other words, the permanganate delayed death for ten hours, on the average.

Some of the other experiments, with greater or less amounts of venom, gave opposite results and seemed to indicate that the permanganate has little if any value.

A tabulation of all the experiments indicates that a prompt use of the potassium permanganate had some beneficial effect under the conditions of this investigation. Whether it necessarily indicates its usefulness in cases of human snake-bite accidents, it is difficult to say; but since it seems evident that a 1 per cent. solution of potassium permanganate is practically harmless to living tissues, it is probable that the permanganate should still be used as an antidote to snake venom, at least as a first-aid treatment until other measures can be taken.

The value of incision and suction in the region of the bite is also subject to much debate, but the evidence seems to indicate that prompt and continuous mechanical suction may be of great value in removing the venom from the tissues in the region of the wound.

A more valuable series of experiments might be made with some larger animal where direct injection of venom and permanganate might easily be made into the blood vessels. Some authorities, however, claim that where the snake injects the venom directly into a blood vessel of some size nothing can be done that will effect a cure.

It is obviously not practicable to carry on such control experiments with human beings, but an extensive statistical study of cases of human snake-bite, where permanganate and other remedies are and are not used, should be of great value. India, where more than 20,000 people die each year from snake-bite, would probably be the best region in which to make such a study.

The details of this investigation will appear elsewhere.

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UNDERGROUND WATER AS A TRANSPORTING AGENT FOR GASOLINE

ON May 30, 1930, shortly after the opening of a filling station in Wooster, Ohio, gasoline was discovered floating on the surface of the water in a dug well, located 447 feet from the station. On the same day, a five-gallon can was filled with gasoline obtained from the well. On July 18, 1930, 65 gallons were drawn off. At a later time 45 gallons were removed and large quantities drawn off from time to time, until about November, 1930, when the accumulation decreased at a constantly diminishing rate. At no time since the discovery of gasoline in the well has the water been free from the odor of gasoline or the liquid itself. A constantly flowing spring in line with the dug well, and 622 feet from the gasoline station, was polluted; gasoline accumulated in a thick layer on the surface, the excess flowing into a creek, the water of which was rendered unfit for drinking by live stock. Across the road, 141 feet from the station, and in line with the well, a hole was dug to a depth of 12 feet. Gasoline was discovered floating on the water which appeared at the bottom of the excavation. Workmen who were digging a trench on the road between the station and the dug hole reported heavy gasoline fumes at a point opposite the station.

The station, well and spring are located on a slope, the former standing at a higher elevation. The ground water is therefore moving from the station toward the well and spring. Gasoline issuing from holes in defective tanks at the station makes its way downward through the bed-rock until it reaches the ground water upon which it floats. The bed-rock is thin-bedded and well-jointed sandstone, through which the underground water can easily move. The gasoline is transported down-slope by the water, spreading out fan-like, finally reaching the well and spring. Several gallons of brightly colored kerosene were placed in the dug hole opposite the station. In 23 hours the colored material appeared in the well; the underground water had moved a distance of 306 feet in that time.

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MYOESTHESIS AND "IMAGELESS THOUGHT"

IN the course of an experimental test of the behavioristic theory of thinking there was occasion for artificially inducing minimal or "implicit" contractions of human muscles by electrical stimulation. This work yielded a result which is of interest in connection with the "imageless thought" controversy, in that it sheds further light on the non-sensorial and imageless experiences reported by Binet, the Würzburg workers and Woodworth.

To very feeble electrical stimuli our subjects responded with a "sensation of electric shock" but no perception of movement. As the stimulus intensity was progressively increased, muscular contractions were elicited which were objectively recordable and even visible to the naked eye, yet not perceptible kinesthetically by the blindfolded subjects. It was not until the movements were fairly large in amplitude that the subjects reported kinesthetic awareness of them. This result was consistent and was found to hold for both faradic and galvanic stimulation, and for both trained and untrained subjects. The implication is that the supposedly non-sensorial or "pure