

applied to physiological research; and on the tendency of physical knowledge in general.

Chemistry, as we pointed out in the introduction to this treatise, forms the connecting link between that kind of knowledge which is founded on quantity; and those kinds of knowledge which rest solely on experience. All our experimental knowledge that is not chemical; for instance, all physiology relative to the phenomena of life, is wholly removed from the logic of quantity, and depends entirely on observation. Now so far as the logic of quantity is applicable; so far are we certain of our conclusions; as certain at least as we are of our own existence, or that we see and hear. But when this logic cannot be applied; our conclusions are no longer such as *must* be—no longer follow from our premises as a necessary consequence; but are only, for the most part, such as *may* be; that is to say, have no more than that degree of probability, which arises from the evidence we have of the truth of the phenomena or events, forming our premises.

In all knowledge depending on mere observation or experiment; what we know, is grounded on our own observation and experience, or on the observation and experience of others. What we ourselves observe, we too often observe very imperfectly; or do not understand, when observed. But phenomena or events, the know-