological and educational research, international student achievement studies, and personality development in adolescence.

CAROL LYNN MARTIN is a Professor of Child Development in the T. Denny Sanford School of Social and Family Dynamics at Arizona State University. She is also a director of the Lives of Girls and Boys Enterprise, which promotes innovative research and its application to the real life issues and challenges facing girls and boys. Her research interests include gender development and peer relationships.

SARAH-KATHRYN MCDONALD, Principal Research Scientist in the Academic Research Centers at NORC at the University of Chicago, has more than 25 years' experience serving as a policy analyst, social scientist, evaluation researcher, public affairs advisor, and senior manager with governmental, for profit, and not-for-profit organizations in the US and Europe. Since 2002 she has collaborated with faculty, clients, and staff at NORC on a range of impact evaluations and educational research projects. Other organizations with which she has worked include the US Bureau of the Census; Nuffield College, University of Oxford; Birkbeck College, University of London; and the University of Chicago Consortium on Chicago School Research.

ANNE MCMUNN is a Senior Lecturer in Quantitative Social Science and Population Health, and Graduate Tutor in the Department of Epidemiology and Public Health at University College London. She is also a member of the ESRC International Centre for Life Course Studies in Society and Health.

GABRIEL NAGY is Professor for Quantitative Methods in Educational Research at the Leibniz Institute for Science and Mathematics Education (IPN), Kiel. He received his PhD in psychology at the Free University of Berlin. His research interests include educational and work-related transitions, cognitive and motivational development, latent variable models for interest and ability profiles, and statistical methods for longitudinal and multilevel data.

GOPALAKRISHNAN NETUVELI is a Professor of Public Health at the Institute of Health and Human Development, University of East London. He is also a Visiting Professor at the School of Public Health, Imperial College London and Honorary Professor at the Department of Public Health and Epidemiology, University College London. He is affiliated with the ESRC International Centre for Life Course Studies in Society and Health.

ERIN PAHLKE is an Assistant Professor of Psychology at Whitman College, Washington State.

PHILIP PARKER is a research fellow at the Centre for Positive Psychology and Education (CPPE). His research focuses on social inequality, development, personality, and wellbeing issues related to adolescents' transition from school to work or further education, and uses large longitudinal databases from Australia, the US, UK, Germany and Finland. He received a first-class honors degree in psychology from the SELF research center at the University of Western Sydney and won the Australian Psychological Society Science Prize. His PhD, at the University of Sydney, was on the role of motivational constructs and processes in the development of teacher burnout and subjective wellbeing. He has published in a number of international journals in education, psychology, and sociology, as well as a number of books, chapters and peer-reviewed papers. He was previously a Jacob's Foundation-funded postdoctoral research fellow in the PATHWAYS to Adulthood program.

LARA PEREZ-FELKNER is an Assistant Professor of Higher Education in the College of Education and Department of Sociology at Florida State University. Her research examines how young people's social contexts influence their college and career outcomes. She focuses on the mechanisms that shape entry into and persistence in fields in which they have traditionally been underrepresented. In particular, she investigates racial-ethnic, gender, and socioeconomic disparities in postsecondary educational attainment and entry to scientific career fields. She was a recent Visiting Scholar at the Center for Khmer Studies for cross-national extensions of this work and a Fellow of the Jacobs Foundation postdoctoral PATHWAYS to Adulthood program.

RICARDO SABATES is Senior Lecturer in International Education and Development at the University of Sussex. Much of his work concerns the relationship between education and wider social outcomes such as health and crime. Special interests include the application of quantitative research methods to investigate the strength in the relationship between education and outcomes in the UK and international contexts and the role of education in reducing social inequalities.

KATARIINA SALMELA-ARO is Professor of Psychology at the University of Jyväskylä, and Visiting Professor at the Institute of Education, University of London. She was Research Director of the Helsinki Collegium for Advanced Studies at the University of Helsinki, and Professor in the Finnish Center of Excellence on Learning and Motivation Research. Professor Salmela-Aro is Director of several ongoing longitudinal studies, such as FinEdu and Secretary General of the International Society for the Study of Behavioral Development (ISSBD). She is also a founding member of the PATHWAYS to Adulthood postdoctoral fellowship program. Her main topics are motivation and academic wellbeing using longitudinal studies.

CARLOS SANTOS was trained as a developmental scientist and is currently an Assistant Professor in the Counseling and Counseling Psychology program at

Arizona State University. His research explores how social identities and categories (e.g., being a boy or a girl and Latina/o or white) intersect, and how experiences (e.g., discrimination) and attitudes (e.g., stereotypes) associated with these categories influence youths' identity, relationships, and health.

INGRID SCHOON is Professor of Human Development and Social Policy at the Institute of Education, University of London and is Director of the international postdoctoral Jacobs Foundation Fellowship PATHWAYS to Adulthood. Her research interests are focused on issues of human development across the life course, in particular the transition from dependent childhood to independent adulthood, the intergenerational transmission of (dis)advantage, and the realization of individual potential in a changing socio-historical context. Her work is published widely in peer-reviewed journals. She also has written a monograph on *Risk and Resilience* and co-edited a book with Rainer K. Silbereisen on *Transitions from School to Work*, both published by Cambridge University Press.

BARBARA SCHNEIDER is the John A. Hannah Chair and University Distinguished Professor in the College of Education and Department of Sociology at Michigan State University. Her research and teaching focus on understanding how the social contexts of schools and families influence the academic and social well-being of adolescents as they move into adulthood, with a particular emphasis on improving educational opportunities for students with limited economic and social resources. She is the co-author of 15 books, author of numerous journal articles, and previously editor of *Educational Evaluation and Policy Analysis* and *Sociology of Education*. Schneider was a Fulbright New Centuries Scholar, member of the Sociological Research Association, and Senior Fellow at NORC at the University of Chicago. She is a founding member of the Jacobs Foundation postdoctoral Fellowship program PATHWAYS to Adulthood, and was recently elected President of the American Educational Research Association (AERA).

JACQUELINE SCOTT is Professor of Empirical Sociology in the Faculty of Human, Social and Political Sciences at the University of Cambridge. From 2004 to 2010 she directed the Economic and Social Research Council's (ESRC) Research Priorities Network on Gender Inequalities in Production and Reproduction, where she coordinated projects across eight institutions investigating the changing roles and lifestyles of men and women. The Network investigated why gender inequality is so prevalent within our society and sought to identify ways that greater equality might be achieved. She is the editor of several books about gender inequalities and sociology of family and has published many articles on attitudinal change. She is a member of the Scientific Advisory Board of the European Social Survey and the ESRC National Centre for Research Methods.

ALICE SULLIVAN is a Reader in Sociology at the Institute of Education, University of London. As Director of the 1970 British Cohort Study she leads the team responsible for developing the content, design, and analysis of the 1970 British Cohort Study. Her research interests are focused on social and educational

inequalities, including inequalities of social class, gender, and ethnicity. Her published work includes research on social class and gender differences in cognition and educational attainment, Bourdieu and cultural capital, school sector differences, and education policy.

JENNIFER SYMONDS' research interests are in the development of children's psychological and emotional wellbeing at school transition. Recently, she has directed the Changing Key study of musical identity at school transition for the Paul Hamlyn Foundation, investigated adolescents' school engagement as a research fellow on the Learning Futures project for the University of Bristol, and researched adolescent mental health on both the Nuffield Foundation's Changing Adolescence program and as a research fellow on the international PATHWAYS to Adulthood program at the University of Helsinki. Currently she is writing a psychology book for teachers: *Understanding Transition: What Happens to Children and How to Help Them*.

ULRICH TRAUTWEIN is a Professor for Educational Science at the University of Tübingen. His main research interests include educational transitions, the effects of different learning environments on self-concept, interest, and personality development, and the role of self-related cognitions in students' homework behavior. He has published more than 100 scholarly articles in peer-reviewed journals. Trautwein directs two longitudinal large-scale school achievement studies and several large-scale intervention projects. He is also the director of the graduate program Learning, Educational Achievement, and Life Course Development (LEAD), funded by the excellence initiative of the German Federal and State Governments, and is a member of the Jacobs Foundation post-doctoral Fellowship program PATHWAYS to Adulthood.

LORNA UNWIN is Chair in Vocational Education at the Institute of Education, University of London. She has held academic posts at the Open University and University of Sheffield, and was Director of the Centre for Labour Market Studies at the University of Leicester. Her latest books include *Contemporary Apprenticeship: International Perspectives on an Evolving Model of Learning* (co-authored with Alison Fuller and published in 2012). She is editor of the *Journal of Vocational Education and Training*.

KATJA UPADYAYA, PHD, is a research investigator at the Institute of Social Research, University of Michigan. Her research interests include teacher–student and parent–child interaction, causal attributions and beliefs, study and work engagement, academic motivation and performance, gender differences, STEM, and school and work transitions. From 2008 to 2010 she was a Fellow of the Jacobs Foundation post-doctoral PATHWAYS to Adulthood program.

MING-TE WANG is an Assistant Professor of Applied Developmental Psychology and Research Scientist in the Learning Research & Development Center at the

University of Pittsburgh. He received his doctoral degree in Human Development and Psychology from Harvard University, and he was a Fellow of the Jacobs Foundation postdoctoral PATHWAYS to Adulthood program at the University of Michigan. His research focuses on the impact of school climate and family socialization on adolescents' motivational beliefs and the effects of multiple ecological systems on the behavioral, social, and emotional development of youth from diverse socioeconomic and cultural backgrounds. His work emphasizes the interplay of developmental processes across both academic and social domains in adolescence, and situates these processes within family, school, and community contexts.

ELIZABETH WEBB is a Research Associate in the Department of Epidemiology and Public Health at University College London, and a member of the ESRC International Centre for Lifecourse Studies in Society and Health (ICLS).

DAVID WEISS studied psychology at the University of Kiel and the Australian National University. He completed his PhD at the University of Erlangen-Nuremberg, for which he received the Karl-Giehl Award for the most outstanding dissertation of the year. In 2009, he joined the Department of Psychology at the University of Zurich as a postdoctoral researcher. For his research on age identity, he received the Vontobel Award for Research on Age(ing) in 2011. His main research interests relate to self, identity, and stereotypes from a life-span perspective.

BETTINA S. WIESE is a Professor of Personnel and Organizational Psychology and currently the Managing Director of the Department of Psychology at the RWTH Aachen University, Germany. She received her PhD in psychology from the Free University of Berlin. Her main research interests include the influence of personal goals and self-regulatory strategies on career development and the interplay of work and family during transitions (e.g., return to work after maternity leave).

KRISTINA ZOSULS earned her PhD in Social Psychology, and is currently an associate faculty member at the T. Denny Sanford School of Social and Family Dynamics at Arizona State University.

Abbreviations (selected)

ACT	American College Testing
AGFI	Adjusted Goodness of Fit Index
AIC	Akaike’s Information Criterion
A-level	Advanced level (UK)
ANOVA	Analysis of Variance
ARS	Academic Rating Scale (US)
BCS70	British Cohort Study (1970)
BHPS	British Household Panel Survey
BIC	Bayesian Information Criterion
BYS	British Youth Survey
CAB	Childhood and Beyond (Study) (US)
CAPI	Computer Assisted Personal Interview
CATI	Computer Assisted Telephone Interview
CCCI	Civic Competence Composite Indicator
CES-D	Center for Epidemiologic Studies–Depression Scale
CFI	Comparative Fit Index
CIVED	Civic Education Study
COCON	Swiss Survey of Children and Youth
CRELL	Centre for Research on Lifelong Learning
DAA	Differential Ability Analysis
DfE	Department for Education (UK)
DTI	Department of Trade and Industry
ELS	Education Longitudinal Study (US)
ELSA	English Longitudinal Study of Ageing
EOC	Equal Opportunities Commission (UK)
EU	European Union
GCSE	General Certificate of Secondary Education (UK)
GDI	Gender Development Index
GEM	Gender Empowerment Measure
GFI	General Formal Investigation (UK)
GPA	Grade Point Average
HGLM	Hierarchical Generalized Linear Model
HLM	Hierarchical Linear Model
ICC	Intra-Class Correlations

IDA	Individual Development and Adaptation Study (Sweden)
IER	Institute of Employment Rights
ILO	International Labour Organization
IPUMS	Integrated Public Use Microdata Series
IRT	Item Response Theory
ISCO	International Standard Classification of Occupations
IT	Information Technology
LPA	Latent Profile Analysis
LSYPE	Longitudinal Study of Young People in England
MA	Modern Apprenticeship (UK)
MLA	Multilevel Analysis
MRA	Multiple Regression Analysis
MSALT	Michigan Study of Adolescent Life Transitions (US)
NCDS	National Child Development Study (UK)
NCES	US National Center for Educational Statistics
NEET	Not in Education, Employment, or Training
NLS	National Longitudinal Survey (US)
NLSY	National Longitudinal Survey of Youth (US)
NS-SEC	National Statistics Socio-economic Classification (UK)
OECD	Organisation for Economic Co-operation and Development
O-level	Ordinary level (UK)
OLS	Ordinary Least Squares
ORACLE	Observational Research and Classroom Learning Evaluation (UK)
PAQ	Personal Attributes Questionnaire
PISA	Programme for International Student Assessment
PME	Physical Sciences, Mathematics, and Engineering
RMSEA	Root Mean Square Error of Approximation
SAMSAD	Secondary and Middle School Adolescent Development (Study) (UK)
SAT	Scholastic Assessment Test (US)
SDQ	Self-Description Questionnaire
SEM	Structural Equation Modeling
SES	Socioeconomic Status
SET	Science, Engineering, and Technology
SFR	Statistical First Release
SOC	Selection, Optimization, and Compensation Model
SRMR	Standardized Root Mean Square Residual
STEM	Science, Technology, Engineering, and Math
STVs	Subjective Task Values

Cambridge University Press
978-1-107-02172-3 — Gender Differences in Aspirations and Attainment
Edited by Ingrid Schoon , Jacquelynne S. Eccles
Frontmatter
[More Information](#)

xxx LIST OF ABBREVIATIONS (SELECTED)

TIMSS	Third International Mathematics and Science Study
TLI	Tucker-Lewis Index
TOEFL	Test of English as a Foreign Language
TOSCA	Transformation of the Secondary School System and Academic Careers (Germany)
UKRC	UK Resource Centre for Women in Science, Engineering and Technology
UNESCO	United Nations Educational, Scientific and Cultural Organization
VET	Vocational Education and Training (UK)