

very compatible with an orthodox milieu by the middle of the second century.

It is precisely the question of the orthodoxy of its milieu which most affects the estimate of its value as a witness to normal Christian practice. It now seems clear that the *Didache* had some relation to the Montanist movement. But the absence of any reference to the Prophetesses and the conventionally orthodox character of its apocalypse renders it very improbable that it emanated from fully developed Montanism except as a deliberate forgery and it seems highly unlikely that a deliberate forgery should remain so colourless and so apparently ingenuous. It is possible, as Mr. Vokes suggests, that the *Didache* is the product of an early stage in Montanism. It is possible that it is related to some variant of *Ur-Montanism*, long forgotten. In either case it is impossible to dogmatise on its relationship to normal Church practice; the sources of Montanism are still too obscure. And its 'heterodoxy' has too often been over-stressed. At least to the reviewer, it would seem premature to assert that the *Didache* was never used as a normal Church Order in the Great Church. But it would now seem impossible to utilize it as an independent authority for normal Christian custom. This may seem a very negative result for the work of so many patristic scholars. But it is at least tenable that a negative result has always been the best evidence of positive scholarship.

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PHILOSOPHY OF SCIENCE

PHILOSOPHIE DE LA PHYSIQUE MODERNE. By Emile Rideau.
(Editions du Cerf; 7 frs.)

In view of the widespread belief that natural science stands in its own right as an alternative and more reliable road to truth than philosophy, considerable interest attaches to the treatment given it by the schools of *philosophia perennis*; yet so far they have produced only one full-scale work dealing with modern physics in its philosophical setting (namely, M. Maritain's *Degrees of Knowledge*). It is to be hoped that Professor Rideau's short, compact and non-technical book from the *Editions du Cerf* will help to bring before Thomists the need for further studies and for *vulgarisation*. It is not always realised by Thomists that physical science does not use, and is in seeming conflict with, the fundamental concepts of their philosophy: it has no place for the analogy of being, for potency and act, for the four

kinds of cause. It is important, therefore, that the true grounds of Thomist philosophy, the way in which it supplies the basis for natural science, and the reasons for the apparent divergence of the latter, should be set forth. In particular, it should be made clear that Thomist philosophy (unlike various modern systems) does not restrict itself to non-living nature, but rises to systematic treatment of living and intelligent beings, placing God at its apex and being permeated with the thought of His action; whence it is concluded that God's creation is subject to an order, upheld by Him, which is the foundation of all natural science. Modern physics, on the other hand, is restricted not only to the study of dead nature but to its measurable aspects; and this double abstraction defines its whole method. It is this restriction of physics to the measurable aspect of dead nature which is the root of its apparent divergence from Thomist philosophical principles, its neglect of substance and emphasis upon functional relations, and its emasculation of concepts such as space, time and determinism.

Professor Rideau's book contributes an admirable short account of the consequences for physics itself of this abstraction from all that is living and all that is not patient of metrical observation; and especially of the consequence that the use of mathematics has become integral to modern physics. He rejects the 'timorous positivism' which believed that physics is adequately defined as the empirical determination of laws by the method of concomitant variation, and emphasises that physics now aims at exhibiting these laws as mathematically deducible from an interpretatory scheme of physical laws and entities, which in a sense unifies them and constitutes an 'explication.' [La physique] s'efforce de relier *deductivement* les lois dans une organisation mathématique cohérente, and endeavours to represent its objects 'sous forme d'un système de symboles mathématiques logiquement ordonnés.' This mathematical element pervades modern physics and accordingly it must be content to symbolise causality by mathematical deducibility, while renouncing undue reification of these symbols and all connection with such unsuitable analogues as muscular force or vital energy. Professor Rideau illustrates this with a concise discussion of contemporary wave and corpuscle theories of matter and radiation. There are also useful sections on space and time as known to physics; on the extreme difficulty of determining physically what is a substance in dead nature; on the discontinuity in energy (and other variables) introduced by the quantum theory; and on 'determinism' in

physics, which after analysis he defines as the view that non-living nature is mathematically intelligible.

As we have said, Thomists will realise the limitations implicit in investigating only the quantitative accidents of dead matter, and will not be surprised that physics neglects the principles of Thomist philosophy; but Professor Rideau's interpretation of his exposé of the actual method and framework of physics is very different. He believes that natural science 'atteint peu à peu à l'essence même des choses et en dévoile le structure intime . . . prétend bien attendre l'être de la matière.' Accordingly he believes that we must adjust our fundamental philosophical concepts to modern discoveries about the true method of physics (pp. 34-5, 59-60, 81). He seems to hold that ontology must submit to the emasculation of its concepts for the sake of physics; for instance, that substance and causality have no meaning except in utilitarian contexts (pp. 19, 59, 60), because physics does not use these concepts. This is to make philosophy a commentary upon natural science instead of upon experience in its widest sense, and indeed Professor Rideau seems to be explicitly committed to this extraordinary view: 'La philosophie suppose la science et lui est postérieure . . . notre travail n'a été qu'un effort pour réviser les lois de la pensée et les adapter à la science moderne.' This summary dropping of substance and causality, which rest upon a synthetic philosophy which deals with God, intelligent beings, living beings, and not merely dead nature, is to us astounding; and, in view of Maritain's pioneer work on the relations of modern physics, philosophy of nature, and philosophy in Thomist terms, we can only regard it as unnecessary as well as misleading. The philosophical parts of the book rely largely upon Bergsonian lines of thought, which are perhaps responsible for lapses such as the above. This Bergsonian outlook also pervades the later chapters on the value of science and its relations with philosophy, poetry and art, and limits their scope perhaps unduly; none the less, it is a welcome novelty to have these subjects treated at all.

We wish, however, to express the greatest appreciation of the final pages on the Christian rôle of natural science. Professor Rideau pleads for the recognition of the evident Source of the harmony found even in dead nature, and insists on the total inclusion of the scientist and his work within the life of God. 'Or, c'est pourtant une amitié divine, un concours gracieux, qui les soutient dans leur tâche, celui de ce Verbe dont il est dit qu'il a créé toutes choses et qu'il illumine tout homme

venant en ce monde, de ce Rédempteur surtout qui, par les mystères de son Incarnation, de sa Mort et de sa Résurrection, est devenu le propriétaire et le Roi d'un univers, qui forme comme le revêtement de son Corps. Toute réalité objective, toute structure théorique, ne font que refléter la splendeur d'une Vérité achevée'. And he pictures the scientist, 'comme le prêtre à l'autel, dans un élan d'adoration et de prière, conscient de son rôle sacerdotal, et contemplant la Vérité dans chacun de ses reflets.' Only when natural science is regarded as a means to holiness, like any other discipline, and a priestly oblation of dead nature in a real participation in the Priesthood of Christ, will it be truly conceived as a part of life in Christ.

EDWARD CALDIN.

CATHOLIC ACTION AND POLITICAL PHILOSOPHY

RESTORING ALL THINGS. A Guide to Catholic Action. Edited by J. Fitzsimons and Paul McGuire. (Sheed and Ward; 6s.)

Some of the misunderstanding met with by the call to Catholic Action seems to be due to the idea that it is something exterior to the Christian, a mere organization imposed from without, and as such adding to the complexity of an already overcrowded life. Looked upon as the action of the Church upon the world, a realization of the priestly power of layfolk derived from the Sacraments of Baptism and Confirmation, it is seen to be something not exterior to the Christian but, in the words of Pope Pius XI, 'the very rule of his life.' It is the heritage of laymen and laywomen to be apostles. This is not so much a new thing as a renewal of a life that received its first glowing impetus at the first Pentecost. If the Apostles needed lay helpers to complete their work for the rapid spread of Christianity in a pagan world, this close collaboration of clergy and layfolk is no less needed to-day. We need to meditate on those oft-repeated words of Pope Pius XI: 'Catholic Action is nothing other than the participation of the laity in the apostolate of the hierarchy.'

This book tells of both theory and practice in Catholic Action. It starts with root principles and shows how these are realized in the different organizations abroad both for the young and for grown-ups; among the former there is constant reference to the Young Christian Workers, the 'ipsa germana forma actionis catholicae' (Pius XI). It ends with a valuable chapter on 'formation technique.'