

PSYCHOLOGY

Good Monkey Babies

Nothing Helpless About These Infants—Born With Their Eyes Open, Learn Quickly and Don't Worry Mother

By MARJORIE VAN de WATER

THE MONKEY baby is no blind helpless weakling. He comes into the world with eyes open, active and grasping for his food. From the very moment of his nativity he is busy reaching and seizing and biting things—indeed, he even assists in the process of bringing himself into the world.

This ability to grasp and move himself about is a most fortunate possession for the young monkey, for the mother is urged by no maternal instinct to put her infant to the breast. She does clasp it to examine and lick it, but does so as awkwardly as a ten-year-old boy carries a doll. It is up to the infant to turn himself toward her breast. If he is too weak to do so, he just starves. In the wild state, the baby has another important reason for hanging on to the mother; the nursery in monkeyland is located in the tree-tops. A fall would mean almost certain death.

These facts regarding the behavior of monkeys in earliest infancy are revealed in a report by Dr. O. L. Tinklepaugh of the Laboratories of Comparative Psychobiology, Yale University, and Dr. Carl G. Hartman, to the *Journal of Genetic Psychology*. Their observations were made at the Carnegie Laboratory of Embryology, Baltimore, where Dr. Hartman has built up a colony of one hundred rhesus monkeys. Altogether 38 births have taken place in this colony, of which 14 have been observed scientifically and five filmed. Eleven rhesus monkey mothers gave birth to young within one period of six weeks.

Like Man

Psychologists are greatly interested in the behavior of the infra-human primates, because it is so much like that of man, but in the past very few young monkeys have so far been observed from the time of birth. This has been due to a lack of knowledge concerning the breeding habits of these wild creatures. It is now possible to anticipate the time of birth and prepare to make scientific

observations from the very earliest moment of the animal's life.

Activity! This was the first and most conspicuous thing noted about the infant monkey's behavior. The eyes blink. The arms reach out and the hands seize hold of any object within reach. The feet grasp. And meanwhile the baby gives shrill, piping sounds.

If, in the course of its mother's handling, the infant is turned topsy-turvy, it will struggle violently to right itself. If it is left momentarily on the floor, it will immediately stand up, perhaps on all fours, and attempt to walk—knees and arms all atremble from weakness and lack of coordination.

If held suspended in the air out of reach of firm objects to cling to, the baby will grasp his own hands and feet, one in the other, or seize his own body.

Never Put to Breast

When the mother's attention is directed away from the baby to another interest, she commonly holds it on one arm. It is when this first happens that the baby does the thing which is most important to his survival, the psychologists report. He turns his body about until his face is toward the mother. The mother never puts the baby to the breast, they found. It is the infant who determines when and how he shall nurse.

From the second day, the young monkey has a tendency to climb upward when frightened. This is not, however, due to any instinct associated with his native home in the tree-tops, the psychologists report. Rather it is because the pulling muscles of the limbs are more highly developed and stronger than the pushing muscles. The young can support more than double their own weight by one flexed arm, though they stand or walk only with difficulty. Nina, one of the monkeys studied, on her third day clung to the experimenter's finger and sustained the weight of her own body and also that of eighteen-day-old Joshua who was in turn grasping Nina's legs.

The question of whether the monkey

mothers are guided by a "maternal instinct" in their behavior toward the young is left in some doubt by the work of the experimenter. Much of the maternal behavior is subject to mechanistic explanation, they conclude. The fact that the mothers permit the young to suckle is not necessarily evidence of maternal instinct, they say, for it may be assumed that all mammalian mothers derive a certain pleasure from this act.

The mother does cling to and, if necessary, fight for the possession of her baby. But the monkey Psyche behaved in exactly the same manner with the white rat which she "adopted" and carried about with her for months.

"On the other hand, in the face of this contradictory evidence, it must be pointed out that there is much behavior in the complex mother-baby relationship which we are unable to explain in so simple and mechanistic a manner," the experimenters state. "Some of the mothers fondle and pet their babies and seem to demonstrate actual pride in exhibiting them. The young are protected, not merely from escape or from being taken away, as would be the case if they were merely a possession, but also from injury and molestation."

Individual mothers differ as much in their attitudes toward their children as do human mothers. The ever-solicitous human mamma who keeps her young Percy in curls and protects him from the rough boys, and also the matter-of-fact and stern disciplinarian, have their

● DANGER SIGNALS IN STOMACH CANCER

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by

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This address will be given
Friday, May 12, at 1:45
P. M., E. S. T., over the
Columbia Broadcasting Sys-
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nent scientist speaks over the
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parallels among the monkey mothers.

Two families furnishing such a contrast were given special study by the psychologists. One mother, known as No. 49, was unusually kind and affectionate to her baby, Nina; the other, No. 2, treated her child Pola as though she had been reading the ultra-modern warnings to mothers against the rocking, kissing and petting of babies.

"Almost from the first, No. 49 was the slave of her baby. If it squirmed in discomfort because of her position, she moved about until the baby was quieted," the psychologists report.

Disciplinarian

"No. 2, under the same conditions, would withstand the irritation of Pola for a time and then brusquely slap the infant or shove it over into a new position. The behavior of the two mothers was typical in various other circumstances which arose.

"By the first of May both of the babies were beginning to explore the cage independently. Nina would walk a few inches away from her mother and then suddenly turn and rush back to her. On one occasion the four animals were on top of their quarters' shed. Nina walked toward the edge of the building. No. 49 rushed over, seized her, and carried her back to a corner.

"Pola, in the course of her explorations, approached the same point. No. 2 looked on, but made no move to stop her."

All monkey mothers strongly resent the desire of their children to obtain food elsewhere than at the breast. The contrasting ways in which these two mothers treated this type of "naughtiness" in the babies was typical of their attitudes toward the children.

"When food was placed in the cage, the two mothers descended from the top of the quarters' room, carrying their babies. Pola persisted in getting down from her mother and sampling the food. The mother objected and drew the baby to her breast. The baby again descended and was again drawn back, but this time more forcibly. After this behavior had been repeated several times and Pola was again about to drop down from her mother, No. 2 clasped the infant tightly to her with one hand, and then pitched violently up and down, much as a horse does when trying to dislodge its rider. Pola clung tightly for a time and then started to relax her hold on the mother's breast. Again No. 2 went through the pitching behavior, and this

time even more violently. The baby appeared to have learned its lesson for one day, and held itself close to the mother.

"Nina on this same day got down and sought to sample the food. No. 49 seized the food and then drew the baby up to her breast. After several repetitions of this the mother filled her pouches and one hand with food and took her baby with her to a far corner of the cage away from the main food supply."

Parents who have faced the problem of helping a young child to adjust to the very difficult situation of "having his nose broken" by the arrival of a new and wonderful infant in the family, will be interested in knowing how the young monkey meets the same sort of situation.

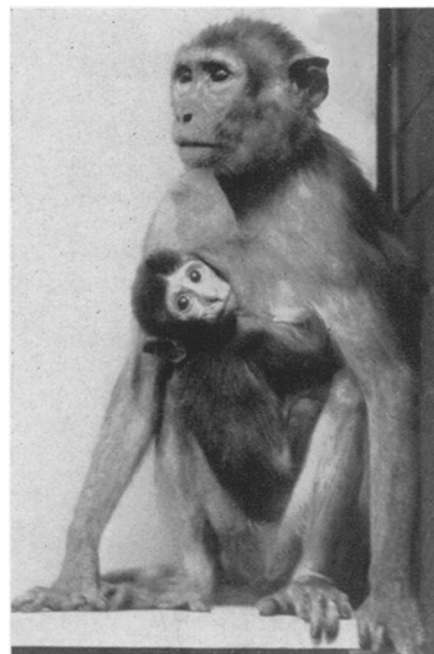
Susie, the monkey mother, was of the matter-of-fact type. Although she seemed fond of her year-old son George and was always a final port of refuge for him, she was never overly solicitous of his welfare. George, for his part, was an active, aggressive, and relatively independent young monkey. They had never been separated from each other.

When the new arrival came, George was greatly excited. He would go up and feel the face of the infant. He would lie down beside it, or actually on it, would leave for a moment, but return to the baby's side.

No Jealousy

Attendants tried to catch George to remove him because the mother became very ill, but he resisted and cried out. The mother came to his rescue, and when the attendants persisted in removing him, George, the mother and baby all joined in an unhappy chorus of wailing protest. So George at last was returned and all three lay down peacefully together to sleep.

Like a miniature Methuselah's is the face of the newborn monkey. Its deep wrinkles, signs of extreme age in man, are signs of extreme youth in the monkey, and they mostly disappear after a few weeks. The newborn monkey looks more nearly human than he does at any time later in life. His fur clings to his body so that it is hardly noticeable, and his skin is a reddish pink only slightly darker than the skin of the newborn human. The eyes, which are to become a deep brown, range at birth from a brownish blue to a brownish hazel. That he is much farther along in the path of development than is the human at birth



HUMAN ORDER REVERSED

It's the baby who holds on to the mother, not the mother who supports the child, as this photograph of a monkey mother and her new baby indicates.

is emphasized by the fact that his gums are already tender and perhaps distended in token of the coming of teeth which commonly erupt during the second or third week.

The little newborn rhesus monkey weighs, on the average, just about one pound. That seems very small to us who are used to thinking of the seven-pound human newborn as quite a tiny mite. However, the average weight for the adult mother monkey is only about ten to twelve pounds and males are larger, so that this newborn has already attained about a tenth to a fifteenth of his adult weight. The full grown human is more nearly twenty times his birth weight.

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A fleet of 100 refrigerated twenty-ton trucks is planned to transport vegetables and other produce from California to New York on a seven day schedule.

The famous Pike's Peak in Colorado ranks only thirty-fourth in order of height among the mountains of continental United States, not including the mountain giants of Alaska.