

# U.S. Govt Should Make Amends to Academia

**Voice of the World**  
Edited by QI Liming

The U.S. Department of Justice (DOJ) announced on February 23 that it will effectively terminate the controversial China Initiative.

Scientists who spoke to *Nature* are relieved to see the initiative end. But they fear that the damage to collaborations with researchers in China will be long-lasting, and hope the U.S. government makes amends for the harm that the initiative caused.

*Welcomed by scientists and professionals*

"These changes are long overdue and certainly welcome," said Jenny Lee, a social scientist at the University of Arizona in Tucson, who studies research collaborations and geopolitics. In partic-

ular, she was glad to see that, during DOJ's announcement, "It seemed there was an acknowledgment that the China Initiative failed in some respects."

But even with the end of the initiative, there is a "palpable fear" in the academic community, said Rory Truex, a Princeton University professor who has written about the initiative's effect on American science.

It's notable that hundreds of people in the academic community have come together to push back against the government's actions, including many researchers who are not ethnically Chinese. "Scientists and academics in general rarely act collectively," said Truex.

"The China Initiative and the broader rhetoric around it has harmed our nation's competitiveness, ruined the careers of innocent scholars, and severely damaged the government's relationship with Asian American communities," Lin-

da Ng, national president of OCA-Asian Pacific American Advocates said after the DOJ's announcement.

The termination of the initiative may not fully address the concerns in the Asian American community. And for the scientists who have been prosecuted by the government, the ordeal also continues, sometimes for years after they are exonerated.

Gang Chen, a mechanical engineer at the Massachusetts Institute of Technology in Cambridge, told *Nature* that he applauds the changes, but also thinks that the U.S. Congress should hold the DOJ and FBI to account for the "harassment" of academic researchers. "The chilling effect will have a long-lasting damaging effect to U.S. higher education and America's ability to attract and retain world talent unless the government acknowledges its own wrongdoings," he said.

*Opinions from American institutes*

The volunteer group APA Justice,

which has been advocating on behalf of researchers of Asian descent, welcomes "the end of the ill-conceived initiative and the DOJ's openness to listen and respond to community concerns."

In December, an analysis by the *MIT Technology Review* magazine, found that nearly 90 percent of all China Initiative defendants were of Chinese origin. The fact as Lee pointed out is indisputable evidence of racial profiling.

An October report co-authored by Lee surveyed nearly 2,000 scientists in the United States. About half of respondents of Chinese descent reported experiencing "considerable" fear, anxiety or a mixture of both that they are being surveilled by U.S. government. Only 12 percent of non-Chinese scientists reported the same concern. The survey also found that many U.S. scientists of Chinese heritage had become less inclined to communicate with scholars in China. "All of those impacts combined means that there's damage that's already been done," said Lee.

*OSTP's new guidelines*

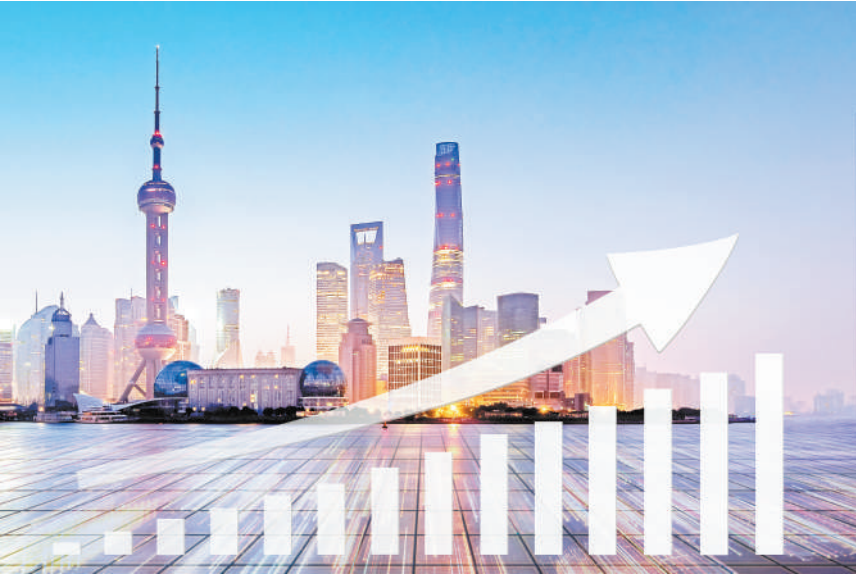
According to *MIT Technology Review*, collaboration with researchers at foreign institutions has long been an accepted and encouraged part of academic life. The White House Office of Science and Technology Policy's (OSTP) new guidelines on strengthening U.S. research security, released in early January, provided some new clarity on what kind of international collaboration is allowed.

The guidelines are meant to clarify requirements for federally funded researchers and develop best practices for federal research agencies. The OSTP explicitly denounced xenophobia and called for the guidance to be implemented without negatively impacting scientific collaboration and recruitment.

While the guidelines do create more clarity, it's unclear exactly what impact they will have.

## Comment

### China's Share in Global GDP Increases — 1% Seems Small, but Huge



China's Two Sessions have been guiding the country's dramatic economic growth and social development. (PHOTO: VCG)

By Staff Reporters

As is customary, China's Two Sessions were convened on schedule in early March 2022, attracting worldwide attention. The Chinese government announced numerous achievements made in 2021, which have shown that China has made a significant contribution to the world's economy, anti-pandemic efforts, and science innovation.

With the help of scientific and effective containment measures along with great efforts to produce COVID-19 vaccines, people's daily lives and China's economic growth have rapidly normalized. According to the latest data, China's GDP in 2021 accounts for 18 percent of the global economy, one percent higher than that of 2020. The number increase may seem small, but in reality is significant.

Furthermore, China has the world's largest middle-income group of more than 400 million people, which helped preserve the purchasing power during the pandemic. The total retail sales of social consumer goods in 2021 exceeded 44 trillion RMB, which increased by 12.5 percent compared with that of the previous year.

In addition to the economy, China has also contributed to the world in other areas.

Firstly, in the field of anti-pandemic efforts, China has kept its promise of assisting other countries. Over the past two years, China has become the biggest COVID vaccine producer globally, and up to now, the country has provided more than 2.1 billion doses of finished and bulk vaccines to more than 120 countries and international organizations.

Secondly, China is also leading the world in promoting regional free trade. The country has successfully pushed forward the Regional Comprehensive Economic Partnership Agreement (RCEP). RCEP means more than 90 percent of the goods trade among approved members will eventually achieve zero tariffs.

Thirdly, China has actively responded to keeping its promise on achieving carbon peaking and carbon neutrality goals. Compared with 2020, China's energy consumption per unit of GDP reduced by 2.7 percent. The area of clean heating in northern China is about 15.6 billion square meters, with a clean heating rate of 73.6 percent.

All of these achievements or contributions are inseparable from enhancing China's overall strength, especially its innovation capacity.

The world has witnessed China's rapid growth in emerging industries in 2021. Compared with the previous year, the value of the high-tech and equipment manufacturing industries increased by 18.2 percent and 12.9 percent respectively, and the output of new energy vehicles and integrated circuits increased by 152.5 percent and 37.5 percent.

Much money also flowed into R&D investment. Total social R&D investment in 2021 was 2.79 trillion RMB, which means a year-on-year increase of 14.2 percent. The intensity of R&D investment is 2.44 percent, while expenditure on basic research at the central level increased by 15.3 percent. However, increasing investment was not enough. The government also reduced tax for R&D. A total of 320,000 enterprises benefited from preferential policies for R&D expenses, with an additional tax deduction in advance and tax relief of 333.3 billion RMB. Meanwhile, policy support was an additional benefit along with the tax relief.

After the global spread of COVID-19, some nations have chosen to unconditionally surrender to the virus, which has resulted in millions of deaths. China, however, keeps insisting on its own policy to coordinate pandemic control and social-economic development. As a result, China has overcome many difficulties and is the only country in the world with positive annual GDP growth every year since the outbreak began.

Brainstorming together. (PHOTO: VCG)

## Hi! Tech

# Will Your Dreams Be New Promotion Channel?

By Staff Reporters



The technology "dream incubation" has shown the potential to advertise products. (PHOTO: VCG)

What happened in Christopher Nolan's movie *Inception* is fast becoming reality. U.S. soft drink company Molson Coors has successfully planted commercials into human dreams.

In late 2021, Molson Coors designed an experiment, inviting 18 participants to watch a specific movie repeatedly before sleeping. The film's content is mainly natural scenes of mountains and rivers, but interspersed with introductions to their own products. In addition, the company also created custom BGM to guide dreams, and even asked a Harvard psychologist to collaborate throughout.

Although the result was not a total success, it still surprised the company. Five people claimed that they could collectively see visions of Molson Coors' beer or soda in their dreams. In

other words, their dreams had been hacked.

The technology used in Molson Coors' experiment was named "dream incubation," and people have tried extensively to improve on it. Earlier, Burger King and Microsoft's Xbox made similar attempts. Undoubtedly, more and more companies will be involved in similar trials, especially when it has shown the potential to advertise products.

However, not everyone wants this experiment to be more successful. Just after Molson Coors' experiment, 40 researchers signed a joint letter appealing to the U.S. government to regulate the commercialization of dreams. After all, nobody wants to be forced to watch advertisements that they cannot skip, especially in their dreams.

# Electronic Tattoos as Health Monitors

By Staff Reporters

Chaotic Moon, a creative technology studio in the U.S., has developed the "Tech Tat," which uses electro-conductive ink to create a temporary tattoo that can also act as a health tracker.

Tech Tat is a high-tech tattoo made of components and conductive paint to create circuitry to basically turn you into a cyborg, by collecting health and other biometric data from your body.

According to Chaotic Moon, the tech tattoo will have an ability to monitor

body temperature and detect if someone is stressed based on sweat, heart rate and hydration levels information uploaded via Bluetooth.

Tech tattoos have the power to replace a physical exam because they can routinely send health data to doctors, who can quickly review the results and have the patient come in for an appointment if they see something unusual. They can also send the data to the wearer's smartphone, so the user can have instant access to the same health data that their doctor can

see.

This technology could allow people to easily spot early signs of illness or disease, which is vital because early detection is one of the most important ways to prevent disease. All too often, many serious or even fatal conditions could have easily been cured if they had been caught sooner.

In addition, the tech tattoo can also be used to track children when they get lost in a crowd and support the payment function of a credit card.



Tech tattoos in work. (PHOTO: SCREENSHOT)

## The Hunt for Planets Like Home

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Through combining transit methods and gravitational microlensing, the Earth 2.0 project will independently develop six 30cm telescopes of 500 square degrees and one 30cm telescope of 4 square degrees. By carrying these telescopes on satellites and using ultra-high-precision photometry, a large-scale searching of Earth-like planets is to be carried out.

According to Ge, the satellite team consisting of more than 200 astronomers from over 30 universities and research institutes at home and abroad has already completed the scientific objective research. Meanwhile, the team has also completed payload and ultra-

high-precision guide star and satellite platform designs.

Two key technical problems of ultra-high stability control of satellite attitude and an ultra-high-precision CMOS photometric camera are still being tackled. The team has completed the ground test of the satellite flywheel isolation system and will carry out in-orbit verification in April.

Experts believe that the largest ever database of Earth-like planets will be obtained via Earth 2.0 project. Through in-depth analysis, researchers are expected to unveil the origin of Earth-like planets and other "wandering planets" in the Milky Way galaxy, pushing exoplanet science leap to the "Earth Age."