Current Comment

A Recognition of American Leadership in Scientific Medicine

In a recent issue, the Münchener medizinische Wochenschrift calls attention to the movement in Germany for making the study of English compulsory in German schools. Until now French has been the compulsory foreign language. The editors say that scientific research in the United States has made great advances, thanks to the wealth of the country, and that American literature is on the point of taking the lead in medicine. “The young medical man planning to settle in other countries,” he says, “had better be trained in English, which is the predominant language on four continents, rather than in French, as German medical men may be long debarred from settling in French speaking countries.” It is gratifying to have this German recognition of America’s leadership in scientific research; it is so different.

The Exhaustion Produced by Extreme Emotion

That the emotions play upon our physiologic reaction is a thesis that scarcely needs to be defended. The digestive secretions, for example, are influenced by psychic states in striking ways to which the Russian physiologist Pawlow has forcefully directed attention. The idea of food may become a stimulus for the flow of saliva or even gastric juice, whereas such emotional states as anger, fear and sorrow may succeed in inhibiting the normal secretion. Strong emotions are attended by more or less well defined changes in the circulation which, in turn, cannot remain without some influence on the tissues reached by the altered blood supply. It is by no means easy, however, to define the part the emotions per se, and exertion that accompanies them, respectively play in producing the consequent exhaustion.

Recently Crile1 has summarized the results of his extended experiments in this field. Like some of his predecessors, he has observed profound changes produced by fear in the cells of the brain; they are most marked in the cerebellum and cerebrum, though the medulla and even the spinal cord may show the untoward effects. Histologically, the brain cells may show increased activity manifested by hyperchromatism followed by a progressive chromatolysis if the activation is continued. The Purkinje cells in particular are severely involved, and may largely disappear when the degree of exhaustion is extreme. Furthermore, it is asserted that extreme emotion causes demonstrable histologic lesions in the liver and suprarenals also. In view of the current disagreement as to the effects of emotional factors on suprarenal function, conservatism demands that these be not stressed in this connection. Crile boldly maintains that emotion causes a more rapid exhaustion than is caused by exertion or by trauma, except extensive mangling of tissue, or by any toxic stimulus except the perforation of viscera.

In a recent issue of THE JOURNAL,2 the probable involvement of toxemia in some of the most severe forms of shock was pointed out. As intoxication of a similar sort is less likely in cases of emotional exhaustion, unless the toxic substances are identified as products of fatigue, it may be that shock and “nervous exhaustion” must be more clearly differentiated in the near future. Because prostration is the end-result in either case, it by no means follows that precisely the same causes are at work.

The Work of the Scientist

Take from the air every aeroplane; from the roads every automobile; from the country every train; from the cities every electric light; from ships every wireless apparatus; from oceans all cables; from the land all wires; from shops all motors; from office buildings every elevator, telephone and typewriter; let epidemics spread at will; let major surgery be impossible—vastly more, the bondage of ignorance, where knowledge now makes us free, would be the terrible catastrophe if the tide of time should but ebb to the childhood days of men still living!...Therefore, whoever desires progress and prosperity, whoever would advance humanity to a higher plane of civilization, must further the work of the scientist in every way he possibly can.

—William J. Humphries.