

in their present form; why the properties which matter actually possesses were established and bestowed and bestowed upon it? We have already attempted, in a previous part of this work, to point out some of the advantages which are secured by the existing laws of heat, light and moisture. Can we, in the same manner, point out the benefits which arise from the present constitution of those laws of matter which are mainly concerned in the production of cosmical phenomena?

It will readily be perceived that the discussion of this point must necessarily require some effort of abstract thought. The laws and properties of which we have here to speak, the laws of motion and the universal properties of matter, are so closely interwoven with our conceptions of the external world, that we have great difficulty in conceiving them not to exist, or to exist other than they are. When we press or lift a stone, we can hardly imagine that it could, by possibility, do otherwise than resist our effort by its hardness and by its heaviness, qualities so familiar to us: when we throw it, it seems inevitable that its motion should depend on the impulse we give, just as we find that it invariably does.

Nor is it easy to say how far it is really possible to suppose the fundamental attributes of matter to be different from what they are. If we, in our thoughts, attempt to divest matter of its powers of resisting and moving, it ceases to be matter, according to our conceptions, and we can no longer reason upon it with any distinctness. And yet it is certain that we can conceive the laws of hardness and weight and motion to be quite different from what they are, and can point out some of the consequences which would result from such difference. The properties of matter, even the most fundamental and universal ones, do not obtain by any absolute necessity, resembling that which belongs to the properties of geometry. A line touching a circle is *necessarily* perpendicular to a line drawn to the centre through the point touch-