NEWSLETTER
SHANGHAI FORUM

GLOBAL GOVERNANCE AND ASIA

Vol.12 No.2 (Gen.36)
Sep. 2019

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NEWSLETTER
SHANGHAI FORUM

Shanghai Forum, launched in 2005, is known as one of the most famous international forums held in Shanghai. Co-hosted by Fudan University and Korea Foundation for Advanced Studies, undertaken by Fudan Development Institute (FDDI), the Forum is a non-governmental and non-profit academic organization which holds an annual symposium each May in Shanghai, involving more than 700 delegates from over 50 countries.

Shanghai Forum Newsletter is a publication of Shanghai Forum Organizing Committee. It includes news releases, feature reports, major projects, and consolidates the Forum's progression in different phases so as to let all circles of society to better know the forum and to boost the forum's development.

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Shanghai Forum 2019: Pooling Global Wisdom to Build Shanghai Brands and Projecting Fudan Think Tanks' Voice

On May 25-27, the annual “Shanghai Forum 2019” symposium was held in Shanghai, which was themed “Asia Amidst Global Reshuffling: Challenges, Developments and New Paradigms”. Over 700 guests and representatives from think tanks, universities, governments, corporations, media and other institutions at home and abroad were present.

Chen Qun, Vice Mayor of Shanghai, Xu Ningsheng, President of Fudan University, Chey Tae-Won, Chairman and CEO of SK Holdings in Korea, and Wang Jiarui, Vice Chairman of the 12th CPPCC National Committee addressed the opening ceremony on May 25 respectively. The opening ceremony was presided over by Jiao Yang, Secretary of the Party Committee of Fudan University and Chairperson of Fudan University Council.

Chen Qun stated in his speech that Shanghai was now accelerating the construction into “Five Centers” and a socialist modern international metropolis. Shanghai is also driving three new major tasks in full swing, which are building new areas of Shanghai Pilot Free Trade Zone (FTZ), establishing a science and technology innovation board and experimenting with the registration system, as well as promoting integration of the Yangtze River Delta. Shanghai will further optimize its business climate to facilitate high-quality development, expedite building a higher-level new pattern of opening up, set a good example for China’s nationwide reform and opening-up and be a pioneer in innovation-oriented development. He expected Shanghai Forum to bring about more achievements and make greater contributions to the peaceful development of China, Asia and the world.

Xu Ningsheng extended his warm welcome to guests present at Shanghai Forum on behalf of Fudan University and expected the event to push for the formation of new paradigms of Asian development as “civilization achievements that span time and space and present everlasting charms” continuously provide prospective and strategic recommendations for Asia and the world. He hopes that Shanghai Forum will become an excellent platform for aggregation of international frontier results and exchanges of Chinese and foreign cultures.

Chey Tae-Won analyzed challenges confronting Asia in his speech. He said that without a sustainable society, there would not be sustainable enterprises, so more companies and individuals should strengthen cooperation and coordination to establish a sustainable world. He expected Shanghai Forum to continue to serve as a bridge which plays an indispensable role in exploring models of innovative growth in Asia.

Wang Jiarui shared his views on opportunities and challenges in Asia. He believed that our proposition of enhancing exchanges and mutual learning with other Asian countries was based on the long-term goal and realistic task of building a community with a shared future for mankind and a sober judgment of China’s development level, and it showed our inheritance and promotion of our own good traditions and great expectations on young people from all over the world. He expected Shanghai Forum to find new ways in which different civilizations could exchange with and learn from each other, explore new paths of development and evolution of human society and make new and greater contributions for the co-building of a community with a shared future for mankind and the cause of peace and development through multi-perspective and multidisciplinary discussions.

Park In-kook, President of the Korea Foundation for Advanced Studies (KFAS) presided over keynote speeches. Susan









Shirk, Professor at University of California, San Diego (UCSD) and Chair of the 21st Century China Center of UCSD, Wu Xinbo, Dean of Institute of International Studies, Director of Center for American Studies and Vice Dean of Fudan Development Institute (FDDI) of Fudan University, Michael Spence, Vice Chancellor of University of Sydney, Paulo Portas, former Deputy Prime Minister of Portugal, and Zhu Wei, Senior Managing Director and Chairman of Accenture Greater China delivered keynote speeches respectively.

The Forum consisted of four parts, namely: "New Tech: Innovation and Social Development", "New Order: Global Uncertainty and the World Restructuring", "New Height: Shanghai Towards an Excellent Global City" and "New Era: China in a New Round of Reform and Opening-up". It included over 20 high-end roundtables, as well as the First Annual General of BRICS Universities League (BRICS UL) and the Second Council Meeting of Fudan-Latin America University Consortium (FLAUC), altogether 30 academic events.

During the Forum, Fudan University and University of Sydney signed a Memorandum of Understanding on international cooperation in teaching, training, scientific research and other aspects, so as to promote resources sharing and win-win cooperation between the two in interdisciplinary and research fields. Meanwhile, Institute for Global Public Policy, Fudan University and LSE-Fudan Research Center for Global Public Policy were inaugurated at the Forum.

The Forum concluded successfully on May 27. At the closing ceremony, Jiao Yang, Party Secretary of Fudan University, extended her congratulations on the success of the Forum. She noted that this Forum focused on the theme "Asia Amidst Global Reshuffling: Challenges, Developments and New Paradigms", where guests were able to fully exchange and share their opinions. Through the discussions, all participants recognized that only by remaining responsive to the trend of the times, upholding equal dialogue, propelling innovation drive, valuing openness and integration, and moving towards a community with a shared future goal of maintaining amicable exchanges and mutual learning could we create a new future for Asia.

She said that by basing itself in Shanghai, Shanghai Forum is able to keep the country in its bearings while being oriented to the world. It would bear the mission of "concentrating on Asia, focusing on hot issues, assembling elites, promoting interactions, enhancing cooperation and seeking consensus" and contribute more to promoting the development of Shanghai, China, Asia and the world.

Park In-kook fully affirmed the organization work of this Forum and the important developments and milestones the previous 14 sessions had achieved. He stated that Asia was rising in the globe in cultural presence and both sides should work together to have a better understanding of opportunities, risks and social impacts of scientific innovation and create a real space for common prosperity and peaceful development of Asia and even the world.

Think tanks at Fudan gave voice at the Forum to offer suggestions on current national major strategies and hotspot issues regarding social and economic development, which became a highlight of the Forum. Ten think tank reports prepared by FDDI, including World, China, Shanghai and Future series, were successively released at the closing ceremony, covering topics such as international strategies, the role of multilateral development banks in Asia and emerging countries, joint development of the South China Sea, China's population development trend and response to an aging society, foreign capital and technological innovation in Guangdong-Hong Kong-Macao Greater Bay Area, and two-way interactions between the market and the government promoting higher-quality and integrative growth of the Yangtze River Delta, development of green finance in the Yangtze River Delta, construction of Shanghai International Financial Center, present situation, impacts and suggestions of e-commerce paper packaging, and also data disclosed by China's local governments in 2019, etc.

This annual symposium of Shanghai Forum enabled nearly 700 political, commercial and academic elites and media representatives from all over the world to gather at Fudan and discuss the challenges and development opportunities Asia might face in an era of great developments, great changes and great adjustments under the theme "Asia Amidst Global Reshuffling: Challenges, Developments and New Paradigms". Through sub-forums, roundtables, high-end dialogues and other forms of activities organized by stakeholders, the Forum shared development experience of regions such as North America, Europe and Latin America, and countries along the Belt and Road, discussed the future direction of the world pattern and relations between major countries, explored the development direction of the "Belt and Road" Initiative, studied the correlation between ecological civilization and industrial development, and looked forward to the roadmap of frontier areas such as innovations in green finance and regulatory technology.

Today, Asia is one of the most dynamic and promising regions in the world, where thousands of "vessels" are competing for the advancement. At the opening ceremony of the Conference on Dialogue of Asian Civilizations, President Xi Jinping brought forth four propositions such as "adhering to mutual respect and equality", "adhering to appreciating the values of others and seeking co-existence of different values", "adhering to openness, inclusiveness and mutual learning" and "adhering to advancing with times and innovation-driven development", and proposed to jointly build a community with a shared future for Asia and the mankind, and create a better future for Asian and global civilizations. This Forum was held against this backdrop and participants reached a preliminary consensus that only by conforming to the trend of the times and moving towards a community with a shared future with exchanges and mutual learning between different civilizations as the spiritual support could we create a bright future for Asia after fully exchanging and sharing their opinions.

The Forum believes that regional rise of the Asian continent has become a trend of the times of global concern since the beginning of the new century and standing on the wave of the new era, Asia should march forward courageously and continue to lead the trend of world development. Communication between different civilizations is the solid guarantee of Asian development, so Asia should adhere to drawing lessons from history, looking into the future, broadening its horizon, building up mutual understanding, reducing the limitation of political and historical factors, resolving disputes through dialogue and consultation, and working together to deal with various threats and challenges; technological innovation is an inexhaustible impetus of Asian development, so Asia should quicken knowledge creation and technological innovation, promote new economic growth through new progress in technological innovation, invigorate social progress through new breakthroughs in technological innovation, have a better understanding of what it is and reshape the world more effectively, thus driving continuous improvements in human civilization; green ecology is an important pillar of Asian development and "civilization rises and falls with ecology", so Asia should pursue green development and prosperity, follow the principle of ecology first, environmental protection first and resources conservation first, develop on the premise of environmental protection and protect the environment whilst seeking development, and thus lay a solid foundation for continuous and balanced economic development in Asia.

Shanghai Forum is a large international academic forum co-hosted by Fudan University and Korea Foundation for Advanced Studies (KFAS) and organized by Fudan Development Institute (FDDI), which bears the mission of "concentrating on Asia, focusing on hot issues, assembling elites, promoting interactions, enhancing cooperation and seeking consensus" and aims at building a platform for exchanges and communication among political, commercial and academic circles at home and abroad, and providing suggestions for regional development and national plans. Since its establishment in 2005, Shanghai Forum has successfully held 13 annual symposiums and attracted nearly 5,000 speakers across the globe. The year of 2019 marks the 14th annual symposium of Shanghai Forum. Adhering to innovation as the spearhead to better serve human progress, national development and people's livelihood improvement, the Forum has already become one of the most prestigious international forums held in Shanghai, pooling global wisdom to build "Four Brands" of Shanghai.






OPENING CEREMONY KEYNOTE SPEECHES

Wang Jiarui

Vice chairman of the 12th CPPCC National Committee

Good morning! Thank you very much for giving me this opportunity to deliver a short speech here. I remember when Shanghai Forum was first held in 2005, I was also honored to have the opportunity to attend and give a speech. Ten years have passed, and today I came to this annual meeting again. As usual, I met my old friends, such as Mr. Chey Tae-Won. We often meet in Shanghai, Beijing, as well as in Korea. Also, I had a very pleasant talk with Ms. Susan Shirk yesterday. Besides, meeting new friends makes me feel great. Therefore, I would like to extend my warmest congratulations to the opening of the Shanghai Forum this year, and my cordial greetings to all the guests.

Just now President Xu Ninsheng, Chairman of Chey Tae-Won, and leaders from Government of Shanghai have all made very insightful speeches and elucidated many insights. I was deeply inspired. One of my most striking feelings is that in the current situation of Asia and even the world encountering complicated changes, it is very meaningful that the Shanghai Forum provides a chance for us to discuss the challenges and the development of Asia. Couple of weeks ago, the Conference on dialogue of Asian Civilization was successfully held and achieved fruitful results. Heads of state, government, and international organizations as well as guests from 47 countries covering all five continents gathered in Beijing, to deepen the exchange of civilizations and jointly explore the path of symbiosis and prosperity of Asian civilization. Chinese President Xi Jinping also delivered a keynote speech, which was highly recognized by the guests as well as people from other countries.

I am currently the Chairman of the China Association of Soong Ching Ling Foundation. We held cultural exchange activities as a part of the Asian Civilization Conference. We have an activity base invested and built by the state, mainly for children and adolescents.

Chairman Chey and the director of Park In-kook, who are here today, also visited our base on 4th May. More than 200 youngsters from 13 countries participating in the Asian Civilization Dialogue Conference came to our base "China Song Ching Ling Youth Science and Technology Cultural Exchange Center" and exchanged ideas face-to-face. In the base, they experienced Chinese traditional activities such as Tea, Beijing Opera, Dyeing, Embroidery, and Chinese medicine. They were very excited and introduced the unique culture of their countries as well. After the experience and communication, many young people said with excitement that this was the first time for them to experience so many Chinese traditional cultures and they'd like to come here again.

Through communication experience with foreign young friends, including friends from all walks of life, we had a deeper understanding of the profound connotation of President Xi Jinping's keynote speech and will support President Xi's initiative to strengthen exchanges and mutual learning among different civilizations. I hope to have more opportunities to communicate with young people from different countries and share cultures with one another. From these contacts, I feel that there is great hope for the future of Asia, because our civilizations are learning from each other, our hearts are connected, and hope is placed on the next generations of young people like them. Of course, we always need to grasp the reality accurately and work together to achieve our goals surpassing reality. The current world is multi-polarized, economically globalized, cultural diversified, and social informatized. With the in-depth development of informatization, human society is full of hope, and Asia is also full of hope. On the other hand, the uncertainty and the instability of the international situation have been highlighted. The global challenges we are facing became more severe. In reality, Asia faces many problems that need to be solved urgently. Moreover, none of the problems in Asia is purely a problem that can be solidified in Asia. It is closely related to each Asian country and the other parts of the world. We mutually affect and interact with each other.

From the perspective of opportunity, Asia is the largest and most populous continent in the world, and Asia is also the stabilizer of the world economy today. In 2018, Asia's contribution to the world economic growth is nearly 60%. Even in the case of global trade cold, Asia also have handed over a satisfactory answer. Fortune Magazine's World Top 500 rankings in 2018 shows that among the 32 countries mentioned, there are 11 countries are in Asia, reaching 30% of the total; and the number of Asian companies on the list is 204, reaching 40% of the total. This is our opportunity.

From the challenge side, climate change, financial turmoil, populism, and extremism on a global scale have had new impacts on existing ways of thinking and traditional global governance. In the age of Internet, there is a deeper connection between people, people and things, things and things. There is also a huge contrast between those connections and the increasing intellectual deficit. The old key can't open a new lock, and some of the conventional theories and ideas are no longer adapted to the new pattern; the old system and policies have gradually courted a series of social problems. As for Asia, we have long faced problems such as a lack of communication or exchange between countries, the economic development mode is extensive and inefficient, the gap between the rich and the poor is still to be bridged, regional hotspots continue to heat up, and extremism is spreading.

Faced with unprecedented opportunities and challenges, China will unswervingly follow the path of peaceful development, pursue an open strategy of mutual benefit and win-win results, and always be a builder of world peace, a contributor to global development, and a defender of the international order. As President Xi Jinping emphasized at the Conference on Dialogue of Asian Civilization: China has been and will continue to strengthen exchanges and mutual references with different countries, different nationalities and different cultures in the world, and consolidate the humanistic foundation of the community of Asian destiny and human's common destiny.

Our advocation of strengthening of exchanges and mutual reference with Asian countries is based on the long-term goal and the realistic task of building a community of human destiny. In the history of mankind, all civilizations have made positive contributions to the progress of human civilization in their own way. The differences between historical culture, social system and development path should not be the causes of conflicts, obstacles to communication or the reasons for confrontation. In today's Asia, the interdependence between countries is unprecedented. We live in a same global village, in the same time and space where history and reality meet. We are interconnected and have become a community of common destiny. Humanities exchanges should become an important bridge for the development of relations between different countries and different ethnic groups in Asia. We will respect the diversity of Asian civilizations and culture, and we believe exchanging transcends misunderstanding; reference transcends conflicts; and civilizations coexistence is far beyond civilization superiority.

Our advocation of strengthening exchanges and mutual learning with Asian countries shows the inheritance and promotion of our fine traditions. The Chinese have always been advocating the concept of holding differences in harmony. The world-famous Silk Road and the historical 7 Voyages to the West of Zheng He in Ming Dynasty have inscribed the historical footprints of the Chinese ancients in pursuing friendly exchanges, mutual benefit and cooperation with the people from all over the world. The Chinese accepts all friendships with a sea of hope and tolerance, and have dedicated in promoting the integration of different cultures, leaving behind many beautiful stories about foreign cultural exchanges.

Compared with other parts of the world, China has an even more harmonious culture exchange with Asian countries, and a natural sense of intimacy. We hope that through important multilateral platforms such as the Shanghai Forum, we will eliminate barriers or misunderstandings among Asian countries, promote mutual understanding of the people, provide important channels, and create various cooperation between countries to deepen mutual communication and references.

Our advocation of strengthening exchanges and mutual learning with Asian countries, is a clear judgment on the level of development of our own. Today's China has achieved remarkable economic development and social progress. However, there are still many gaps between China and some developed countries in the world. China still needs to learn from foreign excellent culture actively and carry out multi-channel and multi-level external development. We need to participate extensively in cultural exchanges, world civilization dialogue, as well as learning from countries and different civilizations. China's history and the great practice of reform and opening up have proved that an open mind is a self-confident mentality and a manifestation of the vitality of China's civilization and culture.

Our advocation of strengthening exchanges and mutual learning with Asian countries, is an ardent expectation for the youth of all countries. The young are the future of all countries and the inheritor of the friendship of the Asian family. I hope that the Shanghai Forum will more broadly unite the strength and wisdom of young people from all over the world. Let them grow together through exchange of mutual understanding and become an orderly force for the friendship of Asia in the future. The two organizations, the "Soong Ching Ling Foundation of China" and the "China Welfare Society" in Shanghai, which I chaired, also would like to take this opportunity to express their willingness to work with various civil society groups and young people in Asia who are committed to Asian friendship. They would help on making contributions to the new era and creating a new form of cooperation in Asia.

Ladies and gentlemen, dear friends, Shanghai in the early summer is full of life and vitality. Just a few days ago, it was Xiaoman, one of the 24 Chinese solar terms. This term means that the seeds of the crops began to fill but are not yet mature. It has just reached Xiaoman but not Daman. From 2005 to now, the Shanghai Forum has made great progress and gained a lot of intellectual wealth. We can also say that it is at the best time for Shanghai Forum. I hope that Shanghai Forum can always hold the attitude of "Xiaoman", and continue to focus on multi-faceted issues so as to implore the value and order in the changes of human society from a multi-disciplinary perspective. In exploring new methods of development and charting new paths for the progress of mankind, we aim to build a community of common destiny and to make more innovative and impactful contributions towards the peace and development of mankind.

Finally, I wish this year's annual meeting a complete success, thank you!

(This article is edited based on the recording and has not been reviewed by the speaker.)

OPENING CEREMONY KEYNOTE SPEECHES

Economic and Trade Friction and A Prospect of China-US Relations

Wu Xinbo

Dean, Institute of International Studies, Fudan University
Director, Center for American Studies, Fudan University
Vice Dean, Fudan Development Institute

Ladies and gentlemen, it's always a challenge to speak after my friend Susan Shirk, who is insightful and balanced. But we do have the shared concern about the current state of US-China relation and we have even stronger concern about the future of this important relationship. I didn't have time to prepare a written speech but I do have some slides. Basically, I want to talk about three things. One, what's happening in US-China relations. Two, what China and US should do next. And finally, how we should manage the growing strategic competition between our two countries.

Let me start by making one assumption, that is, economic relation will very much define the future of China-US ties. Over the last several decades, economic incentive has been the main reason for both countries to reach out to each other to develop bilateral ties. And in spite of the many differences in political security and diplomatic dimensions, the economic factor is what brings two countries together and to cooperate. Now, China and US are entering a period of strategic competition. This competition is very much involved in economic and technological competitions. We all understand the current trade war was launched by the Trump administration and at least three different voices on economic relation with China exist inside and outside of the Trump administration.

The first voice is what I call economic nationalism. Economic nationalism seeks to maximize economic benefits and adopts unilateralist and protectionist approach, as the Trump administration has been doing over the last two years. As a result of that, we have seen very tough negotiation and also the gaming between our two countries in trade and economic areas. If the trend goes on, there will be a spill-over effect into the political and security areas, which means it will be very difficult for two countries to build up trust in economic and security areas. In the end, the overall China-US relation will be full of friction and uncertainties.

The second voice from the US side is called economic realism. It doesn't care about the trade issue. What it cares is that in trade relation with China, US should make sure that it will not increase China's key capabilities, especially in the high tech area and also to prevent China from narrowing the gap with US in its overall national capacity. As a result of that, what US seeks in economic relationship with China is not absolute gain but relative gain to prevent China from catching up and surpassing the US. The US decides not to make a deal with China in trade, economic, financial and technology areas. The spill-over effect of economic realism in the overall relationship is that it is not only fraught with suspicion and friction, but also increases the risk of conflict. And as a result of that, the overall relationship will be eroded by confrontations and conflicts.

The third voice is called the economic liberalism. This puts China-US relationship in the broader context of globalisation. It argues that China-US economic relations should be pursued according to multilateral rules

and norms and two countries should seek a win-win situation in this process. Under these circumstances, China-US economic relationship will continue to develop through both complementarity and competition. The political and security relationship will also reflect both cooperation and competition.

Delving deeper into the logic behind the trade war against China and behind the hardening of attitudes against China in the US for both the elite and public, I think there are at least three different mentalities about China.

One would be anxiety and even fear about the rise of China and the prospect of China catching up and surpassing US not only economically but also in many other areas. The second mentality is that people are disappointed and outraged with the reality that engagement policy failed to change China in the way that US had anticipated. The US has to make judgments. The third mentality is a long-standing disapproval of and to some extent hostility towards China's political and economic system. They still call China as Communist China and Red China. And for them it is never feasible and possible to live with China that is led by the Communist Party. Among the three schools, I think the concern, anxiety and even fear over the rise of China is the broadest consensus behind the current US attitude toward China.

Looking at the US responses toward the rise of China over the last several years, it is even more obvious how the concern of the rise of China has shifted the US China policy.

First, the boycott of Asian Infrastructure Invest Bank (AIIB). The US claimed the reason behind the boycott was that it couldn't trust that AIIB will live by the Western standards and rules. Not only did US decide not to join the AIIB, Washington also tried to dissuade its allies and partners from joining it. I think that behind the rhetoric, the real concern is that China launching the AIIB might challenge the current international financial order dominated by US since the end of World War Ⅱ.

Second, US attitude towards the Belt and Road Initiative. In the last two years, especially last year, the US Secretary of State travelled around the world informing every country to be very cautious with the debt trap brought about by Belt and Road Initiative.

I think behind the so-called debt trap is the US concern that Belt and Road Initiative will serve to promote China's political and economic influence in the Euro-Asia continent and beyond. And more recently, the US has launched a global hunt on the Chinese IT giant HUAWEI and US Secretary of State and other government officials keep talking about the security risk. Are there really security risks? No. Two days ago, when US Secretary of State Pompeo did a television interview with CNBC, he began to talk about the security risks of HUAWEI. The anchor of the program asked him whether he really has the evidence about the security risks, and of course, he didn't. So he said, that's the wrong question. We have to make sure is that 5G should be in our value. What does this mean?

It means that first, you play the security card to scare people. If the security card doesn't work, then you should play the card of value to dissuade people. Following that, if the value card doesn't work, you should play the card of civilization. We are from different civilizations so conflict of civilization is inevitable.

We can see from the shifting logic about China over the last several years, from international rules to international order and international political economic system, from China's foreign policies and security behaviour to trade imbalance, from market access to intellectual property rights and industrial policies et cetera. Behind the rhetoric, I think the core concern is that US has determined that China's rise is posing a major challenge to US hegemony. And what the US should do is to mobilize its allies and partners to contain and disrupt China's rise. If that doesn't work, it will at least slow down the process.

Now, what should China do under the current circumstances? I think three key words as we can tell from Chinese leaders: reform, opening up and innovation.

Last month, when President Xi spoke at the second Belt and Road Summit Forum, he emphasized that China will take a series of major measures to promote opening up and to strengthen institutional and structural arrangements at a much higher level. The concrete measures include the market access for international capital and investment, intensified efforts to promote international cooperation on the protection of intellectual property rights and increasing the import of more commodities and services from abroad. Also, we are trying our best to maintain a stable exchange rate for our currency. And finally, what's most important is to make sure all the reformation and opening up policy will be well-implemented. So, I think President Xi has already made a very serious commitment to the next round of opening up and reformation.

What's also important is China's indigenous innovation. In the last several years, the Western enterprises, especially Americans, complained about China's indigenous innovation. They said that we do not trust the international supply chain. We do not trust international cooperation in innovation because we want to promote indigenous innovation. But today, look at what's happening with HUAWEI and what's happening with the US efforts to cut off the supply and the innovation chains. China has no choice but to input more efforts to ensure that China is able to rely on itself in the high-tech sector. This is absolutely necessary.

For the US, it should also do some soul-searching. What should the US do? I think first and foremost is some philosophical thinking. In international relations, throughout thousands of years of history, the shift of balance of power between countries has been the norm. The US has not been number one since its birth and US cannot be number one for the indefinite future. That is the rule of history and there's no exception for US. People need to have philosophical thinking on this issue. But more importantly, the American elites and the public seem to always like to point to problems from outside of their country. However, the challenges that are confronting US today come mainly from within the country, not outside, not from China. If the US cannot mitigate its political polarization, if the US doesn't want to improve its meagre infrastructure, if the US doesn't want to invest more in research and development, if the US doesn't want to cut the federal deficit, then no matter if China rises or not, the US will certainly decline. That's certainly the case. The real key to the future of US is reforming within the US. The trade war is escalating after almost one year's fighting, struggling and negotiation. But I trust that it will come to an end sooner or later. When the trade war ends, I think we can walk away with several major discoveries.

One, China-US economic and trade relations are too important to be decoupled. Neither side can afford the cost of decoupling trade and economic relations between the two countries. Second, the US cannot interrupt and end the rise of China. What it can do at most, is to slow down the process. But for a country with thousands of years of history, it has a different sense about time frame. Last but not least, is that China-US economic, diplomatic and security confrontations will only quicken the decline of US hegemony, as well as facilitate the collapse of the current international system. This wouldn't serve the interests of anybody, including the US.

What should we do about this relationship down the road? First and foremost, mutual respect. No matter how powerful the US is, it still has to deal with China and other countries with due respect. The slogan of "America First" really lacks respect for the interests of others and the entire international society. Second, let's seek common ground while shelving the differences. The US has to accept the differences in political and economic system between countries and civilizations. The US approach to China for many years has been featured by pragmatism. We acknowledge the cultural, historical, political and economic differences, and we can still develop cooperation and to achieve a win-win situation. Now what really concerns me at the moment is an unfriendly sentiment in the US saying that the competition is really featured by differences of civilizations. This reminded US of the conflicts in history in the 18th, 19th and early 20th centuries. Finally, two countries should engage in benign competition. Competition is inevitable. Competition will intensify between our two countries for sure, but we should compete with each other according to the trends of 21st century. And in this process, we should seek to achieve a win-win situation rather than a zero-sum situation. If competition is inevitable, conflict is not. My concern is for some people in US, including those in the Trump administration, is that when they talk about competition with China, confrontation and conflicts are at the back of their minds. The most important thing for competition between our two great countries is that through competition, each side can do better about itself rather than to defeat the other side. To defeat the other will be simply a mission impossible.

With that, I want to once again express my strong concern about the current state and the future of this relationship. But I also have a cautious optimism that people in both countries, the elites and the public, still have the rational belief that we can handle the relationship not only in a way that best reflects the fundamental interests of our two countries, but also to the benefits of the international society in general. With that, I stop my presentation. Thank you!

OPENING CEREMONY KEYNOTE SPEECHES

Education for a Changing World: Universities and the Fourth Industrial Revolution

Michael Spence
Vice-Chancellor and Principal, The University of Sydney

Chairperson Jiaoyang, President Xu,

It is a remarkable privilege to be here. And I'm going to, if I may, now turn the access in a number of ways.

The first is we've been thinking at the grand scale about the relationship between countries, about geopolitical shifts, and they are obviously important as we think about a period of global uncertainty, but they are not the only source of uncertainty at the moment, and in particular not the only source of uncertainty that is affecting both the work of universities and also the future of work itself. So in one sense, I'd like to both change the scale of our conversation to think about the role of educators in a changing world, and to change the focus of our attention, from geopolitical attentions, to the changes to the world of work that re going to be brought about by the artificial intelligence revolution, because universities are going to be crucial to finding a way through our current eleventh, and universities are going to be crucial both as building people-to-people bridges between countries and bridges of knowledge, of understanding, of research and of education. It's a tremendous privilege to be here with a large delegation from the University of Sydney to sign what will be the most significant investment so far in the China relationship with Fudan University in the area of artificial intelligence and brain sciences.

The scholars differ about the impact of the Fourth Industrial Revolution on the future of work, the future shape of the labor market, but all agree that changes are happening and that the pace of change will only increase. And some estimates as many as 40 percent of current jobs will be replaced by computers in 10 to 15 years, and no one doubts that the students currently at Fudan, currently at the University of Sydney, will need to be ready for several career changes during their lives, and changes that will require changes of whole careers, not just of jobs or roles. Much attention has been focused on the role of university research, but I think it's also important not only to think about research and the Fourth Industrial Revolution, but also the role of the university as the center of education. And it's in that area of the role of the university as the center of education, as the places in which these future leaders that will help us navigate the uncertainties of the current time are produced, that we need to think. The technological revolutions of the past have mostly left the roles for which university education is required untouched, but not so of the Fourth Industrial Revolution. The work of lawyers, of accountants, of doctors, of many professionals will be radically changed. As a recent report by the Reuters put it, today being educated increasingly means having attitudes and behaviors that enable one to adapt quickly to changed

circumstances. President Xi made a similar point earlier this week when he spoke of the need for resilience. The question facing all universities is how we produce graduates who are going to be the people telling the machines what to do, and not just people whose jobs are replaced by the machines. And I think for every university, that requires essentially two areas of self-examination and reform, areas that we've been giving considerable attention to at the University of Sydney, and if you'll excuse me, I'll use my own university as a case study. In addition, the changing face of technology poses important questions for education policy-makers, one of which I'd like to touch on briefly at the conclusion of my remarks.

First, there's no doubt that universities have to closely examine both our undergraduate curricular and the extracurricular experience that we offer, to determine how future-proof they may be. The University of Sydney has just massively reformed our undergraduate curriculum, with the Fourth Industrial Revolution in mind, a process that involved extensive international consultation with experts, with employers throughout the region, with students and with our community more generally. We began with a blank sheet of paper, by asking exactly what personal and intellectual qualities a student will need in order to have the adaptability to respond to rapidly changing world of work. We have designed a new undergraduate curriculum intended to live up to these core attributes. As a result, all our undergraduate degrees are now marked by three key features. The first of these is a balance between deep disciplinary expertise and interdisciplinary effectiveness. In English-speaking world of course, models of undergraduate education are being spread on the spectrum between the poles of the English model with its single area of focus and the very broad American undergraduate liberal arts education. Having taught in those systems, I can say with some confidence that a traditional English undergraduate education teaches you everything about almost nothing, and a traditional American undergraduate education teaches you nothing about almost everything. But it's generally agreed that the education that can survive the Fourth Industrial Revolution must be T-shaped. It must both be broad and genuinely deep in a particular disciplinary area. Depth is required because it's been repeatedly demonstrated to be the most effective way of teaching critical thinking skills that will be essential to the adaption to change, and also effective skills in written and oral communication. Still students need to acquire a habit of mind that pushes beyond the superficial, into the complexities of a given issue or given area of learning. But the questions of the modern world, questions such as how to deal with climate change, with global shifts in the political balance of power, in equality and alike, are essentially multi-disciplinary in their formation. And key to an effective graduate career is the ability to work in multi-disciplinary teams, and to learn quickly the language and intellectual framing of disciplines that are not one's own. In Sydney we have addressed this issue in a number of ways. First, we have strengthened the rigour of our disciplinary education going back to the future to ensure that every student has a very deep grounding in a particular area of learning. Second, we have introduced the requirement that students take some units of study that are available across the university, units that either focus on a multi-disciplinary problem, or introduce students to methodologies that are new to them. But third, and most radically, we've made it possible for students, indeed we've encouraged them, to take a second major, to take two majors, and to take them from anywhere in the university, whatever their primary major may be. Students are putting together really unusual combinations of subjects, and they are doing that in two deep areas. They are doing that always with some future-oriented justification in mind.

The second key feature of the undergraduate education that we think you'll need to survive the Fourth Industrial Revolution is caused by the fact that it's not only technological change that our students will be faced with. The world is increasingly interconnected, no matter how strongly at the moment many politicians may be working to push us apart, the world is increasingly interconnected and increasingly a culturally complex place. Rapid changes in technology and the resulting uncertainty that many will feel in their work and in their futures will only increase the need for better cross-cultural understanding. Business, civil society and government leaders of the kind that universities traditionally produced will increasingly need the ability to reach out beyond their own cultural frames. For that reason, we've made the development of cross-cultural competence a key goal of our undergraduate education. 40% of our Australian students already speak a language other than English at home. But we've made it possible for everyone to acquire an additional language as a part of their degree whatever they are studying. In addition, we've already got more Australian students studying overseas as a part of their degree than any other Australian university and China is their destination of choice, and we also hit our strategic target of at least one in two domestic students spending a significant amount of time overseas. And finally, we thought deeply about the internalization of our curriculum and the way in which cultural competence can be developed in the classroom.

But it's the third new structural feature of our undergraduate degrees that we think is relatively distinctive at the scale at which we are doing it. Remember we are a university of almost 70, 000 students that teaches almost everything, and all students are required to undertake an extended real-world problem-solving experience. In this context, we work with companies and civil society organizations across Australia, China, India, the United Kingdom and Europe, and ask them to identify a real strategic problem on which they are actually working. It can't be devised for the process. It can't be something that's made up. And then they need to work with groups of our students and academics in multi-disciplinary teams to find solutions to the problems. The students need to demonstrate in devising the solution the way in which their own discipline makes a contribution to its solution, but also their effectiveness as part of working in a multidisciplinary team. That experience for many of our students brings together all that they've been learning in their discipline, in multi-disciplinary learning and in cross-cultural effectiveness. It prepares them for a world of change, in which the problems that they'll need to solve don't come with any boundaries, and in which interpersonal effectiveness is as important as their core intellectual and professional skills. The feedback so far from the organizations with whom we've worked across the world, many of whom end up adopting one of the solutions devised by our students and from the students has been outstanding. We've also found a much more satisfactory approach that embedded learning, internships and alike because of the incredible variation in the quality of experience that students can have in placements and internships.

Complementary to those three structural features of our undergraduate curriculum, we are working hard to ensure that our own campus experience delivers us the personal attributes that are necessary for leadership in the future. This is something that I know many Chinese universities are currently grappling with. Contrary to some of the predictions within the digital world that the on-campus experience will disappear, we believe that it's face-to-face interaction, but particularly the ability to leverage the social, capital and networks of the university, that's going to be more and more important for people in the crucial post-secondary phase. It's also in extracurricular activities that students often acquire many of the so-called "soft skills" in interpersonal effectiveness that artificial intelligence will never be able to replace. Moreover, employment rates for three-year undergraduates in Australia are declining. Employers tell us that that's because they increasingly believe that it takes four years to mature a post-secondary student to the point in which they are effective in a modern workplace. Arguably, that will only be truer as uncertainty in the world of work grows. Much of that maturation happens in the extracurricular space.

So that's how we approach the issue of undergraduate education for the Fourth Industrial Revolution. In a way, it's been really gratifying to hear employers talk about the value of much of what universities have traditionally do, but also to challenges, to think about some new things. Universities all over the world are experimenting, with ways of preparing people for uncertain future of leadership, but this T-shaped education, cross-cultural effectiveness, the ability to bring learning to real-world problem solvings are key to all the solutions that have been experimented with at the moment.

The second challenge created for the educational mission of universities by the Fourth Industrial Revolution is of course in the area of post-graduate learning and lifelong learning. As the market for post-graduate taught courses declines everywhere, universities need to examine the question of how actively they are going to engage in what is increasingly called "The 60 Year Curriculum". As professor Gary Matkin from UC Irvine said, the insight of the heart of "The 60 Year Curriculum" is that as the consequence of AI and the Fourth Industrial Revolution, educational needs are going to more than ever extend beyond the whole of the career and emerge at different points of the career, as work evolves and sometimes radically changes. The question arises that as jobs come and go and careers develop through a lifetime, it's how to ensure that workers have education that they need at the time at which they needed—both technical education and further development of the soft skills—that are going to be so important. The relative responsibilities of education providers of individuals and of employers to train and retrain them as their careers are developing is increasingly being renegotiated in different ways and in different systems. Moreover, it's not only a question for the future. Many in our current employment will, within their working lives, see not only their jobs but their professions disappear, and face the need for significant retraining. One thing that's clear is that the traditional postgraduate model of retraining through subsequent degrees and diplomas is proving too inflexible and too costly to respond to the developing needs of the labor force. We have postgraduate or taught postgraduate courses, such as MBAs, that remain popular, but they do so often as a kind of finishing school, a sort of pre-experience education, rounding out an undergraduate education rather than a subsequent qualification. One approach that offers partnership with private online providers has been to develop online taught postgraduate courses of one kind or another, and most universities such as my own have significant examples of such courses. There remains a significant investment of time and effort on the part of students who often face strong demands on their time and energy, and that raises the question of the role of the university in micro-credentialing, quite literally, providing credentials for smaller or more specific attainment levels, sometimes stand-alone, and sometimes able to be built up as models of a more substantial qualification. For every university, the question is going to emerge as to its flexibility, and to its willingness to enter into this new market. Of course, the so-called MOOCs (the massive online open courses) that have emerged in the last decade, have been a wide-scale experiment in this space, and we have many just like everybody else. Almost every university has put its toe into this kind of activity. But the stakes for universities have been relatively low, and for most, MOOC courses amount a little more than brand-enhancing tasters of their more mainstream educational offerings. Moreover, while most universities offer extension education and professional development courses, these activities are only exceptional cases at scale. Systematically to enter the micro-credentialing market would be, for most institutions, a much more significant commitment. Operating in this sphere effectively requires quite different skills of a cultural and academic staff than of traditionally being founding research universities. And it's no small question to how heavily a university wants to invest in this area. On the other hand, given the scale of the predicted demand of the Fourth Industrial Revolution will create, the financial returns from this type of activity are potentially significant. One interesting question is how much this is a new market or how much, for example, like the National University of Singapore, you may see it as a way of enhancing your primary market by making courses open only to alumni.

But finally, it's not only that universities are needing to rethink undergraduate education, and also postgraduate education and micro-credentialing, "The 60 Year Curriculum", but the whole post-secondary sector faces an enormous challenge because of the Fourth Industrial Revolution, and very few governments are responding to this challenge. This is a challenge primarily not for individual universities, but for the system as a whole. The traditional distinction between university and vocational education has assumed a certain division of labor, and at least in the West, a certain traditional class structure between, for example, the design engineer and the mechanic. But those distinctions are already incredibly blurred. And increasingly the Fourth Industrial Revolution will require highly technically-skilled workers who do not necessarily need the full suite of graduate attributes that ought to be developed in a university degree. The major technology companies internationally are complaining that the traditional distinction between the engineering and the mechanic is no longer sufficiently nuanced, and that there's a skill base between those two that will be increasingly required and that is lacking in many advanced economies. The German and Singaporean systems with their technical universities have given considerable thought to that labor market challenge and the Singaporeans are of course at the moment of investing heavily in it. But I'd argue that in many other jurisdictions, such as my own, and I would say to China, have yet to think wholisticly about the post-secondary experience. Governments have a key role to play in building an educational system that services the needs of the labor force throughout the whole of the lives of workers and across the spectrum of the skills that will be required.

The issues that we are considering so far this morning are issues that could well keep you up in the middle of the night. For our graduates, even in a world in which those issues are resolved, uncertainties will still loom large in the world of work because of the very rapid pave of change that is coming in the labor market because of artificial intelligence. In that context, it's a burden on universities to think about what it means to be a university system for the future. And for governments not only to invest in the way that was proposed earlier in university research to keep the pace in the international arms race for research, but also to keep the pace in the international arms race for talent development, and in particular for the development of leaders who can navigate a world of increasing complexity and uncertainty, and a world in which cross-cultural competence is increasingly important. The University of Sydney is proud to be thinking through those issues and particularly to do so with our high-quality promise with Fudan University in the Western Pacific, which we think is the most excitingly, dynamically growing part of the world. Thank you!

(This article is edited based on the recording and has not been reviewed by the speaker.)

OPENING CEREMONY KEYNOTE SPEECHES

- **Paulo Portas**
  Former Deputy Prime Minister of Portugal

Good Morning, everybody,
Dear Chairman of the University Council,
Dear President of the Fudan University,
Dear President of Korea Foundation for Advanced Studies,
Dear President of Fudan Development Institute,
Dear ambassadors, councils and diplomats,
Distinguished guests,

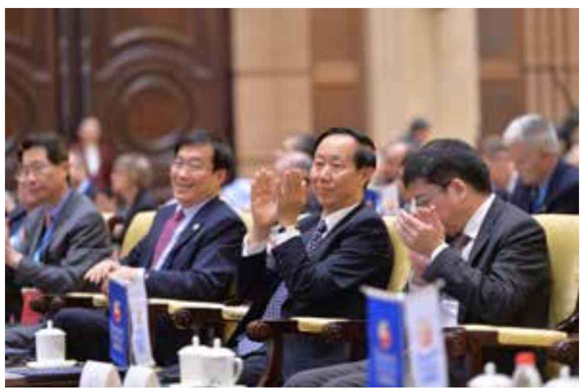
And if you will allow me, my dear former colleague of government, Miguel Poiares Maduro,

I will be a little bit back to the US-China issue, with a mix of history, economics and geopolitics. Actually, I teach geo-economics because I think it's the best approach to modern geopolitics. International relations are more economic than ever.

Yes, the world changed radically in the last 40 years. We have a new economic order. But 40 years were not sufficient to build a new political order, so we have a new economic order, and for the moment, a global political disorder. So we have to make an intense effort to re-think, to reshape the global political rules of our world. I will try to show why China, specifically, and Asia, generically, serve globalization better than any other country or region of the world, and why China surprise the world on digitalization. I want to underline that globalization and digitalization are frequently used as one single concept. They have parallel lives but these are different concepts. You can stop for some moment globalization, but you cannot stop digitalization. That's the main difference.

First of all, I want to call your attention to what happens in this 40 years. Asia is now in charge of 45% of global growth; 40 years ago, it was around 20%. So if we have a problem in Asia, we will have a consequence in the rest of the world. If you want to focus on China itself, the rise is apparent with the last one. China, if you consider the IMF recommended GDP adjusted by PPP, is now responsible for something like almost 19% of global growth and it was less than 10% 40 years ago. I insist 40 years are nothing in humankind's history, but they were enough to provide this change.

If you consider all the continental economies, the regional economies that are exposed to the trade of goods and services, to the core of globalization—globally selling and globally buying goods and services, you will understand why Europe is very exposed to a global trade war because Europe is a top exporter economy, why, on the other hand, China is more exposed, namely on goods, to attention than the United States. It's a matter of fact that the fuel of globalization was trade and is trade. Not only in 40 years, the trade volume of goods grew 10 times, in 40 years 10 times, but more significantly, I want to ask some of your attention to this, not evolution, but revolution. In the 80s, China had 0.9% of global share of trade of goods. Last year, 12%. China becomes the No.1 exporter of goods of the world, nothing less than No.1 exporter of goods of the world. That's why I always try to teach my students that they should understand that, yes, Mikhail Gorbachev, Ronald Reagan, Margaret Thatcher and John Paul II changed



a part of the world in the 80s last century, but in the other side of the world, Deng Xiaoping changed China. Changing China, he changed Asia. Changing Asia, he changed the world.

I also underline that this is not only the rise of China. This is also very solid, if you consider Asia as a bloc. And then, some in the streets of Paris, may be discomfortable with this new world. Some people in some factories in the United States may be discomfortable with this new world. But pay attention, it's a much more balanced and fair world. Now the economic influence are not only North-North, or West-West. It's North-South, West-East, and East-South, and North-South.

I also want to call your attention to what I could define as a scale impact. If you consider the largest top ten companies of the world, 30 years ago in 1990, all the flags were American. The first difference thirty years later, you have more diversity in the flags. In my opinion, that's not a bad thing. But what impresses me more is not exactly the question of the flags. It's that the first company in the 90s in terms of the revenue, wouldn't be in the top ten now. Just compare the revenues. So that's why the process of fusions and acquisitions are growing organizations in such a dimension that probably one day we will regret this kind of scale because it's very difficult to control and very difficult to leave. If it is obvious that China serves very well globalization, if we go to digital, it is even more impressive. And this is impressive, first of all, to Europeans. In the top ten digital economy, Europe is for the moment out of the Champion's League. This is a competition between China and the United States. Year after year, you will have six American or seven American companies and three or four Chinese companies. The first European company—it sounds very good for music—Spotify, however, is not in the top ten. That should worry Brussels, not exactly where to tax Apple, but why the European capitalism is not being able to build and provide a global player on digital economy.

And by the way, the resentment against globalization and new economy, I insist, is a little bit an American-European resentment. I never heard a serious discussion against globalization in Africa, in Asia, or in Latin America, because these regions of the world are net beneficiaries of globalization, of a more fair and balanced world. This line was sent to me from an African friend with hope in globalization and digital world. Our Africa will change very quickly, namely in terms of migration, with seven hundred million smart phones in 2020 and free trade agreement between 54 African countries.

Try to find the place of China 20 years ago in data traffic. Can you find it? I think you can find it in 2016. So the potential growth in the digital market is very large in Asia and in China itself, as you know. But what I want to underline is the last world intellectual property organization register of patents in 2018. The reason why I say China surprises the world is exactly because China is very close to overcome the United States as the first register of patents in the world. If you look at this not by countries but by companies, who is the largest investor in R&D in the world? Huawei. From the 53,000 patents of China, 5,000 are from Huawei. Guess why you have this technological war. That being said, this is just a measure of speed on even the e-commerce. Can you imagine in less than 10 years, in a decade, our China become the real challenger of the United States in unicorns, in e-commerce and mobile payments? So I would just call your attention to just one consequence. With this change in the geo-economics, obviously geopolitics change. You cannot imagine the world of this more recent slides with the same balanced organization 20 years ago. This is the first thing I want to show you.

The second is why in my opinion—it's a friendly opinion—Portugal is one of the most friendly allies of the United States in the Atlantic. We are also a country that opens our economy a lot to Chinese investment. We know the exact differences between alliances and friendship. And we diversify our economic obviously because we want to live in globalization. We want to benefit from the multiple opportunities of globalization. But why is America so discomfortable with this world changing? I would say that it's just an external opinion. America is finally understanding that the world is less American and American is less WASP—less White, Anglo-Saxon and Protestant. But don't blame just the current President of the United States. Protectionism has a long story in the United States. Nativism has a long story in the United States. And isolationism has a long story in the American pendulum. Just two items about the United States. A migration policy excessively restrictive will damage seriously the competitiveness of the United States, namely on the digital economy.

What do you need in Silicon Valley? You need to contract brains. Brains don't depend on flags, religions or continents. I need to be free to contract the best. If the government is too restrictive on migration policy, it will lose something very interesting and distinctive, and, in my opinion, very positive sign of American economic history. 40% of the five hundred biggest companies of America were founded by immigrants or sons of immigrants. If you go to Silicon Valley, it's not 40%, it's 58%.

And then the second reflection is that we know all about financial crisis. We know about it in the United States, in Europe, in Asia, in Latin America. We know all about financial crisis. What do we know about global trade crisis? What do we know about crisis determined by global trade war? We have to be back to the 30s in the 20th century to remember the last global trade war after the Great Depression in the United States. The world was very different at that time. The United States decided to impose tariffs on 20,000 foreign goods. The consequences were not immediate but there were more inflation, more employment, less trade and less growth. So what we can say for the moment is that trade crises are not so immediate as the financial one that cut credit and money from one hour to another, but they last for a long time. And that's one of the reasons why I am very worried. The impact of a trade war lasts for more time. It's harder to recover. And by the way, if you see the financial crisis from Europe, the United States did the job of recovering much quicker than we did, in a very decisive way.

So I want to just finish by calling your attention to some possible conclusions. I would say, first of all, we are in the paths of living in a new political world polarized between the United States and China. It's probably inevitable. Facts are facts, and normally facts have consequences. We don't know when, but this is the world we are going to live in.

Second, Europe has its peculiar dilemma. Europe can be united as a major bloc. If Europe splits, it goes to irrelevance. But if Europe wants to be an international player, it has to be responsible for its own security defense with not only soft power but hard power. For the moment, Europe has them.

The third thing is what are changing in the globalization will change even more with digitalization. Digitalization accelerates all the phenomena of globalization. But don't take it for granted. It's one of the fantastic things in digital world. 50 years ago, the life expectancy of a great company was 50 years. Now it's 15. In a global and digital world, if you have a good idea, you can transfer the good idea in a good contract in a good business very quickly, but pay attention, the next good idea that will replace your good idea is already being created.

The fourth thing is that in a global world, there is no empty space. Look at what happened with the Trans-Pacific agreements. The United States withdrew. I don't know why. The United States withdrew. One year after, Japan, Mexico, Canada, 11 countries of the Pacific decided to sign the new Trans-Pacific without the United States. In this kind of world, to have a global economy without global institutions or at least a minimum of global rules is very dangerous. It can be chaotic. So the path is to reform institutions, namely the United Nations and WTO, not to destroy institutions, not to eliminate international institutions.

Finally, I want to also add that in globalization, the unpredictable can prevail. Who predicted Trump? Who predicted Brexit? Who predicted the challenge of national separation in Spain? Two populists ruling Italy? Who predicted all the recent political phenomena? In globalization, the unpredictable may prevail. So my advice to everybody is to be flexible. Don't be rigid. Someone who is rigid can crash with such dynamic change and evolution. In my perspective, both the United States and China, at the end of the day, regardless of the tweets, the divorce, the crash, have interests in a compromise, because—I don't know if it is a new agreement or a new truth—it's the only possibility to avoid escalations where both China and the United States can lose control. It is an escalation, not only about trade, but about a very relevant good trust. The problem of this kind of crisis is the impact of trust, and trust is the most difficult thing you can build and the easiest you can destroy.

Thank you very much.

(This article is edited based on the recording and has not been reviewed by the speaker.)

OPENING CEREMONY KEYNOTE SPEECHES

Reimagining the consumer market in the age of AI in Asia

Zhu Wei
Senior Managing Director, Chairman of Accenture Greater China

Distinguished guests:
Good morning!

It's a pleasure to attend the 2019 Shanghai Forum on behalf of Accenture, and it's an honor to be invited by Fudan University. This morning, it has been mentioned repeatedly that our world is going through an unpredictable change, which we would all agree as a major reason why we are here today. The change is reflected in various factors, including globalization, protectionism, China's emergence, populism, population transfer and so on, among which the grand leap of digital technology, as well as its transformative impact on business, economic and social community, stands at the center of attention for me and my colleagues, because it is closely connected to Accenture's business and all Chinese enterprises.

A simple briefing about Accenture. We are the only large management consulting and technology service company among Global Fortune 500. Instead of manufacturing or marketing hardware and software, we offer end-to-end service from corporate strategy to operation, including strategy planning and business restructuring, management and operation transformation, digital and IT services, BPO and outsourcing. For over three decades in China, we have provided a range of services to Chinese enterprises and supported their development. We are constantly working on how to truly understand the transformation brought by digital technology and how to seize opportunities in face of challenges. Tomorrow morning, Accenture and Fudan University will host a parallel forum "Reinvention of Industry", and we welcome you to join us in exploring the journey on industry digital transformation. Today we'll share with you the leadership challenge posed by the transformation to policy makers, non-governmental organizations and corporate directors, with a focus on artificial intelligence.

To begin with, the chart above shows China's recent economic development. Frankly speaking, China's economy has taken off into a rosy domain through 40 years of reform and opening-up, but we also realize that the growth drivers in the past are losing momentum. Capital and labor alone cannot drive sufficient growth in China. The growth rate of fixed asset investment has dropped from high periods of around 30 percentage points to barely one percentage point last year. With an increasingly aging population, China is losing strength on its labor force. It is estimated that China's population of working age will shrink in the next 15 years. However, we also see hope in technological breakthroughs which continuously reshape the normal, creating new productivity and indefinite possibilities. The technology waves starting from 1950s have made huge difference on business, economy, and society, and we can see that the seventh wave is triggered by artificial intelligence. According to Accenture's research, AI has the potential to increase China's annual GDP growth rate by 1.6 percentage points until 2035, which is 7 trillion US dollars in total, and enhance China's labor efficiency by 27%. All these figures prove that AI is booming in China and will play a leading role in many industries, as China's investment and financing in AI and the number of AI patents already top the world. Since AI development requires abundant data, China has generated obvious strength in data accumulation. In all walks of life, China's big data volume is 5 to 300 times more than that of the US. Besides, AI has greatly facilitated corporate operation. For example, it helps subsidiaries of Ping An Group to filter out risky loans, and reduce 1000-hour human work on reviewing legal documents to a day. It also helps transnational firms including J&J and Accenture to choose the best candidate for the job.

However, we also found that people have different assumptions and fear towards the future of AI. The pessimistic view that AI is very likely to replace human beings is misleading and harmful in the short term. Gartner predicts that until 2020, AI enhancement technology will bring a commercial value of 9 trillion US dollars and cut 6200 million working hours, creating 2,300,000 jobs while only swallowing 1,800,000. Accenture has worked hard to find out the reason, and it turns out that AI will not substitute human beings, but rather complement us through collaborative intelligence, which we learn from enterprises benefited from the use of AI. According to our research, human and machine have different strengths, yet the lack of collaboration forms a "missing middle" here in between. Once we discover the missing piece and achieve the interaction between human and machine, this middle area will create many new jobs and release humans from works that are complex, dangerous or dull, offering them more opportunities and energy to do more interesting jobs. For example, coal mine giant Rio Tinto uses AI to operate mechanical equipment such as drilling rig, excavator and bulldozer, which prevents human operators from working in dangerous mining conditions. The company can collect sensor data from remote devices, which allows it to monitor the equipment more efficiently and safely. Also, at Accenture worldwide, nearly 17,000 jobs were replaced by automatic technologies. But at the same time, we have trained 180,000 staff in a year and a half through a new technology platform, enabling them with new skills and expertise.

In the past 20 years, technological breakthroughs have struck many enterprises. According to S&P, in the past 50 years, the average life of enterprises has lowered to around 16 to 17 years, and half of the existing enterprises at present will drop out from the S&P 500 in the next 10 years. Enterprises need to analyze from all dimensions to shift their strategy and find new strengths to work with AI. Today, we also have with us Doctor Athina, Accenture's Applied Intelligence lead who has drawn a 10-year development path for enterprises to fully tap the potential of AI. You will see that through different prongs and methods, enterprises will be able to constantly enhance their productivity and operate at their full potential in the next 10 years.

So how do enterprises transform new technology into strength? How do they perform better with the help of AI? Based on our research on leading AI applied companies, we have concluded 5 key principles in applying new technology. The first is that we need to change our mindset and design AI with empathy instead of using it solely for automatic convenience. Secondly, more experiments need to be done in order to accumulate data and experience, building a venturesome and experiment-based culture. For instance, Amazon encourages staff to do ground-breaking experiments and innovate with new methods and thinking rather than rest on its laurels. The third is the integration of isolated data. Although many enterprises claim that they have a large data, their data managers usually fail to utilize these data and their data analyzers do not have enough data. So how to help data circulate around all departments to form an effective supply chain is key to success. The fourth is that we need to put people at the core of our business and cultivate staff's collaboration skill with AI. Some of our client companies in Europe have launched a "3050 plan" which requires all staff to be assessed at the age of 30 and 50 respectively. The

former assessment sets a plan that guides them to grow with the company, and the latter reviews their previous work because the companies believe that those who have made progress on collaboration with AI are more valuable, and they wish that they will continue to work for the company for another 20 years, until they are 70. Therefore, higher human-AI collaboration skills are also crucial to successful corporate application of AI. The last and the most important principle is leadership. Enterprises must lead responsible AI, with top-down consideration of its ethic, moral and legal implications to ensure that AI's judgment and actions are explicable and free from bias.

Technology itself is neither good nor evil, for the two ends are only used to judge how people or organizations use technology, so it's all about top-down leadership. Currently there has been increasing debate on AI around the topic of privacy, tolerance, equality, prejudice, surveillance and monopoly. For example, the Internet and social medias analyze users' personal data with algorithms to personalize dynamic push based on their interest and preference, which furthers people's misunderstanding that AI infringes their privacy. In addition, it is true that AI is very helpful in resume screening, but will it exclude qualified candidates for their gender or race? Will face recognition be used for surveillance? Last week, San Francisco has just banned official use of face recognition through legislation. Therefore, we need to keep three points in mind to apply responsible AI. The first is human at the center. The key idea of responsible AI is that AI should be human-centered. The second is AI's ethical design. We must ensure that technical personnel are trained, and we must give enough thought to AI's ethical standards in designing automatic and intelligent systems, so that we can eliminate prejudice, discrimination or other unjust moral standards in AI practice. Thirdly, we should strengthen the cooperation among the AI industry, the government and the public to reach a consensus on AI's legal, social and moral standards, which helps to build a positive policy framework. Thus, responsible AI is also a leadership challenge for policy-makers especially in China, because although China has strength in its data volume and accessibility, loose data governance brings hidden problems. The business opportunities of data platforms and AI are so great that enterprises with skyrocketing valuations swarm into the market, growing from zero to 50 billion US dollars in only 3 years. The large number of stakeholders makes the supervision and regulation of AI a highly complicated and challenging job. Meanwhile, the technology and business community are constantly evolving, which poses serious challenge to a sound and flexible governance. But we are very happy to see that Shanghai Forum includes a parallel forum which allows us to talk about AI and humanity issues, and we look forward to inspirational and fruitful discussions.

Ladies and gentlemen, we are now facing an era of change. Technological breakthroughs have brought huge uncertainties to the world, but whether they brought challenges or opportunities depends on our capacity to truly harness our technology. If we can join hands to explore the best way of human-technology collaboration, we believe that we will go through the change that has certainly come with uncertainties and embrace a better world. Thank you!

(This article is edited based on the recording and has not been reviewed by the speaker.)

CLOSING CEREMONY FUDAN THINK TANK REPORT RELEASE

Abstract of Changes in Turmoil: Fudan International Strategic Report 2018

The international political arena of 2018 featured turbulence and turmoil. Through the promotion of the so-called “America First” policy, the Trump administration of the United States has constantly stirred up the international political landscape and become the primary source of chaos on the international stage. In the face of such turbulence triggered by, and intensified through, the actions of the Trump administration, countries around the world, after undergoing a “wait-and-see” period, have stepped up efforts to cope with the situation, by adjusting existing policies and embarking on new strategic moves.

The report indicates that the US was the primary cause for most of the changes in 2018. Governments of different countries have been eagerly coping with the uncertainty brought about by the Trump turmoil. Major political and economic powers, such as China, Russia, Japan and the EU, have stepped up efforts to unwaveringly defend multilateralism and uphold the international free trade system and principles, or actively promote bilateral and multilateral free trade arrangements, or try to lessen financial independence on the US, or strengthen defense cooperation with each other. These efforts reflect that the world has realized the necessity and urgency of self-reliance and self-improvement in the “post-America era”.

The report suggests that the world will still be largely plagued by continuing chaos in 2019—the massive impact and destructiveness of the Trump administration will endure, as the upcoming election and the severe hurdles from the Democratic Party in domestic politics are likely to prompt Trump, who is striving for another term, to take further provocative actions in the realm of foreign affairs, which could only exacerbate international political environment; and changes will also continue—other countries marginalized by the US will continue to deal with, and fight against it, by seeking to form “issue-specific alliances” and enhancing strategic coordination. These countries are likely to make joint efforts or hedge their bets on policies in response to an increasingly unpredictable US, as well as an ever complex and uncertain world, which will lead to a new round of adjustment and even restructuring of the international political landscape. The report recommends that facing the great changing international environment, China should maintain a calm mindset as well as an optimistic attitude and undertake positive and measurable actions on the world stage.

Released by Institute of International Studies, Fudan University, the report contains 13 articles with different topics, including International Political Landscape: Seeking Changes in Turmoil written by Prof. Xin Qiang; The World Economy: Escalating Uncertainties? written by Prof. Song Guoyou; Chinese Diplomacy: Stabilizing Neighboring Relations and Promoting Opening-up written by Lin Minwang, a young research fellow; U.S.: The ‘Trump’ Turmoil written by Prof. Wu Xinbo; Russia: Back to Pragmatism written by Prof. Feng Yujun; The European Malaise: Old Rules Falling Apart, New One on the Way written by Prof. Ding Chun; China-Japan Relations: Turnaround and Progress with Twists written by Prof. Hu Lingyuan; India: From ‘Pulling Chestnuts out of the Fire’ to ‘Balancing for Survival’ written by Prof. Zhang Jiadong and Associate Research Fellow Zhang Jiegen; The Korean Peninsula: New Situations and New Opportunities and DPRK: Towards a ‘New Concerted’ Path written by Zheng Jiyong; Middle East: Confrontation, Stalemate and Imbalance written by Prof. Liu Zhongmin (Shanghai International Studies University); Southeast Asia: New Diplomatic Adjustment under the Sino-U.S. Competition written by Associate Research Fellow Qi Huaigao; and Indo-Pacific Strategy: How Far Can It Go? written by Prof. Wei Zongyou. These articles provide an in-depth view of major international events and developments this year from different perspectives, together with deep analysis of interactions and games between international relations and the international landscape underlying these events, which can help better understand the developments and future trend of international relations amidst changes and uncertainties.

Two-way Interactions between Market and Government Promote Higher-quality Integrated Development

As stated in the report, coordinated development in the Yangtze River Delta (YRD) over the years indicates that the market plays a fundamental role while the government plays a decisive role. In order for deep integration of the YRD, the basic idea is to allow full play to the basic role of the market in allocation of resources and establish unified market standard, service platform, data resources and financial risk prevention mechanism; the fundamental guarantee is to reform and blaze new trails in the system of administrative control; the main method is to promote market-led natural industrial agglomeration and division, integration of technological innovation and industrial upgrading, and integration of ecological economy and industrial economy, especially building core industrial clusters in frontier areas such as artificial intelligence (AI), micro-electronics and health technology; the basic premise is that people's sense of gain continues to rise. To this end, we should begin with top-level design to establish a cost- and benefit-sharing coordination and compensation mechanism in favor of social security integration, promote regional integration of elderly care services in the light of the actual situation, actively and steadily explore new models of medical services and security system, and energetically coordinate the construction of infrastructure such as railways, highways, ports, airports and information. With preservation of safe water sources and ecological space as the common goal, responsibilities and obligations of different parties should be made clear for joint protection and fruits sharing.

Based on the understandings above, the report recommends that the construction of a deep YRD integration demonstration zone should serve the overall goal of building a "world-class metropolitan area", closely follow the broader path of "advanced manufacturing" and ensure effective "combination of production, education, research and application". Meanwhile, Shanghai should play a core and leading role in the YRD integration strategy. Shanghai should show its strategic height by giving play to its role as five centers, forming height difference in resources to drive the flow of market players and facilitating reasonable division of labor in the YRD. Shanghai should show its innovation capacity by exerting the role as a global S&T innovation center, fully mobilizing the innovation and industrial momentum in the YRD through policy resources such as the free trade zone and S&T innovation board, enhancing innovation-driven development, strengthening joint ecological governance, co-building infrastructure and highlighting its role as a pioneer and forerunner. Shanghai should show its inclusiveness by establishing the vision of "Great Shanghai", which advocates a wide impact of Shanghai, as the core, over the entire YRD, based in the globe and China, and playing a leading and exemplary role. Shanghai should lead the way in capacity building, continue to deepen ecological construction, make breakthroughs in cultural construction, bring forth new ideas in attraction of talented personnel and improve the spatial conception of "one belt", "one axis" and "three zones" in combination with national strategic needs. The integration of the YRD might face challenges in all respects and the specific implementation strategy is yet to be further studied. Once all these problems are solved, a brand-new large and high-quality economy will definitely become the most powerful driving force of China's economic development and will greatly increase China's confidence in leading a new round of global competition.

Role of Multilateral Development Banks in Asia and Emerging Countries after the 2008 Crisis

Based on the speeches and discussions made in the roundtable with the same theme at Shanghai Forum 2018, this report contains an assessment of problems left over by the financial crisis in 2008; the expected role of new multilateral development banks (MDBs); challenges facing the infrastructure sector and institutional investors as well as an introduction to the development model and new intelligent infrastructure.

According to the report, a new global financial governance model has emerged ten years after the breakout of the financial crisis in 2008. By using this new model, emerging countries can immediately mitigate the impacts of the crisis and then play a leading and coordinating role in forcefully driving global economic recovery and financial stability. Against this backdrop, the establishment of new MDBs is considered a main institutional legacy of economic recovery in the post-crisis era, which features structural transition and the rise and consolidation of new actors on the global arena. For example, the setup of new MDBs such as New Development Bank (NDB) and Asian Infrastructure Investment Bank (AIIB) represents a louder voice of BRICS in global financial governance. These new institutions are believed to make contributions through new methods and new financial products, and push forward the development of innovation-driven projects.

The report suggests that as the top priority of multilateral cooperation, infrastructure construction is characterized by high capital intensity, long cycle and complex social benefits, and therefore requires strengthening coordination and cooperation and increasing information transparency to make infrastructure projects more attractive, less risky and more cost-effective in regulation. New MDBs have to complement each other to work faster and produce better results. Meanwhile, new MDBs also need to actively attract private capital participation, advance the development of private capital and thus create value and positive spillovers for their member states and people there.

China's Population Development Trend and Countermeasures against an Aging Society

A large population is one of China's primary basic national conditions. Population not only concerns the rise and fall of a nation, but also constitutes an important part of the national economy and the people's livelihood. Demographically, over the next 20-30 years, China's total population tends to decline, but not dramatically or violently; birth rates and births number have become a factor determining China's future population trend; it has been a foregone conclusion that China's population of childbearing age will shrink for some time to come; and aging of population has become a normal in China. It should be noted that with constant deepening of aging, relaxing restrictions on birth control cannot reverse the basic trend of aging of population, but can create more favorable conditions for balanced development of China's population in the long run and buy time for future generations to come up with a solution. If the fertility level remains too low, no system or policy arrangement will be sustained.

In combination with the actual situation today, the report suggests that inevitable policy themes in near-term strategic deployment should include: renewing the concept of old age, strengthening publicity and education, guiding a rational understanding of aging, redefining "family planning", transforming from "planned policy-based childbearing" to "planned autonomous childbearing", envisaging the diversification of employment patterns, formulating labor and industry plan promoting the development of an aging society, intensifying the research on intergenerational transfer payment, increasing investment in working population, emphasizing "combination of medical treatment, elderly care and nursing", prioritizing and focusing on provision of long-term care services for the elderly with disabilities or dementia, guiding and supporting modern family construction based on family policy restructuring, making the best of "demographic dividends", demonstrating the possibility of reaping new dividends in the context of globalization, attaching full importance to the effects of technological development on the elderly and aging policy design, and actively demonstrating how to turn "Chinese characteristics" in countermeasures against aging into "Chinese strengths".

The report states that as a new and irreversible demographic and social form, aging of population has become a new national condition of China. The traditional social governance model and institutional framework based on the dominance of young people in China's population should be adjusted and reconstructed according to the development trend of aging. All individuals, households, communities, organizations and even the market, society and the government have to update or change the original modes of production and life, methods of allocating resources and institutional arrangements on the premise of being adapted to such demographic changes, and reselect a concept and model of governance.

Sustainable Development and Social Co-Governance: Status and Impacts of E-commerce Paper Packaging and Suggestions

China has witnessed rapid development of e-commerce and the rise of express and logistics, as an important pillar of e-commerce, in recent years. With higher requirements of producers and consumers for packaging, the problem of "excessive packaging" is worsening. Therefore, Fudan Development Institute and Metro China invited a team led by Prof. Marie Kieran Waxman from Fudan University to give a systematic and detailed analysis of this problem.

This report begins with the development status of e-commerce consumption at home and abroad, shows the status quo of excessive paper packaging and its potential environmental hazards and further discusses possible solutions. In combination with domestic and international experience in relevant policy making and excellent practical cases, especially relevant practitioners' viewpoints on main development trends of major industries concerned and issues of concern in future research, the report puts forward the prospects and feasible suggestions for excessive packaging in e-commerce consumption in China today.

The report states that "excessive packaging" is a systematic problem, so the solution must also be systematic. Problem solving lies with each link of the system, which must have a clear understanding of and assume its responsibility and gradually reach a consensus on the basis of mutual trust, respect, assistance and benefits. Stakeholders' perspectives should be properly listened to and understood, on which basis mutual trust and respect should be built, so as to further promote collaboration throughout the industrial chain for improvements in "excessive packaging".

Currently, the public actually have an "excessive" understanding of the pollution in the express industry and blindly enlarge the problem of paper packaging (e.g., "excessive packaging", "green packaging", etc.), easily causing the neglect of pollution problems in other links. Meanwhile, there are no unified standards or norms for packaging in the logistics and express industry and efforts should be made to establish sound unified standards or norms required by the industry.

Fortunately, we have diversified solutions to "excessive" paper packaging, including a mature intelligent green warehousing and logistics system, front-end optimization of paper packaging design and application, and tail-end promotion of recycling of paper packages by consumers. What cannot be ignored is the huge investment and concentrated operation by the industry, which also forms the barrier for small and medium-sized enterprises to realize green logistics.

The report puts forward viewpoints on governance in the following three aspects from a macro perspective. In terms of industrial governance, technological innovation is a direct measure to relieve excessive packaging and at the same time, efforts should be made to establish environmental awareness and publicize the hazards of excessive packaging among businesses and consumers and in a number of production links including design. In terms of environmental governance, public administration could be taken into account to improve relevant legislation and intensify legal punishment. In terms of social governance, solving excessive packaging requires collaboration among consumers, owners, garbage collection organizations and other parties concerned, so it is important to resist excessive packaging and improve the overall social awareness, for which the knowledge about excessive packaging and its hazards can be popularized to the public through television, the Internet, etc., so as to shift the wrong idea of "packaging being quality" in society and promote correct public understanding of excessive packaging.

We should localize excellent environmental thoughts and experience in combination with the situation in China and value viewpoints and suggestions of independent third parties. The government and the market should work together to control excessive packaging, form a governance model featuring government leadership and coexistence of multiple players, systematically develop and change consumers' habit of recycling paper packages, attach importance to relevant data opening and collection, conduct data-based regulation and further enhance citizens' environmental awareness and links related to closed-loop environmental protection.

Research Report on Foreign Capital and Technology Innovation in Guangdong-Hong Kong-Macao Greater Bay Area

Based on registered capital and patents of enterprises, this report analyzes the status of foreign capital and its role in technology innovation in Guangdong-Hong Kong-Macao Greater Bay Area, and also probes into the correlation among capital, technology and innovation there. Patents reflect the technology innovation capability of a country or region. This report involves three types of patents, namely invention, utility model and design. The findings show that Guangdong Province is one of the areas in mainland China where there are a large number of foreign-funded enterprises. Foreign companies are mainly distributed in nine cities in the Pearl River Delta, with an increasing concentration. Hong Kong has become the primary source of foreign investments in the Pearl River Delta (PRD), where investments are increasingly inclined to flow to producer services in the PRD; the PRD is the most innovative highland in China, where patent applications account for 15% of the total in mainland China. Foreign enterprises, especially Hong Kong-funded ones, play a key role in driving technology innovation in the PRD and, among the three types of patents, contribute nearly 1/4 to invention patents granted in the PRD, of which more than 80% can be attributed to Hong Kong capital. Patents generated from Hong Kong capital are mostly granted to producer services and high-end manufacturing, but Hong Kong enterprises are maintaining low investments and even reducing such investments in high-end manufacturing in the PRD in recent years. Macau capital makes small contributions to patents in the PRD and flows mainly to producer services.

The Greater Bay Area economy is an important growth pole of the world's economy. On February 18, 2019, the Chinese government released the Development Plan for Guangdong-Hong Kong-Macao Greater Bay Area, which puts forward the construction of "Guangzhou-Shenzhen-Hong Kong-Macao" Technology Innovation Corridor. Whether an international technology innovation center can be successfully built is the key to future construction of Guangdong-Hong Kong-Macao Greater Bay Area. Using micro big data, this report discusses the correlation among capital, technology and innovation in Guangdong-Hong Kong-Macao Greater Bay Area and offers suggestions for collaboration in technology innovation there. The report recommends that in order to build Guangdong-Hong Kong-Macao Greater Bay Area into an international technology innovation center with international influence, the key lies in making full use of the existing innovation network created by Guangdong, Hong Kong and Macao through capital, reducing barriers to free flow of innovation elements between regions and creating a more powerful engine for technology innovation. On the one hand, governments at all levels in the Greater Bay Area should continue to pursue sounder personnel attraction policies and provide sufficient convenience and incentives in visa simplification, household register management and individual income taxation in addition to basic public service facilities like education, so that more technological personnel from Hong Kong and Macao can start businesses in the PRD. Also, they should attract more capital through innovation projects, thus truly forming synergy in technology innovation among Guangdong, Hong Kong and Macao. On the other hand, the Greater Bay Area should encourage the entry of more diverse international venture investments and their flow to more disruptive technologies, so as to attain the goal of "curve overtaking" in the field of international innovation.

Green Finance Contributes to Green Development in the Yangtze River Delta

The theory that finance partly serves economic growth and environmental protection indicates that green finance and green development are correlated to the extent that the construction of a green finance system can facilitate progress in the green development system while green development poses new requirements on green finance innovation and development.

By reference to domestic and international experience in evaluation of green development, this report develops a three-level evaluation index system for urban green development in three primary dimensions such as economic development, natural environment and governance of environmental problems, and provides a comprehensive evaluation of economic growth, development of the tertiary industry, scientific and technological innovation, natural endowments, environmental quality, energy conservation and emission reduction, and pollution control in different cities in the Yangtze River Delta (YRD). The evaluation involves 22 indexes treated with the variation coefficient method, and the 41 cities in the YRD have been evaluated with a score (out of 100 points).

From the perspective of the comprehensive ranking of green development, green development in the YRD features better performance in the south and east than in the north and west, indicating spatial imbalance and obvious inter-provincial and intercity differences. In terms of the green development ranking, among the cities ranking the bottom 50%, 90% are located in Jiangsu and Anhui Provinces while those in Shanghai and Zhejiang perform well. Geographically, the YRD in its narrow sense, provincial capitals and economically developed cities, such as Shanghai, Suzhou, Hangzhou and Ningbo, have the highest level of economic development in the broader YRD, with generally higher scores. This indicates that the level of economic development is the primary cause of spatially imbalanced green development and that we have a long way to go until the YRD is completely integrated and the ultimate development goal should be ensuring that residents in each city in the YRD enjoy the same "green benefits" and similar "senses of gain" from green development.

In combination with the report titled Competitiveness of the "40+1" City Cluster in the Yangtze River Delta in Green Finance Development released in 2018, this report analyzed the correlation between scores from the two index systems and conducted an empirical study of the transmission mechanisms and influence mechanisms of green finance and green development. The results show that there is a positive close correlation between green finance and green development. Flourishing green finance can drive and serve green development and play a positive role in promoting regional green development while new demands for green development will force innovation in green finance; the two promote each other.

In order to strengthen coordinated development of green finance at the provincial level and better serve green development in the very province, the report recommends (1) enhancing organizational leadership and further optimizing top-level design; (2) strengthening the construction of supporting measures and putting into practice green finance development; (3) stepping up the efforts to establish an incentive mechanism and setting higher requirements for information disclosure. Green integration is an integral part of the integration of the YRD. With a view to better and faster development of green finance in the long run, and to green coordinated development and contribution to green integration of the YRD, this report gives the following suggestions for the construction of a YRD integration demonstration zone: (1) establishing an intergovernmental coordination mechanism; (2) unifying policies and standards concerning green finance; (3) building a benefit induction mechanism for industrial transfer; (4) setting up a fund earmarked for green coordinated development; (5) establishing green finance innovation systems and mechanisms; (6) strengthening reserves of human resources in the realm of green finance.

Strengthen High-quality Innovation and Opening-up to Improve Shanghai International Financial Center's Role in Resources Allocation

Construction of Shanghai International Financial Center is an important national strategy and also a major mission Shanghai undertakes. During the 13th Five-Year Plan (FYP) period, great headway has been made in the construction of Shanghai International Financial Center towards the goal of "basically completing an international financial center matching China's economic strength and the international status of renminbi". Financial markets have been significantly improved in terms of size and quality, and the status of international financial center has been further consolidated while a global center for innovation, trading, pricing and clearing of renminbi products has been preliminarily built, with obvious improvements in business climate and financial development environment.

In 2019, with the release of the Action Plan for the Construction of Shanghai International Financial Center (2018-2020) (hereinafter referred to as the Action Plan), the construction has headed into the home stretch. Therefore, in the face of major historical opportunities such as pilot registration system for "science and technology innovation board" and expansion of financial opening, strengthening Shanghai's technology innovation capability and opening-up quality and promoting further improvements in allocation of resources by Shanghai International Financial Center will be the key to the construction of Shanghai International Financial Center. Specific actions should be taken in four aspects:

Firstly, we should take the opportunity of pilot registration system for "science and technology innovation board" to advance the reform of the capital market and enterprise innovation in Shanghai. We should stress core principles of information disclosure, strengthen intermediary regulation and main business review, improve intraday price fluctuation management and short-selling and other risk prevention mechanisms, delist enterprises with serious violations, whilst designing a good investor protection mechanism and posing the requirement of "technology innovation" on listed companies.

Secondly, we should take advantage of the free trade zone system to further open financial markets in Shanghai to the outside world. We should emphatically cultivate and build an offshore international financial center, attract head offices of more foreign financial institutions such as banks, securities and insurance companies to move to Shanghai through more favorable policies, further increase the openness of various financial markets in Shanghai, try to maintain capital account convertibility under FT account and replicate it in other parts of China.

Thirdly, we should strengthen the risk warning, prevention and resolution mechanism and hold the bottom line that no systematic or regional risks will occur. We should establish an orderly exit mechanism for FDI and other long-term capital and a regulatory model of window guidance and "dynamic Tobin tax" for short-term capital, at the same time enhance look-through supervision of the nature of financial business and improve the protection of financial consumers' rights and interests.

Fourthly, we should promote innovation in the financial industry through technology to drive an increase in the efficiency of financial services in Shanghai. Currently, the combination of technology and finance has become an important direction to push forward the development and reform of the financial industry. Integration of frontier technologies such as the Internet, big data, artificial intelligence (AI) and blockchain can, on the one hand, markedly increase the efficiency of services in the traditional financial industry and expand the scope of services; on the other hand, it will derive new forms of financial services and extend the connotation of financial services. Specific measures include: increasing the international competitiveness of the insurance industry in Shanghai through progress in regulation technologies and construction of an international reinsurance center; intensifying data opening on the premise of safeguarding customer privacy and regulatory security to increase the core competitiveness of financial information services in Shanghai.

China Open Local Government Data Report 2019

China Open Local Government Data Report 2019 (hereinafter referred to as the Report) was jointly issued by Fudan University and Digital China Institute, State Information Center.

Open data forms a flourishing forest. Produced by DMG Lab, Fudan University, "China Open Data Index" is China's first professional index dedicated to open local government data. Since it was released at the Big Data Expo in May 2017 for the first time, China Open Data Index provides an annual comprehensive evaluation of open local government data in China on a regular basis and meticulously measures the form, height, fineness, quality and value of "data wood" from local governments at all levels, so as to facilitate the construction and development of an open government data ecosystem in China.

DMG Lab has invited and engaged more than 70 academic, political and industrial experts from home and abroad, who make up the Methodology Committee of "China Open Data Index". The Committee has built a systematic, scientific and operable evaluation index system in the basic principle of data opening, by reference to index systems in international open data evaluation reports and based on China's policy requirements for data opening and relevant practice, so as to collect and analyze data, formulate index reports and bring forward countermeasures and suggestions in the light of this system.

As of April 2019, 82 local governments in China had introduced their own data government data platforms, including 13 provincial ones and 69 sub-provincial and prefecture-level ones. The Report contains a comprehensive evaluation of open data from these local governments through four primary dimensions, such as readiness, platform, data and use, and subordinate indicators at different levels. Readiness is the "base", which serves as the foundation of open data; platform is the "outer part", which serves as the carrier; data is the "inner part", which is the core; and use is the "fruit", which is the result. Use is a new evaluation dimension added this tear to promote social utilization of open government data.

The Report releases 2019 China Open Data Index. It finally brings forward a number of countermeasures and suggestions for advancement of open government data in China in such aspects as strengthening policy supply, providing organizational guarantee, creating a favorable ecosystem, opening quality data, optimizing platform operation and maintenance, and promoting innovative use.

In April 2018, China Open Data Index was adopted by Digital China Development Index released by State Information Center as the basis for evaluation of regional data opening capacity. Since 2018, China Open Data Index has also provided data support for Information Technology Development Bureau, Cyberspace Administration of China to monitor the opening of public information resources in China.

In May 2019, the Report was included in Fudan Think Tank Report. It has become one of the 15-20 key socially influential reports released by Fudan University.

ROUNDTABLE WRAP-UP

How to Restructure the Pattern in Northeast Asia?

- **Organizer:**

  The Center for Asia-Pacific Cooperation and Governance and the Institute of International Studies, Fudan University

Since DPRK's first nuclear test in 2017, the Korean peninsula issue has attracted high attention over the past 2 years. The first nuclear test was hotly opposed by the U.S. and led to opposition between the two countries. In 2018, the situation mitigated slightly and top leaders of the two countries held the first US-DPRK talk, and the situation in the peninsula took a turn for the better. However, the second summit between them failed without any substantial fruit, and then DPRK launched short-range missiles, further intensifying the contradictions between it and the U.S. and escalating the tension in the peninsula. Against such a backdrop, how to restructure political peace in Northeast Asia has become a concern of many scholars.

Currently, the Sino-US game and American sanction against DPRK become increasingly hot, making the puzzling prospects of denuclearization of the peninsula more complicated. To change the deadlock in the nuclear issue of DPRK, efforts must be made to open new thoughts and explore new paths, so as to promote peace and stable development of the peninsula in the future. Besides dialogues between DPRK and the U.S., we can also re-launch the Six-party Talk or the Four-party Talk and introduce multilateral dialogues on the basis of bilateral dialogues to promote inter-country understanding and exchange. DPRK has announced shifting its focus to economic development, but the maximum pressure and economic blockade by the U.S. and its allies and the still unclear prospect of denuclearization in the peninsula will cause great uncertainties in economic development of DPRK and Northeast Asia and in economic integration in Northeast Asia.

China 2049: Dealing with Challenges in the Rising of Economic Strength

- **Organizer:**

  The Brookings Institution; National School of Development, Peking University

The year of 2049 seems far distant at present, but talking about "2049" of China is helpful for attention to and understanding of issues with long-term significance, which include topics of market regulation, environment, population, technological competition and international organizations, etc. First, in terms of market, as relevant evidences show that China has a low capital flow efficiency and rise of debt to GDP, it needs to rely on more market power to carry out resources allocation and emphasize the leading role of finance in market. Meanwhile, in terms of opening-up and investment, China should pay attention to adjusting market liberality and threshold, and not slacken the control simply; second, environmental problem; since entry into WTO in 2001, China has witnessed sharp rise of carbon dioxide emission. Solving the problem of emission needs not only market regulation, but government's flexible application of policy instruments such as carbon emission pricing, carbon dioxide emission ration system and development of renewable resources; third, variations of China's population and the trend of ageing population. At present, ageing goes on very rapidly in China, and the working-age population has turned down from the peak. In the following 20 years, with the average age higher, the number of labors with the working-age between 55 to 65 may increase rapidly. Making full use of and tapping the potentialities of the laborers within the range can also serve as a means to address the issue of ageing population through individual and national public policies; fourth, technological competition. China and the U.S. have become the most innovative economies, but the trend of limiting trade and technology exchange exists in the U.S. and China on the ground of national security, which will undoubtedly make them stranded in a tiny area and lower innovation efficiency; finally, China has participated in many international economic organizations, such as WTO and IMF, from which it has been greatly benefited. On the other hand, such international financial and economic institutions also need continuous adjustments, development and reform under the general situation of Sino-US cooperation to address new issues in cross-border service trade, IPR protection and so on. Of the needs, the work to further expand IMF as proposed by China goes too slowly. It is reasonable for China to have more discourse right in the institutions, but the well-to-do countries headed by the U.S. basically refused more IMF-based discourse right for China and other emerging markets. If China and the U.S. establish their own international monetary organizations respectively and repel each other, it will be unfavorable for improvement of world economic efficiency. In order to establish a set of higher-efficient international institution or international organization, we need cooperation between China and the U.S., and Europe, Japan and some emerging economies such as India should also join the course. China faces a series of challenges. Considering 2049 is the 100th anniversary of the founding of the People's Republic of China, its progress in relevant field is worthy of expectations of all of us.

Co-existence with AI – Humanity in the Era of Intelligent Machine

- **Organizer:**

  Fudan University

- **Coorganizer:**

  Sydney University

Currently, machine intelligence boasts great advantages compared with early AI and abilities of self-learning and deep learning but has defects of unreliability and specificity. The unreliability is reflected in that it is hard to forecast the results of machine intelligence through deep learning, while the specificity means that functions of machine intelligence at present are mainly confined to an aspect and hard to satisfy the purpose of general use. Against such a backdrop, how human being shall better develop, use and control AI becomes a very important topic.

In developing general AI, we need to attach importance to the reference to human brain's operation mode and relevant morality and ethics. Only by simulating real working mechanism of the brain can real intelligence be created. To build the friendship between man and machine, it is needed to consider roles of human feeling such as trust and betrayal in the relation. In the process of establishing artificial moral agents, we should actively reflect on the issue of AI ethics from the angle of cognitive science, for example, adding "moral module" in AI to carry out ethical assessment of it. When designing AI, the conflict between personal demand and group demand may occur. Overemphasizing personal demand will lower the credibility of intelligent machine. There are many problems with AI at the current stage, but it is too early to negatively evaluate influences of AI on human being. Many concepts and issues in AI development need to be more deeply discussed and thought.

Opportunities and Challenges Facing Financial Industry in the Complicated Environment

- **Organizer:**

  Financial Research Center, Fudan Development Institute; School of Economics, Fudan University

It is undoubtedly an important proposition how to deal with various opportunities and challenges facing financial industry in the complicated environment, which can be specifically interpreted from the following aspects. First, it is mainly reflected in economic imbalance. The train of economic globalization brings high-efficient and rapid growth of world economy, but the adequate competition accompanying economic opening-up has also aggravated domestic economic imbalance between big powers. In the U.S., many opportunities and fortunes swarm into overseas transnational corporations and elite class owning knowledge-intensive industries such as intangible assets, technologies, finance and movies; in China, resources concentrate to some labor- and capital-intensive sectors after globalization, and the opportunities make fortune over-depend on European and American markets. Such situations lead to an inevitable result, namely great surplus in service trade of the U.S. and great surplus in goods trade of China, causing extremely unstable impacts to monetary policies, exchange rate policies even financial policies of both parties.

Second, it is of Sino-US trade friction. The Trump administration transforms the problem of interest conflict due to internal imbalance to one of external imbalance for adjustment, and rely on tariff, IPR, interruption of supply and tax reduction for return of enterprises and thus force the countries with favorable trade balance to widely open market, with a view to alleviating the problems of imbalanced solidification of strata and of employment due to widening rich-poor gap facing it, but such efforts have caused more severe and complicated global economic imbalance. In addition, all countries in the world are facing the challenge of poorer effects of the macro regulating policies designed to support economic recovery of them. Correspondingly, the problem of mismatching between economic growth and monetary and credit growth comes into being, which will cause sharp price volatility in global markets of commodity, finance and foreign exchange, even make some countries and regions under the risks of asset bubble and debt expansion.

The third aspect centers on market vitality. Certain downturn pressure on market vitality exists in China's economic transformation. Stabilizing employment and forestalling risk are important goals proposed by the government. To solve such problems, private enterprises are major concerns, particularly SMEs, which generally lack mortgage ability and are overburdened by taxes and fees. Such problems have been attached high importance to by the government. The biggest challenge to China's economy at present is to move ahead with the supply-side reform at the enterprise end and the financial institution end and to eliminate risks of deviation between financial service and real economy due to lack of core competency. Rising motive of preventive saving of Chinese residents has also created internal demands for the return of high interest. How to transform national savings into effective investment and thus increase actual income of the people as soon as possible has become the key for recovery of market vitality of China today.

Besides the topics of opportunities and goals, there is no lack of highlights in the development of China and the development has been well recognized by the outside world. First, China-integrated regional economy is unbalanced in development, but its scale effect and vitality will surely work together with the complete industrial chain and the multilateral-cooperation supply mode including BRI and free trade zones led by China since the reform and opening-up, to drive increase of market vitality of China and benefit economic recovery of other countries in the world; second, the first-mover advantage of China in innovations such as fintech is favorable for improving business environment for SMEs, tapping the potentialities of long-tail effects of consumption in China, uplifting the accuracy of enterprises' decisions and government's policy design and establishing the new globalization mode of cooperation and win-win development; third, it is urgently needed for China to speed up reform of its education and research mechanisms, conduct industrial upgrading of SMEs, and optimize service sector and business environment including IPRs.

Reinventing the Industries

■ **Organizer:**

Accenture

Today, the world economy brings about many uncertainties to us, and the rising of digital industry forms challenge to traditional industry. In the past, we took capital investment or low-cost human resources as the power for industrial development. Nowadays, however, China is at the core of industrial remaking and digital transformation, and Chinese enterprises need to drive industrial upgrading and development with digital technology.

Precedents show that in the process of digital transformation of traditional enterprises, the success rate was extremely low as the existing system was mature and no personnel were given digital training fully. In fact, for traditional enterprises, the core of industrial transformation and remaking is the remaking of products. Today, traditional manufacturing enterprises face difficult situations, which are mainly embodied by the inferior position compared with other enterprises, namely, 1. The demand inferiority compared with the upstream parts manufacturing enterprises; 2. The customer inferiority compared with the downstream platform players. In order to deal with the difficulties, traditional enterprises should attach higher importance to software and consumers. In the process of product remaking, enterprises must help consumers have better production experience, and carry out effective communication with them through better products and service mode.

Indeed, new technologies can effectively promote industrial transformation. But comparatively, enterprises' behavioral logic is more important. Transformation should be target and result oriented. We should firstly identify enterprises' problems demanding prompt solutions and the results they hope to achieve, thereby to determine specific technologies and methods to be adopted.

In industrial transformation, we need to pay attention to new manufacturing, new ecology and new idea. New manufacturing means self change and production innovation of enterprises; new ecology means internationalization and globalization of industrial chain and providing enterprises with better development environment; new idea means paying attention to roles of higher education in industrial remaking and making cross-disciplinary and cross-major talents empower industrial development.

Building Watershed Biodiversity and Ecological Civilization

■ **Organizers:**

Key Laboratory of Watershed Ecological Evolution and Biodiversity of Jiangxi Province; Key Laboratory of Biodiversity Sciences and Ecological Engineering, MOE in Fudan University

■ **Cooperators:**

Nanchang University – WWF Watershed Ecology Research Center; WWF; Alashan SEE East China Project Center

Building watershed biodiversity and ecological civilization is an issue that is extremely important but liable to be neglected in global governance. Nowadays, everyone talks about economy and society, but few discuss the relations between man and nature. It is well-known that the four civilizations all originated from basins of big rivers, and human being cannot go without functions of ecological service particularly. Many works, such as focusing on big river basins in developing countries from the angle of global governance, including the Yangtze River, the Amazon River, the Nile River and the Mekong River, studies based on government's decision and administration, sharing innovations in how to management watershed system and governance experiences, not only involve the relations between creature and human being, but are more related to destiny of human itself. Worth mentioning, the Nile River, the Mekong River, the Amazon River and the Yangtze River in developing countries all have some problems of common character. All developing countries have problems relating to building dam, fishing, sand excavating and environmental pollution. Their development modes are at the lower stage, with the basins different from those in developed countries. Solving problems of developing countries means contributions to global governance in a concerted manner. Reviewing the history, China, as the only civilization that has never interrupted in the history of human being, boasts the long-lasting cultural system and the thoughts of unity of heaven and mankind and harmony between man and nature, which are important characteristics of Chinese culture. China is now in the historic change. We should take the strategic opportunity, and unite all developing countries in the world and absorb their civilizations, to offer Chinese wisdom for and Chinese solution to ecological civilization around the world.

INTERVIEW WITH GUESTS

During the Shanghai Forum 2019, the Organizing Committee invited well-known professors from Fudan University to make in-depth interviews with VIP guests in order to elicit their insights of their respective research areas and on Asia's future development.

SCHOLAR'S DIALOGUE

We Hope for the Best

Editor: Feng Yuhan

Paulo Portas

Former Deputy Prime Minister of Portugal

Interviewer: ***Chen Zhimin***

Vice President of Fudan University

Chen Zhimin: Mr. Portas, welcome to Shanghai Forum and Fudan University. Thank you very much for the extremely insightful keynote speech in the Opening Ceremony. I know that you have been interviewed many times yesterday, but I still have some questions to ask. You have served in the Portugal government for many years, so my first question is: how do you assess the impacts of the ongoing process of the Brexit on EU? What can you do to minimize the negative impacts of this Brexit process and to ensure that there could be a mutually beneficial relationship in the UK and the Union?

Paulo Portas: Professor, first of all, congratulations for holding the Shanghai Forum. I visit China frequently, because I want to feel and understand the move and dynamics of the world, and I am delighted to be able to attend this international forum. Addressing your question about Brexit, I must confess that I'm not a fan of referendums about complex questions. You cannot assume that the complexity of Brexit question can be addressed by a yes or a no. Maybe there are good reasons for a yes and good reasons for a no. I would have voted 'remain', but I'm not British, so I respect their vote. Once you call for a referendum, even if it is not legally-binding, it represents popular sentiments. Hence, as the center of gravity of the constitutional system in United Kingdom, it is dangerous for the Parliament to disagree with the referendum. In my opinion, today's vote in UK about European election is very bizarre. The British are voting for a parliament who wants to leave EU because the majority want to retaliate against EU. So even if I disagree, the possible outcome is a net Brexit because it is in line with the popular will. If you know something about that referendum, you know that the majority wants to leave, so politicians have to deliver that answer. It's preferable to leave amicably to reduce damages, and for Europe, the exit of the UK will bring about some damages. For a country like Portugal, we are losing the Atlantic dimension of Europe. If we consider the relationship with the United States, the Atlantic club is relevant, and hence it is essential to have more countries in the Atlantic club. UK developed the first services economy of Europe, encompasses 50% of the European strength in the Security Council and also owns 50% of the nuclear military power of Europe. Without UK, we just have France, so the situation is risky, and I would bet for an agreement to be reached. But in an agreement, you have to concede, give and receive something. So, it's not possible for UK to fulfill an agreement without conceding something. But anyway, for the moment, UK is not yet out of Europe, but you have the Prime Minister out of office.

Chen Zhimin: Yeah, it's a lot of casualties.

Paulo Portas: A lot of collateral casualties. And Professor, there are some lessons learnt from this never-ending story of Brexit. One, you should never do exactly the opposite of what you think. Theresa May voted remain but she was mandated to fulfill Brexit. Jeremy Corbyn voted Brexit but he leads the pro-European party, so this results in complete confusion. Two, a complex state cannot leave unilaterally without risking problems related to geography. For UK, you do not only have a singular island, and you cannot eradicate the concept of geography completely. For example, you have the Scottish being firm on keeping the status of an EU member and hence proposing to leave UK. So, at the end of the day, you have a more divided UK.

Chen Zhimin: So, that's what UK have to handle in the coming months. But at the same time, the European parliament election is ongoing and we know that the Brexit party in UK will be winning. What about the results in the continent member states? Will there be any seat changes in the political landscape, or will it be a still management?

Paulo Portas: First of all, Professor, European elections traditionally have a low turnout. And that is the most practical example of the nature of EU. EU is not a nation. EU is a club of nations. There's no such thing as an European nation, but there are many European nations. Portugal is one of the ancient stable borders nation states in Europe, but you have a lot of complex states with internal problems. So, I would expect a significant fall from the two major families in Europe, which are the Christian Democrats and the socialists. All the parliaments in Europe are having two or three more parties compared to 30 years ago, and this trend of fragmentation is sign of fatigue of prosperity as well as resentment towards globalization. These are bizarre to Portugal because we don't have the resentment as a pro-globalization country. The Portugese like Chinese, like others, both in the West and East, were were all navigators, so we are globalizers. At the same time, you have a rise of the liberals as the central new option, more importantly, there is also the rise of far-rightists, extreme-rightists, ethnic nationalists, right-wing populists and left-wing populists. On the bright side, I think the collection of parties are not able to establish partnerships as they are very strongly nationalist, but if you think them as a whole, I think they will have more than 20% of the Members of Parliament, and they will become a very strong force. And in three of the four biggest nations of Europe – UK (still in Europe for the moment), France, and Italy, the first party would probably be populist and the second party would definitely be. You have the Brexit party in UK, Marine Le Pen being neck-to-neck with the present party in France, and in Italy you have not one but two populists in the first and second party, so that shows you something very disturbing in Europe. And what to do with the populists is a very good question. You have two options. You can bring them to government, and you compel them to face reality, to face difficulties, to choose between the bad and the less bad, and to forget utopia, that's one option. And populists are usually not competent in government because they don't love to deal with reality. They prefer demagogic speeches in the square. Or you try to isolate them, that's the second option. In my opinion, if you isolate them, they will play the victim card. So perhaps, we have to call them out to bear some responsibilities.

Chen Zhimin: In your speech yesterday, you expressed a deep concern that the Europe is lagging behind in the digital age compared to the US and China. So what can the European countries can do to catch up?

Paulo Portas: You know, Professor, when I phased out from party politics after 16 years leading the Portuguese conservatives (both moderate and classic conservatives) and Center-right party, and after being the Defense Minister and the Deputy Prime Minister and holding other titles, I dedicated time to research, study and teach on the concept of geo-economics. Geo-economics is a relatively innovative concept because usually you work with geo-politics. Geo-economics is the path to neo-geopolitics with the help of globalization and digitalization. The world changes completely, and changes through economics. The rise of Asia and the rise of China were done through economics and digitalization. And that changes the balance of power. Now questions like tariffs and trades, migrations, data technology become hard political questions instead of technical ones. And in my opinion, Europe should be very worried about the current situation. Because the economy of the future – 5.0, 6.0, or 7.0 and what follows – will be digital. Europe has to rethink its strategy because if you consider the top 10 or even the top 20 technological companies, you will find the Americans and the Chinese, you won't find the Europeans. Nothing is definitive in the digital and global world, and unpredictable changes can happen very quickly, but there are two or three criteria to reverse this situation. One, Europe has to invest much more in research and development and in innovation, namely the private sector. Europe was overcome by China two years ago, and as you know, America has a very strong private sector investment in R&D. Two, Europe has to adapt itself to flexibility. I'll give you can example: an American citizen changes job 11 times during his working life, and European, 4. So, to change is more difficult for Europeans than for Americans. Three, another item I consider very relevant is the fiscal gap between Europe and the US. The US cuts 14 points of the corporate tax, so we lost 14 points of competitiveness. And then I'll give you the last example. Imagine, Professor, that you were a young boy in Singapore or in Lagos or in Tegucigalpa, and you had very good grades. You have an idea and a new technology, and you want to materialise that new idea and new technology in the business. Is it easier to do it in Europe or in the United States? The answer is in the United States, because they have much more venture capital, much more business angels, and because they depend less on banks. The Americans' finance business is done in the market, the European finance business is done through banks. So, when you have a band situation in banks, you don't have a very stimulating economy. This kind of things will have to change in Europe, and that's why the geo-economic approach is, in my opinion, very useful. The Dean of the National University of Singapore said a very interesting thing in a recent interview– if you don't teach geo-politics in MBAs, future CEOs will miss out on the strategic trends and evaluation of risks because international relations are more economic than ever. So that's why I'm warning Europe, that something is wrong in our innovation and creativity development. Being hostile to migrations by principle is also not a good sign.

Chen Zhimin: The EU is currently developing a review mechanism for investment services and some say that it is specifically targeting China. What is your assessment of this review mechanism?

Paulo Portas: My position is very clear. I was a member of government that opened the Portuguese economy to Chinese investment. We know exactly who our allies are (namely in NATO) and we are old friends of America. But Portugal is always a global nation, so we love to diversify our friendships and our dependence, and we maintained a responsible policy towards China, after the success of Macao transition. International community doesn't have many successes, but Macao was a success between China and Portugal. So, the opening of our economy to China was transparent and was not criticized, even though it was a matter of controversy. Now, I would say that the climate in Brussels changed a little bit, namely after some fusions and acquisitions procedures on the digital side. But don't be too worried. Why? I have my own competitive policy and I don't support ideological prejudice because I don't think it's compatible with economic rationality. Sometimes the Chinese investors win, and sometimes they lose. If they lose, they have to understand the regulatory environment in Europe better. On the other hand, let's go back to figures. China invested 44 billion in UK, 24 billion in Germany, 15 billion in Italy, 14 billion in France, 9 billion in Finland, 7 billion in Greece, and 6 billion in Portugal in the last 20 years. Do you think the French government is free to just decline Chinese investment? Let us be practical, we Europeans are free traders, we are a very strong economic bloc. We love the American market and the Chinese market because these two markets bring about the most consumers and the largest revenue. So, let the consumers decide and don't put ideological tariffs in the middle. Europe needs a good negotiation with US and needs a good negotiation with China. I don't believe in tweets, I believe in negotiations even if I admit that tweets are a negotiation skill, in a very bizarre way, but they can be. I'm seriously worried with the possibility of an escalation, losing the control of a trade war.

Chen Zhimin: Actually, my next question is regarding the trade war. Portugal and most of the European countries maintained a balanced and strong relationship with both China and the US in the past. But the issue is, if the Trump government imposes this trade and technology war against China and is pressing the European allies to follow the American path, you will be put in a very difficult position. How will you manage this complicated new situation?

Paulo Portas: There's an interesting wording from the Portuguese government that I would subscribe to. We know exactly who our allies and friends are, and we don't intend to leave alliances or break friendships. Portugal is always open to the world. Even if we are just an European country with a ten-million population with a considerable debt after overcoming the financial crisis, we are still independent. We are a very quiet country out of the terrorist radar, safe and welcoming, and very competitive in some areas. So why should we reduce our world vision? But your question is very interesting. Take Washington for example, for many years (three or four years ago) the American establishment was convinced that Russia was the problem. Obviously, Russia is no longer considered a superpower even if it is strong on nuclear power. Russia is no longer Soviet Union, it's no longer a global ideological project. Obviously, China's the one challenging the American leadership. And I think they've only just realized that very recently. Obama made the rhetoric shift to the Pacific, and Trump is tweeting every day about China. But, as I have said yesterday, we have a new economic order but we don't have a new political order. So, our discomfort lies in the fact that we lack a political order. I believe that both China and US have interest to reach a compromise because both of them know that after a certain level of escalation, measure, countermeasure, retaliation – this can become dangerous because this impacts confidence, and once you lose confidence, you can have a global crisis. And the global crisis is not in the interest of the re-candidate Trump or President Xi Jinping. They can live in a tough environment, but they have nothing to win with the risk of global crises that will impact everybody. Because when you lose confidence, what will the investors consider? I will delay or cancel investments. I will wait for better times. In my opinion, Europe should reform but also stand by WTO. We need an international system of arbitrage. We need a framework of litigation on trade to control escalation. From the perspective of international trade, China cannot retaliate much more because China exports much more to the US than the US to China. So, you have no more American goods to retaliate on. But I think there are four or five serious issues in the negotiation process where some progresses can be made. For example, there are problems of open markets versus closed markets for foreign companies, problems of transfer of technology and problems of state subsidization. These kind of questions should be discussed and negotiated, and I noticed it last January that the Chinese government showed some intentions on reforming some of these frameworks. If you want to have a deal, you have to believe in the deal, and you should be prepared to give something and receive something. I personally have some hope on the Japanese good influence in G20 when President Xi and President Trump meet again. Remember that when they met in Buenos Aires, the world got a six-month truce. But I don't think this realization regarding China challenging the US hegemony will just be a Republican issue or a Trump administration issue. Imagine if Democrats win the White House, which is not impossible, I think that the tone will be different. You won't see such an aggressive rhetoric. I am just interested in having answers to one question – is this just a Republican question, or is it a question that will last for more time?

Chen Zhimin: I think that this is the reality they need to face, with all the projections, not only China will surpass the United States, India will too in two or three decades.

Paulo Portas: India, is for the moment, a lower contributor to global growth if you compare it to China. What is very impressive with China is if you have a problem in Asia, you have a problem in global economy. It's 45% of global real growth adjusted by PPPs, so any reasonable person would prefer a stable environment in the Asian continent.

Chen Zhimin: I think that the United States has to face the reality and start to consider how they will share the responsibilities of managing this these global challenges together with other countries, for it always believes that it's the only leading or hegemonic power in the system. I think that this mindset will create a lot more problems in the future. But if we have time, I have a Shanghai-related question. There is a very important initiative recently in Shanghai, it is going to pursue closer sub-national integration with three of its neighboring provinces by launching "Yangtze River Triangle Integration". Based on your experience governing in Portugal and Europe, what suggestions or advice do you have for this project?

Paulo Portas: You know, there is a huge difference between the scale of governance between China and Europe. The size of China is the size of a continent, and many times the size of a Chinese province is the size of a big state in Europe. Some months ago, I was delivering a speech in Nanjing University, and I asked how many people Nanjing has. And someone told me, 12 million. This is Portugal's population plus one million. But this is also a very interesting way of cooperation. Many nation states in Europe who are very connected, you don't need to be big or central, you can be little and peripheric and still be very connected. Connectivity is the new epicenter of global relevance. And you can approach towns, cities, provinces, with the agreement of the central government on cooperation. This said, I'm in favor of reasonable integration policies. When you have some cultural differences, you shouldn't dissolve your cultural specifics and should instead of respect for others. The condition for a good integration would be everyone respecting global and state laws, and for the Chinese, the Chinese constitution and Chinese laws. We have a problem in Europe. Recently, some Europeans developed some hostility to migrations, as you know, which is not good in my opinion, because Europe has a huge demographic problem. We risk becoming an "antique" with the fertility rate in Europe. So, you need migrations. Zero-migrations scenario is not viable in the modern world, so you have two solutions – you choose and select the migration you need, or you will be chosen by the migrations you might not need. The Europeans did not erase or eliminate all the differences, namely economical differences, but the experience of regional integration, namely on the share of structural funds to development, was very interesting. So, I wish you the best on that experiment of integration between Shanghai and the other three provinces. And we must be hopeful for the future. We have a lot of troubles, but those are troubles for a fairer world, a global world. It was great talking with you. Thank you very much.

Chen Zhimin: Yes, let's hope for the best. Thank you very much, Mr. Portas.

World "Network" Drives Sustainable Development: China is both responsible and capable

INTERVIEW

Reporter: Mei Xuechun

Jin Keyu

Professor of economics at The London School of Economics and Political Science, doctor of Harvard University and 2014 Young Global Leader

[The world, whether it is of technology, environmental protection or scholarship, is a network. Making the network better enough to involve everyone in it can more effectively safeguard future peace and harmony. In this sense, China is neither intended to be a great power nor competing for No.1 or No.2 in the world, but instead it should view the world as a network: who stands at the center of the network, who helps build it and who maintains it.]

Reporter: You mentioned last year that in order to promote the Belt and Road Initiative (BRI), China had to learn to communicate with the rest of the world in a language that could be understood by the world and clarify the necessity of the BRI from an economic point of view. So what elements do you think should China pay attention to in such "clarification"? How can China better advance the BRI with other countries in the principle of extensive consultation, joint contribution and shared benefits?

Jin Keyu (Jin): I think China should first of all lay more stress on the economic connotation and benefits of the BRI, especially from the perspective of win-win cooperation. The platform built by China enables many developing countries to join the network , since the infrastructure is actually a network in terms of the BRI; technology as well.

Then China can help build the network, given the resources over its vast territory and previous experience. Developed countries, however, overlook infrastructure construction in developing countries, and fortunately China, as the center of the network, can be better involved in this process. In consequence, I think the economic connotation and benefits of the BRI should be stressed. Specifically, in my opinion, the world, whether it is of technology, environmental protection or scholarship, is a network and so is infrastructure, as in the case with the electronic network and the physical network. Secondly, from a political perspective, on account of various geopolitical risks, making the network better for the purpose that everyone can be involved in the network, namely, we are all deeply antegrade, can more effectively safeguard future peace and harmony. In this sense, China is neither intended to be a great power nor competing for No.1 or No.2 in the world, but instead it should view the world as a network: who stands at the center of the network, who helps build it and who maintains it.. This, I think, should be emphasized by China.

Reporter: In the face of international problems of transnational characteristics, China has been actively promoting coordination and cooperation between different countries on the global stage, and trying to portray itself as a supporter and leader of the global network. In what ways do you think is China qualified as the core part of a modern connected world?

Jin Keyu (Jin): It is beyond doubt that we need a great power to help build this network, because a small country definitely does not have the resources and collaboration capability to do so. And China has what it takes.

Secondly, global impacts should be considered. At present, the U.S. makes its economic decisions based mainly on its internal politics and the need of serving its own citizens, particularly in future when many policies will be more geared to its national economy, so the U.S. has no resources or energy for the building of such a new network in the world.

Of course, this network is a good thing for China as we, located in the center of the network, can build more connections with other countries, lead the development of the network and benefit a lot from it. China has resources, funds and ability to collaborate with other countries. Moreover, China has established and maintained positive political relations with other BRI countries, including the former-Soviet states and today's Russia, over a long period. Geopolitically, this has paved the way for China to do so.

Hence in my opinion, what China should do is to shift from a coordinator to a co-leader, in which the BRI is an embodiment. An important thing, I think, is that the U.S. hegemony has slowly showed some problems, and met with oppositions of many countries. Then whether China can establish another co-relation with BRI countries and Russia to balance the relationship between the U.S. and the West, especially West Europe, is the most important part of future development, in which the BRI is also a representation.

Reporter: Trade tensions between China and the U.S. remain in a stalemate after several rounds of negotiations, for which the countries have taken actions. What do you think will be the economic trend of China-U.S. imports and exports in the context of the policy of increasing tariffs from both sides? How will that affect China's economy as a whole?

Jin Keyu (Jin): This might have different short-term and long-term effects. In the short run, I think the economic effects will be directly detrimental to both sides. At present, we already can see some of the consequences: for the U.S., the increased tariffs are actually paid for by its consumers. Trump considers that such increased tariffs are mostly borne by other countries, but it is not the fact. It should be noted that the economic relations between the U.S. and China are supply chain relations, in which China provides numerous exports and intermediate products; if those intermediate products are impacted at the time, the U.S. companies will also be. And these are the impacts of short-term economic effects on U.S. companies and consumers. For China, the economy, especially economic instability, will also pose great pressure on the Chinese, which is an immediate effect in China.

In the long run, more importantly, most of the world's systems and rules and WTO will be greatly impacted. Actions taken by the U.S. break the environment and law system established by WTO, which reflects a self-defeating approach. As a result, relations between countries, including trade relations, will face all kinds of pressure, and this is a bad news for the entire world. Therefore, if the U.S. goes beyond this rule-based system, it can be hard to imagine what will happen, and this might have a huge impact on the world's economy. And this is a problem in the long run.

So let's return to short-term effects. I think, it takes one or two years to see the results of certain things. As in this supply chain, if the U.S. turns to other suppliers, say, other countries than China, it may have to pay more and U.S. companies will face more pressure, and all these will slowly emerge. Meanwhile, we can see that recently, the consumer price index in the U.S., a major gauge of inflation, has increased, and prices of imports from China have also begun to rise.

Reporter: You mentioned early this year that concessions made by China on trade issues fit in with its long-term economic development. Based on China's recent counterattack against the U.S., what changes has China made to its trade strategy?

Jin Keyu (Jin): Changes have to take place. We have realized that it might be increasingly difficult to drive economic growth through excessive dependence on exports and on imported high technologies from the U.S. and other countries in the just a few years and even a decade and two decades to come, so we have strengthened our own efforts to gain necessary resources. On the one hand, we should promote economic development independently by boosting the domestic market and relying on consumers instead of exports. On the other hand, we should develop our own technologies.

INTERVIEW

Role and Direction of China's Public Administration in the Context of Innovation

Reporter: Wang Jiaxin and Zhong Yutong

■ *Xue Lan*

Dean/Professor,
Schwarzman College,
Tsinghua University

[No matter how technology develops, human remain major makers of relevant decisions. Therefore, decisions regarding technology should be made in such a manner as to benefit mankind, rather than just to satisfy the curiosity of engineers or scientists.]

Reporter: Prof. Xue, you delivered a speech themed on "adaptive governance in the development of emerging industries" at the roundtable just now, and I noticed that this issue was also expounded on in an article you published in 2015, in which you used the term "regulation". Can you talk about the meaning of such change in your wording?

Xue Lan (Xue): One of the government functions in the conventional sense is market regulation, an important means whereby the government maintains an orderly market and many market failures, such as information asymmetry, externalities and natural monopolies, can be solved. However, we have updated and deepened our understanding of government functions in recent years. The emergence of quite a few new technologies has also forced changes in the traditional relationship between the regulator and the regulated. It turns out that there are more solutions to market failures, in which the government does not always play the key and core role. In this sense, the term "governance" is broader. Of course, given the current circumstances in China, especially when it comes to people's health and safety, strong government regulation is of vital significance. And the government may apply more flexible and innovative modes of operation and ideas.

Reporter: You expressed a similar viewpoint in a publication concerning indigenization of public administration in China in 2017, proposing that we should continuously reconsider the relationship among the government, the market and society. What changes do you think should China make in the relationship among the three? What is likely to happen?

Xue Lan (Xue): To secure an orderly and well-developed society, any country or society should first of all handle the relationship among the three correctly. There is no standard answer or fixed proportion. This relationship might vary from one type of historical culture and political regime to another, and it varies with development stage in a single country.

The astonishing achievements China has made over the past forty years of reform and opening-up are actually a result of a good understanding of the relationship among the three. The success can be owed to both conscious macro design and, possibly, the method of trial-and-error. I think we, as scholars in China's public administration, should extract experience and lessons from the past four decades and tap into the rules and laws underlying the same. This is why I put forward the idea of indigenization. A lot of the basic theories, including some paradigms in respect of public administration we are using are derived from the West and even the U.S. alone. These theories might be generally applicable in some European countries, but much less workable in some East Asian countries.

Reporter: Today you talked about quite a lot issues regarding the Fourth Industrial Revolution and innovation. You ever wrote that China had sound and effective policies guiding technological innovation, but little policy guidance or support for business model innovation. The end of 2018 saw that ofo, which was a "good model" of business model innovation, fell into predicaments such as capital chain rupture and customer refunds on a large scale. Do you think that this reflects the failure of our national supporting policies for business model innovation to some extent?

Xue Lan (Xue): It's an interesting question. This is in fact a good example of our failure to comply with adaptive governance in the efforts to promote the development of emerging industries. It is exactly a counterexample. Bicycle-sharing companies such as "ofo" and "Mobike" blazed new trails mainly in business model and, more or less, in technology.

In my opinion, it was too late for the government to play a part in this. For example, casual parking was a prominent problem at the beginning of bicycle sharing. It not only increased rates of bicycle loss and damage, but also resulted in direct bans on shared bicycles through extreme measures in many places. The problem was a result of the government's failure to intervene in time rather than excessive intervention. Bicycle sharing shows positive externalities: bicycling can save energy and reduce emissions, and solve the last-mile problem. The government should intervene earlier to consult with stakeholders and even intensify such consultation, in ways such as making surveys on communities that needed shared bicycles most and planning for or opening up parking spaces nearby. On the other hand, bicycle-sharing companies should also make certain technical or managerial adjustments, say, establishing credit and reward and punishment systems for customers based on parking rules. It is not hard to come up with or implement these solutions, but both the government and enterprises failed to communicate with each other and try to solve these problems as early as possible.

Reporter: Are Didi's problems you mentioned repeatedly at today's roundtable similar?

Xue Lan (Xue): Yes. But the case of Didi tells an opposite story, which indicates excessive and inflexible government regulation. For instance, Beijing has issued a regulation that Didi drivers must meet a number of requirements, including a Beijing registered permanent residence and even specific car types. Actually, this is detrimental to the growth of emerging industries and runs counter to the original philosophy of sharing economy. Definitely, these policies might be intended to solve negative safety problems concerning Didi.

Reporter: I noted an interesting chart in your presentation at today's roundtable. This chart depicts vividly and intuitively jobs that might be "killed" and generated, respectively, by the Fourth Industrial Revolution. If the conclusion and trend indicated by the chart are completely correct, perhaps we cannot be too optimistic, because the former changes at a rate double that of the latter. In the first place, we are interested in the research to be conducted on which jobs might be created and which might appear first as you mentioned in a speech in 2017. Now, a year and a half have elapsed, so can you share with us some new opinions on this research?

Xue Lan (Xue): We are always looking to carry out such research, but it is extremely difficult to do so, so the empirical part has not yet begun. Another challenge is that technology is developing fast and its applicability is changeable. So to be frank, the nature of future jobs is changing. We are talking about not only which jobs will simply replace certain ones, but also new and hybrid jobs that will emerge and the evolution of jobs. It is quite challenging to make precise predictions in such fully dynamic evolution.

Reporter: Employment is closely tied to cultivation of university students. As the Dean of Schwarzman College, you must have some unique insights into personnel cultivation in colleges and universities. Do you think that in the face of the Fourth Industrial Revolution and the subsequent employment revolution, colleges and universities should make some changes in personnel cultivation?

Xue Lan (Xue): I think colleges and universities should first of all exert strict control over values-shaping regardless of technological development since human beings remain to be major decision-makers no matter how technology develops. Therefore, decisions regarding technology should be made in such a manner as to benefit mankind, rather than just satisfy the curiosity of engineers or scientists. Such humanistic quality, in my opinion, is the core.

It is also important to turn students into lifelong learners. Additionally, they should develop stronger adaptability, communication skills in a multicultural environment and capabilities of self-management and quick response in case of uncertainties. Hence, adaptive governance is also applicable to individuals.

Reporter: Apart from the cultivation of innovation-oriented personnel, we see that social security for the unemployed and laid-off workers is also vital to social stability and sustainable economic development. How do you think should we reform our social security system to address new social needs and possible problems in the course of promoting structural reform?

Xue Lan (Xue): This really is a crucial question. We may consider it from two perspectives: one is how to control the pace of job replacement. Sometimes we can hardly control the pace at which new technologies emerge, but if we have some mechanisms which allow relevant enterprises or institutions to assume some responsibilities generated from job replacement, such as the provision of training and assistance with job transfer, then we can slowly solve inevitable unemployment problems in a more orderly manner. The other is how to provide effective employment training at the national level. This might be easier said than done. In particular, vocational high schools, colleges and universities are underdeveloped, which adds difficulty to the provision of employment security. Therefore, I think we should conduct more surveys and research in this respect.

In addition, we have to understand that those facing unemployment and job transfer are often the middle-aged who are 40 to 50 years old, not young people aged 20 to 30. They definitely have poorer cognitive and learning abilities than the young. So we should be more committed to the research on the middle-aged.

> ***Reporter:*** We have learnt that you harvested outstanding social achievements at a very young age. Many young people who are interested in the public domain might not initially major in public administration, just like me. What attitude do you think should college and university students have when they pursue public administration studies based on a review of your own educational experience? What can they do in college to lay a good foundation to effectively solve practical problems in the future?

Xue Lan (Xue): In China, the public sector needs management personnel with comprehensive quality most. Of course, some specific posts require specific skills or theoretical basis. Such quality and skills include values, writing ability and communication skills, among others, to which majors, especially undergraduate majors, matter little. So students who wish to seek employment in public administration do not have to worry about the lack of preliminary studies.

However, before they enter the public sector, it is important to figure out whether their values and pursuits are compatible with the sector. The public sector does assume huge responsibilities in China, but the public and society in China and even many other countries have an inadequate understanding of the value of the public sector and the realities. As a consequence, before individuals enter the public sector, they have to prepare themselves mentally for the possibility of being misunderstood by the public. Moreover, to be more realistic, wages may be lower than those paid by enterprises. This should also be mentally prepared. If they can have a good understanding of how different levels and departments of the Chinese government work through different channels in advance, they will be better prepared to enter the public administration sector.

> ***Reporter:*** We know that you are an excellent leader in public administration and you have a great many thoughts on the status and trend of China's public administration system. On the occasion of this Shanghai Forum, can you offer some suggestions on future development of emerging industries in Shanghai?

Xue Lan (Xue): Firstly, Shanghai gives people an impression of strong public administration capability and advanced concepts. The city has strengths in developing emerging industries, such as technological innovation, capital and human resources. Therefore, Shanghai boasts adequate fundamental original resources. Nevertheless, more problems and stricter government regulation come along with these strengths. The development of emerging industries in their infancy itself could pose impacts on and challenges to some traditional industries. Under this circumstance, we have to provide effective guidance and impetus, and give certain signals, instead of excessive regulation which will restrict their development potential and space. The government should respond quickly and moderately to emerging industries. These are my suggestions.

Watershed Ecological Protection from the Perspective of Metacoupling

INTERVIEW

Reporter: Huang Jiaxuan

Jianguo Jack Liu

Chair Professor, Distinguished Professor at Michigan State University (MSU), Fellow of American Academy of Arts and Sciences (AAAS)

[Policy makers are sometimes short-sighted...it takes ten or twenty years or even longer to generate feedbacks, but ordinary people cannot see these problems. So men of science are required to recognize these problems and raise public awareness through the media..]

Reporter: You pointed out in a recent interview that the Chinese government "is paying increasing attention to environmental problems, but there are still challenges to be addressed." Which do you think is the core challenge for future ecological protection in the Yangtze River Delta, industrial restructuring along the Yangtze River or pollution control?

Jianguo Jack Liu (Liu): I think what matters most is our understanding of the ecological environment, namely people's thoughts and attitudes towards environmental and ecological issues. If thoughts can be changed, other problems can be easily solved.

We used to consider economic development important, but failed to realize the importance of the ecological environment to us. However, the deterioration of the ecological environment can cause great damage to human health and a lot of environmental pollution has led to serious diseases such as cancers and tumors. We stress the coupling of human and ecological systems. Human is a part of nature and vice versa. How can the two be separated? Today, more and more people have realized this, so has the Chinese government.

Among the measures to solve this problem, enterprise restructuring is a key part, since many enterprises will greatly aggravate environmental pollution if they do not carry out structural reforms. Firstly, agriculture, the primary industry, requires food production, but many farmers use lots of fertilizer and pesticides, which are unnecessary and result in economic losses and environmental pollution. Secondly, in industry, many enterprises consume enormous water and electricity and thus cause environmental pollution, so the reform must be aimed at increasing resource utilization efficiency. The tertiary industry should also be reformed. Definitely, existing pollution has to be controlled and this should be carried out in parallel with the reform as the two are correlated. When one of them is solved, the other can also be solved; if any of the two remains unsolved, the other might also linger on.

Reporter: In 2018, you published an article in *Nature Sustainability* emphasizing that interrelated ecological and environmental problems should be addressed in a holistic way. Can you introduce the key idea of that article? And how can this idea guide practical applications, especially the government's policy-making?

Jianguo Jack Liu (Liu): All departments, all environmental factors and ecological factors are interrelated. Why do I underline this? It's because most government departments are going along their own way. This is also true in the environmental protection department, which is composed of divisions in charge of water, soil pollution, air pollution and biodiversity, respectively. But biodiversity depends on water, soil and atmospheric conditions. Therefore, we must figure out the interactions among them, of which some might be positive, which means good water and soil conditions facilitate plant growth; while some might be negative. The idea can provide government departments with guidance on how to maximize the use of positive ones and minimize negative ones. Different departments have their own functions and responsibilities, but should also cooperate with each other to find out the correlations.

Reporter: In recent years, the Chinese government is vigorously advancing the integration of the Yangtze River Delta, building an ecological and environmental community there and establishing an inter-basin ecological compensation mechanism. What do you think are the shortcomings of the community? What implications does it have for ecological protection in the Yangtze River Delta basin?

Jianguo Jack Liu (Liu): Integration is undoubtedly a good thing as it can increase efficiency, avoid repetitive work and facilitate communication and improvement in environmental standards. However, there is no clear theoretical guidance though everyone has a good intention and hopes for development towards the right direction and good results. Therefore, we put forward metacoupling yesterday, which means, in addition to the integration of the Yangtze River Delta, relations with areas neighboring the Yangtze River Delta and even with other parts of the world should be recognized as a whole. Such a theory can guide the government to make effective decisions in a long term.

Reporter: IPBES(International Platform on Biodiversity and Ecosystem Services) released a global assessment report on May 6, which discussed human's destruction of ecosystems and its causes, as well as possible solutions. What guiding significance do you think does this report have for global ecological protection? How should the solutions provided by the report apply in China?

Jianguo Jack Liu (Liu): Let me be clear at the outset, I'm a coordinating lead author at the IPBES. We mainly probe into future development paths. As quite a few problems cannot be solved within a single department, unit, country or region, we should underline such systematic concepts as nexus and metacoupling. To be more specific, we should figure out the solution to a problem based on causes of the problem.

Measures should be taken in the following aspects: firstly, the way of using land and water; secondly, environmental pollution; thirdly, hunting of wild animals and deforestation, which have direct impacts on biological population; fourthly, climate change. China is attaching more and more importance to climate change, but there is still room for constant improvement in many aspects. Climate change is critical to Shanghai, since sea level rises will have direct impacts on coastal cities like Shanghai. It is an issue concerning survival.

Reporter: You repeatedly mentioned the concept metacoupling in today's interview and yesterday's report. What do you think are the problems to be solved as early as possible with the research on this concept?

Jianguo Jack Liu (Liu): I came up with this concept in 2017. Metacoupling is a complex system composed of various elements such as sending and receiving systems, flows of information, people and goods, so how to quantify this system is of great significance. Coupling exists not only between human and natural systems internally, but also with neighboring and remote areas. Panda rental, for example, will have many climatic and environmental effects. This requires investigating who are doing this job and what are the feedbacks, namely how to spend the income from rental, and only when the money is spent on the protection of wild giant pandas can a virtuous circle be formed.

When I started the research on giant panda protection, panda habitat was continuously deteriorating and we reported this, but no one, including the government and WWF, an environmental organization, believed our report. In their opinion, how could the habitat quality go worse after natural reserves had been built? So we looked into social and economic factors and found that the population in natural reserves grew at a much higher rate than the national level because minorities were not subject to family planning. Additionally, the number of households grew faster for several reasons, of which one was divorce and another was the creation of new households when children grew up and got married. With population unchanged while the number of households going up, per capital consumption of resources will also increase. For example, a household of five family members uses a refrigerator while one of two family members also needs a refrigerator. The number of households doubles in case of divorce and the process where a parent goes to visit his/her child consumes resources, which is a waste of resources.

Reporter: You have repeatedly mentioned that this concept has to be quantified, so what do you think should be done?

Jianguo Jack Liu (Liu): There is much that can be done. The key lies in how to observe data, observe what has happened, for example, flows of goods, people and information. What is the function of information flow? How will you make use of a piece of information after receiving it? Neglect it or make full use of it immediately? This is a critical question. The information should be used to make the best decisions.

Modeling is also helpful. What can you do if you miss relevant phenomena? Some data may no longer be available. And how can you know things that will happen in future? In these cases, modeling must be conducted.

There are many other methods. For example, interviews help observe changes in people's thoughts and concepts. Reference can be made to some significant materials or satellite data can be obtained through remote sensing. We live in an age of big data when data comes from a variety of sources.

Reporter: Can you offer some suggestions for future development of Shanghai based on your expertise?

Jianguo Jack Liu (Liu): Shanghai has been leading China in economics and culture, but there is still room for improvement. Firstly, climate change, an issue of vital concern especially to future Shanghai, should be better dealt with. It should be considered from a natural perspective, since some natural measures are more effective than engineering measures. Taking natural ecosystems for example, a lot of plants can make air and water cleaner and provide ecosystem services. Therefore, more efforts can be done in this regard to expand the natural ecological space and render the layout more reasonable. Secondly, metacoupling should be implemented, not only for Shanghai itself, but also its neighboring areas and areas far from Shanghai (e.g., other countries), because climate change cannot be solved by a single city, but efforts of the entire world. Thirdly, feedback should also be considered. A city is affected by another as many cities obtain resources from remote areas, for example, the countryside, not only nearby countryside, even Africa or South America. For example, wood for a lot of furniture comes from countries with tropical rainforests. Even if forests and ecosystems in those countries are well protected, the atmosphere and climate change will be negatively affected along with deterioration of forests and ecosystems in other countries. A key part of metacoupling is feedback effects. It is hard to study feedbacks since it takes some time to generate feedback and sometimes feedback is invisible and intangible. Nevertheless, in an information society, with a higher speed of producing feedback, a city or even a country is more greatly affected by many factors at a quicker pace.

Reporter: Well, how do you think should countries better cooperate with each other to work out a comprehensive solution to environmental problems?

Jianguo Jack Liu (Liu): First of all, we should be aware of nexuses. If your problems have been solved, mine might also disappear. Nexuses are not competitive relations, but mutually beneficial ones with feedback exchanged. Global sustainability cannot be achieved unless sustainable development is implemented everywhere in the world. The theoretical framework of metacoupling is partially intended to help solve these practical problems. Some feedback cannot be seen in the short run. Policy makers are sometimes short-sighted and a term of two or four years is too short…it takes ten or twenty years or even longer to generate feedback, but ordinary people cannot see these problems. So men of science are required to recognize these problems and raise public awareness through the media.

Reporter: What is your vision for Shanghai and China in 2020? Can you describe it with three keywords or adjectives? And can you tell the specific reason(s) why you choose these words?

Jianguo Jack Liu (Liu): The three words I choose are sustainable, innovative and metacoupling.
Why do I choose these words? Being sustainable is a goal of development, otherwise, a society cannot survive long. This is one of the reasons. To be sustainable, one has to make innovations and replace previous measures which feature inefficiency, waste of resources, poor resource effect or serious pollution with high-efficiency, low-consumption, high-output and high-quality measures. Why do I choose metacoupling? Firstly, metacoupling takes place at any time every day and we must realize this. It has effects on sustainability. Another question is how we can regulate metacoupling and optimize metacoupling, internal coupling and interactions between different systems. It is of great importance since they may conflict with each other and coupling within a system might conflict with remote coupling. So what can be done to diminish conflict, increase harmony and maintain harmony between man and nature? This is critical to global sustainability. It is also the case in the market since quite many Chinese enterprises already are players in the international market. China has the largest population in the world, but China's population accounts for only 20% of world population and the share of foreign markets is 80%. Hence, remote coupling matters a lot.

Reporter: Can you briefly talk about your experience of participating in Shanghai Forum these days? What are your expectations for future development of the Forum and its role in ecological protection in the Yangtze River Delta?

Jianguo Jack Liu (Liu): I think the Forum is satisfying in that experts from different specialties and areas can discuss these problems together. But Shanghai Forum and ecological protection in the Yangtze River Delta can be more interdisciplinary as some problems cannot be solved by one or two disciplines, but a wide range of disciplines. Metacoupling, for example, requires crossing of disciplines such as engineering, art, natural sciences and social sciences.

BRICS Practical Cooperation and New Order of Global Governance

INTERVIEW

Reporter:Xu Xue

■ *Zhang Haibing*

Assistant to Dean
Research Fellow
Shanghai Institutes for
International Studies

[As BRICS cooperation enters the second decade, both BRICS and BRICS cooperation will come to a new historical period facing both great historical opportunities and a stream of challenges. In the global context, only by enhancing effective cooperation and driving reforms on global governance system can BRICS break a new ground for further cooperation]

Reporter: The BRICS New Development Bank (NDB) was founded earlier than Asian Infrastructure Investment Bank (AIIB) but was weaker than AIIB in terms of reputation and the pace of development. In addition, each of the BRICS countries owns an equal share in NDB and as a result, there are some problems with the decision-making mechanism. The outside world is now more optimistic about the prospect of AIIB. What is your opinion on the future of NDB?

Zhang Haibing (Zhang): Compared with other international development banks, NDB and AIIB are innovative in the way they come about. Both of them pursue world-leading philosophy in governance and development, and are established in the face of many challenges to global sustainable development, particularly against the background that developing countries are confronted with a huge gap in infrastructure financing.

First of all, the reason why China, as the main sponsor and participant in the initiative, encourages the development of NDB and AIIB is not to replace and challenge the existing system but to make more financing channels available to existing international multilateral financing development institutions. This is an important premise for us to get more knowledge about NDB and AIIB. We should give full play to the complementary roles of NDB and AIIB. That is to say, the original multilateral development banking system is defective or cannot meet the needs of development, for example, infrastructure financing gap and green financing. Given this, NDB and AIIB put focus on green and sustainable infrastructure financing to replenish funds to the existing international development financing channels.

Second, both AIIB and NDB are still in their infancy and we should look at their effectiveness in a somewhat long-term perspective. AIIB is controlled by large shareholders, somewhat similar to traditional western development banks such as the World Bank. AIIB focuses on green energy and infrastructure. However, NDB is different from AIIB. NDB is equally controlled by BRICS and countries that later become members of BRICS and will not overtake or completely dilute the dominance of the five BRICS countries. A topic is therefore questioned intensely for a long time: it seems that projects invested by AIIB outnumber those by NDB, draw higher international attentions, and are much more successful. Objectively speaking, AIIB has 100 members, 20 times more than NDB which only has 5 members, so naturally it has more influences. AIIB has a large number of members from developed countries and cooperates with the World Bank, the Asian Development Bank and other organizations in many projects which are highly visible. NDB, however, carried out its first batch of projects separately in the five member countries (in different regions), which was less visible. Hence, some people question that or think that NDB is not operated as efficiently as AIIB. Indeed, due to different equity structures, NDB is compared with AIIB in efficiency and fairness. Relatively speaking, AIIB is operated more efficiently because its large shareholders have the final say, but NDB is controlled by the five member countries and all issues should be subject to consultation.

Nonetheless, I think we should take a longer-term view on NDB, because the BRICS countries are all the largest developing countries and face their own challenges in development. Such challenges are complicated in that the BRICS countries are experiencing a transition in development and the world is undertaking a great transformation of international order and international landscape, which take place at the same time. The transition I talk about means that, for example, China is developing from a recipient country to a donor country and to a big power that takes on more responsibilities and makes more donations and contributions. China is carrying out economic restructuring at home, and at the same time, the international environment is also changing where the trends of protectionism and unilateralism in the United States are rising. Brazil also faces economic restructuring, and so do Russia and India. The BRICS countries are troubled by different development challenges and are affected by the increasingly complicated international environment. These factors may affect BRICS cooperation, including the development of NDB. Given this, we should not evaluate the role of NDB based on its performance in the past four years, because it is still in its infancy.

Third, we do indeed have a lot of choices for and uncertainties about the development, influence and cooperation projects of AIIB and NDB. For example, what is the process for NDB to admit new members? What is the influence of Brazil's giving-up of its position in the WTO as a developing country? What is the influence of the escalated China-US trade frictions on BRICS cooperation? All these uncertainties will have corrosive effects on the development of the BRICS. But we should keep an eye on moderate separation of the BRICS cooperation and NDB. After all, NDB is an international organization that has its own office, president and organizational structure. The development of NDB may be tied to BRICS cooperation to some extent, and it is also a relatively independent international organization. Thus, its efforts in membership expansion, project selection and internal governance will depend not only on the political aspiration of the five BRICS countries for cooperation, but also on the development strategy of NDB.

In conclusion, I would advise against a simple comparison between AIIB and NDB and I do not agree with the one-sided conclusion that AIIB performs better than NDB. In my opinion, although they are newly established for the same purpose, they differ from each other in governance structure, topics concerned and difficulties confronted, so we should evaluate their performance and analyze their development prospects in different contexts.

Reporter: The membership expansion you mentioned is also a choice, and an issue worth discussing. Since South Africa joined the BRICS in 2011, the public have been thinking the BRICS needs to expand its membership continuously. Every conference of the BRICS always invites other emerging countries besides the member countries. How is it possible for the BRICS to expand its membership?

Zhang Haibing (Zhang): We should distinguish the expansion of the BRICS Summit from the expansion of NDB. The expansion of the BRICS Summit may depend on two factors: the first factor is whether the five existing member countries have real consensus on the expansion. As I understand it, some members such as India have doubts about the expansion. Certainly, the doubts do not represent official stand of India, but at least some Indian scholars and some Brazilian scholars expressed such a concern when I talked about the issue with them: the increase of member countries may lower efficiency of the BRICS. Therefore, the most important is whether the BRICS reach a political consensus on membership expansion. The second factor is which kinds of candidate countries are qualified for the membership? It is a big challenge, for example, how to embody the representativeness? So it is still necessary to formulate a standard for the expansion. Otherwise it is hard for the expansion to be reasonable. There should be certain standards and procedures, and relevant rules must be formulated in advance. In a word, firstly, a political consensus must be reached; secondly, the rules and procedures for the expansion must be clarified. At lease relevant preparations must be made. But current preparations in the two aspects are not very clear.

Reporter: Former Brazilian President Dilma Rousseff pointed out: the BRICS Leaders Meeting must be institutional. At present, the cooperation of the BRICS countries is guided by the Leaders Meeting, and the time and place for holding the BRICS Summit in a year are subject to the decision of the Summit last year. Is this institutional?

Zhang Haibing (Zhang): The Summit has been institutional. In addition, there is also an informal meeting of BRICS leaders, which has been institutional, too.

The key lies in whether the dialogues can promote mutual trust between the BRICS countries and strengthen their cooperation foundation. Moreover, whether the cooperation and dialogue can lead to substantial results, and whether the results can be implemented substantially. I think these are very important factors.

To sum up, my view is: 1. The Summit has been institutional enough; 2. The key is whether the institutional meetings can address specific issues, namely to enhance political mutual trust, make practical dialogue results and implement the results properly.

Reporter: When meeting current Brazilian President Bolsonaro last March, Trump expressed that he would support Brazil to join OECD, and even become a member of NATO. Some analysts think that the expression is designed to reduce Brazil's support for the cooperation of the BRICS countries. Brazil is the presiding country of the BRICS countries this year. Against such a backdrop, what is your expectation on BRICS cooperation in the year?

Zhang Haibing (Zhang): I feel it is about strategic choices of Brazil on the basis of its interests. All its decisions, including joining OECD of the developed country group, or its announcement of waiving the differential and special treatments for developing countries granted by WTO in his declaration with President Trump, are based on consideration of its strategic interests. It is undeniable that, the decisions will influence BRICS cooperation to certain extent, but I hope the influence is active, namely pushing or forcing the BRICS countries to form certain consensus on the reform of WTO, which is very important for driving the reform of WTO. Meanwhile, will Brazil's approaching OECD or the U.S. influences BRICS cooperation? I feel we'd better not make such kind of judgment, because a country's diplomacy is diversified and multi-level. It is not necessarily the case that more diplomatic efforts on one side means neglect of the other side. We should not reach such a final conclusion.

Reporter: BRICS cooperation has a history of 10 years. Then, to further enhance pragmatic cooperation in economy and trade between the BRICS countries, which aspects should we focus on for breakthrough or advancement?

Zhang Haibing (Zhang): Sorry for that, I have not conducted deep study on the issue. I think the cooperation must depend on the market as ever, and efforts should be made to uplift domestic business environment of the member countries, which may be the fundamental. We should not merely rely on government drive, as government can only play a guiding role after all, while market is decisive.

Brain-AI Integration and AI Medical Treatment from a Medical Perspective

INTERVIEW

Reporter: Wang Jiangzhou

■ *Matthew Kiernan*

Professor of Medicine, Central Clinical School, University of Sydney
Co-Director, Discovery and Translation, Brain and Mind Centre

[I wonder if, eventually, we will have a computer interacting directly with the brain – a true brain-computer interface. For instance, let's say when you are 100 years old and you're dying, can you just download all the information from your life, so that all of your experiences contained in a single readout (like a USB stick). I also think that once we can access the brain, we will be able to fix it better. We can reprogram aberrant pathways. At present, it sounds a bit like science fiction. But who knows where AI research will lead.]

Reporter: The first question is about our roundtable. Its name is "Deep into Brain: Artificial Intelligence beyond Imagination". This topic touches upon neural science, brain science and artificial intelligence. So how do you understand the integration of neuroscience, brain science and AI?

Matthew Kiernan: Well, I think that neurology has always been grasping the technology of the day. So in the 1850s, technology was limited to post mortem examination: take the brain out, cut it up and have a look at it under a microscope to work out the disease and cause of death. More recently, triggered by "the decade of the brain" in the 1990s, technology has developed MRI scans, sequencing of the whole human genome, and a lot of clinical information to support our diagnosis and treatment of patients. The question remains: how can we synthesize all of this information to get a diagnosis for patients, which is better, quicker and more accurate without cutting the brain open. Artificial intelligence may offer us a great way forward. Big data is useful as well. So I support multidisciplinary strategies, whereby we bring in the basic scientists, mathematicians, computer scientists, biomedical engineers (and they love maths) to work towards a common goal. And it turns out everything in the body is governed by maths; every function can be worked out through maths; probably, we can write an equation for everything: to determine whether you blink your eyes, whether you lift up your hand, whether you put a blue tie on…this can all be modeled by mathematics. We just need to work out the algorithms. In today's talk, Dacheng Tao showed initially that artificial intelligence was not very good. They might try to work at it and at how an arm moves a little bit, then a few arms and legs, and then the whole body in a defined sequence. We are seeing more and more complexity coming in with technology. This is a great way to translate basic science into the real world.

Reporter: Okay, let's just call that Brain-AI integration, is that okay? (Matthew: Perfect). And it will promote the development of AI and also brain science. So my question is, which stage do you think the current Brain-AI integration has reached?

Matthew Kiernan: I think that AI is currently operating at around 2-3% of capacity. So I think we're at the beginning, like sailors in the 15th century trying to work out whether the world was round, or flat. We are right at the beginning of AI technology. But 20 years ago, without the Internet or any of this computational technology, AI remained in the realm of science fiction, and we will see how the field develops. It's only just started. We'll see another 90% or more to come!

Reporter: I watched the video "Pave the Way" on your personal homepage. You mentioned that "what we need to take it further is a significant injection of funds". So do you think that the field of Brain-AI Integration is a long-term field? And it does need capital, but it shouldn't be kidnapped by capital?

Matthew Kiernan: Agreed. AI is going to need capital. But I can tell you now. Industries want this information. They don't want it simply for clinical neurology, but to understand how you will make decisions, for instance what you will purchase for dinner tonight when you walk into a supermarket, and what you will choose. Neuroscience is going to control what we buy, what we eat, how we live. So industry will become increasingly engaged in AI. In addition, industry has more money to fund projects, more than universities or governments. So when people become quite good with the technology, industry will come and take them into industry-related projects. That will be our biggest worry: competition for recruitment. But you know it may be slow progress initially, but progress will happen regardless.

Reporter: Many of your research and projects involve nerves. You have made great achievements in the field of motor neuron disease. So besides the challenge of lack of funds, what challenges have you encountered in practice?

Matthew Kiernan: At the moment we have no cure for motor neuron disease (MND). If I make the diagnosis in an individual patient, I know that if I'm right, that the patient will die. Some die faster than others, some die within a few weeks of diagnosis, some die in a few years, or exceptions like Stephen Hawking die after 70 years. What we need is to discover a new therapy that really slows the disease process. Sadly, we still haven't worked out what the process of the disease represents, or indeed what triggers the disease. When I studied medicine, I was told MND was due to the muscles wasting, and then people set out to work out what was wrong in the spinal cord to cause MND. Our research suggested that MND was coming from the brain. We said this is a primary brain neurodegenerative disease. People didn't believe it at the time. And even now, when I present this hypothesis at a conference, some in the audience will get up and tell me I'm wrong. So there is still a big debate. Where does MND begin? I think it begins in the motor neuron in the brain and spreads throughout the nervous system. But we don't know how it spreads through the body either: how does the disease go from one cell to the next, to the next, to the next, to the next? We don't know.

Reporter: You mentioned "Fudan-Sydney partnership" in your speech today, so what's your expectation for the future collaboration of the "Fudan-Sydney partnership"?

Matthew Kiernan: Fudan is making a big investment in technology and machinery. Seven MRI scanners, new technologies such as transcranial magnetic stimulation, but perhaps not enough trained specialists to get the best results out of the new technology. And Fudan hasn't organized the research patient cohorts yet. We can help them to organize, right? We also have good patient cohorts in Sydney, so we can help Fudan to plan and discuss the studies. My expectation is that maybe from today, two or three people from each side of the Fudan-Sydney collaborative partnership could start one or two studies. Once they start small, we give them a bit more academic and financial support to help with planning, that's the way we want to do. And then it can also help organize and incentivize others including industry and government to get more support.

Reporter: So what will your team do in the future collaboration?

Matthew Kiernan: Well, first, I spoke today to the doctors and specialist neurologists in Fudan University Hospital, they were keen to meet up. We have to bring our patient cohorts together. Second, if we do a novel clinical trial, it would be great to do a trial in Fudan using the trial medication that we are also studying in Sydney, which will be a great outcome from our Fudan-Sydney partnership. Third, we can organize to have the same MRI scans undertaken in Fudan and Sydney and combine the cohorts.

Reporter: Do you have any expectations for the future development of Brain-AI Integration?

Matthew Kiernan: That's a very interesting question. It is very hard to predict the future. I wonder if, eventually, we will have a computer interacting directly with the brain – a true brain-computer interface. For instance, let's say when you are 100 years old and you're dying, can you just download all the information from your life, so that all of your experiences contained in a single readout (like a USB stick). I also think that once we can access the brain, we will be able to fix it better. We can reprogram aberrant pathways. At present, it sounds a bit like science fiction. But who knows where AI research will lead.

Reporter: Let's look further, turn from Brain-AI Integration to AI plus healthcare. The World Artificial Intelligence Conference 2018 released a Blue Book, it said "AI plus health care ranks among the hottest areas of AI+ vertical application". Many AI+ medical projects were also unveiled at the 3rd World Intelligence Congress, which just concluded this month. So in your laboratory, what are the brain science and neuroscience related projects that use AI technology?

Matthew Kiernan: Well, the main thing is imaging. At Sydney University we have given all of our patient scans to Professors Michael Barnett and Dacheng Tao, and they're working out better diagnostic algorithms using AI technology. We are very early in the scientific development. At present, we cannot do a scan of an MND patient and say that is the diagnosis. But maybe if I give 1000 scans to Michael and Dacheng, they will develop the algorithm to diagnose disease. That would be a fantastic advance.

Reporter: So this question is following the previous one. In your daily research and clinical treatment, how much can those technologies of AI plus healthcare help you? What is the percentage?

Matthew Kiernan: In the future, I am sure that AI will help us by at least 50%. Let's say, in 10 years' time, I've got 10 treatments for a patient who has a disease.

What treatment should I start first on the patient? And if the first treatment doesn't work, what's the second approach? And that the seventh down to the tenth? What should I do with the seventh and eighth and ninth? So you can see there's a role for AI then. So what you do is that you give all the details of the patient, for instance, 57-year-old, male, ALS, arm weakness, and enter the data into the computer for the AI algorithm to suggest: stop that treatment, then add these three medications.

Reporter: Many people have mentioned the advantages of AI plus medical technology, but have you found any shortcomings in practical application?

Matthew Kiernan: Well, the first thing is that AI makes mistakes. We saw, during today's talk, it sometimes makes more mistakes than humans. And the other thing is that AI lacks soul. But what is the soul? So for instance, there is always unpredictability in the human existence. There is always a human effect.

Reporter: Let's turn our eyes to the industry filed. Some people say AI plus healthcare is like a big dream but difficult to realize. Just at the end of 2018, Google reorganized its medical department and had to cut back on "costly and risky breakthrough technologies" and turned to "businesses with clear profit patterns, which are paid for by the government or medical institutions and are suitable for a wide range of people." What do you think of this shift in technology companies from investment in breakthrough technology to the profitable business?

Matthew Kiernan: Well, the way that you break through is that you should give proper training or exposure to people. For instance, in 1993, I used to send messages by fax machine, and my colleague had an email address, and he said, I should send data by email. It's much better. At the time, I said no, fax is better, because I knew how to use the fax, and it was easy. But then once I realized how email works, when someone showed me, then of course, I'm sending data by email, across the Internet. But if no one had shown me, I would have no understanding and would keep sending faxes. So you need to bring the populationon with the discoveries, with the breakthroughs.

Reporter: So what do you think about those external causes outside the technology, like I mentioned before?

Matthew Kiernan: Wow, that's complex. The real thing you have to realize is the problem that business companies are there to make money. Some companies have funds that try to look after things such as the environment. But for most companies, the real issue is the bottom line, profit or loss. If it's profit, everyone goes up, if it's loss, the staff get sacked. Same with a pharmaceutical company, when a new medication goes really well in the marketplace, everyone is happy. If the company starts losing money, the employees get sacked. It's purely a financial decision.

Reporter: I learned that you have been fighting Motor Neuron Disease for nearly 30 years since your mother suffered from this disease. I admire you very much. I really wonder what this disease has been for you in your many years of research. Is it a mountain that must be turned over? Or an enemy that makes you stronger? Or a kind of force that has already become a habit?

Matthew Kiernan: The first two. Actually, it's been the best of times and the worst of times. It's ironic that the disease that killed my mother made me choose a career in neurology. Before that time, I was actually doing orthopedic surgery. I liked bones. That's what I wanted to do. If I had pursued a career in orthopedics, I probably would have been bored. So I'm glad I did neurology, although I wish I didn't do neurology because my mother had died from a neurodegenerative disease. But now that I'm doing neurology, it's opened up a whole world of interest, including the reason I'm here in China today. And it has led to lots of personal growth, great times, and meeting friends and some fantastic intellects. But the real problem remains - if I look back now I say we still haven't got a cure for MND. That's what's really sad. So it's like a mountain that needs to be climbed. Have you seen the movie: Free Solo? I would like you to see that movie. Like the rock climber, I want that triumph of reaching the peak. But it is a deadly climb.

Reporter: You are a clinician, an educator and also a scientist. You have many different identities. So what do you think of yourself? Which identity is more obvious to you?

Matthew Kiernan: If I look back on it now, all of it, it's the clinical experience that has been the area that makes me the happiest. Separately, it's good to have different streams that you can pursue, because sometimes when you're doing one stream, and it's not going well, you can escape from that area and go into another stream. I gravitate from the university to the hospital and back again. And when the hospitals not going well, I can get back into the university. If you just have one area of expertise, you can become bored and become disillusioned. So it's good to have variety of experience. I like variety. But if I look back now, like the last two days here in Shanghai, when I go to talks, and they're talking about very basic science, that's not me. When someone talks to me about a patient, and this is their clinical history - I can synthesize it. I love that. And then what's the diagnosis, how to do it, and can you make the patient better? When patients come back and they're fixed and they say thank you, then you feel very lucky – it is a real privilege to be involved in the care of another person. That is the best feeling, sometimes it makes you cry.

China's Changing Role in the Global Economy: Challenges and Opportunities

INTERVIEW

Reporter: Ruoyi Liu

David Dollar

Senior fellow in the John L. Thornton China Center at the Brookings Institution

[To deal with the challenges as a rising global economic power, China should play more of a leadership role in international financial institutions, carry out higher environmental standards and investigate more on debt sustainability in its overseas development finance projects. The tensions between the US and China may not be solved in the short term, but decoupling could be very costly to both countries and bring a lot of inefficiencies.]

Reporter: After repeatedly promising that the US-China talks were in their final stages, President Trump threw the negotiations into question with a series of tweets threatening new tariffs on May 5th. Then Mr. Trump imposed 25 percent tariffs on nearly one-third of all Chinese products on May 10th. What do the new tariffs mean for the two sides?

David Dollar: Before the last round of negotiation, each side made some positive statements, indicating they were very close to an agreement. But I think what we learned from the last round of negotiation is the two sides were very far apart. The United States would like China to change a bunch of laws, and China wants the United States to withdraw all of the tariffs. Essentially, each side is not in agreement with the demand of the other side, so we learn they are pretty far apart. President Trump escalated the tariffs by increasing the tariffs that were 10% to 25%. In addition, US trade representatives have put out some further list of products from China to be taxed for comment. So it's not clear what is going to happen, but the US may go ahead and impose tariffs on the remaining $300 billion. So right now, it looks pretty bad. Plus, they have become very public in their dispute, and it's very hard for either side to back down. Probably President Xi will meet President Trump at the G20 meeting in Osaka. And I think the best scenario at this point is that the two presidents have a good meeting and decide that the trade conflict is not good for either economy, and tell their negotiators to find a compromise. But that's certainly going to take a few months, even in the best case. And then there's a possibility that they won't be able to reach an agreement. In that case, this trade conflict is going to continue for the foreseeable future.

Reporter: During the last few weeks, there was some information released by the two sides that they were close to an agreement, but now we heard the bad news. Did China take some wrong actions during the negotiation?

David Dollar: It seems like both sides made some misleading statements about being close. These discussions are private, so it's hard to know for sure. Usually, each side is pretty clear about what they want. So if somebody says we are 95% toward an agreement, that usually means that they are ready to meet the other side's demands. So looking back, it just seems to me that the negotiators were talking past each other.

Reporter: You have mentioned in an essay published in July 2018 that China is in a fairly good position in the US-China trade war. Firstly, the Chinese economy is less dependent on exports in general. Meanwhile, the protection policy of the U.S. may not lead to an improvement in the trade balance; rather the opposite, due to the potential appreciation of the US dollar. Do you still hold the same opinion considering the changes in the last couple of months?

David Dollar: Yes. I think some people in the Trump administration think that China is very vulnerable and will quickly cave in. I don't agree with that. I think first, the tariff for a while is bad for both economies. It's not that serious for the Chinese economy. China has other options to stimulate the economy. Then politically, it will be very difficult for either one of these presidents to back down publicly. So I don't think it's going to be easy to get China to make a big change in its negotiating position.

I think the Trump administration is going to find that this strategy of imposing tariffs is not going to improve US trade balance. We have already seen some appreciation of dollar, and that is the normal reaction of a currency when a country imposes protection. And we don't really see any change in the US trade balance. It got somewhat bigger in the fourth quarter of 2018, and then a little bit smaller in the first quarter of 2019. But if you look at the last six months, the US trade deficit is very high. And there is no evidence that it is going to go down.

> ***Reporter:*** So why do President Trump insists that tariffs can work for the American economy? More tariffs may increase the inflation level, and maybe he regards it as stimulation of the economy?

David Dollar: Well, we don't really have any inflation problem in the US right now. The inflation level is very low. And in fact, our Federal Reserve is somewhat disappointed that they can't get inflation a little bit higher. Some of the pricing increase through the tariffs, that is actually going to be somewhat helpful for the Federal Reserve. So I don't really think that is a big issue.

I would think the real agenda here is that the US tends to import a lot of manufacturing products from China. And the US exports contain a diversity of products, some manufactured products like aircraft, but a lot of agricultural products and a lot of services. By restricting trade, it will have a little bit of stimulating effect for the manufacturing sector in the US. And it will have a depressing effect for some of the service sectors and agriculture. President Trump seems to want to strengthen the manufacturers in the US economy. I think this is the main rationale.

> ***Reporter:*** And my next question is about China's relations with the emerging market. According to your research on China's development finance, China mostly follows the laws and regulations of the host country rather than subscribing to international standards in infrastructure projects. You have pointed out that simply relying on recipient countries' own laws and regulations can be risky due to its own weakness, while subjecting to the World Bank's standard could also be time-consuming and expensive. In this case, what kind of actions and changes would you recommend China's government (i.e. MOFCOM, The Ministry of Commerce of the People's Republic of China) and companies to take?

David Dollar: China has quite good environmental regulations for projects within China, and I think the implementation of those regulations has improved over time. Different aspects of the environment are improving in China, many cities are reducing air pollution, and many lakes and rivers have been cleaned up. So my friendly advice to China would be to have the same practices in other countries that Chinese construction companies have in China, and to follow Chinese standards and practice. And I think that will be a good compromise, as a lot of countries China is lending money to have pretty weak policies and institutions. If you don't bring a somewhat higher standard, you are probably going to have some real environmental failure. On the other hand, I have written before that the World Bank standards are probably too high, especially about the implementation. The World Bank is very risk-averse, so when it runs into any kind of trade-off, they tend to back away from the project. The world is full of complicated trade-offs - sometimes a project will have some environmental costs, but the project also has benefits. Governments have to weigh the costs and the benefits before making decisions. I think right now, China is doing a pretty good job weighing costs and benefits of infrastructure projects in China. So carrying out the same kind of policies to the rest of the developing world seems like a good strategy.

> ***Reporter:*** I believe this is a very good suggestion, but I was wondering if there could be any kind of obstacles China may face when trying to implement this strategy.

David Dollar: I think the problem is that there are costs to carry out good environmental policies. Doing a careful environmental assessment is costly. And then maybe some aspect of the project is going to hurt the environment quite badly, you have to change the project, or maybe you have to spend some more money to mitigate the environmental impact. So it is almost always costly to have good environmental policies. And if you just leave it to the company, it is going to make a private choice. From the companies' point of view, they only do the project and then they will leave. So the companies want to keep costs as low as possible, and they are not really worried about the environment. That is the whole rationale for good environmental governance in general.

Reporter: So the Chinese government should take more actions to regulate the companies' practices overseas.

David Dollar: Right. It's a great example of negative externalities. China is providing a lot of finance to build infrastructure in other developing countries and mostly it is welcome. But if there are some cases where the Chinese companies create a big environmental disaster, then that really destroys your reputation. So instead of generating goodwill through Chinese development finance, you end up generating badwill by creating an environmental mess. It is in China's interest to have the government impose some standards and regulations on Chinese companies.

Reporter: When talking about AIIB, you have mentioned that "if AIIB's activities can put pressure on the World Bank and the regional development banks to streamline their procedures and speed up their infrastructure projects, then this would be a positive change to the global system". However, the establishment of AIIB has, at least to some extent, raised strategic anxieties of some developed countries, such as Japan. Then what do you think is the best way for the World Bank, the AIIB and other multilateral development banks to interact with each other?

David Dollar: The development of AIIB has generated some debate within the existing advanced countries. It is primarily the United States and Japan who chose not to join, but those are two big important economies. Most of the advanced countries chose to join because it seemed positive that China was taking this initiative, and there is a need for more development finance. And I think some competition with the World Bank and other banks is healthy. In the current system, while we have different banks that compete a little bit, the World Bank is the only global development lender. AIIB is going global very quickly – it is already lending to Africa and Latin America. So I think we are going to move to a system with AIIB, World Bank and other global development banks, and some competition between them is healthy. I already said I thought the World Bank was too risk-averse, maybe AIIB will be more risk-taking. I also see there has been good cooperation between the World Bank and AIIB and that is very positive.

Reporter: So do you think the fundamental guidelines of AIIB are different from those of other development banks? Or are they essentially the same?

David Dollar: I would say they are essentially the same. The charter of AIIB is very much based on the charter of the World Bank, but with some positive innovations as the world changes. But I think it is mostly following the practices of the World Bank.

Reporter: Then how do you forecast the future development of AIIB? It is clear that AIIB won't only function as a regional developed bank; instead, it is making more global footprints, and China is inviting other developed economies to join its development finance projects. Do you think this cooperative model will sustain for a long time?

David Dollar: Yes. The United States went through this and came out of World War II as overwhelmingly the biggest economy in the world. And when it set up the World Bank, it was the majority shareholder and it always nominated the president. But then it gave up a lot of power to other countries. When it comes to individual projects, the US doesn't have veto power. It is reflected in certain enlightened leadership that you have to get other important countries in the world to invest in the institution. I think AIIB is very similar. China doesn't have veto power on decisions, so you are putting Chinese money in, but then invite other countries to contribute. That increases the amount of money, and it gets the buy-in of a large number of countries. So I think that is enlightened leadership.

Reporter: Hopefully AIIB can have this kind of positive contribution to the world. My next question is that we have already seen harsh criticism on China's Bridge and Road Initiatives (BRI) and other overseas engagement from the West about debt sustainability issues, environmental and social safeguards, and some western media even characterize China's overseas practices as Neo-colonialism. What do you recommend China's government and media to do to respond to this criticism?

David Dollar: My advice to China would be to pay more attention to criticism from the countries that are borrowing from China than from the advanced countries. I think some of the criticisms from the advanced countries are not really based on fact. But the thing about development finance businesses - for things to work, you need strong cooperation of the countries that are involved. China's financing projects are in a lot of different developing countries. Many of those are working out well, but some of those are not. For example, in Malaysia, they designed a $20 billion rail project. It was expensive for the country since it is not that big an economy. There really wasn't that sustainability, and the project did not go ahead at that level. The new government negotiated with China and it is now scaled down. The fact that China was willing to renegotiate that with the Malaysian government is very positive. Another good example is Pakistan. Originally, Pakistan was asking for some coal-fired power plants from China. But then a new government came in and actually wanted to move to renewable energy, and the Chinese contractors renegotiated the projects. In a lot of ways, the business is about meeting client demand, so you have to listen to your clients, learn what they want in terms of projects, and usually the people in these countries want good environmental standards. And if you have to resettle people, they should be treated fairly and compensated fairly. So it would be positive if China could look at the actual implementation of the projects and make adjustments to ensure that they are successful.

And then the debt sustainability issue, there has been a couple of good studies including some of my own work. It is not a general issue for the countries borrowing from China. So it is not really a fair criticism to say China is pursuing debt-trap diplomacy.

But – there is an important "but" – there are a number of countries whose borrowing from China is very large relative to their economies. The best examples are small countries like Laos, Cambodia, Mongolia, and Sri Lanka. So there are some small countries who have borrowed too much overall, including from China, and that is an important issue. You can't just look at whether there is a good project in the sense that the country doesn't have enough power, so it would be good to generate more power. Think about foreign lending. Ultimately, it has to be serviced by exports. So when you ask how much can Laos borrow, part of the answer depends on what Laos can export. And if you borrow too much, you can't export to service it, then you are going to have a debt crisis. We have seen this over and over again in the developing world, and those crises are often quite devastating. China is trying to help the country, but if it ends up with the debt crisis, then you are not helping it. Plus, China is going to end up having to forgive those loans. Because when countries get into these real debts, what is called "unsustainable debt", then they have to have their debts rescheduled. China has already had to forgive debts for Venezuela and rescheduled Ethiopia's debts recently. So it is in China's interest to have a pragmatic response to all of this. And at the most recent Belt and Road Forum in Beijing, I thought President Xi Jinping's speech reflected lessons that China was getting. He was emphasizing the importance of debt sustainability. Clearly, the leadership understands this issue. And he was talking about improving the quality of the infrastructure projects, and there were not a lot of big pledges of amounts. So there is not so much focus on the amount, but more focus on quality.

Reporter: Well, I agree with your point that China's leadership is trying to reflect on the development finance system and the debt sustainability issue. And just one point I want to mention is that I think the case of Ethiopia comes from China's forecast that Ethiopia would achieve greater economic growth by implementing the infrastructure projects, but maybe it is not that easy for Ethiopia and other recipients to achieve economic growth as expectations even after they received those projects.

David Dollar: Right, I think it is a really important point. The way I look at China's history, and also Vietnam's, is that both of these countries carried out a lot of economic reform, and then they started building up the infrastructure. It is the combination of economic reform and infrastructure. That is powerful, because infrastructure is needed for connectivity to the world market, but policy reform is even more important. If you don't have a free-trade regime, then connectivity to the market doesn't matter. If you don't welcome foreign investment, it is hard to get into global value chains. If you don't have macroeconomic stability, it is very dangerous. China over the last 20+ years has gotten such good returns from infrastructure, but the danger is when you just focus on that and forget that. You need all that policy to make the infrastructure valuable, and that is a good lesson to learn.

Reporter: Yes, I agree with you that infrastructure is not the panacea for development. My next question is about what you have mentioned in a Brookings interview about China's Belt and Road Initiative (BRI) that, "The key question is: Is China learning from its experience and improving, coming closer to global norms? Or, are they dead set on a different kind of model?" How would you answer this question considering China's current performance and global footprints?

David Dollar: I think the evidence is that China is learning from the experience and adjusting its practices. The renegotiation of the projects in Pakistan and Malaysia are good examples of being flexible. That means China is understanding the importance of sustainability and making changes. And you have seen the Ministry of

Commerce has put out at least indicative guidelines on environmental standards for projects. We have talked about China's moving close to global norms, I would also point out that global norms themselves are changing over time, and China also wants to shape them. It is an interactive process.

> ***Reporter:*** And my last question is that the topic of our roundtable discussion is "China 2049: Dealing with Challenges of a Rising Global Economic Power". What kind of challenges do you think China will encounter? And how should China deal with the challenges as a rising global economic power?

David Dollar: China will face a lot of challenges over the next couple of decades. I think two key ones are, first, China's role in the international economic institutions, and second, the whole issue of technology competition, which is mostly a US-China issue.

The first issue is the one I'm writing about for the project. I think China has benefited from a stable global system, it has benefited from being a member of the World Trade Organization, International Monetary Fund, and the World Bank. But as it moves to become the biggest economy in the world, I think it needs to play more of a leadership role in these institutions. And right now, we have this problem that the US and China basically disagree about how to reform the institutions. We already talked a little bit about somewhat different approaches to the World Bank and AIIB, that is one example. In the World Trade Organization, the U.S. would like to see reform of the WTO to deal with the whole set of new issues that have come up: trade of services, cross-border data, intellectual property rights protection, investment, etc. China is pretty happy with the status quo, and it is resisting that kind of deep reform. On the other hand, in the International Monetary Fund, we have the opposite situation. China would like to see the resources of the IMF expanded and to get a larger share of what we call IMF quota. China is going to be the biggest creditor in the world within a few years, so it has a very deep interest in the IMF, which is the lender of last resort to try to prevent financial crises or help countries manage financial crises. However, the US doesn't want to see the IMF expand, doesn't want to see China have a bigger share. So those are difficult issues that have to be resolved over the next couple of decades. I think there is potential for a grand compromise where China accepts some of the things the U.S. wants to do with the WTO, and the U.S. accepts that the IMF should expand and China should play a bigger role. Thirty years is a long time, so we can work this out.

The other issue is that each side has a nationalistic desire to develop certain technologies. And sometimes people use the language of "dominating", but the outcome is not likely going to be that the US or China will dominate particular technology, but much more likely that firms in each country will have successes in somewhat different areas. Lots of evidence shows that if we have a lot of integration between the US and China, there will be more innovation overall, and each country will be better off. On the other hand, if we try to decouple, that is going to be very costly, each side is going to duplicate what the other side is doing, and creating standards that separate the two is going to bring a lot of inefficiencies. Given a competitive relationship, there will probably be some technologies where the two do not want to cooperate. But from an economist's point of view, we want to set up a regime to keep the restrictions as narrow as possible, and then have a lot of cooperation and integration between the two economies and the vast majority of technology.

In general, it is companies that compete, not countries. And in the competition of companies, they tend to get deeply integrated with other countries. Most of the big U.S. tech firms want to open R&D labs in China, because there are a lot of scientists and a big market to test things out. And a lot of Chinese companies would like to have mergers and acquisitions with tech companies in the U.S. So the companies are kind of naturally drawn to integration in the broad sense, but the governments get a little bit nervous. And I think right now, both governments are overreacting. It is kind of a dangerous moment. All of these issues raise tensions between the US and China, and it is not going to be easy to resolve them. But hopefully, we can resolve them over the next 10 years or so, and then the future will be bright.

Role of Regional Coordination Mechanism in the Yangtze River Delta Integration

INTERVIEW

Reporter: Xu Wenkai

Chen Wen

Director, Research Center for Watershed Management and Development, Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences. Participated in preparation of the regional planning for the Yangtze River Delta three times in 15 years.

[To build the Yangtze River Delta into a dynamic and active growth pole for national development, a sample area of high-quality development, a leading area for basic modernization, a demonstration area for regional integrated development, and a new highland for reform and opening-up in the new era, we cannot go without further improvement of regional coordination mechanism. Only by streamlining the relations between the Central Government and the Yangtze River Delta and between the regions in the Delta can the Yangtze River Delta Integration advance to the new stage of high-quality development.]

Interviewer: Which is your top expectation on the Outline of the Plan for Integrated Development of the Yangtze River Delta to be issued? Can you share your view with us?

Chen Wen: Regional coordination mechanism. We hope more highlights in this aspect.

Interviewer: You mentioned in your keynote speech just now that the demonstration zone for integrated development of the Delta will be located in Qingpu, Jiashan, Taicang and Wujiang at the juncture of the three provinces and Shanghai. Compared with what the "G60 Corridor" proposed a few years ago, the "Demonstration Zone" will have what kind of breakthroughs in terms of cooperation field and level?

Chen Wen: Cooperation field and level are major contents in the Outline of the Plan, which is in the process of revision and will be revealed to the public before long. As for fields with breakthrough, simply speaking, it will involve institutional design in the flow of essential factors of production, land planning and management, public service (allocation) and environmental synergy as well as others. Specific situations shall not be clear until the plan is issued.

Interviewer: At the end of last month, when answering the special interview by a CBN reporter, Ma Weiguang, Secretary of the CPC Shaoxing Committee, said that compared with administrative barriers, the top concern about integrated development of the Delta lied in whether relevant cities clearly understand their current situations and future positioning. What do you think about current situations and the future positioning of the three provinces and Shanghai in terms of comprehensive ecological treatment?

Chen Wen: In view of specific division of labor of the cities, the overall planning will have a general guidance for division of labor. For example, which area is suitable for development, and which area should be protected, namely the "major function oriented zoning" as we always call. However, the national planning will not involve specific local industries.

The development mode of all regions in the Delta has a very close relationship with their geographical conditions, regional advantages, talented personnel and even abilities of the entrepreneurs, has a lot to do with the division of labor in the development of surrounding areas, and is market-oriented. Some local governments hope that the Central Government can deliver very clearly specific planning and guidance in terms of industrial orientation, which is not practical. The industrial orientation of any region must depend on rational choice of market entities and intelligent guidance of local governments.

Administrative barriers are significant barriers to the flow of essential factors of production. What the Central Government should do mainly includes the following aspects: 1. Using the "Negative List System" to enhance restraints of economic activities. For instance, in areas with more fragile ecological environment, development should be limited. 2. On some projects with huge sunk capital, such as large airports, ports, and heavy chemical industries, the Central Government must set up entry barriers for local governments. The development in other fields such as the electronics industry and bio-technology industry, is determined by the market on the basis of endowment supply and demands, which involves both inevitability and chance.

We have an admonition or an expectation for local governments and enterprises, that is, to avoid "simple imitation" as far as possible. To copy what others do cannot bring you supernormal profits. Only by innovatively developing some special industries can a region obtain better development fruits.

Without doubt, the problems I proposed cannot be addressed just by one "government planning". To identify own positioning, it is necessary to change the mindset, establish the consciousness of innovation, and find the most suitable direction, so as to enhance the competitiveness. Efforts should be done to enhance industrial capacities and further drive the aggregation effect of talented personnel, education and other resources. Only in this way can valuable development opportunities be captured in the complicated changing situations.

Interviewer: As you just mentioned, when participating in regional cooperation, local development is of vital importance. So, how should an area keep the balance between local development and regional cooperation?

Chen Wen: The balance needs the market mechanism. Driven by market forces, enterprises need to make a rational choice. For instance, if an enterprise needs to avoid homogenization competition or to find supporting enterprises, the optimal allocation in the industrial chain will be formed naturally. What the government needs to do is to remove the barriers against the free flow of essential factors of production, to drive gradual integration of service level and business environment of various regions and to avoid existence of some "Policy High Land or Low-lying Area". With such practice, enterprises will be able to make a rational and reasonable layout in a larger scope. In one word, building a reasonable, fair and just business environment and giving full play to market mechanism are what the government should do in the course of the integration.

Interviewer: As you said, in the process of moving ahead with the integration, relevant works will involve adjustment and restructuring of many interest mechanisms. What efforts should the Central Government and local governments make respectively?

Chen Wen: According to current situations, the Central Government shall mainly formulate policies and the administration mechanism. Some existing policies and mechanisms really hinder the course of integration. Through reform and opening-up, the flow of essential factors of production can be activated as long as a small outlet is opened and relevant mechanisms and systems are adjusted.

For local governments, the most critical task is to clearly identify their positioning, and then to enhance the consciousness of cooperation in various aspects, such as resources, environment, industry and talented personnel. Facing problems, all local governments should consider how to solve them through consultation rather than to bypass them or to refuse negotiation and cooperation. On the other hand, in the process of consultation and cooperation, any party must not bully the others by taking advantage of its superiority and strength. If one party only focuses on its own interests and proposes some conditions that other parties cannot accept, the cooperation will collapse. Such consultation is meaningless.

All regions should keep smooth information exchange and conduct dialogue on the basis of mutual trust. Only smooth information exchange can promote policy adjustment, mutual understanding and the final conclusion of agreements of all parties. Legalization of the integration can draw on successful foreign experiences. For example, in the U.S., some cross-state agreements have to be signed by the President and be finalized in form of decrees and restrained with law articles. Such practice is very helpful for implementation of agreements and deals with the administrative hierarchical relations between the central government and local governments properly.

Interviewer: In the process of the integration of the Delta, what positive factors can drive local governments to respond to national strategies?

Chen Wen: There are three positive factors for local governments: 1. Political driving force from the Central Government. The implementation of national policies and the appraisal of local governments by the Central Government are all powerful driving forces. In addition, the Central Government can remove system and mechanism barriers at a higher level. Of course, the Central Government will propose principle guidance and macro development ideas, but it is local governments that should carry out specific tasks. 2. Public demands. Issues related to the immediate interests of common people, such as transportation, healthcare and education, are important considerations in driving local governments to pay more attention to the integration. 3. Market demands. The development of enterprises needs a good business environment, which will promote the construction and reform of local government. In the process of the integration of the Delta, a production-integrated market will promote better business environment as a whole and change the situation of over-concentrated distribution of industries.

Based on the above-mentioned three aspects, local governments can do the following three things: 1.Getting rid of barriers and improving factors of production, particularly the environment for the flow of capital. 2. Promoting equal access to basic social services and initiative of all regions. 3. Guaranteeing ecological environment for more production and better life. In the end, it will benefit enterprises and common people. Correspondingly, enterprises can make a reasonable layout in line with market principles and maximize interest. For common people, they can create a more convenient living environment and larger development space.

INTERVIEW

Higher-quality Development of Economic Integration of the Yangtze River Delta under Global Vision

Reporter: Xu Wenkai

Gu Chaolin

Full professor with tenure and professor at the Department of Urban Planning, School of Architecture, Tsinghua University; member of the 50 Member Forum on Regional Economy of China and executive director of Chinese Society for Urban Studies(CSUS)

[Experts and scholars and market entities should fully participate in the plan and actively make concerted efforts, be far-sighted, and more importantly, work in a down-to-earth way, as there is a long way to go in the integration of the Yangtze River Delta]

Reporter: What is your top expectation on the *Outline of the Plan for Integrated Development of the Yangtze River Delta* to be issued? Can you share your view with us?

Gu Chaolin: The Yangtze River Delta boasts an economic aggregate accounting for about 30% of China's total, so the development of the region is very important economically for China and even for the world. What I expect most is: to further promote economic development of China, to make the Delta more prosperous and to finally become a "Global Economic Zone" through preparation and implementation of the plan for integrated and high-quality development of the Delta.

Reporter: *The Report on the Development of Metropolitan Circles in China 2018* released by the Institute for China's Sustainable Urbanization, Tsinghua University points out: the Pearl River Delta continuous area centering on Guangzhou and Shenzhen metropolitan circles has the development quality which is poorer than the Yangtze River Delta, but has the connectivity between cities in it which is better than the Yangtze River Delta. What is your view on the conclusion?

Gu Chaolin: The Institute is one of our (Tsinghua University's) think tanks, with the studies focusing on urbanization. I have not studied the Report carefully, but I do not go along with it just in view of the conclusion. When measuring economic connectivity in a region, the indicators selected are very important. Comprehensively viewing all indicators concerned, I think economic connectivity in the Yangtze River Delta is closer than that in the Pearl River Delta.

First, in view of the stage of economic development. In the stage with manufacture as the main sector, the ties between Shanghai and other areas in the Yangtze River Delta, particularly the ties between South Jiangsu and Hangzhou, Jiaxing and Shaoxing of Zhejiang Province, are very close. We often mentioned "Sunday Engineers", as many Shanghai engineers went to factories in other areas in the Yangtze River Delta to give guidance every weekend. The technology and business sharing represented by such phenomenon reflected a very close economic tie. It can be said that there is no any other region which has experienced such a case as the Yangtze River Delta does. Recently, the Yangtze River Delta has entered the development state of "shifting from manufacturing industry to manufacturing industry plus service industry" as the medium- and late-stage of industrialization, with the ties between manufacturing industry and productive service industry being more closer and industrial chain plus value chain working together. Some ties are invisible seemingly, for example, capital flow, information flow and technology flow, but they make higher contributions to economic connectivity.

Second, how to understand such close ties? Let's take the Yangtze River Delta as an example. It is a region with equipment manufacturing as the main sector. In the region, to develop equipment manufacturing, raw materials must be available, which involve heavy chemicals, iron and steel industry, plastic industry and other supporting industries.

Finally, the Yangtze River Delta boasts an economic aggregate of about RMB 30 trillion, while the Pearl River Delta, including Hong Kong and Macao, has an economic aggregate of only RMB 10 plus trillion. In addition, the development level and hierarchy of the

Yangtze River Delta are higher than those of the Pearl River Delta.

Without doubt, we should not say the conclusion is surely inaccurate. It may be based on other angles, for example, purely considering city distribution and urbanization rate. Such indicators are on the surface, while the flow of technology, talented personnel and funds at a deeper level are more important in regional economic connectivity.

Reporter: Some viewpoint holds that the biggest problem in the integrated development of the Yangtze River Delta is whether the cities concerned can clear-mindedly understand their current situations and future positioning. How do you think about current situations and future positioning of the three provinces and Shanghai in mechanism coordination?

Gu Chaolin: It is about the relations between the Central Government and local governments in fact. After the *Development Plan for Guangdong-Hong Kong-Macao Greater Bay Area* was issued, I visited the Pearl River Delta. A few local government officials, scholars and plan participants expressed that there is a defect in the Plan. What is it? It is that the Plan, through a set of complete planning, determines urban functions and positioning by the classes of cities, for example, global city, international city and regional central city. The Plan sets up a "Ceiling" in the Pearl River Delta, and all other cities in the area have to "position" themselves under the "Ceiling" regardless of the development level. That is to say, one's destiny is fixed when he was born. So those other cities and experts of relevant studies in the cities became unhappy. The *Outline of the Plan for Integrated Development of the Yangtze River Delta* has not been issued. I hope there will be no similar problems to occur. If any such problems are found, the plan makers should rethink the case and adjust their plan-making theory and methodology.

Main reasons are: first, every city has its understanding of current situations and its expectation for the future, so a fixed plan, policy or text tends to "delimit " its future. I think we should reduce administrative interference, "delegate more powers" and rely on market mechanism to guide development. In many cases, the development of cities often presents a scene that "a watched flower never blooms, but an untended willow grows"; second, in the process of regional development, different cities face different opportunities and challenges. Therefore, how to identify the keys to solve specific problems is more effective for the development of a city; finally, we should consider the integration of the Yangtze River Delta against the greater background of globalization, focus on how to unite the cities to form a collective to participate in international competition rather than to conduct domestic competition. Why is integration proposed? Because "Cluster Development" has the advantages of expanding overseas. Just as we always say, we want to make the cake bigger to share more fruits, rather than redistribute the cake through power mechanism.

Reporter: A viewpoint thinks that the existing mechanism of Shanghai is lagged behind relatively, and does not fully meet the needs of a global city. What is your opinions on it? If Shanghai wants to become a global city and the leading player among the city cluster in the Yangtze River Delta, what kinds of new changes and actions are necessary?

Gu Chaolin: In the report on Shanghai Forum, I proposed an idea, namely building the Yangtze River Delta into the most important "Global City Region" in the world. The concept of "Global City Region" contains four connotations: first, China should have a "Global City" to play a leading role. Shanghai formulated the goal of "Building Excellent Global City", but it did not do much over the years after the idea was proposed. For example, it now advocates " Five Centers", which are really necessary for a global city. But the completion of the "Five Centers" does not mean it is a global city. The concept of a global city means a city playing a critical role in global economy. For example, building a shipping center may do something favorable for regional economy, but may not surely make big influences on global economy. After shipping industry develops to the stage of "4-Generation Port", ship manufacturing standard, berthing conditions, handling equipment and mode and other systems have been integrated. Taking Rotterdam, former No.1 port in the world, as an example. It not only boasts high handling capacity, but has the dock water depth as the reference by which the draft limitation of ships for "Global 4-Generation Ports" is determined.

Another example: "leading industrial size in the world" and "leading global industrial standard" are two levels very different from each other. In terms of global financial center, the UK has not been the powerful country in economy, but London is still the financial center of the whole world, from which 70% of the capital in the world flows out as a routine business. Therefore, when Shanghai has a financial center, is it really a global city? Obviously, it has to work hard in many aspects, such as financial talents. It is said by far the core system in financial education in the world has still been in the hands of English-speaking countries, and the experts who really achieve mastery of Western finance are hardly any. So we should deeply recognize that to be a "Global City" does not mean economic aggregate only. To be an "Excellent Global City", Shanghai still has a long way to go. If Shanghai always seems to hesitate in major programs and march forward with too small strides, it will face a very unfavorable situation in the future.

Second, about the global city region. To be a global city region, only Shanghai as a global city is insufficient for the Yangtze River Delta. If we position Shanghai as a comprehensive global city, Hangzhou as a global tourism city and Suzhou as a global manufacturing center facing new economy or centering on electronics, and when the Yangtze River Delta boasts several global cities to enhance each other, the region can become a "Global City Region" which is able to make great influences on the world economy.

As someone told me, China now has two roads as a critical role in global economy. One is Houchangcun Road in Haidian District, Beijing, forming a global semi-conductor and IT research base and gathering many high-tech development enterprises. The other is the area along the coastal expressway in the section from Shenzhen to Guangzhou , where many high-tech industrial parks and semi-conductor and IT manufacturing enterprises run businesses. The time of traffic jam on the two roads can influence pricing of global information products in a day, which means global influences. In the Yangtze River Delta, however, there has not had such an area by far. Therefore, I think the Yangtze River Delta has many works to do.

Third, how to establish a global value chain system. In the era of globalization, any piece of goods is not produced by one factory independently. There are complicated division of labor and cooperation and interest distribution in production, so do the subsequent circulation and sales links. If China wants to play a critical role globally, it must control the global industrial chains of some sectors or products. Simply speaking, China must have more pricing rights in corresponding sectors. Under the environment of market economy, price is depended on market and comes from full competition of enterprises, rather than from current policy of the Trump Administration on Huawei, a trade bullying and deglobalization, which is no good for any party.

In view of such angle, the Yangtze River Delta still has a long way to go in global industrial chain and value chain to participate in globalization and establish the global city region, which is an issue we must think about seriously.

Reporter: That is to say, in the process of participation in internationalization, the Yangtze River Delta should also pay attention to enhancing the leading role of capital, technology and global value chain.

Gu Chaolin: That's right. There is another important issue worthy of thinking, namely "Values", for example, green development, understanding of resources, environment and labor force, which we valued less previously. In a word, what is our purpose to develop production? A right development idea is very important for us to participate in globalization.

Reporter: You mentioned valuing resources and environment just now. So, what kind of role can geographical environment play in the development of city clusters or a region? In the Yangtze River Delta, what is the specific manifestation of the role.

Gu Chaolin: The initial development stage of a region is greatly subject to influences of geographical environment, for example, influences of topography, minerals, fresh water resources, land distribution system as well as other factors. The longer the history, the stronger the influences of the production activities of human being. Such activities in a region can promote the incubation and development of specific culture. When culture plays a critical role, other factors can be neglected. Taking the Yangtze River Delta as an example, the reason why the region has served as an important economic area in China for thousands of years is its culture.

In other words, geographical environment really plays a critical role in the early stage of regional development, and gives birth to unique local culture. However, once the culture of an area is formed, the role of it will become influential at a rather slower speed. When mentioning Wenzhou people today, we always mean their spirits, such as bearing hardships and standing hard work, and innovation and entrepreneurship of entrepreneurs. Historically, Wenzhou had a poor natural environment including water and soil, and enjoyed development just since the Tang and Song dynasties. Due to influences of political environment in the Song Dynasty, practicalism began to be popular there and finally developed into unique culture of Wenzhou. That is to say, the Yongjia School played a great role in promoting the development of Wenzhou and Taizhou. The spirit of people developed from the cultural soil of a region plays a very critical role in its development.

Reporter: Starting from the Yangtze River Delta's participation in internationalization, you talked about the development situations of other city clusters and regions in China. It is well-known that China has proposed multiple regional integration strategies and formulated many city cluster plans. Can you make some suggestions on coordinated development between different regions to the Central Government and local governments?

Gu Chaolin: It is sure that the Central Government hopes coordinated development of all regions, so the public policies should highlight allocation of public goods. For example, we propose advanced development in coastal developed regions, so to which extent the development shall go? How about their capacities in loan and solvency? All these need to be controlled by the Central Government?

In my view, main task of local government is to build a platform to serve market economy and give full play to roles of enterprises and entrepreneurs through the platform. We should consider enterprise development as a dynamic process, of growth and development, and of growing old and death. Some enterprises become very big, but then they keep relying on the "Rescue" by the government. Such kind of government-enterprise relation is not virtuous. We should follow the law of the market to allow some enterprises to "die normally". Otherwise they will occupy space and resources in vain, meaning the waste of social resources. On the other hand, we should create conditions for emerging enterprises to develop dynamically.

Here our discussion involves another issue, namely how to understand industrial upgrading. When formulating policy, government officials and scholars in some regions always want to introduce the state-of-art industries, which is known as " vacating cage to change bird", to remove old industries and pursue new ones. Such practice goes too far and is accompanied with problems in fact. Industries in a region run in an ecological system, and it is impractical to only develop high-tech industry. I like to use such an example: in the Journey to the West there are four main characters. If they all became into Monkey King, it would be impossible for them to complete the journey to the West and get the Buddhist Sutra. "Fish lives in their own way, so does shrimp" . A virtuous economic and social system is also an ecological system, which we should maintain properly, to guarantee safety of the system and enrich its functions. Such idea should be integrated into the plan for regional economic and social development.

Reporter: You mentioned the study on "Urbanization and Ecological Environment in Areas like Beijing-Tianjin-Hebei Super-large City Cluster" . Which point in the topic can serve as the reference for the Yangtze River Delta?

Gu Chaolin: In fact, the two city clusters are different completely. I think, discussing regional integration in China today should consider the issue from a higher level, and highlight China's position and influence in the world. Rely on Beijing-Tianjin-Hebei to compete with the world, or on the Yangtze River Delta? This is a choice. In my view, the three city clusters of Beijing-Tianjin-Hebei, the Yangtze River Delta and the Pearl River Delta are all unique. In other words, without any of them, China's advantages in global competition will be hurt.

Let's talk about the three regions specifically. China is a socialist country, and most public policies are mapped out by Beijing, so functions of the capital as a political center play great roles. Meanwhile, economic, financial and political functions are correlated, so Beijing also plans to develop finance. Beijing-Tianjin-Hebei Region is mainly driven by political functions. The development of the Pearl River Delta depended largely on Hong Kong, but Hong Kong's social system and urban system are very closely tied with the Western world and pursue the mode of capitalism. So it is impossible for China to follow that mode of development completely. Therefore, where is the core of China's economy? Without doubt it is the Yangtze River Delta. But the development of the Yangtze River Delta should neither completely rely on political force nor on market force. Otherwise some problems may occur.

What does the above-mentioned discussion mean? That is "what exists is reasonable". Our social and economic system is too big and too complicated, under which no design or plan by a scholar or a politician can work for all. Chairman Mao said very long ago: it is the people who creates the history, rather than a hero, or an individual, which I consider very much true.

In the process of social development, regions evolve slowly to form certain mode. Their existence is reasonable, and we cannot deny such a state rashly. What we should do is reflected in the following aspects: to observe the state and its evolution trend, study the development process, and identify which factor dominates; what is the development direction we hope? What kind of public policies are needed? What kind of supporting public goods should be provided? How to guide development through public goods allocation? In the process of guidance, there exist three key elements: 1. Space allocation; 2. Land resources allocation; 3. Fiscal and financial leverage.

FEEDBACK & SUGGESTIONS

Shanghai Forum 2019 was well received by its audience, some of whom expressed their gratitude to the organization work and expectations of the Forum's future development through letters.

Michael Spence

Vice-Chancellor and Principal, The University of Sydney

Congratulations on a remarkable Shanghai Forum 2019. What an interesting and provocative program. Lots of free exchange of ideas in critical thinking for our region and the world. I am looking forward to Shanghai Forum 2020.

Paulo Portas

Former Deputy Prime Minister of Portugal

I want to congratulate you for the excellent organization of Shanghai Forum 2019. It was my first participation but I was really excited. The level of the establishment of roundtables, the quantities and varieties of the themes were great! Everything was brilliant.

Thanks to all Fudan friends. Hope to see you soon. And, again, congratulations.

Susan Shirk

Research Professor and Chair of the 21st Century China Center, UCSD

I am thrilled to speak at Shanghai Forum for the second time. It was very enjoyable with friends and quality of the topics and participants. Fudan is the founder of China's education of international backgrounds which we should respect and learn from. Looking forward to the future Shanghai Forum.

PERSPECTIVE HIGHLIGHTS

Roundtables

Deep into Brain: Artificial Intelligence Beyond Imagination

Dacheng Tao

Professor, The University of Sydney

AI at Dawn: Opportunities and Challenges
In some tasks, AI can now perform very competitive to humans, while returning results much faster. In other tasks, however, there is still a large gap between human and machine performance.

Deep learning is transforming machine learning and AI, which was demonstrated by the Turing Award having been given to the pioneers in that field. It brought huge improvements in problems such as pose detection, or object detection.

This is the third wave of AI and this time it's different: we have very powerful machines, we have very large datasets, and we have a lot of demand.

I work at perceiving, learning, reasoning, and behaving, as I believe that there are connections between these fields and having researchers talk between them.

Deep learning works very well when the training and testing data are taken from the same distribution, but despite the fact that we have developed methods for transfer learning, they still do not work as well as human reasoning.

Conventional learning theory focuses on worst-case scenarios and, therefore, cannot explain the generalization power of deep learning. However, in a real-life problem, such as face recognition, the complexity is much smaller than the worst-case (human faces have a lot of common structure). We formalized this notion and proved that deep learning is expected to generalize increasingly well with deeper networks.

We introduced evolutionary computing into training GANs (Generative Adversarial Networks), and were able to improve results by combining different loss functions.

Humans can learn from cartoons: my child learned animals from cartoon pictures in flashcards and was able to recognize the same animals at the zoo, which is a very hard task for machine intelligence, but we have improved results in this task by learning to generalize across domains.

Progress is constant: never judge AI by its past or current capabilities.

Wang Shouyan

Professor, Fudan University

Intelligent Modulation of the Human Brain with Deep Brain Stimulation
Neurological diseases are very difficult to treat. Deep brain stimulation (DBS) has shown very impressive results for the treatment of Parkinson's Disease and has changed completely the prognosis of these patients. However, for Alzheimer's Disease, the results of DBS are modest and have large variation between individuals. Furthermore, the costs can be very high, which is a problem for countries such as China. Thus, developing lower-cost solutions is a priority.

DBS also provides an opportunity to obtain measurements of brain function over a long period. The challenge is how to decode the complex information present in the signal obtained. The signal correlates with events of interest and is responsive to outside stimulus, but is dynamic over several time-scales (from sub-second to months). The SNR is very low and the observed data is a complex (the "cocktail party problem"). We can code the neural activities as complex state and relate to pain perception and pain modulation. Indeed, we find correlations between oscillations and pain perception. We are currently investigating whether the same phenomena are present in other diseases (for example, Dystonia, and Tourette Syndrome).

This research field is still at the beginning. We want to move towards an approach where modulation is intelligent and dynamic. We are developing tools to test interactive DBS approaches in patients with different diseases; these are small devices that allow mobility, including giving the patients the ability to go home, so that the tests are performed in a natural environment and the therapy can be adapted to each individual.

There are several sub-topics in this domain. Within each domain, there has been a lot of research, but for translational research, it is necessary to provide a complete package. Thus, we are working across disciplines, in collaboration with several institutions across China and across the world.

Reinventing the Industries

Eric Schaeffer

Senior Managing Director, Industry X.0 Products Lead, Accenture

Reinvent Your Products to Capture New Growth Opportunity

In the post-digital age, electronics and high-tech have significantly affected the present industrial change, as consumers are less interested in products than experiences and outcomes; value from component and platform providers far exceeds that of the products. Therefore, the transformation of the industry has become an absolute necessity.

Reinventing the product lies in the core of the transformation. While hardware provides basic functionalities, the software enables products to offer better user experience, which should be highlighted.

When we step into the digital age, Industry X.0 is gaining momentum, featuring new technologies that will renovate the industry. AI, the core enabling technology, will penetrate and transform future products.

Future products will incorporate intelligence and experience and transform into service and platform for other products. Thus, five new values will be created for manufacturers as a result of product reinventing.

Jay Lee

Vice Chairman Board Directors, Foxconn Industrial Internet; Director of NSF I/UCRC IMS Center, Univ. of Cincinnati

Industrial AI Enables Industrial Internet Transformation

Industrial AI is a system engineering that utilizes the AI's cognitive effect to analyze the accumulated data, thus making a theoretical prediction and driving value.

With big data analytics, the fried-egg model combines core manufacturing and value creation, providing the customers with the service they want.

Concerning the future development of Industrial AI, the source, quality, and availability of data, choice of algorithm, and outcome verification should be emphasized.

Recognizing and analyzing the problems is the first step in the development of Industrial AI so that value creation can be maximized.

Regulatory Technology: Build a Healthy Ecology of Financial Industry Regulatory Capacity and Enterprise Vitality

Meryem Duygun

President, Professor, International Finance and Banking Society

Fintech Credit Markets: Risk and Regulatory Compliance

The current development of the financial technology credit field is not dominated by banks, but by P2P. In today's society, many economies in the field of financial technology credit have developed rapidly, including China, the United States, and the United Kingdom. Financial technology credit is affected by many factors. Its level of development is related to the competition in the banking system and the strictness of the bank's supervision.

There are opportunities and challenges in financial technology credit. Its advantages include: financial inclusiveness, diversification of the financial system, and additional financing channels for SMEs and consumers. For those who do not have access to bank accounts, have encountered credit problems, or have no collateral. People, financial technology credit is very important. Opportunities are accompanied by risks. Financial regulators have faced great challenges. How to make consumers safe, and how to stabilize the financial industry are worth thinking about.

Regulators should not only have data, but also maximize the use of data. The research report shows that the global P2P lending market is very large, but the official national level data is very limited. Since companies that do not necessarily require data to report data, there is no national level of data. The University of Cambridge's Center for New Emerging Finance (CCAF) has relatively complete data collection from academia and industry partners. Through CCAF, you can obtain data on global financial technology credits, and understand the purpose of borrowing and the identity of lenders in various countries, so that you can clearly understand the global pattern.

There is currently no evidence that more and more financial technology will degrade stability, and regulators should understand the impact of financial technology on financial stability. How regulators support this kind of financial technology, and how to better support the development of the financial industry are worth considering. Regulators should support reasonable innovation in financial technology while formulating rules that can catch up with the development of financial technology.

Xu Xian

Director, Department of Insurance and Risk Management, Fudan University

Regulatory Science and Technology: Co-creating Financial Industry Supervision Capability and Enterprise Vitality

With technological innovation, there will be regulatory duplication and regulatory vacuum. Regulatory lags behind the development of technology, and the regulatory authorities have not noticed the gray area, but companies will also have concerns when they are innovating, fearing that they will touch the boundaries of compliance.

The characteristics of compliance and regulatory technology: digital (not only grabbing data, there are more requirements at the technical level), agility, real-time, centralized, and adaptable.

The application of compliance technology in the financial industry includes: automatic report generation, intelligent transaction regulation, efficient risk management, modularization of identity, and simplified compliance management.

The application of regulatory technology in the financial industry includes: full process supervision before, during and after the event, digitization of regulatory rules, efficiency of identification, automation of digital collection, intelligence of risk analysis and transparency of transaction behavior.

The innovation logic of financial technology and insurance technology can be promoted well in other industries and fields, such as environmental protection, medical services, food hygiene, and public affairs.

The policy dividend has been supporting the development of compliance and regulatory technology. In fact, the domestic environment is still relatively loose in terms of innovative financial supervision. For example, UBI auto insurance pricing data is commonly used by domestic companies, but foreign driver behavior is difficult to apply to pricing. A large amount of data, excellent Internet platforms, and universal Internet use also provide an excellent soil for the use of technological means. At the same time, capital is also very concerned about compliance with regulatory technology development. In terms of policy, it is recommended to provide support at the legislative level while providing favorable industrial policies.

The composite talents of technology, business and law are yet to be cultivated, and the standardization of data and products needs to be improved.

How to Restructure Northeast Asian Landscape?

Scott Snyder

Director, Program on US-Korea Policy, Council on Foreign Relations, USA

A Peace-and-Denuclearization Framework for the Korean Peninsula

The North Korean issue, including bilateral relations (South Korea-DPRK relations, US-DPRK relations), regional security, and global security, is a complex issue;

Positive progress has been made in bilateral relations. In terms of DPRK-US relations, the Kim-Trump summit will help the two countries reach a comprehensive military agreement, reduce the tension, resolve the nuclear issue in the form of a framework, and explore ways to disarm nuclear weapons through peaceful means. In terms of North Korea-ROK relations, Moon-Kim meet will reach a gratifying result of the closure of most nuclear facilities; at this stage, the relationship between the United States and North Korea has regressed, and relations between the DPRK and the ROK have evolved;

There is a basic disagreement between the DPRK and the US on the issue of denuclearization. The United States has proposed a "comprehensive ban" and advocated the full denuclearization of North Korea. The DPRK advocates partial denuclearization. It is necessary for officials of both sides to conduct more dialogues in this regard and carry out more conditions of exchange including BDA;

The United States hopes to change the stalemate between the US and the DPRK. North Korea's compromise on the missile issue and the comprehensive denuclearization will help the landing relevant commitments of the Hanoi Summit and the Singapore Summit.

Zheng Jiyong

Director, Center for Korean Peninsular Studies, Fudan University, China

Chang in Northeast Asia Landscape and Policy Implications

Subversive changes have taken place in the security structure of northeast Asia. First, the situation on the peninsula has changed from a simple binary opposition between China, Russia, North Korea and the United States, Japan and the South Korea to a pluralistic opposition and cooperative coexistence. Second, the homogenization mode of actors led by military security has changed into a complex mode with additional factors such as geo-economy. Third, it has changed from the dominance of big powers to the role played by all actors. Fourth, there has been a situation of political opposition between strongman, but this has become an important form of promoting the solution of the problem.

The current situation in northeast Asia has several characteristics: first, there have been many opportunities for resolving the DPRK nuclear issue. On the one hand, North Korea agreed to denuclearization and fully developed the economy. On the other hand, the United States opened the door to the summit talks. Second, the top-down approach has played an important role, but also encountered difficulties. Third, the US monopolistic role subsided, while the role of the DPRK and the ROK rose. Fourth, Trump's interest in the peninsula weakened, making the situation on the peninsula blurred.

To deal with changes in Northeast Asia through mechanism construction. First, we need to restructure the cooperation mechanism. The great achievements of bilateral cooperation are based on the previous multilateral achievements. Bilateral dialogue has a huge driving force, but it cannot completely replace multilateral cooperation. It is possible to explore innovative mechanisms such as bilateral plus small multilateralism and find new breakthroughs. Second, the concept of denuclearization on the Korean peninsula should be reshaped, and it should be made clear whether denuclearization is the precondition of cooperation or the goal of cooperation and whether phased denuclearization can be accepted by all parties. Third, the concept of peace on the peninsula should be reshaped.

Creative Thinking and Practical Policies of Joint Development in the South China Sea

Qi Huaigao

Vice Dean, Institute of International Studies, Fudan University

Joint Development in the SCS: China's Incentives and Policy Choices

China's economic incentives of joint development in the SCS include its domestic demand for energy, "21st Century Maritime Silk Road" construction, Hainan the pilot free trade zone construction, construction of a common market and the future economic integration among the SCS coastal States.

China's strategical incentives include playing its constructive role in maintaining a peaceful and stable SCS, developing good relations with the other coastal states, and reducing the intensity of China-U.S. competition in the SCS.

China's Policy choices on the SCS joint development are as follows: (1)to promote good faith in the South China Sea; (2)to define sea areas for the joint development by seeking consensus; (3) to limit unilateral activities in disputed areas; (4) to begin the process in an area where there are only two claimants; (5) to discuss the possible creation of a Spratly Resource Management Authority (SRMA).

Bui Thi Thu Hien

Deputy Director, Institute of Chinese Studies, Vietnam Academy of Social Sciences

Joint Development in the SCS from the Vietnamese

The South China Sea has important strategic significance in the Asia-Pacific region. The SCS is an important transportation line for oil transportation and rich in natural resources. Since 1980s, the South China Sea issue has become more and more complicated after the entry into force of the United Nations Convention on the Law of the Sea. China and ASEAN signed the "Declaration on the Conduct of Parties in the South China Sea" in order to maintain regional peace and stability.

The significance of joint development in the South China Sea includes: (1)meeting the demands of the countries concerned; (2)strengthening cooperation and mutual trust among the countries concerned; (3)maintaining regional peace and stability; (4) helping open up space for peace negotiations and ease conflicts.

Opportunities and Challenges Facing the Global Financial Industry

Sheng Songcheng

Counsellor, Shanghai Municipal People's Government
Former Director, Statistics Department of the People's Bank of China

It Is Difficult for the United States to Impose Tariffs to Change the Steady Development of China's Economy.
We should take a dynamic and comprehensive view of the actual impact of tariff increased by the United States. In fact, tariff tolerance is not unilateral. The impact of increasing tariff is also uncertain.

The diversification of China's trade structure, sustained development of service trade, promotion of economic restructuring and deepening reform, and further expansion of opening up will offset the actual impact of US increasing the tariff.

Considering the endogenous power of China's economic development and the space for policy adjustment, it is difficult for the tariffs to change the trend of China's stable economic development. A sound monetary policy and a proactive fiscal policy will promote China's domestic demand growth. China should maintain its strength, promote structural adjustment, and stimulate the vitality of market players.

China should maintain its composure, promote structural adjustment, and stimulate the vitality of market subject.

Achim Wambach

President, ZEW Mannheim

A European Perspective on the Global Economy
European economic upswing is slowing down. The economic growth expectations for Germany, the Eurozone and the United States have also been lowered, while expectations for China continue to improve.

US protectionism has fueled concerns about global trade disputes.

China vigorously advocates “the Belt and Road” initiative, proposes the “Made in China 2025” plan, insists on advocating economic globalization, and opposes protectionism. Sino-EU economic and trade cooperation develops rapidly. China has become the second largest trading partner of Europe after the United States.

Concerns about Europe continue to grow. Brexit brings challenges to British and European economies. In 2019, EU itself faces great uncertainty. First, EU institutions are facing new elections. Secondly, political events such as Brexit are still uncertain.

Providing Public Good in Time of Global Transition: Views from Latin America and China

Carola Ramón-Berjano

Argentine Council of Foreign Relations (CARI)

The Belt and Road Initiative as Provider of Public Goods Potential Impacts and Main Challenges for Latin America
Latin America should keep balanced relationship with both China and US, but shouldn’t make policies and subscribe conventions because of their pressure.

Latin America should be an autonomous actor while emphasizing the significance of multilateralism and developing multilateral relations. For instance, we should take regional needs and long-term development into consideration while accepting foreign investment.

China can offer help in construct and development of infrastructure, and meanwhile, helping Latin America can bring enhancement and improvement of international reputation to China. It’s a win-win situation.

Arlene B. Tickner

Director of Research, School of Political Science, Government and International Relations, Universidad del Rosario

Latin American and Chinese Contributions to South-South Cooperation

The principle of 'putting national interest first' can inhibit and harm the development and progress of global governance and multilateralism.

The progress of regional integration of Latin America needs Latin American countries cope well with domestic politic crisis and at the mean time learn broadly from foreign countries.

Rethinking about global governance can promote some noticeable points: Firstly, we should consider how the perception issues come into being and what impacts they will produce; secondly, we should avoid regional integration stagnating in mere local level without global level; lastly, when we're talking about global governance, we should take more possible dimensions into consideration.

China 2049: Dealing with Challenges of a Rising Global Economic Power

David Dollar

Senior Fellow, Brookings Institution

China in the International Economic Institutions

Tension between the US and China could disrupt the global economy system. China needs to play a more active role in the reform and management of global institutions, during which process, Sino-US cooperation is the key.

China's finance and banks are rapidly developing. China is becoming an active participant in IMF. But US opposes expanding IMF resources in order to contain China's development. Given the fact of WTO issues such as declining liberalization and legitimacy, the US and China should negotiate acceptable compromises.

China needs to cooperate with US and others to improve WTO system and promote the development of the international financial system. Meanwhile, potential still exists for China to accept WTO modernization and US to accept that stronger China has more voice and higher quotas in the IMF.

Wang Xun

Professor, Peking University

Commentary

The quality of legal system in China has much room for growth, which is closely related to the country's economic development.

China has made great efforts to maintain global financial stability by stabilizing CNY value through coordination of macroeconomic policies among major economies. Moreover, market-oriented reform is being promoted.

The implications for China are to further open up its domestic markets, and perfect the legal system including intellectual property protection and more coordination and cooperation within the framework of multilateral economic institutions.

BRICS Pragmatic Cooperation and New Order of Global Governance

Evandro Menezes de Carvalho

Professor, International Law and Head of the Center for Brazil-China Studies, FGV Law School in Rio de Janeiro

The Second Decade of the BRICS: Between the Enlargement and the Restriction of the Reformist Agenda
BRICS reform agenda can be divided into two strands: that of economic-financial governance, with priority in the G20 and in the defence of IMF and World Bank reform; and the aspect of political governance with the defence of the reform of the United Nations and its Security Council.

It is necessary to question whether the admission of new member countries into the NDB converges with the BRICS objectives of broadening the dialogue and the participation of emerging markets and developing countries around their reform agenda.

Shen Yi

Director, Center for BRICS Studies, FDDI Fudan University

Cyber BRICS and the New Order of Global Cyberspace Governance
The new threats in cyber space exist in three aspects: the competition of cyber weapons at the national level, the impact of the upgrade of cyber space on the change of state power, and transnational cyber crime.

BRICS countries should be ensured to conduct effective cooperation and achieve international management, so that BRICS countries have a place in the global network security governance system.

From a technical point of view, compared with the United States, BRICS countries do not have advantages in network security governance, but they can make breakthroughs in demographic dividend and number of Internet users to promote the new development of future network order.

Advancing WTO Reform: The Role of Asia and Europe

Ding Chun

Director, Centre for European Studies, Fudan University

Status Quo, Problems of Sino- EU Economic Relations and WTO reform
Present situation: China and EU are important economic, trade and investment partners of each other. In recent years, bilateral economic and trade ties have become increasingly closer, and the scale of trade in services, investment and other fields has steadily increased.

Problems: Firstly, China's complaints to EU lie in trade friction, Green Trade Barrier, Market Economy Status, "ABC" strategy and investment restriction. Meanwhile, EU's complaints to China lie in market access, intellectual property, lack of level-playing field, transfer of technology and investment regulation.

Prospect of WTO reform: Economic relation between China and EU will keep on developing in the new global environment with WTO reform. Although conflicts between China and the EU on certain issues are inevitable, communication and negotiation are the best way to resolve the conflict.

Craig Van Grassstek

Professor, Harvard Kennedy School

Leadership and Decision-making in the WTO
Regardless of how the rules are reformed and regularized, we need the cooperation of the United States and the China. If we do not act, the system will become disintegrated.

Relatively speaking, a group of countries will play a more leading role in the whole system, including five developed countries, Britain, the United States, France, Germany, Japan, and three developing countries, India. Brazil and China.

If we really want to make the WTO work effectively, we need to build a new set of G2, first US-Britain, then US-Europe, and now US-China.

If we cannot reach a practical agreement on the leadership role of China and the United States in the WTO, we may lose WTO.

Global Public Policy: Effective Supply of Public Goods in an Era of Globalization

Sergio Suchodolski

President, Development Bank of Minas Gerais (BDMG)

Providing Global Goods through Regional and Local Development Banks

Multilateral development Banks play an important role in global and local resource provision. After the development of over 56 years, Development Bank of Minas Gerais has played a very important role in helping main sectors of Minas Gerais economy grow up through strategic planning and budget support.

Development Bank of Minas Gerais have five main focusing areas of business: (1) Micro & Small Business (Online credit for Micro and Small businesses); (2) Innovation (Venture capital financing for innovative companies, partnerships in the innovation ecosystem); (3) Municipalities (Credit for municipal infrastructure projects, sewage and solid waste); (4) Sustainability (Solar, SHP and biofuel projects, public lighting, protection of the environment); (5) Agribusiness (Medium and large companies, cooperatives, integration, sustainable practices in agribusiness).

Liang Xiaoyan

Senior Education Specialist, World Bank Group

Global Education Partnership: Relevance of Chinese Experience

World Bank have three approaches to achieve its goal: financing and operations, knowledge and data sharing, and advocacy.

Education education was a tool that could help people grow better and help us reduce poverty, but now, it is regarded as a kind of rights that everyone has. World Bank wants all countries to accelerate investment to achieve equality in individual development, and World Bank hopes to support all countries in preparing our young people to learn, grow, and succeed as adults in a rapidly changing world.

Cooperation is necessary to address educational issues, and the global education partnership paradigm needs to be shifted: (1) To promote new partnerships from "North to South" to "South to South"; (2) To recognize the role of state in education planning and provision; (3) To be honest and and take pragmatic measures; (4) To build the capacities of governments, not just prescribing what to do but how; (5) To balance quality assurance and institutional support; (6) To go back to basics, and lay numeracy and literacy as the foundation; (7) To cultivate long-term global partnerships.

Digitalization and FinTech on the New Silk Road

Marius Jurgilas

Board Member, Bank of Lithuania (Lietuvos Bankas)

Digital Silk Road from a European Perspective

Fintech brings us a more competitive and creative financial market, but it may also lead to the monopoly and excessive loans.

The EU Fintech Action Plan has three major goals: innovation, security and making full use of opportunities.

The financial service can be improved in a proper way, for example, by establishing the infrastructure to connect different platforms, currencies and institutions, improving the compatibility between financial systems and strengthening the ability to counter volatility. From the standpoint of Europe, the key point of the digital silk road lies on the mutual benefits, the improvement of the financial infrastructure and the sincere, tolerant and cooperative attitude of the Chinese government in finance.

Sopnendu Mohanty

Chief FinTech Officer, Monetary Authority of Singapore

FinTech Cooperation along the Silk Road

The policy could serve the digital Silk Road in three ways: offering compliant financial service, making the digital hub accessible to consumers and attracting talents to committed to the program.

The electronic ID and digital economy are widespread in Singapore. The decision and supervision layer take both convenience and security into full account.

In the vertical level, the legislative institutions are advised to pay more attention to the suggestions from the private enterprise and encourage innovation. In the horizontal level, countries should make a joint effort and abide by the law of each to ensure network security.

Higher-quality Development of Yangtze Delta Integration in the New Era Vision, Challenges, Approaches

Ruan Qing

Deputy Director of Shanghai Development and Reform Commission、Executive Deputy Director of Yangtze River Delta Regional Cooperation Office

Thoughts on Participating in Boosting the Integration of Yangtze River Delta Region
The Yangtze River Delta is expected to be a strong powerhouse of Chinese economic development, a pioneer of unequal regional development management and a model of joint solutions to various issues.

To boost the integration, it is critical to properly handle the three pairs of relationship: core and collaborative cities, specialization and cooperation as well as government and market.

The next planning program of the integrated development is at the corner. It includes both hardware projects, for example, infrastructure and software ones like reform and innovation. The government encourages regional pilot as the first step and then promote it to other places.

Chen Wen

Researcher, Nanjing Institute of Geography and Limnology, Chinese Academy of Science

Regional Cooperation under the Integration of the Yangtze River Delta
Regional integration is driven by cooperation dividends, including scale agglomeration, economies of scope and low liquidity and transaction costs. The obstacles mainly come from structural barriers and institutional ones.

Cost-sharing and benefit-sharing are the basis of integration cooperation. The mechanism of the unified market and equalization of public services, which requires communication and negotiation, are indispensable.

The integration development demonstration zone focuses on the establishment of a coordination mechanism, and the leaders of which also work hard on positioning and the space layout. The objective is to construct a demonstration zone of an integrated system and to implement the new benchmark of the development concept.

There are various contradictions in the cross-border areas of the Yangtze River Delta, such as space, resources, public services, and so on. The crucial reason is the existing multi-level administrative management and governance system.

The integration ought to be a high-quality integration of differentiation, efficiency, sustainability and inclusiveness.

Green Finance Development and Yangtze River Delta Integration

Wang Zhen

Vice Dean, Shanghai Academy of Social Sciences

The Yangtze River Delta integration with "ecology first" concept and green development
Green finance integration should come along with ecological protection. Ecological protection is mainly reflected in planning. Administrative boundaries should be broken to promote integration.

Green finance integration governance should come along with ecological governance, such as the integrated management of Taihu lake basin and the cross-regional compensation mechanism. The improvement of these problems needs coordinated local development.

The integration of green finance should focus on the realization of ecological value. For example, the rural green agricultural products and the value-added entertainment products need the support and promotion of green finance.

Mo Lingshui

Low Carbon Development Adviser, Asian Development Bank

The Green Investment of Asian Development Bank
Green finance should be environmentally green and financially profitable. “Green” means to consider how to set standards to unify the cost and benefit into one dimension, and “profit” means to consider how to monetize the green cost and benefit.

Based on “green” and “profit”, the Asian Development Bank implemented two projects, determining the green finance scale and accounting the green cost and benefit.

The Asian Development Bank’s green finance investment is based on strategic and project considerations. Strategically, the focus is whether the sustainable development goals, the goals for the Paris agreement and AIIB can be achieved; for themselves, the projects focus on whether to employ green technology, innovative financing tools and business models.

In the future, the sharing mechanism of green cost and benefit is worth a try, which may solve the internalization of green cost and green benefit, and may give consideration to how to realize the investment of green efficiency.

Land Supply and Urban Growth: Evidence from Shanghai, Hong Kong, and Other Metropolis across the Globe

Chen Shiyi

Professor, Fudan University

The Launch of “Economic Competitiveness of Shanghai-An Analysis of Foreign Direct Investment in the Yangtze River Delta Metropolitan Area between 2008 and 2018” Report
Through observation of the basic tendency of foreign investment in the Yangtze River Delta region, one may see that the foreign capital investment in Shanghai and other big cities has been growing within the decade. The Yangtze River Delta region is the major engine of national economic growth. Hong Kong has been the main source of foreign investment. Among the three major industries, the percentage of high-end manufacturing has been declining while those of high-end and manufacturing service industry have been rising. Single proprietorship takes up a greater proportion.

Considering the spatial spillover effect of foreign capital in the Yangtze River Delta, Shanghai doesn’t stand out in high-end manufacturing, but outperforms others in high-end and manufacturing service industry

Shanghai should make use of its current basis and promote its manufacturing service industry to be more professional and high-end. It should increase land supply, fully trust the market ability to distribute resources and develop more economic space, attract diverse economic investment, and improve its global influence.

Lennon Choy

Adjunct Professor, Hong Kong University

Institutional Barriers of Peri-Urbanization in Hong Kong
Hong Kong is in shortage of at least 1,200 hectares of land on top of what has been planned. The living conditions in Hong Kong are pricy, tiny and crowded. People have to queue up for long hours for public housing. Yet much agricultural and industrial land is not fully made use of.

To solve the problem, the Hong Kong government took a series of methods. Since 1960s, the government has started to develop new land, and since 1990s, it also has made regional plans.

Committee on Land Supply comes up with two suggestions. One is developing brownfield sites, and the other one is tapping into privately owned agricultural land. It’s also proposed that there should be fair sharing of land value created by readjustment.

The new proposal is to ask developers to hand 50% of the land to the local government for management. Follow “Land Sharing Pilot Scheme” to increase the applicability of eminent domain on public purpose ground, thus satisfying the needs of more stakeholders in society.

“Land Sharing Pilot Scheme” faces many challenges as well, including public choice barriers and institutional barriers such as tax and compensation.

Watershed Biodiversity and Construction of Ecological Civilization

Liu Jianguo

Distinguished Professor, Michigan State University, Member of American Academy of Arts and Sciences

Systematic Comprehensive Framework and Countermeasures for Watershed Protection Under the Background of Globalization

1. The Yangtze River Basin is an extremely active economic zone in China, but human activities have caused serious ecological problems, making it a complex system.
2. The metacoupling framework helps to systematically understand and quantify the interrelationships of human-natural complex systems in the Yangtze River Basin.
3. The development of basin management policies needs to take into consideration the interaction between different basins.

Rong Jun

Professor/Director, Nanchang University/ Jiangxi Key Laboratory of Watershed Ecological Evolution and Biodiversity

Sustainable Development and Plant Genetic Resources in the Yangtze River Basin

1. Effective protection and utilization of plant genetic resources is an important way to achieve sustainable development.
2. The protection of plant genetic resources is an important part of Yangtze River conservation.
3. At present, the in-situ conservation efficiency of wild rice in the Yangtze River Basin is very low.
4. A global network for the conservation and utilization of plant genetic resources among river basins should be established to share the blessings of nature and achieve sustainable development.

Balance For Better

Jiao Yang

Chairperson of the University Council, Fudan University

Opening Remarks

1. Focus on the development of women's health and explore the harmony and brilliance of women.

2. The society will not be able to progress without women. World development provides a platform for women to shine. Women continuously struggle to take on a variety of roles and devote their time to their family. With the men giving more understanding to women, harmony between the two genders is making a more wonderful world.

3. Universities provide important career opportunities for women. Fudan University pays great attention to female status. The female staff in Fudan has been making great contribution to the development of the school by contributing their talent and working extremely hard. The improvement of women's social status is a manifestation of social progress. Shanghai Forum makes a significant contribution to the development of women. I hope everyone can offer your suggestions for tackling the difficulties in women's development and that we can achieve a significant outcome by the end of the discussion.

4. Manulife Sinochem Insurance has signed a three-year agreement with Fudan University to jointly contribute to the development of women.

Zhang Kai

CEO, Manulife-Sinochem Life Insurance Co.,Ltd

Balance and Harmony: Women's Health and Risk Management

1. The CMC and Fudan Development Institute work together across borders to focus on women's health, helping women aware more about their healthy demands and to correctly assess their risk needs.
2. China's healthcare is seriously inadequate, and the insurance gap is gradually widening. It is difficult to cover the growing demand for insurance.
3. Paying attention to women's health risks is an urgent task. Most cases of women's insurance claims are not optimistic.
4. Women have a positive attitude towards risk management but they lack action: women anticipate risks and protect their families, but their own risk management needs to be strengthened.
5. It is particularly important to care for women's mental health. Women find it difficult to voice their anxiety and anxiety has a negative impact, which is not conducive for their health and even social development.
6. Suggestions: Women should invest more in their own health, pay attention to stress management, and maintain physical and mental balance.

Creation of Corporate Social Values: Innovation, Sharing and Sustainable Development

Miguel Poiares Maduro

Director, School of Transnational Governance, EUI

Social Innovation and Impact Investment: What Can Be Learned from the European Experience?
Social innovation and impact investment describe a wide scope of innovative solutions to societal challenges being introduced in either the market or public sector.

The welfare challenge: complex social problems and unsustainable welfare state.

European and international trends highlight three concepts or sectors that are becoming increasingly relevant: social innovation, social finance and impact investing.

In the market context, it refers to a set of incentives aimed at aligning market returns with social goals. In the public sector context, it refers to the introduction of a result oriented approach to public policies.

Gavin Dixon

Director, Global Perspectives

Global CSV Trends and Their Implications for Business Today
Moving from CSR to CSV is essential, which benefits people, companies and society.

On the global stage there is movement in line with the SDGs but even in the best case scenario things are too slow.

Business has the opportunity to expand the global economy to the benefit of it's stakeholders, regions and the global community, while creating new commercial opportunities and ensuring long-term survival.

Developing leaders at every level of an organization that is sustainability-focused and entirely bought into long term viability is the key of future economic success.

Living with AI - Humanity in the Age of Smart Machines

Kai Riemer

Professor, Information Technology and Organisation, Business School of The University of Sydney

AI – A New Computing Paradigm with Exciting Prospects and New Problems
Prospects of AI: scanning images, facial recognition, processing and analyzing data.

New problems with AI: errors caused by unknown data; analytic errors, as what a machine sees is not necessarily true.

The essence of deep learning is the simulation of a model that is not fully understood by humans based on a defined world.

Xu Yingjin

Professor, Department of Philosophy of Science and Logic, School of Philosophy, Fudan University

Deep Learning Makes Potential Threat to the Longterm Development of Human Civilization
The essence of deep learning eliminates contingency and personality and tends to be consistent.

Deep learning leads to a decline in systemic thinking ability, and the possibility of future civilization development is reduced.

Deep learning can only be applied to a limited field. There is still doubt as to when to make the call.

The deep learning mechanism cannot flexibly deal with the new problem solving context because of lacking the support of existing data. Therefore, the excessive dependence of human beings on such technologies will inevitably lead to the lack of adaptability of human society to cope with new problems.

Artificial intelligence may be squandering the existing accumulation of human civilization, as the ability to artificially label human intelligence is declining.

Shanghai Forum is Open for Roundtable Organizers Worldwide

To establish broader partnership with organizations from a larger range of countries and industries, to expand the platform for professional of development issues in Asia, Shanghai Forum will accept applications for organizing roundtables from universities, institutions, think tanks and corporations all over the world. Preference will be given to worldwide renowned institutions that are influential in politics, diplomacy, economy, finance, environment, ecology, social governance, scientific and technology innovation, etc.
Those who are interested in organizing a roundtable could contact us about the details of collaboration by email.

Join us in Shanghai Forum!

Tel: 86-21-65642354 / 55664590
E-mail: shanghaiforum@fudan.edu.cn
Shanghai Forum Organizing Committee

Inviting Contributions to China Watch

To construct new-type think tanks, promote the conversion between research and policy-making advice, and provide more high-quality reports and advices, Fudan Development Institute and Centre for Think-tanks Research and Management in Shanghai decide to solicit contributions from Chinese and overseas scholars to China Watch. China Watch focuses on hot issues in various fields of China. Every month, it selects the latest achievements of top foreign think tanks. Meanwhile, China Watch invited Fudan foreign visiting scholar to explore their research finding, which is related to Chinese development.

Requirements

1. This contribution should be policy analysis or advice, reflecting author's deep thinking of forward-looking and comprehensive issues. Topics include but are not limited to Chinese domestic affairs, foreign policies, economy, society, education and other issues involving China's development.
2. The English edition could be articles published by foreign think tanks or major media in English (if the article is in other foreign language, please attach a 200-word abstract), or English research achievements of yourself. If the contribution is accepted by editorial department, it will be translated by the referrer or editorial department.
3. The Chinese edition is open to all the institutions and individuals. The topic is decided by yourself and the language should be succinct and not academic. 3000 words are proper, and there should be an introduction of the author within 100 words in the end. If the contribution is involved in sensitive issues, please burn it onto disc and post it to the editorial department with paper edition instead of sending it by email.

Notices

1. Email address: thinktank@fudan.edu.cn. Please fill the title of your contribution in the email subject and attach the following information (very important): Article, Author, Referrer, Address, Email, and Telephone Number.
2. One contribution at a time. Please not deliver more than one contribution at a time, or deliver repeatedly.
3. The contribution could be delivered to other publications and we'll reply in one month. If the contribution is accepted, the editorial department will reward it.

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Fudan Development Institute · Visiting Scholar Program

OVERVIEW

FDDI (Fudan Development Institute) welcomes international scholars to apply for its Visiting Scholar Program. Scholars will interact with Fudan faculty and conduct their independent research at FDDI.

FDDI welcomes academics and researchers in the social sciences who meet the following requirements:

Eligibility

- Applicants must be 55 years of age or under.
- Applicants should be faculty members or researchers at universities or research institutes outside mainland China.
- Research interests should be in one of the following fields: political science, sociology, economics, environment, finance, and other social sciences.
- Preference is given to policy-oriented research.
- Applicants must be able to visit 30-90 days during the 2020 Spring Semester (February 16th, 2019 - June 27th, 2020).

Application Process

Deadline: November 30th, 2019

Notification of acceptance: early January 2020

Application Materials

Documents required for application (in English):

- The application form (application form download link)
- Curriculum Vitae
- High-resolution picture of the applicant (JPEG or PNG)
- Research proposal (minimum of 2 pages)
- One recommendation letter from an expert in the applicant's field or the director at the applicant's institution

Privileges

· FDDI will provide a subsidy package including:

- International round-trip air fare will be reimbursed.
- Stipend: 1000 RMB/ day * (Tax included)

· Visiting Scholars enjoy full access to libraries and electronic resources at Fudan University.

· FDDI provides each Visiting Scholar with free office space accessible (except for University holidays).

· Visiting Scholars are welcome to attend lectures and public events on the University campus, including those organized by the FDDI.

· FDDI offers platforms and publication opportunities in academic journals and Chinese media.

· Visiting scholars have free field trip opportunities.

Responsibility

· Visiting Scholars conduct their research independently on one of the following topics:

· Development Logic of Emerging Economies

· Impact of Technology Change on Society

· Technology-driven Industrial Change

· Comparative Studies of Cyber Governance

· The Role of Culture in Human Development

- All Visiting Scholars are to submit a final research report. Visiting Scholars are required to work at FDDI office at least two days per week.
- Visiting scholars should make at least one presentation on his/her research topic.
- Visiting Scholars are required to provide at least one article on China studies for FDDI publications. They can either submit their own works or recommend articles from others.

* **Selected reports, articles, and essays that Visiting Scholars submit to the FDDI will be recommended to FDDI publishing partners. Please ensure that the reports, articles, and essays submitted do not cause any copyright conflicts.**

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Fudan Fellow Program

The Fudan Fellow Program welcomes excellent scholars and students around the world to Shanghai for on-campus academic interaction with Fudan community. Fudan Fellows are invited to engage his or her on-going researches in humanities and social sciences in Shanghai while contributing to Fudan research programs.

Overview

Fudan Fellow Program welcomes excellent scholars around the world to Shanghai for on-campus academic interaction with Fudan community. Fudan Fellows are invited to engage his or her on-going researches in humanities, social sciences, natural sciences, technology and engineering, life sciences and medical sciences in Shanghai, China.

The goals of Fudan Fellow Program are

To provide the fellows with opportunities to further their understanding of China and China related issues,
To promote academic communication between Fudan faculty and international scholars, and
To build strong partnership between Fudan University and leading research institutes around the world.

Eligibility

Fudan Fellow Program accepts full-time Associate Professor and Professor of fellow institutions in the above fields of study. The Program does not award an academic diploma. All applicants shall:

Have an on-going research project,
Have a good command of working languages to interact with Fudan community where Chinese and English are most spoken,
Be a citizen of a foreign country and holds a full-time position in a foreign institute.

Program

Fudan Fellows are invited to Fudan campus for usually 30-60 days, exceptionally no exceeding 90 days. For every four weeks on campus, fellows are asked to give at least one lecture, either to students or fellow researches, or to host workshops and seminars. Fellows are encouraged to publish papers after the the visit is completed under the title of Fudan Fellow. A copy of the publication shall be presented to and kept by Fudan University.

Funding

International round-trip air fare will be reimbursed.
Stipend: 1000 RMB/ day * number of visiting days (Tax included)

Application

All applications are subject to Fudan Fellow Program Academic Committee and are considered on a case-by-case basis. Applications shall include:
Application Form,
Curriculum vitae that includes education background, research experience and publications
Research proposal.
All applications shall be written in English.

How to apply

Please download the Application Form and send it with other files required to one of the following email addresses based on the background of your study.
1. Natural sciences, technology and engineering, life sciences and medical sciences:
fudanfellow@fudan.edu.cn.
Contact: Ms. Peng +86-21-65648438
2. Social sciences:
xi_lin1@126.com
Contact: Ms. Lin +86-21-55665552
3. Humanities:
fdifudan@fudan.edu.cn
Contact: Ms. Jiao +86-21-65642871

Post-doctoral Research at FDDI

Fudan Development Institute post-doctoral program periodically offers unique research opportunities to Chinese scholars who specialize in the regional and national development of China broadly defined. For more details, please refer to the official website (http://fddi. fudan.edu. cn). The following information is for reference only.

Eligibility

1. We expect applicants with engaging personality and professional academic spirit. He/she should meet the health requirement and relevant qualities;
2. Applicants must have obtained their PhD in the last three years and work in one of the following discinplines: economics, finance, management, sociology or political sciences, etc. Candidates expecting a PhD in 6 months and with previous post-doctoral research experience are also eligible. Applicants should be under the age of 35;
3. Applicants must have the nationality of the People's Republic of China;
4. Applicants must work at Fudan Development Institute in a full time mode. In principle, part-time researchers will not be considered;
5. Applicants must work in the office during workday and be willing to conduct the researches of the Institute.

Funding

1. FDDI provides post-doctoral researchers with favorable remuneration package, including housing arrangement and job allowance as well as the payment made according to relevant standards of the country and of Fudan University;
2. Researchers at the Institute will have necessary office space and involve in our dynamic research environment.

The Institute will make admission decisions based on open recruitment, strict examination, and competitive enrollment in an open, fair and just way. The application materials will be subject to the first round of reviewing before the applicants are further examined.
Excellent doctors at home and abroad are welcome to join the Institute!

Contact

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Paper Call for Fudan Journal of the Humanities and Social Sciences

Fudan Journal of the Humanities and Social Sciences (FJHSS) is a peer-reviewed academic journal that publishes research papers across all academic disciplines in the humanities and social sciences. The journal features three columns: China Studies, Articles of general interest in the disciplines, and Book Reviews. Coverage in FJHSS emphasizes the combination of a "local" focus (e.g. a country- or region-specific perspective) with a "global" concern. Research papers should have theoretical and methodological approaches, and engage in the international scholarly dialogue by offering comparative or global analyses and discussions. FJHSS occasionally invites guest editors to organize special issues devoted to certain themes in the humanities and social sciences. It aims to bridge diverse communities of the humanities and social sciences and provide a platform of academic exchange for scholars both within and outside China, further the internationalization of China's humanities and social sciences research, advocate academic originality, and encourage research with academic rigor.

Requirements

1. Research papers should be approximately 6,000 to 10,000 words long, including references and footnotes. Book review essay should be 2,000 to 2,500 words, focused on a recently published academic books.
2. Submission should be originally written in English. Translations from published Chinese articles are refused.

Notices

Please submit articles online and follow the instructions:
http://www.editorialmanager.com/fdhs/default.aspx

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