ART. IV.—*On the Investigation of Instinctive Movements.* By WILLIAM MURRAY, M.D., &c. (Read at the Physiological Section, British Association, 1863.) pp. 13.

THIS is an ingenious attempt to account for instincts by resolving all instinctive actions into volitional, emotional, and nervous actions, with a source in special nervous centres. The author holds as a principle that life is not an entity, but the result of physical and chemical forces only.

Further, he holds, as regards instinctive movements, that those of lower animals do not differ from those of man in *kind*, but in degree. At the sametime, he allows that "in man the volitional, as representing reason, abstract deduction and experience, is immensely superior to the others."

He asks the question—"Is there in animals an intelligence?" And answers it—"We strongly incline to the belief that there is, and that it varies in its power with the kind of animal, and manifests its existence by the extent to which it controls the emotional, or purely instinctive part of his actions." We take it for granted that he considers vital force the correlative of the other forces.

ART. V.—*On Human Entozoa: comprising the description of the different Species of Worms found in the Intestines and other parts of the Human Body, and the Pathology and Treatment of the various Affections produced by their presence.* By WILLIAM ABBOTTS SMITH, M.D., M.R.C.P. Lond.—London, 1863. pp. 251.

WE learn from the preface to this work, that its author, in the arrangements of his materials, has followed the plan adopted by Dr. Davaine, in his more extensive treatise on the same subjects, and that much of the information he offers is derived from the same source, of which the numerous quotations afford ample proof. But as Dr. Abbotts Smith's acknowledgments are commensurate and well expressed, this indebtedness no wise detracts from his credit, and we are sure that it enhances much the value of the book.

The subject—entozoa—we need hardly say, has its special interests; how remarkable that there should be animals, and these so numerous, the choice, and indeed the only habitats of which are the organs of other animals, higher in the scale of organization; how remarkable further, the many kinds of these parasites, including in their number some of the lowest forms of life, such as the microscopic protozoa, the vibriones and bacteria, with others as conspicuous for their magnitude and well-defined structure, such as the teniæ and many of the nematoidea; and further still, how remarkable are they for the mystery in which their origin is enveloped, and for the metamorphoses and changes of abode to which they are subject.

If interesting zoologically considered, how much more so are they in relation to pathology in the maladies they occasion, and these in no

few instances fatal in their consequences. We are assured on good authority, that as many as a million of sheep and lambs perish yearly in this country from the rot, a disease produced by the liver-fluke, a species of distomum; and that three per cent. of the pigs killed in Ireland are "measly"—that is, are afflicted with a parasite, a cysticercus, rendering their flesh unwholesome, and capable, there is reason to infer, of giving rise to the tape-worm in man. And though less formidable and less frequent in man, they are only so in degree, and that occasionally inconsiderable, there being countries the natives of which are nearly as much plagued by a certain kind of them (*hydatids* and *tænia solium*) as the sheep in England and the swine in Ireland.¹

Interesting and highly important as the subject is, viewed as a study it is not without its difficulties, especially when considered medically: the symptoms which worms produce being often obscure and varying much according to the kind of parasite, the organ infested, and the age and condition of the patient. These difficulties, so well adapted for differential diagnosis, are peculiarly fit to train the mind of the student, and test his ability. On this account, we think, helminthology is deserving of more attention in a course of medical instruction than is commonly bestowed on it.

The work before us is a good compendium; its author has brought together much valuable and curious information derived from various sources, though mainly from the French treatise already mentioned. It is divided into three parts. The first part contains a synopsis of the entozoa which are found in man, comprising five classes: 1, protozoa, or infusoria; 2, cestoidæa, or tape-worms; 3, trematoda, or sucker-worms; 4, nematoïdea, or thread-worms; 5, acanthotheca, or spinous-worms; with their sub-classes, species, or varieties, all of which are well-defined in as many chapters. The second part treats of the pathology and treatment of human entozoa, in thirty chapters—a superfluous number, as we think, leading to unnecessary repetition, without compensation in clearness. The third part is on special therapeutics. A glossary of the principal terms employed in the synopsis is added, and also an index. The woodcuts by which the descriptions of forms are illustrated, are well executed.

The opinion we have formed of the work, as a whole, is so favourable that we have no hesitation in recommending it as deserving of a place in every medical library.

ART. VI.—*The Quarterly Journal of Science.* No. 1, January, 1864.—London. pp. 210.

JUDGING from the published list of contributors, and from the contents of the first number of this Journal, we cannot but augur favourably of it. In an introduction by its editors, occupying seventeen pages, its design is amply explained—and that a very comprehensive one,

¹ We hope shortly to be able to place before our readers all that has been made out with regard to the prevalence of the *Trichinæ* in the human body as an element of disease.