

Stanley L. Jaki. *Science and Creation: From Eternal Cycles to an Oscillating Universe.* Real View Books. 375 pp. \$29.00 USD (Paperback ISBN 9781892539205).

This book is the new edition of the most important work by Stanley Jaki (1924-2009), a leading scholar in the area of the science-faith relationship. The Hungarian Catholic priest and philosopher, Distinguished Professor at Seton Hall University, and Winner of the Templeton Prize for 1987, devoted all his research to highlighting the impossibility of any contrast between science and faith. He rejected all those conceptions supporting the insubstantiality of faith and the absolute priority of scientific discourse. The opinions expressed in his major works can be summed up in the following points: a realistic worldview, the key role played by Christian theology in the origin of exact science, and a divide between the dominions of science and religion.

The quantitative dimension of science, based upon measurements, and the salvific aim of religion, unequivocally contrast with the possibility of a real conflict between the two disciplines. Many errors have been committed because of the misunderstanding about their specific goals. Concordism just represents one of those mistakes, as the Bible does not include any scientific content. Another kind of mistake is made by scientists who adopt scientific statements to demonstrate the inconsistency of religion. Creation out of nothing, for instance, cannot form part of natural science, as the ‘nothing’ is not a scientific concept.

According to Jaki, a true worldview consists in registering objects, whose reality implies the difference between the external world and human mind. Physical reality is the only possible area of a philosophy preceding science that is the quantitative account of observational data. In other words, Jaki’s worldview is founded upon the existence of a universe as a coherent totality of interacting objects. The ultimate source of that causality and sameness of natural reality lies in God’s creation and will to keep the world in existence. Our understanding of the world forms an integral part of Revelation, and it represents the premise of science which assumes the existence of a coherent universe, everywhere ruled by the same physical laws.

Modern science originated in the scientific revolution, whose protagonists deemed the Creator to be the origin of universal mathematical harmony. Creation out of nothing, the distinction between Creator and creatures, the Trinitarian dogma and, more specifically, Christ as the Only Begotten, denied any kind of natural pantheism and finalism. Jaki remarks on the relevance of a passage such as *Wisdom* 11:20, in which it is established that God ‘ordered all things in number, and measure and weight.’ So, ‘if the Creator arranged everything according to number, measure, and weight, man’s understanding of the world had to reflect a mathematical character or, in other words, science was to be based on mathematics’ (221).

Jaki’s most important result consists in having shown why exact science originated in the Christian milieu, and not in other religious contexts where a high level of mathematical knowledge had already been achieved. Even if Revelation has a salvific goal and the Bible does not include any scientific meaning, in Jaki’s mind Christ’s message exerted a decisive influence on the birth of science. The final outcome of the modern turning point in the XVII Century lies in the Newtonian three laws of physics, which are based upon the first of them, namely the principle of inertial motion. However, the first formulation of inertia dates back to the theory of impetus, expressed by the French Scholastic philosopher John Buridan. The most meaningful expression of impetus can be read in his comment to Aristotle’s *On the Heavens*: ‘Also, since the Bible does not state that appropriate intelligences move the celestial bodies, it could be said that it does not appear necessary to posit intelligences of this kind, because it would be answered that God, when He created the world, moved each of the celestial orbs as He pleased, and in moving them He impressed in them impetuses which

moved them without His having to move them any more except by the method of general influence whereby He concurs as a co-agent in all things which take place; “for thus on the seventh day He rested from all work which He had executed by committing to others the actions and the passions in turn.” And these impetuses which He impressed in the celestial bodies were not decreased nor corrupted afterwards, because there was no inclination of the celestial bodies for other movements. Nor was there resistance which would be corruptive or repressive of that impetus. But this I do not say assertively, but [rather tentatively] so that I might seek from the theological masters what they might teach me in these matters as to how these things take place’ (235).

The relevance of impetus as the beginning of scientific thought had already been stressed by the French philosopher Pierre Duhem (1861-1936), who considered it a consequence of the 1277 condemnation of 219 Aristotelian and Averroist statements. According to Buridan, after creation out of nothing, the universe does not need any further intervention by God, save that relationship between Creator and creatures through which the Divine Person maintains the world in existence. Thus, the theory of impetus presupposes the existence of an independent nature, ruled by laws established by God since the beginning of the universe. This vision contrasted with all those philosophies upholding a pantheistic world, dominated by animistic entities. That is also why Buridan rejects that the movement of heavenly bodies is caused by celestial intelligences. In the Scholastic age, the idea of angels as movers of celestial bodies was a typical way to reconcile Aristotelian cosmology and Christian doctrine. So, clear theological ground can be found in Buridan’s worldview, being founded on creation out of nothing. In accordance with the basic tenets of Christian Revelation, it opposes pantheist and animistic visions, as the universe is the outcome of the work by a transcendent God. Creatures share the same creatural condition, and that principle opened the way to the commonality of natural laws throughout the world and, more specifically, the Newtonian synthesis establishing the same laws for all moving bodies: ‘Buridan’s work shows that the radical departures from the main proposition of Aristotelian cosmology and physics were made with most direct references to the Christian belief about the fundamental relations between Creator and creatures’ (233).

Another important consideration consists in highlighting the importance of the linearity of time, which refuses the existence of a great year of the world and eternal cyclic nature. The linearity of phenomena, indeed, represents a fundamental element of modern physics, and helped to dismantle the idea of necessary and unchangeable physical processes: ‘And so is faith in Creation, which enables man to commit himself to cosmic linearity, and, as this book tried to show, made possible the only viable birth of science’ (368).

In the first chapters of this book, Jaki points out that the absence of Christian theological principles gave rise to the stillbirths of science in other religious traditions, although they preceded Christian Revelation by many centuries. In ancient Chinese, Indian or Egyptian milieus, despite a high level of mathematical learning, it was not possible to formulate the basic laws of motion. Moreover, even if monotheism rejects pantheism, it was not sufficient by itself to determine the origin of science. Christian monotheism is based upon the belief in Jesus as the Only Begotten. The lack of such a divine figure in Islamic and Hebrew contexts led some of their major philosophers to embrace pantheist worldviews or theories influenced by pantheism. In other words, while in Christian doctrine the result of the emanation from the Father is Christ, in other philosophies the emanation from God is the universe. That is why philosophers such as Averroes, Avicenna and Maimonides believed in a world as the result of an emanative process: ‘The cases of Averroes and Avicenna are principal illustrations of the symptom of which the whole history of Arab science is a classic paradigm. Muslim science made notable contributions to those parts of science which had, in the historical context at least, little or nothing to do with the laws of the physical world at large’ (195).

In sum, the distinctive features of religion and science exclude the possibility of an unresolvable conflict between them, as the basic tenets of Revelation have nothing to do with quantities. Science, being a quantitative study of natural reality, rejects pantheism, and assumes a realistic metaphysical conception, according to which universal laws allow the mathematical reduction of phenomena. Christian Revelation has provided humanity with just such a view. The world, being created by the Supreme Logos, has a rational structure. Humans, made in image of God, understand natural laws as part of His announcement. The distinction between Creator and creatures, and the revelation of Jesus as the Only Begotten, denied any belief in a world regulated by divine forces. ‘The once-and-for-all facts of the history of salvation, stretching from the Creation to the redemptive work of the Only Begotten Son of the Creator, formed for Christians a framework of thought which allowed for no compromise whatsoever’ (173).

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