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The Proper Study of Mankind

That basic research is important and that free-wheeling investigation of whatever interests the researcher is the only way to conduct basic research are concepts difficult to convey to nonscientists. Ten or 20 years ago what congressman would not have been critical of the use of public funds for research on the genetics of bacteria and viruses? One can imagine the headlines: "Microbe Sex-life Research Grant Irks Senator Fish." Of course no one could have told the senator with absolute assurance that investigations of this kind would lead to the grand generalization about the universal similarity in hereditary mechanisms (DNA and RNA) that we have now attained. Researchers know that all living things are related and that what is true of one form may be true of another, but that if it is not, *"Vive la différence!"* Comparative study teaches us much that we can learn in no other way.

A case in point is the recent attack by Representative Harsha and Senator Byrd on the research grant of $1.2 million to Dr. Harry Harlow of the University of Wisconsin for a 6-year program of primate research. Subhuman primates, as the congressmen should know, offer unusual advantages for research. Interesting in their own right and fully worthy of scientific investigation, they occupy the unique position of being the animals most similar to man in physiology and in mental capacity. Their bodies and brains are far more like ours than are those of any other animals. Hence, they react to physical stresses, to disease, to psychic disturbances, in much the same way that we do. It was not caprice that led us to use a chimpanzee for our first suborbital test shots. The brilliant achievement of Colonel Glenn last week owes something to what was learned from Ham's flight. Nor was it an indifferent choice that led to the use of monkey kidney for the cultivation of the polio virus: The virus will grow in monkey kidney. Of course, it will also grow in human kidney, but that is a tissue hard to come by. Prior to the work of Professor Harlow and others hunger, thirst, pain, and so on were thought to be the primary motivations of behavior. Harlow has shown experimentally that monkeys have—as had long been suspected for man—motivations not reducible to these primary ones: drives to explore, to manipulate, to see, to hear, and to experience affection. Furthermore, his work has had an effect on learning theory: monkeys learn how to learn; they have an accretion of learning.

To give another example, monkeys reared in isolation are emotionally crippled; those brought up by artificial "substitute mothers" seem for a time to be normal, but when adult they are unable to act like mothers toward their offspring. Monkeys have still another advantage as research subjects. They can be studied throughout their lives—they grow up in 2 to 3 years—and can be kept in a controlled environment and subjected to planned experiments. Studies of this kind provide new insights into human behavior that could be attained in no other way. Would the congressmen suggest that we carry out such studies on human beings? Or do they perhaps think it unimportant to try to understand behavior? dangerous to study motivation?—G.DuS.