

PSYCHOLOGY

What Babies Think About

Babies Understand Before They Can Speak, Psychologists Find as They Study the Month-by-Month Growth of Infants

By ELIZABETH SPENCE

WHAT are baby's secret thoughts? Babies understand what is said long before they are able to speak, psychologists have discovered. Wherefore, parents are reminded to think before they talk in front of even very young infants and to count ten, or a hundred and ten, before indulging in a family tiff while the baby looks on.

"Blissful as a babe" may not be so blissful as commonly supposed, some of the modern evidence shows. If the babe in mind happens to be less than a month old, the chances are especially against his being a really contented creature, for the moment, Prof. Charlotte Buhler concluded from her studies of children in the clinic of the University of Vienna. She based her conclusions on the things the baby turned toward as if to reach and the things it turned away from as if to avoid. Food appeared to be the only solace of the very young child, whereas he found a variety of things strange and frightening.

As the child develops, the world becomes a less strange place and conse-

quently more pleasant. Pleasure derived from the mastery of a new life adjustment was strikingly illustrated by the antics of a child learning to stand. This child in the Vienna laboratory was so happy in his newly learned accomplishment that he would not lie down to go to sleep and actually went to sleep standing. When the child was awakened by the nurse's attempt to lay him down on the bed, he showed signs of anger and insisted on struggling to his proud, upright position again.

Adults and older children may speak for themselves but the baby perforce keeps his own counsel, save what is told by the language of movement, laughter, and tears. Hence the need to observe every action and expression, if a clue to baby thought is to be found.

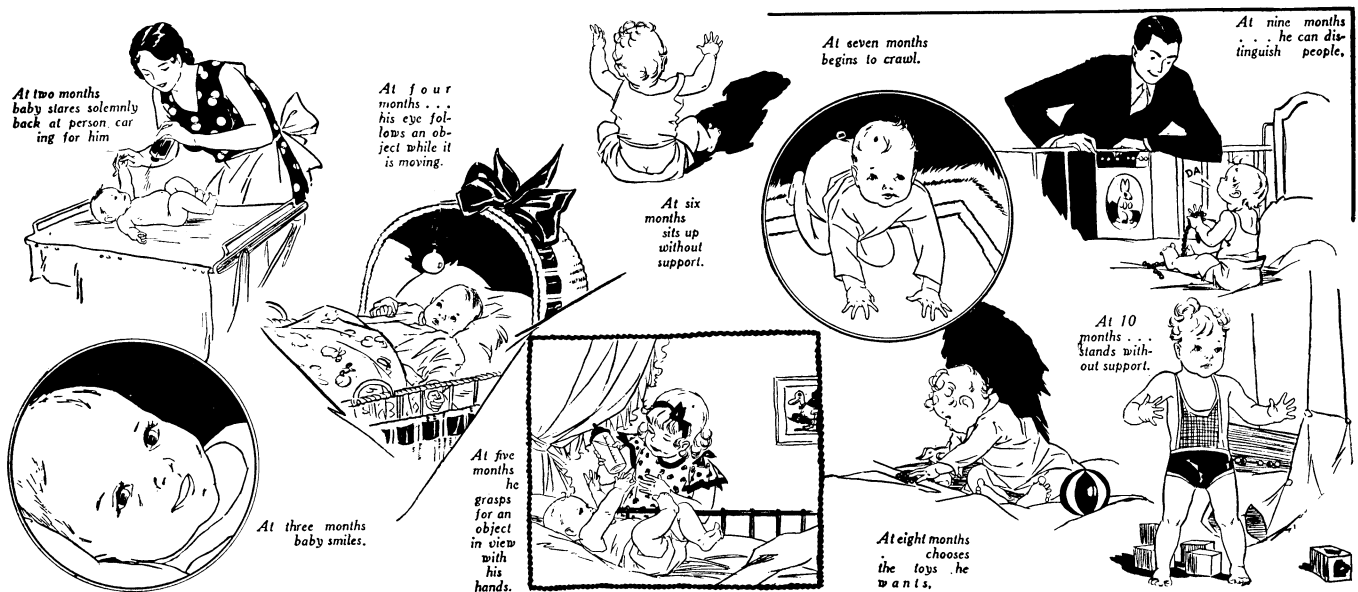
Very elaborate equipment and technique have been developed in the conduct of these experiments. In a recent study of the first year of life in Vienna, for instance, relays of trained observers under the direction of Prof. Charlotte Buhler watched babies of one to twelve months old continuously during twenty-four-hour periods. At night the observers sat in the dim light in which the children were accustomed to sleep

and took notes by an electric flashlight which they were careful to hold so that it would not cast a reflection on the babies.

Prof. Buhler and her assistants devised a series of baby tests on the basis of the records from months of day and night observation. While these are not actually the first baby tests, they are the first which attempt to make such a fine distinction between the various age stages in the infant's development. They are described by Prof. Buhler in "The First Year of Life".

When his majesty, the infant, has reached the ripe age of two months, for instance, he may be expected to respond to an adult's glance by gazing solemnly back into the eyes that have sought his glance. Signs of his growing mental ability are revealed by his fright at a loud sound or by searching head movements during prolonged sound, by focusing his eyes on an object, or by showing consciousness of a changing tone of voice. Holding the head erect, holding the head up in the prone position and turning away the head in a movement of flight from unpleasant objects are standard achievements of bodily control at that age.

At three months, the baby returns a glance with smiling or cooing. Now when he is frightened by a strange touch, his whole (*Turn to page 122*)



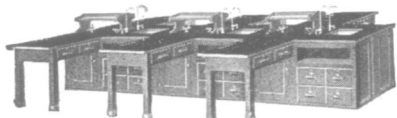
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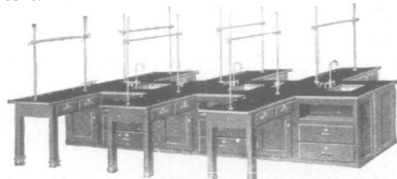
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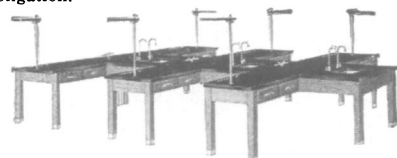
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body twitches in attempted flight. His rapidly growing intelligence and curiosity find expression in looking for the source of a sound, in following moving objects with his eyes and in imitating facial movements. In addition to the experimenting movements of the two-month-old infant, the three-month-old has commenced feeling objects, actively touching them and consciously exploring the mysterious world that surrounds his tiny person.

When the baby is four months old, he has so developed socially that he expresses displeasure when an adult stops playing with him. Mentally he has advanced to the point of active looking about in a new situation, of looking at an object while moving it and imitating facial expressions.

After five months in the world, the infant imitates friendly and angry facial expressions. If he loses a toy, he looks for it and if the plaything is taken from him, he exhibits a defense reaction in protest. His increased bodily control permits him to turn from back to side and back again and to grasp an object in view with one hand.

Sitting with support and the ability to distinguish between friendly and angry talking are achievements at six months. Showing displeasure at unsuccessful grasping and imitating sounds are other characteristics of behavior at this age level.

The seven-month-old child begins crawling. He now responds to angry and pleasant facial expressions, with his own little gestures of rage or friendliness which show the grimaces are not a mere imitation.

Crawling and sitting alone are characteristics of physical development of the average infant at eight months. One sign of his developing mentality is revealed by the child's commencing to choose his toys instead of accepting without choice the one presented to his attention. If the chosen toy is removed, the child shows signs of displeasure and persists in his mood for a while thereafter.

At nine months, the infant is so aloof from strangers that he must become acquainted before he extends his usual greetings. He also tries to arouse the attention of adults upon occasion and shows that he understands simple gestures made to him. His mental activity

is evidenced by curiosity to see a hidden object.

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For the ten-month-old baby, Prof. Buhler has devised a simple memory test. A toy, consisting of a ball and box, was given the child to play with for five minutes. This was then taken away and the box returned after thirty seconds with the ball missing. If the child remembers, he looks for the ball and shows surprise because it is gone.

At ten months, the child is able to stand with support.

At the end of eleven months, the child is mentally advanced to the point of pulling an object from the floor by the string which moors the toy to his cradle. He has learned to be afraid of unfamiliar things and imitates sounds. If a toy is held above the child in such a way that he cannot reach it from a lying position he is able to raise himself to a sitting position to grasp it.

These are only a few of the baby's accomplishments, now that he has enjoyed the advantages of almost a year's growth and experience in the world.

Prof. Buhler purposely patterned her tests on the ordinary day by day life of the infant, for after all, children have to live in a day by day world and adapt themselves to it. There is more to life than merely being able to solve some arbitrary problem and so the tests take into account the baby's physical control, his sociability, and his skill in handling objects, as well as his budding powers of reason.

Simple and natural as the tests are, the psychologists were careful not to apply them as an arbitrary index of a baby's development. Thus the children were not judged alone by the score they made on their own age level test but were allowed to show their skill in performing the tests for children a month older and a month younger than themselves. Allowance was also made for baby's moods.

Four hundred babies between the ages of one and two years were tested in all. Findings of the tests agreed remarkably well with the judgment of physicians, nurses, and parents.

The front cover illustration was chosen as typifying the spirit of the growing child. It is one of 32 excellent photographs taken by Hedda Walther and published in Paul Eipper's book "Human Children." Copyright 1930 by the Viking Press, Inc., New York. Reproduced by permission.

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