MedicalXpress

New games added to The Great Brain Experiment

December 17 2013

Scientists at the Wellcome Trust Centre for Neuroimaging at UCL have found that by using a mobile app, it is possible to gather, on a large scale, the type of information that can traditionally only be gleaned from lab experiments.

Since launching last March, The Great Brain Experiment app (which was developed by the team of neuroscientists at the Centre) has received more than 50 000 downloads and been played more than 150 000 times. In comparison, a typical lab-based experiment would only involve one task being performed by a few dozen participants.

The team have found that all four of the games - which look at risk-taking, memory, impulsivity and how well the mind's eye can see - seem to replicate known experimental effects, and the results are being prepared for publication now. The Great Brain Experiment plans to build on this success with the addition of four new games, available to play from 21 November 2013.

Dr Rick Adams, from the Wellcome Trust Centre for Neuroimaging and one of the developers of The Great Brain Experiment, said: "The Great Brain Experiment has shown us that we can obtain high-quality, meaningful data through the use of an app. Now that the crowdsourcing method has been validated, we are adding new games to the app so that we can ask new questions, particularly of the kind that require the statistical power provided by large numbers of subjects."

The new games will look at decision making, performance under pressure, hearing ability and how we make predictions based on available information. As with the previous version, players will be entirely anonymous and their scores will be sent to the servers at UCL when they finish a game.

Players can compare their scores against others to see how they rank or share their scores on Facebook and Twitter. With an in-app messaging function, the researchers are also able to contact players with particularly interesting scores to potentially carry out further research.

Harriet Brown, a PhD student also at the centre, said: "We hope that the addition of the new games will allow us to reach new audiences, as well as bringing existing players back for more. This has the potential to be one of the largest neuroscience experiments ever conducted, marking a new development in citizen science and allowing us to ask some interesting questions to a wider population than we are usually able to reach, and without them having to travel to London to take part in our research."

Clare Matterson, Director of Medical Humanities and Engagement at the Wellcome Trust, said: "The Great Brain Experiment is a brilliant example of how crowdsourced or citizen science can make a real contribution to genuine research. The games mirror those that subjects might play in a lab while having a brain scan, and ask questions that are important to neuroscience, but they are also fun, original and rather addictive. I am very much looking forward to seeing some of the findings so far, as well as having even more games to play!"

The Great Brain Experiment has been jointly developed by Dr Rick Adams, Harriet Brown, Dr Robb Rutledge, Peter Smittenaar and Peter Zeidman at the Wellcome Trust Centre for Neuroimaging and programmed by Neil Millstone at White Bat Games. The new games in

the app were developed in collaboration with Dr Sven Bestmann, Dr Molly Crockett, Dr Tim Griffiths, Dr Laurence Hunt, Dr Sukhbinder Kumar, Dr Christoph Mathys, Dr Fiona McNab and Sundeep Teki. It is available as a free download on iPhone and Android systems via The Great Brain Experiment website.

Provided by Wellcome Trust