

have remained unassailable so long as the question was a professional one; and the discussion is open to those who possess no peculiar knowledge of anatomy. We shall, therefore, venture to say a few words upon it.

*Sect. 2.—Estimate of the Doctrine of Unity of Plan.*

It has been so often repeated, and so generally allowed in modern times, that Final Causes ought not to be made our guides in natural philosophy, that a prejudice has been established against the introduction of any views to which this designation can be applied, into physical speculations. Yet, in fact, the assumption of an end or purpose in the structure of organized beings, appears to be an intellectual habit which no efforts can cast off. It has prevailed from the earliest to the latest ages of zoological research; appears to be fastened upon us alike by our ignorance and our knowledge; and has been formally accepted by so many great anatomists, that we cannot feel any scruple in believing the rejection of it to be the superstition of a false philosophy, and a result of the exaggeration of other principles which are supposed capable of superseding its use. And the doctrine of unity of plan of all animals, and the other principles associated with this doctrine, so far as they exclude the conviction of an intelligible scheme and a discoverable end, in the organization of animals, appear to be utterly erroneous. I will offer a few reasons for an opinion which may appear presumptuous in a writer who has only a general knowledge of the subject.

1. In the first place, it appears to me that the argumentation on the case in question, the *Sepia*, does by no means turn out to the advantage of the new hypothesis. The arguments in support of the hypothetical view of the structure of this mollusc were, that by this view the relative position of the parts was explained, and confirmations which had appeared altogether anomalous, were reduced to rule; for example, the beak, which had been supposed to be in a position the reverse of all other beaks, was shown, by the assumed posture, to have its upper mandible longer than the lower, and thus to be regularly placed. "But," says Cuvier,<sup>18</sup> "supposing the posture, in order that the side on which the funnel of the sepia is folded should be the back of the animal, considered as similar to a vertebrate, the brain with re-

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<sup>18</sup> *G. S. H. Phil. Zool.* p. 70.