

point of the earth's surface to another. The newly ascertained facts seemed to admit of but one interpretation, that, namely, of the existence of inequalities on what may be called the external surface of the atmosphere; but it would perhaps still be premature to speak of the accepted explanation as a truth. If we turn next to a somewhat analogous phenomenon, with which all who are engaged in nursing are familiar, we may find it in the variations of temperature which occur in the human body. The thermometers which existed when I was a student were not calculated to detect and register these variations; and it was then the accepted doctrine that the temperature of the human body did not vary, that manifest surface heat was only skin deep, not extending to the deeper parts or to the blood, and that there was an extraordinary provision by which the latter was preserved at all times in a state of uniformity. With better thermometers came a knowledge of the facts; and we may now receive it as an absolute truth that variations occur over a range of several degrees, and also that considerable elevations of temperature are generally indicative of danger to life. We have hypotheses, also, as to the way in which elevation of temperature is brought about; but I do not know that any of these have as yet been so far subjected to the test of experiment as to justify us in saying of them that they are true. With regard to each one, we must be content to limit ourselves to a form of speech which was often used by one of the greatest philosophers who ever lived, Michael Faraday, and to say, "It may be so." It is only by thus holding apart, in our minds, that which we actually know and are sure of, such as the elevation of temperature itself, from that which we only think possible or probable, such as some particular explanation of the way in which the variations may be produced, that we can keep ourselves in a condition of mind favourable to the increase of our knowledge. With regard to all of which we are certain, we may rest content; but, with regard to all of which we are uncertain, we should constantly recognise our uncertainty, and should be prepared to reconsider our opinions whenever fresh evidence which bears upon them can be placed before us.

The greatest help towards the attainment and maintenance of this condition of mind is to be found, as I have already said, in the correct use of language, or, in other words, in the habit of saying that which is true, and that only. If we say, "This patient's temperature has increased since yesterday, because he partook of such an article of food," we shall be mixing up that which is certainly true with that which is possibly untrue; and our opinion concerning the cause of the rise of temperature will be supported, that is, we shall

be less ready to abandon it upon cause shown, because it has been identified, and blended in our minds, with actual truth, by the employment of an incorrect form of speech. But if we say, "This patient's temperature has increased since yesterday, and *I think* the change must be due to his having partaken of so and so," then we shall be speaking the truth. We shall mention as a fact that which we know, and as an inference that which we suppose; and hence, because we recognise the character of the latter half of the proposition, we shall at all times be ready to reconsider it. This is what I mean by the scientific aspect of truthfulness; namely, that only by the greatest circumspection of speech can we accustom ourselves habitually to keep apart in our minds the known and the conjectural, and to assign their respective places and limits to each. It is only by so keeping them apart that we retain consciousness of the limitations of our knowledge, or that we become properly desirous to extend that knowledge into the regions which are still circumscribed by conjecture. If we suffer ourselves to speak of the two things in similar language, and if we thus forget or neglect the difference between them, we shall run great risk of insensibly placing the conjecture upon the same level with the fact, sometimes by attaching too much importance to the former, but often by attaching too little importance to the latter, and in either way we shall be likely to sink into a state of satisfaction with imperfect knowledge. We shall, indeed, cease to realise that it is imperfect, and may thus come to accept the most baseless hypotheses as if they were truths. Against this danger, what is popularly called education, as it is commonly conducted, affords scarcely any security; and thus it is that we see, in the present day, such a frequent abandonment of truth by many of those who would at first sight seem likely to adhere to it. People become unconscious of the difference between truth and falsehood, as a natural result of the practice of uttering one as if it were the other, of the practice of repeating assertions, surmises, and conjectures in phraseology which would only be appropriate in relation to facts. They insensibly lose sight of a difference which their words never bring into prominence; and, by thus forgetting the distinctive characteristics of truth, they prepare themselves to give credence to any fool's story which may be laid before them.

It is obvious that the definition of truth which I have laid down will exclude a large number of propositions which are firmly believed by many people, but which do not admit of demonstration. It is much to be regretted, in my judgment, that many ministers of religion, of all denominations, have accustomed themselves habitually to speak of

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