

in truth, is nothing else than the former energy under a different form.

It, then, these principles are applied with respect to the sun, as a source of heat, it is quite evident that the cause of solar heat will arise from a contraction of the solar molecules, and, consequently, of the entire body itself. For if it be supposed that, at one time, the sun was far larger than it is at present, that it extended far beyond its present limits, and that it has been undergoing a slow contraction during the countless ages allowed the period of creation, then, its affording heat is easily accounted for. Its molecular constituents were, undoubtedly, widely separated at first; but after large masses had been cast off to form the several planets now existing, the remaining portions were, with less difficulty, drawn nearer the centre, and accordingly nearer to each other. The energy required at first to keep them at a comparatively great distance apart, was there no longer in requisition, and made itself visible under the form of heat.

It may be argued, then, *a posteriori*, that as solar heat cannot be accounted for either by electricity, meteoric showers, or combustion, and as there must still exist a reason for it, the most probable conclusion to be arrived at is that contraction of the sun can alone be the source of its warmth.

This mode, then, of explaining the problem of the sun's undiminished heat, is not only in perfect harmony with the Nebular Hypothesis, but fully bears out its leading tenets. For, if the sun is undergoing contraction at the present time, there is no reason to doubt that such an action has been constantly maintained since the very beginning, so that the further back we go, the larger we must find the sun to have been, and we must finally reach a time when the solar sphere occupied the entire space twixt our earth and its present location. And, if we proceed further, we must necessarily arrive at a period when the sun extended far be-

yond the most distant of the known planets.

Other arguments might, indeed, be adduced in support of the Nebular Hypothesis, but the foregoing are deemed sufficient in the present exposition of the theory. They suffice to show that Laplace's supposition is no mere arbitrary figment, but that on the contrary, it is well founded upon many extraordinary coincidences which admirably concur to render the whole theoretical fabric well worthy of consideration. The theory is strictly evolutionary, and, as such, gave birth to Darwin's far bolder, but far less probable hypothesis. While Laplace's supposition meets no serious objection, the Darwinian doctrine clashes with the most evident truths of christian philosophy. Alterations of matter can be easily understood, when the changes do not exceed the power or outstep the limits of the material order; but, when that change, which matter undergoes in its passage from an inanimate mass to a living body, is in question, then, there can be no doubt of the absurdity of attributing it to evolution. For, as water would never become fire, no matter how high or low its temperature might become, so, inanimate matter could never reach animation by any progressive process, so contrary are life and death. Between these latter there is no succession of steps, no more than there is between good and evil; for what is not alive is dead. Progress can, indeed, be made in every order, but that by a programme peculiar to any order, its transformisms should step from one order to another, cannot be admitted, nor does Laplace's evolution consist in such a progression. It is the evolution of the solar system from a massive globe of incandescent matter, but it does not reach anything higher than the material order. Hence, Laplace's theory conforms to reason; it is not involved in a tangled skein of absurdities and contradictions; and, sustained as it is by many facts otherwise unexplainable, should not be rejected.

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