BETWEEN AGENCY AND SPONSORSHIP:

ADULT HIGHER EDUCATION IN CHINA, 1949-2003*

Qing Lai

University of Michigan

* Direct all correspondence to Qing Lai, 426 Thompson Street, 2054 ISR, Population Studies Center, Institute for Social Research, University of Michigan, Ann Arbor, MI 48106, USA.
Email: laiqing@umich.edu.
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Abstract

China is currently the largest higher education provider in the world. Until recently, adult higher education accounted for about half of the industry. This paper, for the first time, systematically investigates the stratification of higher education opportunities over adulthood (age 21-40) across the PRC regime (1949-present). We argue that, under the historical influences of *keju* credentialism (i.e., belief in academic efforts as the orthodox means to social mobility) and revolutionary pragmatism (i.e., manipulative institutional practices in favor of political elite), the PRC adult higher education has been characterized by a duality of self-agency and institutional sponsorship. Using the retrospective information from the 2003 Chinese General Social Survey, we found evidence for the credentialist agency that resisted modern life course norms and state interventions, as well as the institutional sponsorship that favored cadre leaders, party members, and employees in party/government organs and state-run professional services.

Keywords

China, adult higher education, self-agency, institutional sponsorship

The most dramatic development in the history of higher education happened in China. Between 1966 and 1977, all colleges and universities in the country were essentially closed due to the Cultural Revolution. Then, in less than three decades, China became the world's largest higher education provider (UNESCO 2004:9). In 2007, China's undergraduate enrollment totaled some 24 million, yielding an annual growth rate of 8.5% since 1978, or 9.6% since 1949 (State Education Commission 1984-2008). Those striking growth rates imply not only rapid increase in institutional capacity but also underdevelopment in early historical phases. Indeed, until the last decade, higher education had remained a luxury good for most Chinese people—the direct progression from senior middle school (i.e., grade 9-12) to tertiary education (i.e., 2/3-year junior college or 4-year college) used to be highly competitive.[1] However, given quick expansion of the opportunity, many who missed their first chances were eventually able to go back to colleges in mature adulthood.[2]

Chinese higher education system consists of a regular full-time sector that recruits directly from senior middle schools as well as an adult part-time sector that recruits from adult learners in society. Though previous literature on adult higher education (AHE) has typically focused on the part-time programs (e.g., Tang 1994; Wang and Morgan 2009; Xiao 1998), it is worth pointing out that the full-time sector has also provided opportunities for adult learners. In fact, it was the main provider between 1949 and 1966. After the Cultural Revolution (1966-1977), to compensate for the eleven-year suspension of normal college recruitment, the age limit for the full-time college admission was officially set to 30 in 1977 and 1978, and then reduced to 28 in 1979-1981. Since 1982, the age limit remained 25 until it was eventually abolished in 2001. Over time, a non-

trivial proportion of adulthood transitions to higher education were enabled by the regular full-time sector.

Through both full-time and part-time programs, a huge number of adult learners have participated in higher education. In terms of output, the part-time programs alone have graduated 23.6 million students in 1953-1965 and 1972-2007 (records missing for other years), accounting for 42.3% of the total higher education output in the same period (State Education Commission 1984-2008).[3] In terms of enrollment, as shown in Figure 1, the part-time sector has always been a significant (at times a dominant) component of the nation's higher education. Because of a sudden expansion of the full-time sector since 1999, the relative size of the part-time programs shrank considerably, but its absolute enrollment numbers kept increasing. We should note that the above quantities are still underestimates, since the number of AHE participants in the regular full-time sector are not reported in official statistics.

[Figure 1-a and Figure 1-b about here]

From the above figures we can see that the contemporary Chinese AHE is far from a matter of simple linear growth. What institutional vicissitudes, then, has Chinese AHE traveled through? How did adult education seekers fare along the structural changes? What are the main features of the stratification of AHE opportunities? In particular, could there be a historical explanation? Despite the substantive and quantitative importance of Chinese AHE, these questions remained largely unanswered in sociological literature. This paper, for the first time, attempts to give the issue a systematic treatment. In the following, we begin with an introduction to the institutional conditions of Chinese AHE since 1949. Then we continue to examine the adult learning

in history and identify two distinct historical forces—namely, *keju* credentialism and revolutionary pragmatism. We argue that, under the post-1949 institutional conditions, these two historical forces have given rise to strong self-agency and institutional sponsorship in Chinese AHE. Empirical hypotheses are put forward and evaluated with individual-level data across the PRC regime.

PRC ADULT HIGHER EDUCATION: THE INSTITUTIONAL CONDITIONS

All social stratifications occur in concrete institutional circumstances (Parish and Michelson 1996; Szelényi and Kostello 1996; Walder 1996). Under strong state socialism, the Chinese people have lived in direct consequences of shifting state policies. To understand what have been relevant for Chinese adult education seekers, we need to first examine the ups and downs of AHE as a state institution over the PRC regime.

Upon the power transfer in 1949, all public colleges and universities were immediately put under the control of the military regulation commissions of the People's Liberation Army. By the end of 1952, all the foreign-funded and private institutions were taken over, too. While nationalizing the higher education, in 1950 the Ministry of Education ordered that cadres with worker or peasant backgrounds enjoy lower academic standards in college admissions (State Education Commission 1984:585). From then on, a non-trivial admission quota had been allocated to adult cadres in the name of "opening door to workers and peasants." According to incomplete statistics, in 1955 and 1956 alone, some 51,000 cadres were admitted to colleges (State Education Commission 1984:585), accounting for 18% of the total regular college recruitment in those two years. At the same time, China also modeled after the USSR and created a separate adult part-

time sector, which mainly consisted of correspondence programs and night-time colleges. As shown in Figure 1-b, the proportion of part-time enrollment grew quickly from 2% in 1952 to 14.7% in 1957.

Then in 1958 came the Great Leap Forward movement. To achieve the ambition of "popularizing higher education in fifteen years," the centralized college accreditation and student recruitment were trusted with local authorities (He 2004:94). In no time, hundreds of "worker's colleges" and "peasant's colleges" were established by local urban work organizations and agricultural collective communes. As a result, the part-time enrollment increased by ten times within three years—from 76,000 in 1957 to 793,000 in 1960. To finance themselves, these new adult colleges mostly adopted the so-called "half-work, half-study" curriculum that was promoted by Mao himself. However, together with the national economy, the system suffered rapid deterioration and rendered itself unsustainable by 1960. As a result, the enrollment dropped by nearly a half to 410,000 in 1961. Poorly managed institutions were either closed or merged, and great efforts were made to improve the educational quality. Just when the system was returning to the right track, Chairman Mao launched the Cultural Revolution.

The Cultural Revolution (1966-1977) was socialist radicalism at its extreme. The higher education was diagnosed by Mao as "usurped by the capitalist intelligentsia". To "regain" the campuses, the normal educational order was disrupted to exercise on-campus class struggle (see Pepper 1996 and Deng and Treiman 1997 for more detailed historical reviews). Throughout the eleven years of Cultural Revolution, the merit-based progression from senior middle school to college was outlawed. During the early phase, from 1966 to 1971, the entire higher education system fell into total paralysis. Then,

between 1972 and 1977, regular full-time colleges recruited from adult workers, peasants, and soldiers with at least two years of work experience based on recommendation and political screening;[4] in the meanwhile, a huge growth occurred in the adult part-time sector, which peaked in 1976 with an enrollment of 2,628,600, accounting for 82.3% of the total enrollment (see Figure 1-b). However, this was by no means the golden age of AHE. For one thing, most so-called adult "worker/peasant/soldier students" at regular colleges had only junior middle school or less schooling at admission, and during their two or three years of stay at colleges they were mainly busy with on-campus class struggle activities (State Education Commission 1984:83). For another, the skyrocketing adult part-time enrollment toward the end of the Cultural Revolution was but a short-lived backlash of radical educational egalitarianism. For instance, over 56% of the 1976 adult part-time enrollment came from the infamous "7-21 Universities" (Dong, Bi, and Zhang 2002:117).[5] The highly politicized expansion of adult part-time sector in 1972-1977, if anything, gave AHE a bad name in popular minds.

In the wake of the 1978 economic reform, AHE quickly recovered in response to massive demands for higher education credentials. The cohorts who lost their college dreams during the Cultural Revolution, especially the "send-down" youth who counted on college recruitment to regain urban life, created a nationwide aspiration for higher learning.[6] For example, in October 1977, the first college entrance examination since 1965 received more than 20 million applications (Yang 1995:45)—in the same year, the senior middle schools across the country only graduated a total of 5.9 million students (State Education Commission 1984).[7] To accommodate the massive demand for AHE, measures were taken on three fronts. First, the age limits for full-time college admissions

was allowed up to 30 and then 28 in 1977-1981, and 25 thereafter. Second, the pre-1966 adult part-time system, including correspondence programs, night-time colleges, and broadcasting and television universities, was reinstated mainly on a merit basis.[8] Third, conditional on decent quality, many "7-21 Universities" were preserved and transformed into workers' colleges, and continued to serve adult workers in urban China. Several case studies on the workers' colleges in the 1980s found that they functioned relatively well and in general were well received in society (Deaux 1988; Yu and Xu 1988). The "5-7 Universities" and "Communist Labor Universities" in rural places, on the other hand, experienced a sharp decline and essentially disappeared by 1982 (He 2004:177). It is worth noting that the student admission in the part-time sector, unlike the regular full-time programs, has been a mixture of academic merit and institutional favoritism. To achieve greater fairness, the adult programs began to administer centralized entrance examinations in 1986. Yet as a state policy, favored admissions based on local recommendations never went extinct (State Education Commission1994:330-331).

In the reform era Chinese higher education as a whole has undergone sustained development. In 1999, China launched an unprecedented higher education expansion (cf. Figure 1-a). Within eight years, the total enrollment nearly quadrupled. The increase was mainly driven by dramatic expansions of full-time institutions, whose enrollment rose from 3.4 million in 1998 to 18.8 million in 2007. Consequently, the relative size of the part-time sector has declined since 1999 (cf. Figure 1-b). Nevertheless, in absolute numbers the part-time enrollment experienced even faster growth after 1999. Between 1978 and 1998, the adult part-time enrollment grew at an average annual rate of 3.5% (from 1.4 million to 2.8 million); whereas since 1999 the rate increased to 7.1%, leading

to a national total enrollment of 5.2 million in 2007. Therefore, it is safe to conclude that, the huge expansion in the regular full-time sector has not saturated the demand for adulthood higher education.

HISTORICAL INFLUENCES: *KEJU* CREDENTIALISM AND REVOLUTIONARY PRAGMATISM

Having set up the institutional stage, we now turn to the historical backdrop against which Chinese AHE stratification took place. Like most life resources, some AHE opportunities were earned, and some were given. What makes this process uniquely Chinese is the fact that it distinctly bears the influences of two historical forces. First, twenty centuries of merit-based bureaucratic recruitment had made adult learning a well-received and widely engaged social behavior. Academic efforts, regardless of age, had long been viewed as the orthodox channel of upward social mobility. Second, the prototypical adult colleges in modern China were actually founded in pre-1949 CCP-controlled areas with the special mission to serve for the revolutionary wars. The war-time pragmatism warranted strong institutional sponsorship, which was directly passed down to the PRC regime.

Keju *Credentialism*

Social mobility through academic efforts took root in China in ancient times. To weaken the feudal aristocrats' power, the Confucian doctrine, which endorsed social inequality as an outcome of meritocratic mobility, was adopted as the official state ideology in Han Dynasty (206 B.C. – 220 A.D.). Since then Chinese society had always

maintained stringent status demarcation between the ruling class (i.e., state officials) and the commoners (Ch'ü 1961), while leaving the boundaries permeable on a merit basis. In Sui Dynasty (581-618), the state-run civil service examination, or *keju* system, was officially established. By evaluating the candidates' mastery of Confucian classics, *keju* exams had remained the only functional and legitimate channel to the high status group (i.e., the officialdom) until it was abolished in 1905 (Weber 1951).[9]

Historians and sociologists have reached a consensus that although family advantages were somewhat inheritable, *keju* system had created substantial leeway for the ambitious and able to rise from the bottom of the scale. For example, Kracke (1947) analyzed the family background of 851 *jinshi* degree recipients in 1148 and 1256, and found 57.3% had no forebears within three previous generations in civil service.[10] A content analysis of a collection of Ming (1368-1644) and Qing (1644-1912) ethnographic documents found that, out of a total of 7,359 local prominent individuals (among whom 73.7% were bureaucrats or off-duty *keju* degree holders), about a half came from unknown origins; in addition, roughly 80% of their descendants beyond the grandson generation also lost distinction (Hsu 1949). Ho's (1962) meticulous genealogical examination of 12,226 *jinshi* degree recipients between 1371 and 1904 shows that an overall proportion of 42.3% came from non-official families (also see Ho 1959). Thus, unlike in traditional Western societies where social status was transmitted almost exclusively through noble blood or wealth, the upward social mobility was realistically achievable through academic efforts in traditional China.

What does *keju* mean for adult learning? Unlike modern life course norms, *keju* credentialism does not expect individuals to complete education before entry into work or

family. Given the high stake and great competitiveness, persistent educational efforts were common beyond young adulthood. For instance, the median age range of *jinshi* attainment was 31-35 in 1472 and 1529 (Elman 2000, Table 5-22), 36-40 in 1835, and 31-35 in 1868 and 1894 (Chang 1955, Table 10). For the 141 *jinshi* champions over Ming and Qing Dynasties, according to Elman (2000, Tables 5-20 and 5-21), the median range was 31-35, and approximately 40% were beyond age 35. Regression analysis detects no dynasty or linear period effects on age at *jinshi* championship attainment, indicating that the most successful *keju* mobility took place consistently in mature adulthood.[11] To put things in perspective, at those times the remaining male life expectancy at age 20 is estimated to be 32 years (Lee and Wang 1999). Without great tolerance for adulthood learning, this could not have been the case.

The appreciation for *keju* mobility was not only felt by the bureaucrat-scholar class, but also a shared sentiment among the mass public. Students of Chinese traditional literature have found success in *keju* competition a dominant motif at all times. Besides numerous mentions in refined literary works, it also prevailed in popular novels and theatre (Elman 2000). The *keju* achievement had been consistently depicted as a dramatic upgrade in personal status which brought about conspicuous glories, happy marriages, social justices, and so on. At the dawn of modern China, strong aspirations for *keju* mobility still existed among the intelligentsia and the illiterate alike (Rozman 1981:189-190; Wang 1960, 1961). Over centuries, academic meritocracy has become an inalienable part of the Chinese national mentality.

Revolutionary Pragmatism

The 1911 Republican Revolution ended the imperial rule in China. What followed, however, were four decades of imperialist invasions and internal power struggles. Under the Kuomintang government, the modern institution of higher education kept developing, with the enrollment reaching a historical high of 156,412 in 1947 (State Education Commission 1984:966). However, education for adults had been concentrated at basic levels of schooling or vocational training.

Odd as it might seem, it was under the communist regime where the adult education was established at the tertiary level. Prior to 1949, many communist colleges and universities were established to serve the CCP's struggle with Kuomintang and the Japanese invaders. In fact, the very first adult college was founded by Mao Zedong himself in Hunan province right after the first Party Congress in 1921 (Dong, Dan, and Chen 2007:185). Unlike conventional modern colleges where one typically acquires skills and credentials in order to compete in the labor market, the pre-1949 communist colleges recruited from cadres and activists among workers, peasants, and the CCP army, and prepared them to lead in local movements, wars, and civil administration. The production was large in scale. For example, during the Sino-Japanese War, the People's Anti-Japanese (Invasion) Military and Political University of China alone trained more than 200, 000 revolutionary leaders (Dong, Dan, and Chen 2007:221). Between 1946 and 1948, cadre colleges graduated some 38,000 students (State Education Commission 1984:79).

In the spirit of revolutionary pragmatism, the formality of modern higher education was often sacrificed in order to respond to real revolutionary needs in a timely manner. As a result, the admissions mainly depended on political loyalty and

revolutionary leadership, whereas gender, age, academic merit, and sometimes even class background made no decisive difference. Participants did not advance to these colleges from secondary schools. Rather, adult soldiers, workers, and peasants were selected by the Party to receive short-term training in political ideology and revolutionary work skills. In fact, the education policy in pre-1949 CCP-controlled areas explicitly stated "cadre education first, civil education second," and that education should "prioritize the training of existing cadres over the preparation of future cadres" (State Education Commission 1984:582).

To sum up, Chinese AHE as a modern institution had lived a pre-life under the pre-1949 CCP regime, and was since then characterized by a strong revolutionary pragmatism and institutional sponsorship. Later on in 1951, while nationalizing the higher education, the CCP government launched a curriculum reform which formally acknowledged the value of the credentials produced by the pre-1949 communist adult colleges. Those institutions were then quickly integrated into the existing civil education system, many of which migrated to regular colleges as special cadre programs. That is, in the era of civil state-building after 1949, the Chinese AHE had directly inherited the war-time revolutionary pragmatism.

RESEARCH HYPOTHESES

Having put Chinese AHE in perspective, we now move on to concretize the contemporary relevance of the two historical forces. Below we formulate a set of empirical hypotheses on how the AHE opportunities were stratified among different

individuals across the PRC regime (1949-present) under the continuing influences of *keju* credentialism and revolutionary pragmatism.

First, what does the credentialist mentality imply for individual life course in modern China? Since learning had been a highly regarded activity even in one's twenties and thirties, increase in age may not seriously keep the Chinese from pursuing college education. Also, role conflicts in adulthood may be less of a problem. In Western societies, higher education is known to delay entries into employment, independent living, cohabitation, marriage, and other domains of adult life (Blossfeld and Huinink 1991; Marini, Chan, and Raymond 1987; Rindfuss, Swicegood, and Rosenfeld 1987; Thornton, Axinn, and Teachman 1995); reversely, adulthood engagements such as early marriage also lead to postponed college enrollment (Bozick and DeLuca 2005; Goldrick-Rab and Han 2011). Such role conflicts, we expect, may be less salient in China given the historical norm that allows for co-occurrence of learning activities and other adulthood engagements. Hence our first hypothesis on self-agency:

> *H1-a: Modern life course norms do not seriously hold back Chinese individuals' educational pursuit in adulthood. Specifically, increase in age and alternative adulthood engagements (i.e., family, work, military service) do not significantly reduce individuals' probability to attend higher education beyond "normal" ages.*

Another implication of traditional credentialism has to do with individual's response to structural intervention. As reviewed earlier, the Cultural Revolution ruled out the direct educational progression to college for eleven years. But since adult learning had long been the rightful choice for upward mobility, the affected cohorts, albeit past the

"normal" ages, should exhibit a substantial resilience after the restoration of higher education in 1977. Though we cannot attribute such resilience, if it can be observed, entirely to the credentialist mentality, it certainly plays a facilitating role.

> *H1-b: Strong resilience would follow the state interventions that disrupted Chinese people's education. That is, the cohorts whose opportunities for college education were systematically suppressed during the Cultural Revolution were more likely than other cohorts to enroll in AHE after 1977.*

Regarding the contemporary relevance of revolutionary pragmatism, our hypothesis involves three forms of institutional sponsorship. First, as a direct historical heritage, the special favor for cadres persisted through the ups and downs of the PRC higher education. In fact, to facilitate the post-1949 political power transition and post-1978 economic development, the importance of credentialing adult cadres was repeatedly ascertained in state policies as a compulsory "political and organizational mission" (State Education Commission 1984:582-586). Second, to create a technocratic elite with political loyalty, the state has sponsored existing party members to obtain postsecondary diploma through adult education (Li and Walder 2001). Finally, *danwei*, the work organization in urban China, has been a crucial institutional agent in the stratification of life resources (Wang 2008; Wu 2002; Xie, Lai, and Wu 2009; Xie and Wu 2008). AHE, in light of differential educational returns (Korzec and Whyte 1981), can be conceptualized as a form of work benefit. Therefore, we expect to observe greater risks of AHE enrollment among employees in the party/government sector, who are closer to distributive power, as well as the professional services (e.g., health, education, research,

media, finance), where *danwei* provides institutional convenience for further accumulation of human capital.

> *H2: Revolutionary pragmatism implies institutional sponsorship in credentialing state/party-favored elites. Therefore, cadre leaders, party members, and employees in favored* danwei *(i.e., party/government organs, professional services) are more likely to get enrolled in higher education in mature adulthood.*

DATA AND METHOD

It is important to note that this paper exercises the "implication analysis" advocated by Lieberson and Horwich (2008). Simply put, we derive implications from our theory (i.e., the historical explanation) and then assess how closely the empirical evidence meets those implications. In other words, our analysis is to evaluate the appropriateness of a historical understanding of contemporary Chinese AHE, not to determine the counterfactual effects of *keju* credentialism and revolutionary pragmatism under the PRC regime.

Our analysis uses the data from the 2003 Chinese General Social Survey (CGSS 2003). The sampling frame was constructed based on the 2000 national census. Targeting on the adult population in urban China, the survey adopted a four-stage sampling scheme with probabilities of selection proportionate to size. The sample is representative of all the urban residents aged 18-69 across the country in 2003. A total of 5,894 respondents were successfully interviewed, yielding a high response rate of 98.9%. One analytical advantage of CGSS 2003 is that it provides rich retrospective information

on multiple domains of respondents' life course, which fits well with our research hypotheses.

We analyze the data using discrete-time event-history logit models. The event of interest, entry into higher education during mature adulthood, is defined as the first higher education enrollment over age 21 through 40. All respondents are considered at risk since age 21 if they have not yet attended college by then. They were then "followed every year" until they entered either junior college or college. In case the event never occurred, the respondents were dropped when they hit 40. A uniform censoring took place in 2003 when the survey was conducted, which means all those younger than 21 in 2003 were automatically excluded. Also, to focus on the PRC regime, the person-years earlier than 1949 did not enter the analysis.[12] After restriction, we obtain an analytical sample with 79,102 valid observations, each a person-year exposure to the risk of attending AHE. Between1949 and 2003, a total of 542 events are captured. That is, among the 1,139 CGSS 2003 respondents who have ever entered college, as many as 47.6% got enrolled between the age 21 and 40. This fact alone justifies our focus on the adulthood transition to higher education.

[Table 1 about here]

As shown in Table 1, the distribution of average risk rates over time is largely consistent with our historical account.[13] Overall, the AHE opportunity concaved during the Cultural Revolution years. Then, after a sustained period of recovery, a visible increase emerged during the recent higher education expansion. This shows that Chinese individual life chances had been sensitive to policy changes under strong state power (Hannum and Xie 1994; Pepper 1996; Zhou, Moen, and Tuma 1998). However, we take

caution in trusting the risk rates for the first two periods due to mortality selection. The longitudinal form of our analytic sample does not truly come from a panel design that follows a fixed sample from 1949 onward. Instead, it was constructed backwards based on a cross-sectional sample that is representative of the Chinese urban population in 2003. Those who attended colleges in early years may also have enjoyed better life chances and longevity. Their contemporaries who never went to college, on the other hand, are less likely to survive to 2003 and be interviewed, whose contribution to the exposure is therefore missing. This selection on mortality causes an over-representation of events in our data, hence the artificially high risk rates around the 1950s and early 1960s. Despite the problem, the above periodization is used anyway to fix out known period effects.

The independent variables are mostly time-variant predictors that record respondents' past life experiences. To test the various life course contingencies proposed in H1-a, personal histories of marriage, fertility, employment status, and military service were imputed. Age was made time-varying and specified as a 4-segment spline function. For the life course resilience hypothesis (i.e., H1-b), a cohort identifier was created for those who were born between 1950 and 1956, so that their college-attending ages collided with the Cultural Revolution. As the send-down movement largely coincided with the Cultural Revolution, we also constructed a time-variant status dummy for the person-years spent in countryside as send-down youth. Finally, for the three types of institutional sponsorship (i.e., H2), we recovered the respondents' annualized cadre rank, party membership, and *danwei* category. The information of cadre rank and *danwei* category comes from work history. Cadre rank indicates one's leadership in public ownership sectors. For simplicity a dummy variable was coded at *keji* level, which is

commonly recognized as the entry level of organizational leadership. *Danwei* was classified by ownership and function into party/government organs, state-owned services, state-owned enterprises, collectively owned services/enterprises, *geti* businesses (self-employment), Chinese private businesses, and foreign businesses.

For a cleaner test of the hypotheses, our analysis also controls for the characteristics known to be influential in Chinese educational stratification. Namely, we entered parents' socio-political capital (parents' education and party membership when the respondents were 18), respondents' academic standing (completion of senior middle school), gender, ethnicity, and *hukou* status. While regional variation was a major source of inequality in China (Wang 2008; Wu and Zhang 2010; Xie and Hannum 1996; Zhou, Moen, and Tuma 1998), we decided not to include geographic covariates. This is because our data only provide the residential location in 2003, and Chinese college graduates' subsequent residence is greatly dependent on their higher education. Therefore, such post-outcome heterogeneity is conceptually incompatible with our event-history models. To be safe, we tried including provincial dummies, which did not affect the main results.

Three discrete-time logit models were estimated. The first utilizes all the person-years from 1949 to 2003, and the other two models correspond to the pre-reform era (1949-1977) and reform era (1978-2003), respectively. Not only a necessity to test H1-b, the cutoff at 1977-1978 reveals important historical changes in the stratifying mechanisms. The two period-specific models are nicely aligned with what Whyte (2010:13) called the "two social revolutions": the socialist transformation upon 1955 and the market transition upon 1978. In the analysis, since private ownership was a historical

impossibility before 1978, *geti* business, Chinese private business, and foreign business only appear in the reform era model.[14]

RESULTS

Results from the three models are assembled in Table 2. After statistical control, the period effects remain the same pattern as the unadjusted average hazard rates in Table 1. They not only represent the heterogeneous policy regimes traveled through by Chinese AHE seekers, but also effectively fix out the period effects. The table also, for the first time, provides an overall picture of the AHE stratification in contemporary China. It is beyond our scope to exhaust all the rich empirics, however. In the following, our interpretation focuses on the three research hypotheses.

[Table 2 about here]

The first agency hypothesis (H1-a) is partially supported. As expected, aging plays a weak role in deterring AHE enrollment, effective only from age 21 to 25 during the reform era. However, the credentialist agency against alternative adulthood engagements finds little evidence. In the overall model, marriage, number of children, employment, and military service all significantly suppress the likelihood of AHE enrollment. Though the negative effects of fertility and employment disappear in pre-reform and reform era, respectively, it would be exaggerating to say that the agency inspired by traditional credentialism had been strong enough to overwhelm the modern life course norms.

As for the individual agency against state intervention (H1-b), the results match our hypothesis well. As expected, the educational deprivation due to Cultural Revolution

resulted in a subsequent resilience. Holding other things constant, the affected cohorts were 1.34 times (0.29 exponentiated) more likely to gain entrance into AHE than other cohorts after the Cultural Revolution. However, this is not to say that the disruptive policies did no real damage. For one thing, the period effects clearly indicate the suppression of AHE opportunities during the Cultural Revolution. For another, as shown in the pre-reform model, the send-down youth were significantly disadvantaged in AHE enrollment during their stay in the countryside.[15] What we try to convey here is that in spite of state interventions, Chinese individuals showed substantial resistance once the structural barriers were removed, which was a behavioral outcome implied by the traditional credentialist mentality.

Finally, we found strong evidence for institutional sponsorships based on cadre leadership, party membership, and certain *danwei* affiliations (i.e., H2). When a respondent worked as a cadre at *keji* level or above, his or her odds of AHE enrollment increased by a factor of 5.7 (1.74 exponentiated) before 1978 or 2.6 (0.949 exponentiated) in the reform era. Overall, such a consistently strong and positive effect is on par with senior middle school completion only. Advantages associated with party membership and privileged *danwei*, though not significant prior to the reform, were both strong and highly significant after 1978. In the reform era, party membership scaled up the odds of going back to college by a factor of 2.84 (1.044 exponentiated); the employment in party/government organs and state-run services increased the odds by 2.6 times and 2.2 times, respectively. It is worth pointing out that not all professional service *danwei* enjoyed an advantage—the collectively-owned services were actually associated with a

negative effect, albeit only marginally significant. Clearly, even for professional careers the credentialing privilege is not detachable from state power.[16]

Why did party and *danwei* sponsorships exist only after 1978? The answer dwells in historical reality. The early socialist China witnessed constant political movements, many of which involved extensive internal power shuffles. While party membership in general brought about benefits, a good number of person-years contributed by party members between 1949 and 1977 could have been spent in political distrust or even persecution. Such diluting effects disappeared after the party regime entered stabilization. Since 1978, party membership became consistently a form of positive human capital. Given the boom of structural opportunities during marketization, party members were increasingly apt to translate their political capital into personal life resources. In terms of AHE, the provincial-level party schools gained the authority to award higher education credentials through correspondence programs in early 1980s. Although party school credentials were often not recognized outside of the party system, local party schools became a hotbed of political favoritism. We notice that in our analytic sample as many as one tenth of the AHE enrollments occurred in 1982-2003 were enrollments in party schools.

The same logic explains the lack of *danwei* advantages prior to 1978. Until the economic reform China had traveled through rather heterogeneous episodes. There were times of enthusiastic participation in adult education as a "political mission", but one after another political movements not only distracted people from educational pursuits, but also made intelligentsia a dangerous hat. Thus, workplace sponsorship and professional motivation for further education in adulthood might have been weak or even

non-existent until late 1970s. In contrast, the reform era had been coherently characterized by market ethos. With the development of a labor market that increasingly rewarded higher education, professional incentives and state clientalism began to emerge.

CONCLUSION AND DISCUSSION

Though underrepresented in the literature, Chinese AHE is an enormous enterprise that accounted for about half of the nation's higher education output since the mid-20th century. This paper seeks a historical understanding of the stratification of AHE opportunities under concrete PRC institutional conditions. On the one hand, fourteen centuries of civil service examination fostered the social mentality that educational engagement, regardless of age, was the orthodox means of upward mobility. On the other hand, the institutional heritage from pre-1949 communist colleges was directly ushered in to the PRC higher education system. Thus the contemporary Chinese AHE has been characterized by a distinct duality of credentialist agency and institutional sponsorship, which were both well supported by our empirical findings.

It should be pointed out that the examination of credentialist agency and institutional sponsorship as two separate dimensions does not mean that there were no interactions between the two. Although a detailed investigation is beyond the scope of this paper, important interactions did exist at two levels. At the macro level, motivated education seekers preserved the AHE credential value through practicing academic meritocracy, which drove the state to create more institutional leeway to give the elites a free ride; and the expansion of AHE market, in return, inspired even greater credentialist agency in society. It would be an exaggeration to say that the sponsorship and agency

necessarily live in symbiosis, but there is little doubt that their interplay has contributed to the development of Chinese AHE in the aggregate. At the micro level, the interaction could take place along individual life trajectory. One's educational pursuit might well be characterized by both self-agency and institutional favor. When there are many such individuals whose life course events occur in variable sequences, it is of great analytic and theoretical interest to disentangle the two interwoven threads over adulthood.

Apart from the duality, an overarching theme emerged from the comparison between the pre-reform and reform-era models. Among the newly emerged stratifying agents we see not only the socialist institutions of party and *danwei*, but also the old-fashioned family origin and gender. Obviously, the market reform had played an enabling role in generating new educational inequality. How did this happen? We believe that the story begins with the increase in the returns to AHE. Despite slow paces at the initial stage (Naughton 1996; Xie and Hannum 1996), since early 1990s Chinese labor market increasingly rewarded education (Zhang et.al 2005), including mid-career adult education (Xiao 2002; Liu and Xiao 2006). But AHE might not have benefited everybody equally. For example, given the systematic discrimination against women in Chinese urban workplaces (Cao and Hu 2007; Zhang, Hannum, and Wang 2008), there might be a male premium in the returns to AHE, hence the male advantage in AHE enrollment during the reform era.[17] Besides differential incentives, a second mechanism involves the coping strategy of the political elite. Despite the "evident vulnerability of Party reward structures to the kinds of market-oriented reforms" (Walder 1995:326), material returns to political capital turned out to be persistent and increasing in the reform period (Bian and Logan 1996; Bian, Shu, and Logan 2001; Hauser and Xie 2005; Zhou

2000). Walder (2003) suggested that an important reason was the appreciation of market values of the public assets at the disposition of the political elite. Thus our finding can be interpreted as, in light of the increasing value, AHE credential had become a public asset that was actively appropriated by the powerful. [18]

The discussion on the new stratifying mechanisms can go on, but the message remains that the market reform had advanced inequality in AHE on multiple new fronts. In this sense, our findings make another case of the *Maximally Maintained Inequality* (Raftery and Hout 1993). Namely, the institutional expansion of AHE during the reform era did not bring about equal opportunity; on the contrary, educational inequality was exacerbated as a result of the rational choice logic in an emerging market economy. Whether we will see declines in these inequalities after a saturation point awaits further empirical assessment.

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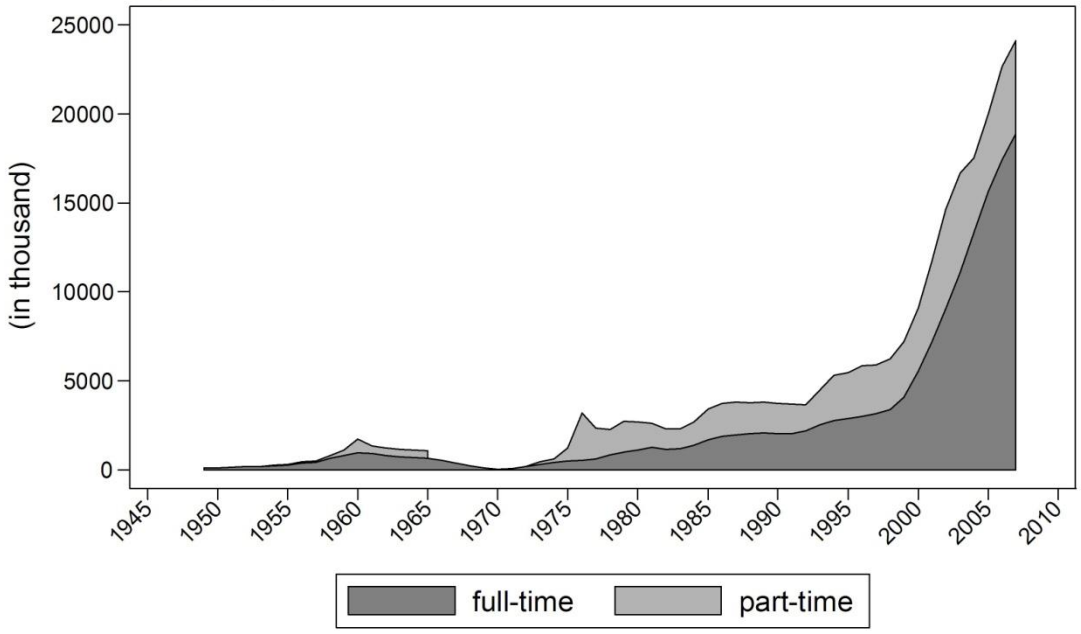
Figure 1-a. Chinese higher education enrollment by sector, 1949-2007



Source: State Education Commission 1984-2008.
Note: Part-time sector enrollment records in 1949-1951 and 1966-1971 are unavailable.

Figure 1-b. Relative size of adult part-time sector in enrollment, 1949-2007

Source: State Education Commission 1984-2008.
Note: Part-time sector enrollment records for 1949-1951 and 1966-1971 are unavailable.

Table 1. Exposure and event ocurrence over six periods, 1949-2003

Period	Exposure	AHE enrollment	Mean annual probability
Turnover & transition (49-57)	419	9	0.0210
Great Leap Forward (58-60)	945	23	0.0238
Adjustment & development (61-65)	2,900	21	0.0072
Cultural Revolution (66-77)	15,914	27	0.0017
Market reform (78-98)	48,866	369	0.0075
Higher education expansion (99-03)	9,516	93	0.0097
Total	*78,560*	*542*	*0.0069*

Source: Chinese General Social Survey 2003.

Table 2. Discrete-time event-history logit models predicting higher education enrollment over age 21-40

	Overall (1949-2003)		Pre-Reform (1949-1977)		Reform era (1978-2003)	
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Period						
Turnover & transition (49-57)	2.145 ***	0.407	1.826 ***	0.523		
Great Leap Forward (58-60)	2.585 ***	0.301	2.393 ***	0.425		
Adjustment & development (61-65)	1.581 ***	0.303	1.284 **	0.395		
Cultural Revolution (66-77)	(reference period)		(reference period)			
Market reform (78-98)	1.408 ***	0.210			-0.460 ***	0.129
Higher education expansion (99-03)	1.872 ***	0.241			(reference period)	
Life course norms (H1-a)						
Age (spline function)						
21-25	-0.204 ***	0.043	-0.164	0.104	-0.207 ***	0.049
25-30	-0.006	0.040	0.006	0.152	-0.025	0.042
30-35	-0.061	0.045	-0.352	0.362	-0.063	0.046
35-40	-0.064	0.061	0.415	0.502	-0.075	0.062
Alternative adulthood engagements						
Marriage (ref. = not married)	-0.524 ***	0.126	-1.553 ***	0.371	-0.316 *	0.140
Number of children	-0.187 †	0.102	0.466	0.470	-0.253 *	0.106
Employment (ref. = unemployed)	-0.523 ***	0.137	-1.272 **	0.367	-0.081	0.170
Military service	-0.929 **	0.283	-1.009 †	0.591	-0.810 *	0.331
Resilience against state intervention (H1-b)						
Cultural Revolution cohort	0.406 **	0.127	0.144	0.450	0.290 *	0.138
Send-down	-0.051	0.325	-1.583 *	0.752	0.507	0.352
Institutional sponsorship (H2)						
Cadre leadership (ref. = below *keji*)	0.960 ***	0.189	1.740 ***	0.473	0.949 ***	0.212
Party membership	0.971 ***	0.129	0.237	0.435	1.044 ***	0.138
Danwei type						
Party/government	0.860 ***	0.166	-0.622	0.700	0.938 ***	0.171
State-owned service	0.719 ***	0.144	-0.297	0.511	0.771 ***	0.152
State-owned enterprise	-0.450 **	0.131	-0.148	0.422	-0.524 ***	0.140
Collectively owned service/enterprise	-0.407 †	0.240	-1.137	1.066	-0.429 †	0.248
Geti *business*					-0.777 †	0.458
Chinese private business					-1.034 †	0.590
Foreign business					0.054	0.729
Control variables						
Family background						
Father's education at 18	0.145 ***	0.033	0.074	0.091	0.147 ***	0.036
Mother's education at 18	0.216 ***	0.040	0.201	0.159	0.216 ***	0.042
Father's party membership at 18	0.225 *	0.101	-0.050	0.481	0.221 *	0.105
Mother's party membership at 18	0.188	0.155	0.503	0.626	0.174	0.162
Senior middle school completion	1.142 ***	0.094	2.327 ***	0.260	0.916 ***	0.100
Gender (ref. = female)	0.493 ***	0.095	0.244	0.270	0.469 ***	0.103
Ethnicity (ref. = non-Han)	-0.258	0.179	-0.824 †	0.455	-0.209	0.196
Hukou status (ref. = rural *hukou)*	0.650 *	0.268	1.037 †	0.610	0.514 †	0.299
Intercept	-2.643 **	1.012	-2.364	2.467	-0.874	1.152
Model χ^2 (df)	1002.16 (29)		334.35 (27)		731.84 (28)	
Sample size (in person-years)	79,102		20,258		58,844	

Note: † $p < .01$, * $p < .05$, ** $p < .01$, *** $p < .001$.
Source: Chinese General Social Survey 2003.

[1] The organizational form of Chinese higher education can be described as a "diversified system" (Arum, Gamoran, and Shavit 2007). On the top are the academic-oriented 4-year colleges and universities. The 2/3-year junior colleges provide a second-tier education, which includes both occupationally oriented programs and preparatory programs for further academic education. Note that the graduate level education is beyond the scope of this paper.

[2] In modern education, almost all transitions to higher education occurred in adulthood, since college entrants typically reach age 18. In this paper, however, the term "adult higher education" refers exclusively to the tertiary education occurred during mature adulthood. In our later analysis, mature adulthood is technically defined as age 21 through 40.

[3] The calculation excludes the credentials acquired through self-taught examinations, which began to produce tertiary-level credentials since 1981. Although training classes were often offered to assist the preparation for the examinations, they were not comparable to formal program studies as in full-time or part-time higher education institutions. See Zhou (2005) for more policy details and historical statistics concerning the self-taught examinations.

[4] The worker/peasant/soldier student recruitment already began in 1970 and 1971, but only with a limited quota of 42,000 per year.

[5] Like the "half-work, half-study universities" in the Great Leap Forward movement, the "7-21 Universities" were promoted by Mao himself during the Cultural Revolution. Unlike regular universities, the "7-21 Universities" were essentially on-job training

programs for urban workers. In rural areas, similar part-time institutions were mostly named "5-7 Universities" or "Communist Labor Universities."

[6] Between 1967 and 1978, some 17 million urban middle school graduates were forcibly "sent down" to live and work in the countryside (see Bernstein 1977; Zhou and Hou 1999).

[7] The 1977 entrance examinations were administered at the provincial level. The centralized state-run college entrance examination was officially restored in 1978. Though the 1977 exams still involved political screening and not well standardized, it was the first-time nationwide college recruitment based on academic merit since 1965. After political screening, 5.7 million out of the 20 million applicants were allowed to sit the exams, among whom 0.27 million (i.e., 4.7%) eventually gained admissions.

[8] The correspondence programs were partially restored in 1972 on a recommendation basis, and served mainly the send-down youth during the Cultural Revolution. The scale was small, though. By 1974, a total of 73 institutions in 17 provinces and autonomous municipalities enrolled only 0.1 million students (Dong, Bi, and Zhang 2002:119).

[9] There were exceptions, but none lasted long. For example, the longest disruption lasted from 1237 to 1315, due to the Mongolian conquest.

[10] The attainment of *jinshi* degree warranted entry into officialdom. In Ming and Qing Dynasties, the *jinshi* exam was the highest level exam in the *keju* system, which was proctored by the emperor himself. See Han (1946) for a brief introduction to the civil service examination system, and Elman (2000) for a comprehensive social history.

[11] The analysis was conducted by the author using data reported in Tables 5-20 and 5-21 in Elman (2000).

[12] By design the observational window should start from 1955—the year when the 69-year olds in our 2003 sample reached 21. However, the survey happened to capture several more senior respondents, who contributed some person-years from 1949 to 1954. Therefore, the results prior to1955 may be biased.

[13] Technically, what we have in Table 1 are annual probabilities of events rather than "risk rates". However, given the large amount of exposure and relatively few event counts, the numerical differences between probabilities and rates can be ignored.

[14] Strictly speaking, until the completion of the nationalization movement (a.k.a. "socialist transformation") in 1955-1957, China lived on a hybrid economy including a non-trivial market component. Thus the categorization of public ownership *danwei* does not capture part of the workplace variation that had existed during 1949-1957. However, it is impossible to recover such historical information. After all, considering that the state sector kept expanding rapidly since 1949 (Whyte 2010:16), and the relatively weak contribution of the several initial years to our retrospective event-history data, this information is dispensable.

[15] With regard to later outcomes of send-down experience, previous research has found effects in opposite directions (see, for example, Xie, Jiang, and Greenman 2008; Zhou and Hou 1999).

[16] Our results about cadre and party sponsorship are partially at odd with Li and Walder's (2001) study, which found party sponsorship but no cadre advantage in attending adult higher education during 1949-1977. This might not be just a result of different parametric assumptions and statistical controls. While our evidence comes from a 2003 sample, Li and Walder (2001) used a 1996 sample. There could be real differences

between the histories lived by the two cohort populations —after all, with retrospective data "all history is contemporary history."

[17] The male advantage in AHE can also be due to the female advantage in the direct progression from secondary to tertiary education in the reform era (Wu and Zhang 2010; Zhou, Moen, and Tuma 1998).

[18] This argument needs to be qualified by a possibility of selection bias. Party membership may mask unobserved heterogeneity (such as ability or motivation) that simultaneously leads to party membership and the pursuit of AHE (Gerber 2000; Hauser and Xie 2005). That is, the observed positive effect of party membership on AHE enrollment could be an overestimation.