

ARTICLE REVIEW

(By Name)

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## Article Review

According to Hutchinson and Barrett (2019), advanced neuroscience has produced predictive processes in the brain. Therefore, researchers are able to study and map the relationship between the human mind and the brain. In their article, the authors suggest that the neurobiological paradigm can guide psychological research. They first consider vital factors involved in predictive processing and then discuss ways in which psychological research could be made stronger. They believe that the mind is a computational phase in the brain that forms a continuous process of neural activity that regulates the body.

The article findings state that dual processes in the brain show that there is a single-underlying difference between how forecast occurs and the processing of the error in the brain. In the case of controlled and automatic processing, a participant's brain was found that it launched several predictive signals to indicate that the brain was undergoing a series of rapid automated processes. The effects of learning and practice as seen during the experiments might suggest that the brain is successfully updating its model. The brain also predicts an error and corrects it when a prepotent is inhibited (Hutchinson and Barrett, 2019, p 287). Updating the model or error is fixing the problem the brain has identified. The authors also found out that memory is an ingredient of psychological processes. Forecasts based on the past events affect perceptual processes in the brain's visual cortex.

The predictive model also reveals that affect is involved in the psychological process, even if it does not involve non-emotional states. If the internal brain model includes allostasis and energies, the sensory consequences of the predictions are also part of the internal model. As argued and supported, a number of professors, valance, and arousal are believed to be part of the emotional properties. Therefore, cognitive processes and emotions are always under conflict

when controlling the behavior of an individual (Hutchinson and Barrett, 2019, p 287). The implications of the experiment, therefore suggest several implications and speculations. First, there are many names and concepts given to the different psychological processes that are formed from distinct functions such as memory, emotions, and perception. What neuroscientists now understand is that all processes associated with the psychological phenomena occur from a smaller set of building blocks used in computation that is at the center of the predictive model. The findings also reflect that optimizing the predictive process is best understood when the model is implemented as the species level of neural development. Brains of different organisms in the animal kingdom work through prediction and correction of errors. The temporal and regular activities and happenings of the environment might translate or reflect how the brain evolves. For instance, the brain does not always rely on past processes and events. Instead, it is significantly affected by the happenings of the environment.

The brain has a multi-functional role in relation to psychological processes in humans. On one hand, the brain is in a constant process of imposing predictability on different time-scales. Current research even shows that there are temporary dependent processes that move beyond discrete individual events when relating memories that occurred in different time-scales. On the other hand, energies have a significant effect in stimulating and regulating mental functions in the brain. Taking stimulants, sleeping, ingesting sugar, and hydration influences how the brain will respond to a corresponding task (Nehlig, 2016). Even if the effect of the external energies is minute, the impact on the stability of the brain and mental processes is robust.

References

Hutchinson, J.B. and Barrett, L.F., 2019. The power of predictions: An emerging paradigm for psychological research. *Current Directions in Psychological Science*, p.0963721419831992.

Nehlig, A., 2016. Effects of coffee/caffeine on brain health and disease: What should I tell my patients?. *Practical neurology*, 16(2), pp.89-95.