

tion of formative laws acting for a purpose. They do not become more intelligible by the fact that the regeneration of mutilated crystals, observed by Pasteur and others, points to similar processes in inanimate nature. Also the ability of organisms to perfect themselves by exercise has not found sufficient appreciation with regard to natural selection.”¹

To sum up, it appears certain that at least in a few instances, and possibly quite generally, purposeful tendencies exist in the organism which seem to be inexplicable by natural selection or any other existing mechanistic hypothesis. It is not too much to hope that a scientific explanation of these phenomena in whole or in part may some day be found; but meantime they constitute the natural subject of vitalistic speculation. A field remains, though limited, where the physical scientist cannot yet successfully subdue the vitalist, however strong his conviction of the errors of vitalism.²

¹ Du Bois-Reymond, “Reden,” Vol. I, p. 226.

² The indeterminism which is based uniquely upon belief in freedom of the will appears to be foreign to the present discussion. It is, accordingly, entirely disregarded in the following considerations. Hence the conclusions of the present inquiry are not to be taken as cognate with such metaphysical hypotheses as the indeterminism of Kant and Lotze.