

we employ the muscular sense even more than that of touch. True these perceptions could be given us by the sense of touch alone, but then in practical experience such is not the case. This close connection between the muscular sense and that of touch must always be borne in mind when judging of the relative capabilities of the different senses and the character of the perceptions which they give us. Of the two classes of sensations of touch it will be readily seen that those arising from the pressure of distinct points are by far the more important, for on them is based our perception of local distinctness, on which all our knowledge of the external world depends. From them arise our ideas of a world in space with all its different relations and dimensions, by them we perceive the character of surfaces and, in abnormal cases, distinguish colors. But the importance of this sense as a knowledge-giver it seems to me may best be understood by an analysis of the manner in which our primary perceptions must have been obtained. In doing this we must of course argue largely from analogy, we must argue back from known experiences and processes to what can never be said to be actually known to have taken place. Yet this inferential knowledge aided by facts derived from observation among infants and young children will be of as reliable and stable a character as any knowledge gained in any other sphere in a similar way. And here we see the advantages to be gained from a general education of the people. Knowledge resembles money placed out at a good rate of compound interest, each new acquisition very soon becoming itself productive.

We must only hope that in the case of the knowledge as in the case of the money the investment may be a safe one. So if large numbers of intelligent men and women were educated to scientifically observe some occurrences and actions which are ordinarily not perceived or reflected upon at all, our knowledge would rapidly increase in reliability and extent. Curiously enough it is the two senses which are of the highest intellectual rank which first come into operation, it is with the eye and the hand that effective perception commences. But the appropriateness of this order is at once recognized when we consider that the other senses could be applied to no use until they are connected with the external objects which excite them, by means of the muscular sense, by touch and by sight. Now if it were possible to draw a distinction between the importance of the two highest senses, we should be inclined to exalt that of touch—a sense of which no human being can be deprived, and one by means of which intelligent perception is very early acquired. So in all those cases of abnormal development of the organs of one or more of the senses, or in the case of persons deprived of the use of one of these organs by disease or otherwise, the sense of touch stands out as the great compensator, supplying ably, in its increased efficiency derived from cultivation, the wants arising from the suppression of the other sources of perceptive knowledge. Indeed it is a question whether we do not all in our earliest days learn to perceive for a while as if we were blind.

But not only does this sense give us our largest stock of knowledge of the external world; it is

capable also of giving us ideas of beauty to a larger extent than we ever give it credit for. In this respect, however, the capability of the sense is rather of a potential character, nor is its real power observed except when the more facile and grasping sense of sight is deficient.

The sense of touch is seen to be the most positive of all the senses when we consider the manner in which its sensations are excited, while these sensations are the most forcible which we receive. But to my mind the most striking point with reference to touch is its extensiveness. In fact all the other sensations seem as it were to reduce to touch. The organ of the sense is the most extensive of any, and the organ of every other sense is also an organ of touch. We touch everything we taste, nor could we taste anything without touching it. There is also a sensibility of touch to vibrations. So much so that persons who are deprived of hearing may by means of touch (feel) music. In sight the organ may be said to be impinged upon by the etherial waves, although the eye cannot be literally said to touch the light. It was the fact of this connection of the tactual and muscular sensations with seeing, hearing, smelling and tasting which led Democritus to say that "all the sensations were modifications of the sense of touch." To the sense of touch there can be no doubt that we owe the first idea of matter, nor could any of the other senses ever have awakened it. The eye, for instance, is affected by nothing but light or color. This seems at first contrary to experience, but it has been clearly demonstrated by Bishop Berkeley. Magnitude, figure, distance cannot be seen, but are acquired by the sense of touch and the muscular sense. At the same time, however, that this process of acquisition by touch is going on, the ever-active sense of sight is being affected by certain associated differences of shade and light, dullness and brightness, etc., which occurring uniformly become inseparably associated in the mind with ideas which have really been acquired by touch. Thus the law of Irresistible and Instantaneous suggestion is brought into play, and these variations suggest irresistibly and instantaneously the ideas, which are thus credited to the sense of sight.

We pity, and with reason, the deaf, the blind and the dumb, but I shall ask in conclusion what kind of being that would be which did not possess the sense of touch?

J. R. MURRAY.

IMPOVERISHED aristocrat: "What dish, waitah, combines the greatest, ah, luxury with the least expense?" Waiter: "Codfish and cream, fifteen cents." I.A.: "And how much for the codfish, ah, plain?" Waiter: "Same price, sir." I.A.: "Waitah, bring me some, ah, cream."—*Lampoon*.

I Saw.

A gentle maiden,—aye, so lovely, too,—  
A sturdy youth near by, slack! too true.

I saw  
Him there; but where on earth's his arm, I wonder?  
Where? Round my girl's waist it is, by thunder!

—*Tech.*

FOR MAKING A SEMINARY MAN.

Take a little egotism,  
And a slice of skepticism,  
Mix well together with a "culchured" Boston drawl;  
Add a little Darwinism,  
Just a smack of positivism,  
And flavor with the essence of unmitigated gall.