

while my hypothesis of Perigenesis applies the mechanical principle of transmitted motion to the molecules of plasma or plastidules, and assumes that their tendency differs owing to adaptation; and whereas, further, Naegeli, in a purely teleological manner, imagines some internal, unknown tendency of perfecting in his idioplasm-molecules or mi-cells, and assumes these to be connected in strings forming a network;—Weismann finds that the actual cause of inheritance lies in the *continuity of the germ-plasma*, and the cause of the variation to lie in the mixing of the two different germ-plasmas, by sexual propagation. He assumes that there exist in an organism two completely distinct species of plasma—the germ-plasma, as the propagating substance, and the somatic plasma, as the substance out of which all the tissues of the body become developed (this distinction was assumed at an earlier date by Rauber, who speaks of the germinal part and the personal part of the individual). Weismann further maintains that in every act of propagation a portion of the parental germ-plasma is not used for the construction of the filial organism, but is left behind unchanged, and used for the formation of the germ-cells for the following generation; that inheritance depends upon this uninterrupted *continuity* of the germ-plasma through a series of generations; on the other hand, that adaptation or variation depends upon the individual difference of the two species of germ-plasmas (of the female egg-plasma and the male sperm-plasma), which become mingled in the process of sexual propagation. Weismann regards it as an important sequence of his theory that an acquired quality cannot be transmitted. He, therefore, rejects the most essential principle of the earlier, Lamarckian,