

What, then, is the explanation of this so-called "paralytic secretion" of saliva? The evidence that the various functions of the body, as a whole, are discharged as individual acts, or series of acts, correlated to other functions has been abundantly shown; and looking at the matter closely, it must seem unreasonable to suppose that this would be the case if there was not a close supervision by the nervous system over even the details of the processes. We should ask that the contrary be proved rather than that the burthen of proof should rest on the other side. Let us assume that such is the case; that the entire behavior of every cell of the body is directly or indirectly controlled by the nervous system in the higher animals, especially mammals, and ask, What facts, if any, are opposed to such a view?

We must suppose that a secretory cell is one that has been, in the course of evolution, specialized for this end. Whatever may have been the case with protoplasm in its unspecialized form, it has been shown that gland cells can secrete independently of blood supply, when the nerves going to the gland are stimulated. Now, if these cells have learned, in the course of evolution, to secrete, then, in order that they shall remain natural—not degenerate—they must, of necessity, secrete, which means that they must be the subject of a series of metabolic processes, the final of which only is expulsion of formed products. Too much attention was at one time directed to the latter. It was forgotten, or, rather, perhaps, unknown, that the so-called "secretion" was only the last of a long series of acts of the cell. True, when the cells are left to themselves, when no influences reach them from the stimulating nervous centres, their metabolism does not at once cease. As we view it, they *revert* to an original ancestral state when they performed their work, lived their peculiar individual life as less specialized forms, wholly or partially independent of a nervous system. But such divorced cells fail; they do not produce normal saliva: their molecular condition goes wrong at once, and this is soon followed by departures visible by means of the microscope. But just as secretion is usually accompanied by excess of blood, so most functional conditions, if not all, demand an unusual supply of pabulum. This