

Author unknown. "Mind Art—The Newest of the Sciences." Newspaper article with photos. Source and date unknown. Newsprint badly deteriorated. [Possibly: Bache, Rene. Boston Evening Transcript, date unknown.]

fragments from
Mind Art—The Newest of the Sciences

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Professor Gates has applied the theory in his own nursery, and has obtained amazing results from the training of his little boy and girl, who began their education before they were weaned.

A beginning was made very early in cultivating the faculty of attention, which is essential if a child would learn quickly.

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The utilization of the "play instinct" for educational purposes is most valuable during childhood. Professor Gates used it in many other ways, only three or four of which can be mentioned here. The little boy was taught to throw rings at pegs on a target, and in this way his brain structures governing aim and distance were built up. It was found that he could put two rings in succession upon one peg, at a distance which increased steadily at the rate of four per cent per day. If an attempt was made to increase it by five per cent he failed.

For instance, the little girl was taught to improve herself in the association of ideas by means of various apparatus. She was placed on the floor with a toy cow and box in front of her. By means of an arrangement of wires and strings her father was able to move the head of the cow to make the animal utter a mournful note, and to cause a series of colored strips of pasteboard to pass across the box. The child was required to make a certain signal when the cow lowed and the color blue appeared; she was to make another signal when the color was red and the cow moved its head and so on. To her it was all play, but she was training her brain just the same.



Another thing she did was to the ticking of her father's watch. It was a peculiar kind of watch, which could be made to tick at varying degrees of loudness, and the experiment showed that the ticking had to be seven times as loud to be noticed by her, when her attention was attracted to colors shown on the wall. Similar [color]s were shown to the boy, and he [was ask]ed to press an electric button [. . .]



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Some of Professor Gates' most interesting experiments in this line have been made with animals, special attention being given to monkeys because they are susceptible of higher training than other beasts. One monkey, which was under the Professor's tuition for quite a while, actually became able to converse with its master to some extent. It could distinguish sixty-eight words, going into another room and fetching therefrom a ball, a bat, a turnip, a shoe, an apple, or almost any article that might be asked for. At the same time, it could make no fewer than twenty-two sounds which the instructor could understand.

It has been an accepted theory that acquired characteristics cannot be transmitted to offspring. For a great many generations the women of China have been binding their feet, and yet their children are never born with deformed feet. Weissmann, the famous naturalist, cut off the tails of monkeys through a series of generations, to see if a monkey would be born without a tail, but nothing of the sort happened. But, while it is a fact that acquired bodily traits are not transmissible, the case, according to Professor Gates, is quite otherwise with structures that have to do with mental processes. Improved brains can be handed down from parent to offspring.

Professor Gates has proved this by educating animals, which in five or six generations of training showed marked superior intellectuality. For example, he took a pair of ordinary guinea pigs, and in four years, by educating them generation after generation, produced guinea pigs that were intellectual giants—for guinea pigs. He taught them through their senses of sight, hearing, feeling, smell and taste, and the things they managed to learn were astonishing.

He taught them to distinguish colors by placing the guinea pig's food under a number of small inverted red pans, but scattered among blue, green and yellow pans of the same size and shape, which had nothing under them. After a while the little beast learned that there was food only beneath the red pan, and did not take the trouble to turn over any of the others. When red had made familiar in this way, the food was put only under blue pans, and so on. Finally, the pans were made all of one color—green, for instance—but of different shades, and the guinea pig was required to pick out shades.

More than forty different ways were adopted for obliging the animals to exercise constantly their various mental functions. A hallway was constructed with a flooring of metal tiles of different colors, so arranged that any of them could be connected at will with a galvanic battery. The guinea pig was obliged to go constantly through this hallway, and soon learned that it got a little shock every time it touched a tile that wasn't red. Consequently, it adopted the practice of jumping from red tile to red tile.

Eventually the animal learned to differentiate sounds, tastes and smells, and even to associate ideas, as a sound with a color. The sense of taste was cultivated by obliging the guinea pig to partake many times a day of small quantities of food flavored in a great variety of ways, and in the course of generations its descendants became regular epicures.

Professor Gates found that dogs and cats, having more intelligence than guinea pigs, were easier to instruct; but cats were more difficult to teach than dogs, because they have less power of attention. Dogs were educated to the point of being able to distinguish as many as fifteen shades of any color except purple and red, to which the canine race seems to be totally color blind.