

fields after World War II. Many established scientists—such as Theodosius Dobzhansky, André Weil, and Richard Feynman—stayed for various periods in the next two decades, helping establish the new institution as the leading higher education center in the country.

The *paulista* enterprise has flourished. The University of São Paulo is the top university in all rankings among Latin American universities and one of the few from that continent that appears in international rankings. Brazil has developed a large group of public universities, reformed in the 1960s with the introduction of a US-inspired graduate education model. Brazil now leads Latin American countries in research and graduate education, being 13th in the world in the number of internationally published papers, with a share of 2.6 percent of the total world output. In 1980, Brazil's share of the world's published research was just 0.2 percent, indicating how fast the system has developed in just a few decades.

The new university's founding document was just 54 articles long and proposed a liberal and decentralized structure for the new institution.

THE RESEARCH UNIVERSITY IN 2030

Now, what would be the prospects for the research university of 2030 in Brazil? Just recently, the University of São Paulo has announced that it will start to offer massive open online courses, without any restriction regarding registration. The use of the results as credits is under debate, as it is at many universities around the world. The international trend of providing courses and even full programs, using online technology, is certainly one that the research universities will have to face; and that will likely be a very common component of most *curricula* very soon.

The on-campus student will still be there in 2030, certainly. However, more and more people will develop their own program paths without having to be in residence most of the time or having to restrict themselves to a single institution. One can see graduate education expanding even more and becoming more diversified (with more programs that go beyond the traditional academic degrees—master of science/PhD), with various distinct objectives. That will go along with a less-specialized undergraduate education, another trend that will evolve from the traditional Liberal Arts/General Education curriculum, which will need to be updated and adapted to a country like Brazil but will cer-

tainly have a place here and in other emergent economies. International scientific collaboration will certainly become even more common than it already is today.

Thus, despite a few gloomy predictions, the research university is well poised to remain a central actor in educational systems, its main roles being: enabling people to develop their full intellectual potential and keeping its status as the main source of innovative basic knowledge, as it has done for at least two centuries. ■

Long Road Ahead: Modernizing Chinese Universities

YANG RUI

Yang Rui is professor at the Faculty of Education, University of Hong Kong, Pokfulam Road, Hong Kong, China. E-mail: yangrui@hku.hk.

Current universities are uniquely in European origin and characteristics, spreading worldwide under conditions of imperialism and colonialism as a result of the rise in Western modern human history. Thus, universities in non-Western societies have accepted underlying Western values that may not accurately reflect their own culture and traditions. For non-Western societies, indigenizing the Western model has been an arduous task in their development of modern universities.

With strikingly different cultural roots and higher learning heritages, China's attempt to integrate Chinese and Western ideas of a university is particularly illustrative. Although China is an old civilization with extraordinarily rich traditions in higher learning, modern universities are an imported concept for China. The ancient Chinese education system was established during the Yu period (2257–2208 BCE), and China's earliest institutions of higher learning appeared in the Western Zhou Dynasty (1046–771 BCE). The famous Jixia Academy was established 20 years before the Platonic Academy in Greece.

THE LOGIC OF THE CHINESE SYSTEM

Chinese higher education was evolved according to its own logic. By and large, it focused on the knowledge of human society rather than knowledge of the natural sciences. It generally disregarded knowledge about the rest of the world and confined the dissemination of knowledge to the provincial level. China's central focus was political utility, defined by the ruling classes and it thus started its higher learning

system with a fundamentally different relationship between the state and higher education. Whereas universities in the Western world sometimes (perhaps often) clashed with state power, institutions of higher education in China were loyal servants of the emperor and the aristocracy.

The imperial examinations and the academies were key elements of ancient Chinese higher learning. Designed for recruiting bureaucrats to ensure merit-based appointment of government officials, the imperial examinations dominated Chinese higher education up to 1905. The academies, which reached their peak during the Southern Song (1127–1279), were integrated into the government school system from the Yuan to Qing dynasties (1271–1911). Under the Qing dynasty (1644–1911), their aim shifted to preparing students for the imperial examinations. Autonomy and academic freedom—the definitive scholarly values of European universities, at least by the mid-19th century—were absent in the Chinese tradition.

WESTERN IMPACT

With the international diffusion of the European model of the university after the Opium Wars (1839–1842, 1856–1860), China's institutions of higher education could have taken a lead in assimilating Western culture, science, and technology. Instead, most continued to train scholars with an encyclopedic knowledge of Confucian values but little knowledge of the outside world. Even after Western higher education models had demonstrated their strengths, China's communication with the West was largely (and intentionally) restricted in an attempt to preserve traditional culture and protect aristocratic authority.

Only gradually, in the late 19th and early 20th centuries, did this scholarly isolationism give way to a new era, in which China began to experiment with Western-style universities. The central purpose of China's modern higher education has been to combine Chinese and Western elements, to "indigenize" Western models, and to bring together aspects of both philosophical heritages. Yet, such markedly different cultural roots have led to continuous conflicts between traditional Chinese and new Western ideas of the university—and of "modernity" itself.

The late 1970s marked a key moment in the internationalization of higher education in China—when the country sought deliberately to break with the past and embrace a new future. Deng Xiaoping's strategy of "groping for stones to cross the river" sought to downplay ideological differences between China and the West. As a result, traditional values in higher education were often minimized in favor of higher education's contribution to economic growth. By the 1980s, China had incorporated a series of reforms taken from foreign models—including decentralization and marketization—without exploring the ideologi-

cal foundations of these approaches. China's emphatic determination to separate the advanced knowledge of Western capitalist countries from what were still perceived as "decadent ideas" and a "bourgeois way of life" had overtones of the formula devised in Deng's early modernization efforts: "Chinese learning as the substance, Western techniques for their usefulness."

Since the 1990s, China's higher education policies have emphasized the quest for world-class universities. The Program for Education Reform and Development in China (1993), the Education Act of the People's Republic of China (1995), the 211 Project (initiated in 1995), the 985 Project (initiated in 1998), and the dramatic expansion of Chinese higher education starting from 1999 reflect a fervent desire to "catch up" with the West. This desire reflects larger changes in Chinese society, as China reforms its economy to adopt market principles. A desire for internationally competitive universities provides the impetus for China's best institutions to follow the lead of European and North American universities and embrace "international" norms. However, the notion of world-class status is imitative rather than indigenous. In striving for "international" standing, top Chinese universities compare themselves with Oxford and Yale but forget the long history of these institutions—let alone their own.

Thus, universities in non-Western societies have accepted underlying Western values that may not accurately reflect their own culture and traditions.

CONTEMPORARY CHALLENGES

Today, Chinese universities routinely look to the most elite Western (often American) counterparts for standards, policy innovations, and solutions to their own development problems. This is particularly the case for the most prestigious universities. For example, personnel reforms at Peking University in the mid-2000s were patterned entirely after the perceived US experience. The reformers cited Harvard and Stanford almost exclusively to legitimize their policy moves. But the grafting of American policies onto Chinese university structures has often ignored important cultural differences. The wholesale adoption of US plans was not appropriate—indeed, not possible—in a culture with strikingly different cultural values and educational traditions.

China's latest policy initiative is the Medium and Long-Term Education Reform and Development Plan (2010–

2020), approved in May 2010. The policy has prioritized technical innovation and preparedness; but, like its predecessors, it lacks what is required for a reemerging China: namely, a vision to make *cultural* preparedness an equal priority to ensure China's well-rounded future global role. Still confined to a catch-up mentality, state policy continues to stress economic development, as the primary reference point in every part of the initiative—once again, leaving knotty issues of culture and values aside.

Modern universities are layered institutions, with technical apparatus on the surface but cultural values at the core. China's repeated attempts to import Western university models has occurred mostly on the level of technical apparatus. Based on the core values of the Western model, such as academic freedom and institutional autonomy, these have rarely been understood, let alone implemented. In the present great leap forward in Chinese higher education, what is missing is attention to cultural and institutional values. If Chinese universities cannot successfully integrate Chinese and Western values, the promise of the modern university in China will be limited. The question of culture is part of a much wider and more complex process of seeking an alternative to Western globalization. To be truly "world-class," Chinese universities must find an appropriate—one might even say uniquely Chinese—way to balance indigenous and Western ideas of the university. ■

Foreign Influence, Nationalism, and the Founding of Modern Chinese Universities

SHEN WENQIN

Shen Wenqin is professor in the Graduate School of Education, at Peking University, Beijing, China. E-mail: shenwenqin@pku.edu.cn.

Historically, the development of higher education in various countries was often influenced by other countries' models. In a globalized world nowadays, policy learning between countries is very common. This article analyzes how different foreign models influenced the development of China's higher education system, during 1917–1927, and how nationalism became a driving force of this reform.

Although China has a long tradition of higher education, the first group of Chinese universities came into being around the turn of the 20th century—led by Beiyang Gongxue (1895), Nanyang Gongxue, Capital Metropolitan University (predecessor of Peking University, 1896), and Shanxi University (1902). Until 1911, these universities generally adhered to the ancient Confucian traditions of learning.

It was in the years after the Republican revolution of 1911—a movement led by Sun-Yat Sen, which toppled the two-thousand, year-old Qing Dynasty—that Chinese higher education would truly begin to change. In the postrevolutionary era, Chinese leaders would look to "modernize" Chinese higher learning.

GERMAN MODEL

Cai Yuanpei, appointed as the first minister of education for the new Republic of China in 1912, looked west for models of higher education. One of Cai's first moves was the drafting of "The Regulation of the Universities" (DaXue Ling), which outlined the modern disciplinary system in Chinese universities. Most importantly, this document made research and postgraduate education as central to the university mission.

But it was not until Cai became president of Peking University, in late 1916, that his idea of a university with a research mission would be fully realized. In 1916, the university was not small, but most students were drawn to the professions—namely law and business—and guided by a sense of "careerism." The university's faculty similarly did not value the research enterprise. Cai, in his inaugural address, sought to change this mentality, encouraging students to work hard and attend to scholarship—not careers. He proclaimed the university to be "a place to investigate advanced knowledge."

From where did Cai's intense interest in research and scholarship arise? To begin with, Cai had studied in Germany from 1907 to 1911. During this time he became familiar with the German university system and admired the German ideals of academic freedom, original research, and knowledge for its own sake. In 1917, seminars along the lines of those in German universities were founded in the division of humanities, social sciences, and natural sciences. Cai saw such seminars as places for "the professor and graduate students or advanced students to do research together." By 1918, 148 students (80 postgraduates and 68 senior undergraduates) participated in the seminar system.

Faculty research was another matter. In 1919, to encourage professors to engage in scientific research, Cai founded *The Journal of Peking University*, a forum for the publication of faculty research. With the addition of another academic journal, the *Chinese Social Sciences Quarterly*, in 1922, the