

Scientists proved that 'blindsight' is used in everyday life scenes

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The visual information from eyes is sent into the brain unconsciously even if you are not aware. One of examples of unconscious seeing is a phenomenon of "blindsight" [Subjects have no awareness, but their brains can see] in subjects with visual impairment, caused by the damage of a part of the brain called the visual cortex. Although it is already reported that the patients with damage in the visual cortex, who were not aware of seeing, can walk and avoid obstacles, it was not proved whether this was really blindsight. In this new study, the international collaborative research team including Assistant Professor Masatoshi Yoshida and Professor Tadashi Isa from The National Institute for Physiological Sciences, The National Institutes of Natural Sciences, Japan and Professor Laurent Itti from the University of Southern California demonstrated that blindsight in monkeys is available not only under the specific conditions of the laboratory, but also in everyday environments. This research result will appear in *Current Biology* as an electronic version on June 28, 2012.

The researchers previously showed blindsight in monkeys - monkeys with damage in the visual area of the brain are able to turn their eyes to 'unseen' [visual stimuli](#). At this time, the research team examined whether blindsight occurs not only under the specific conditions of the laboratory, but also in everyday environments. They recorded eye movements of the blindsight monkeys freely watching video clips of everyday life scenes. They found that the monkeys were able to turn their eyes to the prominent portions in term of motion, brightness or color. By looking at eye movements of the monkeys with visual

disability, we can understand where they pay attention to, although they do not see.

Assistant Professor YOSHIDA said, "this new finding indicates that blindsight can be used in everyday life of patients with hemianopia by cerebrovascular disorder. Then, there is the possibility that patients with visual impairment can recover their hidden visual function by rehabilitation." He also said "measurement of [eye movements](#) during viewing movie clips can be an efficient method to examine how well the patients can see unconsciously".

Provided by National Institute for Physiological Sciences

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