

III.

RETROSPECT;

OR,

HOW THE STORY OF THE WORLD IMPRESSES US.

L. THE ABYSS OF CENTURIES.

THE AGE OF THE WORLD.

WE stand finally at the end of the world's long history. From fire-mist to man—we have flitted in thought, and have taken some note of the grand events of each æon. We pause now, to indulge in reflections. How inexpressibly magnificent a career! How inconceivably vast the stretches of space and time which it spans! How many centuries must have been swallowed up in the stately transformations of the original nebula! There are other nebulæ in our modern universe, and we gaze on them from year to year, and fail to note the progress of any change. But they are changing before our eyes; and we are beginning to record some slight variations from their first observed aspects. How long a time is required for one revolution of a mass of nebular vapor a hundred billions of miles in diameter, who can calculate? Who guess? How long to reach the ring-making rate of rotation—how long to throw off a system of planets and condense to a sun?

Yet there are some data for a calculation. I might even lead you to understand what are the grounds of a mathematical estimate, but it would too much lengthen this Talk. Professor Newcomb has calculated that the heat evolved by the contraction of the matter of the sun from an infinite distance would last only eighteen million years. He assumes the sun's