

argued that the snake reaction is not inborn, but merely a cultural phenomenon resulting from individual learning. Young chimpanzees reared under abnormally isolated conditions have reputedly failed to show the fear response when first exposed to snakes. But these experiments are not very convincing. In some instances, the chimpanzees have been too young when first tested. Had they been re-tested a few years later, the reaction may well have been present. Alternatively, the effects of isolation may have been so severe that the young animals in question were virtually mental defectives. Such experiments are based on a fundameneal misconception about the nature of inborn responses, which do not mature in an encapsulated form, irrespective of the outside environment. They should be thought of more as inborn susceptibilities. In the case of the snake response, it

'may be necessary for the young chimpanzee, or child, to encounter a number of different frightening objects in its early life and to learn to respond negatively to these. The inborn element in the snake case would then manifest itself in the form of a much more massive response to this stimulus than to others. The snake fear would be out of all proportion to the other fears, and this disproportionateness would be the inborn factor. The terror produced in normal young chimpanzees by exposure to a snake and the intense hatred of snakes exhibited by our own species is difficult to explain in any other way.

The reaction of children to spiders takes a rather different course. Here there is a marked sex difference. In boys there is an increase in spider hatred from age four to fourteen, but it is slight. The level of the reaction is the same for girls up to the age of puberty, but it then shows a dramatic rise, so that by the age of fourteen it is double that of the boys. Here we do seem to be dealing with an important symbolic factor. In evolutionary terms, poisonous spiders are just as dangerous to males as to females. There may or may not be an inborn response to these creatures in both sexes, but it cannot explain the spectacular leap in

Spider hatred that accompanies female puberty. The ,  
only clue here is the repeated female reference to  
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