

engaged in the intellectual processes, sufficient data have been accumulated to enable very competent authorities to venture certain hazards. Thus Professor Patrick of the University of Iowa, argues strongly against the methods of teaching now in vogue in the primary schools. Both upon anthropological and psychological grounds he condemns the use of the reading book—the spelling book and the copy book by children under, say, ten years of age. Man has only recently become a reading and writing animal, and to quote Patrick's own words "It will demand a considerable maturity in the child before he is ready for that which has developed so late in the history of the race. The language of the child, like that of the primitive man, is the language of the ear and tongue. The child is a talking and hearing animal. He is ear-minded. There has been in the history of civilization a steady development toward the preponderating use of the higher senses, culminating with the eye. The average adult civilized man is now strongly eye-minded, but it is necessary to go back only to the time of the ancient Greeks to find a decidedly relative ear-mindedness. Few laboratory researches have been made upon the relative rapidity of development of the special senses in children but such as have been made tend to confirm the indications of the "culture-epochs" theory, and to show that the auditory centres develop earlier than the visual."

Another criticism of prevalent teaching methods is that of Oppenheim. I quote him as follows: "One must keep in mind that the faculty which governs mathematical computation is located among the higher centres in the cerebrum; that this part of the brain is among the latest to attain maturity; that therefore in childhood it is in no condition to put to a strain. Whenever a scholar at this age is forced into attempts to use this faculty, a process similar to any other sort of exhaustive work results. One can the more easily understand the inevitable outcome from a knowledge of the fact that the nerve cells of children being more or less in a state of unstable equilibrium, are easily exhausted, so that a consequent nerve poverty must show itself. Thus such children receive no permanent value from studies in mathematics, simple though they be; and what is more, if these studies were not begun until greater maturity—say at least ten years of age—not only would a vast amount of nervous wear and tear be saved, but also the children would learn as much in one year, as they formerly, under the present adverse conditions and methods, learn in five. The time thus saved might be profitably employed in strengthening both mind and body."

Now, if there is anything of real merit in these opinions, is there not need for certain reorganization of present-day methods? Surely the im-