

microscopic minuteness, but there is no foundation for any such hypothesis. \*

These are the modes in which the Hydra naturally multiplies its kind, but it can be increased, as already hinted, by artificial sections of the body, in the same manner that a perennial plant can be by slips and shoots. If the body is halved in any direction, each half in a short time grows up a perfect Hydra; if it is cut into four or eight, or even minced into forty pieces, † each continues alive, and develops a new animal, which is itself capable of being multiplied in the same extraordinary manner. If the section is made lengthways, so as to divide the body into two or more slips [connected merely by the tail, they are speedily resoldered, like some heroes of fairy tale, into one perfect whole; or if the pieces are kept asunder, each will become a polype, and thus we may have two or several polypes with only one tail between them; but if the sections be made in the contrary direction—from the tail towards the tentacula—you produce a monster with two or more bodies and one head. If the tentacula,—the organs by which they take their prey, and on which their existence might seem to depend,—are cut away, they are reproduced, and the lopt off parts remain not long without a new body: if only two or three tentacula are embraced in the section, the result is the same; and a single tentaculum will serve for the evolution of a complete creature. ‡ When a piece is cut out of the body the wound speedily heals, and, as if excited by the stimulus of the knife, young polypes sprout from the wound more abundantly, and in preference to unscarred parts; when a polype is introduced by the tail into another's body, the two unite and form one individual; and when a head is lopt

\* Trembley, Mem. 196—7.

† “ J'ai ouvert sur ma main un Polype, je l'ai étendu, et j'ai coupé en tout sens la peau simple qu'il formoit, je l'ai réduit en petits morceaux, je l'ai en quelque manière haché. Ces petits morceaux de peau, tant ceux qui avoient des bras, que ceux qui n'en avoient point, sont devenus des Polypes parfaits.”—Trembley, Mem. 248. Romé de Lisle attempted to lessen the remarkableness and singularity of this fact by supposing that the Hydra was a colony of minute animalcules held together in a moveable polypidom, represented by the thin outer cuticle, and of course that this cutting and division only set free a number of independent entire beings. The hypothesis is a bold one, but has nothing in the way of observation to support it. See Blainv. Actinol. p. 563.

‡ From the experiments of Trembley, (Mem. 235,) of a correspondent of Baker's and of Baker himself, it would seem that a tentaculum cannot produce a new body unless a part of the head or body is removed with it (Hist. 193—4.); but other experimentalists are said to have succeeded when this was not done. For the particulars stated in the text, and others equally incredible, the reader may consult the works of Trembley and Baker, *passim*.