

CONTACT: Donald Lehr  
(212) 967-8200 / [dlehr@templetonprize.org](mailto:dlehr@templetonprize.org)  
[www.templetonprize.org](http://www.templetonprize.org)

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### **MICHAEL HELLER WINS 2008 TEMPLETON PRIZE**

NEW YORK, MARCH 12 – Michael (Michał) Heller, a Polish cosmologist and Catholic priest who for more than 40 years has developed sharply focused and strikingly original concepts on the origin and cause of the universe, often under intense governmental repression, has won the 2008 Templeton Prize.

The Templeton Prize, valued at 820,000 pounds sterling, more than \$1.6 million, was announced today at a news conference at the Church Center for the United Nations in New York by the John Templeton Foundation, which has awarded the prize since 1973. The Templeton Prize is the world's largest annual monetary award given to an individual.

Heller, 72, Professor in the Faculty of Philosophy at the Pontifical Academy of Theology in Cracow, toiled for years beneath the stifling strictures of the Soviet era. He has become a compelling figure in the realms of physics and cosmology, theology, and philosophy with his cogent and provocative concepts on issues that all of these disciplines pursue, albeit from often vastly different perspectives. With an academic and religious background that enables him to comfortably and credibly move within each of these domains, Heller's extensive writings have evoked new and important consideration of some of humankind's most profound concepts.

Heller's examination of fundamental questions such as "Does the universe need to have a cause?" engages a wide range of sources who might otherwise find little in common. By drawing together mathematicians, philosophers, cosmologists and theologians who pursue these topics, he

also allows each to share insights that may edify the other without any violence to their respective methodologies.

In a statement prepared for the news conference, Heller described his position as follows:

*Various processes in the universe can be displayed as a succession of states in such a way that the preceding state is a cause of the succeeding one... (and) there is always a dynamical law prescribing how one state should generate another state. But dynamical laws are expressed in the form of mathematical equations, and if we ask about the cause of the universe we should ask about a cause of mathematical laws. By doing so we are back in the Great Blueprint of God's thinking the universe, the question on ultimate causality....: "Why is there something rather than nothing?" When asking this question, we are not asking about a cause like all other causes. We are asking about the root of all possible causes.*

Despite the active anti-intellectualism of the Communist regime that controlled Poland for the majority of his life, Heller established himself as an international figure among cosmologists and physicists through his prolific writings – he has more than 30 books and nearly 400 papers to his credit – on such topics as the unification of general relativity and quantum mechanics, multiverse theories and their limitations, geometric methods in relativistic physics such as noncommutative geometry, and the philosophy and history of science.

Simultaneously, as a Catholic priest, Heller surmounted the anti-religious dictates of Polish authorities, opening new vistas for the faithful by positioning the traditional Christian way of viewing the universe within a broader cosmological context and by initiating what can be justly termed the "theology of science."

In his nomination of Heller for the Prize, Professor Karol Musioł, Rector of the Jagiellonian University in Cracow and a professor in the Institute of Physics there, noted that Heller's combination of scientific investigation and theological inquiry rises above the trap of easy

concordism. “His unique position as a creatively working scientist and reflective man of religion has brought to science a sense of transcendent mystery,” he wrote, “and to religion a view of the universe through the broadly open eyes of science.... It is evident that for him the mathematical nature of the world and its comprehensibility by humans constitute the circumstantial evidence of the existence of God.”

Reverend Professor Heller earned a master of theology degree in 1959 from the Catholic University of Lublin in Poland, and was ordained a priest in April 1959, serving briefly in a parish in Ropczyce, about 30 miles east of Tarnow. He returned to the Catholic University in 1960, earning a master of philosophy in 1965 with a thesis on the philosophical aspects of relativity theory, and a Ph.D. in philosophy with a thesis in relativistic cosmology in 1966. Even though his studies were largely in physics, the authorities prevented the university from granting degrees in that discipline.

In 1969, Heller received a docent degree – an academic achievement above a doctorate – with a thesis on Mach’s Principle in relativistic cosmology. He obtained a passport in 1977 after more than a decade of delay and was named visiting professor at the Institute of Astrophysics and Geophysics at Catholic University in Louvain, Belgium and, subsequently, did research at the Institute of Astrophysics at Oxford University and at the Physics and Astronomy Department of Leicester University in Britain. In 1985, he joined the faculty of the Pontifical Academy of Theology where his scholarship in physics, logic, philosophy and theology has influenced two generations of students.

In 1986, Heller began research at the Vatican Observatory in Castel Gandolfo, Italy, where he has worked with George Coyne, the observatory’s director emeritus, astrophysicist and theologian William Stoeger, and many others. One of the oldest astronomical research institutions in the world, the Vatican Observatory’s dependent research center, the Vatican Observatory Research Group, is hosted by the Steward Observatory at the University of Arizona in Tucson.

The Templeton Prize is a cornerstone of the John Templeton Foundation's international efforts to serve as a philanthropic catalyst for discovery in areas engaging life's biggest questions, ranging from explorations into the laws of nature and the universe to questions on love, gratitude, forgiveness, and creativity. Created by global investor and philanthropist Sir John Templeton, the monetary value of the Prize is set always to exceed the Nobel Prizes to underscore Templeton's belief that benefits from advances in spiritual discoveries can be quantifiably more vast than those from other worthy human endeavors.

John M. Templeton, Jr., M.D., Chairman and President of the John Templeton Foundation and son of Sir John, notes that Heller's scholarship has exposed the global community to a wider understanding of purpose in life. "Michael Heller's quest for deeper understanding has led to pioneering breakthroughs in religious concepts and knowledge as well as expanding the horizons of science."

The 2008 Templeton Prize will be officially awarded to Heller by HRH Prince Philip, the Duke of Edinburgh, at a private ceremony at Buckingham Palace on Wednesday, May 7th.

Michał Heller was born on March 12, 1936 in Tarnow, Poland, one of five children in a deeply religious family devoted to intellectual interests. His mother, a school teacher, and his father, a mechanical and electrical engineer fluent in several languages, fled with their children as the Nazis approached in 1939 after Heller's father sabotaged the chemical factory where he worked to keep it out of the hands of the invaders.

By the time Heller was ten years old, the winds of war had uprooted his family from Poland to the present day Ukraine, to Siberia, to southern Russia and back to Poland. Thanks to vigorous debate among his parents and their friends, Heller gained powerful insights into the importance of mathematics, physics and religion. At 17, he entered the seminary in Tarnow and was ordained a priest at 23.

Despite the oppression of Polish Communist authorities against intellectuals and priests, the Church, energized by the Second Vatican Council, provided Heller with a sphere of protection that allowed him to make great strides in his studies.

Among those fostering this atmosphere in the 1960s was the Archbishop of Cracow, Karol Wojtyła, the future Pope John Paul II, who invited Heller and other scientists, philosophers and theologians to his residence to discuss their various disciplines. Heller and Józef Życiński, later Archbishop of Lublin, began calling this group the Center for Interdisciplinary Studies and blended it into the Theological Faculty in Cracow. When the Solidarity movement in the 1980s ushered in fits and starts of newfound freedoms for Poland, Heller's subsequent travels and the translation of his writings helped to quickly establish his reputation around the globe.

Heller's current work focuses on noncommutative geometry and groupoid theory in mathematics which attempts to remove the problem of an initial cosmological singularity at the origin of the universe. "If on the fundamental level of physics there is no space and no time, as many physicists think," says Heller, "noncommutative geometry could be a suitable tool to deal with such a situation."

Heller plans to dedicate the Templeton Prize money to help create the Copernicus Center in conjunction with Jagiellonian University and the Pontifical Academy of Theology in Cracow to further research and education in science and theology as an academic discipline.

Also at the press conference, the foundation noted that Heller's selection as the 2008 Templeton Prize Laureate will launch a broad, online discussion of the question, "Does the Universe need to have a cause?" at its website [www.templeton.org](http://www.templeton.org).

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