Gates Foundation funding moves African infant brain study into Phase II

Researchers at Birkbeck’s Centre for Brain & Cognitive Development (CBCD) have received a significant grant from the Bill and Melinda Gates Foundation for a 3-year infant brain imaging project in Africa. The funding will allow the interdisciplinary researchers to move to the next stage of the Brain Imaging for Global Health (BRIGHT) study – a project investigating crucial points where malnutrition affects infant brain development. This new grant, worth £671,823, follows an initial grant of Grand Challenges Exploration funding from the Bill and Melinda Gates Foundation in 2012 which demonstrated the first functional brain imaging of African infants. The group, led by Prof. Clare Elwell (UCL, Medical Physics and Biomedical Engineering Visiting Professor at CBCD), Dr. Sophie Moore (Cambridge, Human Nutrition Research) and Dr. Sarah Lloyd-Fox (CBCD-Birkbeck), will now follow children in Gambia from birth, using functional Near Infrared Spectroscopy (fNIRS) and a multitude of cognitive tasks, with the aim of identifying key markers of compromised development and of guiding future intervention strategies. The multidisciplinary team comprises experts in nutrition, developmental science, fieldwork and statistics as well as brain imaging. The team aims to ascertain whether malnutrition has an impact on early brain development globally, or whether certain brain regions and cognitive functions may be particularly vulnerable. For further information visit www.globalfnirs.org.
Dr Angelica Ronald was interviewed for BBC Radio 5 Live on Saturday 27th June 2015 to discuss her recent findings showing that differences between newborn babies in their looking behaviour predict behaviour problems and temperament style in later childhood (http://www.bbc.co.uk/programmes/p02vql2m). The work was also picked up by the Daily Mail, and international news outlets including Voice of America news and Radio National in Australia. These findings stemmed from work funded by Dr Ronald’s Waterloo Foundation grant and the CBCD Marie Curie training grant. The project involved a collaboration between scientists here (Prof Mark Johnson, Dr Tim Smith) and at the University of Padua (Dr Teresa Farroni). The work was led by former PhD student, Dr Kostas Papageorgiou. Relevant publication: Papageorgiou, K. A., Farroni, T., Johnson, M. H., Smith, T. J. and Ronald A. (2015). Individual differences in newborn visual attention associate with temperament and behavioral difficulties in later childhood. Scientific Reports, 5, 11264. doi: 10.1038/srep11264.

But it’s not always good to be in the media….  
Tim Smith and Annette Karmiloff-Smith were interviewed by a journalist from The Sunday Times. The article that followed totally misrepresented their interviews, capitalising on a cheap headline to make "a good story". And, before being retracted from the Sunday Times website, it was alas picked up by the Daily Mail, the Evening Standard, Good Morning America, Italian and Brazilian TV and newspapers, etc etc. as well as letters/emails from concerned parents and nursery teachers accusing us of being irresponsible scientists… But we fought back! And, not only did we get a published apology, but also a top-of-the-page Headline advertisement for our new TABLET project in the form of a letter.

The Sunday Times-Correction, June 21st:
Birkbeck scientists will not be giving iPads to babies at birth, as erroneously reported in last week’s Sunday Times (News June 14), but have just started a study into how the use or lack of use of touchscreen devices may influence infants’ cognitive, brain and social development.

The Sunday Times-Letter, June 21st:
A recent survey showed that family ownership of touchscreens has increased from 7% in 2011 to 71% in 2014, and scientists at Birkbeck’s Department for Psychological Sciences want to understand how this influences early child development. The Leverhulme Trust-funded TABLET (Toddler Attentional Behaviours and Learning with Touchscreens) project aims to document the huge increase in touchscreen devices in family life, and the enthusiasm most children show for using them, but also the concerns that parents express. Birkbeck’s researchers are inviting families around the world to participate in the study through a series of online questionnaires. For those families living near London, there will also be a follow-on study at the BabyLab to gain more detailed insight into any possible differences in infants’ cognitive and brain development between those who use tablets and those who do not. The eventual aim of the TABLET project is to provide an evidence base for parents, policy makers and scientists to better understand how the current generation is developing in their media-filled environment and to inform future decision making. The research has only just been launched – and the Birkbeck scientists are appealing to parents of infants from 6-36 months, who do or don’t have access to tablets, to take part in the online questionnaire study: http://www.bbk.ac.uk/tablet_project/
**Dr Iroise Dumontheil** is a co-investigator on a Wellcome Trust Large Arts Awards (£86,621) recently awarded to Tony McBride, from Cardboard Citizens.

**Professor Jonathan Smith** and collaborators: Shafran R (UCL) ... Smith J.A. et al. (2015) *Improving the mental health treatment of young people with epilepsy: A feasibility study.* NIHR Programme Development Grant (£96,000).

CBCD was awarded £200,000 from Garfield-Weston Foundation for *The CBCD Toddler Lab project*. A total of 2.3 million has now been raised for this initiative which was to be built adjacent to 32 Torrington – see later in this Newsletter under Other News – watch this space for future developments!

**Professor Mark Johnson (PI) and Dr. Emily Jones (Co-I)** was awarded £200,000 from Action Medical Research/Great Ormond Street Children’s Charity: Identifying early infant treatment targets for neurocognitive development in neurofibromatosis type 1

**Dr. Tim J. Smith** was awarded a Wellcome Trust ISSF public engagement grant for a collaborative event with the British Film Institute entitled 'Why we cry at movies? The psychobiology of film viewing' to be held at BFI Southbank 14th November (£4,480).

Conratulations to **Professor Jacqueline Barnes**, who was made a Fellow of the British Psychological Society

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**THESES EXAMINED/AWARDED**

**Kristen Swan Tummeltshammer** successfully defended her PhD dissertation on 2nd September, supervised by **Dr. Natasha Kirkham** and **Prof. Denis Mareschal**. Her examiners were Professor Andy Bremner and Dr Gaia Scerif. Dr. Tummeltshammer is off to Brown University to start a NSRA funded post doc with Dr. Dima Amso.

**Irati R. Saez De Urabain** successfully defended her PhD dissertation entitled 'Investigating the mechanisms underlying fixation durations during the first year of life: a computational account' on Monday 1st June, 2015. She was supervised by **Dr. Tim J. Smith** and **Prof. Mark Johnson**. Her examiners were Professors Robin Walker and Gert Westermann. Irati is currently a post-doc on the TABLET project and will shortly be moving to Berlin.

**Professor Michael Thomas** examined a thesis by Nicolas Léwy, entitled *Computational psycholinguistics and spoken word recognition in the bilingual and the monolingual*, at the Faculty of Arts, University of Neuchâtel, Switzerland. June 25th, 2015.

**Johanna Spiers** (2015) successfully defended her thesis entitled: *The experience of living with and being treated for end-stage renal disease.* Supervisor: **Professor Jonathan A Smith**.


**Karmiloff-Smith, A. (2015). An alternative to domain-general or domain-specific frameworks for theorizing about human evolution and ontogenesis. AIMS Neuroscience, 2*(2), 91-104.


**Professor Mike Oaksford** (along with Professor Valerie Thompson) organised the *London Reasoning Workshop 2015* held at Birkbeck, August, 5th – 7th August, 2014. He also gave a talk titled, *Discounting testimony with the argument ad hominem and a Bayesian conjugate prior model.*

Organised by **Dr. Teea Gliga**, The Biology and Psychology of Sex Differences in Development Workshop was held at CBCD on the 3rd of July, gathering more than 80 participants. The aim of this workshop was to encourage communication between different approaches to studying sex differences, disciplines that rarely meet. The nine speakers touched upon the the study of hormones, epigenetics, psychopathology and socialisation. The discussion revolved around the need to develop a mechanistic understanding of sex differences. This workshop was funded from ISSF funds.

**Dr. Fiona Tasker**: V. Figueroa & F.Tasker. The identity life course of Chilean lesbian women becoming mothers from heterosexual relationships. 14th European Congress of Psychology. EFPA (European Federation of Psychologists’ Associations) Symposium: Lesbian and gay parents in the social context: “What they think we are. What we actually are” 07th - 10th July 2015. Milano, Italia

**Professor Mark Johnson** was Keynote Lecturer at the "Autism: Future Directions" conference, University of Warsaw, Poland, May 9-10 2015.

**Dr Iroise Dumontheil** gave a talk on the adolescent brain at Sunday Times Festival of Education, at Wellington College, Crowthorne on 4 June and a talk titled “Genetic variants of the dopamine neurotransmitter system and higher cognition” at the Genetics & the Brain Bloomsbury Centre for Genetic Epidemiology and Statistics (BCGES) Annual Conference in London on 30 June.

**Dr Angelica Ronald** gave a public lecturer at Enfield Thinks entitled “What is Autism Today?” in June 2015 in Enfield, London. (Enfield Thinks is a “pop-up learning shop” aiming to raise the profile of vocational qualifications, link qualifications to labour market demand and provide a platform to promote the uptake of STEM subjects). Dr Ronald also gave an invited seminar at the MRC Integrative Epidemiology Unit, Bristol University in July 2015 entitled "Psychotic experiences in adolescence: New findings from a community-based twin study”. Finally, Dr Ronald was an invited speaker at the Wellcome Trust-funded Sex Differences in Development Workshop at Birkbeck in July 2015. Her talk was entitled "Sex differences in autism and ADHD: Lessons and predictions from behavioural genetics”

**Professor Michael Thomas** gave a Keynote Address at III Coloquio Internacional De Ciencias Cognitivas, Durango, Durango, Mexico, 26-28 August 2015. My lecture was entitled: "Two fundamental flaws in psychology: How neuroscience and computational approaches may help”. He also gave a Presentation at National Research Foundation (NRF) Workshop on Inter-disciplinary Research on the Science of Learning, 1-2 July 2015, National University of Singapore. Talk entitled: "Research at the University of London Centre for Educational Neuroscience"

**Dr. Clare Press**: Workshop entitled 'Social Cognition: From Evolution to Applications' at Bangor University, August 2015.

**Dr. Alex Shepherd**: Patricia Dore and Ardian Dumani completed a project supervised by Dr A Shepherd, which was presented as a poster at the 2015 ECVP: Dore P, Dumani A, Shepherd AJ. Colour discrimination, coloured backgrounds and local and global shape perception. Abstract 516, ECVP, 2015.
Professor Jacqueline Barnes gave two talks on "Sure Start and its legacy", to visiting academics from the Institute of the System on Childcare and Early Childhood Education, Tokyo, and the Department of Education and Culture, Doshisha University, Kyoto. June 16th, London. She also gave a presentation on "Evidence and How to Spend Early Years Pupil Premium" to Wandsworth Pupil Premium Conference, September 15th, London.

Dr. Sarah Lloyd-Fox gave two talks at the Flux congress, Leiden in September - "Using fNIRS to study infants at risk for compromised development” and "Improving our confidence in fNIRS data to allow the study of individual differences”.

In July Professor Ted Melhuish on the Advisory Board of the Save the Children Fund, and was made a trustee of the Foundation Years Trust. In August Ted Melhuish was invited to talk to the Department of Education of the Japanese Government in preparation for their review of Children's Policy. Ted also gave a presentation at the government-funded Center for Early Childhood Development, Education, and Policy Research (CEDEP) of the University of Tokyo. They asked if they could translate one of Ted's books into Japanese, and this was agreed. In September Ted Melhuish was visited at the Institute for the Study of Children, Families & Social Issues by a delegation of 20 officials from the Department of Social Welfare of the South Korean Government. They seemed impressed by the quality of the research on social policy issues. In September Ted Melhuish was asked to validate a research degree at the University of Ioannina.

Dr. Marie Smith gave a series of talks during August:

Professor Annette Karmiloff-Smith gave an invited talk on infant development in Down syndrome at the Jerome Lejeune meeting in Paris 4-5 June. She also gave a talk at the Sunday Times Festival of Education, at Wellington College, Crowthorne on 4 June, entitled: “How scientists get inside the minds/brains of babies”. On 30th July, she attended the Association for Psychological Science planning committee in Paris for the next international integrative science congress, 2017. On 4th September, she went on a short walk in the rare sunshine before giving a Keynote Address at the Society for the Study of Behavioural Phenotypes, tripped on a curb and next thing she knew she was in an ambulance being asked the usual neuropsychological questions for concussion: she got them all right except: who is the current Prime Minister? Blank. Clue: David. Continued blank. Final clue: Cammm… and she finally got it. Poor question when some prime ministers can be so forgettable… Hana d’Souza, new postdoc in Annette’s team, represented her the week after in Braga, Portugal, at an integrative symposium on Using different neuroimaging methodologies to deepen our knowledge of neurodevelopmental disorders.

Dr. Tim J. Smith hosted the Society for Cognitive Studies of the Moving Image (SCSMI)' annual international conference at Birkbeck, June 17-20th. It is the first time this interdisciplinary conference has been hosted in the UK and it received record attendance (170). The conference consisted of exciting presentations, panels, social events (a cruise along the Thames), and a retrospective of the work of local experimental filmmaker, John Smith. The conference was only made possible by support from the British Society of Aesthetics, the Birkbeck Institute for the Moving Image, SCSMI, the Department of Psychological Sciences and the generous assistance of students and staff in the department.
Birkbeck’s Centre for Cognition, Computation and Modelling (CCCM) held two one-day workshops during this period:

**Decision-making: from evidence accumulation to preference formation & belief updating** on Thursday July 16th

**Speakers:**
- Rafal Bogacz, University of Oxford
- Neil Bramley & David Lagnado, UCL
- Nick Chater, University of Warwick
- Eddy Davelaar, Birkbeck
- Laurence Hunt, UCL
- Benedetto de Martino, University of Cambridge
- Neil Stewart, University of Warwick
- Chris Summerfield, University of Oxford
- Konstantinos Tsetsos, Birkbeck
- Marius Usher, University of Tel Aviv

**Associative Learning, Connectionism & Reinforcement Learning: Past, Present, Future**

*On Monday June 1st, organised by Professor Ulrike Hahn*

**Speakers:**
- John Pearce, Cardiff University
- Jay McClelland, Stanford University
- Peter Dayan, Gatsby Computational Neuroscience Unit
- Koray Kavukcuoglu, Google DeepMind
- Denis Mareschal, Birkbeck

Professor Jay McClelland from Stanford, giving his talk, at the end of his sabbatical stay at Birkbeck.
Forthcoming colloquia at the Centre for Brain & Cognitive Development

CBCD colloquia will no longer be held on Tuesday lunchtimes, but henceforth once a month on Tuesday afternoons from 4-5 p.m., followed by wine and cheese.

Tuesday 10th November:  Dr. Duncan Astle, MRC Cognition & Brain Sciences Unit, Cambridge
Title tba

Tuesday 8th December:  Professor Michael Lamb, University of Cambridge
Title tba

For info on CBCD colloquia, abstracts etc. see:
http://www.cbcd.bbk.ac.uk/news/events

There will be no general departmental colloquia this term.
32 Torrington Square turns into Birkbeck’s Tower of Pisa!

Staff was evacuated within an hour of the discovery of a hugely widening crack on the front wall of the third floor… all rehoused in 43 Gordon Square until teaching starts, and will be subsequently moved to Bedford Square.

Watch this space!
AT THE RECENT ATHENA SWAN MEETING, Professor Mike Oaksford announced that Prof Annette Karmiloff-Smith would take on the role of Parental Champion within the Department. She is now available, in her words, "to those who are pregnant, those about to go on maternity/paternity leave, during maternity and newly returned from maternity, for advice on work/life balance in all its aspects (from nappies to sleep to grant writing!)." We felt strongly at the meeting that such role was needed in order to meet the needs of staff. We will also be exploring other avenues of support for staff members about to have children or returning to work after becoming new parents.

Professor Ted Melhuish subsequently volunteered to act as the Grandparental Champion.
The Dept. of Psych Sciences isn’t just about brain imaging, Reaction Time, and questionnaires. We have lots of fun too!

In June, Annette Karmiloff-Smith held a luncheon party for her team and their partners at her barn in Braughing, Hertfordshire. A good time was had by all. It was one of the few days of actual Summer this year!

In September, the whole Dept. held a picnic, with fun and games in Gordon Square