HIGHER EDUCATION AND AUTHORITARIAN RESILIENCE: THE CASE OF CHINA, PAST AND PRESENT

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The Case of China, Past and Present

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In an influential essay on the political consequences of economic development, political scientists Bruce Bueno de Mesquita and George W. Downs identify access to higher education as one of the most important types of public coordination goods, the supply of which poses an existential threat to authoritarian rule. They argue that “[a]round the world, from Beijing to Moscow to Caracas, authoritarian regimes seem to be well aware of the dangers of providing coordination goods to their people, and they refrain from doing so with remarkable consistency.”2 The suggestion that authoritarian endurance hinges upon denying citizens access to higher education is consistent with a large body of literature establishing the powerful role of disaffected intellectuals in sparking revolutionary change in non-democratic societies.3 As Bueno de Mesquita and Downs explain, “advanced education facilitates the creation of a large

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1 This paper benefited greatly from comments by participants in the Holbrooke Forum on Authoritarianism in Global Context held at the American Academy in Berlin in the summer of 2015. I am particularly grateful to fellow participants Martin Dimitrov, Linda Cook, Nara Dillon and Natalie Koch for many helpful suggestions. In addition, I acknowledge with appreciation the constructive contributions of Peter Bol, Nancy Hearst and Benjamin Read.


3 See, for example, John H. Kautsky, Political Change in Underdeveloped Countries: Nationalism and Communism (New York: Wiley, 1962).
pool of potential opposition leaders, thereby increasing the supply of rivals to the incumbent government.”

Less explored in social science studies of authoritarianism is the other side of the coin: the pivotal role of acquiescent intellectuals in sustaining autocratic rule. In fact, autocracies do not always withhold public access to higher education; the more sophisticated authoritarian regimes actively support (and shape) institutions of higher education with an eye toward winning the allegiance of the intelligentsia and thereby prolonging their reign.

**Imperial China: The State-Scholar Nexus**

In analyzing the institutional mechanisms that sustain autocracies, it is worth a brief excursion back in time to consider the most durable authoritarian political system in world history: imperial China. Two millennia of Chinese imperial rule offer rich material for generating hypotheses about the bases of authoritarian resilience. Moreover the surprising success of the contemporary People’s Republic of China (PRC), where a largely unreformed Communist Party has presided over stunning and sustained economic growth, renders that country’s long experience with authoritarian rule of particular relevance. Inasmuch as PRC leaders and Party theoreticians frequently point to the Chinese past as a source of valuable lessons for present-day governance, consideration of China’s historical record is of more than arcane academic interest.

Historians agree that a key institutional underpinning of the Chinese imperial state was the Confucian examination system, which served for centuries as a mechanism to attract, evaluate, and enlist intellectual talent for government service. The origins of this ingenious system extend as far back as the Han Dynasty (206 BC – AD 220), although it was during the

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4 Buena de Mesquita and Downs, “Development and Democracy.”

5 See, for example, Liang Yanhui, ed., 梁妍慧主编, 党的群众路线教育实践活动案 [Cases in the Party’s Mass Line Education and Practice Campaign] (Beijing: Central Party School Press, 2013), which opens with dozens of examples of successful governance techniques drawn from the Chinese imperial past.
Tang and Song dynasties (7th to 13th centuries) that the imperial-sponsored examinations, supported by a network of Confucian academies (shuyuan 书院), developed into a comprehensive and systematic means for educating and selecting officials. Blind examinations were introduced in the 11th century, and by the early 12th century a state-funded nationwide school system had been established. Higher education, tailored to success on the imperial examinations, was thus closely associated with state authority. In this respect, the Chinese situation differed from that of other premodern societies where higher education served to legitimate religious rather than political authority.

By assigning quotas of different ranks of examination degrees (which afforded opportunities for government appointment) to all provinces and prefectures, the state was able to command the attention and allegiance of educated men throughout the realm. Qiang Zha explains,

Ever since the Han dynasty, formal institutions of scholarship had been a part of the structure of imperial rule, and a system of written examinations was gradually developed, which opened up an opportunity for young men to compete for positions in the imperial bureaucracy. Higher learning was thus a formalized part of the state system of rule, and those selected through these examinations were given positions of great responsibility on a meritocratic basis.6

By socializing and schooling bright, ambitious young men for government service, higher education in imperial China constituted a cornerstone of political strength and stability that helped sustain the system for centuries.

Only a miniscule proportion of exam takers, generally on the order of 1-5%, were actually awarded imperial degrees, but the fact that all males – regardless of regional location or

class status – were in theory eligible to sit for the civil service examinations, endowed the institution with an aura of egalitarianism and inclusivity. Because examination essays were read blind, the process contributed to an impression of fairness rather than favoritism – even though in fact the great majority of degree recipients hailed from exceptionally wealthy families (able to afford the classical education necessary for success on the exams) who lived in exceptionally prosperous places (able to support high-quality Confucian academies).7

Despite the elitism of outcome, the meritocratic and impartial reputation of the Confucian examination system made it a mainstay in upholding the legitimacy of the imperial Chinese state. While the content of the exams was ethical and abstract, calling for the recitation and interpretation of approved literary and philosophical texts, the system nevertheless served a number of pragmatic state purposes: unification of the written language, homogenization of political culture, standardization of academic curricula, and – most important of all – cooptation of the intelligentsia. The promise of official position for successful examinees generated a high degree of loyalty and compliance among the educated. Degree holders who did not occupy bureaucratic posts, known as “literati” or “gentry” (shenshi绅士), also performed critical grassroots governance functions in their native places, helping to carry out such tasks as education and moral instruction, tax collection, public works projects, mutual surveillance, and militia mobilization.

The genius of the imperial system lay in its ability to induce those with education and ambition to channel their energies in directions supportive of state authority. Historian Arthur Wright explains, “the literate elite . . . had entered into alliance with the monarchy. The monarch provided the symbols and the sinews of power: throne, police, army, the organs of social control.

7 Benjamin A. Elman, A Cultural History of Civil Examinations in Late Imperial China (Berkeley, CA: University of California Press, 2000); Benjamin A. Elman, Civil Examinations and Meritocracy in Late Imperial China (Cambridge, MA: Harvard University Press, 2013).
The literati provided the knowledge of precedent and statecraft that could legitimize power and make the state work."8 This symbiotic relationship between state and scholar was forged as early as 124 BC with the establishment of an imperial academy to offer officially approved instruction in the Confucian classics; by the mid-second century AD, the academy enrolled more than 10,000 students – many of whom were tapped for government service.9

Six hundred years later, the Tang emperor’s founding of the Hanlin Academy further solidified the nexus between the imperial court and the literati. A chief duty of the Hanlin Academy was to write imperial edicts and other official documents in proper literary style. Literati examination papers were graded, and the results publicly announced, by state authorities. While the imperial state exercised the prerogative of ranking and licensing academic merit, scholars themselves enjoyed the prestige and material benefits of state-conferred recognition. Soon other Confucian academies, both public and private, sprang up around the country to train native sons for the examination.10 The spread of educational institutions meant that China came to enjoy one of the highest male literacy rates of any pre-modern society; by the late imperial period, almost every family could claim at least one literate member.11

As a consequence of this mutually beneficial relationship between the authoritarian state and higher education, China was initially spared the alienation of intellectuals that undid autocracies in other parts of the early modern world. Only very occasionally did the system backfire, when – in the case of the 19th-century Taiping Rebellion, for example – an unsuccessful

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10 Zhu Hanmin, Deng Hongo, Chen He, eds. 朱汉民，邓洪波，陈和主编，中國書院 [Chinese Academies] (Shanghai: Shanghai Education Press, 2002).
exam taker decided to channel his frustration into a frontal challenge to the imperial order.\textsuperscript{12}

Although Chinese history was punctuated by frequent popular protests – tax and rent resistance, millenarian rebellion, ethnic conflict, and the like – seldom did these events include significant participation by Confucian degree holders.\textsuperscript{13} Prior to the advent of Western schools and values, higher education in China – thanks to its close connection to statecraft and bureaucratic recruitment – worked as a powerful bulwark for the preservation and perpetuation of imperial rule.

**Revolutionary Education**

In the late nineteenth and early twentieth centuries, the introduction of new ideas and institutions from abroad (through the founding of Christian colleges by American and European missionaries among other means) undermined the authority of the *ancien regime* and helped to foment revolutionary change.\textsuperscript{14} The abolition of the Confucian examinations in 1905 (in response to the anti-Christian Boxer Uprising) severed the centuries-old bond between state and scholar, and contributed to the rapid radicalization of the Chinese intelligentsia. Untethered from close association with the state, college students and their professors became a potent force for political protest. The May Fourth Movement of 1919, which called for “science and democracy” to overcome the weakness of the Chinese nation, was one notable outcome of the changed


\textsuperscript{13} In the late imperial period, literate women, excluded from the examinations, sometimes founded “heterodox” religious sects that could, especially if persecuted by the authorities, turn against the state. But such movements alarmed the gentry, who responded to the perceived threat by mobilizing local militia in opposition. Susan Naquin, *Millenarian Rebellion in China: The Eight Trigrams Uprising of 1813* (New Haven: Yale University Press, 1977); Philip A. Kuhn, *Rebellion and Its Enemies in Late Imperial China: Militarism and Social Structure, 1796-1868* (Cambridge, MA: Harvard University Press, 1970).

relationship between state and scholars.\textsuperscript{15} The establishment of the Chinese Communist Party (CCP) two years later was another. The early leaders of the CCP, including Mao Zedong, were educated intellectuals who had been politicized in large part by their exposure to Western learning.\textsuperscript{16} Their revolution, in turn, featured new forms of education – night schools for workers, part-time schools for peasants, party schools for cadres – intended to instill “socialist” values in the course of literacy instruction.

Founded by some of China’s most distinguished academics, including the Dean and the Head Librarian of Peking University, the CCP from its inception appreciated the cardinal importance of education for both popular mobilization and political control. Although many of the pedagogical practices employed by the Chinese Communist Party in its revolutionary drive to power were imported from the Soviet Union, these methods were creatively adapted to the Chinese context. And, tellingly, the techniques worked even better after transplantation and Sinification.\textsuperscript{17}

At the same time that early CCP cadres were successfully building revolutionary labor and peasant movements on the basis of grassroots education and cultural activity, the Soviet Union (under Lenin’s New Economic Policy) was also establishing networks of rural reading rooms, cultural clubs, elementary schools and local party schools as vehicles to eliminate illiteracy and promote revolutionary morality. Yet whereas in China these efforts were welcomed by the rural populace as consistent with their own attitudes and aspirations, in the USSR such initiatives elicited a rather different response among a people who often resented

\textsuperscript{17} Elizabeth J. Perry, \textit{Anyuan: Mining China’s Revolutionary Tradition} (Berkeley: University of California Press, 2012): Chapters 2-3.
Bolshevism as a violation of prevailing norms. In China, a general thirst for education (and an entrenched expectation that instruction should be imbued with officially authorized ethical and political content) rendered revolutionary education a critical weapon in the CCP’s arsenal of mass mobilization methods.

The Mao Era

After the victory of the Chinese Communist revolution, the authorities moved swiftly to revamp higher education so that it might once again serve to support rather than subvert political authority. Soon after the establishment of the PRC in 1949, the new government abolished all private colleges and universities (religious and secular alike) and implemented a Soviet-style system of specialized academies and institutes under tight Communist Party control. The only significant deviations from Soviet practice occurred when Mao Zedong personally intervened in education policy, advocating initiatives intended to blur the distinction between “red” and “expert” and to reduce inequalities between city and countryside and among social classes.

Throughout the Mao era, as the Chinese Communist Party sought a new modus vivendi with intellectuals, relations between state and scholars were fraught with tension. Although Premier Zhou Enlai initially attempted to enlist the support of intellectuals in the country’s modernization drive, his efforts were cut short when the Anti-Rightist Campaign of 1957

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19 Donald J. Munro, The Concept of Man in Contemporary China (Ann Arbor: University of Michigan, 1977).
attacked hundreds of thousands of intellectuals on grounds of harboring “bourgeois thoughts.”  
A consequence of this draconian campaign was that many of China’s brightest minds were silenced or subjected to labor reform for years on end.

When China moved away from the Soviet orbit in the late 1950s, Mao called for a new model of higher education to underpin his Great Leap Forward which would combine firm party committee leadership with “mass line” practice and a blending of education and productive labor. Schools were to run factories and factories to run schools. This radical style of pedagogy was supposed to become universal within fifteen years; to accommodate increased enrollments, the number of institutions of “higher education” jumped from 229 to 1,289 in the space of three years. In subsequent pronouncements before and during the Cultural Revolution (1966-76), Mao made clear that these institutions should focus on political education for worker-peasant-soldier students. Hands-on knowledge of “class struggle” was deemed more valuable than academic or professional training. The Cultural Revolution witnessed another state-sponsored assault on intellectuals, this time carried out by student Red Guards. Most institutions of higher education ceased to function as such for much of the Cultural Revolution decade.

The Deng Era

Only after Mao’s death in 1976 did Deng Xiaoping and his colleagues show renewed interest in Western models of higher education as a means of enlisting intellectual talent to facilitate their ambitious program of economic reform. High on the agenda of the post-Mao regime were international academic exchanges intended to provide world-class training for a new generation of educated youth who could lead China’s modernization effort. Among the most

popular of Deng’s higher education reforms was the reinstatement in 1977 of a national meritocratic examination for admission to university. The “Class of ‘77,” as the first cohort of successful examinees came to be known, replaced the Maoist “worker-peasant- soldier” students whose university admission had been based upon political activism and workplace recommendations.

Although higher education in the early reform period remained both free of charge and highly selective, the selection criteria were vastly different from those that had obtained in Mao’s day. The new system initially enrolled less than one percent of the college age cohort, but the fact that the entrance examination [gaokao 高考] was open to everyone, and was graded blind by state-appointed scholars, endowed it – and by extension the state that sponsored it – with instant legitimacy. Even today, despite widespread criticism of the rote learning and “studying to the test” that the gaokao encourages, its reputation for incorruptibility continues to sustain it. (Moreover, the popularity of the gaokao has led to the introduction of competitive examinations for recruitment to all manner of jobs in the PRC – from civil servants to hair stylists. With unemployment, or underemployment in the case of university graduates, a growing problem in contemporary China, the apparent objectivity of an examination-based selection process is an effective means of defusing potential resentment.) The meritocratic ideal remains a powerful source of legitimation in contemporary China.23

The prestige that accompanied success on the gaokao encouraged a heady sense of both elitism and activism on the part of the Class of ’77 and its immediate successors. One consequence was a series of dramatic public demonstrations in which privileged university students, claiming to be the conscience of the nation in the May Fourth tradition, called for

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“democracy.” From Democracy Wall in 1978-79 to the student protests of 1986-87 to the Tiananmen Uprising of 1989, university students demanded a greater voice (for those with higher education if not necessarily for all Chinese) in the political system.

Initially the student demonstrators, having benefited substantially from the post-Mao reform policies, did not intend to challenge the Communist system. In launching their protests, students believed that they enjoyed the support of a reformist wing of the CCP (led by Deng Xiaoping, Hu Yaobang and Zhao Ziyang) which would welcome their activism as an asset in factional struggles against hard liners within the leadership. But over time the scale and scope of the protests escalated. The acceleration was propelled by several factors. The 1980s witnessed a major expansion in both the number of universities and the number of university students. Government spending on higher education did not experience a commensurate increase, however, causing a noticeable decline in both the quality of instruction and the standard of living of faculty and students alike. Employment prospects for university graduates suffered, a situation made worse by the state’s retreat from the system of guaranteed job assignments (fenpei 分配) that had been a hallmark of Maoist socialism.24 Grievances generated by these developments were an important precipitant of the string of “democracy” movements that Chinese students launched throughout the 1980s. Student mobilization was further facilitated by a steady loosening of the political control system at Chinese universities that also took place during the initial decade of the post-Mao reform period.25

These trends culminated in the protests of 1989, as millions of ordinary citizens (angry about double-digit inflation, among other common concerns) joined university students and

faculty in massive demonstrations that paralyzed major cities around the country for weeks.\textsuperscript{26} When protesters, frustrated by the lack of government response, began to call for Deng Xiaoping himself to step down, the specter of a politically powerful cross-class alliance along the lines of Poland’s Solidarity convinced Deng and his colleagues that the political system was in mortal peril and that military repression was therefore the most prudent response.\textsuperscript{27}

The June Fourth Massacre brought an immediate end to the Tiananmen Uprising, but the collapse of Communism across Eastern Europe later that year, followed soon thereafter by the dismemberment of the Soviet Union, heightened anxiety among PRC leaders about the durability of their own political system. In light of the unsettling student activism that had snowballed in the post-Mao era, a top priority of the party-state was to ensure that Chinese universities would henceforth no longer serve as springboards for politically threatening protest.

**Post-Tiananmen: A New State-Scholar Nexus**

In the more than twenty-five years since the momentous student-led Tiananmen Uprising of 1989, China’s university campuses have been notably tranquil. The situation is particularly striking in light of the veritable explosion of popular protest found among virtually all other sectors of post-Tiananmen Chinese society.\textsuperscript{28} Land conflicts by rural villagers, labor disputes by urban workers, environmental protests by a rising middle class – to name only some of the most prominent varieties of popular resistance – contribute to an impressive level of contention in contemporary China. Yet, in the midst of this widespread social ferment, college students and their professors have remained conspicuously quiet. The sole exception to this quiescence has been their participation in state-sanctioned nationalistic demonstrations against foreign

\textsuperscript{26} Jeffrey N. Wasserstrom and Elizabeth J. Perry, eds., *Popular Protest and Political Culture in Modern China* (Boulder, CO: Westview, 1994).


“militarism.” Such compliance obviously cannot be attributed to any inherent passivity on the part of Chinese academics. Prior to Tiananmen, every generation of twentieth-century Chinese intellectuals from May Fourth to June Fourth engaged in politically consequential protest. Moreover, the recent “Sunflower Movement” in Taiwan and the “Occupy Central” demonstrations in Hong Kong attest to the continuing propensity of university students in other parts of Greater China to mobilize large-scale political protests.

The success of the PRC’s current strategy for maintaining campus calm reflects important lessons gleaned from the searing experience of 1989. After June Fourth, the party-state reinstated and reinforced the previous system of political controls on university campuses. In subsequent years, a number of new techniques for “guiding” student and faculty behavior were introduced as well. Moreover, in stark contrast to the period leading up to Tiananmen, today the major Chinese universities are awash in generous government funding. These various measures, detailed in the next section of this paper, have repaired the nexus between state and scholar, thereby restoring a central pillar of authoritarian resilience.

The result of the post-Tiananmen approach has been a remarkable turnaround in China’s campus climate. Even when potentially unsettling higher education reforms were implemented in the wake of the Asian financial crisis of 1997, Chinese universities remained protest free. In November 1998, as concern about the financial crisis mounted in China, a prominent husband and wife duo of economists (Tang Min 汤敏 and Zuo Xiaolei 左小蕾) co-authored an influential open letter to the central leadership in which they suggested that China could escape the crisis (and thereby preserve social stability) by further increasing higher education enrollments. Unlike the pre-Tiananmen era, however, this new round of expansion was designed to enrich

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both the universities and the wider economy. Tang and Zuo recommended that enrollments be
doubled over the next three to four years, and that the newly enrolled students be required to pay
for their own tuition to the tune of 10,000 yuan per student per year. They argued that Chinese
families would be willing to dig into their personal savings to give their children a college
education, thus providing the Chinese economy with a significant boost in spending and (when
taking into account the new construction and ancillary industry that would be needed to
accommodate the expanded enrollment) thereby increasing GDP by at least half a percent. This
logic resonated with Premier Zhu Rongji, and a hasty decision was made to increase both the
number of students and the price of tuition in order to grow the Chinese economy. In deciding to
radically expand college enrollments, Zhu and other top leaders “ignored opposition from the
Ministry of Education (MOE), overturned established policies, and assumed de facto control over
MOE bureaucratic power.”30 As Qinghua Wang explains, underlying this drastic reform was the
central leadership’s anxiety about regime endurance:

The rationale for Party interference was political. During the second quarter of
1999 when China’s struggle with the Asian financial crisis was at a “critical
juncture”, social stability and regime survival were the Party’s overriding
concerns. The June 1999 Decision was an emergency measure that was greatly
shaped by desire to avoid a scenario similar to “the dramatic fall of the Suharto
regime in Indonesia”, or the “élite turnovers” in other Asian countries. The Party
intended to use radical expansion as a policy instrument to boost domestic
consumption, stimulate economic growth and create jobs, as well as to delay the
entry of high school graduates into job markets, make room for laid-off workers
and reduce the unemployment rate. The scale of expansion was pushed to the
limit. The side effects on higher education were of secondary importance when
the Party considered that its rule was threatened. 31

In 1999, Chinese higher education enrolled 8.8 million students (10.5% of the age cohort); by
2006 the enrollment figure had increased nearly threefold to 25 million students (22% of the age

31 Qinghua Wang, 2014: 151.
cohort) and by 2014 the number of students exceeded 29 million (30% of the age cohort).³²

Today China leads the world in the total number of its college and university students. While the number of enrollees is projected to decline in the near future as a result of demographic trends, the percentage of the age cohort enrolled in tertiary education is expected to continue to increase steadily. The role of the state in this impressive “massification” of higher education remains central.³³ Although private schools proliferated after the reforms of 1998-99, public institutions still accounted for more than 80% of enrollments in 2008.³⁴

The higher education reforms of 1998-99 were not simply an across-the-board expansion. Convinced that China’s future development would demand elite universities able to foster the intellectual innovation required to compete successfully in the global “knowledge economy” of the 21st century, PRC leaders embraced a policy package designed to propel a handful of the country’s leading public institutions into the ranks of “world-class” universities. In short, a general massification of Chinese higher education was to be complemented by a selective pattern of strategic state investment. The effect was to make the elite universities more dependent upon state support and more attentive to state priorities. On the occasion of Peking University’s centennial celebration in May of 1998, a speech by Communist Party General Secretary Jiang Zemin launched what came to be known as “Project 985” (for the year and month of Jiang’s announcement) by which impressive infusions of central state funding were to be funneled to a small handful of universities deemed capable of becoming “world-class universities.” Project 985 had been anticipated a few years earlier by “Project 211,” a Ministry of Education initiative

³³ The seminal work on the phenomenon of massification is Martin A. Trow, Problems in the Transition from Elite to Mass Higher Education (Berkeley, CA: Carnegie Commission on Higher Education, 1973). Trow distinguishes among “elite” higher education, which enrolls under 15% of the eligible age cohort, “mass” education which enrolls 15-50%, and “universal” education which enrolls over 50%.
³⁴ Washington Post (February 12, 2012).
which showered financial resources on China’s supposedly top 100 universities, in hopes that at least a subset of them might reach “global standards” in the 21st century. But Project 985 was even more selective than its forerunner; at first limiting its support to a mere nine universities and then expanding to include an additional 34 institutions. The funding formula within Project 985 was also hierarchical: Peking University and Tsinghua University were given the privilege of being exclusively funded by the central government (with 1.8 billion RMB each for the first three years of Project 985), whereas other Project 985 recipients were forced to seek matching funds from various sources at lower levels of the political system.35

The result of this targeted funding by the central government has been a further stratification of Chinese universities, with a small number of aspiring global players on top of the pyramid structure, a sizeable number of provincial universities, independent colleges and degree-granting private universities in the middle, and a still larger number of vocational colleges bringing up the bottom tier.36 The elite universities, in a manner reminiscent of imperial academies, enjoy a close and mutually beneficial relationship with the central state. Top Party and government leaders are drawn overwhelmingly from the graduates of Tsinghua and Peking universities and often serve as honorary directors of programs at these schools.37 Administrators at the elite universities are themselves afforded the ranks and privileges of government officials. And General Secretaries of the CCP, like emperors of old, are expected as part of their statecraft credentials to take a close interest in shaping these institutions of higher education.

China’s current General Secretary, Xi Jinping, has already put his personal stamp on higher education policy by calling for “world-class universities with Chinese characteristics” in a

36 Qiang Zha, 2011: 32
37 The former and current General Secretaries, Hu Jintao and Xi Jinping, are both graduates of Tsinghua, while the current Premier, Li Keqiang, is a Peking University alumnus.
May 2014 speech at Peking University. Rather than simply imitate famous foreign universities, Chinese educators – at the top five universities at least – are enjoined to develop an alternative (if unspecified) model. As Xi explains it, “the world can have only one Harvard . . . but China can have its own Peking, Tsinghua, Fudan, Nanjing and Zhejiang universities.” The commitment to catapult China’s premier universities into world-class status (albeit with Chinese characteristics) has been accompanied by a push to globalize higher education through a host of academic exchanges and other international programs. One might have expected, contrary to the desires of the PRC leadership, that opening China’s ivory tower to an infusion of scholars and dollars from around the world would work to liberalize the intellectual climate on Chinese campuses. Yet Chinese universities remain oases of political compliance amidst the social contention that has swept much of the rest of the country.

**Sources of Academic Acquiescence**

The causes of China’s academic acquiescence are complex. First, and most obvious, is the array of control mechanisms that the party-state deploys to maintain order on university campuses. Second is a range of more subtle techniques of cultural governance designed to produce political allegiance and regime loyalty among citizens in general and students in particular. Third are the opportunities for regime-supportive civic engagement and service afforded by a recent burgeoning of clubs and associational activity. Ironically, the fluorescence of a nascent “civil society” in the form of NGOs and other voluntary associations has to date

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38 习近平在北京大学师生座谈会上的讲话（全文） http://www.gov.cn/xinwen/2014-5/05/content_2671258.htm
contributed more toward authoritarian resilience than to democratization.\footnote{Elizabeth J. Perry, “Citizen Contention and Campus Calm: The Paradox of Civil Society in Contemporary China,” \textit{Current History} (September 2014): 211-217.} Finally, and perhaps even more ironic, is the influence of the multiple metrics (and attendant rewards for good performance) that have been adopted as part of Chinese universities’ concerted bid to attain “world-class” status in the twenty-first century. Instead of bringing political liberalization, China’s impressive globalization of higher education has encouraged a frenzied “scaling” of its ivory tower that diverts interest and energy away from independent criticism in favor of enjoying state-supplied rewards for fulfilling “objective” production targets.\footnote{Elizabeth J. Perry, “Scaling China’s Ivory Tower,” in \textit{Beyond Bibliometrics – Identifying the Best} (Alexander von Humboldt Foundation, November 2014): 26-27.}

Let us consider first the control mechanisms. To combat the potential threat of campus turmoil, China’s Communist party-state has developed a battery of methods to monitor and restrain student behavior. College students are organized by “homeroom” (\textit{banji} 班级) as well as by class year (\textit{nianji} 年级), with these units headed by politically reliable peers who convey information both from and to the university administration. Peer surveillance and pressure is embedded within a professional oversight hierarchy. The cornerstone of the control regimen is made up of so-called “guidance counselors” (\textit{fudaoyuan} 辅导员), trained personnel tasked with keeping close tabs on their student charges to ensure that their beliefs and behavior do not violate approved boundaries. Although a system of guidance counselors was originally introduced at Tsinghua University as early as 1953, it assumed renewed and enlarged significance after 1989. Some of the counselors’ duties are similar to those of resident tutors on many Western college campuses: helping to resolve personal problems, offering academic advice, and generally serving as older role models for undergraduates. Unlike resident tutors at Oxford or Harvard, however, the chief responsibility of the \textit{fudaoyuan} is ideological and political. Typically young instructors
or advanced graduate students in their late twenties or early thirties, the guidance counselors (assisted by student informants) report directly to the deputy party secretaries responsible for student work at all levels of the university structure.

In recent years these control methods have been “modernized” with the aid of new techniques and technologies. For example, as in the United States, mental health facilities are now a staple feature of Chinese college campuses. But in the PRC the definition of “mental illness” is broadly construed to include ideas and inclinations that the state deems politically dangerous, and the results of mandatory mental health screening for freshmen are forwarded to political cadres for analysis and possible preventative or punitive action. Another “modernized” means of gauging (and guiding) student opinion is afforded by the spread of the internet and social media. In 2008 China passed the U.S. as the world’s biggest internet user, with microblogging via Weibo (the Chinese equivalent of Twitter) and messaging via WeChat (an alternative to Facebook) especially popular among college students. Blog postings, text messages, and other cellular and electronic communications facilitate the growth of (both virtual and actual) civil society among Chinese university students. They also enable the state to better monitor and respond to this burgeoning activism. Counselors and cadres combat subversive or suspicious content not only through censorship, but also by commissioning counter-posts that promote the officially prescribed point of view.43

The party-state deploys proactive as well as reactive measures in the effort to channel student sentiment in directions favorable to the CCP’s agenda. Since the 1990s, ideological and political education (sixiang zhengzhi jiaoyu 思想政治教育) and military training (junxun 军训) have been standard components of the university curriculum. Such classes and exercises are

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designed to inculcate regime-supportive dispositions and deportment. Of growing importance in recent years has been instruction in “cultural proficiency” (*wenhua sushi* 文化素质) and “national character” (*guoqing* 国情), which presents Chinese history, art, philosophy and literature in ways that postulate an organic connection and essential compatibility between the splendors of China’s ancient “tradition” and its contemporary “socialist” system. This is an extension of the Patriotic Education Campaign, launched in the aftermath of the Tiananmen Uprising, which highlighted both China’s national cultural heritage and its modern revolutionary experience as twin sources of legitimacy for the Chinese Communist Party.44 One expression of this renewed interest in “traditional culture” has been a renaissance of Confucian academies (*shuyuan*) dating from the imperial period. As of 2011, a total of 674 *shuyuan* had been revived in some fashion or another, whether as functioning schools, museums, historical sites, or commemorative place names.45 Cultural proficiency – thanks to generous funding from the Central Propaganda Department – is promoted not only in the classroom, but also in theaters, museums, field trips to ancient and revolutionary historical sites, invited lectures by distinguished scholars and public intellectuals, research projects by renowned teams of social scientists and humanists, and so forth. The universities constitute a key node in a massive party-state initiative in cultural governance intended to convince citizens that CCP rule is endowed with “Chinese characteristics” which render its authority both natural and necessary.

While overt control mechanisms and formal ideological instruction are a common cause for complaint among Chinese university students, the more subtle and sophisticated modes of cultural governance appear to enjoy considerable success. To be sure, one hears many criticisms

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of the contemporary political system on Chinese campuses; seldom, however, is there a suggestion on the part of these critics that the system is in any way “un-Chinese.” Under the banner of patriotism, the Propaganda Department’s hybrid blending of China’s ancient heritage with its 20th-century revolutionary legacy to fashion an allegedly seamless “socialism with Chinese characteristics” (as Deng Xiaoping dubbed the post-Mao system) seems to have taken firm root. For a political system whose basic ideology and institutions were imported almost wholesale from the Soviet Union, achieving this level of cultural recognition and acceptance (at least among those who identify as Han Chinese, if not among ethnic minorities such as Tibetans or Uighurs) is a significant achievement.

Recent studies by Chinese social scientists suggest that the party-state’s ideological-cum-cultural propaganda has had the intended effect of depoliticizing university students. An attitude survey of nearly a thousand students at two leading Chinese universities found that the students scored exceptionally high (compared to other social sectors) on indicators of patriotism and national identity, while scoring exceptionally low on measures of political efficacy and political participation.46 The thirst for “democracy” that inspired student protests throughout most of the twentieth century appears to have largely dissipated. On a questionnaire administered to a random national sample by the Chinese Academy of Social Sciences, only 43% of college student respondents answered “yes” to the question “Is democracy good?” Among other social groups (including professionals, civil servants, factory managers, workers, farmers, self-employed, and unemployed), the percentage of affirmative responses was a full ten to fifteen

points higher, ranging from 53% to 58%. Only high-ranking cadres expressed less enthusiasm for democracy (41% affirmative responses) than college students.47

Arguably even more effective in eliciting campus compliance than either control mechanisms or cultural governance are the expanded opportunities for voluntarism and community service that have developed apace in recent years. Student clubs of various sorts had been a feature of Chinese college life since the 1980s. The period since 2008, however, has witnessed a mushrooming of organizations whose mission extends beyond conventional campus recreational and educational activities to the provision of social services outside the academy. Although the Xi Jinping administration has blacklisted “civil society” as a dangerous Western notion, its emergence is actually an important contribution to campus calm in the contemporary PRC. The space for meaningful participation afforded by the growth of grassroots NGOs encourages college students (and their professors) to concentrate on varieties of activism that directly and indirectly benefit Communist rule – relieving the state of a portion of its social welfare burden while at the same time channeling youthful energy away from potentially disruptive behavior.

Many of the associations that have sprung up in recent years enjoy close connections to the party-state and its official “mass associations.” The Chinese Communist Youth League (CYL) plays a particularly prominent role on Chinese university campuses, not only as a training camp for prospective party members but also as sponsor for a range of volunteer and philanthropic activities. The best known of these CYL endeavors, Project Hope, mobilizes a

47 Zhang Mingshu 张明澍, 中国人想要什么样民主 [What kind of democracy do Chinese want?] (Beijing: Social Sciences Press, 2013): 16, 22-23. It may be that students are simply more apt to give answers they believe to be “politically correct,” and that their responses do not necessarily reflect their actual views, but in either case their replies indicate an unusually high level of compliance. Haifeng Huang concludes that even when state propaganda does not change attitudes toward the government, “it can nevertheless be effective in influencing their behavior and promoting regime stability.” Huang, “Propaganda as Signaling,” Comparative Politics (July 2015): 435.
steady stream of college student volunteers to help staff the thousands of elementary schools that it has recently constructed in impoverished areas of the country.

While a disproportionate share of financial and political resources is concentrated in such GONGOs, or government-organized non-governmental organizations, they by no means monopolize the field of associational activity either on or off campus. The Chinese Academy of Social Sciences, a government think tank, reported an official figure of over 800,000 “social organizations” and “social associations” in 2013. Unofficial estimates, which include a multitude of unregistered groups, put the total number of grassroots NGOs of various sorts at several million. Thanks to reforms making it easier for social service organizations to register with local municipal bureaus of civil affairs, such groups have been able to enlarge their fundraising efforts. After the catastrophic 2008 Wenchuan Earthquake, when both government and social media encouraged citizens to open their own pocketbooks to aid the disaster victims, the practice of private giving spread rapidly in Chinese society. Charitable foundations and philanthropic venture funds proliferated, numbering in the thousands and affording expanded opportunities for community activism. The Wenchuan quake not only encouraged the rise of private philanthropy; it also triggered a massive volunteer movement as concerned citizens from across the country, especially college students, flocked to Sichuan to offer their personal assistance to the rescue effort. The trend of youthful voluntarism for public causes accelerated a few months later when the government (via the CYL, the Confucius Institute and other official agencies) mobilized large numbers of student volunteers to assist at the Beijing Olympics. The experiences of 2008 were clearly transformative for the current generation of young Chinese, some of whom went on to establish private charities of their own and many others of whom have
continued the practice of devoting a generous amount of personal time and money to further their favorite causes.

While the battle against HIV/AIDS and environmental pollution awakened the first generation of China’s grassroots NGO activists, today both the issues and the motives that underlie them are remarkably wide ranging. A variety of religious faiths – from Christianity to Buddhism – is inspiring the establishment of privately operated medical clinics and nursing homes, for example.\(^{48}\) A secular sense of social responsibility is fueling donation drives for everything from books for school libraries to winter coats for the poor. And the influence of socialist ideals can be detected in the labor NGOs that provide legal and welfare services for downtrodden workers. Not since the imperial period has China seen such an outpouring of philanthropic activism on the part of educated classes.\(^{49}\)

Under some pressure to live up to its own officially espoused socialist ideology by upgrading the provision of social services, the party-state is anxious to reap the positive dividends of this fluorescence of community activism. In some cases, local governments even contract with civic organizations to facilitate the implementation of mandated welfare policies and other social services.\(^{50}\) But the state’s top priority remains that of “stability maintenance” (\textit{weiwen} 维稳), or the perpetuation of Communist party rule. Fearful that networks of social activists could pose an existential threat similar to what transpired in Eastern Europe in 1989, the government keeps close tabs on NGOs and makes it difficult (through registration rules as well as public security surveillance and harassment) for local groups to forge links with counterparts


\(^{49}\) Joanna Handlin Smith, \textit{The Art of Doing Good: Charity in Late Ming China} (Berkeley: University of California Press, 2009).  

in other regions of the country or to accept foreign funding. Recently promulgated laws threaten to further constrain NGO activism. The party-state pays special attention to monitoring the involvement of intellectuals – college students included – in order to prevent their serving as bridges between groups operating in different locations or composed of disparate social classes or interests.

Like so many features of the contemporary Chinese scene, the role of civil society would seem to challenge conventional wisdom concerning the relationship between socioeconomic development and political change. Counter-intuitively, the recent associational upsurge in the PRC – much of it student-driven – has proven in some respects to be more of a help than a hindrance to the perpetuation of Communist party-state rule. Rather than providing a platform for political agitation and democratization, burgeoning civil society in mainland China has offered an outlet for public service that relieves the state of some of its own onerous welfare burden while also fulfilling educated youths’ desire for social engagement. The pervasive contestation that takes place outside the gates of university campuses has concentrated on economic and environmental issues that do not directly challenge CCP authority. And the campuses themselves, the cradle of political ferment in twentieth-century China, have remained uncharacteristically quiet for the past twenty-six years. The sort of politically engaged civil society that emerged in Poland, Hungary and Czechoslovakia – or for that matter in China itself – during the 1980s is not a feature of the associational activity of contemporary China either on or off campus. Gone are the “democracy salons” that helped to inspire the Tiananmen Uprising of 1989.51 Of course this is not to insist that civil society lacks any potential to become

politically subversive at some future point; at present, however, such activism serves to undergird rather than undermine the Communist order.

Important as student and faculty involvement in public service outreach has been, it would be misleading to suggest that China’s current campus calm is primarily due to diverting intellectual attention away from academics toward social assistance. On the contrary, thanks to government support, the universities are able to offer a menu of extremely attractive incentives to encourage certain types of scholarly productivity. Among the most powerful instruments in the PRC’s toolkit for taming the universities is the package of assessment measures – by no means unique to China – which are internationally recognized as standard metrics for a globally competitive system of higher education. At the core of these evaluation procedures is a fixation with *scaling*, or quantifiable ratings of “quality,” that pervade (and pervert) both official and unofficial criteria of scholarly excellence.

A driving motivation behind China’s contemporary higher education reforms, first unveiled in 1998, has been the effort to helicopter the country’s leading universities into the upper echelons of “world-class universities” – as reflected in the *Times Higher Education*, *Shanghai Jiaotong*, *QS*, and other rankings of top research universities in the world. The PRC has pumped enormous amounts of funding into this endeavor, via centrally mandated programs such as Project 211 and Project 985. In return for this generous financial investment, the universities have introduced an elaborate system of evaluation and compensation – tailored to the benchmarks of the world university rankings – that serves to structure and constrain the activities and attitudes of Chinese academics. The apparent objectivity and universality of this method of rating and rewarding academic achievement (and the state recognition it brings) endows the
system with an aura of legitimacy not unlike that which surrounded the imperial Confucian examinations.

Bibliometrics, or the counting of articles published in SCI and SSCI journals, has become the gold standard for assessing China’s progress in scaling the ivory tower. As a result of this strategic ascent, armies of post-doctoral fellows have been hired by all of China’s major universities. These are young scholars (often with considerable overseas research and study experience) who have no teaching duties and are employed on short-term contracts, renewable upon producing a specified quota of SCI or SSCI journal articles. Faculty members are rewarded with generous bonuses for publishing in these designated outlets; graduate students are often required to publish in these venues in order to qualify for their degrees. The result is an academy more preoccupied with fulfilling “productivity” targets than with engaging in political criticism.

In determining the rankings of world universities, the number and size of research grants is an important criterion. World-class universities are supposed to have world-class funding. China’s Communist Party structures the system of research grants so that it functions simultaneously to improve the global rankings of Chinese universities and to inhibit the independence of researchers. The Party, through its propaganda departments at both central and provincial levels, exercises considerable control over university research by setting priorities for large-scale grants in the social sciences and humanities.52 The propaganda departments’ influence can be seen in the extraordinary number of major research grants earmarked for the study of Xi Jinping’s China Dream, for example.53 There is considerable pressure on faculty to apply for these lucrative and prestigious grants, and discrimination against those who are

53 Application guidelines and lists of state-supported projects can be found at the website of the National Planning Office: [http://www.npopss-cn.gov.cn/n/2014/1211/c219469-26187444.html](http://www.npopss-cn.gov.cn/n/2014/1211/c219469-26187444.html)
unwilling or unsuccessful in garnering them. The recently diseased historian Gao Hua, arguably China’s leading scholar of the Communist revolution, received shabby treatment from his own university due to his principled refusal to seek state funding for his research.⁵⁴ Such funding affects not only salaries and promotions, but also university standings.⁵⁵

The party-state’s lavish funding of elite public institutions of higher education, propelled in large part by the prospect of their rising rapidly in the global rankings, is surely a key reason for the notable quiescence of the Chinese academy. It is sometimes suggested that Chinese universities can never become “world-class” as long as Communist Party committees remain in charge of their administration. But that depends on how a world-class university is defined. If it is defined by the quantity of publications or the size of research grants, then the Party’s ability to channel vast amounts of state resources toward such metrics is a decided advantage. The results can be seen in the impressive rise of China’s top universities in the academic rankings of world universities over the past few years.⁵⁶ Of course the quality of the scholarship being produced in this frenetic process is less easily assessed; if citations of scientific papers are any indication, it is perhaps telling that China lags far behind the United States, Europe and Japan on this particular statistic.⁵⁷

Conclusions

Why does the contemporary Chinese state lavish such attention on higher education? An outside observer might suspect PRC authorities of betraying a streak of paranoia in devoting so


⁵⁷ http://api.ning.com/files/HfyPkwzay-6HhFQwHTEQQzr6S8c9GXy3*vLJQflzAdkMQPFJ1Nd9WS-dAL8FMiMAyGT2MZQXmZyOMdR5YWmPnvoRyKHZHCQx/Top20.png
much concern to taming the presumed political threat of its universities. After all, rapid expansion in higher education enrollments, combined with the growth of professional and technical training at the expense of liberal arts education, has rendered college students in China today – as in many other countries – more focused on securing a job than on sabotaging the system. But in fact the party-state’s worries are hardly groundless. As we have seen, Chinese university students played key roles in a series of momentous “democracy” movements that stretched from May Fourth 1919 to June Fourth 1989. And, at the start of the twenty-first century, students in Central Europe acted as catalysts in igniting the Color Revolutions that swept across much of the formerly Communist world.58

As the PRC keenly appreciates, the possibility of college students serving as sparkplugs of political protest did not disappear on June Fourth 1989. In addition to China’s twentieth-century cycles of student protest, there is ample contemporary evidence of the challenge posed by student power in those parts of Greater China where campus controls are less stringent than on the mainland. Twenty-five years after the suppression of the Tiananmen Uprising, events in both Taiwan and Hong Kong demonstrated the continuing capacity of Chinese students – in concert with civil society allies – to trigger mass movements with unwelcome political implications for Beijing. In Taiwan, the “Sunflower Student Movement” (taiyanghua xueyun 太阳花学运) occupied the Legislative Yuan for the first time in its history and forced the ruling party to reconsider a cross-straits service trade agreement with the PRC. In Hong Kong’s “Occupy Central” (zhanling zhonghuan 占领中环), students spearheaded some of the largest demonstrations in the history of the island to register dissatisfaction with the PRC’s stipulated process for selecting the city’s chief executive.

Although neither the Sunflower Movement nor Occupy Central elicited much public support on the mainland, the recent events in Taiwan and Hong Kong undoubtedly reinforced PRC authorities’ worries about the dangers of politicized students. The chance, for example, of a “patriotic” demonstration against Japanese claims to the Senkaku/Diaoyu Islands turning into a student-led protest against their own government’s ineptitude and corruption, is not beyond the realm of possibility. Instead of resorting to riot police, as occurred in both Taipei and Hong Kong, Beijing would obviously prefer to prevent the emergence of student unrest in the first place. Ensuring that college campuses are tightly monitored and that intellectual energies are channeled into system-supportive rather than system-subversive activities is therefore a critical element in the regime’s comprehensive scheme for “stability maintenance.”

In devoting such concern to higher education, the Chinese leadership is surely mindful of its own eventful history. The Chinese Communist Party was a direct outcome of the alienated academy generated by the sudden collapse of the age-old state-scholar nexus after the abolition of the imperial examinations. In seeking to fashion a new twenty-first century partnership, the CCP experiments with an eclectic set of practices to induce the loyalty of its intellectuals and thereby preserve Party rule. Its success in this endeavor, in contrast to that of the dynastic order, is unlikely to be measured in centuries, let alone millennia. Yet the PRC’s already decades-long achievement merits our serious attention nonetheless.

Although China’s Communist system differs from imperial China along numerous critical dimensions, it shares with its autocratic ancestor a keen appreciation of the utility of higher education for regime durability. The current Chinese state continues to play a central role in sponsoring and stratifying institutions of higher education according to criteria that directly serve state interests. Today, however, the yardstick for measuring academic achievement is not
the Confucian classics but the global rankings. Scholars and state are partners in a concerted
effort to boost the international standing of Chinese universities. In this process, a massification
of student enrollment goes hand in hand with an increasing elitism of academic assessment.
Scholars at leading Chinese universities benefit from this arrangement in terms of both personal
income and professional prestige, while the party-state reaps the advantages of a preoccupied,
pliant, and productive academe. Unlike imperial academies, contemporary universities are
expected to constitute bases of intellectual innovation conducive to national success in the
globally competitive “knowledge economy” of the twenty-first century.

The PRC is not alone among contemporary authoritarian states in funneling impressive
amounts of public investment toward the project of building “world-class” universities in hopes
that such institutions will serve both as motors of economic development and as mainstays of
authoritarian rule. Singapore, another predominantly Chinese society, by government design
already boasts an outstanding higher education infrastructure that has clearly redounded to the
island’s economic benefit while not unraveling its authoritarian political fabric. It may be that
China’s historic state-scholar nexus renders higher education of special saliency and efficacy in
the development strategies of those societies, such as the four East Asian “tigers,” that partake of
a shared Confucian bureaucratic and cultural heritage. Tellingly perhaps, the only
contemporary autocracy whose founding predates that of the PRC is North Korea, where serious
state attention to higher education has also been evident since the inception of the regime. Today
Kim Il-sung University, the country’s premier institution of higher education, boasts that it is

60 David Ashton, et.al., Education and Training for Development in East Asia (New York: Routledge, 1999). To be
sure, Taiwan and South Korea did eventually democratize, but their impressive economic takeoffs were engineered
by authoritarian regimes that appreciated the instrumental use of higher education for such purposes.
“conducting vigorous research activities to pave the way for setting up cutting-edge industries that include the development and production of advanced intellectual products.”\textsuperscript{61}

Increasingly, however, significant investment in higher education can also be seen among authoritarian regimes outside the formerly Confucian world. Russia’s “Program 5-100,” adopted in 2013, channels a generous level of state support toward that country’s leading universities with the explicit intent of catapulting at least five of them into the top 100 in the global rankings. Beyond the obvious economic goals of enhancing national growth and international competitiveness, the possible political motives behind the initiative are contested by sociologists studying Russian higher education reform. Natalie Forrat suggests that the program reflects the Putin regime’s “fear of youth political mobilization similar to that which played a very important role in the color revolutions in Serbia, Georgia, and Ukraine in 2000-2004.”\textsuperscript{62} Igor Chirikov, however, challenges the claim that Putin’s support for state investment in higher education is driven by fear of anti-regime student mobilization.\textsuperscript{63} Whatever the causes driving the Russian reform effort, both scholars agree that contemporary college students in Russia demonstrate little appetite for political engagement. In the Middle East, as well, the United Arab Emirates and other oil-rich autocracies have welcomed the establishment of Western-style universities and branch campuses in the belief that the modern research university model “might, with sufficient resources and political will, be detached from its democratic moorings and reconstructed in their own societies . . .”\textsuperscript{64}

\textsuperscript{61} http://www.ryongnamsan.edu.kp/univ/intro/history/develop
These trends contradict Bueno de Mesquita and Downs’ claim that authoritarian governments refrain from supplying higher education for fear of inciting anti-regime activism.\textsuperscript{65} To the extent that this impressive state support for universities proves politically successful, moreover, it carries implications not only for authoritarian regimes but for democratic regimes as well. Growing investment in modern universities by authoritarian regimes around the globe casts doubt on influential theories that associate the flourishing of such educational institutions with democratization. Western social scientists from John Dewey to Seymour Martin Lipset have stressed the importance of higher education for the emergence and endurance of liberal democracy.\textsuperscript{66} Commenting on this seemingly obvious symbiotic relationship, sociologist Edward Shils observes that “[i]t is clear that the universities owe a great deal to liberal democracy and that liberal democracy owes a considerable part of its successful functioning to universities.”\textsuperscript{67} As the quintessential embodiment of Enlightenment values, the modern research university has often been acclaimed as an institution that is fundamentally incompatible with an illiberal political system.\textsuperscript{68} These days, however, the most “enlightened” autocrats are betting billions of dollars otherwise. The Chinese example suggests that their wager might not be misplaced.

\textsuperscript{65} Bueno de Mesquita and Downs, “Development and Democracy”: 77-86.
\textsuperscript{68} Chad Wellmon, \textit{Organizing Enlightenment: Information Overload and the Invention of the Modern Research University} (Baltimore, MD: Johns Hopkins University Press, 2015).