

reasons of a far more refined and comprehensive kind than we can distinctly apprehend.

4. But before quitting this subject we may offer a few further observations on the question, whether gravitation and the law of gravitation be *necessary* attributes of matter. We have spoken of the selection of this law, but is it selected? Could it have been otherwise? Is not the force of attraction a necessary consequence of the fundamental properties of matter?

This is a question which has been much agitated among the followers of Newton. Some have maintained, as Cotes, that gravity is an inherent property of all matter; others, with Newton himself, have considered it as an appendage to the essential qualities of matter, and have proposed hypotheses to account for the mode in which its effects are produced.

The result of all that can be said on the subject appears to be this: that no one can demonstrate the possibility of deducing gravity from the acknowledged fundamental properties of matter: and that no philosopher asserts, that matter has been found to exist, which was destitute of gravity. It is a property which we have no right to call *necessary* to matter, but every reason to suppose *universal*.

If we could show gravity to be a necessary consequence of those properties which we adopt as essential to our notion of matter, (extension, solidity, mobility, inertia) we might then call it also one of the essential properties. But no one probably will assert that this is the case. Its universality is a fact of observation merely. How then can a property,—in its existence so needful for the support of the universe, in its laws so well adapted to the purposes of creation,—how came it to be thus universal? Its being found every where is necessary for its uses; but this is so far from being a sufficient explanation of its existence, that it is an additional fact to be explained. We have here, then, an agency most