

China reaches a cloning milestone

Editor's note: On Thursday, the Institute of Neuroscience, Chinese Academy of Sciences, announced it had cloned two monkeys using non-reproductive somatic cell nuclear transfer in December. Three experts share their opinions on the issue with China Daily's Zhang Zhouxiang:

Welcome news, but we need a new law

Since Dolly the sheep was cloned using somatic cell nuclear transfer in 1997, scientists around the world have been trying to clone primates. None of them succeeded until the Chinese team tasted success. More importantly, the Chinese team cloned a primate with non-reproductive cells, which is even more difficult than cloning animals through reproductive cell transfer. The biggest significance of the success is that scientists can now use proper primates for medical tests. The research into many human diseases lags behind because scientists cannot conduct tests on humans. At present, researchers mainly conduct tests on animals such as mice, but there is a huge genetic difference between humans and mice.



Wang Yue, a professor at the Institute of Medical Humanities, Peking University

With the cloning of primates, it is possible to get large numbers of primates infected with the same diseases as humans, and conduct medical tests on them to find a cure. Such tests will be more effective because primates are genetically much closer to humans than mice. The cloning of monkeys has also aroused worries, especially raising the question: Will the technology be used to clone humans? The legislature needs to draft a new law and corresponding regulations on the issue to suit the needs of the times. Technology is neutral, but we need a specific law to prevent vested interests from abusing technology.

Success will help find cure for diseases

Currently, researchers can edit the genes of a single cell, but not the genes of an animal already born. With the technology used to clone the primates, we can get animals with edited genes. That's very good news for neuroscience. Many genes, such as those causing Alzheimer's disease, Parkinson's disease and



Tang Cheng, a research fellow in gene-editing studies at the Institute of Neuroscience, Chinese Academy of Sciences

autism are similar in primates and humans. With the new technology, we can edit the genes of a monkey piece by piece to find out which gene caused a particular disease and how it can be re-edited leading to a cure. Besides, there are so-called "tool animals", such as monkeys with optogenetics, which can be so gene-edited that their nerves are accurately controlled by light. Gene-editing is the only way of cloning these animals and the new technology makes that process much easier. Therefore, it would not be exaggerating to say the success of the Chinese team will make China a leader in the world of neuroscience.

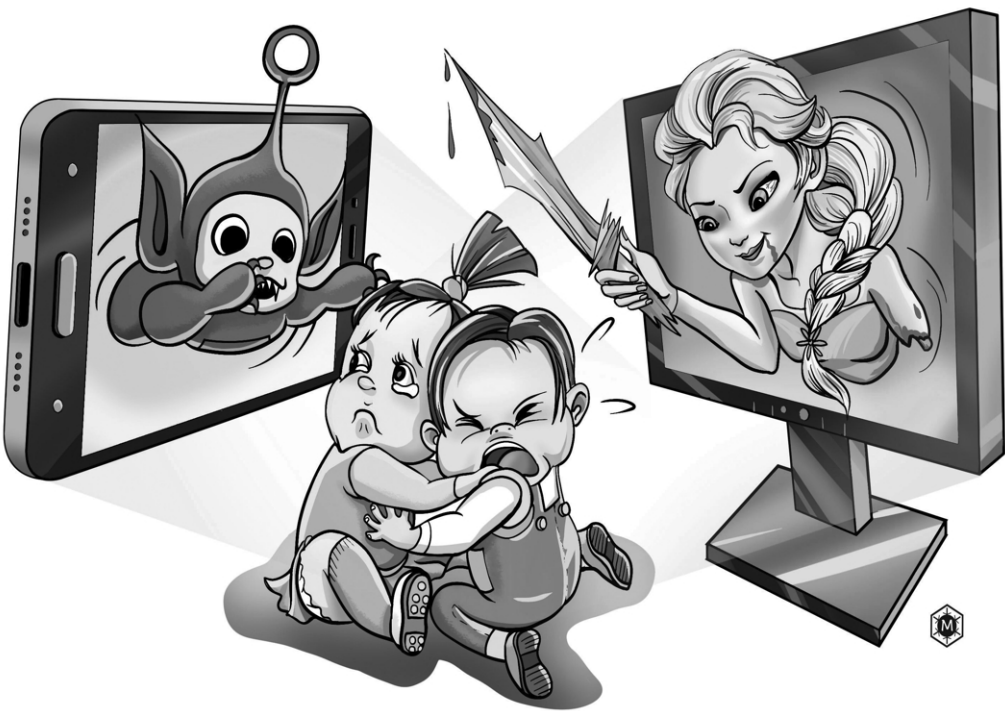
Technology needs stronger rules

Cloning animals is quite a mature technology, and there is little dispute over it. However, there are some questions that need answers. For example, will the cloning process cause irreparable damage to the animals? Will the cloned animals pose a threat to humankind? There are no detailed regulations on animal cloning yet, but some principles must be followed. According to the Human Genome Organization's declaration on cloning technology in March 1999, the researchers who clone animals must take very good care of the animals, and the purpose of cloning must be made clear before beginning the process. And biodiversity must be given due consideration in the process.



Zhang Tiankan, a former medical researcher and vice editor-in-chief of Encyclopedia magazine

With the Chinese team's success, cloning technology might achieve more progress in the future, which makes absolutely necessary to improve the regulations on cloning, so that it can better serve humankind.



MA XUEJING / CHINA DAILY

Specific regulation needed for kids' online safety

Editor's note: Millions of Chinese children were exposed to thousands of cartoon videos with disturbing scenes of violence and sex that passed through the online "children filter", leaving parents horrified and sparking a debate on cybersecurity for kids. Three experts share their views on the issue with China Daily's Yao Yuxin. Excerpts follow:

Blocking disturbing videos easier than deleting them



Zeng Xiangmin, a professor of Television and Journalism at the Communication University of China

Children are accessing the internet at a much younger age than, say, a decade ago. They are also spending more time online. As excessive online exposure can cause physical and/or psychological problems among children, even making them prone to violence, younger kids need special protection against the violent video contents. With some famous look-alike cartoon characters and false claims of helping children learn about colors and characters, these videos use computer algorithms to lead the viewers toward violent, disturbing scenes. Since prevention is always better, and easier, than cure, the authorities should introduce foolproof firewalls to prevent such videos from entering the online network, and keep an eye on the suspicious products. Innovative technology — through the dynamic use of algorithm — can play a key role in guaranteeing cybersecurity for children. The authorities should also strengthen regulation, and improve legislation and implementation. Parents, on their part, should fulfill their responsibility toward their children, and educate them about the dangers of the internet, instead of handing their smartphones or tablets to

their young children just to keep them "engaged".

Concerted efforts needed to fight potential threats

That violent videos are harmful for kids is not news. Too much exposure to videos and TV programs can turn kids into "couch potatoes" even if they don't contain violence and sex. Plus, children are prone to imitating the actions of the characters in the videos, because they cannot differentiate between reality and fantasy. For example, two boys, aged 4 and 7, were found tied to a tree by their 10-year-old playmate in Jiangsu province in 2013, and both had suffered severe burns trying to imitate the actions of a "wolf grilling a goat" in the popular Chinese animation *Pleasant Goat and Big Wolf*.



Liu Xiuying, director of Family Education Research Center at China Youth and Children Research Center

So one can imagine what effect the videos that can lure kids into forbidden territories online will have on their mind. Perhaps the rating system can, to a certain extent, prevent children from accessing "adult" contents. The "Elsagate" scandal (Elsa being the main character in the film *Frozen*) highlighted the dangers that kids exposed to online face. Elsgate refers to the controversy over supposedly child-friendly videos on YouTube and YouTube Kids that in reality contained themes inappropriate

for kids. But the scandal also showed that specific regulations are needed to protect children from the hidden dangers on the internet. So parents should carefully select the TV programs, videos and cartoon films that their children can watch, aside from teaching them to tell right from wrong.

People violating cyber rules must be punished



Du Jiangyong, a professor in the Civil and Commercial Law School at South-west University of Political Science and Law

There is no specific law that accords cyber-protection to kids. Thousands of videos that look like official versions of popular animations but have hidden contents not suitable for children's viewing had been drawing plenty of viewers until they were deleted after the recent controversy. Some evil-minded people made and uploaded countless clips, including violent parodies of popular Disney animation movie *Frozen* with the main character Elsa, which firstly is a violation of Disney's copyright. The importance of enacting a specific law on cybersecurity for children can never be exaggerated. To eliminate the new forms of violence against kids, video platforms should shoulder their social responsibility of removing videos with contents inappropriate for kids' viewing from online sites meant for children. Furthermore, a legal provision should be created to allow people other than parents and children to file public litigation to protect children against violent online videos and ensure their safety in cyberspace.

Manochehr Dorraj

Belt and Road will boost ties with Middle East

Judging by the US Energy Information Administration's forecast, China's demand for energy could double by 2030 if its domestic growth and overseas economic activities through the Belt and Road Initiative continue at the current pace. Hence, speculation is rife that China might be a prime bidder for the 5 percent stocks of Saudi Arabian Oil Company (Aramco) which Riyadh has decided to sell to ensure its future energy security. Over the last two years, China has been expanding its oil imports from Iran, which has the fourth-largest oil reserve in the world. China imports 55 percent of its oil from the Middle East and North Africa. And some observers believe that given its current level of consumption, China could run out of its domestic energy sources in the next 15 years. Assuming this prediction proves correct, China would be even more dependent on the region for its energy security and, therefore, invest more in the political stability and security of the region.

Another factor that is deepening relations between China and the Middle East is the Belt and Road Initiative, which, once fully operational, will see China's greater involvement in the region's economies. One of the six corridors of the Belt and Road Initiative runs from Urumqi in China's Xinjiang Uygur autonomous region through Central Asia, Russia, Iran and Turkey to Europe, which has the potential of substantially boosting trade between China and the countries involved in the initiative. In fact, Chinese investment in many of these countries has risen considerably since 2015. As a gateway to Central Asia and the Caspian Sea, and with the longest coastline in the Persian Gulf and 80 million consumers, Iran is poised to become a major transit hub for goods in this corridor. Iran is the sixth-largest oil exporter to China, and China is Iran's top oil importer and largest trade partner. Also, Chinese investment in Iran has increased 43 percent since 2016.

As the Belt and Road Initiative advances, the region may become increasingly important in China's geostrategic calculus.

In January 2016 when President Xi Jinping visited Iran, which joined the Asian Infrastructure Investment Bank in 2015, the two countries pledged to expand their bilateral trade to \$600 billion by 2025. The estimate may be exaggerated, but it reflects both sides' desire to expand their economic ties. Saudi Arabia, which has the second-largest oil reserve in the world, is the third-largest oil exporter to China. China, on the

other hand, is Saudi Arabia's top oil importer and biggest trade partner. Saudi Arabia has also agreed to join the China-Pakistan Economic Corridor, which extends from Kashgar in Xinjiang to Gwadar in Pakistan through to the Middle East and Europe. Apart from signing business deals worth \$65 billion during Saudi King Salman's visit to Beijing in 2017, the two sides also pledged to work together to create synergy between "Saudi Vision 2030" — an initiative intended to diversify the Saudi economy — and the Belt and Road Initiative. Saudi Arabia joined the AIIB in 2015 and contributed \$20 billion to its initial capital, hoping to attract Chinese investment, in order to bring to fruition the Saudi Vision 2030. And last year, Riyadh decided to put some of its massive sovereign funds in renminbi treasury notes, in the hope that the Chinese currency will appreciate substantially in the future. In 2017 China-United Arab Emirates' trade was expected to surpass \$46.3 billion achieved in 2016, with the UAE emerging as

China's second largest trade partner in the region after Saudi Arabia. More than 2,400 Chinese enterprises are already registered as members of the UAE Chamber of Commerce. And tourism and flights between the two countries have expanded, with about 300,000 Chinese nationals living and working in Dubai alone. In the last decade, China's trade with the region as a whole increased 600 percent. The projected value of the trade between the 22 Arab countries and China by 2024 is \$600 billion. If we consider the fact that China-US bilateral trade in 2016 was estimated to be \$578 billion, this is an impressive figure indeed, indicating that as the Belt and Road Initiative advances, the region may become increasingly important in China's geostrategic calculus.

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How divisive will Trump be when he speaks in Davos?

The news that US President Donald Trump will attend the 2018 World Economic Forum in Davos and deliver a keynote speech there on Friday has shocked many and even sparked protests in several Swiss cities. Trump's populist and nationalist rhetoric during his presidential campaign and in his first year in office is widely viewed as being the antithesis to the overwhelmingly globalist views at Davos. It's like having him speak at a Democratic National Convention. White House officials explained on Tuesday that Trump's "America First" policy is not "America Alone" and he wants to tell the world that the United States is open for business and wants the world to invest in the US. But facts are more eloquent than words. In the past year, Trump has announced the withdrawal of the US from the Paris climate accord and the United Nations Educational, Scientific and Cultural Organization. He has also cut funding to the United Nations and threatened to withdraw the US from the Iran nuclear deal. The US president also defied the strong global opposition to recognizing Jerusalem as the capital of Israel.

Indeed, the speech by President Xi Jinping at Davos in January 2017 was one of the most frequently quoted in the past year, often as a contrast to Trump's ... statements and deeds.

Even on the key issue of denuclearization of the Korean Peninsula, which Trump intends to talk about at Davos, he has repeatedly contradicted himself and members of his administration. In his first speech at the UN in September, Trump threatened to "totally destroy" the Democratic People's Republic of Korea, triggering an outcry against such a genocidal comment. While on the trade front, Trump has pulled out the US from the Trans-Pacific Partnership agreement and threatened to scrap the North American Free Trade Agreement and the US-Korea Free Trade Agreement if the other parties involved — Canada and Mexico and the Republic of Korea — do not make unilateral concessions. Just a day before he departed for Davos, Trump signed two orders imposing steep tariffs on imported solar cells and washing machines. The protectionist measures have dealt a heavy blow to the US and global renewable energy industry and drawn protests from both inside and outside the US. Indian Prime Minister Narendra Modi and German Chancellor Angela Merkel have blasted Trump's protectionism and isolationism in their speeches at Davos in the past two days, although they did not mention the US president by name. Richard Hass, president of the New York-based Council on Foreign Relations, described Trump as turning the US from a preserver to a disruptor of the international order in his first year in office. The 2018 Edelman Trust Barometer released this week showed that trust in the US has suffered the largest-ever recorded drop and ranks the lowest among the 28 nations surveyed. And a Gallup poll released last week that the median approval of US leadership in more than 130 countries and regions was at a mere 30 percent. In both surveys, China fared better than the US, a rebuke to some Americans who still try to defame China as a disruptor of the global order. Indeed, the speech by President Xi Jinping at Davos in January 2017 was one of the most frequently quoted in the past year, often as a contrast to Trump's isolationist, protectionist and anti-globalization statements and deeds. Xi was the star at the 2017 WEF when the world was haunted by the anti-globalization sentiment, in particular Brexit — Britain's departure from the European Union — and Trump's "America First" policy. The fact that Xi's words are still being cited at this year's Davos shows people's deep concerns over Trump's policies. I hope Trump proves me wrong when he speaks on Friday in front of the world and business leaders who are clearly at odds with his policy.