

**The New Physics and a New Theology. By Michael Heller.**

Tr. G.V. Coyne, S.J., S. Giovannini, T.M. Sierotowicz.

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**Book review by Jitse M. van der Meer.** Director, Pascal Centre. Professor, Departments of Biology and Philosophy. Redeemer College. Ancaster. Ontario. Canada L9K 1J4.

In this book Heller has collected his contributions to the rapprochement between the Roman Catholic Church and the natural sciences. It marks a departure from (neo-) Thomism as the intellectual context for reflection on the relationships between Christianity and science. Heller argues that church-sanctioned Aristotelianism is at odds with contemporary physics as well as with the philosophy of physics. Constructive relationships between Christianity and science, therefore, require a “new theology.” This “new theology” is to be a rational interpretation of religious truths in the context of a view of the world and of rationality provided by philosophy and by the sciences (5). The road towards this new theology has two legs. In the first five chapters he reviews how religious and scientific thought have interacted and draws lessons for the future. The last two chapters apply what has been learned to questions about cosmology. This culminates in the proposal that the new theology should be a theology of science. (Compare: Kaiser, C. B. (1996) “Scientific Work and its theological Dimensions: Toward a Theology of Natural Science.” In: J.M. van der Meer, editor. *Facets of Faith and Science*. Volume I: *Historiography and Modes of Interaction*. The Pascal Centre / The University Press of America. Lanham. Pp. 223-246.) Heller limits himself to pointing in the general direction of a theology that is consonant with what is known as the new physics (6).

The Christian doctrine of creation and its implication that God and nature share the same rationality, provide a context of consonance with science. Yet conflict arose. Heller locates the main reason for conflict in the replacement during the 13<sup>th</sup> century of neo-Platonic thought forms by Aristotelian ones as the intellectual and institutional framework of the Christian Church (16, 26-32). The two main “affairs” between science and the Church, involving Galileo and Darwin, are interpreted as conflicts between the static Aristotelian world view that has remained with the Church up until modern times (chs. 1, 2 and 4) and the increasingly dynamic and atomistic world view of the natural sciences. The merger of Christianity and Aristotelianism made it hard indeed not to throw out Christian theology when its Aristotelian context clashed with the Platonism of physics.

Could the clashing of theology and physics have been avoided if it had been recognized that they were being abused in the service of hostile world views? As Heller sees it, scientists must adjust their methodology to the demands of an ever-changing conception of nature. This can create conflict with Christianity. For instance, the question motivating the so-called Theory Of Everything in physics is whether it is “possible, using the methods of physics, to answer all questions which could be posed within that method?” (5). This is a question with theological (and philosophical) ramifications. Obviously, methodological flexibility can derail into totalitarian extremes such as scientism and positivism and this is a more visible root of conflicts with Christianity. Given the need to avoid *a priori* limitations on scientific method and the need for theology to be relevant in a scientific world, Heller concludes that conflict between religion

and science is inevitable and that the continuing task of theology is to reinterpret some of the assertions of faith. Heller is able to accept this price by affirming the existence of a transcendent reality inaccessible to the human mind, let alone the scientific method. Moreover, his theology is done at arm's length from his faith so that the latter cannot easily be threatened by science-inspired changes in the former. These solutions, however, are not available to all Christians, and one is left wondering what he would recommend to them.

One thing is clear from contemporary studies on the history of the relationship between science and religion. This relationship is characterized by interpretation. That is, theological knowledge is interpreted in the context of scientific knowledge and *vice versa*. Further, each also interprets its primary object of exploration, nature or Scripture. For instance, with the benefit of hind sight we now know that interpretations other than Aristotelianism and also consistent with the Christian doctrine of creation were available to the Church. Heller himself mentions the newly interpreted Archimedean tradition in which mathematical models are constructed *a posteriori* to experience as in modern science. An awareness of alternative interpretations of natural phenomena and sacred texts can inspire a sense of the limitations of human knowledge. This provides an antidote to conflict left unexplored by Heller, namely a willingness to suspend judgment. Heller does explain that conflict between faith and reason ultimately arises out of our limited ability to know the transcendental content of the same truth (44), but he refrains from developing this in terms of a hermeneutics of nature and Scripture.

According to Heller the theology of science is to bring about a synthesis *a posteriori* of the partial views provided by the scientific disciplines. How can theology of science do this given that it is itself caught in its own incompleteness? The answer is that it has access to revealed knowledge. However, it remains unclear how revealed knowledge can function in a theology that should interact with science by adopting the scientific point of view (64). For instance, the scientific point of view leaves out divine action in the world, but theology would have to deny itself if it left this out of consideration. Further, how is the Church going to interpret religious truths in the context of a world view supplied by the sciences (5) if the sciences cannot agree on their world view (see below)?

Science is to provide a view of reality that serves as the rationale for new theological conceptions. Ironically, Heller appreciates the demise of neo-positivism, and is aware of its continuation in the thought of contemporary scientists, but nevertheless appears to succumb to it in uncritically welcoming into theology the world view provided by science. He acknowledges the extent to which Aristotelian thought has shaped Christian theology and presents this as a justification for letting contemporary science have such a shaping effect. He even warns that current science is proposing its own metaphysics, and that this metaphysics might develop into anti-Christian ideology (71-72). Yet he ignores the possibility that this anti-Christian metaphysics abuses the authority of science to assert itself when he gives science the task of providing the world view within which the theology of science is to work. Further, why should the philosophy of physics and the new physics itself be a model for theology if it cannot even be a model for say biology which needs its own distinctive concepts? As Heller observes in the end: "There are some complications. On the one hand, the principal research tool of the theology of science should be reflection in the light of the theological truths about creation; on the other hand

the theological concept of creation, more than any other theological doctrine, depends on the status of scientific thinking in a given epoch.” My suggestion is that the theology of science in reflecting on science in the light of theological truths must consider the metaphysical and religious cargo that sometimes comes with the concepts and explanations of science.

In conclusion, Heller’s background has important implications for his views. As a physicist he sees the main conflict between religion and science as one between ecclesiastical Aristotelianism and the purified Platonism of current physics. However, contemporary mainstream biology has a non-essentialist atomistic world view unlike that of physics and this circumstance creates a second front line at which conflict with ecclesiastical Aristotelianism can erupt. How is the Church going to heed Heller’s advise and interpret religious truths in the context of a world view supplied by the sciences (5) if the sciences cannot agree on their world view?

Further, as Heller acknowledges, his conclusions apply primarily to the Roman Catholic Church. That is, he is interacting primarily with (neo-)Thomism and keeping a firm distance from it since its ontology and philosophy of science are thoroughly outdated. It could not be otherwise because Thomism and neo-Thomism have remained the theological framework since Leo XIII ordered a return to the scholastic philosophy of St. Thomas Aquinas in his 1879 encyclical *Aeterni Patris*. In his message to the participants of a conference on religion and science, John Paul II has been working towards creating theological space for approaches other than (neo-) Thomism ( see R. J. Russell, W. R. Stoeger, S.J., G. V. Coyne, S.J. (Editors) *Physics, Philosophy, and Theology: A Common Quest for Understanding*. Vatican Observatory. Vatican City State. 1988). However, one wonders how to interpret this in light of the more recent reaffirmation of Thomistic philosophy in his 1998 papal encyclical “Fides et Ratio.” Heller clearly believes that neo-Thomism is not up to the job because of its reliance on inadequate philosophies of science (62-63). Perhaps “Fides et Ratio” could be interpreted to suggest that (neo-)Thomism can accommodate non-Aristotelian views of nature while maintaining the duality of nature and grace for Roman Catholic theology.

Thus there is a rich agenda for the new theology of science. I suggest that a theological critique of the concepts and explanations of the sciences ought to be included in its mandate. We can be grateful to Michael Heller for pointing the way.

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