

COGNITIVE LEVEL OF ANALYSIS

WITH REFERENCE TO ONE RESEARCH STUDY, EXPLAIN HOW ONE BIOLOGICAL FACTOR MAY AFFECT ONE COGNITIVE PROCESS

Biological factors, such as hormones, can affect the cognitive process of memory. Hormones are chemical messengers secreted by cell or gland. These messengers are sent out from one part of the body to affect cells in other parts of the body. Hormones are often released directly into the bloodstream.

One study done on this was by Newcomer. Newcomer wanted to test the role of glucocorticoids on memory. Glucocorticoids are chemicals that can stop inflammation. As Meany had found, exposure to high levels of glucocorticoids lead to a decrease in memory in rats and atrophy of the hippocampus. Newcomer wanted to see if this was also true in human beings. He wanted to test the effect of cortisol, a stress hormone secreted by the adrenal glands, on verbal declarative memory. The hippocampus plays the role of transferring declarative memories from STM to LTM. Cortisol appears to lead to hippocampal cell death.

Newcomer ran a double-blind test in which participants either were given a high dose of cortisol (similar to a high level of stress), a low dose of cortisol or a placebo over a period of four days. The participants were asked to read a piece of prose. After the four days, they were asked to recall the data from the prose. Newcomer found that those who had been given high levels of cortisol had the worst recall of the text. When they stopped taking the pills, their memory levels returned to normal. Newcomer concluded that cortisol has a negative effect on the transfer and retrieval of STM to LTM.

MARK AWARDED

Clearly at the very top of this markband range: **8**

COMMENT

A very strong response. The role of cortisol is outlined and the study clearly demonstrates the effect of cortisol on memory.

SOCIO-CULTURAL LEVEL OF ANALYSIS

DESCRIBE ONE THEORY OF HOW STEREOTYPES ARE FORMED

One theory that explains how stereotypes are formed is through either experience or society and then confirmation bias. Stereotypes are schema that people have of other people. These usually form from experiencing a certain event multiple times or from what society tells you to think. One study on the formation of stereotypes was done by Rogers & Frantz. They aimed to see if the amount of time that somebody was in Rhodesia (today Zimbabwe) would affect their stereotypes of the locals. They studied European settlers in Rhodesia. They gave participants a test where multiple segregation and discrimination laws were listed, showing

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how much better the whites were treated in Rhodesia than the blacks. They then asked them how much they wanted things to either stay the same or change. The results were that the longer somebody had lived in Rhodesia, the less they wanted things to change and the more they liked the status quo. This shows that the longer someone had been living there, the higher amount of the stereotypes he had towards the locals.

Those that wanted the change the most were the ones that had been there the least amount of time. This indicates that stereotypes form over time. When new European settlers came to Rhodesia they had no idea what to think and had no stereotypes toward the Africans. Because of this, they looked to others to see what to think. This is called informational social influence. They conformed to the ideas and stereotypes already existing in the White European community. They did this in order to connect to their "in-group." Once learning these stereotypes, they then experience confirmation bias. This is when they only see and remember things that fit into the stereotype or schema that they now had of the locals and ignored the things that went against these stereotypes. This is how their stereotypes got stronger. One theory of the formation of stereotypes is that people look to others they consider their in-group to see what to think. Then through confirmation bias these stereotypes increase in intensity. The more time the Europeans had been in Rhodesia, the more they felt ok with discrimination against the locals and the stronger their stereotypes were.

MARK AWARDED

Clearly at the very top of this markband range: **8**

COMMENT

A very clear description of the process by which stereotypes may be formed. Good reference to a study to support claims.