

# Rewriting the Rules

China's most influential scientific and technological think tanks are rethinking their admissions process **By Yin Pumin**



**MEETING OF MINDS:** The 17th Congress of the Chinese Academy of Sciences and the 12th Congress of the Chinese Academy of Engineering opens in Beijing on June 9

**T**he Chinese Academy of Sciences (CAS) and the Chinese Academy of Engineering (CAE) have redrafted their charters in an effort to improve the selection and management system for academicians.

The amended charters, which were ratified during the biennial congresses of the country's

two top think tanks on June 9-13, included modifications to the nomination and exit mechanisms for academicians by barring governments, universities and enterprises from the right to make nominations.

According to previous rules on new member selections of the CAS and the CAE,

candidates can be recommended by other academicians, eligible employers or national academic societies. "Organizations such as the Ministry of Education and the China Association of Science and Technology only have the right to recommend candidates to other academicians," said Chen Jiaer, a CAS academician and



former President of Peking University.

To cut administrative interference, the new charters deny other organizations of the right to nominate candidates, leaving only incumbent academicians and academic groups commissioned by the two think tanks this privilege.

The move is a response to a reform plan adopted at the Third Plenary Session of the 18th Central Committee of the Communist Party of China (CPC) in November last year, which stated that the system of selection and management for academicians should be modified to help increase the number of younger academicians and phase out the underqualified.

"It is also an attempt to bring China's academician system back to its roots," said Wang Mengshu, a CAE academician and a professor at Beijing Jiaotong University.

## Stricter procedures

In China, the title of academician is the highest honor for a scholar. The lifelong title carries a large amount of prestige. CAS and CAE academicians often hold administrative posts and are granted power to allocate academic resources and evaluate academic works. Every two years, the academies select new academicians, and the selection and management regulations are amended. In October 2013, 104 new

academicians were elected to the CAS and the CAE, bringing the total combined number of academicians up to 1,545.

However, in recent years these scientific and technological elites, as well as their privileges, have become a source of controversy. In particular, the biennial academician selection has received attention owing to the number of scandals related to it.

During a court hearing on his alleged corruption on September 10, 2013, Zhang Shuguang, former Director of the Transport Bureau under the former Ministry of Railways, confessed to spending 23 million yuan (\$3.7 million) on bribing and hiring scholars to compile materials for him in his bid for election to the CAS.

Zhang was nominated as academician in 2007 and 2009, but failed to obtain the title both times. According to media reports, he was only one vote short of his target in the 2009 election. Before Zhang could make his third attempt, he was removed from his post and investigated for accepting bribes in February 2011.

The day after Zhang made his confession, the CAS released a statement saying that it had not received any complaints concerning academicians receiving bribes from Zhang. "If any academician was proven to have taken bribes, the CAS would not tolerate it. We welcome public supervision," it added.

In spite of efforts taken by the CAS to clarify its unawareness about Zhang's actions, public doubts lingered.



**The Chinese Academy of Sciences (CAS)** was established on November 1, 1949, in Beijing. Since 1956, it has participated in the preparation of all national scientific and technological development plans, serving as a national think tank. The incumbent CAS president is Bai Chunli.

There are 124 institutions directly under the CAS as of the end of 2012. The academy is also home to more than 85 percent of China's large-scale science facilities.

Now the CAS has **743** Chinese and **71** foreign academicians.

**The Chinese Academy of Engineering (CAE)**, established in 1994, is the most prestigious and informative advisory institution in China's engineering science and technology, conducting strategic studies of the state's important engineering-related issues and providing consultation for decision-making. The incumbent CAE president is Zhou Ji.

The CAE currently has **802** Chinese and **42** foreign academicians.

According to the previous CAS Charter adopted in 2012, there were two ways to take the first step to becoming a qualified candidate. One could either be recommended by at least three academicians, or by specific government departments and national-level academic institutes.

Chu Junhao, a CAS academician and a researcher with the CAS' Shanghai Institute of Technical Physics, said that under the previous charter, each academician can recommend two candidates at most each year, while departments and academies can recommend a maximum of 60. All new academicians were elected through rounds of anonymous voting by current academicians.

Both the CAS and the CAE require academicians to understand the candidates' research areas, academic contributions and their ethics as well as recommending candidates that meet standards rather than those who have engaged in currying favor with already anointed academicians.

However, while the impartiality of individual academicians may be compromised through canvassing, that of organizations is even more likely to be influenced by departmentalism. Chen with Peking University said that out of departmental interests, some organizations had recommended more candidates than they should, or even nominated candidates who were not up to standard.

In late April last year, about 490 made it to the first round of nominations. "But only a third of them made it to the next," Chu said.

Usually, the shorter list is made public in August when the candidates are narrowed down to around 150, but the CAS did not do so last year. There was speculation that this was due to attempts to lobby academicians for a ticket to the final round despite rules prohibiting this practice.

To reverse the situation, the amended charters of the CAS and the CAE limit nomination rights to incumbent academicians and academic groups, barring administrative departments from taking part.

Zhai Guangming, a CAE academician, said that he believes the move will reduce administrative influence in the selection process.

"In the past, we had to consider candidates we knew were underqualified because they were recommended by government departments that controlled many of the resources we need," Zhai said. "We often knew little about some of the candidates and their academic



achievements, which created problems when we had to evaluate them.”

Another complaint about the addition of academicians was the high percentage of government officials. For instance, in 2009, more than 85 percent of the 48 new CAE members were incumbent high-ranking officials or corporate executives.

“All officials eventually retire, but being an academician is a lifetime honor,” said Gu Haibing, a professor at the School of Economics of Beijing-based Renmin University of China.

Lei Zhidong, an academician of the CAE, worried that for officials who are nominated for academician titles, it is difficult to tell whether their achievements should be credited to their team as a whole or their individual efforts.

Some reforms had been made to the academician selection process in response to this even before the CAS and the CAE amended their charters this year. For instance, of the 104 academicians elected to the two academies last year, only three were high-ranking government officials or corporate executives.

Meanwhile, the election of new academicians now requires a vote by the whole academy, rather than just one of its divisions.

Previously, candidates were divided into groups based on their professional fields preceding the vote in October. Each candidate faced a review committee composed of the three academicians who know the most about the candidates, usually including their referrer.

The new rule is considered by many as a step to further improve the quality of academicians. “It is a reference to international practices and will be helpful in strengthening the reviewing of candidates,” said Xu Rigan, another CAE academician.

However, Gu thinks that the reform falls short.

“Due to the divisions between different academic subjects, it is impossible for an academician to understand every academic branch. So it is illogical to allow academicians to vote on candidates from other academic fields,” Gu said.

## Privileges

In 2003, Gu was commissioned by the government to study China’s academician system. He found that academicians’ powers over allocating research funding and evaluating research

results could be abused, which would in turn result in ineffective use of research funds and academic corruption that would stifle innovation.

The lucrative incentives to hold the title have changed the nature of academicians’ nominations, with many potential candidates attempting to fake research in order to win a place in the CAS or the CAE in order to profit from the title, according to Gu.

The real benefits, such as special privileges and better access to resources, have driven some local governments and academic institutions, especially those in less developed central and western provinces, to be more eager to have their scholars elected as academicians or attract academicians to work for them.

In 2009, the Academy of Science and Technology in southwest China’s Chongqing publicly announced that any academician seeking a contract there would be given a 2-million-yuan (\$321,400) allowance plus 200-square-meter housing, according to reports.

Gu suggests that academician should be an honorary title with no affiliated administrative and economic powers.

But Chu with the Shanghai Institute of Technical Physics doesn’t think the preferential treatment is an attraction for academicians who truly want to pursue an academic career, and neither does he believe that this title gives them more advantages when competing for scientific funds.

Wang Enduo, a CAS academician and a researcher at the Shanghai Institute of Biochemistry and Cell Biology, agrees with Chu. He argued that the special treatment academicians are reported to enjoy is somewhat exaggerated.

“It’s true that academicians are given VIP status when seeing doctors in public hospitals or taking flights, but that’s it,” Wang Enduo said.

Wang Enduo added that some academicians in her institute who are in their 70s still take the bus to work every day.

Chu and Wang Enduo both denied that academicians have greater access to scientific funds. Chu said that only half of academicians are able to get the grants they apply for. Wang Enduo mentioned that two projects that she applied for this year were rejected.

According to Chu, the income of an academician in China is normally made up of two parts—their wages and their special subsidies.



The latter can sometimes be many times larger than the former, Chu added.

“In Shanghai, the subsidy for academicians is around 150,000-300,000 yuan (\$24,075-48,150) each year. But compared to professors at the same level in overseas universities, this is not much at all, as their regular wages are high,” Chu said.

But Chu admitted that becoming an academician did have certain benefits for his scientific work. “My supervisor valued my words more and my projects and my laboratory got approval for projects more easily because I was an academician,” he said.

## Exit channels

In November last year, 80-year-old CAE member Shen Guofang applied for retirement from his research position at Beijing Forestry University, but his application was turned down.

Although there is a mandatory retirement age for almost everyone else in China, one does not exist for academicians.

“No government document has speci-





**HOMETOWN PRIDE:** A man walks past a multi-media demonstration showing Shanghai-based academicians of the Chinese Academy of Sciences and the Chinese Academy of Engineering in the Shanghai Science Hall on January 28

He said that Isaac Newton no longer did research after a certain age, whereas Madame Curie conducted research until the last minute of her life.

Wang Mengshu with Beijing Jiaotong University also believes that retirement system is not appropriate for academicians. "Retirement rules should be applicable only to actual posts," he said.

However, the issue of retirement for academicians still seems far from a solution. The amended charters of the CAS and the CAE this year mention only "advised resignation" but not "retirement."

The new charters stipulate that should any academician violate scientific ethics, lack personal integrity, or tarnish the reputation of academics or the academies, they will be "advised to resign."

However, it is hard to implement such a rule in reality.

In January, national broadcaster CCTV reported that Wang Zhengmin, a CAS academician and a professor at the Eye and ENT Hospital of Shanghai-based Fudan University, purchased an Australian-made artificial cochlea—a spiral tube that resides the inner ear and is essential to hearing—and copied the technology for a product produced in China.

Four of the six academicians who recommended Wang Zhengmin as a candidate for academician status in 2005 wrote a letter in October 2013, stating that they believed he should be disqualified.

Despite this, Wang Zhengmin has retained his academician title while the Academic Committee of Fudan University is reportedly conducting an investigation into his papers and the artificial-cochlea products he was involved in.

"If an academician has done something wrong, he or she should be punished or have his or her title revoked," said Yuan Yaxiang, a member of the CAS dealing in applied mathematics.

Wang Yue, a CAS academician and an expert in telecommunications, also pointed out that disqualifying academicians with ethical problems is necessary to protect the reputation of the group. ■

fied when academicians should retire, and no employer wants their academicians to retire either," Shen said.

Implementing an academician retirement and exit system was included in the reform plan adopted at the Third Plenary Session of the 18th CPC Central Committee.

Official statistics show that most of the 1,545 CAS and CAE members are between 70 and 89 years old. In spite of this, academicians on the whole still seem to lead active careers. According to an article that appeared in May 2012 in *Study Times*, a newspaper published by the Party School of the CPC Central Committee, 783 academicians of the CAE held a total of 5,610 part-time positions, averaging out at 7.2 positions per person.

Wang Xuan (1937-2006), a late academician of both the CAS and CAE, once said that he was no longer creative after the age of 55, and this holds true for many academicians.

Implementing an academician retirement and exit system will encourage academicians to contribute to the progress of science rather than resting on their past laurels, said Ouyang

Zhongcan, a CAS academician.

"Academician is only a title, but that title lasts a lifetime. The retirement of the academicians we are talking about now is for them to leave their current professional positions and duties," said 81-year-old Qin Boyi, a senior academician of the CAE.

Qin, a pharmacologist studying neurologic medicine and industrial toxicology at the Academy of Military Medical Sciences in Beijing, was elected an academician of the CAE in 1994 at the age of 62. In 2005, he retired from academic research after a one-year wait. Since then, he has pursued his personal interests such as traveling.

Today, Qin is a senior academician, a title that the CAE gives to its academicians above 80 years old. According to the charters of the CAS and the CAE, a senior academician cannot hold an academic leadership position, and cannot recommend or elect new academicians, but still has other rights and duties relating to the title of academician and still can attend meetings.

Qin said that the right time to retire would better be decided by academicians themselves.