

THE  
PHILOSOPHICAL REVIEW.

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ANOTHER FORM OF THE ONTOLOGICAL PROOF.

IF we seek evidence on the question, whether the universe has a Divine ruler, we naturally begin by asking: What are the fundamental traits of that universe, as revealed to human observation?

Fifty years ago, the assertion would have been fairly unanimous, that nature is governed by exact and inviolable law. So sweeping a statement had of course not been proved; but it had been suggested by the discoveries of Galileo and Newton, and every advance in knowledge seemed to strengthen its claims. Where empirical confirmation was lacking, its intrinsic beauty as an ideal filled the gap, until it was accepted as an established principle, to doubt which was to hark back to superstition. But in the second half of the nineteenth century a hitherto unrecognized type of phenomenon, not exactly within the purview of such a principle, engaged the attention of physicists. It was found that many of the properties of gases can be explained if we assume that the particles possess among them all velocities in all directions. We are to suppose all possible combinations of forces that could act on a particle, realized with approximately equal frequency throughout the collection. If we were to pass from particle to particle, we should find the utmost irregularity of speed and path; yet on the whole a certain mean velocity must very decidedly prevail, and the gas display a practically uniform temperature and pressure in all its parts. Particles that move much faster or slower than the mean velocity will be relatively few; and the greater the deviation, the fewer they will