

Program of International Research Coordination Networks on Dimensions of Biodiversity Announced

The National Natural Science Foundation of China (NSFC) and the National Science Foundation (NSF) seek to encourage the development of international research coordination networks. Such networks would support interactions among Chinese and US scientists to develop new research directions or to advance new fields of research. Groups of investigators in China and the US may be supported to communicate and coordinate their research, training, and educational activities across disciplinary, organizational, institutional and geographic boundaries. NSFC will award up to 750 000 RMB to each approved project for a period of 5 years. The due date for Chinese applicants is April 5, 2011.

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Relations found between human memories and similar neural patterns

In a project funded by NSFC, Professor Xue Gui of Beijing Normal University and his research team discovered that memories stick to similar neural patterns. A paper published on *Science* in September 2010 reported this discovery. This paper was jointly written by Xue Gui and his colleague Q. Dong in Beijing and US collaborators G. Xue, Z. Lu at University of Southern California, C. Chen at University of California, Irvine, J. A. Mumford and R. A. Poldrack at University of Texas, Austin.

According to the article on *Science*, when someone is studying something or trying to keep it in mind, they generate various patterns of neural activity. Professor Xue Gui and his collaborators found out that similar patterns of neural activity during this memory-encoding period actually indicate a greater likelihood that the individual will recall that memory at a later date. Patterns of neural activity that appear different are less likely to be remembered, they say.

It is reported by *Science* that in order to make this discovery, Xue Gui and his colleagues monitored the brains of healthy human volunteers with fMRI while they performed a set of experiments. In one experiment, for example, the volunteers attempted to memorize 120 different faces of people, each one presented to them four separate times. After an hour, the volunteers were shown 240 faces-half of them learned and half of them new-and asked to identify which ones they had already seen in the previous task.

The research results answered a long-standing debate among the psychology community by demonstrating that memories are more likely to stick in an individual's mind when the same neural representations are reactivated, rather than when the patterns of activation appear variable.

The title of the article published on *Science* is "Greater Neural Pattern Similarity Across Repetitions is Associated with Better Memory".