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News

Results of Unlocke Project released



Image courtesy of [RubyT](#) CC BY-NC-ND-2.0

Results of the [Unlocke Project](#) which was led by Professor Denis Mareschal and colleagues from the Centre for Brain and Cognitive Development (CBCD), were released at the end of September 2019. The project, a collaboration between Birkbeck, UCL and the Institute of Education (in partnership with LEARNUS), developed a computer game called 'Stop and Think' for primary school teachers to use to help children overcome naive beliefs to support progress in maths and science.

The project worked with 6672 children from years 3 and 5 from 89 schools across England. The results show that children who

participated made progress in both maths and science, equivalent to +1 month's additional progress in maths and +2 additional month's progress in science, when compared to the control group.

Teachers involved in the study commented:

"It allowed me to develop my understanding of how the children in my class learn and to analyse what they know, how clearly they understand concepts and to identify misconceptions that some/most or all children in my class have."

"It gave me an insight into how children's ideas can change when given thinking time and how they are able to reason as to why something is right or wrong."

For more information about the results, please see the [Unlocke Project](#) website. A more detailed summary is available on the [Birkbeck News pages](#).

Department welcomes new staff members

Claudia Rehm began working in the departmental undergraduate office in June as the BSc Psychology Administrator.

Nathan Foster has started an ERC funded Fellowship, based on a partnership between IIT in Genoa, Italy (Cristina Becchio) and Birkbeck (Clare Press) for the next four years.

And we bid farewell to...

Daniel Yon has left the Action Lab research group after six happy years where he undertook a 1+3 ESRC funded studentship and subsequently a two year postdoc, funded by the Leverhulme Trust grant. He has started a faculty position at Goldsmiths University, London but will continue to be involved in many of the Birkbeck projects.

Carl Bunce also finished his one year Research Assistant position in the Action Lab research group, funded by Clare Press' Wellcome ISSF grant. He is soon due to start a PhD with Rich Cook and Clare Press.

Comparative Cognition Group (CCG) sets out objectives

Our previous newsletter announced the launch of the new **Comparative Cognition** Group. This new multi-institution research group for developmental and evolutionary psychological research has now set out its objectives which are to: (1) consolidate collaborations; (2) apply for funding; (3) promote and mentor individuals in the early stages of their academic careers and; (4) undertake public engagement.

Anyone is welcome to join the group. To find out more please contact **Gillian Forrester**.

Top Media Mentions

Our staff have been attracting high profile media attention

In June, Claudia Hammond, the host of BBC Radio 4's *All in the Mind*, visited the BodyLab to discuss **Renata Sadibolova's** work on the perception of body volume. You can listen to a recording of the programme on the BBC Sounds platform, [here](#).

Gillian Forrester was interviewed by BBC World Service for their Crowd Science programme, 'Why do we pull faces when we concentrate?' which was broadcast in July. Again, a recording of the programme is available via the BBC Sounds platform: <https://www.bbc.co.uk/programmes/w3csz1t7>

Tim Smith was interviewed by the New Scientist in a story about how screens *really* affect our bodies and brains, considering their ubiquity in daily life. Read more [here](#).

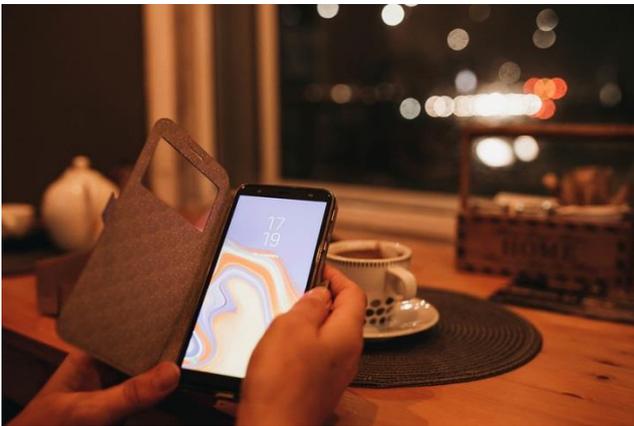


Image courtesy of [Marco Verch](#) CC BY 2.0

CDBD's [Tablet Project](#) was covered in *The Times* in a story about how touchscreens may improve toddlers' fine motor skills.

Daniel Yon, explored how our brain sculpts our experiences in line with our expectations in an essay for *Aeon* magazine which is also available to listen to as a podcast. Read or listen to his piece, 'Now you see it', [here](#).

Picks from Birkbeck Matters



The Science Museum, London. Image courtesy of [Son of Groucho](#) CC BY 2.0

Me, Human at Live Science

For twelve weeks during the summer, **Gillian Forrester** and the *Me, Human* team were in residence at the Science Museum leading scientific experiences for public participation as part of the Live Science programme.

Members of the public were invited to meet members of the *Me, Human* team in the 'Who am I?' gallery at the Science Museum to take part in experiments that considered how brain organisation influences sensory and motor behaviours. During their residency, the team saw over 1700 participants.

The residency concluded with *The Big Discussion*, a panel discussion with Professor Uta Frith, Professor Ben Garrod and Tony King which examined our place in evolution and our responsibility to care for the world around us.

Find out more about Me, Human:

A video introducing the *Me, Human* project is available on [YouTube](#).

Gillian wrote a blog piece about the Live Science event for the Science Museum Blog, which is available [here](#).

Follow *Me, Human* on Twitter: @Me__Human (note the double underscore).

Public Engagement and Talks

The *Me, Human* public engagement project begins



Image courtesy of Gillian Forrester via Twitter

As described above, the *Me, Human* project was very active over the summer delivering experiments at the Science Museum in London. The project is directed by **Gillian Forrester** as a means of bringing together a range of different public engagement activities which consider how humans are tied to the natural world.

The project kicked off with contributions to the [Soapbox Science](#) festival in Brighton (1 June) and Canterbury (15 June) where Gillian spoke about '*Your 500 Million Year Old Brain*'.

In August Gillian contributed to the *Level Up Human* live podcast at the Barbican Centre in London. This will air shortly on: <https://play.acast.com/s/leveluphuman/ef945cc4-0009-40cc-9282-1d6f3f591234>

Me, Human has forthcoming events this autumn in the style of a set of cabaret-style interactive science talks called [Psyched!](#) which is a joint venture between Birkbeck College and City Lit. Join the *Psyched!* panel in London's Covent Garden to discuss how evolutionarily old behaviours manifest in modern humans; the next events will take place on 24 October and 28 November and will consider disgust and language.

Other public engagement events

In June, **Iroise Dumontheil** gave a Birkbeck Science week talk on the *Adolescent Brain* in which she presented a short video created by two former Birkbeck PhD students, going on to discuss the research behind the video to show how various brain networks develop during adolescence.



Other public presentations and invited talks

In June, **Fiona Tasker** was invited to speak to the Bloomsbury Childhood Studies Group at UCL, discussing her paper with Pedro Costa and Alessio Gubello 'Adoptive parenting in the UK: lesbian, gay and heterosexual parents and hard-to-place children's psychological well-being'.

Fiona was also invited to speak to the Derby & Derbyshire Local Family Justice Board Training & Development Day, held at the University Law School Derby University in September. Here she delivered a paper on 'Lesbian, gay & heterosexual adoptive parenting: children's psychological well-being and family connections.'

Iroise Dumontheil gave an invited talk in June on the regulation of emotions and behaviours during adolescence and implications for education at the neuroeducation Summer School of the Association for Research in Neuroeducation in Montreal, Canada.

Gillian Forrester joined the Open Minds event at UEL on 12 July as a panellist. Open Minds is a project directed by Paula Manning of the company Multi-Sensory Educational Theatre (M-SET). The panel of academics and clinicians addressed questions about the brain and emotion from children and teachers of SEND schools, mainstream schools and young carers. Artwork created by the children during this project was exhibited at the London Science Museum as part of the *Me, Human* residency.

Ulrike Hahn was an invited speaker at a number of events in June including: 'The dangers of attributing bias based on intuition' at the Bartlett Symposium, Experimental Psychology Society Meeting, Bournemouth University and; 'Explanation in AI systems' and 'Tutorial: the psychology of argumentation' at the MI21-HLC Meeting, Cumberland Lodge.

Awards and Recognition

Congratulations to all our staff and students who have received awards and recognition for their work

Congratulations to **Luke Mason** who was awarded the 'Jan Buitelaar Award for Resource Management' at the Innovative Medicines Initiative AIMS2 Annual Meeting in June 2019 which took place in Fuerteventura.

In July 2019, GEL Lab PhD student **Laura Havers** and GEL Lab director **Professor Angelica Ronald** published the first twin study to explore the degree of stability and underlying genetic and environmental influences on psychotic experiences in mid-adolescence. Importantly, Laura's work shows that persistent psychotic experiences tend to be associated with greater levels of distress and other psychopathology at baseline compared to groups with transitory or low levels of psychotic experiences. Her work was recognised for its importance in an accompanying editorial by Professor Eric Fombonne who stated:

'The finding that persistence of high levels of psychotic and negative symptoms was associated with increased baseline emotional distress is important. It could be used to help target clinical interventions toward those youths experiencing both symptom constellations that seem more likely to persist over time.'

To read the editorial and paper by Havers and Ronald, please see:

Fombonne, E. (2019). Editorial: The passage of time. *Journal of Child Psychology and Psychiatry*

Havers, L., Taylor, M. J., & Ronald, A. (2019). Genetic and environmental influences on the stability of psychotic experiences and negative symptoms in adolescence. *Journal of Child Psychology and Psychiatry*, 60, 784-792.

Grants

Congratulations to all our staff receiving research grants

NAME	FUNDER	TITLE	AMOUNT £
Fred Dick	Royal Society	New approaches to understanding cortical and subcortical mechanisms of sustained auditory.	5,889
Emily Jones	European Commission Subcontract from University of Warsaw	SAPIENS: Shaping the social brain through early interactions.	513,875

Conference Activity

Members of staff from across the department have been representing Psychological Sciences at conferences across the world

Alex Shepherd attended the EURA UAA City Futures IV Conference from 19 to 22 June, in Dublin, where she presented on: 'Toward inclusive sustainable cities – Making a case for urban design informed by vision science' with Dr Ute Leonards (University of Bristol).

Alex attended the International Colour Vision Society Conference in Riga, Latvia, 5-9 July.

Alex also attended to back-to-back conferences in August: the Visual Science of Art Conference (21-24 August) and the European Conference on Visual Perception, both in Leuven, Belgium (25-29 August), where I and my colleague Eric Vente presented a very successful poster on: 'Reduction of migraine episodes in Ménière patients following chronic use of weak prismatic spectacles'.

Clare Press delivered a keynote lecture, 'The role of action predictions in shaping perception,' at the UK Sensorimotor Conference, June 2019, in London. Three members the Action Lab Group - Daniel Yon, Emily Thomas and Carl Bunce - also presented there.

GEL Lab Director **Angelica Ronald** and GEL lab PhD student **Wikus Barkhuizen** attended the Behaviour Genetics Association conference in Stockholm in June 2019. Wikus presented his work on the underlying genetic and causal associations between tobacco use and psychiatric illness.

In July, **Andrea Caso** and **Rick Cooper** presented a poster on 'Executive Functions in Aging: An Experimental and Computational Study of the Wisconsin Card Sorting Task' at the 41st Annual Conference of the Cognitive Science Society in Montreal, Canada.

In August **Rick Cooper** presented a talk on 'Language production as a modulated routine sequential activity' at a workshop in Cologne, Germany, on Computational approaches in language and music cognition research.

In September, postdoctoral researcher, **Georgie Donati** presented a poster to outline **Gillian Forrester's** Leverhulme project regarding 'Structures of meta-tool use across human and non-human primates as a precursor to linguistic syntax' was presented at The Brain and Behavioural Evolution in Primates conference in Erice, Sicily.

Fiona Tasker presented a number of papers at conferences during the summer, including:

Carneiro, F.A., **Tasker, F.** Salinas Quiroz, F., Costa, P.A. & Leal, I. *Psychological Adjustment of Children and their gay/bisexual fathers: A systematic review*. European Health Psychology Society conference, 3-7 September 2019.

Gmelin, J.H., **Tasker, F.** & Kunnen, E.S. "That will probably last forever": On the relationship between normative master-narratives and diversity in sexual identity configurations in gay men. 19th European Conference on Developmental Psychology, Athens, Greece, 29 August – 1 September 2019

Gmelin, J.H., **Tasker, F.** & Kunnen, E.S. "It is the Most Normal Thing in the World, as Long as It is For Me": The Influence of Social Contexts on Identity Narratives of Young Gay Men. International Society for Research on Identity, Naples IT, May 13-15, 2019.

Leal, D .; Gato, J .; Coimbra, S .; Freitas, D. & **Tasker, F.** (2019) *The role of social support in lesbian, gay and bisexual parenting*. Associação Portuguesa de Psicologia,- Universidade da Madeira, Funchal PT, 27-29 June, 2019.

In June, **Ulrike Hahn** presented two papers at the ECE European Conference on Argumentation, Groningen in the Netherlands: 'A closer look at goal framing' and 'In the space of reasonable doubt'.

In June, **Ulrike** also delivered a keynote lecture, 'Knowledge from social networks: the good, the bad, and the ugly' to the FEW2019 Conference in Turin, Italy.

Doctoral Activity

Theses Awarded

Congratulations to all those successfully defending their theses

Candidate: **Andrea Caso**

Title: Grounding Semantic Cognition Using Computational Modelling and Network Analysis

Supervisors: Prof. Rick Cooper and Dr. Eddy Davelaar

Examiners: Dr. Tom Stafford (The University of Sheffield) and Dr. Max Garagnani (Goldsmiths University)

Candidate: **Ann Gui**

Title: Evaluating the role of social attention in the causal path to Autism Spectrum Disorder

Supervisors: Prof Mark Johnson, Prof Emily Jones and Dr Emma Meaburn

Examiners: Prof. Pasco Fearon (UCL), Dr. Kate Baker (University of Cambridge)

Candidate: **Igor Volzhanin** (joint candidate with Computer Science)

Title: Impact of Feedback Loops on Decision Making

Supervisors: Prof. Ulrike Hahn

Examiners: Prof. Andrew Howes (University of Birmingham); Prof. Michael Thomas (Birkbeck College)

Theses Examined

Staff from around the department are frequently invited to examine doctoral theses at institutions across the country

In June, **Michael Thomas** was the internal examiner for Igor Volzhanin (supervisor Prof. Ulrike Hahn), who passed with minor corrections. The thesis was entitled: Impact of Feedback Loops on Decision-Making.

Emma Meaburn was an external examiner for J. Myantheni Lennox's thesis in clinical psychology at Kings College London. The thesis was entitled 'Childhood emotional abuse: pathways to self-injurious behaviours in early adulthood' and was supervised by Dr Ted Barker and Dr Susanna Roberts.

Publications

Journal Articles

Berggren, N., & Eimer, M. (In press). [Attentional access to multiple target objects in visual search](#). *Journal of Cognitive Neuroscience*.

Berggren, N., Nako, R., & Eimer, M. (In press). [Out with the old: New target templates impair the guidance of visual search by pre-existing task goals](#). *Journal of Experimental Psychology: General*.

Berggren, N., & Eimer, M. (2019). [The roles of relevance and expectation for the control of attention in visual search](#). *Journal of Experimental Psychology: Human Perception and Performance*, 45, 1191-1205.

Brookman-Byrne, A., Mareschal, D., Tolmie AK, & Dumontheil, I. (2019) [The unique contributions of verbal analogical reasoning and non-verbal matrix reasoning to science and maths problem-solving in adolescence](#). *Mind, Brain, and Education* 13:211-223.

Donati, G., Dumontheil, I., & Meaburn E. L. (2019) Genome-wide association study of latent cognitive measures in adolescence: genetic overlap with intelligence and education. *Mind, Brain and Education* 13:224-233.

Dumontheil, I., Kilford E.J., & Blakemore S-J. (In press). Development of dopaminergic genetic associations with visuospatial, verbal and social working memory. *Developmental Science*

Forrester G.S., Todd, B. (2018) A comparative perspective on lateral biases and social behavior. *Progress in Brain Research*, 238: 377-403, online first: <https://doi.org/10.1016/bs.pbr.2018.06.014>

Forrester, G.S., Davis, R., Mareschal, D., Malatesta, G., Todd, B. (2019). [The left cradling bias: An evolutionary facilitator of social cognition?](#) *Cortex*. 2019 Sep;118:116-131. <https://doi.org/10.1016/j.cortex.2018.05.011>

Havers, L., Taylor, M. J., & Ronald, A. (2019). [Genetic and environmental influences on the stability of psychotic experiences and negative symptoms in adolescence](#). *Journal of Child Psychology and Psychiatry*, 60, 784-792.

Katus, T., & Eimer, M. (In press). [Shifts of spatial attention in visual and tactile working memory are controlled by independent modality-specific mechanisms](#). *Cerebral Cortex*.

Katus, T., & Eimer, M. (In press). [The N2cc component as an electrophysiological marker of space-based and feature-based attentional target selection processes in touch](#). *Psychophysiology*.

Leal, D., Gato, J. & Tasker, F. (2018). [Prospective Parenting: Sexual Identity and Intercultural Trajectories](#). *Culture, Health and Sexuality*, 21(7), 757-773. Doi:10.1080/13691058.2018.1515987

McCants, C., Katus, T., & Eimer, M. (In press). [Task goals modulate the activation of part-based versus object-based representations in visual working memory](#). *Cognitive Neuroscience*.

Morris, S., Farran, E.K., & **Dumontheil, I.** [Field Independence associates with mathematics and science performance in 5- to 10-year-olds after accounting for domain-general factors](#). *Mind, Brain, and Education (in press)*.

Ort, E., Fahrenfort, J.J., Ten Cate, T., **Eimer, M.**, & Olivers, C.N.L. (2019). [Humans can efficiently look for but not select multiple visual objects](#). *eLife*, 8:e49130.

Press, C., & **Yon, D.** (2019). [Perceptual prediction: Rapidly making sense of a noisy world](#). *Current Biology*, 29, R751-R753.

Ronald, A. (2019). [The psychopathology p factor: will it revolutionise the science and practice of child and adolescent psychiatry?](#) *Journal of Child Psychology and Psychiatry*, 60, 497-499.

Saffari, A., Arno, M., Nasser, E. **Ronald, A.**, Wong, C. C. Y., Schalkwyk, L. C., Mill, J., Dudbridge, F., & **Meaburn, M.L.** (In press). RNA sequencing of identical twins discordant for autism reveals blood-based signatures implicating immune and transcriptional dysregulation. *Molecular Autism*.

Taylor, S. A., Mallett, S., Bhatnagar, G., Morris, S., Quinn, L., Tomini, F., **Miles, A.**, Baldwin-Cleland, R., Bloom, S., Gupta, A., Hamlin, P. J., Hart, A. L., Higginson, A., Jacobs, I., McCartney, S., Murray, C. D., Plumb, A. A., Pollok, R. C., Rodriguez-Justo, M., Shabir, Z., Slater, A., Tolan, D., Travis, S., Windsor, A., Wylie, P., Zealley, I., and Halligan, S. [Magnetic resonance enterography compared with ultrasonography in newly diagnosed and relapsing Crohn's disease patients: the METRIC diagnostic accuracy study](#). *Health Technology Assessment* 2019;23 (42). <https://doi.org/10.3310/hta23420>

Tasker, F. & Bellamy, C. (In Press) [Adoption by same-sex couples -- reaffirming evidence: could more children be placed?](#) *Family Law*, 49 (2), 171-179.

Yuan, W., Lin, F., & **Cooper, R. P.** (2018) [Relevance theory, pragmatic inference and cognitive architecture](#). *Philosophical Psychology*, 32 (1).

Books

Forrester, G., and Hudry, K. and Lindell, A. and Hopkins, W.D., eds. (2018) Cerebral lateralization and cognition: evolutionary and developmental investigations of behavioral biases. *Progress in Brain Research* 238. Elsevier. ISBN 9780128146712.

Siraj, I., Taggart., B., Sammons, P., **Melhuish, E.**, Sylva, K. & Shepherd, D-L., (2019) *Effective Teachers in primary Schools: key research on pedagogy and children's learning*. London: UCL-IOE Press.

Book chapters

Barnes, J. & **Melhuish, E.** (2019). Inter-Agency working in Europe and the UK to support vulnerable young children and families. In: Tremblay RE, Boivin M, Peters RDeV, eds. Corter C. *Encyclopedia on Early Childhood Development* [online].

<http://www.child-encyclopedia.com/integrated-early-childhood-development-services/according-experts/inter-agency-working-europe-and-uk>