## Science Was Born of Christianity: The Teaching of Fr. Stanley L. Jaki by Stacy Trasancos

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Contemporary apologetics must address the widespread belief that religion opposes science. It is fitting, then, that some recent Catholic writers aim to show first how medieval Latin Christendom begat modern science and, second, that science and religion have no dispute. Much of the effort put into these writings is corrective and refutes modernity's misunderstandings of the so-called Dark Ages.

Benjamin Wiker has made a career out of such contentions with writings that include *The Darwin Myth* and *The Catholic Church and Science*. Robert Spitzer's *New Proofs for the Existence of God* and Karl Giberson and Francis Collins's *The Language of Science and Faith* also argue that science, in fact, buttresses religious belief. The late English Catholic Stratford Caldecott took a more integrated approach, as elucidated in his book *Beauty for Truth's Sake*.

The first question, then, is how Stacy Trasancos's work fits into this tradition. Instead of following many writers who discuss the mathematical foundations of the universe or other attributes that seem to point to an intelligent Creator, she examines how science itself was made possible through the medieval Christian belief in a rational Creator. Such a God implies that the world must work in a rational way. This contrasts with other cultures, such as in India or China, where a true science never got off the ground, because of different intellectual and spiritual assumptions, mostly concerning the cyclical nature of reality. The importance of how a cyclical understanding of nature prevents the development of authentic science is one of the basic teachings of the late Stanley Jaki.

With a doctorate degree in chemistry and a master's degree in theology, Trasancos uses her cross-disciplinary perspective to survey

the extensive writings of Jaki, likewise a cross-disciplinary thinker. The Benedictine priest was, in the words of Trasancos, "an internationally acclaimed Catholic physicist, theologian, historian, author of over fifty works, Templeton Prize winner, and honorary member of the Pontifical Academy of Sciences" (182). This erudition led to challenging books. As Trasancos notes, "Jaki's works take commitment and considerable effort to assimilate. ... I found his commentary and conclusions to be accurate, reliable, and insightful. The most difficult task is often in deciphering his subreferences. Entire essays can be written about a single Jaki sentence, so packed with nuance and information are some of them" (185). Trasancos writes in clear prose, so readers who might be scared off by her description of Jaki's style can at least come away from her book with a clearenough understanding of his thought.

A small book limits Trasancos to the very basics. She examines, for instance, important medieval thinkers who were essential to the growth of a scientific spirit, pointing out where Christian theology made all the difference. She strongly criticizes Wiker for arguing that some writers have over-stressed the Christian foundations of science, adding, "While it is true that the Church would reject a caricature of Jaki's argument that the Church was 'the source' or 'the cause' of modern science, it is not true Jaki's argument that science was 'born' of Christianity, properly understood, has been rejected by the Church" (183, original emphasis). Here Trasancos shows the nuance of Jaki's argument that only attentive readers will appreciate. She follows him in claiming that instead of being incidental or merely helpful to science's development, Western Christendom played the essential role.

Some medieval thought built on antecedents, and Trasancos briefly traces its ancient Christian roots: "When other scholars tried to interpret biblical references as evidence of eternal cycles, Augustine strongly rejected such an interpretation, just as his predecessors had, on the grounds of the impossibility of more than one Savior" (114). She contrasts this with the pre-Christian Greeks. Though

frequently supportive of empiricism, they still believed in cyclical time, something that was particularly rooted in their religious thinking: "The gods, according to Plato and the Greeks, were themselves made in the form of a circle, the 'most perfect figure and the figure of the universe.' According to Aristotle, time itself was, therefore, a circle" (81). This led to a sort of spiritual and intellectual imprisonment, resulting in a futility that Trasancos explains quite well: "For the most brilliant scholar or the least accomplished servant, the Greeks believed the same thoughts are recurring over and over again, and Aristotle held that this was, in fact, what man experienced" (81). Science needed the freedom from a cyclical view and, perhaps, from fate that Christ brings. A more thorough examination of the role of fate in nonbiblical worldviews might have furthered the discussion here.

Trasancos shows the consistency of the roots and progression of Western Christian thought throughout the centuries. The importance of the biblical conception of linear time cannot be overstated, and the author repeats this often. Yet in addition to the Hebrew mindset, authentic, rational science needed the Word of God and the belief in an incarnational God. The author cites Jaki's thoughts on Augustine: "A man with a restored sense of purpose, a man with an ability to discern intelligible patterns in the universe, a man aware of the vital difference between knowledge and happiness, a man confronting an external world not as an a priori product of his mind but accessible to the light of reason which itself was a participation in God's mind, such were some principal consideration[s] which Augustine stressed through his literary career as a thinker and a Christian" (116-117). Readers would have benefited from a more precise explanation of how belief in the Word, or Logos, helped promote the belief in a world that can be understood rationally, as few of us are clear on the ancient Greek meaning of logos.

Jaki, Trasancos argues, taught that science deals with only one type of knowledge, quantitative, but that so much of life is qualitative. She never minces words: "Since exact science [Jaki's term for physics] derives its exactness

from measurements, the application of quantities, it is *limited to matter*, and since science is limited to matter, it has no philosophical or religious implications whatsoever" (32, original emphasis). Perhaps Jaki or Trasancos overstates the case, as philosophy can certainly learn from science and has to integrate scientific discoveries into its wider views.

The author's clarity regarding the differing roles of science and religion seems to strike a better balance: "Religion is about morality; science is not. ... Jaki explains that 'real culture' must attend to questions that 'most agitate a human being.' There must be attention to religion's questions" (43). This is where she hits the nail on the head. Science has failed to address our deepest needs, which do not revolve around comfort and consumerism. Perhaps this is because religion-medieval Christianity, to be more precise—is antecedent to science. The argument turns to the importance of culture, which echoes Pope St. John Paul II's emphasis on culture, the importance of which he probably learned while living under Nazi and Communist regimes. We in the West are learning this lesson the hard way at present.

As the author shows, Jaki was not shy to proclaim the truth when it came to what type of religion best serves man and his culture. People under the spell of political correctness will not be amused by such a perspective, which asserts one truthful religion and one truthful science and claims that the first led to the second. Trasancos cites his words: "Real cult means real religion, that is, a religion with a God in its center to whom man can be truly 're-ligated' (the etymology of the [word] religion) so that he may truly worship. No true worship is deserved by a God who is the product of a cosmic process, let alone the distillation of a process theology. The only God who deserves a proper cult, which is worship, is much more than the Creator who brings forth the universe out of nothing" (43). Such challenging words verify Trasancos's claim that Jaki is a tough but satisfying read.

Trasancos offers a historical overview of ancient and medieval Christian thinkers who helped develop a scientific mentality, including Origen, Adelard of Bath, Robert Grosseteste, and William of Auvergne. Because of the importance that Jaki attached to him, Trasancos spends a greater amount of time on the relatively unknown Jean Buridan, whose theory of impetus had a marked influence on Newton. Buridan, like so many Christian thinkers, rejected the cyclical nature of creation: "Because he viewed the universe as the creation of a rational Creator and thus viewed the universe as having an absolute beginning in time, Buridan, in thinking scientifically, necessarily had to ponder the cause of motion for heavenly bodies, which in turn meant he had to ponder the cause of motion for terrestrial bodies" (152-153). Thus Trasancos the chemist makes science basics clear-enough for the non-scientific reader to appreciate the real meaning of this slow but inexorable change in thinking about the nature of creation: individual thinkers over the centuries worked out the implications of a rational God.

Regarding modern times, the author highlights the importance to Jaki of French physicist Pierre Duhem: "In the early twentieth century," Trasancos writes, "Duhem conducted pioneering research on the origins of classical physics, uncovering medieval texts by Christian scholars that were before not included in the historical accounts of the Middle Ages. He is credited by Jaki as 'single-handedly' inspiring a 'vigorous interest in medieval science'" (147). Duhem died in 1916, yet here we are one-hundred years later, still trying to convince people that Rome is not the enemy of MIT and CalTech.

Science Was Born of Christianity fills the apologetics gap that the Church has only gingerly addressed. Church leaders and educators have left most Catholics woefully under-armed for the culture wars. Regarding this battle, Trasancos has succeeded in two ways. First, those who finish the book will have a clear idea of Jaki's basic ideas and where he stood in the science—religion debate and why. Second, they will want to read his extensive work for themselves.

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