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Wednesday, October 29, 2008 Atiyah expounds on 'Mind, Matter and Mathematics'

Daily Star staff

BEIRUT: Renowned mathematician Michael Atiyah touted the practical benefits of his field during a lecture at the American University of Beirut (AUB) on Monday, arguing that it is more useful than philosophy in terms of explaining the relationship between the external world and the human mind.

Atiyah made the remarks during a talk titled "Mind, Matter, and Mathematics" at the invitation of AUB's Center for Advanced Mathematical Sciences (CAMS).

Atiyah said that mathematics offers a more in-depth view of the relationship between the external world and the human mind than philosophy since it builds on its findings of the external world.

"Mathematics is extracted from the physical world but refined by the human mind and then employed in the physical world in ways that are useful to the physical world ... Mathematics lies in the human brain," he said, noting the human mind, through mathematics, interprets the external world.

After surveying the views of ancient, medieval and modern philosophers of mathematics such as Aristotle, Plato, Rene Descartes, Gottfried Leibniz, David Hume, Bertrand Russel, and Immanuel Kant, Atiyah concluded that it is thanks to mathematics that man is able to ask new philosophical questions.

"Mathematicians took the role of philosophers, but I want to bring the philosophers back in. I hope someday we will be able to explain mathematics in a philosophical way using philosophical methods," he said.

Atiyah has been described as one of the greatest living mathematicians. In 2004, he shared the second Abel Prize - widely recognized as equivalent to the Nobel Prize - with Isadore Singer for the Atiyah-Singer Index Theorem, an achievement that the Norwegian Academy of Science hailed as "one of the great landmarks of 20th century mathematics."

He served as president of the Royal Society from 1990-95. He has received numerous honors throughout a long and distinguished career, including a Fields Medal in 1966, the Feltrinelli Prize in 1981, the King Faisal International Prize for Science in 1987, and the Benjamin Franklin Medal in 1993.

Since 1999, Atiyah has chaired CAMS' International Advisory Committee, which counsels the president and the director of CAMS on scientific policy and programs.

Atiyah, who was knighted by Britain's Queen Elizabeth II in 1983 for his mathematical and academic achievements, was awarded an honorary AUB doctorate in 2004. In 2007 AUB announced the establishment of the Michael Atiyah Chair in Mathematical Sciences at the Faculty of Arts and Sciences, which was made possible by a \$2 million pledge by the Simons Foundation.

According to an AUB press release, CAMS was founded in 1999 through the efforts of an international group of scientists with the goal of becoming the premier center of excellence for research in the mathematical sciences in the Middle East. The statement added that CAMS strives to create opportunities for top-quality research and teaching, and by encourage academic collaboration and interdisciplinary research at AUB and in the region. - **The Daily Star**

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