

finite minds take cognizance—that our process is to collect laws from observed facts, and then to trace out the remote consequences of those laws: and that consequently our results, whether accounting for or predicting phenomena apparent to us, may be depended upon, however metaphysical speculations might interfere with the objective correctness of our assertions. This answer we clearly cannot make if our belief of the inertia of matter in any way depends upon our persuasion that “space is infinite in extent and every where identical.” Again, if the principle in question is to be established by an appeal to *experience*, it must be made in a much more guarded manner. When we speak of a body passing from a state of rest to a state of motion, both the rest and the motion must be *relative*: and it should at least be pointed out that we are obliged to draw an inference concerning a particle *absolutely* at rest, from the examination of a body *relatively* at rest. And when we come to consider the case of a body passing from a state of relative rest to one of relative motion, it is necessary to guard our language by another restriction, which may tend to increase the embarrassment of the learner. The *cause* to which the change of state is to be referred may be one applied either to the body observed or to the system relatively to which its state of rest or motion is estimated. A carriage is suddenly stopped and a person riding in it is, to use the popular language, thrown suddenly forward. He passes from a state of rest to a state of motion with regard to the carriage, exactly because *no* force is applied to him, and the case is an illustration, not of the statical but of the dynamical aspect of the principle of inertia, viz., that the body once in motion will continue to move unless some external cause be applied to stop the motion. So that if the statical principle of inertia is to be established by an appeal to experiment it must be in language somewhat more extended than that used by our Author, unless, indeed, his book is intended merely as a peg to hang lectures on. Before quitting this point we would state that our own impression is in favor of treating these fundamental principles, in the case of beginners, not exactly as axioms, but as facts which the learner must for the time take on trust. It is not until the mind has become familiar with the ideas of force, and of rest and motion, absolute and relative, that, as a general rule, it can take in the train of thought upon which such principles depend. It seems to us to be not only the easier but the safer course (and we would suggest this as a practical consideration to those of our readers who are engaged in teaching) to assume, and