differential general activity with the various stimuli, it is unlikely that the decrease in response for threat pictures was the result of such a factor. As shown in Fig. 3, climbing activity was similar for both threat and infant pictures from months 2 to 5, yet infant pictures elicited a high level of lever-touching while touching for threat pictures declined markedly.

In general, the shapes of the curves in Figs. 2–4 were characteristic of the behavior of individual subjects. The individual curves tended to follow the major inflections shown in the averaged data, although there were discrepancies of up to 1 month in the exact age at which a given monkey might show a large increase or decrease in a given behavior. The most important case concerns disturbance behavior in response to threat pictures. Two monkeys showed a large increase in disturbance at 2 months of age, four animals showed increases at 2.5 months, and the remaining two subjects showed increased disturbance at 3 months. Kendall's Coefficient of Concordance was calculated to measure the degree of consistency in disturbance with threat pictures between subjects over age blocks. This measure revealed a very high degree of association between subjects ($W = .808$; $p < .001$), indicating that individual animals behaved in a very similar manner toward the threat pictures.

These data lead to several important conclusions. First, at least two kinds of socially meaningful visual stimuli, pictures of monkeys threatening and pictures of infants, appear to have unlearned, prepotent, activating properties for socially naive infant monkeys. From the second month of life these stimuli produced generally higher levels of all behaviors in all subjects. Second, the visual stimulation involved in threat behavior appears to function as an "innate releasing stimulus" for fearful behavior. This innate mechanism appears maturational in nature. Thus, at 60 to 80 days threat pictures release disturbance behavior, although they fail to do so before this age. These fear responses waned about 110 days after birth. This could be due to habituation, occurring because no consequences follow the fear behavior released by threat pictures—consequences that would certainly appear in a situation with a real threatening monkey.

One important implication of these results concerns the ontogeny of responses to complex social communication in primates. These data suggest that at least certain aspects of such communication may lie in innate recognition mechanisms, rather than in acquisition through social learning processes during interactions with other animals. Although the maintenance of responses to socially communicated stimuli may well depend on learning and some type of reinforcement process, the initial evocation of such complex responses may have an inherited, species-specific structure. Thus, these data suggest that innate releasing mechanisms such as those identified by ethologists (*2*) for insect and avian species may also exist in some of the more complex behaviors present in the response systems of primates.

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References and Notes

1. See, for example, R. Melzack, in *Pathology and Perception* (Grune and Stratton, New York, 1965); A. H. Riesen, in *Functions of Varied Experience*, D. W. Fiske and S. R. Maddi, Eds. (Dorsey Press, Homewood, Ill., 1961); M. R. Rosenzweig, *Amer. Psychol.* **21**, 321 (1966); G. P. Sackett, *Child Develop.* **36**, 855 (1965).
2. W. H. Thorpe, *Learning and Instinct in Animals* (Harvard Univ. Press, Cambridge, 1963).
3. Supported by grant MH-4528 from the National Institute of Mental Health. Portions of these data were reported at the 10th Interamerican Congress of Psychology, Lima, Peru, April 1966. I thank C. Pratt and L. Link for assistance with this research.

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Calcium and Bromide Contents of Natural Waters

Anderson, Graf, and Jones [*Science* **153**, 1637 (1966)] fitted a straight line to their log-log scatter plot of the Ca^{++} and Br^{-} contents of a group of natural waters. The equation of this line was given as

$$\log Ca^{++}\ [g/10^6\ g\ (\text{solution})] = 1.263 + 1.406 \log Br\ [g/10^6 g\ (\text{solution})]$$

The coefficient 1.406 is not correct for the line as drawn in their figure; a value of 1.05 (1.046, perhaps) seems more likely. Indeed, for the given data a line of unit slope would fit just as well.

The authors' emphasis on their particular line is presumably based on the coincidence that a line tightly fitting their Michigan data in the high-salinity range also gives a fairly good fit of the part of their Dead Sea data that fall in the low-concentration range. But this must be a coincidence unless the authors propose a single original source other than sea water, which falls well above that line.

It would be more instructive to draw a line of unit slope through their sea-water point, indicating compositions available by evaporation or dilution of sea water. The fact that almost all the data fall on the calcium-rich side of such a line, but less than a decade removed from it, is much firmer evidence of both a common sea-water origin and the proposed calcium-enrichment processes.

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Mangelsdorf is correct in suspecting that our proofreading was faulty: the constant in the equation should be 1.046, not 1.406. We also agree that drawing an additional line in the diagram (Fig. 1), at unit slope through the sea-water point, is a useful device; but one must remember that this new line, as defined by Mangelsdorf, is fictive, because precipitation of $CaSO_4$, $CaSO_4 \cdot 2H_2O$, and $CaCO_3$ prevents one from increasing the Ca concentration of sea water very much by simple evaporation.

The common source of Ca^{++} and Br^{-} suggested for the Dead Sea and Michigan Basin chloride brines that plot on the line of Fig. 1 is sea water modified to a comparable extent by ultrafiltration, dolomitization, and fresh-water infiltration in the two areas. Sets of subsurface samples from other areas, with different hydrodynamic histories, would not be expected to fall on the line. The line, therefore, does involve a coincidence between two geographical regions; it is of significance not for its position but for its slope, which was interpreted in terms of the processes mentioned above, rather than of simple dilution or concentration, because of the particular chemical composition of the samples. It is quite possible that subsurface calcium chloride waters exist that have undergone dilution by fresh water subsequent to the other processes.

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