

THE HOUSE OF THE MIND

The past five years have revolutionized the science of the brain. Before then there were manifold gropings in the dark. Now a great sunlight shines.

Camillo Golgi in Naples and S. Ramon y Cajal at Madrid are the Helmholtzes of the physics of thought.

The splendid researches of the latter on the retina of the eye and the courses of the nerves of sense, and the brilliant monograph of Golgi upon the minute anatomy and physiology of the brain, thrill the reader like the new planet which "swims" into the astronomer's ken.

This new land, poised high above the shoulders of the modern Atlas, has, hidden within its bony walls, the veritable microcosm of the universe. It is brimful of analogies, eloquent of evolution, prophetic of infinite progress, shadowy with mystery of the dead forms of disuse, radiant with the light of purposes accomplished.

We know now that all the special senses have what are called end-organs—such as the retina of the eye and the organ of Corti in the middle ear. That vibrations of ether impinge upon these end-organs in the guise of shapes, colors, smells, sounds, etc. A vibration is the mode of motion enjoyed by ether particles.

Recent investigations in animal physics prove that the end-organs modify the character of these vibrations, or rays, so that they may be forwarded by the special nerves to the centres in the brain where sights and sounds and smells are received and stored.

The most rapid, or quick-following, vibrations are those of violet light, and the slowest those of sound, smell, touch, and taste. This is probably the exact descending scale of rapidity.

A close study of physiology has also elicited the interesting fact that these rays of vibratory ether invariably pass through some watery medium before they are finally taken up by the end-organs and so carried to the brain centres by the several special nerves of sensation.

Thus shape and color rays pass as waves through the aqueous, and vitreous humors

of the eye, and sound rays through the endolymph of the middle ear. While odor and taste require the hair-cells of the nose and the taste-buds of the tongue to be bathed in mucous.

The smell and taste centres are close together in the brain, and taste-buds and smell-cells are mingled in the mucous passages of the mouth and nose.

The Pacinian corpuscles in the fingertips fail to receive and modify the sensations of touch if the cuticle or outer skin is removed. A raw-flesh finger-tip has lost all of the brain-like sensitiveness of the whole-skin finger tip.

In the same way it is now proposed to employ a selenium transmitter (lens in this case) for the transportation of color and shape by wire over long distances.

A camera in New York may thus photograph a man at the Washington end of the wire.

You play on the piano and find that certain notes will make the windows vibrate, and other notes cause the gas to flare up. A certain note on your violin will shatter a wine-glass. This quality of being naturally affected by certain vibrations is general in physics.

All sensations (vibrations) can be carried from far distances when the proper media for modifying original vibrations or tuning them to a common carrier are found.

The telephone may be said to be an (imperfect) ear on a long-distance scale, and the telephoto (to coin a similar derivative) a long-distance eye. In point of fact, a close study of the brain will show an endless list of analogies between its physics in miniature, so to speak, and those of the ever-widening mundane sphere of electrical invention.—S. Millington Miller, M.D., in *Leslie's Weekly*.

An announcement of the first number of *Vox Wesleyana* appears in the last issue of the *Manitoba College Journal*. It is so grossly insulting and so utterly devoid of any sense of journalistic courtesy, that we cannot understand how it received editorial sanction.