

# 1001 Inventions: Science in Muslim lands

CHRISTOPHER TORCHIA - Associated Press Writer - Associated Press

For generations, the lore of "One Thousand and One Nights" helped shape Western notions about Muslim culture. The collection of tales described an exotic world of harems and flying carpets, Sinbad and monsters, Aladdin and the jinn, Ali Baba and the 40 thieves.

Now an exhibition about innovation in Muslim civilization seeks to highlight what organizers say is an overshadowed period of history, a "Golden Age" in which advances in engineering, medicine and architecture laid groundwork for Western progress from the Renaissance until modern times.

In a play on the old stories, it is titled: "1001 Inventions: Discover the Muslim Heritage in Our World."

The show seeks to be strictly academic, and shuns political or religious pronouncements. But the robust response of many young Muslims suggests a thirst for cultural pride against a contemporary backdrop of conflict and suspicion between the West and Muslim countries.

"Originally, it was aimed at the Western public," said Salim Al-Hassani, organizer of the Britain-based exhibition and a professor of mechanical engineering at Manchester University. "But we found that when people from the Muslim world, when they see it, they get fired up, especially the young people who are in search of identity."

It's a slick production, with an introductory film featuring a Harry Potter-like fantasy sequence with Sir Ben Kingsley, the Oscar-winning actor, as a mysterious figure who dispels three skeptical students in a library of preconceptions about the past.

The centerpiece of the show is a replica of an elaborate "elephant" clock that symbolized a multicultural spirit and pioneered modern automation and robotics. It used Greek water-powered technology, and the figures of an Indian elephant, an Egyptian phoenix, a Persian carpet, Chinese dragons and men in Arabian dress.

It was designed 800 years ago by Al-Jazari, a Muslim engineer in what is today southeast Turkey. Other giants of innovation during the 1,000-year period that began in the seventh century were physician Al-Zahrawi, whose innovations shaped European surgery, and Fatima Al-Fihri, whose multi-subject institute of learning, with no gender restrictions, laid foundations for the modern university.

"There is a perception that Islam was always backward and made no contribution to the world of science," said visitor Sule Seda Tezer, who was especially pleased to note the high profile of women in the displays. "The West has a phobia about Islam. I think there is an effort to break the phobia and build better ties between the East

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Published on Chem.Info (<http://www.chem.info>)

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and West."

With 40,000 followers, the "1001 Inventions" Facebook page echoes her enthusiasm. "Come to Algeria!" and "we are waiting 4 u in Damascus" are among the posts. From Saudi Arabia, Abdull-Kareem Andeejani wrote:

"Will you ever come to open in Riyadh? Please? I want to know more of my own history, I see it as highly important to look back in time, so that we can pick up what we have forgotten."

The exhibit has interactive features designed to attract children, and details research in optics, music and algebra from Muslim civilizations that once encompassed parts of Europe and ranged as far as China.

One curiosity is a replica of the flying machine of Abbas ibn Firnas, who constructed a winged framework near Cordoba in Spain and flew briefly before injuring himself. Centuries later, Leonardo da Vinci worked on his own flying designs.

In Istanbul, at least 6,000 people a day — up to twice that on weekends — file daily into the exhibition tent in front of the former Byzantine church of Hagia Sophia, and near the fabled Blue Mosque, built during the Ottoman Empire. The display coincides with the Islamic holy month of Ramadan; the tent stays open until 3 a.m. to welcome a nocturnal crowd. There is no admittance fee.

The project was created by the Foundation for Science, Technology and Civilisation, an academic group based in Britain. Funding came from the Jameel Foundation, a British charity linked to Abdul Latif Jameel Co. Ltd., a Toyota car distributor based in Saudi Arabia.

The exhibition had a successful run at the Science Museum in London earlier this year, and will move to the New York Hall of Science after ending its seven-week Istanbul stint on Oct. 5. It arrived hurriedly in Turkey after Prime Minister Recep Tayyip Erdogan saw it in London and said he was eager to host it.

"There was an attempt to impose a history that jumped from ancient Greece straight to the Renaissance period," Erdogan said at the opening ceremony last week. "Later on, some Western scientists made a praiseworthy effort to acknowledge the contributions of Islamic civilization to the history of science."

Erdogan leads an Islamic-oriented government that has cut away at the power of traditional elites with a strongly secular background. He has also sought to elevate the memory of the Ottoman Empire, whose attempts at Western-style reform failed to stem its collapse in the early 20th century.

Ehsan Masoud, author of "Science and Islam: A History" and editor of a research policy newsletter in Britain, said scientific innovation in Muslim lands began to decline as Islamic empires grew weak and poor, and Western colonial powers expanded.

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"It's fair to say that history is written by the victors," Masoud said. "Quite understandably, Western nations are hardly going to start crediting the people they've defeated."

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Associated Press Writer Erol Israfil contributed to this report.

**Source URL (retrieved on 03/30/2015 - 7:00pm):**

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