

Article review on psychology

[Environment](#), [Animals](#)



Summary Article for PSY 140 2011

Summary review of Article: McTighe, S., M., Cowell, R. A., Winters, B. D., Bussey, T. J., & Saksida, L. M. (2010). Paradoxical false memory for objects after brain damage. *Science*, 330, 1408-1410.

This article captures previous research work relating to brain damage and the previous experiments that have been done in as far as memory and brain damage relationship are concerned (McTighe et al., 2010). Vann and Albasser (2011) while citing the works of McTighe et al. (2010) defines the neural process as the mechanism that allows humans and animals to have episodic memories which are set in such a way that people experience or remember past events throughout their lives; and also notes that this occurrence is yet to be completely comprehended (p. 1). (See also the works of Byrne, Becker and Burgers (2007, p. 340 - 375) and the works of Vann, Aggleton and Maguire (2009, p. 792-802) for more details). In their work, it was highlighted that the periphenal lesion rats have the inability to discriminate between old and new objects and this was thought to be caused by the inability by these rats to remember previously observed objects (Vann & Albasser, 2011, p. 1).

Many researches propose that poor memory can be attributed to the fact that those experiencing poor performance should be having brain damage caused in the near or distant events in their lives (McTighe et al., 2010, p. 1408, 1409). This brain damage causes information stored in the memory to become inaccessible or lost altogether (McTighe et al., 2010). McTighe et al. (2010) captures some intuitive assumptions that are made detailing that memory impairment can be attributed to incorrect interpretation of events

and past experiences as being novel.

In their experimental research findings, it is noted that while the brain has a tendency of treating otherwise novel experiences as if they are familiar, it does so happen that repeated experiences do at times get treated as novel which according to McTighe et al. (2010) is a paradoxical occurrence based on their animal model of memory recognition of a novel object. In trying to explain these occurrences, McTighe et al. (2010) argue that loss or damage to perirhinal cortex (Bussey, Muir & Aggleton, 1999), in animals makes the animals to be unable to comprehensively utilize the unique complex features that should otherwise be associated with that particular object. They continue to explain that what is left of the whole object being viewed is limited to the utilization of only the stimulus features which in most cases are shared across the board with likewise objects which in the end results to false recognition (McTighe et al., 2010).

In their research discussion on possible solution to this problem, McTighe et al. (2010) propose the use of visual-restrictive procedures, which have the ability to decrease the level of interference. In their support of this proposition, McTighe et al. (2010) add to this proposal by claiming that the patterns of data that is recorded in the memory can be understood by utilization of recent representational-hierarchical cognitive views.

References

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