

found close to the odontoblasts, and, as Black shows, they communicate to the sensorium the sensation made on the protoplasm of the odontoblasts through the injury to the fibrils. It is not even necessary to assume that fibrils are nerves, before recognizing that they can communicate sensation. Many animals, which have no demonstrable nervous system, are endowed with sensation. As Black shows, protoplasm in itself may be sensitive, as is seen in the *amœba*, the leucocyte, etc., which respond to stimulants and exhibit sensitiveness to thermal changes.

However, there is no doubt but that the sensitiveness is due to the presence of the tube contents, whether nerve fibres enter or not. We are still ignorant of a great deal as to the peripheral distribution of the nervous system, and it would be rash to say that we know all about the nerve structure of the tooth. Only recently a new addition was made to our knowledge of muscular tissue, and it is quite certain, that if any of us live ten years longer, we will know a great deal we do not know now as to the structure, mode of action and functions of the more complex nervous system.

Sensitiveness of dentine is purely physiological, but we cannot assert that it is never pathological. It seems reasonable to believe that a pathological condition of the fibrils at once follows fracture of dentine, or a severe blow, which the pulp resents but cannot resist. Yet it is a demonstrable fact that the teeth differ as to this susceptibility the same as nerve, muscular and other soft tissues: that not only is there a great variation in different mouths, but that the more inexplicable fact presents itself, that in the same mouth at the same time, in teeth apparently under the same conditions as to the extent of caries, there are frequently remarkable differences in degree during excavation. This, to me, is quite different, and more obscure, than the fact that the greatest sensibility is at the point of ultimate distribution of the dentinal tubes and their contents—that is, immediately below the enamel. This latter fact would alone prove that the fibrils are organs of sensation, and subject to the same laws as nerves of sensation, the highest sensibility of which is confined to their terminal branches. How do we explain sensitiveness in one cavity in the same mouth more than in another cavity in the tooth beside it? If it was on the opposite side, we might perhaps say that it was due to the