

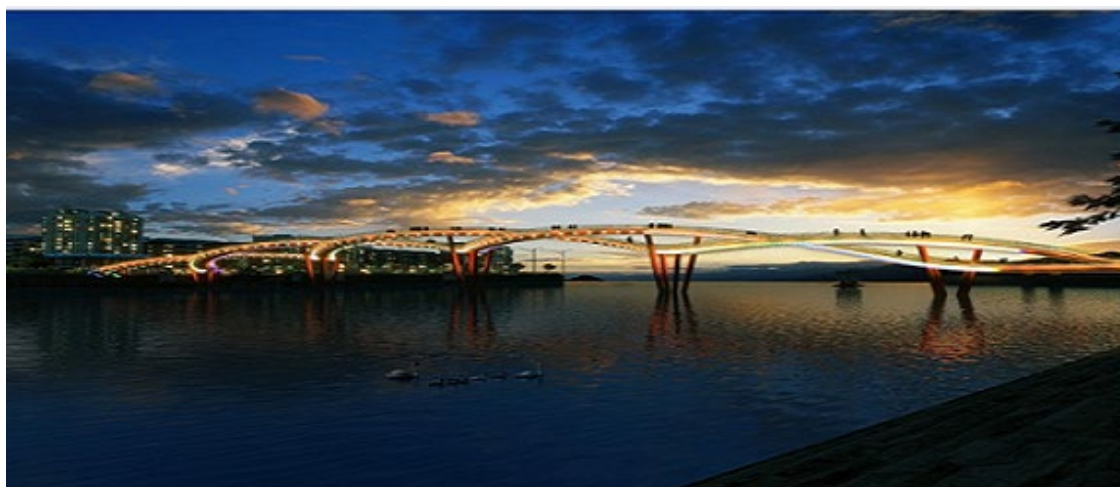


# Braingenethics Update

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[braingenethics.cumc.columbia.edu/](http://braingenethics.cumc.columbia.edu/)



## In the Literature

### [Neighborhood Disadvantage Alters the Origins of Children's Nonaggressive Conduct Problems](#)

S. Alexandra Burt et al.

The authors examine whether and how neighborhood disadvantage alters the genetic and environmental origins of child antisocial behavior. Their results highlight the role that pervasive neighborhood poverty plays in shaping the etiology of child nonaggressive antisocial behavior.

### [The Impact of Communicating Genetic Risks of Disease on Risk-Reducing Health Behaviour: Systematic Review with Meta-Analysis](#)

G.J. Hollands et al.

The authors do not find support in existing evidence that communicating DNA-based risk estimates changes behavior. These results do not support use of genetic testing or the search for risk-conferring gene variants for common complex diseases on the basis that they motivate risk-reducing behavior.

This year's Annual CEER Conference,

["The Search for Genetic Origins of Human Behavior: Ethical, Legal, and Social Implications."](#)

is available on [video here](#).

## News

[Same But Different](#)  
S. Mukherjee

### [The Ambiguous Nature of Epigenetic Responsibility](#)

C. Dupras & V. Ravitsky

The authors argue that the identification and assignment of moral epigenetic responsibilities should reflect the rich diversity and complexity of epigenetic mechanisms, and not rely solely on a gross comparison between epigenetics and genetics.

### [Use of Genetic and Neuroscientific Evidence in Criminal Cases: A Brief History of “Neurolaw”](#)

C. Willmott

This chapter reviews some of the most prominent international cases in which attempts have been made to introduce genetic or brain imaging evidence into criminal proceedings.

### [Publication Trends Over 55 Years of Behavioral Genetic Research](#)

Z. Ayorech et al.

The authors document the growth in published papers on behavioral genetics for 5-year intervals from 1960 through 2014. A searchable resource of this corpus is freely available online at [http://www.teds.ac.uk/public\\_datasets.html](http://www.teds.ac.uk/public_datasets.html) and will be updated annually.

### [Genetic Attributions, Immutability, and Stereotypical Judgments: An Analysis of Homosexuality](#)

M.R. Joslyn & D.P. Haider-Markel

The authors find that genetic attributions strongly shape perceptions of immutability and stereotypic judgments about gays and lesbians.

### [Meta-analysis of Genome-Wide Association Studies for Extraversion: Findings from the Genetics of Personality Consortium](#)

S.M. van den Berg et al.

The authors report on a large meta-analysis of GWA studies for extraversion in 63,030 subjects in 29 cohorts. Their results show that extraversion is a highly polygenic personality trait, with an architecture possibly different from other complex human traits, including other personality traits.

### [Genetic Variants Associated with Subjective Well-Being, Depressive Symptoms, and Neuroticism Identified Through Genome-Wide Analyses](#)

A. Okbay et al.

The authors identify 3 variants associated with subjective well-being, 2 variants associated with depressive symptoms, and 11 variants associated

How epigenetics can blur the line between nature and nurture.

### [Do Genes Time One's Loss of Virginity?](#)

K. Weintraub

A U.K. study (see link in this issue of BGE) connected the varying onsets of sexual activity to genes and personality traits.

### [Could a Diet Tailored to Your DNA Save Your Life?](#)

A. Fleming

Some commercial nutrigenetics services will already test DNA and offer dietary advice. Is this the future of disease prevention?

### [Sperm Donor's Profile Hid Mental Illness and Crime, Lawsuits Say](#)

C. Hauser

Three families filed lawsuits in Ontario Superior Court this month accusing the sperm bank, Xytex Corp., in Augusta, Ga., of misleading them about their donor. The suit says the company failed to describe him accurately or disclose that he had a record of mental illness and a criminal record.

### [CRISPR May Help Neuroscientists Unlock Genetics of Psychiatric Disease](#)

A. She

Many neurological disorders cause people to behave unusually in social situations, and studying other social

with neuroticism, including 2 inversion polymorphisms. Across phenotypes, loci regulating expression in central nervous system and adrenal or pancreas tissues are strongly enriched for association.

### [Alcohol Use Disorder and Mortality Across the Lifespan](#)

K.S. Kendler et al.

Increased alcohol-related mortality could arise from the habits and predispositions of the person who develops alcohol use disorders (AUD) or it could be a direct effect of AUD itself (e.g. high alcohol consumption, withdrawal symptoms, frequent drunkenness, dietary deficiencies, and social isolation). The authors distinguished these two mechanisms and aimed to understand the cause of mortality increases.

### [Alcohol as An Environmental Mortality Hazard](#)

A. Heinz et al.

Whether the mortality effects of alcohol are due to genetic or environmental effects or a combination of both is poorly understood.

### [How MicroRNAs Are Involved in Splitting the Mind](#)

L. Tsai & S. Siegert

The authors provide an introduction to the role of microRNAs in the nervous system and outline their potential involvement in the pathophysiology of schizophrenia, which is hypothesized to arise owing to environmental factors and genetic predisposition.

### [The Influence of Polygenic Risk Scores on the Association Between Infections and Schizophrenia](#)

M.E. Benros et al.

The authors investigate the possible effect of polygenic risk scores (PRS) for schizophrenia on the association between infections and the risk of schizophrenia. They conclude that PRS and a history of infections have independent effects on the schizophrenia risk and the common genetic risk measured by PRS did not account for the association with infection in this sample.

### [Genetic Risk for Autism Spectrum Disorders and Neuropsychiatric Variation in the General Population](#)

E.B. Robinson et al.

Using several large ASD consortium and population-based resources, the authors find genome-wide genetic links between ASDs and typical variation in social behavior and adaptive functioning.

animals might help us to understand why that is. Many scientists are also using CRISPR in human induced pluripotent stem cells ([see this special edition article](#)) or in neurons derived from these stem cells to study the effects of genetic changes on human neurons in a dish.

CEER Post-Doctoral Fellow  
Martine Lappé was selected for an Outstanding Author Contribution in the 2016 Emerald Literati Network Awards for Excellence. She was selected for this award based on her chapter contribution to *Advances in Medical Sociology: Health, Genetics, and Society*. Chapter available [here](#) and full citation below:

Martine Lappé and Hannah Landecker. 2015. "Sociology in an Age of Genomic Instability: Copy Number Variation, Somatic Mosaicism, and

### [Disclosure of Research Results in Genetic Studies of Parkinson's Disease Caused by LRRK2 Mutations](#)

C. Pont-Sunyer et al.

The authors suggest ethical principles that should guide disclosure policies in studies of families with LRRK2 mutations. They make recommendations regarding genetic counseling, policies of either active or passive disclosure, responsibilities of funders to budget for genetic counseling, clinical genetic testing where locally required for disclosure, and aspects of study design to avoid mandatory disclosure whenever feasible.

### [Genetic Overlap Between Type 2 Diabetes and Depression in Swedish and Danish Twin Registries](#)

C. Kan et al.

This study demonstrates significant genetic overlap between Type 2 Diabetes and depression.

### [Physical and Neurobehavioral Determinants of Reproductive Onset and Success](#)

F.R. Day et al.

In this genome-wide association study, the authors found 38 specific regions of the genome that contributed to the age at which people first had sex. Those regions fell into two groups: genes that act on reproductive biological processes such as estrogen signaling and genes that appear to play a role in behavior and personality.

### [Pathogenic Variants in PIGG Cause Intellectual Disability with Seizures and Hypotonia](#)

P. Makrythanasis et al.

Disorders in the same gene PIGG are the cause for intellectual disability with seizures and hypotonia. PIGG is one of the enzymes active in the GPI anchor glycolipid synthesis and this study revealed its significance in the development of the cerebral nervous system.

### [Exploration of the Cognitive, Adaptive and Behavioral Functioning of Patients Affected with Bardet–Biedl Syndrome](#)

E.N. Kerr et al.

This study aims to investigate the behavioral phenotype of patients affected with Bardet–Biedl syndrome (BBS).

the Fallen Genome,” pp. 157-187 in *Advances in Medical Sociology: Health, Genetics, and Society*, Brea Perry (Ed). London, UK: Emerald.



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