

DRAFT: Not to be cited.

U.S. – China Relations: The Education Factor

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Education relations have long been viewed as deepening and stabilizing U.S. – China relations. Today’s extensive ties have been made possible by historic and cultural traditions, high level political support from both governments, and the globalization of both Chinese and American universities. Recently, however, critics of the relationship have come to the fore. Articles titled “The Failure of American Universities in China,” “China’s Pernicious Presence on American Campuses,” or “Chinese Power ‘may lead to global academic censorship crisis’” are just a few examples.¹

These critiques are provoked by the emergence of a more ideological China which has also become our global competitor. China’s return to Marxist ideology and America’s more protectionist economic position have introduced growing strains in the educational as well as the political relationship. What many fail to see is that the United States is positioned as China’s primary educational and scientific collaborator, as its most influential model. The educational relationship is a strategic asset for both countries and supports a continuing American role in China’s modernization for decades to come. Working to maintain the many positive aspects of the educational relationship will take great care on both sides of the Pacific. Reflections on four decades of engagement in the bilateral educational relationship illustrate these trends.

Education is in the DNA of our U.S. – China relations.

In April 1974 I waited at Washington's Dulles airport to meet the Chinese Seismology Delegation arriving from Beijing via Moscow. This was one of 12 exchanges agreed upon by China's Science and Technology Association and the Committee on Scholarly Communication with the People's Republic of China (CSCPRC) that had been approved in negotiations between Secretary of State Henry Kissinger and Premier Zhou Enlai. Contacts between American and Chinese scientists had been almost non-existent in the quarter century since the victory of the Chinese Communist Party in 1949.

This was my first solo venture accompanying a Chinese delegation since I had begun working at the CSCPRC. My nervousness was not helped when the ten-member delegation deplaned. There were no smiles. They were exhausted from the long-trip and unable to engage in even light conversation. We checked into Washington's Mayflower Hotel and sat down to dinner in its elegant formal dining room. The service seemed incredibly slow, the food not appetizing for Chinese palates, and I sensed all anyone wanted to do was to retire to their rooms and sleep. When the waitress offered dessert I declined for everybody. Suddenly the chair of the delegation, Gu Gongxu came alive: he turned to the waitress and, speaking in perfect English said "We would all like apple pie, apple pie a la mode. I have waited thirty years for a piece of apple pie." The ice was broken.

Gu Gongxu, the director of China's Institute of Geophysics, had been a Boxer Indemnity Scholar, studying in the United States in the 1930s at Cal Tech and the Colorado School of Mines. His warm memories were shared with his much younger colleagues. Ku's mission on this trip was to introduce a new generation of Chinese geophysicists to American institutions and American science.

The trip was not without its challenges. Taiwan was an extraordinarily sensitive issue. As an active seismic zone “the Republic of China” was cited in many of the books that were given to the delegation. We had to return all of them. The delegation suddenly got up and left a Denny’s restaurant: the Taiwan flag was among the many international flags decorating the place mats.

But what I learned then and subsequently over and over again was that *education is in the DNA of U.S. – China relations*. President Theodore Roosevelt could have never have imagined the long-term results of his 1907 pledge: “This nation should help in every practicable way in the education of the Chinese people, so that the vast and populous Empire of China may gradually adapt itself to modern conditions.”² He approved the remittal of Boxer Indemnity Funds to China for educational purposes. Tsinghua College was created to give preliminary training for the more than 1,000 Chinese students who received Boxer scholarships to study in America’s best universities. They not only became the backbone of China’s research and higher education community, many, like Gu, were still active in the 1970s and led the renewal of academic ties between our two countries.

Another example is Zhou Peiyuan, University of Chicago and Cal Tech trained physicist who, in 1978, led the Chinese delegation which negotiated the U.S. – China Educational Agreement which became Appendix 1 to the Jimmy Carter/Deng Xiaoping normalization agreement. Zhou was China’s senior scientist-diplomat and de-facto president of Peking University. His model for the new era was the one he remembered, the one he had participated in – a de-centralized, wide-open educational framework with scholarship opportunities for Chinese students and scholars. Forty years later with over 350,000 Chinese students in the United

States and an American number only limited by interest and funding, this remains the governing framework.

The significance of the initial decisions made by both the U.S. and Chinese governments to open educational doors cannot be overstated. For China it was a stunning reversal of Mao's isolation policies. For the United States it was to open educational doors to a Communist country. American presidents and Chinese political leaders have advocated and accelerated educational ties since President Carter responded to a midnight query from Deng Xiaoping, relayed by his Science Advisor Frank Press who was in Beijing: Will the United States accept 500 students in six months? Carter, who loves telling the story, replied: send as many as you will. Speaking at Fudan University in 1984 Republican president Ronald Reagan reminded the audience that Xie Xiede, Fudan's president, had studied at both Smith and MIT. He extolled the virtues of a new Chinese generation coming to "American schools to study electronics and computer sciences, math and engineering, physics, management and the humanities."³ Thirteen years later China's president Jiang Zemin visited Harvard University, thanking Harvard for being among the first American universities to accept Chinese in the 19th century. Many Chinese officials, including President Xi Jinping, have sent their offspring to prestigious American universities.

To further elaborate the historical significance of U.S. – China educational relations I turn to my own experience in studying the history of Peking Union Medical College. As a graduate student in the late 1960s amid the Vietnam war era I was convinced that the American presence in Republican China was an ill-conceived failure. I set out to write a dissertation that demonstrated the Rockefeller family and foundations were culturally imperialistic when they established Peking Union Medical College in 1917. Surely this quintessential American

educational model was inappropriate for China. The title of my thesis (and later book) was *An American Transplant: The Rockefeller Foundation and Peking Union Medical College*. I aimed to demonstrate that the elite scientific model it featured was a mistake for a country with few doctors, a life-expectancy of 30 years, and unrelenting communicable diseases. I set out to demonstrate that the American transplant would be rejected by the host country.

I have been studying PUMC now for forty years and, yes there have been periods of rejection – especially in the early 1950s and the Cultural Revolution. And there has been significant Chinese adaptation. But I have also learned that the American transplant took hold and became the cradle of modern Chinese medicine. Through my years of interviews and residence on Wangfuqing near PUMC I have learned much about how PUMC became a model for China’s medical education, and how PUMC Hospital, today still rated #1, has continuously set an example for clinical care. When I came to write my second book, *The Oil Prince’s Legacy: Rockefeller Philanthropy in China*, I had come to an even more significant conclusion: “At the heart of the Rockefeller scientific agenda throughout the twentieth century was the aim to create a scientific community unbounded by national or political boundaries...the desire to share cutting-edge American science with China and to include Chinese scientists in a global scientific family.”⁴ This generous animating value is central to understanding the global appeal of American science and higher education. It is key to American soft power.

China’s emerging educational models have been influenced by the United States but will likely remain distinctly Chinese.

During the Reform and Opening era China has drawn on American educational models as it has instituted wide-reaching reforms in scientific research and higher education. It has also invested heavily in the physical and institutional transformation of its knowledge sector. Although still encumbered with recalcitrant bureaucracies the success of these changes has been a surprise. No, China does not yet have world-class universities but it is getting there. And it has become a destination for global science and education.

China's modern scientific and educational infrastructure owes much to the legacy of many countries including Japan, German, Russia, France, the United Kingdom as well as the United States. These do not fully account for this new era of institutional transformation, a transformation that, while distinctly China's own, has drawn from the American research university model and, more recently, the American liberal arts model.

During the Cultural Revolution China's knowledge institutions were depleted of both talent and purpose. Institutions were either emptied out with faculty, staff and students sent to the countryside or convulsed by inter-institution debilitating ideological conflict. I saw glimpses of that in travel with American academic delegations to China in the mid-1970s. Accompanying a Schistosomiasis delegation in 1975 we were confronted not just with tense faculty and empty labs but with clearly fraudulent claims that schistosomiasis had been completely eradicated in China. After all that was the point of Chairman Mao's famous poem "Farewell to the God of the Plague."

In the summer of 1977 little seemed to have changed and my delegation, led by the presidents of the NAS, SSRC and ACLS, grew discouraged that any future fruitful intellectual dialogue would be possible. We were, however, introduced to the leaders of the new Chinese Academy of Social Sciences, spun off from the Chinese Academy of Science. And as we left via

Guangzhou my colleague from the Chinese Academy of Science pulled me aside and whispered: “Don’t worry. Deng Xiaoping is back!”

Perhaps no sector in China was as transformed by Deng’s return as higher education and scientific research. By 1977 the modernization of science and technology was enshrined as one of the four modernizations. An ambitious eight year plan to develop a high level research plan by 1985 was approved. In March 1978 the National Science Conference drew up a plan to focus on agriculture, energy, materials science, computer science, lasers, space science and technology, high energy physics and genetic engineering. I remember reading with great skepticism about that conference. Genetic engineering, high energy physics, materials science – surely post-Cultural Revolution China couldn’t progress in these advanced fields!

I was, of course, wrong. China has demonstrated time and time again that it can move the needle forward in forefront areas of science and technology. In order to do so it has carried out a comprehensive restructuring of both its higher education and research institutional structure. Among the foreign models are the American research university, liberal arts education, and scientific peer review.

The American research university, greatly influenced by German models, fully emerged after World War II. Government funding for scientific and military research during the war had primarily been undertaken in government facilities. A far-reaching decision shifted government funding for science to universities, greatly amplifying the role of American universities in creating new knowledge. The comprehensive American university with undergraduate teaching and the most advanced research in open intellectual communities has been a powerful global institutional model. Academic freedom, the right to teach and publish freely, has been central to innovation and knowledge creation.

During the Reform and Opening era educational reforms moved much of China's key research away from Soviet model institutes to universities. Comprehensive universities which integrated schools of medicine, engineering and the social sciences and humanities were created by merger. Extensive government funding through special programs physically transformed university campuses. Advanced graduate training became a hallmark of these institutions even as generous funding encouraged many China's overseas students to return.

Chinese university campuses today gleam with new buildings and new campuses, however reforms in China's higher education are not limited to hardware. Over the past twenty years China has doubled its college enrollment, merged institutions to create comprehensive ones, introduced systemic curricular change, raised expectations for faculty research and publications and given greater emphasis to internationalization. Today China has some 2400 institutions of higher learning with a total undergraduate enrollment of 26 million (in 2017 the United States enrolled 17 million undergraduates.)

Curricular reforms are especially important. China has moved away from the Soviet model of narrow specialist training to adapt components of the American liberal arts model. A number of experimental liberal arts colleges have been created within major universities. For example, beginning more than a decade ago Peking University created the Yuanpei College and Zhongshan University the Boya College. Each are experimental two year liberal arts programs where students have considerable curricular choice and delayed selection of a major. Today, in search of education for innovation, most of China's key universities have adopted some form of a liberal arts curriculum providing all students with exposure to a wider range of courses. Fudan University has created Fudan College for all entering undergraduates requiring wide

distributional requirements and new cross-disciplinary residential colleges. These programs do not, as yet, introduce the most important element of American liberal arts learning – critical learning. But with more and more returned faculty taking up teaching positions in China’s universities China’s didactic rote teaching style is also beginning to change.

Chinese universities do take very seriously an early tenet of American liberal arts: character building. Now out of favor in American higher education, a central purpose of Chinese undergraduate education is character building: it is here that Marxist ideology is increasingly being promoted. In a thoughtful seminar presentation on the liberal arts some five years ago Tsinghua professor Cao Li gently reminded her international colleagues that the Communist tradition, as well as the western liberal arts tradition, will be a component of a liberal arts education *of* China. She pointed out that Marxist ideology places great value on moral and ethical education “which is closely linked with a concern for students’ political consciousness.”⁵ The current emphasis on ideology in China’s higher education is about more than fealty to the Chinese Communist Party: it is seen as establishing stronger social norms in a rapidly changing society.

Modes of evaluation and selection of scientific research shape the directions of knowledge creation. China traditionally has relied on top-down state directed designation of scientific priorities. Seniority, personal relations or *guanxi* often determine whose research projects are funded. Early on in the Deng era China became interested in the American peer review model exemplified by the National Science Foundation. In the mid-1980s China’s scientific leaders sought NSF assistance in creating the National Science Foundation of China. . This brought real change to how China distributed state funds to individual scientists who were selected primarily on the basis of peer review, not institutional *guanxi*. Reporting to China’s

State Council the NSFC had considerable autonomy in its operations. In 2018, however, the reporting lines were changed to put the NSFC under China's Ministry of Science and Technology. Although it is too early to judge some fear that its here-to-fore merit based grants and relative independence may be diminished.

The emerging Chinese academic model, while familiar in many dimensions, does not, however, include academic freedom as understood in the United States. When I first moved to Kunshan as executive vice chancellor to help Duke University establish a new joint venture university I had many conversations with Chinese colleagues about academic freedom. The governing documents for Duke Kunshan University which were approved by the Ministry of Education were very clear about academic freedom: the university "shall encourage their faculty to teach, research and publish articles freely and openly, hold public academic discussions, explore new knowledge, lead and help students broaden their views..." But I learned that Chinese educators often had a different meaning in mind when they discussed academic freedom: they meant the growing autonomy of universities from the Ministry of Education, not the freedom for individual faculty to openly express their own views in teaching and research. Since then the Chinese Communist Party has strengthened its ideological controls over the university community and in some instances endeavored to extend these to foreign faculty and to China studying abroad.

Concerns about academic freedom are at the heart of many of the issues facing U.S. - China education relations today. These are not easily solved. Central to the American model of higher education is the endorsement of an academic freedom that protects individuals from political retribution and also establishes a climate that promotes successful innovation. It is often

assumed that Chinese universities will never be first class or engines of innovation unless they embrace the western concept of academic freedom.

This frequently asserted concept, however, may be subject to re-interpretation in the years ahead. In a provocative article titled “Higher Education and Authoritarian Resilience: The Case of China, Past and Present,”⁶ Harvard political scientist Elizabeth Perry suggests that Chinese universities may never develop as institutions autonomous from the state, as institutions fully promoting academic freedom. Continuing a centuries old tradition it is more likely, Perry suggests, that Chinese universities will have a synergistic relationship with the state. She points to the absence of student protests in the thirty years since Tiananmen suggesting that the Chinese government is rewarding universities but in so doing also guaranteeing their relative quiescence. Perry also suggests that the American linkage between autonomy, academic freedom and innovation may be upended in China. China may demonstrate that authoritarian regimes can foster innovation after all.

Collaboration, competition and ideology challenge the bilateral educational relationship today.

After four decades of educational relations, especially the great flow of students and scholars between the two countries, American and Chinese universities were prepared for more extensive collaboration. This collaboration has taken many forms including joint venture universities and degree programs, Confucius Institutes, and hosts of joint scientific research. Today hundreds of American universities have research and exchange programs with China. Eighty colleges and universities from 36 states are operating undergraduate degree programs in China while thirty offer graduate degrees. All Chinese provinces and autonomous regions have educational agreements with American universities and all but Xinjiang, Tibet and Qinghai have

joint degree programs. These various collaborative endeavors demonstrated that even though the cultural and university systems had differences institutions and individuals could find ways to work together. In the last several years, however, the growing competitive and ideological climate which has affected both countries is challenging what had here-to-fore been seen, by both countries, as the most beneficial aspect of the bilateral relation.

Institutional collaboration is very different from educational exchange or students studying abroad. It requires a deepening of professional relationships, a strengthening of cultural ties, the necessity of compromise and of creating trust. The differences between curriculum standards, role of faculties and relative institutional autonomy must be addressed. From my own three-year experience as executive vice-chancellor at Duke Kunshan I can attest to the complexity and challenges of collaboration. Kunshan City had sought a world-class university for some years and attracted Duke by guaranteeing most of the funding and – most importantly – by giving Duke responsibility for the academic program and policies. Wuhan University, late to the partnership, was the Chinese university guarantor and facilitated the multiple approval policies through the Chinese Ministry of Education. The Chinese goal from the outset was to establish a comprehensive liberal arts university with Duke University degrees in Kunshan.

It took approximately ten years from initial vision to final approval of both China's Ministry of Education and Duke University's faculty and Board of Trustees to implement this vision. The issues were everything you can imagine – cultural, institutional and political. For all partners, however, the goal of creating a new university on China's soil that overcame those obstacles was worth it. Today it includes research institutes, graduate degrees and, beginning in 2018 an innovative full four-year undergraduate program – with Duke degrees. As American international universities in the past it will have to sort out the complex ways in which it will

interact with the intellectual and political environment around it. The shape of the university will undoubtedly change. And all this will take time. One has only to remember the histories of Yenching and Tsinghua universities and Peking Union Medical College to understand the possible historical arc of such a new, hybrid university.

For its part China's most ambitious international collaborative model has been that of the Confucius Institutes. Today numbering some 400 worldwide with over 100 in the United States these were designed to enhance China's cultural image abroad. The model was brilliant. "Confucius" was the only name likely to be honored and recognized world-wide. The agreements were university to university, generously funded by the Chinese government and each was designed sui generis. Many provided start-up funds for Chinese language instruction where hithertofore there had been none. Many fostered faculty and student exchanges between institutions –some of them in lesser developed regions of both countries. Some were oriented to business Chinese, promoting commercial ties between regions. Some supported teaching Chinese in public high schools. Many supported lectures and programs on things Chinese. For example, Carter Center programs on China have frequently been partially supported by Emory University's Confucius Institute.

In the United States these institutes have become controversial because they are seen to be promoting Chinese political influences within American universities, to be suppressing diverse views about China. Specific examples of politicization have been relatively few and most universities affirm the usefulness of the Confucius Institute grants. Still controversies have politicized the overall program. The National Defense Authorization Act of 2019 includes the provision that federal funds for Chinese language study at a given university will not be provided if that university hosts a Confucius Institute. It is not yet clear how many institutions will be

affected. Given the paucity of funds for Chinese language study anyway a clear option is for the U.S. government to increase rather than decrease its support for this critical language training.

China's announced return to Marxist ideology and heightened rhetoric against western learning values has intensified the opposition to Confucius Institutes. This concern about the presence of Chinese influence in American universities has been compounded by reports of political pressure on Chinese students to serve as China's political spokespersons on American campuses. A new report from the Woodrow Wilson Center carefully examines those charges. It concludes that Chinese embassy personnel have frequently attempted to influence American university decisions regarding sensitive topics – such as the Dalai Lama or Taiwan – and to influence Chinese student behavior as well. The report also concludes that only “a tiny” number of Chinese students have been so involved.⁷

American universities and the public face a complex challenge here. Chinese students studying in the United States will naturally embrace a wide range of views concerning their home country. As one Chinese student observed: “I like the United States. But I love China: it's my motherland.”⁸ Our free-speech society permits the widest possible range of views. We must refrain from allowing Chinese students to be profiled. At the same time we must encourage American universities to fully implement their guidelines for academic freedom, to keep the university free of quid-pro-quo funding or to yield to undue pressure regarding China.

The close collaborative ties between Chinese and American universities and the large numbers of Chinese students studying in the United States make the educational relationship prey to political fallout in both countries. This is further compounded by American fear that China is catching up to us in science and technology. Certainly the upgrading of China's research and university structures coupled with massive infusion of funds in targeted fields has

created a scientific research community that is approaching world-class levels. This is causing heart-burn in some American circles. A very recent (July 19, 2018) article titled “China on the Rise,” in *Inside Higher Education* leads with the statement “U.S. may be overtaken on research impact by mid-2020s.” This assertion is supported by the fact that China today already publishes more papers indexed in SCOPUS (largest global data base of peer-reviewed literature) than the United States. In addition to the quantity of articles, the article also cites the U.S. National Science Board’s report which indicated that “the share of China’s science and engineering research making the top 1 percent of cited articles had more than doubled from 2000 to 2014,” a clear indication of if not quality at least international influence.⁹

In reality one of the most positive results of educational ties has been the steady flow of strong Chinese science students to the United States and the role of those students in American universities and in promoting scientific collaboration between the two countries. Over two-thirds of Chinese graduate students in the last three decades have received doctorates in engineering, math, physics and computer science and have tended to stay in the United States. Chosen from a highly competitive pool and proficient in disciplines with relatively few American students, U.S. – based academic and research positions have been open to them. They have contributed significantly to U.S. human capital needs in the STEM fields. This has not limited their contributions to their home country: telecommunications, joint appointments in Chinese and international universities and the ease of trans-Pacific travel has changed the context of global knowledge creation: the boundaries between national and international science are far more blurred.

It is the very success of the educational relationship that exposes it to so many challenges today. Over forty years the educational paradigm, like that of the broader relationship, has

changed. Gone are the days when China had a critical need for American educational assistance. Gone are the days when American faculty members were always the senior partner in research collaboration. American education ventures in China, and sometimes in the United States, look to China for funding. We are well-positioned for a more equal relationship but on terms that respect American values.

China must recognize that an ideological campaign that continues to deny the educational value of western learning will, in short order, destroy the bilateral educational relationship and significantly endanger China as an international education destination. At the same time Americans must continue to be open to collaboration with Chinese institutions which have different characteristics than our own. We must reaffirm that the educational relationship is a cultural relationship that binds our peoples together. It is also a strategic relationship that positions us as China's leading scientific and intellectual partner. Our close technological relationship does require the United States to be especially vigilant about exposing intellectual property or military technology espionage. But even as we face economic competition we must continue to adhere to our longstanding premise that true science has open borders. At the height of Chinese concern about their brain drain I remember Chinese Academy of Science Vice President Zhou Guangzhou stating. "I will be happy if my students make a contribution to their home country, to the country which trained them, and to the world."

¹ Kent Harrington, "The Failure of American Universities in China," *Foreign Affairs*, (Aug.Sept., 2016); Peter Wood, "China's Pernicious Presence on American Campuses," *Chronicle of Higher Education*, February 26, 2018; Ellie Bothwell, "Chinese power 'may lead to global academic censorship crisis,'" *Times Higher Education*, December 7, 2017.

² Theodore Roosevelt, "Seventh Annual Message to Congress," December 3, 1907, accessed July 25, 2016.

³ Ronald Reagan, "Presidential Address," Fudan University, Shanghai, China, Monday, April 30, 1984. Personal copy.

⁴ Mary Brown Bullock, *The Oil Prince's Legacy: Rockefeller Philanthropy in China* (Stanford, Stanford University Press, 2011), 4.

⁵ Comments made at a Harvard Shanghai Center conference on the liberal arts, date to be verified.

⁶ Elizabeth Perry, "Higher Education and Authoritarian Resilience: The Case of China, Past and Present," Harvard-Yenching Institute Working Paper, 2015.

⁷ Anastasya Lloyd-Damnjanovic, "A Preliminary Study of PRC Political Influence and Interference in American Higher Education," Wilson Center, 2018.

⁸ Tea Leaf Nation Staff, "Do Years Studying in America Change Hearts and Minds," *Foreign Policy*, December 7, 2015.

⁹ Simon Baker, "China on the Rise," *Times Higher Education*, July 19, 2018.