

PATHFINDER



The Pathways to Adulthood Newsletter



Capacity building and advancing the understanding of productive youth development in an international context are the objectives of the PATHWAYS Post-Doctoral Fellowship Programme, funded by the Jacobs Foundation. In this second issue of the PATHWAYS newsletter research conducted by the PATHWAYS fellows is presented, as well as an overview of two recent book publications by our Principal Investigators.

Julie Ashby, a PATHWAYS Fellow based at the Institute of Education in London, focuses in her research on the influences guiding economic behavior. In particular, she investigates the role of teenage aspirations and values in shaping adult behavior and identity. A recent publication of hers, in the *Journal of Vocational Behavior*, has examined the association between adult earnings and teenage career aspirations and job ambitions. She shows that young people for whom it is important to have a challenging job that enables them to 'get ahead' earn more money in adulthood than their less ambitious peers.

Angela Chow, a post-doctoral Fellow based at the University of Helsinki, reports on her research about how students prioritize and value different school subjects, showing that priority patterns of task values predict educational expectations. Her study will be published in the *International Journal of Behavioral Development*.

Martin Tomasik, our very first PATHWAYS Fellow, based at the Centre for Applied Developmental Studies at the University of Jena, reports on his experiences within the PATHWAYS programme. During his Fellowship he has published six papers in academic journals as well as several book chapters and reports.

PATHWAYS programme activities during 2010 included an international workshop at the University of Helsinki, co-hosted by the Helsinki Collegium for Advanced Studies. We also organised a number of PATHWAYS symposia at international conferences, and a first international PATHWAYS conference on 'Gender differences in aspirations and attainment' in London in July 2010 (co-funded by the UK Economic and Research Council and the Centre for the Study of Lifelong Learning and Life Chances in the Knowledge Economies (LLakes)).

Please visit our website to find out more about our work and the team: www.pathwaystoadulthood.org

In Brief

Career Success:
The role of aspirations, ambition and gender in predicting adult social status and earnings.
Article by Julie S. Ashby and Ingrid Schoon, Institute of Education, University of London
Page 2

Task values across subject domains:
A gender comparison using a person-centred approach
Article by Angela Chow and Katariina Salmela-Aro, Helsinki Collegium for Advanced Studies at the University of Helsinki
Page 4

Fellowship Focus:
Julie Ashby
Angela Chow
Martin Tomasik
Page 6

Workplace Flexibility:
Realigning 20th Century Jobs for a 21st Century Workforce
A new book edited by Kathleen Christensen and Barbara Schneider
Page 8

Social Change and Human Development Concept and Results
A new book edited by Rainer K. Silbereisen and Xinyin Chen
Page 8

Career Success:

The role of aspirations, ambition and gender in predicting adult social status and earnings.

Raising young people's aspirations is a current objective for most governments. The idea is that encouraging young people to challenge themselves and "aim high" will increase their educational and occupational attainment. The link between teenage career aspirations and adult career attainment has been established in previous research, and there is also evidence to suggest that teenage career aspirations are linked to values regarding future jobs. However, there appears to be a lack of research linking the value attached to success or ambition expressed during adolescence to adult outcomes. Recent research shows that ambition values are indeed linked to adult earnings (Ashby & Schoon, 2010) and here we report about this study.

Julie S. Ashby and
Ingrid Schoon,
Institute of Education,
University of London

Introducing the research

Previous research has shown that young people with high career aspirations are more likely to enter a professional career in adulthood (Schoon, Martin, & Ross, 2007; Schoon & Parsons, 2002). There is also evidence to suggest that teenage career aspirations are linked to values regarding future jobs (Eccles, 2009). For example, Eccles et al. (1999) found that valuing helping others predicted teenager's plans to enter either human service or health related professions. Similarly, Liem and Nie (2008) found that valuing success and impressing people was associated with teenagers wanting to do better than others in school. However, there is little evidence linking the values attached to success or ambition values expressed during adolescence to adult outcomes.

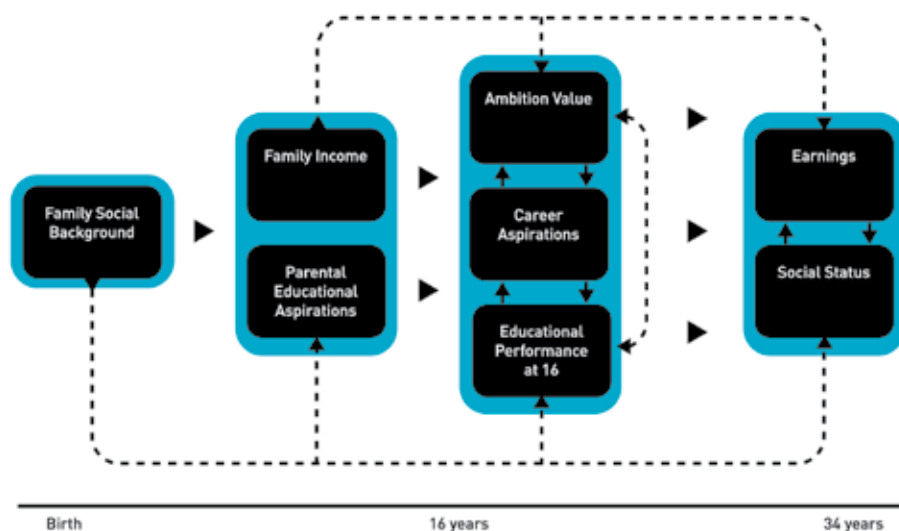
Are aspirations, expectations and ambitions different concepts?

Yes. Aspirations capture what one would like to happen, while expectations describe what one thinks will happen. To tap into more "realistic" career aspirations we thus used a combined measure, which took account of both realistic and ideal career choices. On the other hand, our measure of ambition value captured the importance adolescents attached to having a job that enables them to be challenged, be promoted and get ahead.

How are teenage career aspirations and ambitions linked to adult outcomes?

We tested a developmental contextual model (see figure 1) specifying the pathway linking family social background factors, teenage educational performance, teenage career aspirations and teenage ambition value to earnings and social status in adulthood. The diagram shows the interlinkages between these different variables.

Figure 1: Developmental contextual model predicting social status attainment in adulthood (Ashby & Schoon, 2010)



What data did we use?

We used data collected from the 1970 British Cohort Study, which is a continuing longitudinal study following children born in a week of April 1970.

About the study:

- Data collection sweeps have taken place at ages 5, 10, 16, 26, 30 and 34 years.
- The data we used was collected at birth, at age 16, and at age 34.
- We used a sample of 1851 females and 1825 male cohort members, all of whom were in part- or full-time employment at age 34.

We looked at men and women separately— why did we do this?

- Proportionally fewer women than men rise to the top of their professions (e.g., Scott, Dex, Joshi, Purcell & Elias, 2008),
- Men continue to earn higher salaries than women in equivalent occupations (e.g., Freeman, 2004).

What did we find?

- Our pathway model had a good fit to the data for both men and women.
- Teenage ambition value was linked to adult earnings. That is, young people for whom it was important to get ahead in their job earned more money in adulthood than their less ambitious peers.
- As previous research has shown, young people with high career aspirations were more likely to enter a professional career in adulthood.

Were there any gender differences?

- Teenage girls from higher income families were more likely to want to get ahead in their job than girls from lower income families.
- Family income was not related to teenage boys' level of ambitiousness.
- Teenage boys placed more importance than girls on being challenged, which might explain why they "aimed high" (i.e., expressed high job ambition) independent of whether they came from a high or low income family.
- Parents had significantly higher expectations and aspirations for their daughters than for their sons, and females achieved significantly higher exam results at age 16 than males.
- The relationship between parental educational aspirations and educational performance at age 16 was stronger for boys than for girls. Although girls have closed the overall gender gap in educational attainment and often outperform boys, it appears that educational performance of teenage boys could benefit from raised parental aspirations.

References

- Ashby, J. S., and Schoon, I. (2010) The role of aspirations, ambition and gender in predicting adult social status and earnings. *Journal of Vocational Behavior*, 77(3), 350 - 360
- Buchmann, C., & DiPrete, T., A. (2006). The growing female advantage in college completion: The role of family background and academic achievement. *American Sociological Review*, 71, 515-41.
- Croll, P. (2008). Occupational choice, socio-economic status and educational attainment: A study of the occupational choices and destinations of young people in the British Household Panel Survey. *Research Papers in Education*, 23, 243-268.
- Eccles, J. S., Barber, B., & Jozefowicz, D. (1999). Linking gender to education, occupation, and recreational choices: Applying the Eccles et al. model of achievement-related choices. In W. B. Swann, J. H. Langlois, & L. A. Gilbert (Eds.), *Sexism and stereotypes in modern society: The gender science of Janet Taylor Spence* (pp. 153-192). Washington, DC: APA Press.
- Eccles, J.S. (2009). Who am I and what am I going to do with my life? Personal and collective identities as motivators of action. *Educational Psychologist*, 44, 78-89.
- Freeman, C. E. (2004). *Trends in educational equity of girls and women: 2004*. Washington, DC: U.S. Government Printing Office.
- Joshi, H., & Paci, P. (1998). *Unequal pay for men and women: evidence from the British Birth Cohort Studies*. London: MIT Press.
- Liem, A., D., & Nie, Y. (2008). Values, achievement goals, and individual-oriented and social-oriented achievement motivations among Chinese and Indonesian secondary school students. *International Journal of Psychology*, 43, 898-903.
- Schoon, I., Martin, P., & Ross, A. (2007). Career transitions in times of social change. His and her story. *Journal of Vocational Behavior*, 70, 78-96.
- Schoon, I., & Parsons, S. (2002). Teenage aspirations for future careers and occupational outcomes. *Journal of Vocational Behavior*, 60, 262-288.
- Scott, J., Dex, S., Joshi, H., Purcell, K., & Elias, P. (Eds.). (2008). *Women and employment: Changing lives and new challenges*. Edward Elgar.

Where can this research go in the future?

Important next steps to this work appear to be (1) exploring possible variations by country, region, school environment and peer group and (2) linking teenage career aspirations and values to adult outcomes beyond career and income attainment, such as wellbeing and identity.

Task values across subject domains: A gender comparison using a person-centred approach

As part of a wider research programme which aims to gain a better understanding of learning motivation and to identify effective ways to foster motivation towards science, we conducted a study to examine how students prioritize task values across four subject domains (languages, math and science, social sciences, the arts and P.E.) and the related gender differences (Chow & Salmela-Aro, in press). We found four distinct patterns of how students valued the four different subject domains. Although nearly all students valued languages highly, preference patterns were mostly driven by how students valued math and science. Preferences in task values, in turn, were associated with educational expectation. For example, students who placed a particular high value on math and science at the last year of comprehensive school (age 15) were more likely to expect to continue education after the completion of comprehensive school than students who placed a particular low value on math and science, even if they had the same GPA.

Angela Chow and
Katariina Salmela-Aro,
Helsinki Collegium for
Advanced Studies at the
University of Helsinki

What are task values?

Task value refers to how individuals perceive the value of a school subject or an activity, i.e. how important, useful, and interesting it is to them. Task values have been identified as an important motivational source for students' behaviour and subsequent educational choices (Eccles [Parsons], 1983).

While most studies on task values have focused on the valuation of one particular school subject and its relationship with subject-specific behaviours and choices, there is a lack of research investigating task value patterns across subject domains and their associations with outcomes at a more general level (e.g., expectation or decision regarding continuing education).

We conceptualized the study based on two key reasons. First, recent research has found that at a subject-specific level, the gender gap of how math and science are valued has become smaller or insignificant. However, the gender imbalance regarding subject choice continues to exist, with boys having stronger aspiration to enter educational or occupational fields related to math, physical science, engineering and computing than girls (Jacobs, 2005). Therefore, our research goes beyond the examination of task values at a subject-specific level and investigates how boys and girls prioritize task values across an array of subject domains. Second, the question of how to foster learning motivation has been a major concern among researchers and educators internationally. This is also the case in Finland, even though Finnish students



ranked high in their academic performance - as evidenced by the OECD Programme for International Student Assessment (PISA). For instance, although Finnish students ranked top in academic achievement in science, their interest and personal value attached to science was relatively lower than the international average (Lavonen, 2008).

What data did we use?

We used the FinEdu data, comprising a sample of 638 Finnish ninth graders (boys = 329, girls = 309, mean age = 15). The data were collected from all the lower secondary schools in one city in Eastern Finland. The analytic variables included:

- Task values. In reference to the expectancy-value theory (Eccles [Parsons], 1983), we measured task values by asking the participants to rate the (1) importance, (2) usefulness and (3) level of interest of four key subject domains, including languages, math and science, social sciences and lastly, the arts and P.E. The means of the three task value items on each of the four subjects were calculated as an overall task value score of the respective subject domains.
- Grade point average (GPA).
- Educational expectation: either continue to study or not upon completion of compulsory education after ninth grade.

How did we analyze the data?

A two-step approach was employed in this study:

- First, the participants were classified into groups according to their task values across the four subject domains. Each group was characterized by a unique priority pattern regarding their preferences of the four subjects. We did the classification by latent class analysis, which is a statistical procedure to estimate the number of latent homogeneous classes in a heterogeneous sample based on the pattern of observed responses (Vermunt & Magidson, 2002).
- Second, we examined how the task value groups differed in their educational expectation.

What did we find?

Four distinct task value groups could be identified:

- High-Math-and-Science group (highly value math and science; 20% of the sample)
- Low-Math-and-Science group (lowly value math and science; 19% of the sample)
- All-Subjects group (highly value all the four subjects; 55% of the sample)
- The-arts-and-P.E. group (highly value the arts and P.E.; 6% of the sample).

Two groups were characterized by a relatively high or low task value in math and science, which suggested that task values in math and science played quite an important role in the task value group classification. While both languages and math and science are generally taken as the core subjects in schools, it is intriguing that math and science stood out in the classification, but not languages.

Considering the applicability of subject knowledge across the different fields may help to explain this finding. Mathematical and scientific knowledge may not always be relevant to some educational or career fields, while language skills are essential to almost all fields (Durik, Vida, & Eccles, 2006).

For example, mathematical skills may not be relevant to the career of a historian, but a physicist still needs the language skills for reading and writing reports. As such, all the participants tended to attach a relative high value on languages, regardless of their educational or career goals. However, as for math and science, only the students who planned to pursue these subjects also placed a high value on them. This can explain why math and science emerges as a more important subject domain in contrasting task value patterns across subjects, but not languages.

Where there any gender differences?

A gender imbalance was obvious in three groups:

- Boys dominated the high-math-and-science group (98% boys in this group).
- Girls dominated the low-math-and-science group (82% girls in this group).
- Boys dominated the-arts-and-P.E group (78% boys in this group).

How did the task values patterns link to educational expectation?

The participants of our study were at the last year of compulsory education in Finland. The task value patterns of these students were found to be influential regarding their educational expectation, even after taking their academic achievement into account. **For example, among the students with the same GPA, the chance for the “high-math-and-science” group to expect to continue education was 4.11 times higher than among the “low-math-and-science” group.** This provides initial evidence on the linkage between task value patterns and educational expectation at the across-subject level.

What next?

We have identified a meaningful classification of task value patterns across subjects. We also found initial evidence on the relationship between these task value patterns and educational expectation. In our future studies we plan to identify how these priority patterns of task values

are related to other outcomes, such as school engagement and choices of extra-curricular activities. Also, we will investigate task value patterns among students from other countries, so as to validate the generalizability of the task value classification. In addition, building on this study, we will examine the roles of task value patterns in shaping gendered developmental trajectories beyond the compulsory education period, for example, regarding academic subject choices and occupational development.

References

- Chow, A., & Salmela-Aro, K. (in press). Task values across subject domains: A gender comparison using a person-centred approach. *International Journal of Behavioral Development*.
- Durik, A. M., Vida, M., & Eccles, J. S. (2006). Task values and ability beliefs as predictors of high school literacy choices: A developmental analysis. *Journal of Educational Psychology*, 98(2), 382-393.
- Eccles [Parsons], J. S. (1983). Expectancies, values, and academic behaviours. In J. T. Spence (Ed.), *Achievement and achievement motivation* (pp. 75-146). San Francisco, CA: W. H. Freeman.
- Jacobs, J. E. (2005). Twenty-five years of research on gender and ethnic differences on math and science career choices: What have we learned? *New Directions for Child and Adolescent Development*, 110, 85-94.
- Lavonen, J. (2008). PISA 2006 – Science literacy assessment. In J. Hautamäki, E. Harjunen, A. Hautamäki, T. Karjalainen, S. Kupiainen, S. Laaksonen, J. Lavonen, E. P. P. Rantanen & P. Scheinin (Eds.), *PISA06 Finland: Analyses, reflections, explanations* (pp. 67-116). Ministry of Education Publications 2008: 44. Centre for educational assessment, University of Helsinki.
- Vermunt, J. K., & Magidson, J. (2002). Latent class cluster analysis. In J. A. Hagenars & A. L. McCutcheon (Eds.), *Applied latent class analysis* (pp. 89-106). Cambridge, UK: Cambridge University Press.

Fellowship Focus

Julie Ashby



Thanks to the support from the Jacobs Foundation I could pursue my research within the domain of economic and social-developmental psychology under the guidance and mentorship of an international network of scholars. My research focuses on potential influences guiding economic behaviour and transitions, examining in particular the role of motivation and values expressed during adolescence and their impact on adult behaviour and identity. Gaining a better understanding of early precursors of adult behaviour provides crucial information to educators and policy makers aiming to prepare young people for the assumption of adult roles.

The PATHWAYS fellowship has given me the opportunity to work with leading researchers in the field of youth transitions and to establish a supportive network with other early career researchers. The regular PATHWAYS meetings have enabled me to receive invaluable feedback on my work, and provided a source of inspiration. Although my fellowship is coming to an end, I have developed strong ties with the PATHWAYS Network and hope to maintain these contacts throughout my career.

Angela Chow



I am a postdoctoral fellow based at the University of Helsinki, and in the summer of 2008 I joined the PATHWAYS to ADULTHOOD programme, funded by the Jacobs Foundation. I am particularly interested in the role of motivation and education in shaping young people's development, as I believe this line of endeavor can help to identify effective educational policies and strategies for fostering productive development across the lifespan.

Being involved in PATHWAYS allows me to work with a strong team of professors and researchers across the world. In my future studies, I will examine how motivation and perceived school experiences shape the educational and career trajectories of young people during the transition to independent adulthood, and how these processes shape outcomes (e.g., career, mental health and family relationship) in later life.

Martin Tomasik

During my PATHWAYS fellowship I was able to pursue my research interests on individual agency in negotiating transition demands related to social and economic change. Referring to a model developed in Jena by Silbereisen and Pinquart (2004) and further elaborated by Schoon and Silbereisen (2009) for the context of productive youth development, I conceptualized individual agency in terms on individual engagement and disengagement processes (see Heckhausen, Wrosch & Schulz, 2010). My special interest within this theoretical framework are the contextual predictors of the benefits of disengagement or 'knowing when to let go'. In other words, I am examining conditions in the social ecology that render disengagement from transition related demands a more adaptive alternative to engagement. The PATHWAYS fellowship has given me the invaluable opportunity to publish on this and other related topics.

In the two years of my fellowship I have published six papers in international journals, one research paper for the Centre for Learning and Life Chances in Knowledge Economies and Societies (LLAKES), one book chapter on socio-emotional development of children in times of social change, one encyclopedia chapter on globalization and adolescence, and together with Rainer K. Silbereisen have co-edited two special sections on the interaction between social change and individual development. Furthermore, I was able find a publisher for my dissertation thesis.

This output would not have been possible without the support from the Jacobs Foundation and without the intellectually stimulating setting of the PATHWAYS network. During the two years I had the opportunity to work with leading researchers in developmental science who have inspired me to carefully consider contextual opportunities and constraints when investigating individual adaptation and development.

The PATHWAYS meetings and workshops I have attended have been particularly fruitful for me as they provided me with constructive and multi-faceted feedback on my work and with experience in working with international colleagues from different fields of psychology and sociology. I am looking forward to staying in contact with the group in the future.

References

- Pinquart, M. & Silbereisen, R. K. (2004). Human development in times of social change: Theoretical considerations and research needs. *International Journal of Behavioral Development*, 28, 289 - 298.
- Schindler, I., & Tomasik, M. J. (2010). Life choices well made: How control strategies relate to partner and career decision processes. *Motivation and Emotion*, 34, 168-183.
- Schoon, I., & Silbereisen, R. K. (2009). Conceptualising school-to-work transitions in context. In I. Schoon & R. K. Silbereisen (Eds.), *Transitions from school to work: Globalization, individualization, and patterns of diversity*. New York: Cambridge University Press.
- Silbereisen, R. K., & Tomasik, M. J. (Eds.). (2010-a). Changing contexts - changing individuals: Psychological approaches to social, economic, and political change. [Special section]. *European Psychologist*, 15(4).
- Silbereisen, R. K., & Tomasik, M. J. (2010-b). Development as action in changing contexts: Perspectives from six countries. *Historical Social Research*, 35, 57-75.
- Silbereisen, R. K., & Tomasik, M. J. (2010-c). Human behaviour in response to social change: A guide for the special section. *European Psychologist*, 15, 243-245.
- Silbereisen, R. K., & Tomasik, M. J. (Eds.). (2010). Transitions - transformations: Trajectories of social, economic and political change after communism. *Personality development and social change* [Special section]. *Historical Social Research*, 35(2).
- Silbereisen, R. K., & Tomasik, M. J. (2011). Mapping demands of social change. *LLAKES Research Paper*.
- Silbereisen, R. K., & Tomasik, M. J. (in press). Psychosocial functioning in the context of social, economic, and political change. In X. Chen & K. H. Rubin (Eds.), *Socioemotional development in cultural context*. New York: Guilford Press.
- Tomasik, M. J. (2010). *Developmental barriers and the benefits of disengagement*. Berlin, Germany: Logos.
- Tomasik, M. J., & Silbereisen, R. K. (2009). Demands of social change as a function of the political context, institutional filters, and psychosocial resources. *Social Indicators Research*, 94, 13-28.
- Tomasik, M. J., & Silbereisen, R. K. (in press). Adolescence and globalization. In B. B. Brown & M. Prinstein (Eds.), *Encyclopedia of adolescence*. Oxford, United Kingdom: Elsevier.
- Tomasik, M. J., Silbereisen, R. K., & Heckhausen, J. (2010). Is it adaptive to disengage from demands of social change? Adjustment to developmental barriers in opportunity-deprived regions. *Motivation and Emotion*, 34, 384-298.
- Tomasik, M. J., Silbereisen, R. K., & Pinquart, M. (2010). Individuals negotiating demands of social and economic change: A control theoretical approach. *European Psychologist*, 15, 246-259.



Books

Workplace Flexibility Realigning 20th Century Jobs for a 21st Century Workforce



Edited by
Kathleen Christensen
and Barbara Schneider

This book addresses why today's workers are facing enormous pressures at their jobs which are structured much the same way they were fifty years ago before the explosion of dual earner families. The first section of the book examines the problems faced by working families, including the conflict and emotional stresses that inflexible work schedules have on family well being. The second section provides an in-depth description of workplace flexibility policies in Australia, Europe, Japan, and the U.S. and the difficulties faced by both the private and public sectors in implementing them. The book concludes by offering several solutions for how the workplace can accommodate the needs of 21st century workers.

Cornell Press
For more information about
the book please visit
www.cornellpress.cornell.edu



- The major objective of the programme is to promote the next generation of researchers through funding, mentoring and collaboration
- The mission of this Collaborative Post-Doctoral Fellowship Programme is to stimulate innovative, interdisciplinary, and comparative research of productive youth development.
- Our programme brings together experts from the UK, Germany, Finland, Sweden and the US.
- We engage with different stakeholders in how best to equip young people for mastering the challenges of growing up in a changing social context.

Principal Investigators and participating institutions

- Lars Bergman – Stockholm University
- Jacquelynne S. Eccles – University of Michigan
- Katariina Salmela-Aro – University of Helsinki
- Barbara Schneider – Michigan State University
- Ingrid Schoon – Institute of Education, University of London
- Rainer K. Silbereisen – University of Jena
- Ulrich Trautwein – University of Tübingen

www.pathwaystoadulthood.org

Social Change and Human Development Concept and Results



Edited by
Rainer K. Silbereisen
and Xinyin Chen

Today's world is characterized by a set of overarching trends that often come under the rubric of social change. In this innovative volume, Rainer K. Silbereisen and Xinyin Chen bring together, for the first time, international experts in the field to examine how changes in our social world impact on our individual development. Divided into four parts, the book explores the major socio-political and technological changes that have taken place around the world - from the rapid upheavals in 1990s Europe to the gradual changes in parts of East Asia - and explains how these developments interplay with human development across the lifespan. **Social Change and Human Development** is a useful resource for students and researchers involved in all areas of human development, including developmental psychology, sociology and education.

Sage Publications
For more information about
the book please visit
<http://www.uk.sagepub.com>

Pathways to Adulthood
Institute of Education
University of London
20 Bedford Way
WC1H 0AL

Telephone +44 (0)20 7331 5143
Email info@pathwaystoadulthood.org
www.pathwaystoadulthood.org

The mission of the Pathways to Adulthood Programme is to stimulate innovative, interdisciplinary, and comparative research of productive youth development.