

The Disconnected Mind aims to understand how changes in the brain's white matter – its connectivity – contribute to age-related cognitive decline in humans.

Welcome to the autumn Disconnected Mind newsletter. The past couple of months have been very busy and productive, and you'll find news about the latest publications and events the team have been involved in here. For more information about anything in the newsletter, just get in touch (contact details on the last page), especially if you have something you'd like included in a future issue. Do also visit the website, www.disconnectedmind.ed.ac.uk, to see the most recent activity, news stories and publications.

The Disconnected Mind—the Future from Professor Ian Deary

As I write this on 1st November 2010, it is exactly six years to the day since I wrote to my five co-PIs to tell them that we had

been shortlisted by the then-Help the Aged charity as one of the finalists for their 'Major Gift Campaign'. By early 2005, we had won it. The attraction of The Disconnected Mind's plan to conduct integrated human and experimental studies of age-related cognitive changes—focusing on the causes and consequences of brain white matter changes—beat strong opposition from leading UK research teams.

We thank the charity's bold initiative for bringing together the six of us and our research teams to work in a co-ordinated and harmonious way; and in a productive way too. Since the start of The Disconnected Mind we have produced many peer-reviewed journal articles, and our presence at each of the grantholders' meetings that the charity holds each September has seen long rows of our posters with novel results. The human studies side of the project—the Lothian Birth Cohort 1936 (LBC1936)—had the advantage that it was already up and running when we began, and so it has

The Disconnected Mind Principal Investigators



seen dozens of LBC1936 reports appear in the last few years. As you'll read in this issue of the Newsletter, we are also seeing the first of several exciting reports from the experimental work. The content of these fundamental, important and revealing experiments shows how well-conceived our programme was, and how truly complementary these studies are to the LBC1936 work.

The Disconnected Mind has been an unusual and exciting way to be funded. Over the last six years we and the charity have welcomed many potential donors to our study in Edinburgh. Also in search of funders, the charity and I have been to many meetings in London—with dinners at ancient inns in London's City area, and meetings in some of London's exclusive clubs—and Karen has had some interesting London breakfast meetings. And we six PIs will not forget the gala dinner held at Buckingham Palace for our project, hosted by Prince Philip, the Duke of Edinburgh. All of these occasions, and more, have meant that, from the start, we have had to address the practical importance of what we do.

I have no doubt that the existence of The Disconnected Mind was a major contributor to our successful bid for a Lifelong Health and Wellbeing Centre. And now, it is almost hard to think of the Centre for Cognitive Ageing and Cognitive Epidemiology not being a fixture at the University of Edinburgh. As a platform, The Disconnected Mind has helped us gain other funding for human and experimental work, from the research councils and other charities and we hope that these agencies will continue to support research ideas related to The Disconnected Mind.

From April 2011 we shall enter Phase 2 of what The Disconnected Mind started. This has been discussed over a period in which the charity has undergone huge

changes. Help the Aged merged with Age Concern and the new organisation is now named Age UK. They have decided that their future funding will be solely for the Lothian Birth Cohort 1936. This is in line with their intention to broaden research support, especially into more socially-oriented investigations. The greater Disconnected Mind effort continues. As a broad team we shall continue to help each other to attract funding for the whole range of activity, we shall continue to hold our enjoyable Disconnected Mind meetings, and we shall continue to hold to the aims of the original project we scripted back in 2004. The joint harnessing of expertise Psychology, Neuroscience and Clinical Neurosciences together for this project has had impressive outcomes in the collaborative work we are doing, and it must continue because we are now seeing the real first harvest of our efforts.



Out and about with the DM team

The DM was well-represented at the inaugural Research for Later Life conference, held in Nottingham in September, organised by Research into Ageing and Age UK. The conference replaces the previous Grantholders' Conference, and included not only research presentations but also contributions for the Age UK committees. The DM team hosted a session on the project, with contributions from Ian, Dr Mark Bastin, Dr Lorna Lopez, Dr Alan Gow and Dr Karen Horsburgh. The speakers each also presented a poster, as did Dr Phil Holland and Dr Susana Munoz Maniega. It was interesting to

Research for Later Life Conference



The DM team hosted a session on the project and presented 6 posters covering all aspect of the research.

have the mix of scientists and those who work with older people and Age UK day-to-day, and we look forward to seeing how the conference develops in the coming years.

Also in September, a number of the DM team gave presentations or presented posters at the CCACE Annual Research Day. In fact, the team scooped all 3 poster prizes on offer: Dr Susana Munoz Maniega (3rd), Dr Michelle Luciano (2nd) and Dr Maria Valdes Hernandez (1st). Congratulations to the prize-winners (the judge was completely independent of the team and the centre, before you ask).

This month, Dr Lars Penke attended the Aging and Cognition conference in Dortmund, Germany, and presented some of the data on white matter integrity and lifetime cognitive ageing. At the same time, Dr Maria Valdes Hernandez and Miss Natalie Royle were attending the 5th Conference of Epidemiological Studies in Europe, in Paphos, Cyprus. Maria spoke in the "Ageing and cognitive decline "

session, organised by Professor Tim Bates (CCACE, the University of Edinburgh), about the effect of white matter lesions, and Natalie presented a poster about the processes developed for measuring hippocampal volume.

Also in October, Ian and Alan visited the Center for Healthy Aging (CEHA) at the University of Copenhagen for a congress organised by the International Alliance of Research Universities on "Ageing, Longevity and Health". During the meeting, Ian presented an overview of the DM to the international audience and then also acted on the scientific advisory board of their centre. Both are exploring collaborations with members of CEHA which has some very similar work packages to our own CCACE. Visit <http://healthyaging.ku.dk/> for more information about their work.

And finally, Dr Wendy Johnson appeared at a Book Festival event in August. Wendy was on an expert panel discussing a new book, "The genius in all

Pastures new and long service



Left: Catherine, Caroline and Ross with Ian on their last day. Best of luck! Right: Ian cutting the cake at his 25 years celebration.

Caroline and Catherine now at the University of Stirling working towards a Masters in Health Psychology, while Ross has stayed at Edinburgh and has begun a medical degree. We wish them every success in their future studies, and look forward to continuing to work with them on their analyses of the LBC1936 data.

Between them, the 'departees' clocked-up about 11 years with the study. Impressive, although still a little way off the milestone Ian celebrated at the start of September, having been with the Department of Psychology for 25 years. To mark the occasion, the LBC1936 team and the CCACE hosted a reception, with Ian as somewhat surprised guest of honour. A number of colleagues past and present came to offer their best wishes, which were generally summarised by "here's to the next 25".

The Big Knit

Ever been browsing the smoothie section of the supermarket around this time of year and wondered why some of the bottles have woolly hats on? Well, it's a scheme called "The Big Knit" and is a collaboration between Age UK and Innocent. The idea is that volunteers knit the little hats, and send them to Age UK.

For each bottle with a hat sold, 25p goes to Age UK. Incidentally, the DM's Dr Susana Munoz Maniega contributed her skills by knitting some hats on the train back from the Age UK conference. The charity are aiming to raise £200,000 this year, so if you're buying a smoothie from November 3rd, makes sure it has a hat. To find out more about the scheme, and how the funds raised by Age UK help older people, visit:

www.ageuk.org.uk/get-involved/volunteer/get-knitting-for-the-big-knit/



Just some of the handiwork that Susana created for Age UK's The Big Knit.

Latest publications

In the last few weeks, the Experimental Models team have had a number of publication successes. Firstly, Robin Coltman's paper, entitled "Selective white matter pathology induces a specific impairment in spatial working memory", is now 'in press' with *Neurobiology of Aging*. This was followed in quick succession by Dr Phil Holland with "MRI is a sensitive marker of subtle white matter pathology in hypoperfused mice", also now 'in press' with *Neurobiology of Aging*. The progress is set to continue over the coming months with a number of further papers from the experimental models work currently under review.

The publications list on the DM website is regularly updated. From the homepage, www.disconnectedminded.ac.uk, click on the link labelled Scientific publications. If you would like a copy of any of the articles, please just get in touch. Let me know of your 'in press' or recently published papers. They'll be added to the website and may be profiled in a future newsletter.

And finally...

At the IARU Congress in Copenhagen hosted by the Center for Healthy Aging, mentioned above, there was an exhibition about different aspects of ageing and research in this area. A new exhibit called "An aging world" was launched at the congress, which is a sculpture highlighting changing population demographics on a map of the world. You can find out more about the exhibition at: <http://healthyaging.ku.dk/activities/exhibition/> and specifically about the new sculpture: www.corporeality.net/museion/2010/10/05/an-ageing-world-a-science-design-installation-about-global-demography/

DM meetings and diary dates

The next full team meeting will be January 13th, starting at 3.30pm (in Psychology). More details will follow nearer the time, and we look forward to seeing you there.



The sculpture, "An aging world", came from the "simple idea...to make a commentary on the rapidly changing demographic of the human population".

Photo: Mikal Schlosser.

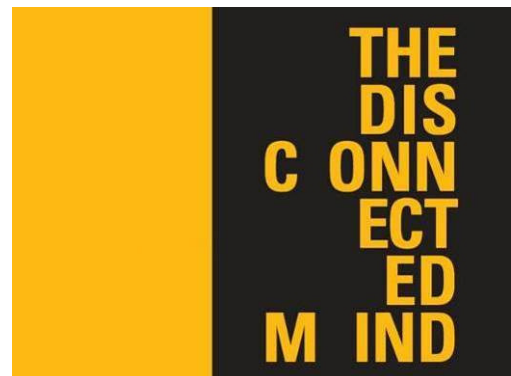
Content request

If you are due to present something in the coming months or are representing the DM at any kind of event, please let me know so I can share it with the team.

As well as conference presentations and publications, if you have any news or pictures for future editions of the newsletter, do send them in. This can be a piece about what you're currently working on, or details of a recent publication that you think might be of interest to the rest of the team.

Any and all ideas and suggestions welcome.

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