direction, and impinging upon the material atoms of bodies; as a mode of accounting for gravitation, is too grotesque to need serious consideration; and besides, will render no account of the phænomenon of elasticity. Besides this, I am not aware of any other attempt to embody in a tangible form the notion of a substitute for the conception of dynamical force arising out of the elementary conceptions of motion and inertia. There is a tendency indeed, of late apparent, to attribute the elastic pressure of a gas on its containing envelope, as due to the collisive shock of its particles conceived as existing in a continual state of vibration, or of circulation round each other. But the maintenance of such vibrations or revolutions involves the supposition of inter-molecular coercive forces, and is not, therefore, to be classed with such attempts.

(9.) If it be true, then, that the conception of FORCE as the originator of motion in matter without bodily contact, or the intervention of any intermedium, is essential to a right interpretation of physical phænomena; and if it be equally so, on the other hand, that its exertion makes itself manifest to our personal consciousness by that peculiar sensation of *effort* which is not without its analogue in purely intellectual acts of the mind; it comes, not unnaturally, to be regarded as affording a point of contact, a connecting link between these two great departments of being—between mind and matter—the one as its originator, the other as its recipient. The control we possess over the external world we are sure must arise from a capacity somehow inherent in the intellectual part of our nature, to originate or call into action

geology.19thcenturyscience.org/books/1867-Herschel-Lectures/README