

# crae news

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## CRAE

The **Centre for Research in Autism and Education** is a unique initiative that has at its heart the ambition to improve the lives of people with autism and their families. It is the first centre in the country committed to understanding which factors, intervention programmes, or classroom environments might help or hinder autistic children's learning and real-life outcomes.



CRAE seeks to achieve this goal in several ways. First and foremost, it conducts ground-breaking scientific research to enhance our knowledge of intervention, education and outcomes for people with autism. Second, it builds partnerships within the scientific community both nationally and internationally to ensure that researchers are working together on these issues. Finally, CRAE is working with professionals on the ground, and is further engaging those directly impacted by autism – children, young people, and adults with autism, their families and friends, and the wider public.

In this newsletter, we report on recent activities, including some of our recently completed projects, and our new research projects. Please get in touch if you would like to help out, or if you have any comments or questions. You can email [l.pellicano@ioe.ac.uk](mailto:l.pellicano@ioe.ac.uk), call us on 020 7331 5140 or visit us at [ioe.ac.uk/crae](http://ioe.ac.uk/crae). You can now also follow us on twitter: [twitter.com/CRAE\\_IOE](https://twitter.com/CRAE_IOE). We'd love to hear from you.

**Tony Charman and Liz Pellicano**

Our supporters:



## CRAE's 2nd Annual Lecture: Ari Ne'eman on 'The Education and Miseducation of Autistic Students'



We were very fortunate to have Ari Ne'eman give CRAE's 2nd Annual Lecture. Ari has been hugely instrumental in raising awareness about autism and campaigning for quality of life and

rights for people with autism. He is a White House appointee, advising President Obama on ways of ensuring that health care, education, support services, and employment policy reforms in the US are more equitable for people with a disability. He also set up a national organisation (shortly after finishing high school), the Autistic Self-Advocacy Network (ASAN), which has placed the rights of people with autism firmly on the US agenda.

Ari gave an incredibly engaging and thought-provoking lecture. He talked about his experience of the US special education system and the need to raise educators' expectations of pupils on the spectrum; he warned of the dangers of the growing bias to place pupils in special education provision; and he stressed the importance of listening to the pupils themselves. He also spoke of ASAN's work with autistics and their families, practitioners and researchers to ensure that people with autism are included in each step of the research process – a practice that we hope to adopt here at CRAE.

Ari also did a live Q&A chat with parents and self-advocates on Talk about Autism (provided by Ambitious about Autism – one of CRAE's partners). We had some great questions and discussion. It is all at: [www.talkaboutautism.org.uk/community/live-qa-events/010611-ari-neeman](http://www.talkaboutautism.org.uk/community/live-qa-events/010611-ari-neeman)

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# What is 'good practice' in autism education?



Tony Charman and Liz Pellicano were commissioned by the AET to characterise aspects of good practice in autism education in schools considered to demonstrate such practice by Ofsted/external agencies. We interviewed school practitioners in a wide range of provisions for preschoolers, children, and young people on the autism spectrum.

Like previous research, we found that schools were using innovative methods to adapt the curriculum to the needs of individual children, and multiple ways of monitoring pupils' progress. They also had highly trained and highly motivated staff who had very high levels of communications with parents and families, and were working in partnership with specialist practitioners in health, education and social care.

We also uncovered some aspects of good practice that hadn't been recognised fully in previous work. We found that school staff 1) had consistently high ambitions and aspirations for pupils with autism; 2) were modifying the curriculum to include not just academic skills but also social communication and independent living skills; 3) had developed 'hubs of expertise', where staff would share knowledge about autism with schools and professionals in the local community, and with parents; 4) were ambassadors for autism, raising awareness about autism in the broader community; and 5) worked hard at developing strong reciprocal relationships between teachers and parents, and teachers and pupils.

These findings are extremely valuable and should form the foundation of a set of basic standards for the delivery of good practice in education provision for children and young people on the autism spectrum. They also highlight several areas where the government might focus their efforts in future policy, for example, by harnessing expertise within centres of excellence. In the near future you will be able to find the full report at [www.autismeducationtrust.org.uk](http://www.autismeducationtrust.org.uk)



# Children with autism learn to search differently in a large-scale environment

Liz Pellicano and colleagues recently reported intriguing results from a study looking at the way children search in a large-scale space. It is well known that children and adults with autism show excellent performance when asked to search for an object hidden amongst other objects on a computer or a table top. But they wanted to know whether these exceptional skills translate to more true-to-life settings.

They asked children with and without autism to search within a 'foraging room' (see picture), by pressing each green button until they found the special one that turned red. Unexpectedly, typical children performed



much better than children with autism, who instead were less organised or systematic in their search. Although surprising, these results mapped on to parents' experience of their children's difficulties with everyday navigation and search skills.

Liz and her colleagues suggested that these difficulties might be explained by differences

in autistic children's cognitive make-up, for example, autistic children's difficulties forming a global 'snapshot' of the search space and remembering which search locations have already been visited. These findings stress the importance of carrying out research that more closely investigates the real-world skills of young people with autism.

# Viewing the world differently

Much of our work at CRAE is aimed at understanding how children and young people with autism view and interpret the world around them, and how these differences might impact upon their everyday lives.

Cathy Manning is an ESRC-funded PhD student at CRAE who is looking at whether children with autism judge the speed of objects in a similar way to that

of typical children. Some people with autism say that the world moves too fast for them, making it difficult for them to make sense of things. Cathy is therefore trying to understand whether children with autism might take in new information better if it is presented at a slower pace.



3D glasses study looking at how young people with autism combine information from the senses. We know that people with autism see aspects of the world that non-autistic people don't: focusing on tiny pieces of dust, for example. We are interested in just how they do this. Being able to accurately combine information from the senses is critical in everyday life for judging how to move in the world around us. For example, combining what we see with what we hear allows us to judge the distance of a car when crossing a road.

Rachael is looking for young people aged between 12 and 16 years to take part in her project. Young people will wear 3D glasses to see colourful pathways that 'pop out' of the computer screen.

She is looking for young people with autism, aged between 6 and 12 years, to take part in this project. Children will take part in a fun 'Space Training' game, where they will see constellations of shooting stars on a computer screen and be asked to judge how fast they are moving.

Rachael Bedford is a Bloomsbury Colleges PhD student at CRAE, who is currently running a

Image: 'Space Training' in action.

## 'Number sense' in autism

Liz Pellicano has been awarded a grant from the Nuffield Foundation to look at children's 'number sense' – the intuitive ability we have to estimate magnitude or how much there is of something. In autism, anecdotal reports suggest that mathematical skills are enhanced, but those working with children with autism in schools know that their maths skills can vary widely: while some children do indeed show a talent for mathematics, others struggle to grasp it.

Together with Dr Niki Daniel and David Aagten-Murphy (Liz's PhD student at the University of Florence), Liz is trying to understand the nature of maths ability in children with autism, how this ability might differ from that of children without autism, and whether children's number sense might be linked to their maths skills.

**We are looking for young people with autism aged between 8 and 12 years to help out with this project.**



## Enhancing the scientific study of early autism

Tony Charman has been awarded funds from the European Science Foundation to set up a network of European scientists to develop capacity in autism research through networking, lab exchanges, bi-annual meetings, summer schools for early stage researchers, and conferences. Tony is leading the network, which involves over 50 scientists from 20 European countries. Over the next four years, it will establish a cross-disciplinary scientific network to advance the pace of discovery about the earliest signs of autism, to combine techniques from cognitive neuroscience with those from the clinical sciences, and to establish European practice guidelines on early identification and intervention. For more details see [www.cost.eu/domains\\_actions/bmbs/Actions/BM1004](http://www.cost.eu/domains_actions/bmbs/Actions/BM1004)

## Children's 'mental tools' and their readiness for school

Liz Pellicano is looking at the way in which children's 'mental tools' relate to early academic skills. Children's mental tools include the abilities to shift easily from one thing to the next and to 'stop and think' before responding. Children with autism often show difficulties with certain mental tools, which might make it difficult for them to learn effectively in the classroom or do everyday things. We want to see whether children's mental tools are related to their early maths and literacy skills. Knowing this will be an important step towards designing early intervention programmes to mentally exercise children's cognitive skills within the context of everyday classroom activities.

**We are currently looking for preschoolers (3 to 5 year-olds) with autism to take part in this project.**

## Thank you!

A **huge** thanks to all the children, young people, families, and practitioners who have so generously taken part in our research ... our work would not be possible without your help.

**Thanks especially** to the headteachers and school staff from the following schools (in alphabetical order): Aylward Primary, Corley Centre, Downsend, Durants, Eagle House, Education Village Federation, Fosse Way, Hamilton Primary, Hatton, Heathermount, Hendon (HARP Unit), Hillingdon Manor, Pears Special Resource Provision at JCoSS, Ladygrove Park Primary, Lark Hall Primary, Linden Bridge, Livingstone Primary, Lord Williams's, Mossbourne Academy, Newdigate C of E Infant, Norton Hill, Oak Lodge, Phoenix, The Pines, Priory Lodge, The Puzzle Centre, Queensmill, Radlett Lodge, Russet House, Sandcross Junior & Infant, Spa, Springhallow, St Nicholas Primary, St Andrews C of E Primary, Stephen Freeman Primary, Sutherland House, Sybil Elgar, and TreeHouse.

**We are extremely grateful** to our funders, including The Clothworkers' Foundation, Pears Foundation, Kirby Laing Foundation, Autistica, Autism Education Trust, Bloomsbury Colleges, Economic and Social Research Council, European Science Foundation, Medical Research Council, the Nuffield Foundation, the UK's Experimental Psychology Society, the Volkswagen Stiftung, and to our partner, Ambitious about Autism, and CRAE Advisory Group members.



## CRAE news

**Mark Taylor**, a CRAE PhD student, recently presented at the Annual Meeting of the Behavioral Genetics Association in the US, where he spoke about the extent to which the overlap between autism and ADHD might be caused by genetic factors.



We said goodbye to **Dr Catherine Jones**, who has gone to the University of Essex to take up a permanent lectureship.

Catherine had been at CRAE since the very start and made an enormous contribution to all of our efforts, both academically and socially. We also wished the best to

**Besterah Kutlu**, an undergraduate placement student from the University of Surrey.



Besterah had been working on the Autism, Behaviour and Communication Study, which is surveying the mental health and service use of children and young people with autism in special schools from the Pan London Autism Schools Network. The data will be analysed shortly, so we will have more news on what we found in the next newsletter.



We say hello to **Dr Niki Daniel**, who has come to work with Liz Pellicano on a study

investigating 'number sense' in children and young people with and without autism. Niki has recently completed her PhD within the Autism Research Group at City University, London, where she investigated holistic and configural face processing in typically developing children and children with autism.



Congratulations to **Dr Susie Chandler**, who has just given birth to baby boy number three, Harvey, and to **Elena Klaric**, an ex-

CRAE member, who has given birth to her first child, Elliot, in Perth, Western Australia.

Congratulations also to two of Liz Pellicano's students from the Professional Doctorate in Educational Psychology programme, who have just submitted their dissertations. **Lynsey Calder** looked at friendships and the social networks of Year 6 children on the autism spectrum within mainstream schools, and **Chantelle Gumaste** examined the transition from primary to secondary school for children with autism in one local authority. Both Lynsey and Chantelle's findings are extremely relevant for parents and practitioners. Stay tuned for a report of their findings in the next CRAE newsletter.



## Can you help?

We are looking for young people on the autism spectrum aged between 3 and 16 years and their families to take part in our fun research projects. You can call us on 020 7331 5140 or email us at l.pellicano@ioe.ac.uk or t.charman@ioe.ac.uk. Tell your friends about us too!

crae news is available in alternative formats. Please contact the Marketing and Communications Unit for assistance: tel +44 (0) 20 7911 5556 email info@ioe.ac.uk

## British Autism Study of Infant Siblings (BASIS)

**Tony Charman** and several members of the CRAE team are involved in the BASIS study – an exciting collaboration with the Babylab at Birkbeck College, University of London, which involves seeing young babies who have an older sibling diagnosed with an autism spectrum condition ([www.basisnetwork.org](http://www.basisnetwork.org)).

**Dr Greg Pasco** and **Dr Susie Chandler** are Research Fellows on the BASIS project. Their main research interests relate to the early social communication skills of children with autism, screening and diagnosis and early intervention. **Wafa Alshami** is a CRAE PhD student funded by the King Abdullah Scholarship Program. She is looking at the way that infant siblings of children with autism integrate eye-contact, smiling, vocalising, and manipulating objects, and how this relates to these children's later social interactions.

They hope to find out more about the early signs of autism, which may result in earlier detection, as well as determine why some children develop the condition and others do not.