

From *Zoo Guide*, Zoological Society of London

The Rhinoceros

The rhino's skin is thick and tough,
And yet this skin is soft enough
That baby rhinos always sense,
A love enormous and intense.



Figure 14. Typical response to cloth mother surrogate in fear test.

Social Development

Since contact comfort is a part of Social development, I've decided to include other three major theories of social development. Social development pertains to how individuals interact with others and obtain a self image.

Attachment

This is the first step in social development. There are four dominant theories of attachment:

Freud's Theory

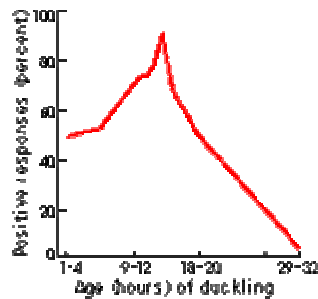
According to Freud, attachment is derived from **bodily needs**. That is, a baby becomes attached to its mother because she satisfies its hunger. However, this theory does not answer the question of why babies (for example) find other people so interesting.

Bowlby's Theory

Bowlby's two-fold theory is perhaps the dominant one today. First is an infant's innate **need for contact**. This feeling is enhanced by a **fear of the unfamiliar**, which is a primary source of an infant's anxiety.

Lorenz's Theory

Lorenz came up with the notion of a social critical period, or **imprinting**, in infants. For example, the duck following behind its mother is doing so because her behavior was present during the critical period. On the other hand, if Lorenz himself had been there, the duck would be following him around. This critical period, however, is rather short, lasting only for fifteen hours to one day after birth. Below is a graph which illustrates the amount of imprinting a duckling displays, depending upon the age at which it is exposed to a duck model to which the duckling could become attached.



Harlow's Theory

Harlow argued that attachment comes from a need for **contact comfort**. What this means is that babies require close attention and holding to thrive. Although it has been shown that infants who are held and snuggled do better than ones that are not, whether or not this is a basis for attachment is unclear.

Harlow's Rhesus Monkeys

The Freudian concept of early childhood affecting later development was studied in depth by Harlow, who separated baby rhesus monkeys from their mothers anywhere from three months to a year following their birth and put in separate cages.

In the cage are two "mothers," a soft terry cloth mother and a austere wire mother. Some of the monkeys were fed from the cloth mother and others from the wire mother. If what Freud said was true, we would expect the infant monkeys to show attachment to the wire mother if that's where the food is, even if it less comfortable. However, this was not the case. Even when the wire mother was the nourishment source, the baby still clung to the more comfortable terry cloth mother. Even if the infant monkeys are fed by the wire mother, they wind up spending more and more time with the cloth mother over time, indicating a need for contact comfort. Lastly, Harlow introduced unfamiliar items into the cage with the baby monkeys. Responding to a fear of the unusual, the monkey would quickly head for the cloth mother, to which it is attached.

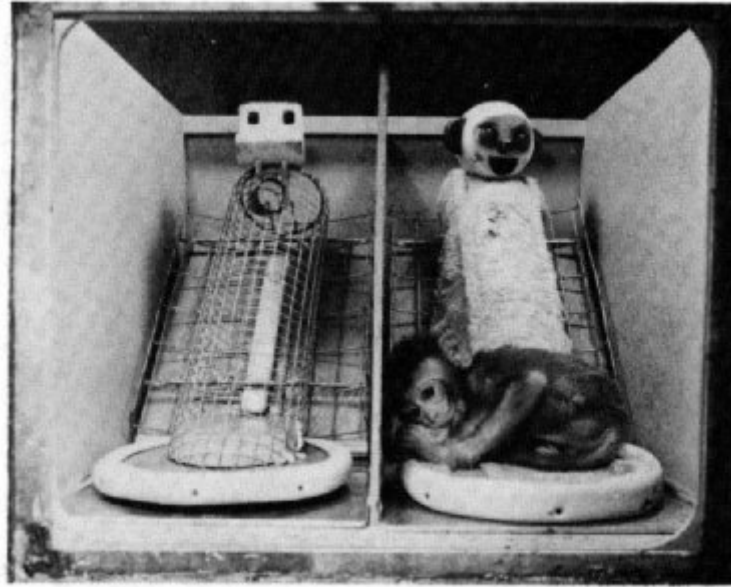


Figure 4. Wire and cloth mother surrogates.

The Effects of Isolation

Harlow found that if the isolate monkeys were returned back into a normal developmental environment within about two months, they would show no significant long-term difference. However, if the time of isolation was increased to three months or more, serious consequences were observed, especially later on. Many of these monkeys became apathetic, withdrawn, even hostile. Some bit themselves.

The female isolates were socially incapable of being mothers. After having to be artificially inseminated, these mothers often wound up killing their babies either through negligence or "deliberately."

Is there a way to rehabilitate these monkeys? Actually, it is possible to rehabilitate these monkeys through a form of therapy--by placing a juvenile isolate monkey with a younger normal monkey. The younger monkey will act as a quasi-therapist. However, it is key that the normal monkey is younger and not yet socialized. What winds up happening is that the younger monkey, who does not know to leave the isolate alone, insists on playing for so long that the isolate often recovers very well. This, in turn, demonstrates how **interaction**, in addition to contact comfort, is important in social development.