Understanding Coordination of Eyes and Brain in a Frog: Draft

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Introduction

The primary aim of this project is to understand the coordination of activities between the eyes and brains of a frog. Essentially, this will be facilitated by considering the effect of the processes taking place between the periods when a frog sees an object and the processing of the image or object in the mind. According to Lettvin, et al. (1959), the mind and the brain coordinates using a language that is interpreted and organized as opposed to transferring a perfect replica of the distribution of light receptors. Remarkably, this marks an important contribution in Lettvin et al. article towards understanding the psychology of coordination of processes between the eyes and mind of a frog. Besides, the article will facilitate an understanding of the behavior of the frog in the food search and in escaping from its marauders.

Elements of interconnectedness between the eye and the mind

Notably, the search for food and escaping from predators marks some of the circumstances involving the processing of information between the eyes and the mind of a frog. Ideally, reading through the article by Lettvin et al. (1959), there are important insights that a person can derive concerning the cognitive psychology involving the eyes and the mind. In bringing this understanding into effect, Edward Titchener studied the process of light transformation from the eye to the mind and deduced three states of consciousness including affection, images, and sensations. Titchener argued that sensations entail what is being seen by the eyes and images being the reflection of sensations in the mind. Accordingly, these two states of consciousness are crucial in understanding cognitive psychology in a frog concerning information processing between the eyes and the mind.

Methodology

In the context of this project, the use of Dowben and Rose’s platinum will enhance an understanding of the relationship between the eyes and mind of a frog. The experiment will entail using a small flap of bone behind the brain or eye-opening so that the superior colliculus and the optic nerve can remain exposed to light. The next step in the experiment will entail covering the frog with a piece of cloth in a cork platform. An aluminum hemisphere will be brought close to the frog’s eyes and a phototube will be used to observe the image. Through this experiment, one can understand the rationale behind the connectionist theory discussed by Wageman et al. (2012) whereby they argue that the processing ability depends on multiple elements that are interconnected together to make a complex whole.

Relevance of the experiment

Similarly, this is the same idea embraced by Plaut et al. (2003) in their article whereby they claim that simple processing ability helps in sending signals to other parts of the body. By this, Plaut et al. (2003) try to suggest that it is the basic features that help in understanding the complex system of a living thing. Case in point, by understanding the experiment of the cognitive processing ability between the eyes and minds of the frog, there is no doubt that an individual understands the complex whole between the eye-mind processes. The current project will be of great relevance because it represents one of the suggestions made a long time ago by psychologists concerning the interconnectedness of the eye and the mind, or between what is seen and what is processed in the mind (Dumit et al., 2014). Besides, it helps in understanding how the frog or people respond to various external stimuli as stipulated by Butler et al. (2006) in their article. Overall, cognitive psychology as displayed by the frog experiment will create a basis for understanding the relationship between the eyes and mind, which is part of understanding cognitive psychology in animals.

References

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