

BRAIN DIARIES

Modern Neuroscience in Action



March 2017 - January 2018

Special exhibition and event programme that explored how neuroscience is transforming what we know about our brains, from birth to the end of life.



Museum of
**Natural
History**
University of Oxford



OXFORD
NEUROSCIENCE



BRAIN DIARIES

IN NUMBERS

Brain Diaries exhibition attracted

168,453 visitors

On average the exhibition had

565

visitors a day

Visitors rated the exhibition

4.1

out of 5

50

researchers from across 5 different University of Oxford departments and beyond contributed to the exhibition.

42

Brain Diaries themed events took place over 8 different locations.

These included talks on current neuroscience research, big late nights, a large family science fair, film screenings, a Great Debate on smart drugs, researcher talks in a local pub, an A Level psychology study day, a poetry evening inspired by the brain and lots more.

74

brains featured in the exhibition, including:

- 46** historic brain casts from across the animal kingdom
- 22** real mammal brains to show brain evolution
- 5** 3D printed touchable brains
- 1** real human brain

The exhibition featured **4** research led digital interactives.

1 hand illusion interactive had **93,810** uses

303

researchers contributed to the events programme

Brain Diaries events were attended by

11,478

people

1,129

people attended the NeuroNight late night event at the museum.

1 Big Brain Competition

Brain Diaries visitors were offered the chance to investigate by the Wellcome Centre for Integrative Neuroimaging. The winning experiment idea was carried out in their state-of-the-art MRI scanner.

873

people entered an experiment idea to the Big Brain Competition either in the gallery or on online .

There was **1** overall winning experiment that was developed by neuroscientists and carried out in the MRI scanner.

The exhibition cost **£70,00**

Costing **£0.42** per visitor

The Brain Diaries website has had

40,000

visits

Oxford Sparks created a lot of online content around the Big Brain Competition announcement and experiment.

5 Facebook Lives featuring neuroscientists had **30,000** views.

The associated microsite had **9,000** views.

Twitter activity around Big Brain Competition got **126,000** impressions

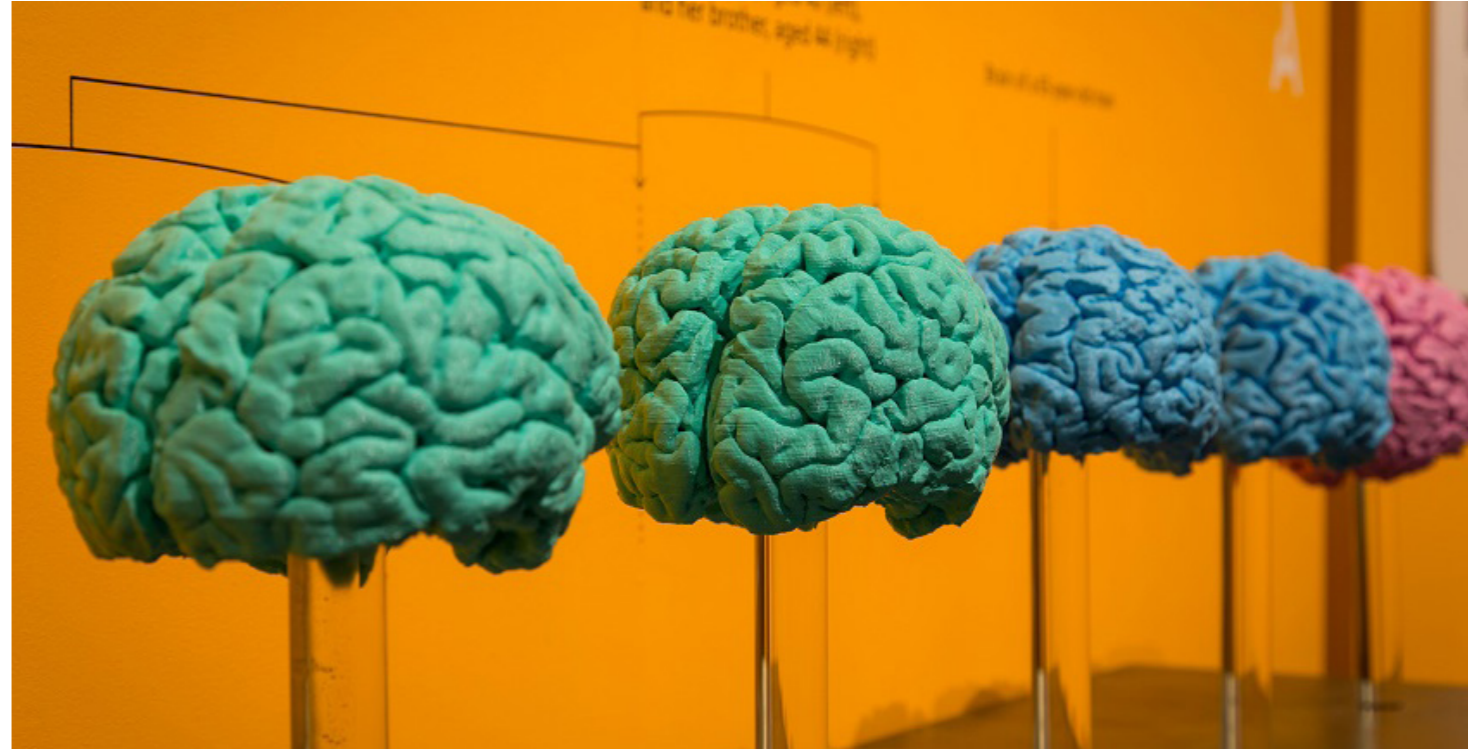


image: A series of 3D printed brains of a family showing brain development over a lifetime

Brain Diaries

Brain Diaries - Modern Neuroscience in Action charted the astonishing development of the human brain, from conception through childhood and adulthood to old age. The exhibition was the largest instalment to date of the Museum's 'Contemporary Science and Society' series along with the museum's most ambitious accompanying public event programme. Both the exhibition and the public programme were developed in partnership with Oxford Neuroscience.

The exhibition attracted 168,000 visitors and engaged over 11,000 people with the public programme. In order to ensure that everyone could access the exhibition, the Museum developed an accompanying website with nearly all the content included - this has had over 40,000 views.

Over 50 neuroscientists from the University of Oxford and beyond contributed to the Brain Diaries exhibition, allowing the Museum to present current research and understanding of the healthy brain to its large and broad audience. A further 300 researchers took part in the public programme, which was used to explore further many other aspects of translational and clinical neuroscience research. The exhibition and programme also aimed to use modern neuroscience to overturn some popular misconceptions about the brain.

Working with researchers

The partnership between the museum and Oxford Neuroscience was extremely successful, allowing cross-promotion of the exhibition, joint marketing efforts, and an ambitious multi channel engagement programme. This collaboration also provided a number of connections between the museum, different neuroscientists and research groups. This resulted in the creation of engaging content and digital interactives, delivery of unique events and opportunities for visitors to participate in current research.

Digital

The museum worked closely with a number of neuroscientists and a digital design consultancy to create two interactives for installation in the gallery and delivery online. *Brain Explorer* presented our current understanding of the major structures of the brains of vertebrate animals, and was compiled with neuroscientists in the Department of Physiology, Anatomy and Genetics, with input from other academic specialists around the world.



Word Detective was based on the Department of Experimental Psychology's ReadOxford lexical decision research, which explores how our brains determine real words from phonetically plausible non-real words. The gallery installation signposted directly to ReadOxford to encourage visitors to sign up to the study.

Public programme

Through the 'Contemporary Science and Society' model, researchers at all levels; from principal investigators to early career academics, were able to leverage the museum's experience and skills in exhibition development, event programming and public engagement.

Through the public programme, people had the opportunity to hear from the researchers themselves. Neuroscientist Holly Bridge; who uses neuroimaging to understand the organisation of the visual system, led a touch tour of the exhibition for a blind and partially sighted group.

The museum set up a series of regular Saturday afternoon talks aimed at adults called Brain Spotlights which were delivered by early career researchers. Each researcher was given guidance on how to develop and deliver the session from the Public Engagement team in order to develop their public engagement skills.



Top image: Brain Explorer interactive screen
Bottom image: University of Oxford PhD student Lance Millar delivering a Brain Spotlight on the cortex

Neuro Nights

To coincide Mental Health Awareness Week and to celebrate Brain Diaries the museum and Oxford Neuroscience held NeuroNight, a late night extravaganza pulling in 50 researchers from across the University. Over 1000 people attended the night which included sampling Neuro cocktails whilst learning how alcohol affects the brain, talks on the science of sleep with the Sleep and Circadian Neuroscience Institute, knitting neurons, and practicing Laughing Yoga whilst finding out about serotonin and the brain.



There was live music from global community Sofar Sounds, alongside an explanation from some of Oxford's auditory neuroscientists about what is going on in the brain when we listen to music. The climax of the evening was a live performance in the centre court by award-winning beatboxer Reeps One, whose specialised pattern of brain activity has been revealed in scans by neuroscientists.

NeuroNight was just one of 42 events held across eight different locations in the Brain Diaries public events programme. The programme incorporated input from over 300 researchers from the University and beyond, which allowed for more diverse and ambitious events such as an evening of poetry and neuroscience looking at the fallibility of memory, and a funfair inspired event of a play, juggling, jazz and current research to launch the Wellcome Centre for Integrative Neuroimaging.



Top left image: Knitting neurons communally at NeuroNight
Top right image: Visitors taking part in laughing yoga at NeuroNight
Bottom left image: WINdow on the Brain event team photo

The Big Brain Competition

For the museum's Brain Diaries exhibition the team worked with the Wellcome Centre for Integrative Neuroimaging (WIN), to run a public competition asking what brain experiment people would conduct if they had access to the centre's state of the art MRI scanner.



Over 800 people submitted potential experiment ideas, with the majority of submissions by members of the public, directly corresponding to content from the Brain Diaries exhibition. The originator of the winning idea was invited to WIN to carry out his experiment to test how the brain identifies voices. A genuine two-way interaction between researchers and a public audience is a high aspiration for public engagement with research initiatives. The Big Brain Competition was a notable success, achieved through a powerful mixture of exhibition gallery engagement and promotion and content on social media.

Facebook played a large role in the communication and discussion of questions raised by the public, and the winning experiment was streamed live on the Facebook page of Oxford Sparks, the University's science public engagement unit. The strength of this partnership was illustrated by further engagement from researchers and members of the public. Researchers answered more big questions live on Facebook during Brain Awareness Week, adding a legacy of engagement to the Big Brain competition that enhanced the impact of the competition itself.



Evaluation (title tbc)

Brain Diaries exhibition and public programme sought to increase awareness of current neuroscience and understanding of the development of the healthy human brain over a typical lifespan. The exhibition aimed for visitors to come away with a feeling of having contributed to scientific research and for visitors to be aware that they were learning about current research. It was intended the exhibition would increase visitor interest in current neuroscience.

Evaluation of visitor experience suggested that overall, the Brain Diaries exhibition had a positive impact on visitors' perceptions of neuroscience research and brain development. The majority of respondents showed a positive change in their understandings and awareness of neuroscience research.

Feedback showed that Brain Diaries had a positive impact on respondents' understandings of the brain and its development. After the exhibition respondents were able to describe the brain in more complex, detailed and specific terms. They also gained a greater understanding that the brain changes throughout the life cycle and brain development affects teenage behaviour.

Overall, survey respondents' assessment of the Brain Diaries exhibition was positive. They found it to be informative, interesting and interactive, and they reported that it enabled them to gain new knowledge about the brain and neuroscience research.

Survey response results showed that over 50% of visitors had never visited the museum before, yet 77% of visitors to the exhibition agreed or strongly agreed that the museum is a place to come into contact with the latest scientific research. Furthermore 95% of exhibition visitors recognised that the exhibition featured research from scientists currently working in neuroscience.



With special thanks to researchers and staff from Oxford Neuroscience and the Medical Sciences Division at the University of Oxford.

<http://www.oum.ox.ac.uk/braindiaries>



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