

renheit's thermometer below the zero of that scale. No animal or vegetable could resist such a frost for an hour, any more than it could live for an hour in boiling water. Such a frost exists, no doubt, over the dark half of the moon, which has no atmosphere, neither air nor vapour, and in all probability quite as violent an extreme of heat, a boiling temperature at least, over the bright half; so that we may pretty well make up our minds as to that half of the moon at least which we see, being uninhabited; while on the other hand, if it would not lead too far away from our immediate subject, I think it might be shown on admissible principles, that Venus and Mercury, in spite of their nearness to the sun, and possibly also Jupiter and Saturn, in spite of their remoteness, *may* have climates in which animal and vegetable life such as we see them here, might be maintained.

(3.) But it is with the sun itself that we are now concerned. What I am going to say about the sun will consist of a series of statements so enormous in all their proportions, that I dare say, before I have done, some of my hearers will almost think me mad, or intending to palm on them a string of rhodomontades, like some of the mythical stories of the Hindùs. And yet there is nothing more certain in modern science than the truth of some of the most extravagant of these statements; and, wild as they may seem to those who for the first time hear them, they appear not only not extravagant, but actually dwarfed into littleness by the still vaster revelations of that science respecting the scale of the visible universe; in every part of which when we