

Script JC

Name \_\_\_\_\_

This is a paper Ia that was done by one of my students last year. She earned only a 6 on this paper. Can you tell why?

Lastly, please note that there are errors in this paper, but she has done an excellent job.

### **Biological Perspective**

1. Explain why a reductionist approach adopted by many biological psychologists is controversial. *[8 marks]*

Reductionism defines behaviour by breaking it down into its simplest components; in the case of the biological perspective, this means physiological components: neurotransmitters, genetics, brain structure, and hormones. There is much controversy in this approach, as demonstrated by studies of sexuality.

Simon LeVay opened the reductionist debate on sexuality with his study of homosexual men. He found that the INAH3 nuclei of the hypothalamus was larger in homosexual men than in heterosexual men. Later, twin studies carried out by Bailey and Pillard argued that there is a genetic basis to sexuality.

The attempt to provide a reductionist explanation of behaviour is limited to scientific and correlation studies. In both of the above studies, correlations were used. Correlation, however, is not causation. Though there appears to be some indication that genetic factors play a role in sexuality, the fact that twins were used on a self-reporting basis means that the sample itself was rather flawed. The inability of the researchers to isolate environmental factors also leads one to wonder whether the conclusions are premature. Though the twins in Bailey and Pillard's study have identical genes, there is no way to conclusively show that the environment played no role in the development of their sexuality. In the case of LeVay's original research, the fact that the men who were studied were deceased, makes it difficult to establish whether the atypical nuclei were actually the result of sexuality or the result of the disease/cause of death.

The reductionist approach has been most successful in the treatment of diseases like schizophrenia and Parkinson's Disease, where an excess or deficit of the neurotransmitter dopamine has been identified as a cause of the disease. In spite of this cause and effect relationship, however, not all schizophrenics are successfully treated by dopamine moderation. This may indicate that not all behaviour has a single cause.

The reductionist reliance on the scientific method, however, does have advantages. Because of its rigorous manipulation of variables and standardization of procedure, the research tends to have a high level of reliability. Unlike the more holistic approach of the

psychodynamic or humanist approaches, research can be replicated and hypotheses tested. The results of such research has also led to a high degree of predictability.

That being said, however, there is some question about the ecological validity of such research, and whether the isolation of variables in a laboratory is an adequate assessment of human behaviour. There is also some question as to whether biologists exaggerate the power of our genes to explain complex human behaviours.

### **Cognitive Perspective**

2. (a) With reference to **one** research study, describe the main features of **one** method of investigation used by cognitive psychologists. *[4 marks]*  
  
(b) Outline **one** strength and **one** limitation of this method. *[4 marks]*

a, One of the main methods employed by cognitive psychologists is the observation. In these kinds of studies, it is not possible to determine a cause-effect relationship because the researcher does not control the variables. It might be possible to find correlations between observed variables, but this does not indicate the direction of a cause.

Essentially, an observation requires a researcher to enter a situation where some behaviour of interest is likely to take place, to watch the nature and frequency with which particular forms of behaviour occur, and to make a record of what is observed. Data collected may be both quantitative and qualitative in nature.

**Bandura** used observation as a technique in his famous Bashing Bobo study, he used controlled observations to record amounts of aggression shown by children after they had watched an adult model being rewarded, unrewarded or punished for aggression. Each child was then observed in an identical play setting with an identical doll. In such a setting there is not the strict control over the environment as in the experimental setting. Many researchers find the experiment setting too artificial and they argue that behaviour studied out of context is meaningless.

b. One of the key strengths of the observational method is that it is more likely to have ecological validity. Unlike the artificial nature of an experiment, where though psychological reality may be achieved, but in order to do so, mundane reality has been abandoned (Aronson); the observation usually is more like field research. One of the limitations, however, is its reliability. In order for observations like Bandura's, to be reliable, a clear operational definition for aggression must be set, and then the researchers must be trained in order to guarantee inter-rater reliability. This means that it is often difficult to replicate the research outside of the original study.

### **Learning Perspective**

3. Identify and evaluate **one** contribution of the learning perspective to the scientific study of behaviour. *[8 marks]*

The learning perspective has contributed to the scientific study of behaviour by arguing that animals are key to understanding human behaviour. Watson was among the early researcher who argued that what is true for animals is true for humans – it is only a question of degree.

Early learning theorists believed that the only approach to psychology that was acceptable was the application of the scientific method. Studies should only be carried out which yield observable results. Ivan Pavlov was the first to study *classical conditioning* in dogs. He argued that this stimulus-response reaction would also be true in other organisms, including animals. Other theorists like Thorndike and Skinner made extensive use of pigeons, cats, and mice in order to study how organisms learn from their environment. Since they were not interested in the cognitive processes, communication with the participants in their research was unnecessary.

The learning perspective was able to carry out a lot of research that would have been considered unethical if it were carried out on humans – in fact, it is questionable whether their research on animals was ethical by today's standards. Many theorists, especially the Humanistic theorists, argue that we cannot learn about humans by studying animals. They argue that each of us is unique and is working to self-actualization – they believe that this is not true in animals.

Lastly, theorists like Kohler and Harlow showed that the primates had a higher level of thinking than did mice or lower organisms. Kohler's research with Sultan on insight learning showed that perhaps learning was more complex in monkeys than once thought. Skinner believed that animals had no emotions – and he scoffed at anyone who tried to attribute human characteristics to animals – and yet animals were the primary basis for his research which he applied to humans. Harlow's classic study on attachment in rhesus monkeys indicates that perhaps chimps were more emotionally complex than once believed.