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| **Learning Table 3: Animal Studies of Attachment** | |
| **AO1** | **AO3** |
| **Lorenz (1935) Imprinting**  **Aim**: Lorenz was an ethologist (a scientist who studies animal behaviour) who set up a classic experiment to investigate the phenomenon of imprinting.  **Procedure**: Lorenz took a clutch of gosling eggs and divided them into two groups. One group were left with their natural mother while the other group were placed in an incubator. When the incubator eggs hatched the first living things they saw was Lorenz and they soon started following him around. To test the effect of imprinting, Lorenz marked to two groups to distinguish them and placed them altogether.  **Findings**: Lorenz found that the goslings quickly divided themselves up, one following their natural mother and the other group following Lorenz. Lorenz’s brood showed no recognition of their natural mother. Lorenz also noted that this process is restricted to a critical period. If an animal is not exposed to a moving object within the first two days of its life it will not imprint. Imprinting is a process similar to attachment in that it binds a young animal to its caregiver in a special relationship.  **Conclusions**: Interestingly, the effects of imprinting are long lasting and irreversible. Early imprinting can affect later mate preference, called sexual imprinting. Animals (especially birds) will choose to mate with the same kind of object upon which they were imprinted. | **Supporting Evidence for Imprinting**  One strength of Lorenz’s research into imprinting is that it has evidence to support its assumptions.  For example, **Guilton** (1966) demonstrated that leghorn chickens exposed to yellow rubber gloves for feeding them during the first few weeks became imprinted on the gloves.  This is a strength because it supports the view that young animals are not born with a predisposition to imprint on a specific type of object but probably on any moving things that is present during the critical window of development.  As a consequence this strengthens the overall credibility of Lorenz’s research into imprinting.  **Generalisability to Humans**  One weakness of Lorenz’s research into imprinting is that we cannot generalise his findings about imprinting to humans.  This is because although some of his findings have influenced our understanding of human development, it seems that the mammalian attachment system is very different to that of birds.  For example, mammalian mothers show more emotional attachment to young than do birds and mammals may be able to form attachments at any time, albeit less easily than in infancy.  As a consequence, we cannot extrapolate the findings from Lorenz’s research to humans because they are too fundamentally different. This casts doubt over the explanatory power of Lorenz’s research. |
| **Harlow’s (1959) Research on Monkeys**  **Aim**: Harlow wanted to investigate whether feeding or comfort was important in the development of attachment.  **Procedure**: Harlow created two wire mothers each with a different head. One wire mother additionally was wrapped in soft cloth. 8 infant rhesus monkeys were studied for a period of 165 days. 4 of the monkeys were exposed to a milk bottle that was on the cloth wrapped mother and the other 4 monkeys were exposed to a milk bottle that was on the wire monkey. Measurements were taken on the amount of time each infant spent with the two different ‘mothers’. Observations were also made of the infants’ responses when frightened by a mechanical teddy bear.  **Findings**: All 8 monkeys spent most of their time with the cloth-covered mother whether or not this mother had the feeding bottle or not. Those monkeys who fed from the wire mother only spent a short amount of time getting milk and then returned to the cloth-covered mother. When frightened, all monkeys clinged to the cloth-covered mother. When playing with new objects the monkeys often kept one foot on the cloth-covered mother for reassurance.  **Conclusions**: These findings suggest that infants do not develop an attachment to the person who feeds them but to the person offering them comfort.  As the monkeys grew up the effects of their rearing lasted. The monkeys exposed to the wire mothers developed more severe problems. Both were socially abnormal, they froze or fled when approached by other monkeys. They also did not display normal mating behaviour and did not cradle their own babies. Harlow also reported a critical period for attachment of 90 days. | **Ethical Issues**  One weakness of Harlow’s (1959) research into monkey’s attachment is that it breached the ethical issue protection from Psychological harm.  For example, the monkeys were taken from their natural mothers very soon after birth and suffered a great deal of distress being reared in cages and social isolation. This is an issue because Rhesus monkeys are considered similar enough to humans to be able to generalise the results so presumably the suffering was also human-like.  However, a cost-benefit analysis of this research would have taken place. Although the monkeys did suffer distress, it can be said that Harlow’s research is very valuable to the scientific community. Harlow showed that attachment does not develop as the result of being fed by the mother, but as a result of contact comfort. Harlow also showed us the importance of early healthy attachments in later social development. Both of these findings have informed child-rearing practices across the world.  As a consequence, it can be said that this research does break ethical guidelines but the costs benefits of the findings outweigh the costs.  **Practical Value**  One strength of the Harlow’s (1959) research into attachment is that there is a great deal of practical application from its findings.  For example, Howe (1998) reports that Harlow’s research has helped social workers understand risk factors in child neglect and abuse and so intervene to prevent it. In addition, it has influenced the care of captive monkeys, we now understand the importance of proper attachment figures for baby monkeys in zoos and also breeding programmes in the wild.  This is a strength because it demonstrates how Harlow’s research has influenced society.  As a consequence this increases the credibility of Harlow’s research into the importance of comfort in attachment. |