

in what manner, or by what mechanism, they are propagated from one body to another; and how their mutual interconversion is effected. In referring them to the action of dynamical force upon matter, and in getting rid of the "imponderables" (other than the luminiferous ether) we are at length fairly entered on the construction of a *theory* of their phænomena, in what, as above remarked, must be considered the true acceptance of that term in physics: and once satisfied that dynamical force itself is a phænomenon *sui generis*; that it is not a result of collision—an *educt* from the duality *Inertia* and *Motion*;—one of those correlatives, in short, to which the epithet "Physical forces" has of late been so generally, and, in my opinion, so very improperly applied, we have reached the point where theory ends and speculation begins,—where we cease to inquire into the *causes* of phænomena, and direct our consideration thenceforward to their *reasons*.

(12.) The universe presents us with an assemblage of phænomena, physical, vital, and intellectual—the connecting link between the worlds of intellect and matter being that of organized vitality, occupying the whole domain of animal and vegetable life, throughout which, in some way inscrutable to us, movements among the molecules of matter are originated of such a character as apparently to bring them under the control of an agency other than physical,* superseding the ordinary laws

* Take for instance the formative *nisus*, which determines the production of a supernumerary finger in the human hand. Here is no gradual change from generation to generation, no first develop-