MARCHING TOWARD HARVARD:
CHINA’S QUEST FOR WORLD-CLASS UNIVERSITIES

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ABSTRACT

China, with its long history of using education to serve the nation, has committed significant financial and human resources to building world-class universities in order to strengthen the nation’s development, steer the economy towards innovation, and gain the prestige that comes with highly ranked academic institutions. The key economic shift from “Made in China” to “Created by China” hinges on having world-class universities and prompts China’s latest intentional and pragmatic step in using higher education to serve its economic interests. This thesis analyzes China’s potential for reaching its goal of establishing world-class universities by 2020. It addresses the specific challenges presented by lack of autonomy and academic freedom, pressures on faculty, the systemic problems of plagiarism, favoritism, and corruption as well as the cultural contradictions caused by importing ideas and techniques from the West. The foundation of the paper is a narrative about the traditional intertwining role of government and academia in China’s history, the major educational transitions and reforms of the 20th century, and the essential ingredients of a world-class institution. It offers an evaluation of how well China uses its resources, talents, and governance structure to strengthen its elite universities, and concludes with my opinion regarding the long-term resolution of the obstacles that stand in the way of China’s quest for world-class universities.
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DEDICATION

This thesis is dedicated to our grandchildren: Christopher, Briana, Anna, Katie, Erik B., Scott, Nathan, Aaron, Zachary, Erik H., Andrew B., Samuel, Abigail, Andrew H., Troy, Lydia, and John, and to our great-grandchildren Zoe, Conor, and Berek. May they live in a world that combines our founder’s principles of freedom and independence with Hu Jintao’s quest for harmony and peaceful development.
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INTRODUCTION

Higher education in China has long been used to serve the government and strengthen the nation. From earliest times, scholars have commanded great respect within the society as they offered moral and intellectual guidance to emperors. These personal relationships mirrored the close and mutually supportive actions between state and academia. As China strives for continued economic advancement and global leadership in the 21st century, it must, as President Hu Jintao recognizes, “improve its capacity to innovate and redefine its economy from ‘Made in China’ to ‘Created by China.’”¹ This key shift from “making” to “creating” hinges primarily on having world-class universities and thus gives rise to the state’s latest pragmatic step in using higher education to serve the interests of the country as well as the Chinese Communist Party (CCP). These top-flight academic institutions will also help satisfy China’s desire for global leadership and prestige. Therefore, the question that prompts this thesis is whether the government can succeed in building world-class universities able to compete with the best in the world given its Confucian culture of test-taking and rote-memorization rather than independent thinking, its tradition of intertwining state-university relationships, and a one-party political system that stifles academic freedom.

The first marker towards achieving world-class status was laid down by President Jiang Zemin in May 1998 at a ceremony commemorating the 100th anniversary of the founding of Peking University when he said that the “modernization of China calls for a number of first-rate universities at the advanced world level.”² Less than three decades after Mao Zedong’s Cultural Revolution closed most universities and silenced China’s

¹ Peking University is spelled using the Wade-Giles system of Romanization for this paper rather than the pinyin system that would spell it Beijing.
intellectuals, Jiang’s remarks initiated a major effort by the central government to provide funding and policy guidelines intended to enable China’s most prestigious universities to reach world-class status. As a result, two Chinese universities are implementing strategic plans with the goal of reaching world-class status by 2020, with several more to follow by mid-century. These bold and ambitious goals present major challenges as we will see in this paper.

It is important to note at the beginning that the state’s vision of Chinese universities ranking alongside the prestigious leaders of academic excellence -- Harvard, Princeton, and Oxford -- marries long-standing Confucian beliefs in the value of education and meritocracy with Deng Xiaoping’s plans to build a modern socialist market economy through education. The vision also resonates with the deep desire of the Chinese people to negate their “century of humiliation” and showcase China’s great traditions of education, innovation, and scholarship. The unstated but implicit expectation is that China’s finest academic centers, along with its economic dynamism, will draw a straight historical line from the “Middle Kingdom” to the 21st century enabling China to acquire the prestige and recognition it feels it deserves as a rising global power. In providing the historical narrative of the path China has taken from its earliest days to the present quest for world-class status, this thesis begins by surveying traditional Chinese society wherein the government defined curriculum and scholars gained status through a series of examinations, describes the major educational transitions and reforms of the 20th century, outlines the essential ingredients of a world-class institution, and evaluates how China is using its resources, talents, and governance
structure to strengthen some of its universities. My opinion on China’s ability to succeed in building world-class institutions is offered in the conclusion.

Chapter 1 provides a chronological look at the role of the scholar throughout China’s centuries of dynastic rule and highlights the interlocking relationships among education, academia, government, and culture. It describes how China’s unique examination system created a ladder of success for those few who achieved official status and thus became trusted and revered scholar-bureaucrats and keepers of the culture.

Chapter 2 follows China’s painful and difficult transition from an insular nation ruled by Emperors who believed they were inheritors of the Mandate of Heaven to the final days of Mao Zedong’s tenure as leader of the country and the Chinese Communist Party. The focus is on the transformation from an education system based on The Four Books and Five Classics to the creation of China’s first universities and the political vagaries that impacted the building of higher education institutions.

Chapter 3 outlines the reforms Deng Xiaoping instituted in 1978 to align China’s educational system with its socialist market economy. Particular attention is given to the changes in sources of funding, governance structure, autonomy, and the crucial nexus of faculty, students, and research.

Chapter 4 demonstrates how the convergence of China’s economic and educational reforms along with a more globalized competitive world lead to Jiang Xemin’s decision to specifically focus on strengthening China’s top universities. The chapter identifies the benchmarks of a world-class university and provides details about the three major surveys that rank universities worldwide.
Chapter 5 is a report card on China’s efforts to build world-class universities. It focuses on how China is handling the important issues of resources, talent, and governance while identifying what is working for them and what remains problematic.

The conclusion offers my assessment of China’s march towards Harvard and the challenges it continues to face in building world-class universities that will help China become a more creative and innovative society.
CHAPTER 1
THE SCHOLAR IN TRADITIONAL CHINESE SOCIETY

What Confucius teaches is true; what is contrary to his teaching is false; what he does not teach is unnecessary.

--Old Chinese axiom

Respected for knowledge gained during long years of study, scholars have held an influential and prestigious place in China’s hierarchical culture for nearly four thousand years. During the Shang Dynasty (1766-1027 BCE), they used a rudimentary writing system to keep government records, a task they have continued into modern times. They also had a liturgical function as head of a belief system based on ancestor worship and a main god, Shangdi, as well as several lesser gods.¹ As guardians of right conduct, scholars provided the moral framework and the legitimacy for the emperor’s leadership resulting in a strong bond between governance and education.² The history of this interdependence of belief, culture, government, academia, and educational institutions is the topic of this chapter.

The first emperor of the Zhou Dynasty (1122-256 BCE) offered prayers and sacrifices to his ancestors and to Shangdi when his forces overtook the Shang Dynasty. The Zhou leaders justified their actions by laying claim to the Mandate of Heaven (t’ien ming), a spiritual manifestation legitimizing their reign. Under this concept, the emperor saw himself situated between heaven and earth while his followers believed him to embody both human and divine traits. The understanding was that if an emperor ruled wisely, justly and fairly, the people would thrive and he would keep the Mandate of Heaven; i.e., it was a conditional right. If he became self-centered and/or disrespectful of
the people’s needs, the Mandate would pass to another family, group or clan.³ The scholar’s role, through his knowledge and wisdom, was to see that the emperor conducted himself according to the rules of propriety. In this way, the emperor would enhance his moral prestige and influence in the eyes of his followers. In such a context, only the most educated could hope to become a scholar official and have this prestigious responsibility.

Interestingly, this powerful political theory of obtaining and retaining power and legitimacy by conducting oneself appropriately, improving the lives of the governed, winning wars against outside forces, and upholding the moral fabric of society helped transform scholars from their role as spiritual figures to that of the founding philosophers and safekeepers of Chinese culture. As the Zhou Dynasty met the Iron Age in about 600 BCE, new weapons came into being, communication improved, territories became independent, and warfare was almost continuous. Following a tumultuous period known as the Spring and Autumn Period (770-476 BC), China’s dynastic leadership system disintegrated and an era of anarchy known as the Period of the Warring States began. Both eras provided the necessary space for an intellectual movement to develop that would have a lasting impact on China and its community of scholars.

The most influential philosopher from the Spring and Autumn period, known as the Hundred Schools of Thought, was Confucius (Kung Fuzi) who lived from 551-479 BCE and took the Mandate of Heaven’s commandments for rulers and applied them to individuals. His theme was one of moral harmony, compassionate rule, correct rituals, and filial piety.⁴ Confucius’ philosophy of ethical humanism was rooted in the value of personal virtue based on a hierarchy of superior-inferior relationships: rulers to subjects, father to son, husbands to wives, elder brothers to younger brothers, and friend to friend.⁵
The following principles underlie Confucianism and explain much about the interlocking system of government, education, culture, morality, and hierarchy in China:

1. All men innately have an equal potential for goodness; therefore, the government should educate all without social or racial distinction;

2. Education is a path for reaching moral perfection; it should emphasize ethical virtue;

3. Government should be led by a select few who are morally qualified to govern;

4. Society should be hierarchical and the ruling class should be composed of a select few who meet the moral qualifications.⁶

To promote the central principle of Confucianism, the idea of *li* or “proper behavior according to status,” young boys memorized the following poem:

Let us present our work to father.  
Confucius himself  
Taught three thousand.  
Seventy were capable gentlemen.  
You young scholars,  
Eight or nine!  
Work well to attain virtue,  
And you will understand propriety.⁷

Other philosophies blossomed with Confucianism, such as Daoism with its belief in limited government and primitive agricultural communities, Buddhism which arrived from India with its focus on inner peace, and Legalism which argued for a codified set of strict and impersonal laws for every aspect of life.⁸ While Confucius was not recognized in his lifetime for his contribution to Chinese society, John Fairbank and Merle Goldman argue that his “esteem for age over youth, for the past over the present, (and) for established authority over innovation provided one of the great historical answers to the problem of social stability.” They believe that Confucianism was the most successful of all systems of conservatism and served China well for centuries.⁹
Emperor Wu (Han Wudi) of the Han Dynasty (206 BCE-9 AD), who ruled China for 54 years, established the primacy of Confucianism over other schools of thought. Believing that erudite scholars offered him indispensable advice legitimizing his power, he ignored those seeking hereditary assignments and promoted open competition by creating an examination system that was the beginning of China’s mechanism for systematic talent selection.\(^9\) He created an alliance whereby the monarch provided the symbols of power while the literati provided the knowledge of precedent and statecraft.\(^10\) Emperor Wu also is credited with establishing the first organized institution of higher education, the Imperial University, in the second century BCE. Unlike the medieval European universities with their relative degree of autonomy from the state, the Imperial University was an elite institution whose primary goal was to teach the *Five Classics*\(^11\) to aspiring bureaucrats who would, in turn, serve the interest of the state and emperor. As Richard Hartnett notes about this period, “political and educational functions were interchangeable.”\(^12\) The circle was complete.

China’s history is one of dynastic families gradually losing the Mandate of Heaven because of the family’s profligacy or the fact that family members grabbed more land leading to exorbitant taxes on the still-taxable land of the peasantry.\(^13\) Sometimes the change was punctuated by disunity, as was the case following the Han Dynasty when China disintegrated into nearly 500 years of family squabbles, eunuchs vying for power against empress dowagers (mothers of infant heirs), factionalism, and non-Chinese rule. The short-lived Sui Dynasty (589-618) reunified China, re-instituted the examination system for the selection of bureaucrats, and preceded the Tang Dynasty (619-907), considered one of China’s most productive and influential dynasties.
Emperor Taizong (Li Shi-min), son of Emperor Gaozu, the founder of the Tang Dynasty and a master calligrapher, ruled the country with ambition, intelligence, and diligence. He ordered his officials to preserve historical documents, record the annals of recent dynasties, and specifically asked Kong Yingda, Master in Confucianism, to oversee the re-interpretation of the *Five Classics*. Kong’s interpretations were called the *Explanatory Notes to the Five Classics*. In 653, after 12 years of proofreading, they became the legal teaching books of the Imperial University and the curriculum for students taking the scholarly examinations.¹⁵ The scholarly devotion to the classics, as approved and defined by the Emperor, helped to regulate the well ordered imperial bureaucracy, and bound rulers and scholars together more tightly than ever.¹⁶

The other major educational achievement of the Tang Dynasty was the establishment of the prestigious Hanlin Academy (Hanlin Yuan). Located on the palace grounds, Hanlin scholars studied and taught the classics, established the official interpretations of the Confucian texts, collected and preserved books from around the country, and performed secretarial, archival, and literary tasks for the court. Their work, according to Ruth Hayhoe, President Emerita of Hong Kong Institute of Education, “formed the basis of all knowledge and controlled the precedent-setting historical records. This community of intellectuals enjoyed a scholarly monopoly over the imperial bureaucracy and an intellectual authority that was never effectively challenged until the Empire itself began to crumble.”¹⁷

The Hanlin Academy became the model for the many academies (shuyuan) that were to open and thrive during the Tang Dynasty and beyond. Largely independent and financed by private endowments, the shuyuan tended to rise and fall in accordance with
the quality and vision of the great scholars who led them. Respected by the public for their scholarship and independence, they were “constantly under threat from the imperial bureaucracy which sought to co-opt them to the service of the examination system in some periods and to destroy them in others.”

Building upon the educational renaissance of the Sui and Tang dynasties, the Song Dynasty (969-1279) began to use the merit-based examination system as the only means for drafting officials into the government. This move finalized the political shift from a society ruled by a hereditary aristocratic order to one governed by a central bureaucracy of scholar officials selected through the rigorous civil-service examination. This class of intellectuals, grounded in Confucianism, climbed the ladder through several stages of test taking, starting with preliminary local exams, and progressing, if successful, through rigorous district, provincial, national, and palace examinations. Each stage required years of study and the memorization of tens of thousands of characters if a candidate was to have any hope of progressing to a civil service position. Even at the district level, the pass rate was only one or two percent. The district degree, shengyuan, gave the examinee the right to wear a scholar’s robe, have a small state salary, and become a member of the gentry. Civil service positions required the juren, given to provincial degree holders, while only a few exceptional scholars, who were often interviewed by the Emperor, won the highest national honor, jinshi. While the passing of the exam was required for an official position, it did not guarantee one.

As the number of exam takers for the low-level provincial exams rose from 30,000 candidates in the early 11th century to 400,000 candidates by the late 13th century, the shuyuan flourished. One of the best known was the Deer Grotto Academy,
eventually headed by the prominent neo-Confucianist Zhu Xi. Zhu and his fellow scholars codified what is now considered the official Confucian canon of classics, *The Four Books: The Analects of Confucius, Mencius, The Great Learning, and The Doctrine of the Mean.* Their interpretations, which absorbed Buddhist and Daoist concepts so as not to compete with them, and the Deer Grotto Academy dominated Confucianism for the next eight centuries.

With the *shuyuan* taking responsibility for education, a fixed curriculum of Confucian texts, and an examination system designed to select and reward those who aspired to official positions, China gradually became an “aristocracy by examination.” The examination system produced scholar-bureaucrats who, in turn, provided national stability, cohesion and continuity, and governmental legitimacy despite changes in rulers and dynasties. The system, with scholars serving as the cultural cement, worked for the Han Chinese dynasties, such as the Song and Ming, as well as China’s foreign conquerors, the Mongols and the Manchu, who saw it as a successful method of governance and adopted it for their purposes. It was a way of life that provided a “ladder of success” for a select few until the beginning of the 20th century. However, hindsight allows us to see the system had major predictable flaws that would surface centuries later.

By 1500, for example, the pyramidal exam-based system began to stagnate in terms of real accomplishments. Memorization and continuity were valued over innovation and progress. Joseph Needham, a British scientist and confirmed Sinophile, spent his adult life trying to understand how China, once so technologically creative and inventive, could become so backward, ethnocentric, and poor. The “Needham question” asks why modern science did not develop in China as it did in the West during the 17th
and 18th centuries. Needham concluded that China simply stopped trying; that the summit of the student’s world was the bureaucracy where “complacency ruled, incentive atrophied, and mediocrity became the norm.” Thus, while the system worked to benefit the Emperor, the nation suffered.

The examination itself underwent many changes during its long history of almost 1400 years, and by the time the Qing dynasty came to power in 1644, “it had developed into something quite different from what it had been at the start.” With the introduction of the eight-legged essay in the 15th century, it took a major step towards rigidity. The essay, which emphasized symmetry and stylistic formation, had to be composed in two sections according to a strict pattern with introduction, exposition, argumentation, and conclusion. Each "leg" had to be written in a specific number of characters or words that paralleled its counterpart in the corresponding section. Competition became intense as the population grew at a rapid pace and literacy increased. What began in Confucius time as a contemplative intellectual activity of study, research, dialogue, and open discussion gave way to an intense and competitive “examination hell,” which rewarded rote memorization over rigorous intellectual thinking and creativity.

The absolute conservatism and rigidity of the examination process correlated slowly but inexorably with the world arriving at China’s doorstep beginning in the 17th century. In a time of global adventurism and exploration, China’s system continued to produce a literary caste of narrowly educated individuals who influenced the throne and administered the government. While Christian missionaries arriving in China believed scholar bureaucrats were blocking “what Western nations considered progress,” and “the pathway of Christianity,” the fact is the scholars had, for too long, focused their
attention on preserving the status-quo. They were Confucian to the core; conservative, proud, safe-keepers of the Mandate of Heaven. They were China’s cultural linchpin. However, what had worked for China for nearly four thousand years was no longer viable; the world was changing, and China would be forced to deal with the new reality. Sadly, the path would be neither easy nor smooth, and it would consume most of the 20th century.
CHAPTER 2

HIGHER EDUCATION FROM CONFUCIUS TO MAO

The road from the private shuyuan with Confucian scholars preparing students for rigorous civil service examinations to the egalitarian university of the Mao era was a bumpy one. The process lurched alongside political upheavals, natural disasters, and several wars. The 125 years from 1850 to 1975 saw the creation of the university system along with amazing growth, shrinkage and stability, protests, and near total destruction of the same. As this chapter demonstrates, questions were raised about the purpose, structure, and financing of higher education as well as the relationships between government and universities, meritocracy and egalitarianism, faculty and students, graduates and jobs, and China and the West. This transitional period laid the groundwork for China’s formal system of higher education and much of the credit for the structure in the early years goes to the foreigners who first knocked on China’s doors.

China’s initial answer to Europeans arriving on its shores was to strictly control the foreigners’ presence and treat them as they treated other non-Chinese “barbarians;” i.e., to require “tributes” for the Emperor, limit trade to a few ports, and ask them to leave every winter. Britain sought to change this dynamic at the end of the 18th century by seeking to establish free trade, diplomatic contacts, and resident embassies; they were summarily rebuffed, ignored, and dismissed. When British gunboats, in pursuit of their goals, responded with force in 1839 to China’s destructive dumping of illicit chests of opium, the Chinese emissary, Lin Zexu wrote to Queen Victoria saying, “You savages of the further seas have waxed so bold, it seems, as to defy and insult our mighty Empire.
Of a truth it is high time for you to ‘flay the face and cleanse the heart,’ and to amend your ways.”

The Opium Wars (1839-1842 and 1856-1860) were China’s first reality check that the Western world was infringing on its sovereignty and challenging China’s Middle Kingdom status. Among other things, the “unequal treaties” ending the wars forced China to cede the island of Hong Kong to the British, open fifteen ports to foreign trade, exempt foreign nationals from Chinese laws, relinquish tariff control, and pay large indemnities to Britain and France. What began as a conflict of interest between England’s desire for diplomatic equality as well as profits from trade in silk, porcelain, and tea, and the Confucian ideal of self-sufficiency, hierarchy, and exclusion from corrupting influences resulted in excruciating defeats by technologically superior Western forces, the eventual partitioning of China by the Western powers (and later Japan), the undermining of traditional Confucian values by Christian missionaries, and rampant trading in foreign opium. It was the beginning of what would become known in China as “the century of humiliation.”

The Qing Dynasty’s response to those fearing “the west wind is blowing east” was the Self-Strengthening Movement (ca.1861-1895), China’s first attempt to synthesize Confucian ideals and Western learning. Feng Guifen, a scholar who denounced China’s ignorance of the West, asked, "Would not the best of all possible stratagems be to retain the social relationships and the illustrious principles of China as the foundation, and to reinforce them with the technology that the various countries of the West have used to attain wealth and power?" Known as the ti-yong concept, he and others believed they could maintain China’s essence (ti) while adopting Western techniques (yong) by
creating new institutions, such as military and naval academies and foreign language institutions, to train young people to deal with the foreigners at both a military and diplomatic level. These institutions were separate from the traditional shuyuan that continued to focus on classical knowledge and prepared students for the civil service examinations. Hartnett refers to the reforms of this period as “spotty, superficial, and tied to preserving the traditional Chinese order.”

As a result, by the end of the 19th century, the traditional school and examination system, in place for nearly 1,400 years, was collapsing from internal decay and lethargy. Corruption was widespread, examiners were easily bribed, and some examinees paid a fee to skip the examination entirely.

While the Emperor clung to his ways, there were others who recognized that the world was changing and China would need to adapt in order to survive and protect itself.

Influenced by Japan’s Meiji Restoration and China’s humiliation at the hands of the foreigners, Kang Youwei, a high-ranking scholar, proposed the first version of a modern system of education in which examinations would be subordinate to the school curriculum that would include Western courses in science, law and technological skills. After years of seeking an audience with Emperor Guangxu, Kang finally persuaded the Emperor to order a large number of changes to the country’s educational system. As a part of the Hundred Days Reform, from June 11-August 21, 1898, among other things, the Emperor ordered the reform of the civil service exam, eliminated the eight-legged essay, and reorganized the shuyuan into public schools. He also encouraged students to study abroad with government funding, mainly in Japan, to learn new technology and ideas.

Shortly thereafter, the Empress Dowager Cixi, Guangxu’s aunt and power behind
the throne, prodded by the Manchu conservatives, initiated a coup and assumed power as regent. Following the coup and after the Boxer Uprising which revealed the bankruptcy of the conservative approach, she took three important steps regarding education. First, she abolished the eight hundred year old examination system in 1905 with an edict that read, “The people will maintain an attitude of watching and waiting as long as the state examination system remains in effect; therefore the examination system must be abolished before modern schools will be widely established.” Second, she reorganized the *shuyuan* that had played such an important role in the hierarchical civil service examinations into universities at the provincial level, middle schools at the prefectural level, and primary schools at the local level. Third, she allowed the Imperial University, founded by the Emperor in 1898, to continue with minor changes. Modeled after the University of Tokyo, which itself was modeled after European institutions, China’s bureaucrats wanted their premier institution to use Western techniques while maintaining “imperial authority and Confucian cultural supremacy.” Renamed Peking University after the revolution in 1912, the university was China’s first modern national comprehensive university. However, it did not become the important role model originally intended by Emperor Guangxu until the presidency of Cai Yuanpai in 1917. As we will see, the changes instituted by President Cai set the course for Peking University, popularly known as *Beida*, to become China’s most prestigious university, a title it holds to this day.

While supportive on the educational front, the Empress Dowager continued to have political problems. The 20th century began with the Boxer Uprising, a last chance for the Manchus to show their superiority over the barbarians. With government backing,
anti-Christian and anti-foreign groups, known as Boxers, burned churches and killed Christians. The Qing hoped the foreigners would leave China and thereby make reform unnecessary. However, eight Western countries and Japan retaliated, won, and consummated another unequal treaty protocol. At the same time, several anti-Manchu Governors, tired of the government’s corruption and inability to restrain foreign incursions, shifted to Western technology in order to create and strengthen “New Armies” (Xin jun). An uprising on October 10, 1911 in Wuhan, launched by lower-ranking officers in Wuhan’s New Army, ignited the battle that ended with the abdication of Emperor Xuantong (Puyi) on February 12, 1912. Yuan Shikai became the Republic of China’s provisional President in March 1912. He died of uremia in 1916 at which time China was ruled by various warlords until the military force of the Guomindang (GMD) unified China in 1927 and established the Nationalist government in Nanjing.

The interplay and ferment of politics and foreign affairs during the warlord era provided time and space for the molding of China’s new system of higher education. With the old system abandoned and no central government in power, there was an opportunity for experimentation, new ideas to rise and be tested, and debates to rage over what, if anything, to retain from China’s traditional educational culture. In the process modern Chinese universities developed from a European model and gained traction through three major channels: study-abroad programs for Chinese scholars and students; the establishment of Western missionary colleges in China; and the modernization efforts of Chinese reformers. These efforts combined to give birth to the May 4th and New Culture Movements and to produce the basic system of higher education that exists in China today.
Initially, Chinese students and scholars went to Japan as part of Emperor Guangxu’s effort to learn how Japan transformed itself into a modern nation and succeeded in meeting the challenge from the West. Finding the country culturally attractive due to its proximity, common script, relatively similar dress, and diet, approximately 25,000 Chinese students traveled to Japan for some form of modern schooling between 1898 and 1911. Among them were many intellectuals, including Cai Yuanpei, future leader of Peking University, who also studied in France and Germany, and Chen Duxiu, co-founder of the Chinese Communist Party, who also traveled in France. They returned to China firmly believing that fundamental change was required if China were to survive, that knowledge was the means to advancing progress, that there was value in a participatory constitutional form of government, and that they were the vanguard of this necessary change.

Many were heavily involved in teacher training and became a “driving force in the development of Chinese universities.”

The first Chinese students in the United States were ones who followed their missionary teacher to Yale in 1847, with the first U.S. degree awarded to a Chinese citizen going to Yung Wing (Rong Hong) in 1854. In the 1870’s, the Chinese government funded 120 students as part of the Self-Strengthening Movement, to study in the U.S. in order to “to acquire Western expertise and help direct China's efforts to strengthen itself and repel foreign aggression.” They were recalled, however, for fear they would lose touch with their Chinese “essence.” Subsequently, it was the Boxer Rebellion Indemnity Scholarship Fund that made a lasting impact on Chinese higher education by funding nearly 1,300 Chinese students at well-known U.S. universities from 1909 until 1929. The Fund was the brainchild of the American missionary Arthur H.
Smith who suggested to President Theodore Roosevelt that the funds China owed the U.S. as reparations from the Boxer Uprising be returned to the Chinese government and used to develop higher education. Eighty percent of the scholarship students studied in technical fields, such as engineering and agriculture. The government, wanting technical expertise, restricted students from studying law and politics thereby “revealing its displeasure with the politically active students in Japan, who tended to study such subjects.” As we will see, the Chinese government’s preference for limiting knowledge from the West to technical and scientific fields, while ignoring social and political developments, continues to this day. Again, the emphasis is on serving the state, not the individual.

The Boxer Rebellion Indemnity Funds were also used to establish Tsinghua University in Beijing. Founded as a preparatory school in 1911 for students planning to study abroad, “American influence permeated virtually every feature of the campus, from its administrative structure and educational policies, curriculum, teaching methods, to its architecture.” Tsinghua’s innovative system of shared governance between administrators and professors reflected American collegial patterns with faculty playing an active role in academic decision-making. The first two undergraduate years were based on the American liberal education model with upper division programs modeled after M.I.T. and the University of Michigan in engineering, and the University of Wisconsin in chemistry. Tsinghua, along with Peking University, has played -- and

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*Tsinghua University is spelled with the original spelling for this paper rather than the pinyin system which would spell it Qinghua.*
continues to play -- a major role in the setting the highest of standards for Chinese universities.\textsuperscript{18}

Tsinghua University, one of the fifteen American missionary colleges in China by 1917, was modeled after American liberal arts colleges and focused on teaching humanities, social sciences, languages, and science to a small and elite segment of Chinese society. In addition to their primary goal of introducing young influential Chinese to Christianity, the missionaries at Tsinghua and other similar institutions believed in using Western methods of education to modernize and reform Chinese society.\textsuperscript{19} For example, they brought science and the scientific method into the mainstream of higher education, welcomed women into higher education before the Chinese government did, introduced Western nursing and medical education to China, and established joint relationships with U.S. universities. At the same time, however, these missionaries were a lightning rod for those who believed that China was leaning westward and neglecting the superior features of its traditional culture; i.e., its “essence.”\textsuperscript{20} These contradictory feelings about borrowing knowledge from the west were not unique to the time; they continue to be present in Chinese higher education today.

While study abroad students and foreign colleges influenced higher education in China, the most liberal, lasting, and ground-breaking changes were initiated by a remarkable group of Chinese intellectuals. One of them was Hu Shi, a graduate of Columbia University and one of Peking University’s foremost intellectuals. Hu changed Chinese writing from the classical form to the vernacular and constantly reevaluated Chinese culture so as to make it more accessible and useful for its citizens. Mei Yiqi, another U.S. university graduate who served as head of the China Educational Mission in
Washington, DC from 1928-31 before returning to China, became President of Tsinghua University. Mei was known as a peacemaker who fostered “the spirit of liberalism rather than the inculcation of any particular ideology.”

The primary change-maker, however, was Cai Yuanpai who briefly held the position of Minister of Education in 1912, but quickly resigned in a dispute with Yuan Shikai and returned to Germany for further studies. Appointed president of Peking University on January 4, 1917, Cai Yuanpei created “what was probably the first truly modern Chinese university” by stressing such crucial attributes as academic freedom, professorial self-government, and university autonomy. When he arrived, students referred to professors as “their excellencies,” and in turn, students were called “esquires.” By focusing on intellectual and cultural attainment, Cai hired faculty of various beliefs, supported academic journals, such as *New Youth* and *New Tide*, which openly challenged traditional learning, and encouraged students to take up self-government and form student-centered societies.

In Cai’s second year as President, students from Beida and other universities began demonstrating on May 4, 1919 against the Versailles Treaty ceding Germany’s rights in China’s Shandong province to Japan. They burned the house of a pro-Japanese government minister, were attacked by the police, and many went to jail. While President Cai negotiated for the students’ release, he felt that his involvement went against his principles of political detachment and detracted from his goal of getting his students to lay “the foundation for a new national culture for China.”

Many believe that Cai’s determination to hire outstanding scholars, institute academic freedom, and encourage unrestrained debate set the stage for the May Fourth
Movement, the centerpiece of the longer-lasting New Culture Movement. This was a time of simplifying the Chinese language, espousing scientific thought, experimenting with various forms of socialism, providing educational opportunities for women, emphasizing individual and personal choice, and the rights of laborers.27

This period of enlightenment coincided with the 18-month visit of John Dewey, the world-renowned educator, who was known in China as “The Yankee Confucius.” Traveling to several cities with former students, Dewey urged educators to see their task as educating students and building a strong democratic country.28 As a result of Dewey’s visit, the Provincial Education Associations met in 1919 and proposed an educational system that would: 1) adapt itself to the changing society; 2) promote the spirit of democracy; 3) develop individuality; 4) give special consideration to the economic well-being of every citizen; 5) make school responsive to the needs of life; 6) spread universal education; and 7) allow for local variations.29 As we will see in Chapter 4, with the exception of numbers 2 and 3, having to do with democracy and individuality, these guidelines were at the core of Deng Xiaoping’s educational reforms in 1978 to promote economic development.

With in-put from many U.S. oriented Chinese, legislation passed in 1922 and 1924 establishing a school system based on the American 6-3-3 scheme of elementary school, middle school, and high school followed by university. Legislators instituted the credit system and broadened the term “university” to include any institution of higher education thereby opening the door for new institutions of higher learning.30 From only eight universities in 1917 to 35 in 1923, the new institutions included left-leaning institutions such as Shanghai University with a president installed by the Chinese
Communist Party to Labor University, whose official goal was to “turn schools into fields and factories, and fields and factories into schools.” As Hayhoe notes of this period, “Faculty and students supported all kinds of scientific study which would contribute to national development needs and engaged in forms of social science that constantly overflowed into radical political activism.”

In the mid-1920’s, the new political activism collided with the older and more conservative generation, many of whom also harbored nationalist sentiments. For example, anti-foreign groups railed against the Japanese while anti-Christian movements protested the meeting of the World Student Christian Federation at Tsinghua University in 1924. In an era of growing nationalism, some students began demanding that all educational institutions be placed under Chinese secular control and directed to nationalistic ends. Many students became radicalized and sided with either the Nationalist *Guomindang* (GMD) or the anti-imperialist Chinese Communist Party. It was in this atmosphere that the increasingly conservative GMD took power in China, muted warlord rule, and formed a new government in Nanjing while Mao Zedong and his followers ultimately went into hiding in the northwest enclave of Shaanxi. Chiang Kai Shek’s government immediately formed a Ministry of Education whose task was to provide higher education for those elites who supported the GMD, upgrade the technical skills needed by the nation, and provide equity across geographical areas.

The GMD regime, however, was split on the matter of university reform with moderates favoring university autonomy and conservatives favoring tighter government control of education. By the Third Party Congress in 1929, it was clear that the government was reluctant to cede autonomy; regulations were passed that centralized
higher education and established Ministry of Education control over the universities through accreditation processes and funding procedures. Most, but not all, missionary colleges chose to close their doors at this time rather than register with a Ministry that required them to have a Chinese President and made the teaching of religion elective rather than compulsory. The pendulum was swinging from universities with self-governance and autonomy to a centralized top-down system.

In an effort to move the universities towards a more standardized European model, the Ministry of Education turned to the League of Nations in 1931 for advice. The League’s advisors recommended national entrance examinations, an established tenure system for faculty, a long-range financial planning system, a national university council to create a more rational curricular balance and geographical distribution of resources, and a comprehensive examination at the end of each university program. As the League’s recommendations were implemented, they improved academic standards, provided for greater centralized government control, and encouraged the study of technical fields. They also made it possible for the Nationalists to gain more authority over the institutions as the GMD controlled the accreditation process, reviewed faculty credentials, and allocated resources. By returning to the system of higher education serving the state, Cai Yuanpai’s vision of China building autonomous universities free of government interference was finally put to rest.

In 1937, at the outbreak of the second Sino-Japanese war, the government and the universities made heroic efforts to move universities beyond the reach of the Japanese into foreign concession areas or to rural areas within the school’s province or westward. Between 1938 and 1940, the Ministry of Education organized committees in all major
fields, set curricula, published standards for required courses and guidelines for elective courses, developed standards for teaching faculty, and established an elaborate process of faculty evaluation. At this time, science, engineering, agriculture, and medical enrollments accounted for half of the total enrollment; a positive sign for economic development but a subtle way for the government to limit the number of people studying government, law, and social sciences.\textsuperscript{39} Hayhoe believes this government involvement was a means of hiding “political repression under the guise of academic standards.”\textsuperscript{40} As faculty became more critical of the government’s lackadaisical response to Japanese aggression and continued inaction on social and economic issues, the government responded with increasingly repressive academic and administrative policies. This is a theme that we will see again later in the chapter.

Despite the internal and international battles that were brewing, China’s higher education system grew from 37,566 students in 141 institutions in 1930 to 154,612 students attending 207 institutions in 1947. While this group was a small and elite segment of China’s population, 20\% of the students were female, something unheard of during the Qing dynasty and the early years of the Republic, and many institutions “combined elements of China’s academic tradition of scholarship with its ethos of intellectual freedom and social responsibility, and dimensions of both the American and European patterns that had been introduced.”\textsuperscript{41} While Hayhoe was critical of the government’s control, she credits the Nationalist government with creating and shaping modern institutions with its own selectively-chosen patterns from overseas with or no direct German or American involvement in the thirties and forties.
World War II ended and the universities returned to their formal campuses with high expectations for normalcy just as China’s civil war began to simmer. A growing number of faculty and students found it increasingly difficult to support the GMD’s repressive and corrupt regime and “campaigned bravely and consistently for the formation of a coalition government to bring peace to China.”\textsuperscript{42} In the end, the GMD lost legitimacy and the Chinese Communists became the viable alternative to Nationalist rule. It was a new day in China and the beginning of another bumpy roller coaster ride for Chinese universities.

The People’s Republic of China was established in October 1949 with a small and relatively elite system of higher education. There were 227 higher education institutions (138 public, 92 private and 24 missionary) with 134,000 students. Of these, 65 were universities, 92 were specialized colleges, and 70 were specialized schools. At the outset, tensions existed between regularizing the institutions to serve the national interests and designing egalitarian reforms to “intellectualize the proletariat and proletarianize the intellectuals.”\textsuperscript{43} Institutions were expected to combine theory with technological knowledge and reform professors ideologically; in other words, the state wanted a faculty that was both “red” and “expert.” This large and often contradictory agenda about the role of education in society continued throughout Mao Zedong’s tenure.

In 1952, in order to meet the state’s technological needs and achieve Mao’s ideological goals, the central government began to consolidate, reconstruct, and reorganize all higher education institutions, including the private and missionary colleges, labeled as “perpetrators of Western cultural imperialism.”\textsuperscript{44} Beijing, like governments before it, re-prioritized areas of attention by downgrading programs in the humanities and
increasing the attention given to science and engineering to serve its interests. Borrowing exclusively from the Soviet model, it reduced the total number of institutions from 227 to 181, and split them into three distinct specializations: comprehensive universities (14); polytechnics (38); and single specialty colleges (129). Peking University remained a comprehensive university while Tsinghua became a polytechnic with eight departments ranging from architecture to hydraulic engineering. According to Hartnett, “the comprehensive universities received more funding and better facilities than the other types of institution and became, in point of fact, elite institutions, despite the government’s claim that all institutions were equal in importance.” Faculty lived together in on-campus housing units, belonged to departments, and were promoted on the basis of their ideological purity; i.e., how “red” they were.

The impact of the Soviet Union on China’s higher education system in the early 1950’s was enormous. From the beginning Mao admired the Soviets for not only for their ideological and military accomplishments but also for their “economic and intellectual prowess.” Thousands of Soviet experts arrived to plan the economy, teach at universities, and assist with structural reforms. Curriculum was copied, textbooks were imported and translated, and national instructional plans were implemented at all institutions; the last of these to serve the manpower needs of the centrally planned economy and meet Mao’s political goal of “bringing all higher education institutions under the leadership of the government.” National entrance examinations were re-instituted, enrollments skyrocketed, and the number of faculty, including women, increased rapidly.
The 1950s began with most faculty members holding the rank of assistant or full professor, but by the end of the decade, a large majority of the teaching staff was lecturers and assistants, many without graduate degrees. Such a shift reduced the quality of instruction but enabled the introduction and cultivation of new specializations. As the decade ended, China was on its way to reaching its goal of modernizing society through science and technical education. Nearly one million students were enrolled in higher education with most of them in teacher training, engineering, agriculture, and medicine while enrollments in the traditional areas of humanities, economics, political science, and law declined significantly. This pattern of governmental focus on technical skills while eschewing the humanities and social sciences, begun during the GMD period, continues to this day and reflects the government’s desire for raising the technological; i.e., utilitarian skills of the population, while tamping down expressions of political dissent.

As the universities were busy meeting the country’s economic development needs, Mao Zedong turned his attention to class struggle. His love of continuous, and often chaotic, revolution began with the Yan'an Rectification Movement in 1942-44, continued with the Hundred Flowers Campaign from 1956-59 and the Great Leap Forward from 1958-61, and ended with the deadly and disastrous Cultural Revolution from 1966-1977. A look at the impact of these events on China’s universities concludes this chapter.

Believing that the Party had “adjusted” the thinking of most intellectuals by 1956, Mao launched a campaign under the slogan reminiscent of the period of the Warring States and time of Confucius: “let a hundred flowers blossom and a hundred schools of thought contend.” Engineered to consolidate power within the CCP for Mao against the
pragmatists who emphasized “expert” over “red” and to fight corruption, university professors’ i.e., the intellectuals, were invited to make their thoughts known. They slowly began to publicly complain about the “mechanical copying from the Soviet Union, the narrowness of programs of teaching, the neglect and repression of the social sciences, and the fact that Marxism-Leninism was upheld as orthodox doctrine.” Within three years, many of the scholars who raised their voices were forced to recant; they were effectively silenced. To Mao, they were “weeds” that needed to be eliminated; his negative feelings and vindictive actions against intellectuals continued to his death and created an environment in which people were reluctant to speak their minds.

Mao’s next act was an economic one -- the Great Leap Forward -- whereby he reorganized rural society by dividing families and establishing communes with production brigades; all crops were sent to selected locations, sorted, and cooked for everyone in huge mess halls. Food rationing was introduced and enforced through public struggle sessions, social pressure, and violence. A severe drought exacerbated Mao’s faulty economic plan with its fabricated results, his social assault on the family, and officials reluctant to readjust their thinking and speak up, leading to the death of an estimated 45 million people.

The Great Leap Forward also created a revolution in education with contradictory messages about quantity vs. quality and “red” vs. “expert”. In 1957, as Mao became disenchanted with the Soviet model and its professors who were “teaching books but not teaching people,” he abolished the Ministry of Higher Education and directed universities to “advance egalitarian social goals over those of economic production.” Fearing that the masses were being ignored in higher education, the government
expanded the university system from 441,200 students in 229 universities in 1957 to 961,000 students in 1,289 institutions in 1960. Many were under the control of the provincial and municipal authorities and admitted students from the peasant-worker classes without entrance examination scores. At the same time, full-time institutions were asked to raise the quality of education, improve teaching, and increase scientific inquiry. Research activities returned to the universities, links were forged with the Chinese Academy of Sciences, and a quest for “unity and integration with revolution” was seen as the antidote to the specialism of the Soviet model. In addition, recognizing the government’s dependence on high-level learning, universities such as Beida and Tsinghua, were designated “key-point” universities thereby allowing them to maintain their prestige, meritocratic entrance system, and low staff-student ratios.

The economic debacle of the Great Leap Forward, however, forced universities to merge or close their doors with the number of universities decreasing from 1,289 to 407 in 1963. After this hectic period of expansion, reduction and reorganization, the situation in 1965 was relatively stable with everyone offered the opportunity for a middle school education. At the university level, however, class struggle intensified between the students of worker-peasant origins (so called good classes) and those from bourgeois backgrounds (so-called bad classes) who were seen as enemies of the people. The stage was set for Mao Zedong to express his dissatisfaction with the loss of revolutionary spirit by fomenting the Great Proletarian Cultural Revolution.

The Cultural Revolution, from 1966-1976, remains one of the darkest periods in China’s long history. Mao Zedong’s intentions were to reboot his vision revolutionary struggle and marginalize his detractors, specifically Liu Xiaoqi and Deng Xiaoping, by
“shattering the shackles of all foreign dogmas”\textsuperscript{59} and ridding the country of “the four olds;” old habits, old customs, old culture, and old thinking. University students, from Tsinghua, Beida, as well as other less selective institutions, responded to the call to show allegiance to Mao by shunning their elite status and joining the Red Guard brigades. These students burned libraries, destroyed laboratories, forced teachers to wear dunce caps, and caused faculty members to be “sent down” to rural areas to do manual labor by claiming they were not pure in their beliefs. The national entrance exam was abolished, university classes were suspended for four years, and university enrollments dropped from 674,700 in 1966 to 47,800 in 1970. As a result, more than a million students did not get the education they deserved and the country needed.\textsuperscript{60} It is estimated that over four million students, known as China’s “Lost Generation,” were forced to abandon their studies while 200,000 scholars and writers were persecuted.\textsuperscript{61} By the early 1970’s, however, the tide began to turn and Red Guard members, many of them also “sent down,” went from revolutionaries to scapegoats; the Cultural Revolution was losing its steam.

Peking and Tsinghua reopened in 1971 having survived the Cultural Revolution and remained at the top of the pyramid. Despite the rhetoric and actions on campus, they were still seen as crucial to China’s development. In fact, they benefitted from a new requirement that ordered provincial universities to send a fixed number of their best students to these universities thereby reinforcing China’s two-tiered structure of strong national universities and relatively weak local institutions.\textsuperscript{62} Yet, as part of Mao’s ongoing disdain for academia and to re-enforce his slogan, “Straight from the communes, back to the communes,” student participation in practical learning and manual labor
became a central feature for all institutions. As a result, the Beida class of 1974-75 devoted a full year to working at the university farm. Meanwhile, most professors kept busy with non-teaching activities in the early 1970’s. At the same time, administrative staffs doubled as a result of the heightened ideological climate, increased bureaucratization, and the development of a parallel academic/administrative structure, a feature that continues to present challenges to faculty members to this day.

In 1975, the Ministry of Education was reestablished and headed by Zhou Rongxin, who believed in emphasizing theoretical learning over practical training. The moderates began to find their voice as two million people stood in Tiananmen Square to honor Zhou Enlai, the consummate moderate, on his death in January 1976. Within six months Mao Zedong was dead, but it took another year for university enrollments to reach pre-Cultural Revolution levels. The structure of higher education was intact yet in the immediate post-Mao era, it was still balancing on the two legs of academic elitism and revolutionary egalitarianism. It would take Deng Xiaoping’s leadership and major economic reforms to stabilize, expand, and improve China’s universities, and another twenty years before Jiang Xemin would ask the universities to catapult themselves to world-class status.
When Deng Xiaoping became the leader of the People’s Republic China in 1978, he abandoned class struggle and moved immediately to establish a socialist market economy. Using the slogan “Four Modernizations”, he sought to raise the country to the standard of the developed world in agriculture, industry, science & technology, and defense. To meet these goals, he needed “a rapid improvement in the quality and efficiency of education.”1 This chapter outlines the reforms China instituted to raise the quality of higher education and expand educational opportunities for all Chinese students from 1978 to the present in order to meet its development goals. It also calls attention to the recurring pattern of the government offering reform and flexibility to universities followed by periods of retrenchment and control.

Deng Xiaoping’s economic reforms focused on pushing decision-making authority to lower levels of government, replacing the collective system with individual responsibility, allowing the provinces and state-owned enterprises to retain earnings for their own development, recognizing the role of private business, opening China to foreign investment, and encouraging foreign trade. In other words, China moved from a practice known as “complete collection and complete distribution” to a multi-level public financing system based on the practice of “eating from separate pots.”2 It was a template the government would use in reforming higher education.

During the political upheavals of the Mao era, university enrollment increased from 117,133 in 1949 to 444,359 in 1957, jumped to 965,258 in 1960, and dropped to a paltry 47,800 in 1970.3 The majority of the “Lost Generation” found themselves with neither...
hope nor skills; hence, Deng’s first order of business was to expand and reorganize higher education in order “to satisfy the requirements of economic development.” In 1977, the national university entrance examination (Gaokao) was offered for the first time since the end of the Cultural Revolution; 5.7 million candidates took the exams but only 278,000 were admitted. This administration of the Gaokao marked the return of admissions decisions based on academic merit rather than political ideology and class background, as it had been in the distant past.

During the early 1980’s, Beijing took several steps to ensure an orderly, regularized, and hierarchical system of education with opportunities for students at different educational levels. In 1981, the Regulations on Academic Degrees outlined the requirements for bachelors, masters, and doctoral degrees, the latter two representing the beginning of graduate education in China. Because China’s economic reconstruction required varying levels of scientific, technical and administrative experts, provincial institutions increased in size and number and a new layer was created at the local level as municipalities established vocational programs to train mid-level professionals for their own localities. In addition, a large and diverse non-formal adult education sector came into being. As the number of institutions expanded, the key-point system, first established in 1959, was re-introduced guaranteeing that the top national universities would enroll China’s best students, retain their prestige, and become “centers of excellence.” All of these measurers were in keeping with Deng’s vision of satisfying the public’s hunger for education and training China’s growing workforce while creating a “market economy with socialist characteristics.” They were also compatible with China’s long-standing pattern of universities serving the needs of the state.
In 1980, the Chinese Government invited the World Bank to review its system of higher education and make recommendations for improving its universities. The Bank identified several areas for improvement, and in the following year, financed eight projects totaling US$910.4 million in support of China’s higher education reform. The funding focused on expanding enrollment, raising the quality of instruction, building research capacity, and improving university management. These measures helped China to mesh its development goals with its domestic and foreign policies. To upgrade university faculty, more than sixty thousand students and scholars studied abroad in over seventy countries from 1978-1988; the majority of them in the United States on faculty development grants funded by the Chinese government and/or U.S. graduate departments.

The first half of the 1980’s was a period of hope and promise for the universities as standards were raised and connections were made to the international world of scholarship. There was a renaissance of intellectual activity in literary, artistic, and theatrical circles to the point that individuals were feeling comfortable enough to ask the Party to step back and not interfere in their creative processes. Many raised their voices for human rights, including the internationally recognized physics professor Fang Lizhi who asked that science be “allowed to develop according to its own principles, free of any ideological straitjacket.” As we will see, this free expression was problematic for a government intent on maintaining its pragmatic and utilitarian vision of an academia intended to serve the state.

One notable change at the time was the subtle return of Confucian thought. Unlike the period of the Cultural Revolution when intellectuals were humiliated, in the
One example of the change is that of Kuang Yaming who regained his post as president of prestigious Nanjing University after Mao’s death and claimed that “the concepts contained in Confucianism, such as the attitude towards methods and laws of study as well as the attitude towards and methods of teaching do not have clear class implications. These are aspects of Confucian ideas which are valid to this date.” Slowly but surely, Confucius was regaining his place in Chinese society and being quoted on the importance of respect for knowledge and developing individual talents.

On May 27, 1985, the Chinese Communist Party (CCP) released The Decision on Educational Reform in order to expand, change, and make education more relevant to the country’s economic goals. It began by transforming the Ministry of Education into the State Education Commission (SEdC) to promote greater efficiency and control. Similar in status to the State Economic Commission and State Planning Commission, it was responsible for developing educational policies, coordinating educational work among different departments, guiding the educational reform process, and having ultimate authority over admissions standards, curriculum, promotions, salary regulations, selection of university administration, and budgets at the national universities.

In addition, The Decision on Educational Reform expanded the power and increased the authority of individual universities by providing a three-tiered governance structure of national, provincial, and municipal institutions. This structure allowed provinces and cities to more closely align their educational programs with local industries, and allowed the universities to admit students outside the state plan if they were financed by enterprises or self-financed. Narrowly-focused Soviet-style research
institutes were closed and universities began to function as centers for both teaching and research.\textsuperscript{16} Finally, \textit{The Decision on Educational Reform} took a small step towards giving universities limited autonomy by stating, “where conditions permit, an administrative committee composed of the presidents and a small number of teachers and other employees, with teachers as the core, should be established and strengthened in order to ensure more democratic management and supervision.”\textsuperscript{17} While this vaguely-worded plan for reform prompted some faculty to begin to feel engaged in campus decision-making, the feeling was short-lived.

By mid-1987, economic and political strains of reform were beginning to show; the Deng Xiaoping enthusiasm bubble seemed about to burst. Economic reforms, particularly the downsizing of inefficient state-owned enterprises, cost millions of people their jobs at the same time the government began to dismantle the national job assignment system that had been in place since the founding of the People’s Republic. The result was a greatly expanded educational system producing a growing number of graduates for fewer public sector jobs and unknown prospects with new and often unpredictable entrepreneurial ventures. With inflation eroding salaries and corruption on the rise, university students began holding “democracy salons” calling for more political and intellectual debate, higher standards of living, and an end to corruption. Much like the May Fourth movement, students waved banners honoring “Mr. Science and Mr. Democracy,” the phrase coined by Chen Duxiu in New Youth, signaling that neither had gained a foothold in China over seven decades.\textsuperscript{18}

University professors faced their own challenges. Promotions were effectively age-blocked for those between the ages of 31-45 because the teaching force was
“predominantly old.”¹⁹ Many of those who went overseas to study, particularly from the national key universities, chose to stay overseas or take jobs in the more lucrative private sector causing a domino effect as national universities hired from provincial universities who hired from local universities thereby leaving those at the bottom of the hierarchy without faculty to teach incoming students. Workloads increased while salaries remained low. As one graduate remarked, “barbers are now making more money than brain surgeons.”²⁰

Politically, however, the biggest problem was that faculty voices began to be muted, especially of those who were not members of the Communist Party. The issue of loyalty to their own beliefs versus loyalty to the state “came to a massive confrontation as the central authorities began to foster a climate alien to the values and higher loyalties of the intellectuals.”²⁰ The frustrations felt by faculty and pro-democratic students gathered momentum during a six-week period ending in the deaths of thousands on June 4, 1989 in Tiananmen Square. Martial law was declared on May 20, but some of the more strident leaders called for one final demonstration on May 30 at which time students paraded through the streets behind a 35-foot statue of a woman holding a torch in her arms, a visual resemblance to the Statue of Liberty. By the evening of June 3, the crackdown had begun in Beijing as People’s Liberation Army (PLA) moved toward the city center in tanks, armored personnel carriers, and trucks. Civilians turned out in massive numbers and besieged the PLA with rocks, bottles, and Molotov cocktails. However, the government had the firepower and took full control of Tiananmen Square by the morning of June 4. After several days of skirmishes, the Chinese Red Cross estimated there were 2,600 military and civilian deaths and 7,000 wounded.²¹ By June 10, Deng Xiaoping was
publicly supporting the military’s crackdown on the protesters, which he dubbed a “tiny group of bureaucrats, intellectuals, students, and labor activists.”

Following the tragedy at Tiananmen Square, the government, pushed by CCP conservatives who had opposed many of the reforms in the first place, took a big step back from “democratic management” and instituted measures reminiscent of earlier times when government officials believed institutions of higher education to be an extension of the state. In June 1989, Beijing reduced national enrollments in the humanities and social sciences by 3,000, decreased the size of the freshman class of 1989 at Beida to eight hundred students, down from two thousand the previous year, and replaced Beida’s reformist president, Ding Shisun, with a conservative Marxist economist, Wu Shuqing.

International censure was vocal but without “teeth,” so the People’s Republic survived, campuses were quieted, and the economy began to expand with the growth of Special Economic Zones and other economic programs. In 1993, Jiang Zemin succeeded Zhao Ziyang who lost power in the wake of the Tiananmen incident in a peaceful transition of power.

As Richard Baum writes, government leaders “wanting the benefits of modernity without the destabilizing efforts of spontaneous, uncontrolled social mobilization tended to follow each new round of liberalizing reform with an attempt to retain -- or regain -- control.” Baum refers to this pattern as a recurring “fang/shou cycle” where the government lets go (fang) with one hand while tightening up (shou) with the other. This accordion-like movement, in higher education, of reform and relaxation followed by retrenchment and restriction has been apparent in China since the latter years of the Qing Dynasty. At that time, it was the Hundred Days Reform; in Mao’s era, it was the time of
“letting a hundred flowers grow.” As we will see, this tight hold by government on universities is a significant impediment to autonomy and world-class status.

As China’s economic modernization took root, President Jiang, like Den before him, emphasized the importance of education in nation building by stating early in his tenure, “In order to achieve the country’s modernization goals, it is essential to place education in a strategic position and give education high priority in national development in order to raise the moral, cultural, and scientific level of the whole nation.” Under his leadership, The 1993 Guidelines for Development and the Reform of China’s Education System focused on educational structure and finance and allowed the government to reduce its involvement in the direct provision of educational services. To obtain the balance the government wanted, Beijing transferred the administration of most institutions run by specific ministries to local governments and caused several institutions to merge, including Tsinghua University and the Peking Union Medical College, the institution founded in 1906 by Christian missionaries with Rockefeller money. The program, known as “joint-support, adjustment, cooperation, and combination,” succeeded in achieving economies of scale and scope while at the same time it created large diverse universities with cross-disciplinary studies. In addition, the government opened the door for private universities with “active encouragement, strong support, proper guidelines, and sound management.”
The following chart shows affiliation changes of institutions as a result of the 1993 reform measures.

Table 1. Affiliation changes of institutions of higher education from 1997-2004

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<td><strong>1,225</strong></td>
<td><strong>1,396</strong></td>
<td><strong>1,552</strong></td>
<td><strong>1,731</strong></td>
</tr>
</tbody>
</table>

Source: Higher Education in China, Ji Zhou, p. 56

The funding of higher education also was changed to align with the socialist market system and the reduction of many traditional social welfare services. As a part of the 1993 Guidelines, Beijing shifted the responsibility of education to families and individuals, began charging tuition, introduced private universities, encouraged universities to compete for students and faculty against each other, and allowed universities to establish revenue-generating activities; all of which constituted an
admission by the CCP that “the state alone can never meet people’s pressing educational needs;” there must be non-state sectors engaged in educational development. While *The Guidelines* broadened revenue sources and provided more opportunities for students, it did not address the issues of critical importance to world-class universities; i.e., autonomy, academic freedom, internationalization, corruption and plagiarism, and faculty evaluation.

In 1994, just a year after *The Guidelines* opened doors for students, the State Council launched Project 211 to enhance and upgrade the teaching, research, and administration of China’s top 100 universities as a first major step in strengthening China’s top universities. As such, it will be described in detail in the next chapter.

As Zhu Rongji became Premier of the PRC in 1998, the Ministry of Education submitted its *1998-2002 Action Plan for Invigorating Education Towards the 21st Century*. Its primary goals were to require nine years of schooling for all young people and to eliminate illiteracy among 95% of China's young and middle-aged population. For higher education, the *Action Plan* called for student access to reach a participation rate of 11% of the corresponding age cohort enrolled in higher education institutions by the year 2000. While only 4% of the 18-22 age cohort was enrolled in higher education in 1990, China reached this goal earlier than expected, with 22% of the age cohort enrolled in higher education by 2005. By 2008, the tertiary education participation rate was a remarkable 23%, a testament to the Chinese value for higher education.

On May 4, 1998, in a speech celebrating Peking University’s centennial, President Jiang Zemin put forward a blueprint for China’s universities achieving world-class status. In that speech, he said, “In order to realize modernization, China must have universities
committed to excellence that are of the same caliber as the leading universities worldwide.” The Project for Founding World-Class Universities, known as Project 985 (referring to the year and month of Jiang’s speech) provided additional funding to some 43 universities, including these nine identified for world class status: Peking, Tsinghua, Fudan, Shanghai Jiao Tong, Nanjing, Zhejiang, Xi’an Jiao Tong, Science and Technology China, and Harbin Institute of Technology. Again, this project will be described in detail in the following chapter.

In March 2004, the State Council approved the 2003-2007 Action Plan for Invigorating Education for the 21st Century. Building on Jiang’s 1998 speech at Peking University and the 1998-2002 Action Plan, it laid out two major strategic priorities: eradicate illiteracy among the youth in the rural areas, specifically western China, and “optimize resources from various parties to develop some world-class universities.” It included six priority projects, such as strengthening teaching quality in higher education, and six important measures, including supporting non-public institutions, promoting international exchanges, and perfecting the legal systems for education to encourage innovation.

China’s current reform effort, developed under the leadership of President Hu Jintao is known as the Outline of China’s National Plan for Medium and Long Term Education Reform and Development (2010-2020). Formalized in July 2010 and following China’s traditional belief that education serves the state, Hu noted that “education is the cornerstone of our national development and social rejuvenation,” and called for China to be “a prosperous, strong, democratic, culturally advanced, and harmonious modern socialist country.” While attention remains primarily on universal
access and quality improvement, the current initiatives in higher education are: 1) accelerate the building first-class universities and faculties; 2) strengthen the focus on basic and applied research to promote innovation; and 3) modify the college admissions process by evaluating the student as a whole person using multiple tests and factors rather than the single national university examination (Gaokao). 40

Relaxing central control once again, the 2010-2020 Plan called for the government to give universities autonomy by allowing the president and faculty to run their institutions. It stated, “policy guidance and resource allocation shall be brought into play to guide higher educational institutions to position themselves properly in the higher education system, overcome the tendency toward homogeneity, foster distinctive school-running philosophies and styles, distinguish themselves at different levels and in different fields, and strive to be the best.” 41 This drive for institutional differentiation is specifically designed to foster creativity and innovation, a major factor for economic success in the 21st century. As Hu Jintao noted so succinctly at the recent Asia-Pacific Economic Cooperation forum, his nation’s goal is “to improve its capacity to innovate so that its economy is redefined “from ‘Made in China’ to ‘Created by China’.” 42

Since Mao Zedong’s death, China’s formal educational reforms have developed alongside the market economy. While the path has not been straight, notably during the late 1980’s, each new academic program has built upon previous efforts and been used as a means to an end. For example, China’s latest National Plan (2010-2020) marries Deng Xiaoping’s concept of socialism with Chinese characteristics with Jiang Zemin’s “Three Represents” and Hu Jintao’s desire for “a harmonious society along side peaceful

* Jiang Zemin’s “Three Represents,” refers to Jiang’s statement of the three factors important to
As stated, “the Plan should follow the principle of consolidating achievements, deepening reforms, maintaining sustainable development, and improving the quality of education so that we can provide satisfactory education to the whole public.” While neither Confucius and Cai Yuanpai are mentioned, the Introductory Guidelines to the Plan echoes the past when it highlights the importance of education serving the nation and speaks to “cultivating social builders and successors that are well developed morally, intellectually, physically and aesthetically.”

There have been bumps, but China’s economic progress and concurrent educational achievements since 1980 have been nothing short of phenomenal. Its GDP has grown at more than 10% during most of those years; per capital income rose from the equivalent of US$60 in 1978 to US$3,712 in 2009; and an incredible 141 million Chinese have left the ranks of extreme poverty. Between 1993, when the educational reforms began to take effect, and 2008, the number of higher education institutions doubled from 1,065 to 2,263; the number of students attending colleges and universities increased ten-fold from 2.5 million to 20.2 million; and the number of full-time faculty quadrupled from 388,000 to 1,237,000. With four thousand years of valuing education and meritocracy, near universal education and full literacy, and a strong economy, China is poised to move from “quantity” to “quality” and now focus on building world-class universities. The next chapter discusses the essential ingredients of a world-class institution and what China is doing to reach its goal.

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*the Communist Party of China: development trends of advanced productive forces; orientations of an advanced culture; and the fundamental interests of the overwhelming majority of the people of China.*

*Hu Jintao describes his goal of promoting a society that give full play to modern ideas like democracy, rule of law, fairness, vitality, stability, orderliness and harmonious co-existence between humankind and nature.*
CHAPTER 4
BUILDING WORLD-CLASS UNIVERSITIES

Two unrelated events in 1997 underscored the importance of government support for research universities. In May, *Asiaweek* published the first ranking of “Asia’s Best Universities” thereby signaling the Asian public’s growing interest in the status of universities. In July, when the Asian currency crisis started, governments recognized that without strong academic institutions, they would be at the end of the food chain when larger and/or neighboring countries had financial difficulties. This chapter outlines why countries, including China, want and believe they need first-class academic institutions, describes the programs China has instituted to foster world-class status, presents several views on what makes a world-class institution, and concludes with a description and discussion of league tables or rankings of the world’s best universities. This information will set the stage for Chapter 5’s assessment of China’s efforts to build world-class universities and the conclusion.

Several Asian countries, including China, have put enormous resources into expanding tertiary education and building research capacity in order to secure their place in the knowledge economy of the 21st century.\(^{1}\) Philip G. Altbach, J. Donald Monan, S.J. University Professor and director of the Center for International Higher Education, the Lynch School of Education at Boston College, claims that the research university is the “central institution of the twenty-first century.” It forms the “nexus of science, scholarship, and the new knowledge economies” in that it provides the formal training and credentials for the next generation of leaders, entrepreneurs, and scholars, enables faculty to connect with colleagues, opens doors for top-level scientists and other
researchers to collaborate, and contributes to a national innovation system.²

Governments, therefore, recognize that “economic growth and global competitive are increasingly driven by knowledge, and universities can play a key role in that knowledge,”³ and thus are willing to make significant investments in their institutions of higher education.

All universities designated as world-class are research universities, but what sets them apart is their ability to be “at the top of a prestige and quality hierarchy.”⁴ To be the top of the global educational ladder is to become the university of choice for the world’s most respected scholars, top high school graduates, and the acknowledged pacesetter for scientific research and creative innovation. For governments that invest in such institutions, they bring the promise of status and global standing, especially to smaller countries, such as Singapore, and countries rising economically, such as China.

China, seeking both economic advantages and global prestige, seized the opportunity to build on its key-point universities and merit-based educational system to upgrade its workforce, improve its economy, train its next generation, promote innovation, and regain the scholarly reputation it had centuries ago. To this end, the government directed two specific programs, Project 211 and Project 985, and approved the establishment of the C9 Conference, in order to create several world-class universities.

As noted in the previous chapter, Project 211 was launched by the State Education Commission in 1994, in order to cultivate academic leaders, develop key fields of study, improve institutional technology, and undertake the largest higher education construction program in the history of the People’s Republic.⁵ The Project specifically called for
“marked improvements in teaching, research, administration, and efficiency in 100 universities and in certain key fields of study,” specifically the basic sciences, health and medicine, and technology. The central government, local government, and selected universities invested 36.83 billion RMB (about US$5.44 billion) in the first phase of Project 211 (1996-2000) and 17.22 billion RMB (about US$2.54 billion) in the second phase (2002-07). This money, which was over and above their regular allotment, allowed the universities to pool resources, strengthen operational conditions, and build a national higher education digital information platform. The Project significantly increased university enrollment (undergraduate - 61%; master’s degree - 108%; doctoral degree - 101%) while increasing the number of teachers with doctoral degrees and publications by 109% and 94% respectively.

Funding for the Project is now in its fourth phase, and as of 2008, Project 211 universities, representing six percent of China’s 1700 universities, had the “responsibility of training 80 percent of doctoral students, 67 percent of graduate students, 50 percent of students abroad, and one-third of all undergraduates. They offer 85 percent of the State's key subjects, hold 96 percent of the State's key laboratories, and utilize 70 percent of scientific research funding.”

As with previous education reforms, Project 211 was specifically designed to promote the government’s utilitarian goals of “accelerating national progress, pushing forward the development of science, technology and culture, and enhancing China’s overall capacity and international competitiveness.” And while the Guidelines say, “efforts will be made to broaden the coverage of various disciplines,” there is no mention of expanding programs in the humanities or political science. For the first time,
however, the government had its eye on global recognition when it wrote that Project 211 funding was expected to strengthen the universities in order “to establish their international prestige and position among universities in the world.”

Project 985 was a director outgrowth of Jiang’s speech at Peking University. Initially, US$217.65 million dollars was given to each of China’s top two universities, Peking University and Tsinghua University. Seven other universities were added to the Project shortly thereafter, and funding reached US$3.4 billion dollars between 1999 and 2001, with more than 50 percent coming from the central government while local governments contributed the remainder. A second phase expanded Project 985 to 40 universities in 2004, provided new funding of 18.9 billion RMB (about $2.79 billion), and directed institutions to work collaboratively, eliminate duplication, share talents, and gain efficiencies. The funds were (and are) to be used to build new facilities and computer laboratories, increase the hiring of faculty with foreign degrees, and make adjustments to the curriculum. A significant portion is allocated for academic exchanges allowing Chinese academics to participate in conferences abroad, and also to bring foreign lecturers to China. It is interesting to note that as a part of the second phase of Project 985, China intends to build national centers for innovation in humanities and social sciences as well as national science-technology innovation platforms. According to Wanhua Ma, failing to strengthen programs in these non-technical programs “will hurt the overall development of leading universities in the long run.”

In October 2009, nine of China’s most prestigious universities formed the C9, an academic conference referred to by some experts as China’s Ivy League. The nine universities are: Peking University, Tsinghua University, Zhejiang University, Harbin
Institute of Technology, Fudan University, Shanghai Jiao Tong University, Nanjing University, University of Science and Technology of China, and Xi’an Jiao Tong University. C9 institutions participate in joint student exchange programs, accept academic credit from member institutions, and cooperate in postgraduate training. The Global Times China website notes that this conference was established because the universities “want to catch up and surpass the US Ivy League some day.”

As is clear from the above, China intends to concentrate its resources, through policy formation, financial support, and administrative tools, on a few key universities to achieve “leaps in progress,” and help them to become “world-class.” While defining a world-class university is not an exact science, the Chinese government has put considerable effort and energy into the subject. In 1993, *The Research on World-Class Universities*, the first book in the field in China, was published (in Chinese) by Professor Ai Zhu Tao of Shanghai Jiao Tong University’s Graduate School of Education. Jiang Zemin’s 1998 call for China to build a few world-class universities set the stage for many forums, seminars, and international conferences in China to explore the theories and practices of building world-class universities. In 2004, The Center for World-Class Universities (CWCU) was founded as a part of Shanghai Jiao Tong’s Graduate School of Education and approved as a strategic research unit by the Chinese Ministry of Education. The Center hosted its 4th bi-annual International Conference on World-Class Universities in Shanghai in early November 2011 gathering “researchers, university leaders, policy makers and other stake-holders from various regions to discuss major developments related directly and indirectly to world-class universities.”
Much of the focus at these conferences is on the factors or criteria that should be used to identify universities as world-class. Opinions vary, as might be expected, between those favoring specific detailed criteria and those with a preference for harder-to-evaluate subjective qualities. For example, in 2004, Min Weifang, professor of education and Party Secretary of Peking University, surveyed the Chinese literature on the subject and concluded that there is consensus among Chinese authors that world-class universities should have “first-class academic disciplines, a first-class teaching contingent, first-class student sources, first-class talent training, first-class scientific research results, first-class administrative and operating mechanisms, powerful financial strengths and material and technological foundation, state-of-the-art equipment, and make outstanding contributions to the country and to social development.” Altbach, in the same year, offered his comprehensive list of the characteristics of a world-class university: 1) excellence in research; 2) excellent faculty with job security, appropriate salaries and benefits, and adequate facilities; 3) academic freedom and an atmosphere of intellectual excitement; 4) freedom to pursue knowledge; 5) a significant measure of internal self-governance; and 6) consistent and substantial public financial support. On the other hand, in 2006, Henry M. Levin of Teachers College, Columbia University suggested criteria that is difficult to measure: excellence in education of the students; research, development and dissemination of knowledge; and activities contributing to the cultural, scientific and civic life of society. Most recently, in April 2011, the International Exhibition & Conference on Higher Education conference in Riyadh, Saudi Arabia produced a statement saying that a world-class university system includes research, teaching, service,
and development, and is the “engine that can drive the indigenous knowledge ecology of a knowledge-based economy.”

For this paper, I am going to use the paradigm outlined by Jamil Salmi in his recent publication, *The Challenge of Establishing World-Class Universities*. It focuses on three areas: abundant resources, concentration of talent, and appropriate governance, all of which will be described in detail in Chapter 5.

While academics discuss institutional factors and criteria, prospective students and their parents search for information on academic programs, admissions policies, and rankings at a growing number of universities. To this end, U.S. News & World Report began to rank and publish its “America’s Best Colleges” in 1983. At the time universities complained loudly that it was impossible to rank universities; they each had different students, programs, resources, and personalities. Since then, however, the magazine has sought advice from university officials on how best to compare institutions and now strives to be transparent in its methodology. Increasingly, students and parents have turned to the rankings for guidance while colleges use the comparative data to promote their institution. It has turned out to be a win-win-win situation for the magazine, prospective students, and the colleges.

In 1997, *AsiaWeek* began ranking institutions in Asia only to abandon the project in 2001 because it claimed, “these institutions do not change all that much over 12 months.” The truth is they did not get buy-in from many Asian universities including most of those in China that objected to the methodology and the fact that several Taiwanese institutions used the word ‘National’ in their names. The demand, however, for such comparative information continued to grow, especially in China, causing
institutions to take a serious interest in evaluating their performance against their competitors. As Shanghai Jiao Tong University (SJTU) began to identify benchmarks from other universities for its own strategic plan to become a world-class institution, it decided to publish its Academic Ranking of World Universities (AWRU) in 2003. The British-based *Times Higher Education Supplement* (THES) quickly followed with its World University Rankings in 2004. From 2004-2009, THES used data provided by Quacquarelli Symonds (QS), a company specializing in study abroad opportunities, but in 2010, the two organizations ended their partnership. QS, as it is known, continued to evaluate and rank universities and now publishes its own list of the world’s best 700 universities.

At the present time, China has four well-known organizations that rank universities: netbig.com, Guangdong Institute of Management, Research Center for China Science Evaluation, and the China Universities Alumni Association as China University Rankings, a site that presents thirty different rankings of Chinese universities and claims to “boil down” thousands of authoritative documents in order to offer “authoritative guidance.”

Originally designed to determine the global standing of Chinese universities, SJTU now ranks 1,000 universities from around the world annually and the top 500 are published on its website, http://www.arwu.org/. They use six objective indicators to determine their rankings: number of alumni and staff winning Nobel Prizes and Fields Medals; number of highly cited researchers selected by Thomson Scientific; number of articles published in journals of *Nature* and *Science*; number of articles indexed in
Science Citation Index - Expanded and Social Sciences Citation Index; and per capita performance with respect to the size of an institution.\textsuperscript{32}

For its part, the \textit{Times Higher Education Supplement} uses 13 performance indicators, including a peer review process, to select and rank 200 universities each year. The 13 indicators fall into five broad categories: teaching-30%; research-30%; citations-32.5%; industry income-2.5%; and international mix staff and students-5%. Accounting for 34.5 percent of the total score, 17,500 academics from 137 countries complete the Academic Reputation Survey. Their responses form significant portions of the final scores in teaching and research. Some 44 percent of respondents in 2011 were from the Americas, 28 percent from Europe and 25 percent from Asia Pacific and the Middle East.\textsuperscript{33} As we will see, complaints about Western bias persist in discussions of ranking.

QS World University Rankings considers over 2,000 institutions, evaluates over 700 universities, and ranks the top 400. Its methodology includes six indicators: academic reputation from their global survey-40%; employer reputation from the global survey-10%; citations per faculty from Sciverse Scopus-20%; faculty-student ratio-20%; proportion of international students-5%; and the proportion of international faculty-5%. Like THES, QS uses the results of a global reputational survey. In 2011, 33,744 academics responded to the survey with a regional breakdown as follows: Americas-61.7%; Asia, Australia and New Zealand-47.2%; and Europe, Middle East and Africa-72%. The total number exceeds 100% because respondents are allowed to identify with more than one region.\textsuperscript{34}

Table 2 shows the rankings of the top 20 universities in 2011 as published by the three organizations mentioned above.
Table 2. 2011 Rankings of the top 20 universities

<table>
<thead>
<tr>
<th>Rank</th>
<th>University Name</th>
<th>2011-2012 Times Higher Education Supplement (THES)</th>
<th>2011/12 QS World University Rankings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Harvard University</td>
<td>California Institute of Technology</td>
<td>University of Cambridge</td>
</tr>
<tr>
<td>2</td>
<td>Stanford University</td>
<td>Harvard University</td>
<td>Harvard University</td>
</tr>
<tr>
<td>3</td>
<td>Massachusetts Institute of Technology</td>
<td>Stanford University</td>
<td>Massachusetts Institute of Technology</td>
</tr>
<tr>
<td>4</td>
<td>University of California, Berkeley</td>
<td>University of Oxford</td>
<td>Yale University</td>
</tr>
<tr>
<td>5</td>
<td>University of Cambridge</td>
<td>Princeton University</td>
<td>University of Oxford</td>
</tr>
<tr>
<td>6</td>
<td>California Institute of Technology</td>
<td>University of Cambridge</td>
<td>Imperial College London</td>
</tr>
<tr>
<td>7</td>
<td>Princeton University</td>
<td>Massachusetts Inst. of Technology</td>
<td>University College London</td>
</tr>
<tr>
<td>8</td>
<td>Columbia University</td>
<td>Imperial College London</td>
<td>University of Chicago</td>
</tr>
<tr>
<td>9</td>
<td>University of Chicago</td>
<td>University of Chicago</td>
<td>University of Pennsylvania</td>
</tr>
<tr>
<td>10</td>
<td>University of Oxford</td>
<td>University of California, Berkeley</td>
<td>Columbia University</td>
</tr>
<tr>
<td>11</td>
<td>Yale University</td>
<td>Yale University</td>
<td>Stanford University</td>
</tr>
<tr>
<td>12</td>
<td>UCLA</td>
<td>Columbia University</td>
<td>California Institute of Technology</td>
</tr>
<tr>
<td>13</td>
<td>Cornell University</td>
<td>UCLA</td>
<td>Princeton University</td>
</tr>
<tr>
<td>14</td>
<td>University of Pennsylvania</td>
<td>Johns Hopkins University</td>
<td>University of Michigan</td>
</tr>
<tr>
<td>15</td>
<td>UC San Diego</td>
<td>ETH Zurich-Swiss Federal Institute of Technology Zurich</td>
<td>Cornell University</td>
</tr>
<tr>
<td>16</td>
<td>University of Washington</td>
<td>University of Pennsylvania</td>
<td>Johns Hopkins University</td>
</tr>
<tr>
<td>17</td>
<td>UC San Francisco</td>
<td>University College London</td>
<td>McGill University</td>
</tr>
<tr>
<td>18</td>
<td>Johns Hopkins University</td>
<td>University of Michigan</td>
<td>ETH Zurich-Swiss Federal Institute of Technology Zurich</td>
</tr>
<tr>
<td>19</td>
<td>Wisconsin-Madison</td>
<td>Cornell University</td>
<td>Duke University</td>
</tr>
<tr>
<td>20</td>
<td>University College London</td>
<td>Carnegie Mellon University</td>
<td>University of Edinburgh</td>
</tr>
</tbody>
</table>

Complaints about the surveys abound, especially from countries and institutions that fare less well than those in the United States and the United Kingdom. France has expressed “indignation and consternation” because the surveys make no allowance for its unusual division into elite *grandes écoles* and mass universities.\(^{35}\) Germany funds most of its universities at the same level thereby creating many strong institutions but few with world-class status. The most often heard criticisms are: ranks are based on subjective measures instead of objective measures; ranking criteria favors research activities and ignores other important institutional functions such as undergraduate teaching and public service; there is a bias towards science and technology rather than humanities and social sciences; quantity over quality is valued in publications; rankings do not reflect an institutions’ value-added effect; and differences may not be significant enough to tell the real differences, especially for those close on the ranking “ladder.”\(^{36}\) The Chinese, in general, and Shanghai Jiao Tong University, in particular, have few complaints or criticisms as they have been at the forefront in identifying performance indicators and publishing global rankings. They are not only familiar with different rankings and methodologies, but their Graduate School of Education’s vision is to “aspire to the highest standards of scholarly and professional practice” and “emphasize quantitative research and international comparison.”\(^{37}\)

Table 3 identifies twenty-three Chinese universities in the 2011 SJTU top 500, six in the THES rankings of the top 200 universities, and twelve in the 2011 QS World University Rankings’ top 500. It is possible that stronger performance on the SJTU survey is due to two reasons: 1) THES and QS have changed their basis for rankings
several times within the past few years; and 2) the SJTU process is limited to quantitative factors and does not include subjective reputational information.

Table 3. Chinese Universities in World Rankings

<table>
<thead>
<tr>
<th>No.</th>
<th>2011 Shanghai Jiao Tung University (SJTU)</th>
<th>No.</th>
<th>2011 Times Higher Education Supplement (THES)</th>
<th>No. (number in parenthesis is 2006 THES/QS ranking)</th>
<th>2011 QS World University Rankings</th>
</tr>
</thead>
<tbody>
<tr>
<td>150-200</td>
<td>Tsinghua</td>
<td>37</td>
<td>Peking University of Science and Technology of China</td>
<td>46 (14) 47 (28) 91 (116)</td>
<td>Peking Tsinghua Fudanm Shanghai Jiao Tong Nanjing U of Science and Technology</td>
</tr>
<tr>
<td>150-200</td>
<td></td>
<td>49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150-200</td>
<td></td>
<td>58</td>
<td>Tsinghua</td>
<td></td>
<td></td>
</tr>
<tr>
<td>150-200</td>
<td></td>
<td>91</td>
<td>Fudan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>150-200</td>
<td></td>
<td>120</td>
<td>Nanjing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>150-200</td>
<td></td>
<td>171</td>
<td>Sun-Yat Sen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>201-300</td>
<td>Fudan, Nanjing, Peking m Shanghai Jiao Tong Univ. of Science and Technology of China, Zhejiang</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>301-400</td>
<td>China Agricultural Huazhong Univ. of Science and Technology, Shandong, Sichuan Sun-Yat Sen</td>
<td></td>
<td>300 382</td>
<td></td>
<td>Beijing Normal Xi’an Jiao Tong</td>
</tr>
<tr>
<td>401-500</td>
<td>Beijing Normal Beijing U of Aeronautics Dalian Univ of Technology Harbin Inst. of Technology Jilin University Lanzhou University Nankai University Southeast Wuhan, Xiamen Xian Jiao Tong</td>
<td></td>
<td>401-450</td>
<td></td>
<td>Nankai Renmin (People’s Univ. of China Tianjin Tongji Sun-Yat Sen Wuhan</td>
</tr>
<tr>
<td>401-500</td>
<td></td>
<td></td>
<td>451-500</td>
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</tr>
<tr>
<td>601-600</td>
<td></td>
<td></td>
<td>601-600</td>
<td></td>
<td>Xiamen Southeast Shandong</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>6</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These rankings have helped to cement all universities into a global network where each institution looks over its shoulder at those above or near them on the list. Of course, the marker is always moving so it is truly difficult to match the progress of established universities with large endowments. The Chinese government has done much to help Chinese universities improve facilities, hire first-class faculty, and promote exchanges. However, they have only taken baby steps in granting autonomy to universities and academic freedom to their students and professors. As such, the question remains: is China on the path to building first-class universities known around the globe for their research and innovation or are there barriers that will keep them from reaching their goal? The next chapter addresses China’s quest for world-class status, highlights their successes, and gives voice to the challenges that remain.
CHAPTER 5
ASSESSING CHINA’S EFFORTS IN BUILDING WORLD-CLASS UNIVERSITIES

China’s reach for academic excellence begins with its possession of some notable critical resources: a huge pool of talented students, a one-child policy that provides an over-abundance of parental attention, a growing economy, political “heft” for the endeavor, and a culture that values and rewards meritocracy. Few countries have China’s depth of human, financial, political, and cultural resources at their disposal. What is problematic, however, is whether China can maintain the funding levels, attract the best students, recruit and keep the best scholars, and provide the vision, leadership, autonomy, and academic freedom required to create a culture of excellence on its campuses.

In this Chapter, I will assess China’s performance to date using Jamil Salmi’s paradigm as set out in the 2009 publication, The Challenge of Establishing World-Class Universities. Mr Salmi, the World Bank’s Tertiary Education Coordinator, writes that world-class universities can attribute their ability to produce highly sought graduates, leading-edge research, and technology transfer to “three complementary sets of factors: 1) abundant resources to provide a rich learning environment and to conduct advanced research, 2) a high concentration of talent (faculty and students); and 3) a favorable governance system that encourages strategic vision, innovation, and a flexibility that enables institutions to make decisions and manage resources without being encumbered by bureaucracy.”

Abundant Resources

A stable, predictable source of money is at the top of the “hierarchy of needs” for building and maintaining a world-class university. With a few exceptions, research
institutions receive significant funding from their governments; in fact, public support is the principal funding agent in Europe. Universities also generate revenue from tuition fees, research grants, and fees for services from public and private firms. Additionally, many of the most selective universities, particularly in the United States, have large endowments that provide for budget security and the ability to focus on priorities over an extended period of time.\(^2\)

China has made the quest for world-class universities a high priority and an integral part of the country’s development plan. While there is no reason to believe that funding, per se, will be a stumbling block for China’s top institutions, there are concerns that China’s differentiated funding scheme favors the most prestigious universities over the less competitive local and provincial institutions, institutions that are increasingly vulnerable to massive debt and a slowing birth rate. This section looks at the revenue sources of the elite institutions, reviews the outlook for China’s financial stability, and identifies pressures arising from higher education’s loan obligations and the inequities in financing the higher education system.

Since the 1980’s, when all funds for higher education came from the government, an economic and cultural shift has taken place as the government decreased the percentage of its contribution, instituted tuition fees for all students, and encouraged university involvement in “commercial projects.” All of these steps were in keeping with China’s ambition to develop “high-quality higher education in the context of globalization and the knowledge-based economy.”\(^2\) Beijing’s plan is to move toward a system whereby government (central, provincial or local) provides 50 percent of expenses with tuition covering 20 percent and income from industry at 30 percent; an
achievable goal for prestigious national universities but extremely difficult for the provincial and local institutions. The reality is that as some universities prosper, the majority are relegated to mediocrity.

The elite institutions in the C9 conference have succeeded in diversifying their sources of revenue and now derive their operating funds from government, tuition, research grants, service providing, university-run businesses, and some donations. Their ability to attract research grants from the public and private sector and the government’s special programs, Project 211 and Project 985, have made a significant difference, especially since special project funds go to pay for expensive infrastructure and faculty salaries. For example, Shanghai Jiao Tong University, which has quadrupled its budget in the last ten years, recently reported its revenue stream as follows: government-20%; special government allotments, such as Project 211 and Project 985-20%, research-30%, tuition-20%, and donors-10%.

Tuition fees, non-existent before 1985, were instituted gradually in the late 1980’s. By 2005, they increased 25-fold to US$625 per year, the same year that per capita income in rural China was $376. Affordability, an issue for many outside the cities, led the Ministry of Education to place a 5-year freeze on tuition and fees at public institutions as of 2006. However, several empirical studies on the affordability of Chinese higher education show contradictory findings. Some studies show families willing to pay more while the studies that compare tuition fees with family disposable income conclude that the tuition for public institutions already exceeds what they can afford. In other words, parents are willing but unable to pay higher fees. While Beijing offers small scholarships to the brightest students and has a loan program for poor
students, the latter program has experienced implementation difficulties as Chinese banks get nervous and often ask these students to payback the loan before they graduate. Clearly, more work needs to be done to provide tuition assistance for students from poor families.⁹

Meanwhile, universities have been encouraged to create profit-making enterprises to supplement government funding. While some academic leaders in the 1990’s recognized that an over-emphasis on commercial ventures might undermine the fundamental academic mission of the university by re-directing attention away from students and basic research, others appreciated the opportunities provided for universities and their faculty by the private sector.¹⁰ These businesses now provide “significant funding for applied projects although government-sponsored research tends to be more prestigious.”¹¹ Nian Cai Liu of the Center for World-Class Universities at Shanghai Jiao Tong University argues while this research is necessary to assist industries weak in technology and provide a mechanism for raising salaries, it takes faculty time and energy away from research for purely academic interests.¹²

Now the world’s second largest economy, China’s overall financial picture is strong. The country had average annual growth rates of 9.32 percent from 1989 until 2011 with this year’s rate expected to be 9.50 percent.¹³ In 2012, with export growth slowing due to the weak global demand for goods and services, the State Council’s research center recently announced that Gross Domestic Product (GDP) is expected to be “just less than 9.0 percent followed by growth of 7 to 8 percent through 2017.”¹⁴ This new forecast paints a weaker picture than previously posited, but it still leaves China in a position to choose to fund the universities it wants to achieve world-class status.
With respect to higher education, Liu writes that there are studies that show that “GDP and per capita GDP for most of the countries with universities among the top 100 universities in the world are higher than US$210 billion and US$25,000, respectively. The total GDP of developed Chinese regions, such as Shanghai and Beijing, is expected to exceed US$210 billion, and their per capita figure is expected to be around US$25,000 in 2020, the same year the Chinese government expects Tsinghua, Peking, Fudan and Shanghai Jiao Tong University to become world-class universities.¹⁵

Despite these positive factors, China’s provision for the elite institutions, as noted, comes at the expense of other higher education institutions and is further differentially allocated among the elite universities. Using 2003 data, the universities receiving Project 985 funding “accounted for only 1 percent of the total higher education enrollments, but their key labs accounted for almost a half of the whole annual research funds, 20 percent of post-graduate student enrolment, and 30 percent of doctoral candidates.”¹⁶ Kathryn Mohrman, a professor at Arizona State University and the former of Executive Director of the Hopkins-Nanjing Center, declares that while the preferential policy is quite rational, it is, indeed, a skewed system and suggests a “return to elitism with a vengeance.”¹⁷
Table 4 shows the amounts of money given to the elite universities in 2004 as a part of Project 985.

Table 4. Education funding for elite universities in China (2004)

<table>
<thead>
<tr>
<th>University</th>
<th>Funding (yuan) (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tsinghua University</td>
<td>3.591 billion (US$538 million)</td>
</tr>
<tr>
<td>Peking University</td>
<td>2.408 billion (US$361 million)</td>
</tr>
<tr>
<td>Zhejiang University</td>
<td>1.874 billion (US$281 million)</td>
</tr>
<tr>
<td>Shanghai Jiao Tong University</td>
<td>1.461 billion (US$219 million)</td>
</tr>
<tr>
<td>Harbin Institute of Technology</td>
<td>1.443 billion (US$216 million)</td>
</tr>
<tr>
<td>Fudan University</td>
<td>1.312 billion (US$197 million)</td>
</tr>
<tr>
<td>Huazhong Univ. of Science &amp; Technology</td>
<td>1.151 billion (US$172 million)</td>
</tr>
<tr>
<td>Xi’an JiaoTong University</td>
<td>1.053 billion (US$157 million)</td>
</tr>
<tr>
<td>Wuhan University</td>
<td>1.048 billion (US$157 million)</td>
</tr>
<tr>
<td>Jilin University</td>
<td>1.047 billion (US$157 million)</td>
</tr>
<tr>
<td>Nanjing University</td>
<td>1.046 billion (US$157 million)</td>
</tr>
</tbody>
</table>

Source: Table 9, NBER Working Paper 13849. 22.

In addition to differentiated funding among the elite institutions, “under-funding has long been a problem for the Chinese education system,” and most particularly for local and provincial institutions.18 The 1993 Outline of Reform and Development of Education in China mandated that educational expenditure reach 4 percent of GDP by the end of the 20th century, but spending has yet to reach that level. Consolidated expenditures on education as a percentage of GDP reached 2.79 percent in 1999, rose marginally to 2.82 percent in 2005, and to 3.01 percent in 2007; most developed countries spend above 5 percent and many exceed 6 percent.19 In 2007, the government allocated 765 billion yuan (US$119 billion) or 3 percent of GDP, for education, of which 159 billion, or 20.9 percent, was directed to tertiary education. At the same time, enrollment in higher education institutions expanded 19 percent annually but per capita
funding did not keep pace; in fact, it decreased from 7,201 yuan in 1999 to 6,816 yuan in 2001 to 5,772 yuan in 2003 and down to 5,376 yuan in 2005. The decrease in per capita funding was due to the expansion of enrollments without concurrent expenditures for facilities and staffing, reduced funding from the rural provinces, and tuition increases that kept some students away from pursuing higher education.

To counter decreased government funding in the 1990’s, many universities borrowed large amounts of money from banks to expand enrollment, increase educational resources, and attract talented staff. Banks happily loaned money to these “ideal borrowers” believing the government would stand behind the loans. As is often the case, the borrowers got greedy and are now facing massive debts. Liu Liyun, a senior official with the National Audit Office said “more than 1,100 of the country’s universities had racked up a total debt of 263 billion yuan (US$41.5 billion) by the end of 2010. In some cases, bank loans account for over 95 percent of their financing.” Jilin University, for example, borrowed $400 million in 2000, “largely for bricks and mortar,” and the interest payments of about $20 million contribute significantly to its annual budget deficit of $70 million. To this end, the government has curbed new university expansion not in the pipeline before 2009 and told each province that it could not expect any help from the central government after 2012.

Despite government moves to write off the worst debts, the debt situation and under-funding of higher education remain urgent and practical problems for the government, higher education, and the taxpayer who will pay for them eventually. Kai Jiang, an associate professor at the Graduate School of Education, Peking University, writes that the provincial universities and vocational colleges “are being neglected” by
the government at the same time their graduates “play a crucial role in social, economic
and cultural development at the provincial levels.” The gap between the elite institutions
and the others is producing an increasingly hierarchical higher education system where
academic rules and opportunities vary widely and it is becoming increasingly difficult for
cross-fertilization to occur.

Adding to the fiscal woes of higher education is China’s declining birthrate. The
9.33 million students who took the Gaokao examination in 2011 represent a three-year
decline from the high mark of 10.5 million test-takers in 2008. The downward trend may
last until 2018 due to the fact that about 10 million fewer babies were born in 2000 over
1990. These demographic changes are already being felt by China’s newest, and least
competitive, private institutions. A report released earlier this year by China Education
Online, an internet-based educational resource operated by the Ministry of Education,
predicted “universities will struggle with money troubles during the next ten years as they
continue to enroll fewer students.”

Finally, and maybe most important, the public appears to be losing confidence in
the quality of China’s universities, especially the debt-ridden institutions as evidenced by
the growing number of students who choose to leave China every year for university
education abroad. In the United States, the number of Chinese students grew to 157,558
in 2011, a 23 percent increase over the previous year with a whopping 43 percent
increase at the undergraduate level.

With China’s economy slowing, birth rate declining, and debt burdens weighing
heavily on many institutions, it is possible that the state could reduce education
expenditures to the elite institutions. However, such a scenario is highly unlikely since
China is firmly committed to spending the money required to have world-class university for its own economic future and to show the world that it is a responsible and respected global leader. In addition, there is no public clamor for such a move since every parent desires admission to Beida or Tsinghua for their child. A longer range question, outside the scope of this paper, is whether a great nation can educate a small fraction of its population at world-class institutions while providing a mediocre education, at best, for its masses. This is a question that China will confront, but only after several of its universities gain the recognition their government expects of them.

**Concentration of Talent**

Concentration of talent refers to a university’s ability to attract a critical mass of top students and outstanding faculty. It’s the synergy of research, teaching, students, facilities, and academic environment that produces ideas and innovation and sets a university (or department) apart from its competitors. Infusions of new talent are essential, and incorporating international students and faculty is becoming an important element in elite institutions. Finally, it is in this context that Salmi argues the university must have permeable boundaries that allow and encourage interdisciplinary studies, joint projects with the public and private sector, and collaborative research with other institutions.\(^3\)

After years of admitting students based on the results of one test, hiring one’s graduates as professors, and passively accepting students from other countries, China has recognized the importance of talent and internationalization in building world-class universities and is taking steps to address these issues. The Chinese proverb “use only the best steel to make the knife’s edge”\(^3\) gives them guidance as they seek to improve the
caliber of students, upgrade academic staff, and increase international exchanges. This section will outline China’s efforts in these areas and pay particular attention to some significant hurdles; namely, student selection, attracting overseas faculty, the pressure on professors to publish and its resultant ills of plagiarism, favoritism, and corruption, and the growing pains associated with international linkages.

Students

All universities want to attract the smartest students who will learn, grow, and contribute to society. China’s robust applicant pool and examination-based admissions process ease the task, but there are issues that complicate the matter: the brutal and unforgiving Gaokao creates enormous amounts of stress on families; students are dissatisfied with the quality of undergraduate education; elite universities face problems with regional quotas and weak scholarship programs; and the central government is instituting new admissions procedures with potentially unintended consequences. This section looks at the strength of China’s talent pool as well as the challenges it faces in recruiting and enrolling the best students for China’s top universities.

As the world’s largest provider of tertiary education, China has a huge pool of more than thirty million secondary school graduates from which to draw its best and brightest. In June, 2011, 9.33 million students sat for the National College Entrance Examination (Gaokao), a two-day test often referred to as "millions of troops killing for a chance to cross a thin log over a river." Based on the results of the test, 73 percent would receive an admissions offer from a Chinese university for entrance in August 2011.
China’s culture of valuing education and promoting meritocracy, its enormous population, and its one-child policy create anxiety and financial stress as students prepare to take the Gaokao. A recent study conducted by the Chinese Academy of Social Sciences showed that education expenditures for children rank first in consumption categories for Chinese households; they outpace pension and household expenditures. The survey also claimed that the majority of children spend longer hours at school than their parents spend at work. It is not unusual for parents to hire tutors for two years before the exam, employ “exam nannies” for the days before the test, and book over-priced hotel rooms near test centers for their children. One Shanghai taxi company had more than 3,000 bookings for its taxis during the two days of the national exams. The pressure on students is enormous and many report that they “tend to feel valued solely for their grades.”

Despite such efforts to gain admission, public opinion is becoming skeptical about the quality of university education in China. The Asia Times recently reported that higher education is one of three major areas of growing public discontent (the other two are health care and housing) while a recent Internet poll reported that 68.9 percent of the respondents were dissatisfied with the quality of higher education, with only 4.9 percent reporting high satisfaction. Of specific relevance to China’s elite universities is a recent national survey showing that the lowest levels of undergraduate student satisfaction are found in China’s most selective universities. The study concluded that the primary causes are related to teaching performance caused by a shortage of well-qualified academic staff, the pressure on academic staff to focus their time on research output, policies and practices that emphasize research-orientation in the evaluation of academic staff
performance, and poor support for teaching in terms of both support staff and teaching facilities.\textsuperscript{40}

These concerns about educational quality and the pressure to perform on the \textit{Gaokao} cause many students to look abroad for their higher education. \textit{Time} magazine reported that close to one million students chose not to take the entrance exam for Chinese public institutions this year. Among them, some 200,000 chose to go to foreign universities and seventeen of the top mainland students chose to go the University of Hong Kong.\textsuperscript{41} In the United States, the growth in undergraduate students from China has been phenomenal in the last two years such that many universities are now considering quotas for students from China. In the \textit{Time} article, Xiong Bingqi, vice president of the 21\textsuperscript{st} Century Research Institute, a non-governmental organization, is quoted as saying, “We are seeing more students voting with their feet now, and the government is definitely feeling the pressure.”\textsuperscript{42}

As the elite universities seek to recruit and enroll China’s best students, some institutions feel hampered by enrollment quotas and guidelines set by the central and local governments. For example, China has an affirmative action system that allows students from ethnic minority groups to add bonus points to their \textit{Gaokao} score to help them gain entrance to universities. The national universities also have had quotas for local residents that may be as high as 30 percent of their total enrollment. This leads to a phenomenon known as “examination migration” whereby parents move to regions where their child has a better chance of university admission.\textsuperscript{43} Tsinghua University, for example, enrolled 3,300 undergraduate students in 2005, and 350 or 10.6 percent of them were from Beijing, a city that represents only one percent of China’s population.\textsuperscript{44}
Shanghai Jiao Tong University, operated jointly by the central government and the Shanghai government, is required to enroll 30 percent of its students from Shanghai. It contends that it would be better served if it could limit that percentage to twenty or twenty-five and be more aggressive in recruiting outside of Shanghai. Clearly, the universities need to work with the government to remove barriers that impinge on an institution’s ability to admit the best and brightest.

The government, for its part, is looking to adopt new admissions procedures that move away from total reliance on the *Gaokao*. This radical jump-shift is prompted by a concern that the secondary schools’ narrow focus on preparing students for the *Gaokao* does not help them develop and mature in a well-rounded manner. The *National Long-term Development Plan for Education Reform and Development (2010-2020)* calls for a change from the “one-example-decides-all” method to a thorough evaluation of the student as a whole person using multiple tests, teacher recommendations, and extracurricular activities. The government says it wants to promote diverse criteria that nurture students with professional and innovative abilities, and “narrow the gap between different schools and achieve balance rural-urban development of education.”

This idea has been implemented in a small way since 2004 with a pilot project called “Independent Recruitment” (*Zizhu Zhaosheng*). It allows 76 universities the ability to offer admission to a proportion of students (currently five percent) using teacher recommendations, essays, interviews, and alternate examinations in place of *Gaokao* scores. Beginning in 2010, five top universities began working together to coordinate the *Zizhu Zhaosheng* interviews and admissions examinations. In describing its rationale, Peking University’s website quotes former Harvard College Dean Harry R. Lewis, “The
larger objective of the selection process is not to pick people who have the best high school transcripts, but to pick people who will make a difference in the world.” It goes on to say that this is what world-class universities do to ensure the enrollment of outstanding students who will question, experiment, and work collaboratively.

As China moves towards nurturing, identifying, and producing graduates who have the ability to create and innovate, it is challenged to make changes to a trusted and traditional examination-based admissions system while maintaining public support. The new scheme has already been subjected to doubts on its fairness, equality, and openness, and the public has expressed concern that the new procedures will open the door for bribery and corruption. China needs to take great care that in its drive to promote individuality and creativity, it does not create unintended consequences, such as political dissent, and/or return to earlier periods when students gained entry to university through gift-giving and/or connections.

Faculty

World-class faculty are “highly trained, committed to research and scholarship, and motivated by intellectual curiosity.” They are attracted to universities that offer: top-notch colleagues and students; full-time positions with decent salaries, benefits and career mobility; time, facilities and infrastructure for research; long-term employment; and academic freedom. This section describes and assesses China’s efforts to recruit, reward, and promote talented academics, and highlights the recruitment challenges and problems created, among other things, by the pressure on these scholars to publish articles in international journals. Institutional autonomy and academic freedom are also
key issues for scholars considering positions with Chinese universities, and they will be addressed later in this chapter under the heading of governance.

The recruitment schemes focus on luring ethnic Chinese teaching and studying abroad back to China with higher salaries, better research conditions, preferential housing, and the ability to maintain residences and academic positions abroad. The returnees, whether born in China or in the diaspora, are known as “sea turtles” (hai guì) suggesting they were born on the shore, grew up at sea, but eventually returned to the shore again. With 892,000 Chinese studying abroad in 2008, and thousands more in faculty positions at foreign universities, China has a well-educated pool from which to draw. As we will see, however, the focus on bringing the “sea turtles” home sends a negative message to those currently studying and teaching in China and causes some resentment.

The three most significant programs for encouraging faculty members to return to China are the Changjiang Scholar Award Plan, the Chinhui Plan, and the National 111 Project. The prestigious Changjiang Scholar Award Plan was initiated in 1998 with funding from Project 985 and the industrialist, Jia-Cheng Li. Awardees must have a doctoral degree, an outstanding record in research, be internationally recognized in his or her field, and capable of developing a first-class research program at a university in China. For example, Dr. Dian Zhou, a current faculty member at the University of Texas-Dallas (UTD) and a recent Changjiang Scholar, received initial funding of nearly US$250,000 to establish a microelectronics education and research program at Fudan University and develop the Fudan Zhang-Jiang Institute in Shanghai, home to numerous semiconductor and information technology companies. Dr. Zhou continues to teach at
UTD during the regular academic year and spends his summers in Shanghai.\textsuperscript{56} From 1998 to 2007, 1,308 individuals received the Changjiang awards; most of them in the sciences and engineering.\textsuperscript{57}

The National 111 Project attracted attention when it was announced in 2005. Administered by the Ministry of Education and the State Administration of Foreign Expert Affairs, the intent is to invite 1,000 experts from the world’s top 100 universities to build 100 world-class innovation bases at China’s elite institutions. The goal is to have non-Chinese experts work with Chinese colleagues to “enhance scientific innovative competence and comprehensive competitive power.”\textsuperscript{58} To date, 662 scientists have been selected and 310 of them are now working at Chinese research universities.\textsuperscript{59}

The Chinhui Plan, established in the late 1990’s, allows Chinese scholars teaching or working abroad to come to China for short-term research purposes. Interested scholars can use summers or sabbatical leaves to teach or carry out research on Chinese campuses either independently or cooperatively with faculty at Chinese universities.\textsuperscript{60}

Shanghai Jiao Tong University (SJTU) is an example of the difference made by the three government programs and its own faculty development program. From 1998 to 2008, SJTU increased its teaching and research staff from 1,753, with 15 percent holding a PhD degree, to over 2,900 full-time faculty members degree with 64.4 percent holding the doctoral degree. The university also increased the percentage of faculty members holding PhD degrees from foreign universities from 5 percent in 2004 to 12 percent in 2008, and following the principle of “selecting the best,” it prefers to leave vacancies unfilled rather than “fill them with inadequately skilled staff.”\textsuperscript{61}

Despite these energetic efforts, all of which focus on the sciences, the results have
been modest and some unanticipated consequences have come to the fore. First, the majority of Chinese students who went abroad for study have not returned home over the past 20 years. Philip Altbach and Wanhua Ma in their Spring 2011 article, “Getting Graduates to Come Home--Not So Easy,” note that the number of returnees has “only improved modestly despite China’s impressive economic and academic growth”\(^6\)

Second, they believe that those who have returned may be late-in-their-career professors from not well-known institutions while top ranking Chinese academics from the best Western universities have not been willing to return permanently.\(^6\) Their assessment agrees with a study by Graeme Hugo in which he looked at the destination of academic staff leaving Australia with the origin of those arriving between 1993-94 and 2005-06. Hugo found that of the 647 academics that arrived from China during that period, only 62 had left the country. Hugo concludes, “A commonsense interpretation is that those academics willing to emigrate are self-sorting; leveraging the best pay and conditions they can obtain with their experience and expertise.”\(^6\) The pull to return to China appears to be weak for Chinese gainfully employed in other countries.

Additionally, poorly designed recruitment procedures have caused conflicts between overseas returnees and locally trained staff, as well as between recent returnees and those who repatriated many years ago.\(^6\) An article in *Science* in 2008 noted that some of the “sea turtles,” hired without solid vetting, had a tendency to pontificate as they went about their “easy moonlighting gigs.”\(^6\) In the same article, Bo Li, an ecologist at Fudan University, quipped, “We call them ‘sea weed.’”\(^6\) In addition, the returnees usually earn much higher salaries than local academics thereby creating envy and morale problems. The returnees, on the other hand, are often unfamiliar with Chinese academic
culture and have their own challenges fitting into the system. Many feel professionally isolated leading Rao Zihe, president of Nankai University, to recruit entire teams because “you really need collaboration and interaction. If you are the only one, there are not enough resources.”

Some highly qualified Chinese-born academics are forsaking overseas posts to devote their energies to building China’s education system, but the sense is that the best scholars will not return as long as the working conditions -- salaries, facilities, secure funding for research projects, collaborative relationships, and academic freedom -- are stronger in other countries. Altbach and Ma suggest that the best alternative “is to build ties with these academic ‘stars’ and create ties that can yield practical results that will neither harm the local academic culture nor demand impractical results.”

Salaries and Promotions

Beginning with Peking University in 2003, many elite institutions changed their salary and promotion policies in order to rid themselves of mediocre performers and encourage professors to produce higher-quality research. Since the founding of the People’s Republic in 1949, faculty members have been employed in an “all-tenure” system and provided with ‘an iron rice bowl’. Salaries were more or less the same regardless of their qualifications and contributions. The new system of variable pay aligns more closely with China’s migration to a market economy and pushes faculty to be more productive and compete against their colleagues, but it has caused some professors to feel at risk and under high stress. This section describes the problems associated with the new salary scheme and promotion policies, particularly as they impact on China’s goal of building world-class universities.
Faculty salaries at Chinese universities are a composite of base salary, subsidy, and fringe benefits. Peking and Tsinghua Universities reorganized their salary system by setting up nine ranks of base salaries. There are three categories (A, B, C) and each category contains three ranks. The assignment of rank for the base salary is calculated by combining teaching hours, amount of research funds generated, and quantity of publications in national core journals. Each university determines its own subsidies and the differences between all universities can be as much as 50,000 yuan (US$7,500) at the highest level and 3,000 yuan (US$450) at the lowest, representing a striking 17-fold difference. Despite this, the subsidies have allowed most professors to live a middle-class life and not have to depend on outside jobs to make ends meet.

In terms of promotion, lifelong employment is granted only to full professors. Assistant and associate professors in the arts and sciences and lecturers in all subjects are offered three-year employment contracts. These contracts often stipulate that a specific number of papers, usually three per year, must be published in international journals. It is an “up and out” system whereby associate professors in the arts stream are allowed four renewals for a total of twelve years of employment while associate professors in the science stream are limited to three renewals for a maximum employment of nine years. Failure to be promoted leads to automatic dismissal.

These new salary and promotion schemes, in effect less than ten years, have their supporters and detractors. Xiangming Chen, a researcher and teacher at the Institute of Higher Education, Peking University, notes that the new pay system has improved living standards to the point where most faculty members now own their own housing and some have been able to buy a car. He also believes the time-consuming annual review process
has been beneficial and encourages collegial cooperation. On the other hand, Manhong Lai’s study shows that most academics at Peking University have conformed to the system that was imposed on them, but many consider it “inhumane” to ask a colleague to leave after years of contributing to the institution. As an associate professor said of his colleagues, “most of them silently recognised it, some have accepted it, even been passively led by it. To not work in accordance with the reform would mean that you would not work at all.”

While disagreement exists about the value of salary and promotion schemes, everyone seems to agree that faculty is under enormous pressure to research, write, and publish scholarly articles in academic journals. The pressure comes from China’s desire to improve the quality of its academics, move aside those who are not productive, promote those who are actively engaged in research and writing, and prevent “tenured professors from getting ‘too relaxed’ to work hard, especially the younger full professors.” In addition, the push comes from what Ka Ho Mok and Ying Chan call a “late developer mentality.” The term refers to China’s urgency in seeing its universities rise in global rankings, such as those published by SJTU, THES, and QS, all of which place great weight on the number of articles indexed in the Science Citation Index - Expanded and the Social Sciences Citation Index.

The “publish or perish” atmosphere accounted for the doubling of Chinese annual scientific output between 1997 and 2004 based on the number of peer reviewed scientific articles. In fact, the number of cited articles in international publications by China’s top universities in 2009 approached or exceeded the number by the world’s most prestigious universities, including Harvard, Stanford, and Cambridge.
This emphasis on research and publication, however, comes at a cost. The first complaint, as noted earlier, comes from the students who feel that research and knowledge production are “over-emphasized” at their expense, and they are being neglected. The second, and more important concern relating to staffing of world-class universities, is that “the originality and quality of journal articles contributed by Chinese researcher still badly needs improvement.” Jiang sums it up by saying that many of the articles are “short, superficial, and quick.” They are also not as influential as they might be, as noted by the fact that China ranked fourth among nations in 2004 in terms of the quantity of scientific output, yet it ranked seventh in terms of the country with the most frequently cited papers. China’s steep rise in submitting articles to international journals also has created a negative buzz in the international academic community. Li, Whalley, Zhang and Zhao report that due to the number of submissions of poor quality, “rejection rates are increasing sharply and the quality of referring is even being called into question due to the volumes of submissions.” In addition, the burgeoning number of articles for publication has encouraged relatively low status journals to grow in number. This proliferation of poorly researched and quickly written articles, while intended to strengthen the faculty, actually is harming the reputation of China’s academic community and making it more difficult for their institutions to attract well-known scholars.

While weak research is an important issue, the most serious problems resulting from the “publish or perish” policies are plagiarism, favoritism and corruption. As Albert Lee of Hong Kong Baptist University writes in a letter to Science magazine, “Under the rank- and status-conscientious culture, together with the money incentive, data fabrication and duplicate publication should be expected.” Furthering his argument, a
recent study by China’s Wuhan University estimated that academics and students spend US$100 million annually for ghostwritten academic papers,\textsuperscript{88} while a survey of 160 academics by China Daily found that sixty percent said they had plagiarized some part of their work.\textsuperscript{89} Such an environment has produced a number of high profile scandals. For example, the international journal, \textit{ACTA Crystallographica Section E}, retracted 120 papers, submitted since December 2009, from Chinese scientists with seventy of them from one university in Jiangxi province.\textsuperscript{90} In another well-publicized case, Zhou Ye Zhong, a professor at Wuhan University and adviser to the Communist Party, was accused of copying large sections of a book by a former Peking University professor.\textsuperscript{91} The problem became so acute that Helen Zhang, director of Zhejiang University’s scientific publication, the Journal of Zhejiang University Science, turned to a software program, CrossCheck, to spot plagiarism in submitted articles. She said, “In almost two years, we find about 31 percent of papers with unreasonable copying and plagiarism; for computer science and life sciences, that number is almost 40 percent.”\textsuperscript{92} Plagiarism is a highly ranked academic sin; if left unchecked by university officials, it definitely will damage the reputation of China’s academic community and significantly slow the institutional process of attaining world-class status.

Factionalism and favoritism also come into play in promotions and the granting of funding for research projects. Personal connections and networks, \textit{guanxi} in Chinese, have long played a role in Chinese professional life. They influence the admission of students, the promotion of professors, the allocation of research funds, and lead to close-knit groups of faculty.\textsuperscript{93} Rui Yang’s study showed that academic promotion at Peking University is based more on personal connections than on professional achievement. He
believes this to be the case for members elected to Chinese Academy of Sciences (CAS) and the Chinese Academy of Engineers (CAE) since their official status is that of an academic authority with salary and benefits at the level of vice minister. Yang goes on to say that universities support these efforts because “CAS and CAE members are crucial in winning a range of competitions with their peers, and thus vital to the financial strength of the institution.”

Another kind of academic overlord, according to the Chinese academics Yang interviewed, is the faculty dean who appoints people on the basis of favoritism, seizes funds for personal use, and deceives supervisors while deluding subordinates. Yang concludes that this is a major reason Chinese in the diaspora choose not to return China to teach.

Many reasons (or excuses) are cited for the problems of favoritism and plagiarism. Zhang believes that part of problem is that “traditional Chinese culture values rote memorization and repetition and holds that copying a teacher’s work is a way of learning.” Morhman concludes that the “embrace of market principles” is responsible for the corruption in many areas of higher education. Two members of the Chinese Academy of Sciences, Lianghun Hu and Zongming Wang, wrote a letter to Science in response to the magazine’s piece about the number of retracted articles by Chinese professors. Entitled “China's Quantity-based Evaluation Culture is the Real Root of Misconduct,” the article compares the production of research to China’s “rich experience of being a world factory since the 1980s,” and says that “people think everything, including science, can be easily achieved by money and planning, like manufacturing plants.” The authors blame the bureaucrats for acting without scientific knowledge and designing a system that only counts outputs and ignores quality. They conclude that
many research teams are forced to publish low-quality papers with few innovations leading some of them, particularly the younger, “to conduct misconduct!”\(^9\)

To counter such practices, prestigious universities, such as Tsinghua and Peking University, are taking steps to punish professors and students who infringe on intellectual property rights, but problems remain “mostly at lower class institutions.”\(^10\) Altbach notes that in a healthy and mature academic system, problems of plagiarism, favoritism, and corruption receive immediate condemnation from the academic community and are rooted out.\(^10^1\) Zhang Ming, a professor of international relations at Renmin University in Beijing, agrees and says, “we need to focus on seeking truth, not serving the agenda of some bureaucrat or satisfying the desire for personal profit.”\(^10^2\) Failure to address these issues guarantees that that much of China’s research output will be perceived as flawed at the least and mediocre at best.

**Internationalizing the Campuses**

Globalization spurred the internationalizing of university campuses around the world. Students wanted courses with a global outlook and travel abroad opportunities to expand their horizons and improve their job prospects. Scholars took advantage of the easing of travel restrictions and Internet communication to connect with their colleagues and collaborate on joint research projects, and universities pursued joint programs and dual-degree programs with foreign institutions in order to share their expertise, attract students, and make better use of financial resources. Additionally, the two European organizations, QS and THES, use international factors when ranking the world’s best universities; the former giving a weight of 5 percent to the proportion of international students and a like percentage to the proportion of international faculty\(^10^3\) while the latter
now gives a weight of 7.5 percent to the proportion of international students and faculty as well as the proportion of research papers published with at least one international co-author.  

China is slowly opening its universities to foreign students, faculty, and institutions. Until 2005, international students were housed and educated separately on campuses “for political reasons.” With the growing recognition that an internationalized campus brings prestige, talent, tuition, diversity, cross-fertilization of ideas, and future partnerships, China is making great strides in this arena. Its economic success enables universities to attract students, faculty, and joint programs, yet there are a few bumps as we shall see. For example, only 6.4 percent of the international students are pursuing graduate studies, indicating that the quality of graduate education at Chinese universities does not yet compare with that of other countries. It also suggests that the undergraduates may be there for the experience, not the education.

Between 2001 and 2008, the average annual growth rate of international students on Chinese campuses was over 20 percent. The year 2008 was a landmark year with international students exceeding 200,000 nationwide; an increase of 14.32 percent over the previous year. While most students were from South Korea and Hong Kong, larger numbers are now coming from the United States and Europe providing more diversity for China’s universities. For example, Tsinghua University recently announced it would have 1,959 students from 112 countries in 2011, an 11 percent increase over the previous year with the United States supplanting South Korea as the largest sending country. As a way of showing China’s interest in attracting international students, the government offered 20,000 foreign student scholarships in 2010, an increase of 10% over 2009.
China also is actively encouraging its universities to enter into joint and dual degree programs with foreign universities in order to further the internationalization of their campuses and raise their global profile. A recent survey indicates that China now holds first place, with the United States coming in second, in a ranking of countries in which survey respondents said they wanted to set up collaborative-degree programs, although the U.S. remains the top choice for respondents from France, Germany and Italy.  

At the present time, more than 1,000 foreign academic institutions have some kind of collaborative arrangement with universities in China. These relationships include dual-degree and/or joint-degree programs, joint research projects, student and/or faculty exchange, and the co-organizing of conferences and symposia to promote areas of study and collaboration. Mok and Chan in their article “International Benchmarking with the Best Universities: Policy and Practice in Mainland China and Taiwan,” make the case that these efforts demonstrate “the strong determination of universities in China to reach out to the international academic community by internationalizing their research and teaching programs and international benchmarking with the very best in order to excel themselves to be part of the selected few.”  

As Shen Yang, deputy director general of the Ministry’s Department of International Cooperation and Exchange, says, “We want to welcome more high-caliber, world-class universities to come to China to participate in our development.”  

As the linkages develop, however, questions arise about trust, costs, academic freedom, and institutional autonomy. The trust factor becomes a problem when institutions do not share the same goals. For example, China is looking for ways to
introduce Western teaching strategies while most foreign institutions want access to fee-paying students. As Patrick Horgan, the British Council’s China-programs Director, says, “China’s invitation to foreign institutions serves its own development agenda and is not the result of a philosophical commitment to openness.”  

Financial issues also arise as the institutions develop joint programs. In some cases, Chinese students balk at paying the full price for U.S. degrees offered in China. In the case of the joint-degree program between Duke University and Kunshan University in Shanghai, rising cost estimates have created tension between the two institutions. With campus construction costs skyrocketing from a budgeted US$11 million to US$37 million, both sides are frustrated and construction of the building to house Duke's Global Health Institute has been postponed for financial reasons.

Additionally, Duke’s home campus faculty in Durham, NC has expressed professional concerns about the lack of academic freedom, internet access, and faculty involvement. Like Johns Hopkins and other joint U.S.-China university agreements, Duke’s agreement does not restrict formal or casual speech, writing, and/or research within the classroom, in what’s known as “protected space,” but it does not allow opinions on all subjects to be expressed outside the classroom. As June Teufel Dreyer, a University of Miami political science professor and China specialist notes, “In their enthusiasm to be part of the Chinese educational picture, American universities may be ceding some measure of their independence to avoid offending the government.”

In looking toward the internationalization component of world-class universities, China recognizes that universities such as the University of Oxford and Harvard University have THES scores of 91.9 and 67.5, respectively, in the area of international
exchange and collaborative research while Peking University’s score is 51.7 and Tsinghua University’s is 33.4. Both scores are lower than their foreign competitors, but much higher than those of their Chinese counterparts.\textsuperscript{119} As research projects mature, linkages get sorted out, and exchange programs become institutionalized, China’s universities, faculty, and students will benefit and grow if trust can be built with partner institutions, graduate education is improved, and the all important matter of freedom of expression becomes a reality. The latter results directly from an institution’s governance structure, the final leg of Salmi’s paradigm.

**Appropriate Governance**

Beginning with the University of Berlin in 1818, research-intensive universities developed governance systems grounded in institutional autonomy and academic freedom. These twin freedoms -- independence from state control of the university and the faculty’s ability to study, teach, write and speak without fear of repression -- provide the underlying value structure for open inquiry, collaboration, and the development of new knowledge: hallmarks of the modern world-class university and key to Hu Jintao’s pursuit of an economy “created in China.”\textsuperscript{120} The Chinese tradition, on the other hand, has been one of a tight intertwining relationship between government and academia with bureaucrats making decisions on university enrollments, hiring, curriculum, and graduation requirements while scholars attend to research and teaching, but not without the fear of repression or job loss. To this day, each academic institution in China has an academic administration headed by a president and a Communist Party administration headed by a party secretary.\textsuperscript{121} This section briefly describes China’s university governance system since the founding of the PRC, highlights the changes that are taking
place, and discusses key issues and concerns about autonomy, accountability, and academic freedom.

**Autonomy**

The Central Committee of the CCP took full control and ownership of the universities in 1949. In the case of Tsinghua University, Mao Zedong appointed the president, Jiang Nanxiang, whose duty was to “reform Tsinghua to become a new socialist university.” In 1978, as Deng Xiaoping was opening China to the world, the faculty at Tsinghua requested permission to choose its own president. Beijing granted the request while stipulating that candidates be Chinese citizens, members of the CCP, and have experience in both administrative and political posts -- requirements that hardened the political glue between government and academia. In fact, the high number of Tsinghua graduates in high government positions causes many to jest to this day that China is now ruled by a “Tsing (Tsinghua) dynasty.”

In 1998, the CCP’s power in university administration was on display at the 100th anniversary celebration of Peking University when Jiang Zemin made his famous speech urging China’s universities to become world-class. The celebration was held at the Great Hall of the People, not at the campus, and, according to Yuan Weishi of Sun Yat-Sen University, “the person chairing the meeting was not the president, but the party secretary. The party secretary was … at the center of the action, while the president sat in the corner like a mouse.”

The initial decision to reduce Beijing’s tight control over institutions was announced in 1985 in *The Decision on Educational Reform*. In actuality, the central government simply transferred authority to the provincial governments; it did not give
autonomy to the universities. In 1993, the government reaffirmed its decision to act as a facilitator and give autonomy to all universities through *The Program for Education Reform and Development in China*. However, based on a survey of full and associate professors at more than 200 universities in 2000, change has come slowly and unevenly. That survey showed that academic staff recruitment was the only item where more than half of the respondents (55%) thought their institution had relatively more autonomy than in the past. The majority of respondents believed that autonomy was lacking in student recruitment (70%), academic programs (66%), organization structure (65%), allocation of funds (57%), promotion (55%), income allocation (53%), and recruitment of senior administrators and department heads (52%).

Mohrman writes that since 2000, there is general agreement that presidents at the prestigious Project 985 universities, who are still chosen by the state, are playing more active leadership roles; that faculty has more autonomy with regard to curriculum, course design, and evaluation; and students are increasingly able to choose their majors and lecturers. However, tuition fees, staffing levels, and enrollment quotas are still determined by the Ministry of Education through negotiation with campus leaders.

In the recent 2010-2020 Development Plan, the government said it would “relax central control, give universities autonomy and allow presidents and faculty to run their schools.” Prompted by the quest for world-class institutions, the shift from a state-controlled to a state-supervised model -- what Yang, Vicovich and Currie call “regulated autonomy” -- presents two contradictory challenges for university leaders. First, there is room for ambiguity because the current law gives considerable autonomy to the universities, but the rights of the schools have been vaguely defined. Second,
government and industry are increasingly imposing financial and accountability pressures on university activities. Zhu Chongzhi, President of Xiamen University, echoed these challenges when he said “it is imperative to sort out the relationship between universities and the government, between universities and the society, and between the administrative units and academic units within the universities.” The Beijing Review recently made a similar point saying, “resource allocation is seldom defined in legal terms and is subject to strong administrative interference, which makes it difficult for universities to exercise sovereign decision-making powers.” This lack of clarity on the relationship between the state and the university remains a major obstacle for all Chinese institutions.

With no legal framework defining relations between the universities and the government, ambiguity allows school officials to make their own decisions and/or look the other way when they comply with decisions they do not believe are in the best interests of their institution. For example, when faculty members at a university in Hunan province asked the president to change the weight of certain courses to more accurately reflect the time required for the courses, the president told them he agreed with their suggestion but did not “have the authority to change prescribed course loads because the Ministry of Education mandated the class hours.” On the other hand, when Tsinghua’s MBA Program requested permission in the 1990’s to raise tuition fees, no answer was forthcoming. Since it was well known that Premier Zhu Rongji supported new initiatives in the program, the university took the lack of a response as tacit approval and raised fees from 20,000 yuan (US $3,200) in the early 1990’s to 60,000 yuan in 2001 to 80,000 yuan (US $9,600) in 2002. As Mohrman writes, change often “follows a pattern of small experiments that, if successful, are spread more widely. Rather than
changing the rules nationwide with the possibility of significant instability, the state can regulate the absorption of change in a more predictable way." The result is that this small-step-at-a-time cautious approach finds its way into the campus culture, discourages innovation, and hampers the very goal of promoting creativity and world-class thinking.

**Accountability**

The second issue relates to the government’s increasing accountability requirements and resulting pressure for measurable outcomes. As the government grants more autonomy, it still retains its influence “through resource allocation, program approval, project evaluation, campus visits, and numerous meetings.” Decisions about funding, promotions and projects remain with presidents, party secretaries, office heads, and deans; professors have limited impact on governance.

In a survey given to faculty and administrators at Nanjing University and Nanjing University of Science and Technology in 2004, one person commented, “the more autonomy the national government gives, the higher requirement it asks for. It requires our university to be a world-class university and the pressure increases.” Another respondent said “The MOE gave us several hundred million yuan but is always evaluating us, so how can we be free?” One professor when asked about the recent changes in campus governance gave a more poetic response. He said:

> After your shackles are untied, you are still dancing in a cage. If you undo your shackles, you will not fly away; you will dance more perfectly and more elegantly, not overcautious or perform some unqualified dance against your will.

Yang, Vidovich and Currie reported in their 2007 article, that almost all survey takers were positive about the movement towards less centralized control, but are frustrated with what they see as government meddling. One faculty members thinks that
universities are being run like businesses, and says, “the aim of a company is for pursuing maximum profits, which is the worst thing for running a university because the university is for cultivating people’s spirit and it should be full of human culture.” Rao Yi, dean of Peking University’s School of Life Sciences and Shi Yigong, dean of Tsinghua University’s School of Life Sciences sent a letter to the premier in 2010 suggesting “that the same autonomy that had been bestowed on Chinese agriculture and businesses in the 1980s, and led to rapid economic success, should be granted to education.” They argue that the micromanagement by university administrators, acting on instructions from the central government, is forcing all universities to chase the same targets and leads to a “monotony of purpose.”

On the other hand, some faculty and campus administrators worry that university self-governance means distancing oneself from the government. They fear separation would break their crucial connections and influence (guanxi) with powerful government departments, connections that lead to grants and research opportunities. Others believe that as universities gain the ability to choose their own students and move away from the Gaokao or national entrance examination, “new kinds of bribery and corruption will emerge.” The situation leaves China’s universities between the proverbial “rock and hard place.”

Both proponents and opponents of these changes ponder how China can integrate the Western concepts of university governance into China’s traditional views of government and academia. Many believe the new ideas of nurturing creativity and independent thinking in order to foster independent thinking and innovation collide with a China that cherishes obedience as a virtue. Yang, Vidovich and Currie argue that
China’s traditions, culture, and political environment encourage the government to act as “a regulator, a facilitator and a negotiator” even though today’s leaders would prefer to have more faith in the market.148

Su-Yan Pan, in her article, “Intertwining of Academic and Officialdom and University Autonomy: Experience from Tsinghua University in China,” expresses the view that a close government-university relationship benefit both parties. She says, “in exchange for giving Tsinghua more resources, the state expects Tsinghua to contribute to the state in terms of both economic modernization and socio-political and cultural transmission.”149 For Tsinghua’s part, Pan claims, it rendered better service in exchange for the state’s “blessing” and support of its graduates in government positions. She concludes that Chinese higher education institutions are not separate from the state, but an integrated part of the national modernization project; that universities should not simply fight with the government but must adopt strategies to play safely in order to benefit the nation.150 Her remarks validate the thinking of the CCP leaders who have seen higher education as an integral resource for strengthening the nation.

On the other hand, Altbach, in his most recent book, notes that it’s important for all universities, not just those in China, to chart their own paths and make their own decisions “because pressures to prove value added and relevance to their myriad stakeholders are encroaching on historic autonomy norms for many research universities.”151 For China’s universities, the governance curve, from central control to the autonomy experienced by today’s world-class universities, is long indeed. As China reaches for world-class status, it must work to “get the mix right among the trinity of the state, the market and the university sector”152 It is a daunting challenge indeed.
Academic Freedom

While opinions vary about the extent of -- and desire for -- university autonomy, there is general agreement that structural changes at Chinese universities do not translate into increasing autonomy for individual academics.\textsuperscript{153} Recognizing that academic freedom and an atmosphere of intellectual dynamism are key requirements for a world-class university, “many Chinese academics will say quite openly that their universities do not exhibit these characteristics.”\textsuperscript{154} This section looks at scholarly traditions in the West and in China, the squeezing of professors by the aforementioned “trinity of state, market and university,” and the government’s mechanisms for controlling individual academics.

When Wilhem von Humboldt systematized the concept of academic freedom in Berlin in 1818, it gave the professors the right to teach in their classrooms and conduct research in their areas of expertise but it did not include the “freedom to express views outside the professor’s area of expertise,” especially in areas of politics.\textsuperscript{155} The American Association of University Professors (AAUP) addressed the issue in 1915 and expanded the concept in 1940, with the agreement of university presidents, “to include professorial expression on topics outside of the direct academic expertise of the professor.”\textsuperscript{156} In Germany and the United States, academic freedom includes protection through a tenure system; a system that protects professors from dismissal based on their research or views on a range of topics. Altbach argues, “Where academic freedom is entirely missing or severely restricted, as is the case in a small number of countries, research universities with reasonable standards cannot be successful regardless of financial supports or resources.”\textsuperscript{157}
Unlike Western faculty members who prize individual intellectual inquiry and public debate, Chinese scholars in Imperial China, tutored in the ways of Confucius, sought a unity of knowledge and action in their roles as scholar-officials. They were expected to uphold social justice and morality with their “iron shoulders” and “cultivate the self, manage the family, govern the country, and bring peace to the world.” Unlike the Western-educated independent social critic, who can be strident and pedantic, scholars in traditional Chinese culture were perceived as “calm, gentle, modest, and wise in demeanor.” Their task was to offset the ruler’s political authority with their intellectual authority so that he would be a ‘Philosopher King.’

With the abolition of the imperial examinations in 1905, an independent intellectual class repudiated Confucian thinking and began to develop into a respected community of scholars, which, in turn, became radicalized and contributed to the founding of the People’s Republic of China in 1949. Given the opportunity to participate in the Mao Zedong’s Hundred Flowers Campaign, university-based intellectuals criticized the government only to be labeled “rightists,” silenced, and sent into exile. When Deng Xiaoping came to power, many intellectuals, embarrassed by their country’s backwardness, participated in Deng’s opening and reform movement. However, just as they began to engage in public debates, especially about democracy, the government forcibly cracked down on them on June 4, 1989 in Tiananmen Square.

Since that incident, Qiang Zha, assistant professor in the Faculty of Education at York University in Toronto, argues that most professors have decided to become academic workers, by necessity, rather than intellectual reformers. They research, study,
teach, and offer professional advice and constructive criticism in their field but rarely speak publicly on matters outside of their discipline.\textsuperscript{161}

Like their institutions, scholars are being squeezed by the economic interplay of the government, the university, and the market. Their elite status in society is being replaced by a secular one; one that encourages utilitarianism and “a one-sided emphasis on accumulating wealth.”\textsuperscript{162} Zha believes that it is this focus on the material that leads to the problems of corruption and plagiarism “due to the character of the political regime and discontinuity with the Confucian scholarly tradition.”\textsuperscript{163} Whether or not it is personal wealth that motivates the professoriate, today’s “scholars must be entrepreneurs to develop research projects, raise funds and promote their institutions.”\textsuperscript{164}

The government exercises control over the professoriate in a number of ways, including decisions about funding, denying access to information, restricting travel, and approving course offerings. As one professor reported in a recent study, “There is freedom in research except around political issues but you cannot be guaranteed funding. Funding depends on the private relationship (\textit{guanxi}) you have with the person who is in charge of funding.”\textsuperscript{165} Another respondent expressed himself more colloquially about areas of study when he said, “you cannot do research on the June 4th Incident -- its merits, demerit, historical position -- or on the Four Basic Principles -- whether to stick to them or not. But you may wish to study Bill Clinton and no one will interfere with you.”\textsuperscript{166} Clearly, Beijing has built a fence around issues that are close to home.

A significant part of the “fence” is the “great firewall” that restricts or denies information to internet users. In May 2011, the State Internet Information Office assumed responsibility for the censorship task thereby enabling the government to “keep a tighter
grip on the content available to Chinese internet-users inside the country." At the same time, university authorities nationwide restricted access to foreign websites and publications. The Chinese Academy of Sciences' Institute of High Energy Physics reported the situation in this fashion, "Our faculty's access to overseas websites have been disrupted in the past few days. Upon investigation, the reason is because some users have used circumvention tools to get access to illegal content, hence the public security bureau has blacklisted our faculty's IP." One has to wonder about the correlation between lack of access to information and poorly written academic articles and the impact of this situation on quality education.

Chinese officials also use travel restrictions to punish those who have “strayed across the murky line of public nonconformity.” Recently, Cui Weiping, 54, a poet and professor at the Beijing Film Academy was barred from giving a lecture at Harvard University and attending a professional meeting in Philadelphia. As punishment for her commentary on human rights and free speech, Cui says, “I was told I had classes to teach and that the lecture I was giving was not my specialty, but the real reason is that they want to put pressure on me, and they want to punish me.”

Finally, the government has been slow to build strong programs in the social sciences and humanities, fields that add to the richness of a university by developing new methods of inquiry and problem-solving. As Yang and Welch report, “the gap between social and natural and technological sciences still yawns.” The majority of prestigious Changjiang Scholars are in the sciences while faculty in the humanities and social sciences obtain fewer research grants, are paid less and have less chance for promotion. Yingjie Wang writes that technology has pushed aside social sciences and humanities to
the detriment of the universities and notes that “one must be a member of the CAS (Chinese Academy of Science) or CAE (Chinese Academy of Engineering) to be president of a university.”

Many agree with Wanhua Ma who says, “Failing to address these (curriculum) issues will hurt the overall development of leading universities in the long run.”

The social science light bulb recently switched on, but progress is slow, reflecting Beijing’s bias towards easy-to-measure economically-tangible scientific pursuits. The challenge is that creativity and innovation require input from the humanities and social sciences as well as a somewhat more chaotic and messy environment.

Government officials, university leaders, and academics talk about the need for academic freedom, but it is widely acknowledged that informal restrictions exist in some fields; that some areas of research are “off limits,” and that certain kinds of criticism “may result in sanctions, including dismissal and on rare occasion’s prosecution.”

Angela Sorby, a professor from Marquette University in China on a Fulbright award writes that she truly enjoys working and socializing with her Chinese colleagues, but admits that they “can’t organize an independent lecture series, start a magazine, or write too critically about their own society.”

Yang Dongping, an education scholar at the Beijing Institute of Technology, summed it up recently in a newspaper article in the Southern Weekend (Nanfang Zhoomo) when he warned, “If a university does not have academic freedom as its core value, no matter how grand its buildings, how beautiful its campus and how luxurious its facilities, it’s useless to talk about world-class.”

In assessing the efforts that China has made to create world-class universities, there is no question that the country is rich with talented students and over-eager parents who will do whatever it takes for a first-class university education. The government,
through policy direction and funding, generously supports China’s best universities -- often at the expense of other institutions -- at the same time it also tackles expanding access to higher education for its population. Universities are creating long-term plans, working to attract the best scholars, and taking more control of campus actions. The challenges that remain are cultural, political, and economic in nature, and they are not insignificant. They beg the question: can a society with long-standing Confucian values, a history of interdependent government-academic relationships, and a CCP leadership intent upon retaining political control and controlling economic growth and development build world-class universities? I offer my opinions in the final chapter.
CHAPTER 6

THE CONCLUSION

It is easy to be in awe of China’s educational system. Resting on the Confucian belief in education as the path to virtue, using an examination-based system of meritocracy as its means, and service to society as its end, it has survived for centuries despite modifications, dynastic changes, periods of stagnation and internal turmoil, Western incursions into China, and Mao Zedong’s class warfare against Chinese intellectuals. Built on a history of mutually reinforcing support between officials and academics, higher education in China long has been designed to strengthen the nation and serve the state. It is this system that made it possible for Jiang Zemin to proclaim his intention in 1998 to have China’s universities march towards Harvard. It is this same tightly-woven system, however, that presents obstacles to China’s quest for world-class universities.

In 1998, Jiang’s goal of creating several world-class universities seemed audacious considering China had no modern university before the 20th century and no graduate education before 1980. Yet, it was timely as China was experiencing double digit increases in GDP, nearing membership in the World Trade Organization (WTO), anticipating hosting the 2008 Olympics, and emerging as a major player in the global economic arena. In addition, it aligned with Deng Xiaoping’s emphasis on universities serving domestic utilitarian needs and his own desire for China to “gear with the world” (yu shijie jiegui).1 Jiang’s vision also set the stage for his successor, Hu Jintao, to promote China as a global player in a “harmonious world” (hexie shijie) and to call for a transition of the economy from “Made in China” to “Created by China.”32 Finally, having
world-class academic institutions serves the nation’s desire for global recognition or "face," as well as the public’s thirst for a symbolic end to their "century of humiliation."

China’s efforts to create top-ranked universities have been monumental and its results impressive. Yet my research leads me to agree with Philip Altbach’s conclusion that “a kind of ‘glass ceiling’ will soon be reached.” While significant human and financial resources have contributed to the building of several high caliber institutions, world-class status will continue to elude the institutions themselves, the party, and the country. The obstacles are: lack of institutional autonomy and academic freedom; constraints and pressures on faculty; corruption in the system; and some cultural confusion resulting from the overlay of Western techniques on Chinese learning. It is the position of this thesis that unless these issues are resolved, Chinese universities will remain institutions that excel at passing information to the next generation. In other words, they will not be able to graduate students who are excited, adventurous, creative and innovative; the very people they need to make China a prestigious global leader. Remarks about each of these obstacles, along with my opinion about their long-term resolution, conclude this thesis.

For more than 200 years, the world’s best universities have been independent of governmental control and bureaucracy and left to pursue a mission of seeking truth freely. Their emphasis has been on the cultivation of the individual rather than China’s model of educating for society. However, since Beijing launched the “modernization” of science and technology as one of the “Four Modernizations” in the late 1970’s, the state has extended limited authority and some financial responsibility in order to upgrade its universities. Meanwhile the state maintains strict control over the universities politically,
financially, and administratively. It has decision-making power over the admission of students, the curriculum, the criteria for the awarding of degrees, the appointment of presidents, the selection of new members of the professoriate, and the basic direction of the academic work of the institutions. The state decides on the allotment of state funds and research grants. The parallel governance structure of academic and party officials with the party secretary enjoying a higher rank and greater influence than the president, lends credence to the belief that state officials control the central elements of campus life. World-class universities, on the other hand, are independent academic institutions that see their mission as “transcending the boundaries of the nation-state, educating for global perspective, and advancing the frontiers of knowledge worldwide.” For Chinese universities to meet this standard, the state will need to loosen its leash and allow universities to choose their presidents, hire their faculty, admit their students, and set their own scholarly agenda. The problem for the government, however, is that the “loosening” could bring about its greatest fears; i.e., instability and loss of its monopoly on power. Therefore, it’s more likely that the state and academic will remain tethered and the glass ceiling will remain in place.

The party’s active involvement in academia is also responsible for the lack of professorial freedom, the single most significant obstacle to building world-class universities. Until professors are able “to teach without constraint in their field of expertise, do research and publish, and express themselves in the public space,” Chinese universities will not be able to compete for world-class faculty. As the title of an Altbach article says, “It’s the Faculty, Stupid,” that creates the all-important open, collaborative, truth-seeking atmosphere of academic excitement and excellence on university
When professors do not have full access to the internet, when they cannot speak, write, and/or teach on matters of concern to them, when certain subjects are off-limits, and when “video surveillance, physical threats and police detention define ‘academic freedom with Chinese characteristics’,” world-class status remains out of reach. The world’s best scholars simply will not accept offers of long-term employment from universities that place restrictions on their academic freedom. In China’s case, this critical issue, as with the issue of autonomy, requires a political reformation that permits -- and even encourages -- dissent. Because of China’s large population and the party’s non-negotiable need for control, it is unlikely that the reform needed to provide academic freedom will come about in the near future.

In addition to the lack of academic freedom, professors also face daily political and economic pressures as they not only strive to do their jobs while adhering to the party line, but also, at the same time, learn how to operate in the new socialist market economy. In such an environment there is little room for scholarly debate and intellectual exploration, and no “patience for the long gestation periods required for fundamental research.” Professors direct all their efforts toward publishing articles in order to get promoted. They fight over power and material gains, and feel “caught between the pull of the old bureaucratic controls and the push of market forces.” Qiang Zha believes this market-centered orientation has lead directly to problems of plagiarism, corruption, and favoritism. Such problems must be solved if China hopes to participate at the highest levels of the global academic community. While many of the China’s elite universities have taken a strong stand against plagiarism and fraudulent credentials, these problems, which strike me as wide-spread, still exist at lower level institutions. The best solution is
for China’s academics to come forth, take a strong stand against these issues, and raise the global trust level in Chinese scholarship.

Additionally, at the institutional level, the granting of research funds or the hiring of faculty is too often done on the basis of personal relationships or gift-giving rather than on the basis of merit and scholarly work. Rui Yang, in his 2005 article entitled “Corruption in China’s Higher Education System: A Malignant Tumor,” notes that it is not uncommon for the government and universities to allow a substantial percentage of grant money to go directly into the researchers’ own pocket; and that decisions regarding awards, promotions, and bonuses sometimes are determined more by “power than qualifications.” In China, it seems that personal greed and a market economy without legal protections have created an environment where this type of behavior is allowed and/or expected. In healthy academic systems, such behavior is rooted out and condemned as quickly as possible and this is what needs to happen in China. As Zhang Ming, a professor of international relations at Renmin University in Beijing says, “If we don’t change our ways, we will be excluded from the global academic community.”

Finally, for China’s university system to be excellent, it must be, as Ruth Simmons, President of Brown University says, “founded in the culture of the society in which it is located.” Since the Self-Strengthening Movement in the late 19th century, China has struggled to weave Western techniques into its traditional Confucian pattern of “social relationships and illustrious principles.” In its pursuit of economic development and world-class universities, China has borrowed freely from the West. These efforts, however, have largely been “imitative rather than creative” and have caused many professors to feel they are “victims of a kind of Western academic hegemony they cannot
An example of this dichotomy between those who expressed an “international outlook” and those who harbored “homeland feelings” was apparent as Peking University tried to reform its promotion policies. The officials quickly learned that the Western notion of rewarding individuals who performed better than their peers with higher salaries was at odds with Chinese cultural belief in an “all-tenure” system and they slowly backed down. This was a good illustration of “China’s long-standing struggle to strike a balance between dominant Western models and carrying forward its own rich cultural and education traditions.”

The solution to the challenge of integrating Chinese culture and Western learning is outside the scope of this thesis, but I believe that given time, patience and the growing need for our biggest problems to be solved globally, rather than nationally, we will see an increase in the quantity and quality of scholarly collaborations, exchanges, and joint-degree programs. These programs will bring Chinese scholars closer to the global community of researchers and help set new markers for world-class status. In the meantime, however, China’s academics need to find ways to pushback against unrealistic publication goals, eliminate plagiarism, work against corruption and begin to fight for an independent professoriate.

In conclusion, China deserves huge applause for upgrading its elite universities. The facilities, faculty, students, programs, and internationalization efforts are much stronger today as a result of China’s keen focus on world-class status. Yet, China’s march towards Harvard, its quest for world-class universities, and its hope for an economy based on “Created in China” will not be possible until the state-university relationship is untangled and political reform brings about academic freedom. If these changes become
reality, the world has every reason to expect and support China’s participation in the highest ranks of global scholarship.
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