

THE ATTITUDE OF ST. THOMAS TO NATURAL SCIENCE. By F. Sherwood Taylor, M.A., D.Phil. (Blackfriars; The Aquinas Papers No. 3; 9 diagrams; 2s.).

The frontier between philosophy and natural science is like the Gran Chaco between Bolivia and Paraguay, a swampy undergrowth that closes up behind the explorer, a tangled tract only sketchily brushed in by the cartographer. The region has been claimed by the fiercer Paraguayans, or scientists, without the resources to exploit it; they win the wars, but the Bolivians, or philosophers, remain secure in their uplands; more than most neighbours are they complementary. Here is a draft that will help them to work together.

Particularly valuable is the first half, on the status of natural science. The second half, on the structure, stuff, operation, and purpose of the physical universe, is mostly of more antiquarian interest, if we leave aside the doctrines of hylemorphism and teleology. It is in the grammar of science, and in the free yet organic society of the sciences, that we need to go to Aquinas for instruction. The anatomical pattern of the world was among his interests, he was a shrewd observer, but he was not a keen naturalist like his masters, Aristotle and Albert. Content to repeat their findings, he was out to fill in the general philosophical background. This was seen through the foreground facts of instructed and perennial human experience; it was neither a projection of pure thought nor a reference committee to one provisional fashion of scientific research.

Despite his copious commentaries on the subject of physics, Aquinas does not treat of natural science in the modern sense—the rising spiral of carefully observed facts, many of them arbitrarily selected and defined in terms of the instrument of measurement, their transcription into mathematical relations, the rationalization of the resulting laws by inspired guesses, which disclose fresh facts and, having served their turn, are replaced by new hypotheses. His preliminary distinction lies between speculative and practical, not between deductive and experimental. This is in keeping with his denial of the cleft of mind and matter which has split the sciences since the days of Descartes. *Scientia* is a speculative habit, bearing on the intelligible reasons or forms of things, and consequently *scientia naturalis*, though not a department of metaphysics despite its employment of metaphysical conceptions, is what is nowadays commonly called natural philosophy. Nevertheless it cannot be insulated from the management of our mental and physical environment, which is the immediate business of art, the making of an *opus aliquod*, rather than of science, the contemplation of demonstrated reasons.

Here enters natural science as we know it. The scientist is impelled to shape a process; to measure, compute, and construct. A philosopher must practice the art of logic, a natural philosopher

must be an empirical physicist. Science should become practical, not in the sense of Nazi science, not necessarily for human comfort, but at least as serving to advance our knowledge. Dr. Sherwood Taylor is the first writer I am aware of who has seized upon the importance of Aquinas's references to scientific art. His considerable paper will, I hope, be expanded into a book, of which one chapter might well be a study of the *locus classicus* he quotes on the classification of the sciences, which is tucked away in one of the least known of his theological works, Question V of the commentary on Boethius *de Trinitate*. It is characteristic of Aquinas often to be most informative in his asides.

E.R.A.

IMMATERIALISM. By A. A. Luce. From the Proceedings of the British Academy. Vol. XXX. (Oxford University Press; 2s.).

FREE WILL AND SCIENCE. By J K. Heydon. (Obtainable from the author, Gibraltar Cottage, The Common, Tunbridge Wells; 2s. 6d. post free.).

The Henriette Hertz Philosophical Lecture for 1944, by Prof. Luce, is mainly an exposition and defence of Berkeley's immaterialism. The choice of subject is not surprising, in view of the Professor's familiarity with Berkeley's thought, of which he is perhaps the leading contemporary exponent; and what he has to say here will be of great help in the understanding of that most misunderstood of philosophers. This is especially true regarding Berkeley's *esse est percipi*, and his doctrine of cause. The lecture ends with a brief sketch of a positive philosophy of immaterialism, a philosophy which the lecturer claims to be in keeping with the realist trend of modern thought. It would still seem difficult, however, for the immaterialist to avoid the accusation of idealism, so resented by Berkeley himself, and yet of which he never seems to have entirely acquitted himself.

With regard to the criticism of material substance, this is evidently based on the crude empiricist notion of an inert, inactive, propertyless 'something' underlying phenomena; a purely imaginative entity having nothing in common with the philosophical idea of *substantia* except the name. Berkeley may have had no difficulty in demolishing the 'matter' of Locke; indeed he was right in arguing that what was impermeable alike to sense and intellect could have no real existence. He was mistaken however in thinking that his arguments applied equally against the *τό ὑποκείμενον* of Aristotle or the *materia prima* of the scholastics. These conceptions are of an entirely different order, and Prof. Luce is therefore hardly justified in lumping them together with the 'colourless extension' of Descartes and the 'solid extension' of Locke as variants of the outworn and obsolescent concept of 'matter,' to be discarded from the technical vocabulary of the learned. Incidentally, the