Contents
1. Overview
2. Mendel's Laws of Heredity
3. Beyond Mendel's Laws
4. DNA: The Basis of Heredity
5. Animal Models in Behavioral Genetics
7. Estimating Genetic and Environmental Influences
8. The Interplay between Genes and Environment
9. Identifying Genes
10. Pathways between Genes and Behavior
11. Cognitive Disabilities
12. General Cognitive Ability
13. Specific Cognitive Abilities
14. Schizophrenia
15. Other Adult Psychopathology
16. Developmental Psychopathology
17. Personality and Temperament
18. Substance Use Disorders
19. Health Psychology and Aging
20. Evolution and Behavior
21. The Future of Behavioral Genetics

In the New Edition
Over 500 new references to bring students to the forefront of behavioral genetics research.

New authors, Valerie S. Knopik and Jenae M. Neiderhiser. Two new co-authors bring their insightful perspective and new ideas to the book, capturing the latest developments in this fast-moving and highly interdisciplinary field.

Expanded coverage of genetics and the environment appearing earlier in the book in two complete chapters (Chapters 7 & 8). With these chapters, the new edition now highlights the role of behavioral genetics in understanding the environment and its interplay with genetics.

A new chapter on substance use disorders (Chapter 18) and expanded coverage of psychopathology.

New sections
- Multivariate genetic analysis (Chapter 7)
- Genome-wide complex trait analysis (GCTA) (Chapter 7)
- Epigenetics (Chapter 10)
- Brain imaging (Chapter 13)
- Behavioral economics (Chapter 17)

An updated capstone chapter, The Future of Behavioral Genetics, reviewed by 30 of the world's top behavioral geneticists to provide a consensus statement about the field and its future.
## The Behavior Genetics Association gratefully acknowledges the contributions of members of the Executive Committee.

<table>
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<tr>
<th>Year</th>
<th>President-Elect</th>
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<th>Past-President</th>
<th>Secretary</th>
<th>Treasurer</th>
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Note: Service on the Executive Committee during several of the early years of BGA was based on archival records. If you see an error, please let the Secretary, Arpna Agrawal (arpna@wustl.edu) know.
### Awardees

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<td>Roseann Peterson &amp; Claire Coyne</td>
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### Previous meetings

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Friday June 22: **Festschrift for Professor Lindon Eaves**

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| 9:00-9:10 am | Welcome to Festschrift  
Mike Neale                                                                |
| 9:10-9:30 am | “Lindon Eaves, Paradigm Shifter”  
Nick Martin                                                                |
| 9:35-9:55 am | Unsolvable challenges: Human mate selection  
Andrew Heath                                                                |
| 10:00-10:20 am | Quantitative Genetics: Birmingham UK in the 1960's -1970's  
Mike Kearsey                                                                |
| 10:20-10:50 pm | Coffee Break                                              |
| 10:50-11:10 am | “Friends”  
Greg Carey/Wills                                                                |
| 11:15-11:35 am | Extended twin models and adolescent behavioral development  
Hermine Maes                                                                |
| 11:40-12:00 pm | GxE interaction and G-E covariance  
Conor Dolan                                                                |
| 12:00-1:00 pm | Lunch (explore the old town)                                              |
| 1:00-1:20 pm | Genetic analysis of Covariance Structure  
Dorret Boomsma                                                                |
| 1:25-1:45 pm | Developmental Genetic Models  
Eric Turkheimer                                                                |
| 1:50-2:10 pm | Social and Political Attitudes  
Pete Hatemi                                                                |
| 2:15-2:35 pm | Psychiatric Genetics  
Ken Kendler                                                                |
| 2:40-3:00 pm | Lindon Eaves: Mentor and Teacher  
Ben Neale                                                                |
| 3:30-3:30 pm | Coffee Break                                                                 |
| 3:30-3:50 pm | Latent classiness and other mixtures  
Mike Neale                                                                |
| 3:55-4:15 pm | Using what you know: Seeing the forest from the Bayesian trees  
Gitta Lubke                                                                |
| 4:20-4:40 pm | Signatures of assortment  
Sarah Medland                                                                |
| 4:45-5:05 pm | Walking in the shadows of giants  
Matt Keller                                                                |
| 5:05-5:30 pm | Response and Discussion  
Lindon Eaves                                                                |
| 5:30-7:00 pm | Executive Committee Meeting                                               |
| 7:30-11:00 pm | Reception/Opening reception for BGA  
Playfair Library, Old College, South Bridge |

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**Professor Lindon J Eaves**
**Saturday June 23**

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<th>Time</th>
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<td>8:30-8:45</td>
<td>Welcome to 2012 BGA Meeting and Edinburgh, Scotland</td>
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<td>Local Host: Timothy Bates</td>
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<td>8:45-9:45</td>
<td>Plenary Session: Dobzhansky Lecture by 2010 Dobzhansky Awardee Andrew Heath</td>
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<td>Genome Wars, Obesity, and Addiction: Why Dobzhansky Would Have Loved the Modern Era</td>
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<td>9:45-10:15</td>
<td>Morning Break</td>
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<td>10:15-11:15</td>
<td>Plenary Session: Peter Visscher</td>
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**11:15-11:50**

- **Symposium: Dark Heritability**
  - Chairs: Matthew Keller & Greg Carey
  - Conference Centre

- **11:15**
  - Genome-wide complex trait analysis and extensions – Important tools for behavioral genetics
    - Matthew Keller

- **11:40**
  - Comparison of methods that use inferred genetic similarity from GWAS data, even for ostensibly unrelated subjects, to draw conclusions about effects of quantitative trait loci
    - Michael Miller

- **12:05**
  - Some results on the genetic architecture of human intelligence
    - Steven Hsu

**11:15-12:30**

- **Paper Session: ADHD, Attention, and Reading**
  - Chairs: Brian D'Onofrio and Henrik Larsson
  - Great Hall

- **11:15**
  - Nonshared environmental influences on the association between traits of autism and attention-deficit/hyperactivity disorder: A monzygotic twin differences study
    - Mark Taylor, Tony Charman, & Angelica Ronald (Thompson Award Candidate)

- **11:30**
  - The aetiological covariation between inattention, reading difficulties and reaction time variability in a general population sample of twins
    - Celeste Cheung, Alexis Wood, Philip Asherson, & Jonna Kuntsi (Thompson Award Candidate)

- **11:45**
  - ADHD symptoms and atypical hypothalamic-pituitary-adrenal axis functioning – evidence for familial overlap and moderating effects of oppositional behaviours
    - Rebecca Pinto, Fruhling Rijlsdijk, Philip Asherson, Graine McLoughlin, & Jonna Kuntsi

- **12:00**
  - Heritability of SWAN measured ADHD in adolescents and adults
    - Jane Ebejer

- **12:15**
  - The influence of early anesthesia exposure on attention problems: Causality versus genetic pleiotropy
    - Maria Groen-Blokhuis, Jurgen de Graaff, Meike Bartels, Maryse Duran, Toos van Beijsterveldt, Cor Kalkman, Christel Middeldorp, & Dorret Boomsma (Thompson Award Candidate)

- **12:30**
  - The 2p12 dyslexia risk locus is associated with general cognitive ability and white matter density
    - Silvia Paracchini
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<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>2:00</td>
<td>Lightning Round: Mostly Not Kids</td>
<td>Foyer</td>
<td>Angelica Ronald, Jaakko Kaprio, Jessica Nisen, Samuli Helle, Pekka Martikainen, Karri Silventoinen</td>
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### 2:00 - 2:05
- Disentangling the relationship between BMI and health-related quality of life
  - Juan Ordanana, Lucia Colodro, Juan Sanchez-Romera, & Francisco Perez-Riquelme

### 2:05 - 2:10
- Personality similarity in unrelated look-alike individuals: Resolving a twin study challenge
  - Nancy Segal

### 2:10 - 2:15
- Recruitment and retention biases in a multi-wave population-based twin study
  - Richard Rose, Jaakko Kaprio, & Richard Viken

### 2:15 - 2:20
- Genetic patterning of white matter/gray matter signal intensity contrast: A new phenotype for imaging genetics studies
  - Matthew Panizzon, Mark Flecas, Chi-Hua Chen, Christine Fennema-Notestine, Lisa Eyler, Wesley Thompson, Carol Franz, Michael Grant, Hong Xian, Michael Lyons, Michael Neale, Anders Dale, & William Kremen

### 2:20 - 2:25
- A longitudinal examination of genetic and environmental influences on homotypic and heterotypic continuity of anxiety disorders and depression
  - Roxann Roberson-Nay, Lindon Eaves, Ananda Amstadter, Kenneth Kendler, & Judy Silberg

### 2:25 - 2:30
- Epigenetics of maternal cigarette smoking during pregnancy and child neurobehavioral outcomes
  - Valerie Knopik, Matthew Maccani, & John McGueary

### 2:30 - 2:35
- Mapping the genetic association between general cognitive ability and cortical surface area
  - William Kremen, Chi-Hua Chen, Matthew Panizzon, Christine Fennema-Notestine, Lisa Eyler, Carol Franz, Wesley Thompson, Michael Grant, Hong Xian, Michael Lyons, Michael Neale, & Anders Dale

### 2:35 - 2:40
- New evidence on the aetiology of specific psychotic experiences from an adolescent general population twin sample
  - Angelica Ronald, Dominika Sieradzka, Claire Haworth, A. Cardno, & Daniel Freeman

### 2:40 - 2:45
- Differential item functioning in the CAMDEX depression scale across middle age and late-life
  - Michael Sadler, Ryne Estabrook, Matthew McGue, & Kaare Christensen

### 2:45 - 2:50
- Education, height and reproduction: The role of genetic and environmental factors
  - Jaakko Kaprio, Jessica Nisen, Samuli Helle, Pekka Martikainen, & Karri Silventoinen
<table>
<thead>
<tr>
<th>3:30 - 3:50</th>
<th>Symposium: Advanced Genetic Epidemiology with OpenMx</th>
<th>Conference Centre</th>
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<tbody>
<tr>
<td>3:30</td>
<td>Dynamical systems analysis in twin research</td>
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<td></td>
<td>Steve Boker, Michael Neale, &amp; Kelly Klump</td>
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<tr>
<td>3:50</td>
<td>Regime switching models for substance use data: OpenMx models</td>
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<td></td>
<td>Michael Neale &amp; Shaunna Clark</td>
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<td>4:10</td>
<td>Using OpenMx for GWAS</td>
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<td>Sarah Medland, Karin Verweij, &amp; Joseph Powell</td>
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<td>4:30</td>
<td>OpenMx modeling of extended twin (ET) kinship designs</td>
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<td></td>
<td>Hermine Maes, Michael Neale, &amp; Lindon Eaves</td>
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<tr>
<th>3:30 - 5:00</th>
<th>Paper Session: Politics</th>
<th>Great Hall</th>
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<tr>
<td>3:30</td>
<td>The genetic architecture of economic and political preferences</td>
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<tr>
<td></td>
<td>Daniel Benjamin, David Cesarini, Matthijs van der Loos, Chris Dawes, Philipp Koellinger, Patrik Magnusson, Chris Chabris, Dalton Conley, David Labson, &amp; Magnus Johannesson (presented by Matthijs van der Loos)</td>
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<td>3:45</td>
<td>Consanguinity and democracy: Is there a link?</td>
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<td>Edward Bell &amp; Michael Woodley</td>
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<td>4:00</td>
<td>Genetic and environmental links between personality traits and political attitudes</td>
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<td></td>
<td>Christian Kandler</td>
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<td>4:15</td>
<td>Negative affectivity, political contention and turnout: A genopolitics field Experiment</td>
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<td></td>
<td>Chris Dawes</td>
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<td>4:30</td>
<td>The heritable origins of ingroup favoritism: Testing a norm-conformity theory</td>
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<td>Gary Lewis &amp; Timothy Bates</td>
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<tr>
<th>3:30 - 5:00</th>
<th>Paper Session: Alcohol and Substance Abuse</th>
<th>New Library</th>
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<tbody>
<tr>
<td>3:30</td>
<td>Inclusion of SNP data in the CCC Model for Drug Use and Abuse</td>
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<td></td>
<td>Jocilyn Delava &amp; Michael Neale</td>
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<td>3:45</td>
<td>Genetic sensitivity to peer behaviors: 5HTTLPR, smoking, and alcohol consumption</td>
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<td>Jonathan Daw, Michael Shanahan, Kathleen Harris, Andrew Smolen, Brett Haberstick, &amp; Jason Boardman</td>
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<td>4:00</td>
<td>Quantitative trait Loci that influence antisocial drug dependence in adolescence: A replication analysis</td>
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<td>Jeffrey Lessem, Robin Corley, Michael Stallings, Sandra Brown, John Hewitt, Christian Hopfer, Kenneth Krauter, Susan Mikulich-Gilbertson, Matthew McQueen, Soo Rhee, Andrew Smolen, Susan Tapert, Susan Young, &amp; Thomas Crowley</td>
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<td>4:15</td>
<td>GWAS of genetically informed measures of alcohol consumption and problems in the Finntwin12</td>
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<td>Jacquelyn Meyers (Thompson Award Candidate)</td>
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<td>4:30</td>
<td>Genome-wide scoring to predict substance use pathology</td>
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<td>Scott Vrieze, Matthew McGue, &amp; William Iacono (Thompson Award Candidate)</td>
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<td>4:45</td>
<td>Additive genetic variance in AST, ALT and GGT levels and its covariance with problematic alcohol use explained by SNPs</td>
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<td>Jenny van Beek, Gitta Lubke, Marleen de Moor, Gonneke Willemsen, Eco de Geus, Jouke Jan Hottenga, Jan Smit, Brenda Penninx, &amp; Dorret Boomsma (Thompson Award Candidate)</td>
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| 5:00 - 6:00 | Video presentation: Historical Moment in Reared Apart Twins Studies: Filmed Discussion Between Thomas J., Bouchard, Jr., and Niels Juel-Nielsen, May 1981. Introduction by Nancy Segal. | Conference Centre |
Sunday June 24: Registration from 8:30

8:30 – 10:00 Paper Session: Ability: Psychometric Approaches
Chair: Deborah Finkel

8:30 Developmental trajectories in syndromes with intellectual disabilities: Fragile X, Williams-Beuren, and Wolf-Hirschhorn
Gene Fisch

8:45 Shared and unique genetic and environmental influences on changes in multiple cognitive abilities over 16 years of late adulthood
Elliot Tucker-Drob, Chandra Reynolds, Deborah Finkel, & Nancy Pedersen

9:00 Etiology of change in cognitive abilities from adolescence to early adulthood in the Colorado Adoption Project
Chandra Reynolds, Sally Wadsworth, Robin Corley, Michael Stallings, & John DeFries

9:15 Genetic variance in lung Function drives variation in aging of spatial ability and processing speed
Deborah Finkel & Charles Emery

9:30 Socioeconomic status (SES) and children’s intelligence (IQ): In a UK-representative sample SES moderates the environmental, not genetic, effect on IQ
Ken Hanscombe, Maciej Trzaskowski, Claire Haworth, Oliver Davis, Philip Dale, & Robert Plomin (Thompson Award Candidate)

9:45 Does the maternal immunity hypothesis explain individual differences in cognition?
Carol Prescott, John McArdle, Sheri Berenbaum, & Susan Latham

8:30 – 10:00 Paper Session: What have modern genetic studies told us about depression? Chair: Gerome Breen

8:30 What have modern genetic studies told us about depression?
Gerome Breen

8:45 Whole genome linkage analysis in a large multigenerational family from Brazil and case control exploration of linkage regions
Shaza Alsaabann

9:00 Migraine with and without major depression are genetically different disorders
Lannie Lighthart, Cathryn Lewis, Anne Farmer, Ian Craig, Gerome Breen, Jouke Jan Hottenga, Brenda Penninx, Peter McGuffin, Dorret Boomsma, & Dale Nyholt

9:15 Stability and change in anxious depression as a function of genes and environment: A longitudinal twin and GWA study from age 3 to 65 years
Michel Nivard

9:30 Are symptoms of anxiety and depression during childhood and adolescence influenced by similar genetic factors as major depression in adulthood?
Christel Middeldorp

8:30 – 10:00 Paper Session: Health
Chair: Laura Baker

8:30 Does regular exercise help to maintain low BMI? How?
Wendy Johnson, Kirsten Kyvik, & Thorkild Sorensen

8:45 Do extraversion and sensation seeking causally influence exercise? A longitudinal genetically informed analysis
Marleen de Moor, Gonneke Willemsen, Jenny van Beek, Lot Geels, Dorret Boomsma, & Eco de Geus

9:00 Heritability of the trajectory of body mass index across the adult life span
Anna Dahl & Chandra Reynolds

9:15 Genetic architecture of the pro-inflammatory state in an extended twin-family design
Melanie Neijts

9:30 On the association of common polygenic variation with body mass index across adolescent development: A longitudinal twin study.
Roseann Peterson, Bradley Webb, Elizabeth Prom-Wormley, Judy Silberg, Lindon Eaves, & Hermine Maes

10:00 – 11:15 Morning Break

Chair: Tom McAdams

10:15 The genetics of experience: From passive to active approaches
Robert Plomin & Bonamy Oliver

10:35 Parental negativity and adolescent externalizing problems: Using the extended children of twins model to clarify genotype-environment correlation
Kristine Marceau, Briana Horwitz, Jurgita Narusyte, Jody Ganiban, Erica Spotts, Paul Lichtenstein, David Reiss, & Jenae Neiderhiser (Thompson Award Candidate)

10:55 Genes of experience: Explaining the heritability of putative environmental variables
Tom McAdams, Alice Gregory, Robert Plomin, & Thalia Eley

11:15 Is smoking during pregnancy dangerous for the offspring? Estimating gene-environment correlation in a Children of Siblings design using a National Swedish Cohort
Ralf Kuja-Halkola, Brian D’Onofrio, Niklas Längström, Henrik Larsson, & Paul Lichtenstein (Thompson Award Candidate)
**Plenary Session: Ken Kendler**
Chair: Brian D’Onofrio

Reflections on the History and Current Status of Psychiatric and Behavioral Genetics

**11:45-12:45 Sunday Conference Centre**

12:45-1:30 Lunch (Provided)
Foyer

1:30 Symposium: Positive Psychology and Well-Being
Chair: Meike Bartels Discussant: Robert Plomin

1:30 Genetic and environmental links between mental health and illness
Claire Haworth & Robert Plomin

1:45 Happiness in very young children; What are the causes of individual differences?
Meike Bartels, Toos van Beijsterveldt, & Dorret Boomsma

2:00 Wellness and well-being across five years in the lives of middle-aged men
Carol Franz, Matthew Panizzon, Kelly Spoon, Michael Lyons, & William Kremen

2:15 A closer look on the heritability of life-satisfaction: Twin effects and the role of personality
Elisabeth Hahn, Heike Maas, & Frank Spinath (Thompson Candidate)

2:30 Genetic variance and genomic regions of interest; Preliminary Gremi and GWA results on Well-being from the Social Science Genetic Association consortium
David Cesariani, Meike Bartels, Robert Krueger, Patrik Magnusson, Jan Emmanuel De Neve, Niels Rietveld, Nancy Pedersen, Henning Tiemeier, Philip Koellinger, Daniel Benjamin, and the Social Science Genetic Association consortium

2:45 Discussant: Robert Plomin

**10:15-11:45 Sunday Conference Centre**

10:15 Paper Session: Ability: Genomic Approaches
Chair: Eric Turkheimer

10:15 Total number of common copy number variants and cognitive abilities
Maciej Trzaskowski & Robert Plomin (Thompson Award Candidate)

10:30 A genome-wide association study of non-pathological cognitive ageing

10:45 Copy-number variants and general cognitive ability
Robert Kirkpatrick, Michael Miller, Matthew McGue, & William Iacono (Thompson Award Candidate)

11:00 Shared genetic bases between Mendelian disorders and a polygenic trait? Testing for an association between genes underlying autosomal recessive cognitive disorders and full-scale IQ
Sanja Franic, Conor Dolan, Maria Groen-Blokhuis, Jouke Jan Hottenga, Toos van Beijsterveldt, Patrick Sullivan, Dirk Smit, Paul Scheet, Jim Hudziak, Edo de Geus, Gareth Davies, Meike Bartels, & Dorret Boomsma (Thompson Award Candidate)

11:15 Current DNA arrays account for at least half of the genetic influence on cognitive abilities
Robert Plomin & Oliver Davis

**10:15-11:45 New Library**

10:15 Paper Session: Methods & Theory
Chair: Alexandra Burt

10:15 Do non-shared environmental influences persist over time? An examination of minutes
S. Alexandra Burt, Ashlea M. Klahr, & Kelly Klump

10:30 A theory of behavioral genetics
Greg Carey

10:45 Putting nature and nurture on the map: visual analysis of geocoded twin data
Oliver Davis, Claire Haworth, Cathryn Lewis, & Robert Plomin

11:00 Sibship-based association analysis with imputed sibling genotypes
Camelia Minica, Conor Dolan, Jacqueline Vink, Jouke Jan Hottenga, Gonneke Willemsen, Brenda Penninx, & Dorret Boomsma (Thompson Award Candidate)

11:15 Professional Science Master’s: A new graduate degree for behavioral genetics
Carol Lynch & Toni Smolen
| 1:30 – 3:00 | Paper Session: Internalizing Disorders  
Chair: Briana Horwitz | New Library |
| --- | --- | --- |
| 1:30 | Measured and latent genetic influences shared across internalizing disorders  
Alexis Edwards, Fazil Aliev, Jaakko Kaprio, Richard Rose, & Danielle Dick |  |
| 1:45 | Understanding links among remembered parental bonding, friendship satisfaction, and depressive symptoms  
Briana Horwitz, Chandra Reynolds, Susan Charles, & Jena Neiderhiser |  |
| 2:00 | Genetic and environmental influences on rumination and depression  
Daniel Johnson, Mark Whisman, Akira Miyake, Lee Altamirano, John Hewitt, & Naomi Friedman (Thompson Award Candidate) |  |
| 2:15 | Testing models of genes and environment in development of adolescent depression  
Lindon Eaves, Nathan Gillespie, Hermine Maes, & Judy Silberg |  |
| 2:30 | Depressive symptoms and lifetime cigarette use during adolescence  
Elizabeth Prom-Wormley, Roseann Peterson, Lindon Eaves, Judy Silberg, & Hermine Maes |  |
| 3:00 – 3:30 | Afternoon Break | Sunday |

| 3:30 – 5:00 | Symposium: GxE in the Presence of rGE: Methodological Pitfalls and Practical Solutions  
Chairs: Carol Van Hulle & Paul Rathouz  
Discussant: Michael Neale | Conference Centre |
| --- | --- | --- |
| 3:30 | False positives and power in the Purcellian GxE model  
Sophie van der Sluis |  |
| 3:50 | Genotype by environment interactions when the environment is unmeasured: Comparing two approaches  
Dylan Molenaar, Conor Dolan, Sophie van der Sluis, & Dorret Boomsma |  |
| 4:10 | New models and procedures for gene-by-environment interactions in behavior genetic designs  
Paul Rathouz, Carol Van Hulle, Hao Zheng, & Benjamin Lahey |  |
| 4:30 | Integrating quantitative and molecular genetics to characterize gene-environment interaction  
Danielle Dick, Jacquelyn Meyers, Richard Rose, & Jaakko Kaprio |  |
| 4:50 | Discussant: Michael Neale |  |

<table>
<thead>
<tr>
<th>3:30 – 5:00</th>
<th>Paper Session: Externalizing Disorders: Neurologic and Behavioral</th>
<th>Great Hall</th>
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| 5:00 | Genomic Approaches  
Chair: Irwin Waldman |  |
| 3:30 | Direct and indirect relations between reactive and proactive aggression, facial emotion recognition, and MAOA-uVNTR/S-HTTLPR  
Devon LoParo, Courtney Ficks, & Irwin Waldman (Thompson Award Candidate) |  |
| 3:45 | Life events and GABRA2 interact to predict adolescent externalizing symptoms: Initial evidence and a replication  
Jessica Salvatore, Kenneth Dodge, John Bates, Gregory Pettit, Jennifer Lansford, Richard Rose, Lea Pulikainen, Jaakko Kaprio, & Danielle Dick |  |
| 4:00 | The association of childhood antisocial behavior and social cognitive deficits with the vasopressin receptor 1A gene (AVPR1A)  
Irwin Waldman, Devon LoParo, Courtney Ficks, Xiaosong Li, Chris Patrick, & Larry Young |  |
| 4:15 | GWAS of behavioral disinhibition in a selected adolescent sample  
Jaime Derringer, Robin Corley, Brett Haberstick, Susan Young, Dan Howrigan, Matthew Keller, Sandra Brown, Susan Tapert, Christian Hopfer, Michael Stallings, Thomas Crowley, Soo Rhee, Kenneth Krauter, John Hewitt, & Matthew McQueen |  |
| 4:30 | The mechanistic role of callous-unemotionality in the association between CHRM2 and trajectories of externalizing behavior  
Shawn Latendresse |  |
| 4:45 | Is facial emotion identification a true endophenotype for childhood aggression?  
Courtney Ficks & Irwin Waldman (Thompson Award Candidate) |  |

| 3:30 – 5:00 | Paper Session: Schools and Education  
Chair: Pete Hatemi | New Library |
| --- | --- | --- |
| 3:30 | School motivation: a twin study.  
Beata Tick, Maria Grazia Tosto, Claire Haworth, Robert Plomin, & Yulia Kovas |  |
| 3:45 | The genetic and environmental pathways between IQ, education, and social attitudes.  
Pete Hatemi, Brad Verhulst, & Nick G. Martin |  |
| 4:00 | Meta-analysis of educational attainment GWAS: The social science genetics association consortium  
Niels Rietveld, David Cesaroni, Jaime Derringer, Philipp Koellinger, Sarah Medland, & Daniel Benjamin (presented by Philipp Koellinger) |  |
| 4:15 | Exploring the heritability of education attainment using a parent-offspring model.  
Gonneke Willemsen, Dorret Boomsma, & Marleen de Moor |  |
| 4:30 | The heritability of “number sense”  
Maria Grazia Tosto, Yulia Kovas, & Robert Plomin (Thompson Award Candidate) |  |
A closer look at the association between Attention Problems and atopic diseases in a genetic design.

Corticotrophin-releasing hormone genes and stress-related phenotypes

Exome sequencing of an isolated Chilean population affected by Specific Language Impairment (SLI).

Serotonin system gene polymorphisms are associated with impulsivity in a context dependent manner.

Monoamine Oxidase A Gene (MAOA) is associated with free-riding in public goods experiments in females.

Are childhood verbal and motor development associated with cognitive performance in young adulthood: A co-twin control analysis among twins discordant for their development as reported by parents.

Phenotypic and genetic structure of anxiety sensitivity in adolescence and early adulthood.

Comparing the effects of three measures of marital conflict on the etiology of conduct problems.

Genetic and cultural transmission of political attitude: A study of Japanese adolescents and their parents.

Cumulative genetic and environmental predictors of youth alcohol use, abuse, and dependence.

Nonshared environments associated with adolescents' autistic traits and internalising traits and their co-occurrence.

Parental schizophrenia and increased offspring suicide risk: Exploring the causal hypothesis using cousin comparisons.

Abstracts of posters presented at the conference include:

- Genetic and environmental influences on relationship between anxiety sensitivity and anxiety subtypes in children.
- Genetic and Environmental Influences on Gender Specific Income Differences.
- Association between Androgen Receptor Gene (AR) CAG repeat length and Externalizing Behavior.
- Early maternal age at childbearing and risk for ADHD in offspring.
- Genetic influences on victimization during preschool play with unfamiliar peers.
- Genetic influences on sleep duration and overlap with personality.
- Croatian twin study of body mass index and physical activity.
- An assessment of gene-by-environment interaction effects on neuropsychological phenotypes related to developmental dyslexia: The role of the DYX1C1, DCDC2, KIAA0319 and ROBO1 genes and of specified putatively hazardous factors.
- The role of conduct disorder in explaining the common genetic influences on initial sensitivity to alcohol and tobacco.
- Gender differences in preschool temperament: A multi-method twin study approach.
- Gene-environment interplay in adult depression symptomatology: Initial findings from IGEMS.
- ADRB2, white matter integrity and cognitive ageing in the Lothian Birth Cohort 1936.
- Genetic and environmental contributions to separation anxiety: A meta-analytic approach to twin data.
- Common and specific genetic effects on ADHD and Initial Sensitivity to Cigarettes in Female Adolescent Twins.

The conference also featured workshops on:

- Developmental pathways and outcomes: The role of early life experiences.
- The impact of genetic and environmental factors on mental health.
- Integrating genetic and environmental approaches in clinical practice.

The conference aimed to bring together researchers from diverse fields to share findings and foster collaborations in the study of genetic and environmental influences on mental health.

**NEW!**

The poster session schedule included:

- Poster Session: 5:00 - 7:30
  - Posters should be put up between 3:00 & 4:30 pm. Presenters should be at their posters 5:00-7:30 and remove them afterward. Poster size is 1 meter wide x 2 meter high, Velcro dots provided.

 **NOTE**: "T" beside poster number indicates candidate eligible for Thompson Award.
Genetics of decision making: A Japanese twin study
Chizuru Shikishima, Kai Hiraihi, Shinji Yamagata, Juko Ando, & Mitsuhiro Okada

Models and procedures for gene-by-environment interactions in behavior genetic designs: Computational procedures and simulation results
Paul Rathouz, Hao Zheng, Carol Van Hulle, & Benjamin Lahey

Change in heritability of substance use behavior through development: Exploring the longitudinal role of shared environment
Brooke Huibregtsen, Robin Corley, Sally Wadsworth, & Michael Stallings (Thompson Award Candidate)

Negative parenting and externalizing behavior across preschool: A cross-lagged analysis
Gina Raciti, Jody Ganiban, Manjie Wang, & Kimberly Saudino

Can objectively shared events have effectively nonshared effects? Associations between differential perceptions of marital conflict and child externalizing behavior
S. Alexandra Burt, Kelly Klump, & Caitlin Listro

Familial risk and cognitive impairment in major depression: A monozygotic twin-pairs
Kean Hsu, Kelly Young-Wolff, Kenneth Kendler, & Carol Prescott

The association between cognitive abilities and the postsynaptic proteome of central excitatory synapses
William Hill, Gail Davies, Mike Croning, Antony Payton, Leon Craig, Michael Horan, William Ollier, John Starr, Neil Pendleton, Seth Grant, Timothy Bates, & Ian Deary

Family involvement and adolescent alcohol use: Potential sources of shared environmental influence
Di Samet, Martha Rueter, Margaret Keyes, William Iacono, & Matthew McGue

The influence of personality disorders on longitudinal stability of anxiety
Gun Peggy Knudsen, Kristian Tambis, Jack Heitema, Ragnhild Orstavik, Espen Roysamb, Nikolai Czajkowski, Kenneth Kendler, & Ted Reichborn-Kjennerud

Heritability of individual differences in the neural correlates of prediction error
Andrey Anokhin

Examining the reciprocal relationship between maternal negativity and child negative emotionality during adolescence
Tova Jacobs, Jody Ganiban, David Reiss, & Jenee Neiderhiser

Language impairment from 4 to 12 years: An etiological perspective
Philip Dale, Marianna Hayiou-Thomas, & Robert Plomin

The genetics and behaviours of high- and low-risk sport enthusiasts.
Cynthia Thomson, Amelia Rajala, Rebecca Power, Scott Carlson, Gregory Michel, & Jim Rupert

Investigation of genetic association between cerebellar volume and attention problems in children
Suzanne Swagerman, Inge van Soelen, Marieke van Leeuwen, Jiska Peper, Marinka Koenis, Rachel Brouwer, Toos van Beijsterveldt, Eco de Geus, Hilleke Hulshoff Pol, & Dorret Boomsma

A genetically informed study of disordered eating pathology in adolescent twins
Lauren Cohen, Christopher Beam, Robert Emery, Eric Turkheimer, S. Alexandra Burt, Pamela Keel, Michael Neale, Cheryl Skik, & Kelly Klump

Impact of early parental warmth and concurrent punitive discipline on the heritability of young children's problem behaviors
Gregory Swann, Kathryn Lemery-Chalfant, Carlos Valiente, Karen Kao, T. Caitlin O'Brien

Genetic stability and change of personality traits in adulthood:
A 7-year longitudinal study
Juko Ando

School performance but not neighborhood deprivation and social capital predicts serious adolescent criminality and substance use disorders
Amir Sariaslan, Brian D'Onofrio, & Paul Lichtenstein

Is age of alcohol use initiation a risk indicator or risk mediator for alcohol use disorders in young adulthood?
Eivind Ystrom, Kenneth Kendler, & Ted Reichborn-Kjennerud

Inhibitory control in childhood mediates the association between the mu-Opioid Receptor Gene and Adolescent Oppositional Defiant Disorder
Erick Araica, Sierra Clifford, Kathryn Lemery-Chalfant, & Hill Goldsmith

Longitudinal analysis of marriage and desistance from antisocial behavior in a sample of young adult twins and sibling pairs
Erin Hoorn, Yinhan Xu, Eric Turkheimer, & Robert Emery

Reexamining the association between fertility and lifespan: Testing the disposable soma theory in a modern human sample
Elizabeth Chereji, Maragaret Gatz, Nancy Pederson, & Carol Prescott

Examining associations between acetylcholine receptor genotype and personality
Rachael Graziopele

Cross-cultural study of academic achievement of twins
Voluta Chertkova, Marina Egova, Oxana Parshikova, & Leila Geidarova

The heritability and genetic correlates of mobile phone use: A twin study of consumer behavior
Geoffrey Miller

Estimating heritability of personality from family research: Biometrical analyses and the effective influence of SNPs
Lindsay Mateuson, Michael Miller, Matthew McGue, & William Iacono (Thompson Award Candidate)

Genome-wide association analysis of relational complexity: A novel measure of processing capacity
Eric Turkheimer
### Monday June 25

#### 8:30 - 10:00 Symposium: The 2012 National Longitudinal Survey of Youth Kinship Links: Conducting Behavior Genetic Research Using the NLSY 79 and NLSY-Children Data Chair: Joseph Rodgers

- **8:30** Validity Studies of the 2012 NLSY Kinship Links Using Height and Weight Joseph Rodgers, Kelly Meredith, William Beasley, & David Bard
- **8:50** NlsyLinks: An R package facilitating BG research with the NLSY William Beasley, Joseph Rodgers, David Bard, & Kelly Meredith
- **9:10** Biometric analysis of complex NLSY pedigrees: Introducing a Conditional Autoregressive Biometric (CARB) Mixed Model David Bard, William Beasley, Kelly Meredith, & Joseph Rodgers
- **9:30** Multivariate models of BMI, intelligence, and fertility using the NLSY-Children kinship links Kelly Meredith, Joseph Rodgers, William Beasley, & David Bard

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<tr>
<th>Time</th>
<th>Paper Session: Neuro-Endophenotypes Chair: Naomi Friedman</th>
<th>Venue</th>
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<tr>
<td>8:30</td>
<td>Correlates of processing speed difficulty in patients with mitochondrial disease Heather Moore, Mike Allerhand, Michael Trenczel, Ian Deary, Doug Turnbull, &amp; Grainne Gorman (Thompson Award Candidate)</td>
<td>Great Hall</td>
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<td>8:45</td>
<td>Heritability of the neural mechanisms of cognitive control Christine Macare &amp; Ulrich Ettinger</td>
<td>Great Hall</td>
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<td>9:00</td>
<td>The role of executive functioning in the progression from substance use to dependence Joanna Vandeveer, Naomi Friedman, Robin Corley, Akira Miyake, Susan Young, John Hewitt, &amp; Michael Stallings (Thompson Award Candidate)</td>
<td>Great Hall</td>
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<tr>
<td>9:15</td>
<td>Dissociable genetic influences on continuous performance task indices Yunsoo Park &amp; Irwin Waldman (Thompson Award Candidate)</td>
<td>Great Hall</td>
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<tr>
<td>9:30</td>
<td>Etiology of stability and change in executive functions from late adolescence to adulthood Naomi Friedman, Lee Altamirano, Akira Miyake, Susan Young, Robin Corley, &amp; John Hewitt</td>
<td>Great Hall</td>
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<td>9:45</td>
<td>The heritability of the Startle Blink Reflex: A twin study Uma Vaidyanathan, Steve Malone, Michael Miller, Scott Burwell, Matthew McGue, &amp; William Iacono</td>
<td>Great Hall</td>
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<thead>
<tr>
<th>Time</th>
<th>Paper Session: Families, Marriage, and Parenting Chair: Christopher Beam</th>
<th>Venue</th>
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<tbody>
<tr>
<td>8:30</td>
<td>Exploring the intergenerational transmission of parenting behavior: A Meta-analysis of the etiology of parenting Ashlea Klahr &amp; S. Alexandra Burt (Thompson Award Candidate)</td>
<td>Great Hall</td>
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<td>8:50</td>
<td>Behavioural genetic analyses of mate preferences and preferred traits – testing models of mate choice and sexual selection Karin Verweij, Andrea Burri, &amp; Brendan Zietsch (Thompson Award Candidate)</td>
<td>Great Hall</td>
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<td>9:10</td>
<td>Different understandings of the same marriage: A genetically informed study of spouses’ marital functioning Christopher Beam, Eric Turkheimer, Robert Emery, Paul Lichtenstein, David Reiss, Erica Spotts, Jody Ganiban, &amp; Jena Scott-Hemphis (Thompson Award Candidate)</td>
<td>Great Hall</td>
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<tr>
<td>9:30</td>
<td>Longitudinal exploration of the relationship between antisocial behavior and marriage Sarah Ward, Matthew McGue, &amp; William Iacono (Thompson Award Candidate)</td>
<td>Great Hall</td>
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<td>9:45</td>
<td>Marital satisfaction and personality: Using gene-environment interplay to understand mechanisms Susan South, Bob Krueger, William Iacono, &amp; Matthew McGue</td>
<td>Great Hall</td>
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<tr>
<th>Time</th>
<th>Symposium: Genetic and Environmental Influences on Cognition Across Time and Context Chair: Elliot Tucker-Drob</th>
<th>Venue</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Continuity of genetic and environmental influences on cognition across the life span: A meta-analysis of longitudinal twin-family studies Daniel Briley &amp; Elliot Tucker-Drob (Thompson Award Candidate)</td>
<td>Conference Centre</td>
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<tr>
<td>10:45</td>
<td>&quot;Bad friends&quot; moderate the nonsocial environmental influences on reading performance: Florida Twin Project on Reading Sara Hart, Christopher Schatschneider, &amp; Jeanette Taylor</td>
<td>Conference Centre</td>
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<tr>
<td>11:00</td>
<td>Is higher IQ associated with a longer sensitive period in cognitive development?: Evidence from biometrical and clinical studies Angela Brant, John Hewitt, Yuko Munakata, &amp; Robert Plomin (Thompson Award Candidate)</td>
<td>Conference Centre</td>
</tr>
<tr>
<td>11:15</td>
<td>Developmental changes in moderating effects of parental education on individual differences in vocabulary IQ from adolescence to young adulthood Kristen Jacobson &amp; Terrie Vasilopoulos</td>
<td>Conference Centre</td>
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**Monday New Library**
10:45 The genetic factor structure of cannabis use and symptoms of abuse and dependence
Nathan Gillespie, Kenneth Kendler, & Michael Neale

11:00 The genetics of cannabis withdrawal
Arpana Agrawal, Alan Budney, Nick G. Martin, & Michel Lynskey

11:15 Peers and cigarette smoking: Catalyst to initiation or precursor of regular use?
Amanda Wills & Greg Carey (Thompson Award Candidate)

11:30 Maternal smoking during pregnancy and offspring conduct problems: The evidence for the association using genetically-sensitive designs
Darya Gaychina, David Fergusson, Leslie Leve, John Horwood, Jenae Neiderhiser, David Reiss, Daniel Shaw, Misaki Natsuaki, Kit Elam, Anita Thapar, Kate Langley, & Gordon Harold

12:00-1:30 Lunch (Provided)

1:30 Symposium: Genetic Research on Autism and ADHD: Commonalities, Achievements, & Challenges
Chairs: Tinca Polderman & Rosa Hoekstra
Discussant: Angelica Ronald

1:30 The separation of ADHD inattentiveness and hyperactivity-impulsivity symptoms: Pathways from genetic effects to cognitive impairments and symptoms
Jonna Kuntsi, Rebecca Pinto, Thomas Price, Ja van der Meere, Alexis Wood, & Philip Asherson

1:45 Phenotypic and genetic association in attention difficulties and autistic traits in adults is mainly mediated by attentional switching ability
Tinca Polderman, Rosa Hoekstra, Anna Vinkhuyzen, Sophie van der Sluis, & D. Posthuma

2:00 Does the lowering of heritability coefficients of ADHD inattentiveness symptoms during adolescence reflect real genetic or environmental changes?
Kees-Jan Kan, Conor Dolan, Toos van Beijsterveld, Gonneke Willemensen, & Dorret Boomsma

2:15 Genetic overlap between autistic traits and Theory of mind impairments
Rosa Hoekstra, Francesca Happé, & Angelica Ronald

2:30 Family income in early childhood as a causal risk factor for offspring Attention-Deficit/Hyperactivity Disorder
Henrik Larsson, Amir Sariaslan, Niklas Längström, Brian D’Onofrio, & Paul Lichtenstein

2:45 Discussion: Genetic Research of Autism & ADHD: Future Perspectives and Challenges
Angelica Ronald
1:30 - 3:00 Symposium: Genetics and Intervention
Chair: Claire Haworth
Great Hall

1:30 Therapygenetics: Predicting response to CBT in child anxiety from specific genetic markers
Thallia Eley, Jennifer Hudson, Cathy Creswell, Maria Tropeano, Kathryn Lester, Peter Cooper, Anne Farmer, Cathryn Lewis, Heidi Lyneham, Ronald Rapee, Rudolf Uher, Helena Zavos, & David Collier

1:50 Genetic predictors of antidepressant side effects
Karen Hodgson, Oliver Davis, Katherine Aitchison, Rudolf Uher, Anne Farmer, & Peter McGuffin (Thompson Award Candidate)

2:10 Effects of genetic variation in the dopaminergic system on leisure time exercise behavior
Eco de Geus, Meike Bartels, Charlotte Huppertz, Marleen de Moor, Niels van der Aa, Abdel Abdellah, Toos van Beijsterveldt, Maria Groen-Blokhuys, Erik Ehl, Jouke Jan Hottenga, Gonneke Willemsen, Xiangjun Xiao, Paul Scheet, Gareth Davies, Dorret Boomsma, & Jim Hudziak

2:30 The Twins Wellbeing Intervention Study (TWIST): A genetically sensitive online intervention
Claire Haworth, Claire Palmer, Kristin Layous, S. Katherine Nelson, Katherine Jacobs Bao, Sonja Lyubomirsky, & Robert Plomin

1:30 - 3:00 Paper Session: Epigenetics and GWAS
Chair: Timothy York
New Library

1:30 Methylation of 11-Beta Hydroxysteroid Dehydrogenase 2 in the human placenta is associated with newborn neurobehavioral outcomes
Matthew Maccani, James Padbury, Barry Lester, Valerie Knopik, John McGueary, & Carmen Marist

1:50 Using next generation sequencing to investigate methylation patterns associated with alcohol use and addiction
Shauna Clark

2:10 Increased chromosomal damage in adults with a history of childhood sexual abuse: Moving toward a model of biological mechanism
Timothy York, Jenni Brumelle, Jane Juusola, Kenneth Kendler, Lindon Eaves, Ananda Amstadter, Steven Aggen, Kimberly Jones, Andrea Fereira-Gonzalez, & Colleen Jackson-Cook

2:30 Additive genetic variation in risk to schizophrenia across African American and European American populations
Teresa de Candia, Hong Lee, Jian Yang, Brian Browning, Pablo Gejman, Douglas Levinson, John Hewitt, Peter Visscher, Naomi Wray, & Matthew Keller (Thompson Award Candidate)

3:30 - 5:00 Symposium: Animal Models
Chair: Alexander Weiss
New Library

3:30 The genomics of personality in a small passerine bird, the great tit Parus major
Kees van Oers

3:45 The majority of genetic variation in orang-utan personality and subjective-well being is nonadditive
Mark Adams (Thompson Award Candidate)

4:00 The association between copy number variants in chicken chromosome 1 and tonic immobility
Hideaki Abe, Kenji Nagao, Akihiro Nakamura, Miho Inoue-Murayama

4:15 Intra-species differences in tolerance and genetic polymorphisms in Japanese macaques (Macaca fuscata)
Kazunori Yamada & Miho Inoue-Murayama

4:30 Oxytocin and vasopressin receptor gene polymorphisms and personality in bonobos (Pan paniscus) – Preliminary results
Nicky Staes, Jeroen Stevens, Alexander Weiss, & Marcel Eens

3:30 - 5:00 Paper Session: Challenging the latent trait perspective: A phenotypic network view and its consequences for gene-finding studies
Chair: Angelique Cramer and Sophie van der Sluis

3:30 Gene-trait interactions: What they mean and why they matter
Colin DeYoung

3:45 A network perspective on modeling the relationship between genes and psychopathology
Angelique Cramer

3:58 Phenotypic complexity as genetic dark matter: A network explanation of missing heritability
Michel Nivard, Sophie van der Sluis, Sanja Franic, Angelique Cramer, Ingrid Visser, Christel Middeldorp, Gitta Lubke, Dorret Boomsma, & Denny Borsboom (Thompson Award Candidate)

4:11 Network phenotypes and missing heritability
Gitta Lubke, Michel Nivard, & Denny Borsboom

4:24 Charting SNP effects in depression: Abandoning the latent trait perspective
Sophie van der Sluis

4:37 General Discussion
Paper Session: Externalizing: Psychometric Approaches

Chair: Soo Rhee

3:30 Multivariate, multi-method model of P300 amplitude and externalizing psychopathology: Evidence for a highly heritable combination
Greg Perlman, Lindsey Nelson, Scott Vrieze, Steve Malone, William Iacono, & Matthew McGuie

3:45 Locating drunk driving on the externalizing spectrum: A multidimensional scaling approach
Patrick Quinn & Kathryn Harden (Thompson Award Candidate)

4:00 Does parental emotional support moderate genetic influences on early externalizing behaviors?
Amanda Cheung, Kathryn Harden, & Elliot Tucker-Drob (Thompson Award Candidate)

4:15 Testing a developmental propensity model of conduct problems
Soo Rhee, Robin Corley, Naomi Friedman, John Hewitt, Laura Hink, Daniel Johnson, Benjamin Lahey, JoAnn Robinson, Ashley Smith, Irwin Waldman, Susan Young, & Carolyn Zahn-Waxler

4:30 The role of evaluation in the genetic structure of externalizing and internalizing spectra
Erik Pettersson & Eric Turkheimer (Thompson Award Candidate)

4:45 Short and long-term effects of nonparental child care on internalizing and externalizing problems: A behavior genetic study in Dutch twins
Diane Lamb, Christel Middeldorp, Jacqueline Vink, Toos van Beijsterveldt, Ramon Lindauer, & Dorret Boomsma (Thompson Award Candidate)

Executive Committee Meeting II

Duncan Room

5:00-7:30

Pre-dinner Reception

Great Hall

7:30-8:00

Banquet and Award Presentations

Great Hall

8:00pm Midnight

Yong-Kyu Kim, Emory University, Atlanta, GA, USA (Ed.)

Handbook of Behavior Genetics

- Covers the role that behavior genetics plays in the most current issues in behavior genetics such as schizophrenia, autism, alcoholism, smoking, and drug abuse
- Features contributions from behavior genetiicists and psychologists who share their latest empirical findings
- Utilizes the latest molecular techniques and methodologies that students can apply to future research

With the mapping of the human genome, behavior genetics attracted interest as a new lens for studying complex behavior patterns and disorders. This specialty has evolved into an emergent common ground for scientists of diverse fields, including psychology, psychiatry, neurology, biochemistry, and endocrinology as well as genetics.

The Handbook of Behavior Genetics provides psychology, psychiatry, and genetics students with a solid research framework on the role of genes and other factors in a variety of intricate behaviors. Internationally-known experts begin each chapter with an overview of a subject and discuss its latest issues, advances, and controversies, and emerging areas of importance. The genetics of personality, pathology, and cognition are examined, with topics as diverse as childhood temperament, Down syndrome, exercise behavior, handedness, and speech disorders. Through these findings, contributors identify clear directions for the field in its next decade.

A sampling of the Handbook's coverage:
- Methods and models: biometrical, QTL, animal models.
- Twin studies of mental ability.
- Genetic and environmental influences on sexual orientation.
- The genetics of pathological conditions, including ADHD, antisocial behavior, childhood depression, schizophrenia, and autism.
- Attention and working memory.
- Substance use and abuse disorders.
- Cognitive aging.

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Venues
23rd – 25th

The meeting and Banquet are at the
Royal College of Physicians 9 Queen St, EH2 1JQ.

The New Town is laid out around George St, running from Charlotte Square (West end) to St Andrews Square (East end), George St is flanked by Princes St to the South (running along side the castle) and QUEEN ST to the north, where you will find our historic venue: The Royal College of Physicians.

Reception

In the Playfair library (RED CIRCLE ON MAP).

This is in the Old College on South Bridge, a widely known landmark.

Venues
FestSchrift: 22nd

The Festschrift is at Moray House, Paterson’s Land, 19 St John St, EH8 8AQ.

This Old-Town venue (green circle on map) can be reached by either walking down the Royal mile and through the St Johns close (narrow walled gap) off the Royal Mile. Or walk/taxi Holyrood Rd and turn up St John St.

Registration begins at 8 AM. Tea coffee, and a morning muffin are provided. You’re on your own recognizance for lunch at one of many providers and pubs in the nearby historic Royal Mile.