A New Discovery in the Brain Mechanism
Visually Recognizing "Objects"

Dr. Keiji Tanaka of Laboratory for Cognitive Brain Mapping, Brain Science Institute and Professor Wang Gang of Department of Bioengineering, Faculty of Engineering, Kagoshima University, etc. have discovered the visual mechanism that the brain recognizes an object by just getting accustomed to its individual views. This is a new finding that overturns the traditional theory.

The brain recognizes an object as an identical one even though its projected image is different depending on the angle of observation. This function has been traditionally explained that different images of an object seen from different angles of observation are associated with one another in the brain when the different images are seen consecutively in terms of time as in the case of the object's rotation. However, the researchers have discovered, in monkeys, that different images of an object are naturally associated with one another by just getting accustomed to see individual images independently.

This finding shows that the visual system of the brain has specially developed for a three-dimensional object recognition. It is expected that the finding will be useful in elucidation of the whole brain mechanism recognizing objects visually.

The research results were published in the U.K. science journal "Nature Neuroscience" dated in November 23.

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