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A DYNAMICAL HYPOTHESIS OF INHERITANCE (II.).

THE egg cannot be isotropic—as follows from observation as well as experiment—in the sense in which the word isotropy is used by physicists of repute. If the egg is a dynamical system it cannot be isotropic or absolutely the same throughout, or along every possible radius from its center, as is proved by its reactions in respect to its sur-

roundings. It may, however, be potentially æolotropic in directions parallel to a certain axis, as experiment has shown by separating the cells that result from segmentation of the egg. Such fragments, if in excess of a certain minimal size, will undergo a larval development of apparently normal character. But this result is fatal to the ordinary corpuscular hypotheses, according to which every future part is represented in the chromosomes by certain hypothetical corpuscular germs. It has, indeed, been shown by Loeb that larval development of portions of an egg can go on whether the divisions be equal or unequal or in any radius. This seems to indicate that an egg is not necessarily isotropic in the undivided state, but that the moment that separation of its mass has occurred there is a readjustment of the relations and potentialities of its molecules simulating that of the original entire egg. The very definition of isotropy, as given by one author (Lord Kelvin), states that it may be assumed only of a spherical mass of matter whose properties are absolutely the same along every one of the infinite number of radii drawn from its center outward, and, as tested by any means whatsoever, shows that such a condition cannot be assumed, on the ground of observation alone, of any known egg. The condition of the egg we must therefore also assume from its known properties to be æolotropic, or different along every one of the