

The applications of this, in one sense, very satisfactory theory to the phenomena of atavism, and reappearance of similar characters at similar times, do not concern us in this general survey. Its great defect, obvious, of course, to its author, was its entirely hypothetical character. No one has ever observed any gemmules; their migration, collection, and development are equally hypothetical.

Another theory, that of Jaeger, is somewhat difficult to summarize, partly because of its technical character, partly because the author does not appear to have been quite consistent. The main points, under the present section, are the following:—

(1) Each organ and tissue contains, along with the molecules of its albumen, a specific "scent-and-flavour-stuff".

(2) In hunger and similar experience the albumen liberates the "stuffs", which then penetrate through the body as fatty acids, ethers, &c.

(3) These are particularly attracted to the reproductive cells, and may be said to specialize the germinal protoplasm.

From experiments on the transfusion of blood, Galton was led to conclude that "the doctrine of pangenesis, pure and simple, is incorrect". But he did more than urge serious objections against Darwin's theory; he formulated one of his own, to which subsequent investigators have rarely done sufficient justice. The more important part of Galton's theory will be discussed in its proper place; it is not included in the series of pangeneitic hypotheses. Galton is, in fact, one of the numerous biologists who have *suggested* the continuity of the germinal protoplasm. He is included at this stage, however, because he admitted as a subsidiary hypothesis a limited amount of pangenesis. To account for those cases which suggest that characters acquired by the individual parent are "faintly heritable", Galton supposed that "each cell may throw off a few germs that find their way into the circulation, and have thereby a chance of occasionally finding their way to the sexual elements, and of becoming naturalized among them".