Russian Iranologist: Iran, Russia Lead New Movement

MOSCOW (IRNA) -- **Prominent Russian orientalist and Iranologist Vladimir Ivanovich Belov believes that the Islamic Republic of Iran and the Russian Federation are the leaders of the new world movement based on fair and democratic approaches.**

In an interview with IRNA on Monday, Belov said that the recent meeting between Iranian president and his Russian counterpart in Ashgabat showed that Tehran and Moscow have very close and even identical stances regarding most international developments.

The meeting was also of great importance considering the current developments in the Middle East and the world, he added.

Belov is a professor at the Oriental and African Studies Department of the Peoples' Friendship University of Russia (Roden).

He said the meeting was held while tensions in the Middle East as increasing.

Chinese Art on Display in Tehran

TEHRAN -- **An exhibition of selected works of Chinese art and culture is underway here.**

The exhibition showcases a collection of cultural exchange achievements between China and Iran along the Silk Road. It includes paintings created by Chinese artists, manuscripts by renowned Chinese authors, and ancient coins used in Silk Road trade.

China and Iran, as two of the world's ancient civilizations, had been communicating with each other through the Silk Road since a long time ago, Chinese Ambassador to Iran Cong Peiwu said at the opening ceremony, noting that such historical ties have created a solid foundation for the two countries' present cultural exchanges.

The successful holding of the exhibition will inject new vitality into cultural exchanges between China and Iran, providing more support for the deepening of friendship between the two countries, according to the ambassador.

Director of the Malek National Library and Museum Amir Khorakian said that the long distance between the two countries did not hinder communications and relations between the Iranian and Chinese peoples, expressing hope for more bilateral cultural exchanges in the future.

The exhibition will continue until Nov. 10 at the Malek National Library and Museum

Veteran Vocalist Passes Away Aged 99

TEHRAN – **Veteran Iranian vocalist and composer Aminollah Rashidi has died of old age at 99.**

Born on April 24, 1925 in Ravand, Isfahan province, Rashidi became familiar with Radif in Iranian music by listening to gramophone records and the works of Iranian singers.

He composed and sang in Radio Iran from 1948 until 1956. During that time, he composed more than 120 songs. Jaan-e-Jahan, Afsaneh (Legend), Gol Afshan, Jelveye Eshgh, and Ashke Sepideh (Dawn Tears) are among the famous works of this veteran artist.

His daughter, Afsaneh Rashidi, said that the body of the veteran vocalist will be donated to the University of Medical Sciences for research and no funeral procession will be held for him.

Marivan Street Theater Festival Opens

TEHRAN -- **The 17th Marivan International Street Theater Festival in Iran has kicked off.**

The opening of the 2024 Marian Street Theater Fest was held on Saturday in the streets of Marivan.

The festivities began at Shabrang Intersection and proceeded to Mellat Park, marking the start of this vibrant cultural event.

The highlight of the opening ceremony was the mesmerizing performance featuring puppets known as "Bouke Barane." These puppets, operated by skilled puppeteers, entertained spectators of all ages.

Iranian Researchers Design Model for Detecting Cancerous Tissues

TEHRAN -- **Iranian researchers in a joint research with U.S. scholars has designed an artificial intelligence algorithm to detect cancerous tissues.**

Sadegh Kazzemi Fard, the manager of the project named as the Sina artificial intelligence model, described the high accuracy of diagnosis as one of the advantages of the method.

"The artificial intelligence algorithm developed by identifying cancer tissue in the early stages enables doctors to prevent the spread of the disease," he said.

"The Sina artificial intelligence model has been approved by the World Health Organization (WHO) and will be available to medical and research centers from the beginning of 2025," he added.

"In its latest clinical trial, the Sina artificial intelligence algorithm once again demonstrated its ability to accurately diagnose cancer and was able to identify a cancerous mass in the breast tissue of a young woman, which was mistakenly diagnosed as a cyst in the initial tests," Kazzemi Fard said.

"This patient, who was diagnosed with suspected cancer in routine examinations, was accurately identified with the help of artificial intelligence and mammography of the cancer tissue in two places, and the disease was confirmed with a biopsy, and the treatment process began for the patient," he explained.

In May, a researcher at the Tarbiat Modares University (TMU) in Iran designed and produced electrochemical biosensors for the early detection of microRNAs that are involved in breast cancer.

According to the World Health Organization's statistics, breast cancer and lung cancer are the most prevalent cancers among people worldwide, with the breast cancer being the most prevalent cancer among Iranian women.

Breast cancer can be seen in both women and men, but its prevalence is much higher in women than in men.

Future of Scientific Production

WASHINGTON (The Conversation) -- **Millions of scientific papers are published globally every year. These papers in science, technology, engineering, mathematics and medicine present discoveries that range from the mundane to the profound.**

Since 1900, the number of published scientific articles has doubled about every 10 to 15 years; since 1980, about 8% to 9% annually. This acceleration reflects the immense and ever-growing scope of research across countless topics, from the farthest reaches of the cosmos to the intricacies of life on Earth and human nature.

Yet, this extraordinary expansion was once thought to be unsustainable. In his influential 1963 book, "Little Science, Big Science… And Beyond," the founder of scientometrics – or data informetrics related to scientific publications – Derek de Solla Price famously predicted limits to scientific growth.

He warned that the world would soon deplete its resources and talent pool for research. He imagined this would lead to a decline in new discoveries and potential crises in medicine, technology and the economy. At the time, scholars widely accepted his prediction of an impending slowdown in scientific progress.

Faulty Predictions

In fact, science has spectacularly defied Price's dire forecast. Instead of stagnation, the world now experiences "global mega-science" – a vast, ever-growing network of scientific discovery. This explosion of scientific production made Price's prediction of collapse perhaps the most stunningly incorrect forecast in the study of science.

Unfortunately, Price died in 1983, too early to realize his mistake.

So, what explains the world's sustained and dramatically increasing capacity for scientific research?

We are sociologists who study higher education and science. Our new book, "Global Mega-Science: Universities, Research Collaborations, and Knowledge Production," published on the 60th anniversary of Price's fateful prediction, offers explanations for this rapid and sustained scientific growth. It traces the history of scientific discovery globally.

Factors such as economic growth, warfare, space races and geopolitical competition have undoubtedly spurred research capacity. But these factors alone cannot account for the immense scale of today's scientific enterprise.

In many ways, the world's scientific capacity has been built upon the educational aspirations of young adults pursuing higher education.

Over the past 125 years, increasing demand for and access to higher education has sparked a global education revolution. Now, more than two-fifths of the world's young people ages 19-23, although with huge regional differences, are enrolled in higher education. This revolution is the engine driving scientific research capacity.

Today, more than 38,000 universities and other higher-education institutions worldwide play a crucial role in scientific discovery. The educational mission, both publicly and privately funded, subsidizes the research mission, with a big part of students' tuition money going toward supporting faculty.

These faculty scientists balance their teaching with conducting extensive research. University-based scientists contribute 80% to 90% of the discoveries published each year in millions of papers.

External research funding is still essential for specialized equipment, supplies and additional support for research time. But the day-to-day research capacity of universities, especially academics working in teams, forms the foundation of global scientific progress.

Even the most generous national science and commercial research and development budgets cannot fully sustain the basic infrastructure and staffing needed for ongoing scientific discovery.

Likewise, government labs and independent research institutes, such as the U.S. National Institutes of Health or Germany's Max Planck Institutes, could not replace the production capacity that universities provide.

The past few decades have also seen a surge in global scientific collaborations. These arrangements leverage diverse talent from around the world to enhance the quality of research.

International collaborations have led to millions of co-authored papers. International research partnerships were relatively rare before 1980, accounting for just over 7,000 papers, or about 2% of the global output that year. But by 2010 that number had surged to 440,000 papers, meaning 22% of the world's scientific publications resulted from international collaborations.

This growth, building on the "collaboration dividend," continues today and has been shown to produce the highest-impact research.

Universities tend to share academic goals with other universities and have wide networks and a culture of openness, which makes these collaborations relatively easy.

Today, universities also play a key role in international supercollaborations involving teams of hundreds or even thousands of scientists. In these huge collaborations, researchers can tackle major questions they wouldn't be able to in smaller groups with fewer resources.

Supercollaborations have facilitated breakthroughs in understanding the intricate physics of the universe and the synthesis of evolution and genetics that scientists in a single country could never achieve alone.

Hubs made up of universities from around the world have made scientific research thoroughly global. The first of these global hubs, consisting of dozens of North American research universities, began in the 1970s. They expanded to Europe in the 1980s and most recently to Southeast Asia.

These regional hubs and alliances of universities link scientists from hundreds of universities to pursue collaborative research projects.

Scientists at these universities have often transcended geopolitical boundaries, with Iranian researchers publishing papers with Americans, Germans collaborating with Russians and Ukrainians, and Chinese scientists working with their Japanese and Korean counterparts.

The COVID-19 pandemic clearly demonstrated the immense scale of international collaboration in global megascience. Within just six months of the start of the pandemic, the world's scientists had already published 23,000 scientific studies on the virus. These studies contributed to the rapid development of effective vaccines.

With universities' expanding global networks, the collaborations can spread through key research hubs to every part of the world.

Is Global Megascience Sustainable?

But despite the impressive growth of scientific output, this brand of highly collaborative and transnational megascience does face challenges.

On the one hand, birthrates in many countries that produce a lot of science are declining. On the other, many youth around the world, particularly those in low-income countries, have less access to higher education, although there is some recent progress in the Global South.

Sustaining these global collaborations and this high rate of scientific output will mean expanding access to higher education. That's because the funds from higher education subsidize research costs, and higher education trains the next generation of scientists.

De Solla Price couldn't have predicted how integral universities would be in driving global science. For better or worse, the future of scientific production is linked to the future of these institutions.

Picture of the Day

Families participate in the "Flying Kites" celebration under the slogan "For Chilren, for the Future" held at Fadak National Park in Qazvin, northern Iran.

Photo by Mehr News