After the age of Bichat, and largely through his influence,---i.e., through the cultivation of anatomical researches,-the pendulum swung in the direction of proving more and more the parallelism of organic and inorganic processes. It reached its maximum swing that direction about the second third of the in Since then it appears to have again returned century. in the opposite direction. Let us follow this movement somewhat more closely, and see how the stronghold in which the innermost secret of life is intrenched has been attacked from all sides by all the processes and methods of the mechanical, physical, and chemical sciences, and how it has persistently refused to surrender.<sup>1</sup> There was a time when the leading repre-

duquel les planètes suivent dans | l'espace des courbes savantes sans heurter les astres qui fournissent d'autres carrières, sans troubler l'harmonie réglée par le divin géomètre." Another property which was once thought peculiar to and characteristic of living organisms, that of regeneration after mutilation, of "redintegration," is now known to exist also in lifeless structures : "M. Pasteur a signalé des faits de cicatrisation, de rédintégration cristalline, qui méritent toute notre attention. . . . Ces faits . . . se rapprochent complètement de ceux que présentent les êtres vivants lorsqu'on leur fait une plaie plus ou moins profonde "(ibid., p. 173). <sup>1</sup> Bischoff, in his Eloge of Liebig, who remained all his life a vitalist, says (p. 57): "We must, indeed, as

in the exact sciences, guard against letting a mere word step in as an explanation, wherever our insight into the conditioning causes has been insufficient, as was indeed repeatedly done formerly, when a word was considered to be a suffi-

cient reason. We must consider it to be the continual duty of organic science to wage, as it were, a constant war against this organic force. and to dispute its territory wheresoever possible. If, for example, a talent like his succeeds in deducing many morphological traits of the higher animal organisms from the mechanical conditions of growth in the embryo, &c., we shall grate-fully accept the proof; but we must all the while not forget to ask the further question, by whom these mechanical conditions have been brought together. If it be further true that the cells of the embryo perform the most extraordinary wanderings, in order to arrauge themselves into the various tissues and organs of the animal body, we shall welcome this as a very interesting and remarkable phenomenon in the obscure region of development; but we have received no light on the question who acts as guide to the wandering cells. Similarly, if chemistry should some day succeed in forming albumen ar-