

itself. They might be full-grown members of their race, scaled down to little more than the size of a silver dollar; every detail of structure, every marking of the shell, is perfect and in proportion to the whole. I took one to my house, and there, in a roomy tank of sea water, he proved a curious and engaging pet. Within a few days he lost his nervous longing for the sea and grew content, dozing for hours in the sun with shell awash or paddling eagerly to take food from my hand. One instinct was too deeply rooted to be set aside—the belief that all food grew from the bottom, firmly attached and requiring a jerk of the head to be nipped off. It was amusing to watch him as one held out a morsel of cooked breadfruit; he seized the food in tiny jaws, braced himself with a reverse stroke of the flippers, and jerked his head sideways and up, precisely as his wild kindred must feed in the green pastures of the sea. One morning he was not to be found; some fascinated boy or girl had been overtempted by his endearing ways. I missed him,

a curiously individual little chap; like the goldfish of the immortal Mr. Ruggles, he emanated a certain quiet companionship.

The double canoe was turning homeward. The trade-wind—the long-continued *miru*—was blowing fresh and strong, driving the blue rollers toward the land. Along the reef, as each breaker reared a tumbling ridge, the wind whipped its crest into the air, and for miles the vapor hung like smoke above the surf. Beyond the lagoon and the palms of the flat land the mountains rose serrated and green, cleft by deep valleys, ridge upon saw-toothed ridge until the peaks of the far interior were lost in cloud. The pass, broad and sparkling blue, lay before us, and I could see the thatched roofs of the village along the beach. Hina turned to me, her unbound hair flying in the breeze.

“You must be weary,” she said; “the sun is high and it is time that we went home.”

LOVE SONG FROM THE JAPANESE

BY CAROL HAYNES

THE children sail their paper boats,
 Laughing merrily—
 My life is like a little boat
 Sailing to sea.

The children fly their painted kites,
 Gayly fluttering—
 My soul is like a tugging kite,
 Tied with a string.

The children hold their caged-in birds
 Where all who pass may see—
 My heart is like a broken bird—
 Ah, pity me!

WHAT STRONG EMOTIONS DO TO US

BY WALTER B. CANNON

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AN element of surprise and mystery accompanies a strong emotional outburst. In times of terror or of intense anger, for example, there is a surging up within us of forces of which in days of calm and comfortable living we have been quite unaware. So powerful may these forces be that their dominance, even though temporary, may be terrifying. They may lead us to acts which we remember with a thrill of self-satisfaction or, on the contrary, with pain and chagrin. Anyone who has been in the grip of great emotional excitement can readily understand deeds of desperate violence, whether good or bad, which may be the natural consequence of such an experience.

The mystery of the origin of our strong emotions has long interested philosophers and naturalists. It was early recognized that they are states which we have in common with subhuman beings. Significantly, Darwin entitled his classic study, *The Expression of the Emotions in Man and Animals*. And he was able to collect a remarkable array of evidence showing that among widely diverse races of mankind, as well as among the higher vertebrates, the same modes of expression were manifested. Baring of the teeth, dilation of the pupils, erection of the hair, growling or snarling, and a menacing approach are so generally the signs of rage and aggressive feeling that they form a common language which animals of very different types clearly understand. Indeed, it is thus that we often interpret the attitude of the strange dog toward us and thus that he in turn interprets our disposition toward him.

We make an approach to understanding the mystery of emotional experience when we consider that the characteristic bodily changes which occur do not have to be learned. Just as we perform, without any instruction, the complicated acts of sneezing, coughing and swallowing, so likewise, without being taught, we show by natural attitudes and facial expressions that we are angry or terrified, or grief stricken. Since all our actions are due to impulses sent out from the brain and spinal cord to the muscles, the explanation of these automatic responses lies in the working of appropriate arrangements which are already perfected in our nervous system at birth. These arrangements provide for what are called "pattern responses"—so-called because they occur in a strikingly uniform and similar manner in animals of very different degrees of complexity. Usually it is assumed that these fixed and predetermined activities are like those which we gradually develop in time as a result of habit; they are distinct, however, in that they are regarded as racial, not individual habits, and are transmitted from parents to offspring, ingrained in the nervous organization.

Now the question arises as to why there is so much similarity in the expression of strong emotions in man and the lower animals. We can account for this fact by studies which have revealed that there is an ancient and primitive part of the brain which is the common possession of all vertebrates. Besides this, there is a new and, in the higher animals, a much larger part of the brain which has been gradually developed and which varies in