

Review

[Science](#), [Biology](#)



Article Review: Brain Areas Role Learning Identified " Brain Areas Role in Learning Identified" is an online article published in the journal Science by a team of researchers from the University of Maryland and the National Institute on Drug Abuse (NIDA). In this article, researchers have highlighted the role of one area of the brain termed as orbitofrontal cortex, which according to the article " is responsible for decisions made on the spur of the moment, not on experiences or habits". Researchers have emphasized on the fact that previously orbitofrontal cortex was consider responsible for both types of reactions including those based on experiences or habits and those, which are based on spur of the moment (Science Daily).

However, today it is asserted by researchers that orbitofrontal cortex plays a role in value-based decisions only. Here, it can be clearly observed that researchers have not provided any logical reason for them not to agree that orbitofrontal cortex can also contribute as the brain makes decisions based on prior experiences or habits. Researchers have simply stated that if the value is cached or pre-computed like experiences or habits, then orbitofrontal cortex is not needed to participate in the decision making process. But, how this change in the functioning or responsibility of the brain area took place has not been discussed in this study (Science Daily).

In this study, researchers have shown a unique side of learning behavior, which refers to a persons learning through unexpected outcomes. Generally it is believed that a person learns through his experiences; however, in the article researchers have highlighted another form of true learning, but they have not provided evidence to prove that a person can learn through unexpected outcomes (Science Daily).

Furthermore, a conflict in statements of researchers can be observed as initially they have agreed that orbitofrontal cortex has nothing to do with the decisions based on experiences or habits. But, on another occasion this article quotes statement of postdoctoral researcher Joshua Jones, who said that " Our research showed that damage to the orbitofrontal cortex may decrease a persons ability to use prior experience to make good decisions on the fly". Here, it can be observed that researchers have contradictory statements in the same article, which are undoubtedly confusing and difficult to understand (Science Daily).

Serious side-effects of drug addiction particularly use of cocaine have been highlighted in the article to indicate that drugs coerce the brain system and hijack decision making process. It is commendable that researchers have included such information in the article for readers to learn about the negative impact of drug addiction on the brains ability to make decisions (Science Daily).

Additionally, this article describes how brain works in healthy and unhealthy individuals, but it is noteworthy that throughout the entire study, they have not discussed distinguished functioning of orbitofrontal cortex in healthy and unhealthy people. Critically, compilation and presentation of incomplete facts can be considered as the article's major weakness.

Therefore, it could be concluded that the article selected explicitly shows certain weaknesses, but it is appreciable that researchers have come up with a unique topic and they have agreed upon the fact that much more is needed to research in the area regarding functioning of orbitofrontal cortex in the brain.

Works Cited

Science Daily. " Brain Areas Role in Learning Identified." 2012. sciencedaily.com. Web. 24 January 2013. .