

## Harlow's Research

### Part A.

Read the following information about Harry Harlow's research on attachment in rhesus monkeys.

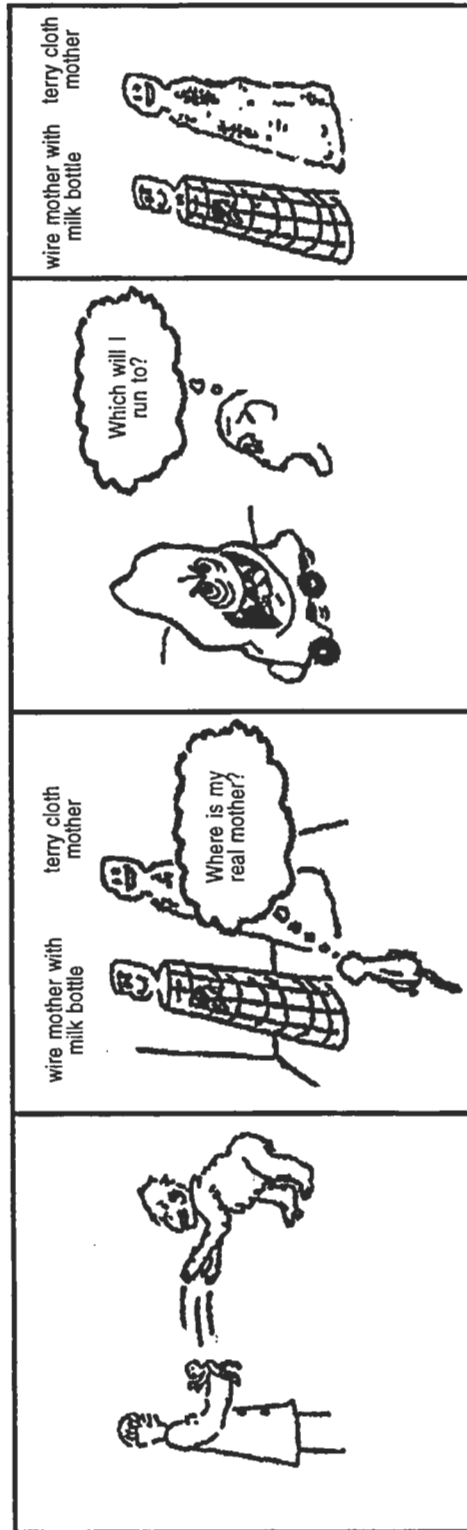
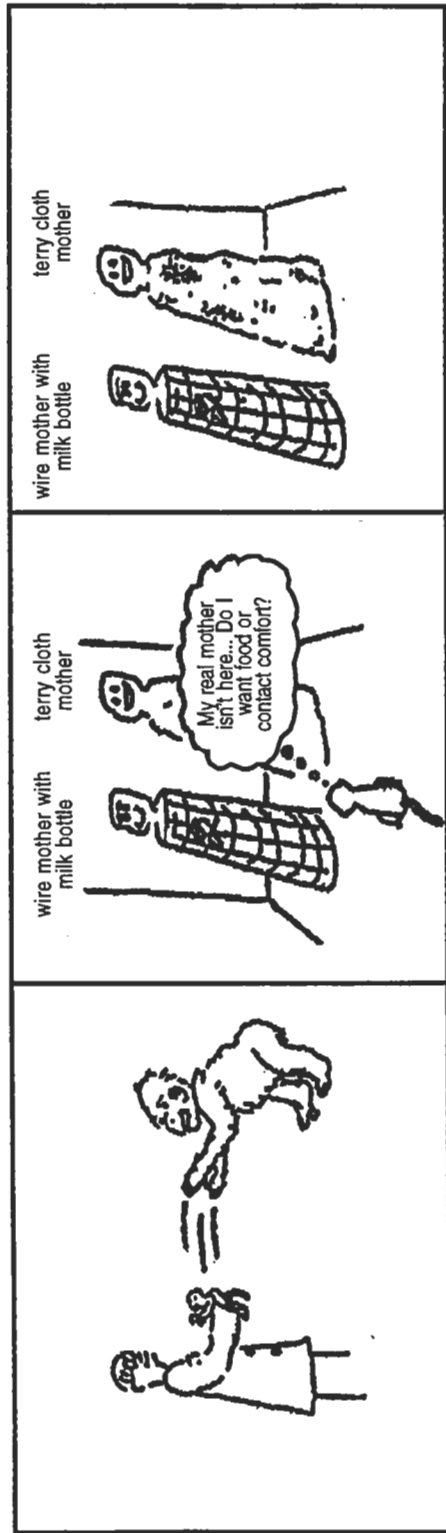
Harry F. Harlow has become famous for his research about the social and emotional effects of isolation on infant rhesus monkeys. Perhaps the most famous series of experiments involved separation of the infant monkeys from their mothers, then placing them with *surrogate*, or substitute, mothers. These surrogate mothers were created from wire mesh similar to that used to make a simple cage. The wire was formed into tube shapes for the bodies; then wooden heads were attached to the top and looked slightly different on each mother. Also, one artificial mother was wrapped with soft terry cloth. The other was left with a plain, hard wire mesh body but had a bottle with a nipple attached to it so that an infant monkey could nurse.

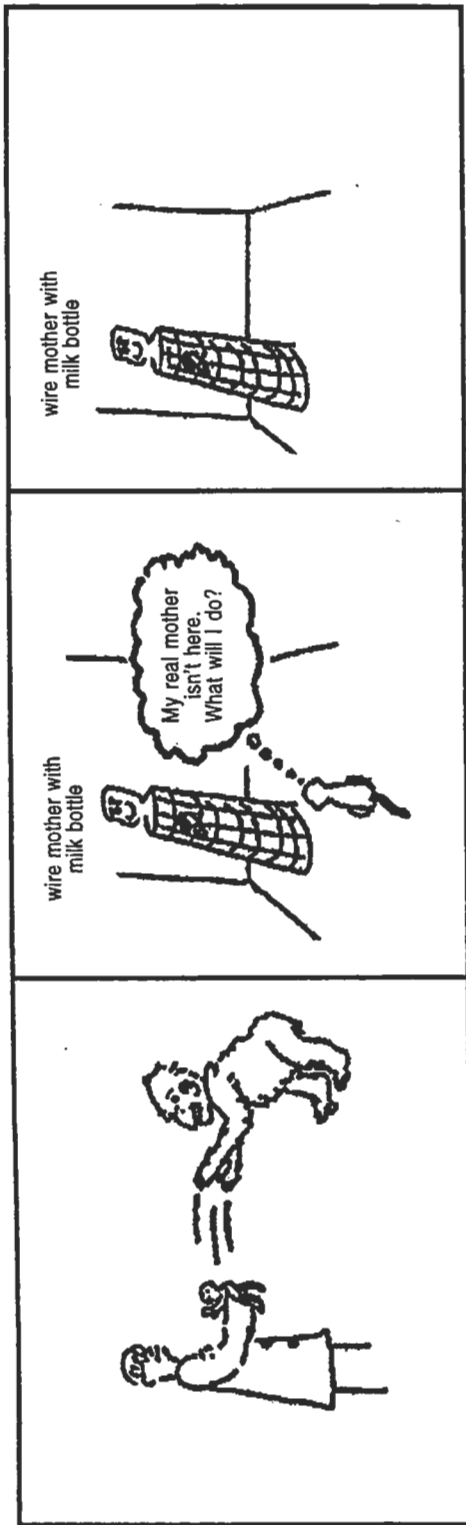
In one of the experiments with these surrogate mothers, infant monkeys were taken away from their real mothers as soon as they were born and placed in a room with the terry cloth surrogate mother. These monkeys were afraid without their real mothers but soon began to hold on to the terry cloth mothers until they felt comfortable and willing to explore the room. Infant monkeys who were placed in the room with the plain wire mother simply curled themselves into a ball in the corner of the room and screeched, avoiding the surrogate mother altogether.

When placed in the room with both surrogate mothers present, the infant monkeys overwhelmingly went to the terry cloth mother rather than to the surrogate mother that could feed them. Also, when something fearful was placed in the room, the infant monkeys overwhelmingly preferred the terry cloth mother.

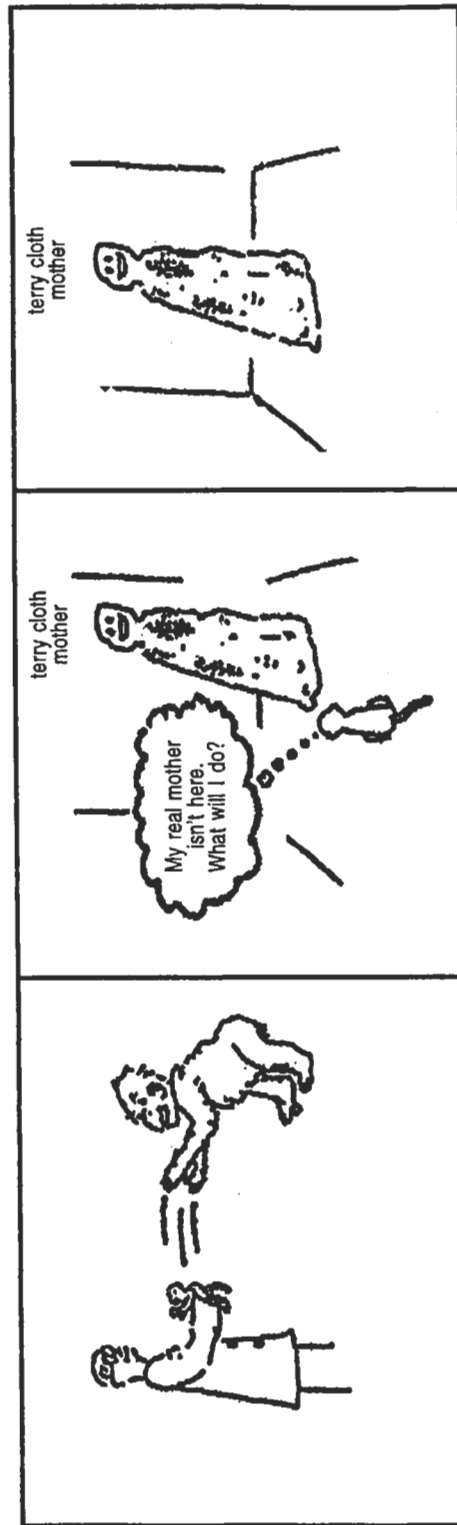
### Part B.

Examine the cartoon strips on pages 2 and 3 of this handout. Each refers to one of Harlow's experiments described above. However, the final frame of each strip is incomplete. You must draw the infant rhesus monkey into the last square of each cartoon so that each panel accurately reflects Harlow's research studies. For example, on the third frame of the first cartoon, where should the infant monkey be drawn—holding on to the wire mesh surrogate mother or the terry cloth surrogate mother?





3.



4.

## Studying Harlow's Studies

### Part A.

Read the following information about Harry Harlow's research on attachment in rhesus monkeys.

Harry Harlow experimented with some newborn rhesus monkeys by immediately placing them in isolation for months at a time. Some were kept alone for three months, some for six months, and others for an entire year. Then they were placed with other monkeys while Harlow observed the effect of the isolation on their behavior. The longer the infants were kept in isolation, the more they developed serious emotional and social problems. Those kept in isolation for three months seemed generally able to recover once they were allowed to be with other monkeys again. Those kept alone for six months, once placed with other monkeys, showed fear, hostility, and violent behavior. They also displayed symptoms of psychotic disorders, such as those seen in schizophrenic patients (rocking, huddling in a corner for long periods of time, etc.)

Monkeys that had been kept isolated for a year showed the most serious psychological problems. Aside from their inability to interact appropriately with other monkeys after the year was over, they also displayed horrifying behavior toward any infants of their own. Some monkeys bit their babies, pushed them into walls, chewed off the hands and feet of their infants, or crushed them to death. The abuse shown by these monkeys caused many people to consider the possibility that the inability to form attachments when young may relate to child abuse behaviors in human beings.

### Part B.

What should parents do immediately after their baby is born and through the first months and years of life to ensure emotional health? Write a paragraph or more of advice to new parents. Base your advice on your understanding of Harlow's research.