Can China Bring Back the Best? The Communist Party Organizes China's Search for Talent*

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Abstract

For some developing countries, the international flow of their human talent in the recent decade was more of a "reverse brain gain" than a "brain drain." China, too, joined the group of states whose students, after studying abroad, now found sufficient opportunity and an acceptable quality of life back home to make returning after graduation a reasonable option. Still, China had not succeeded in bringing back the very best scientists and academics. To remedy this problem, the Organization Department of the Chinese Communist Party became actively involved in the recruitment process. The key programme was the "1000 Talents" Plan, introduced in 2008 by Politburo member Li Yuanchao, who had a visionary perspective on reverse migration. This programme has succeeded in bringing back entrepreneurs full time; but it has not attracted the very best of the Chinese scientists and academics who studied and lived overseas to return fulltime.

Keywords: talent; reverse migration; brain drain; brain circulation; CCP Organization Department; China

For some fortunate developing countries, the international flow of their human talent in the most recent decade has been more of a "reverse brain drain," rather than a terrible brain drain. South Korea (before it joined the OECD),[1] Taiwan,[2] Hong Kong[3] and India have all seen a significant "brain gain." And while UNESCO still worries that the bleeding of talent to the developed states continues,[4] a better balance has clearly been struck. China, too, joined the group of states whose students, after going abroad to study, now found sufficient

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1 Song 1997.
2 O'Neil, "Brain Drain and Gain: The Case of Taiwan," *Migration Information Source*, at www.migrationinformation.org/Feature/display.cfm?ID=155, retrieved on 6 February 2006.
3 Sussman 2010.
4 http://www.unesco.org/new/en/social-and-human-sciences/themes/social-transformations/international-migration/projects/skilled-migration-and-brain-drain/, accessed on July 18, 2011.

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opportunity and an acceptable quality of life back home to make returning after graduation a reasonable option.[5] Still, much debate exists over the reasons for this shift. Is it purely that these states' economies have grown, creating new jobs and opportunities for people with talent, capital, ideas and technology, or has the state played a critical role in this important change in national development?

Assertions about the importance of market forces dominate the literature. According to one view, modernization of these societies creates demands for new talents, skilled migrants and technologies – such as lawyers, software and technical engineers, business entrepreneurs, trade specialists and fund managers – who can significantly increase the capacities of companies, non-governmental organizations and governments in the developing world.[6] As these states become wealthier, they can offer rewards and incentives attractive even to overseas nationals who have been relatively successful in their host country, making returning home a serious option. According to Agunias and Newland, circular migration is "a continuing, long-term and fluid movement of people among countries that occupy what is increasingly recognized as a single economic space."[7] Similarly, the new economics of labour migration (NELM) school emphasizes the role of human agency in the reverse migration process, asserting that the migrant and his/her family see migration as a short-term and conscious strategy whereby a family member goes abroad to enhance their human capital, but then returns once this has been increased.[8]

Yet governments, too, can play an active role in facilitating the flow of human talent, partly by deregulating the controls imposed on human movement and thereby lowering the transaction costs of reverse migration. They can introduce incentives for returnees, such as higher salaries, better housing and dual passports or long-term residence cards for their former nationals who have adopted foreign citizenship. They can offer the best overseas scientists directorships of laboratories or schools and access to cutting edge equipment. To attract entrepreneurs, they can build high-tech zones, replete with tax breaks, discounted floor space and assistance in entering the local market.[9]

Developing states hoping to attract returned talent must improve the overall research climate by investing in science and education. According to Castells, "the state, by either stalling, unleashing or leading technological innovation, is a decisive factor in the overall process, as it expresses and organizes the social and cultural forces that dominate in a given space and time."[10] According to Newland, to facilitate circular migration, governments must at a minimum create an

5 See inter alia, Jonkers 2010, and Li 2005, 69–110.
6 Capacity Development Group. 2007.
7 Agunias and Newland 2007, 2.
8 See Borjas and Bratsberg 1996; Co, Gang and Yun 2000.
9 Zhou 2008.
10 Castells 1996, 13, cited in Zhou 2008, 23.

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enabling environment in the country of origin. The most fundamental (and most difficult) elements of this are establishment of the rule of law, property rights, open and transparent government, lack of corruption and other attributes of good governance, including dual citizenship or eliminating visa requirements for members of the diaspora who are citizens of another country.[11]

The state also enhances opportunities for returnees by overcoming "bias" against them at the national, institutional or individual level, as vested interests – including people with less human talent – may prevent returnees from maximizing the rewards that they should derive from their transnational capital.[12]

In the case of China, the government increased market opportunities, and the confidence of entrepreneurs living abroad, by joining the WTO and by amending the constitution in 1999, declaring the private sector a core component – rather than a supplement – of the national economy. The decision in 1998 to spend billions of RMB to create "world class" universities in China also increased opportunities for overseas educated mainlanders to return to China. Furthermore, China's domestic market, which offers significant returns to technology transfer, has encouraged many people to return,[13] or at least to set up shop back home and travel back and forth.[14]

The Chinese government has been perhaps the most assertive government in the world in introducing policies targeted at triggering a reverse brain drain. China's efforts to attract returnees took off in the early- to mid-1990s, as the country emerged from the trauma of 4 June 1989. Moreover, relative to most, if not all, countries, China has been successful in generating a "reverse brain drain." Yet limited success by government ministries in attracting the very top Chinese living abroad has led the Chinese Communist Party (CCP) to become directly involved in the search for overseas talent in recent years. One should not be surprised that an authoritarian state run by a communist party – with its hierarchies, discipline and command structure – dedicated to asserting the country's position in the world, might decide that Party leadership is necessary to mobilize the government, and the units that will use returnees, to create a reverse brain drain. Nevertheless, as described below, CCP involvement in what previously was a government-managed policy has changed the policy climate; it has taken on the air of a mobilized campaign, increasing pressure on government administrators to meet quotas and successfully implement the policy.

China's leaders recognize that the global-wide "talent war" is critical to enhancing state power and facilitating China's rise as an economic and scientific power.[15] And while a larger number of overseas students have returned, the CCP has raised the bar dramatically in terms of the quality of the talent that it wants to bring back from overseas. As such it has mobilized local and regional

11 Newland 2009, 13.
12 Cerase 1974, 251.
13 Zweig, Chung and Vanhonacker 2006. Also see Sheff 2002.
14 Saxenian 2006; and Saxenian, Motoyama and Quan. 2002.
15 Wang 2009.

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governments to evaluate their economic and scientific needs and then pursue these returnees, even as the CCP's Organization Department, which is responsible for personnel, mobilizes the central ministries to work even harder to bring back the best.

The First 25 Years Brings Limited Success

For the first 25 years of this policy, CCP engagement was sporadic, occurring only at critical moments. The CCP leadership launched the "study abroad policy" in 1978, a major policy redirection that could not have happened without very positive support,[16] if not the instigation, of pre-eminent leaders such as Deng Xiaoping 邓小平 and Fang Yi 方毅. In 1984, the CCP, then led by Secretary General Hu Yaobang 胡耀邦, decentralized authority over academic exchanges and student flows to the universities and the localities. The CCP Politburo also met in response to the brain drain crisis that followed the trauma of 4 June 1989. Overall, however, policy was directed by several key ministries, particularly Education (MOE) and Personnel, as well as the State Science and Technology Commission (later called the Ministry of Science and Technology or MOST) and the Chinese Academy of Sciences (CAS), with some involvement by the ministries of Finance, Public Security and Foreign Affairs. Key foreign players included the World Bank (whose US$800 million loan to the MOE in 1983 paid for fellowships for many students going abroad), overseas firms (particularly in Japan, which trained Chinese who were then recycled back to China as employees of the Japanese firms) and the hundreds of universities overseas that gave top Chinese students fellowships to study abroad.

These ministries introduced policies, some with quite serious financial rewards, to encourage returnees.[17] The most prestigious award for scientists was the "100 Talents" programme (*bairen jihua* 白人计划), introduced by the Chinese Academy of Sciences in 1999, and the Natural Science Foundation's "Distinguished Young Scholars" programme. Under the former, awardees received two million RMB: enough to buy equipment, fund a laboratory and supplement the returnee's salary (by 20 per cent). In the latter case, as of 2002, experimental researchers received one million RMB, while those engaged in theoretical research received 800,000 RMB.[18] For university-based scientists and academics, the key award is the Cheung Kong Scholar, founded in 1999 and funded by Hong Kong tycoon Li Ka-hsing and the MOE.

Many policies targeted the scientific or research environment in China and the difficulties returnees faced due to the highly regulated nature of Chinese society. These include schooling for their children, housing, residency permits, start-up costs and registration of companies. New organizations run predominantly on

16 Hermann 1990.
17 Cao 2004.
18 Simon and Cao 2010, 51.

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Western norms, such as the Chinese-European International Business School (CEIBS), Cheung Kong University, and both the Guanghua Business School and the Center on Chinese Economic Research at Peking University, have been popular with returnees.

More was done in terms of recruiting business entrepreneurs, as local governments vied for new technology that could enhance local output. Over 150 Chinese incubators were set up for overseas entrepreneurs in new high tech zones in cities all over China. Cities offered various incentives, such as tax-free purchases of new equipment and cars, free floor space in the incubator and, in some cases, investment in the start-up by the zone's management company.

The CCP leadership's attitude towards the circulation of China's human talent shifted significantly near the end of the Jiang era. First, Jiang Zemin 江泽民 himself rejected extant state policy that in part preferred to constrain or limit the outflow of talent. Instead, Jiang accepted the notion that China's talent was part of a global talent pool. The Chinese government, therefore, needed to let its talent go abroad to increase the value of their human capital and then compete with other countries in the global marketplace for this now enhanced talent. Prime Minister Zhu Rongji 朱镕基 contributed to the new view on talent when he said that "henceforth China would change the emphasis of the open policy from attracting foreign capital to attracting human talent and technology."[19]

Still, until the early 2000s, the attitude towards recruitment remained relatively passive, with ministries and universities posting advertisements on the internet or sending recruitment teams to the industrialized countries which collected CVs from overseas scholars but rarely followed up with further contacts. Overseas mainlanders cynically called these delegations "recruitment tourism." In 2003, a science councillor at a Chinese consulate in North America reported that he had made no effort to compile a list of top Chinese scientists working in the region.

Successes and Problems Lead to a Mixed Outcome

China's science recovered quickly in the early- and mid-1980s, as thousands of more senior visiting scholars returned to China after one or two years abroad. These "core elements" (*gu gan* 骨干) returned to universities and research institutes and used World Bank loans to purchase some of the cutting edge equipment on which they had worked during their time abroad.[20] They established many high quality, national key laboratories. However, the return of overseas talent essentially stopped after the 1989 Tiananmen crisis; this dealt China a terrible blow, as many of the researchers who had received Western PhDs in the 1980s decided to stay abroad, creating a huge diaspora.[21]

19 Miao 2010, 888.
20 Chen and Zweig 1998, 50–56.
21 Zweig and Chen 1995.

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Despite efforts during the 1990s, the bottom line was that the *really* talented scientists and academics rarely returned. The CAS "100 Talents" programme brought back mostly recent PhDs or, at best, post-doctoral fellows. Having worked for many years under their supervisors, most had little experience devising major research projects and directing research teams. The director of a research institute in north-east China, under the Chinese Academy of Sciences, told one of the authors in 2004 that despite extensive efforts, he could not get the top 20 per cent of mainland scientists living abroad to return. Beijing research laboratories confronted an "internal" brain drain, where returned scientists left CAS and established private firms or joined multinational corporations. Similarly, Li Jin, a population geneticist who relinquished a professorship at the University of Cincinnati to become dean of life sciences at Fudan 复旦 University in Shanghai, and who is now a vice president of the university, commented that "The returnees so far, however, are not superstars. Few are from first-tier universities and/or doing first-rate work."[22]

An ongoing major problem is that the work climate in many research or academic units is not conducive to successful project management. Returnees have long complained of burdensome paperwork and excessive time wasted on cultivating personal relations, rather than on research, as a means to gain research funding; petty jealousies within units also complicate their work.

China met greater success in recruiting overseas entrepreneurs to set up companies in China. But businesses have to be careful if they bring cutting edge technology, given China's poor record on protecting intellectual property. Moreover, returned entrepreneurs face a severe shortage of capital; most rely on funds accumulated while overseas or loans from family and friends.[23]

Bringing the Party Back In

From late 2001, the CCP recognized that human talent and technology, not just financial capital or equipment, were central to creating a powerful and modern Chinese state. Thereafter, the Organization Department of the CCP took a more active role in recruiting talent. This focus on enhancing China's talent came in two spurts: 2001–2005, led by Zeng Qinghong 曾慶紅, and then late 2008–2011, when the Organization Department, under Li Yuanchao 李源潮, organized local governments and CCP committees to analyse their own needs for human talent and commit to meeting recruitment quotas based on those needs. In 2007, the CCP put the idea of revitalizing the country through talent into the Party Congress Report and the CCP constitution, but it was really in late 2008 that the CCP began the "1000 Talents" programme (*qianren jihua* 千人计划), which enhanced the urgency of the CCP's efforts to bring about a major reverse brain drain.

22 Quoted in Normile 2006, 1722.
23 Vanhonacker, Zweig and Chung 2006.

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Round one, 2001–2003

Following Jiang and Zhu's new strategy on human resources and the 2001 Asia-Pacific Economic Cooperation (APEC) conference on building human capacity held in Beijing, talent recruitment received far greater attention. In May 2002, the Central Committee of the CCP and the State Council jointly promulgated the "2002–2005 Outline for Building the Ranks of Nationwide Talent," with its "strategy of strengthening the country through human talent" (*rencai qiangguo zhanlüe* 人才强国战略). The guiding principle was to accord returnees "complete trust," and swiftly carry out research "to determine concrete methods for selecting highly talented returnees to take up leadership positions."[24] Also, while the CCP had always been responsible for developing talent within the Party under its role in "managing cadres" (*dang guan ganbu* 党管干部), at a meeting of the Organization Department in late 2002, Zeng Qinghong, the member of the Standing Committee of the Politburo responsible for personnel, raised the principle that hereafter the CCP should also manage talent (*dang guan rencai* 党管人才).[25]

In June 2003, the Politburo established the "Central Coordinating Group on Talent" (CCGT), which was led directly by the Organization Department of the Central Committee with members from a dozen other important ministries. The group's seven responsibilities all related to guiding and advising the CCP leadership on the supply and development of talent. The leading group was to coordinate policies on talent, which fell under the purview of a host of ministries and agencies whose interests and authority sometimes overlapped or competed. Following this decision, local governments throughout China established "departments on the work on talent" (*rencai gongzuo chu* 人才工作处), each with a general office to coordinate the local effort.

In November 2003, the Politburo decided to implement more energetically the policy of "strengthening the country through human talent."[26] The following month, at a nationwide working meeting on talent, the General Secretary of the CCP, Hu Jintao, publicly endorsed this idea that there must be a shift from the "CCP managing cadres" to the "CCP managing talent." One observer sees this as a historic decision, critical to the CCP's ability to remain the ruling party.[27] On 26 December 2003, the Central Committee and State Council put forward Central Document no. 16 (2003), called "The decision on further strengthening the work on talent" (*Guanyu jin yi bu jiaqiang rencai gongzuo* 关于进一步加强人才工作), which stated that if China wanted to transform itself from a country with "a large population" into one with a "rich supply of human talent"

24 Miao 2010, 889–90.

25 According to one researcher in the Ministry of Education, in late 2001, a report to the Organization Department of the CCP called on the CCP to take control of the work on encouraging returnees, but this suggestion led the Party to take control over the development of all forms of "talent." Interview in Beijing, April 2011.

26 This discussion draws heavily on Miao 2010, 430–39.

27 Miao 2010, 430.

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(*renkou da guo zhuanwei rencai ziyuan qiangguo* 人口大国转为人才资源强国), the CCP had to "manage talent" and import "high quality talent" which was in "short supply." Point seven called for creating a positive environment, including solving their housing, healthcare, family and income problems. Apparently government ministries lacked the authority to override each other on many of these issues, leaving returnees' problems unsolved. Only a higher status organization could overcome such impasses. Rather than treat returnees as threats to their own power, local leaders were also to train the very talented for leadership positions and rapidly promote them. At the same time, the CCP and the State Council began to work on the "Medium to Long-Term Plan for the Development of Science and Technology, 2006–2020," which was promulgated in January 2006.[28]

Still, the Organization Department failed to liberalize the environment in units around China. A 2002 survey found that, when calculating whether to return, mainland expatriates preferred a "systematic reform of China's environment on human talent" (*xitong gaishan guonei rencai huanjing* 系统改善国内人才环境), rather than special privileges.[29] Similarly, a web-based survey in 2004 of 3,000 respondents found that the most important force holding people back from returning was "the complicated role of human relations in Chinese society."[30] Entrepreneurs also felt the "legal system needed improvement."

While the number of returnees after 2006 suggests a major policy success – over 100,000 students returned to China in 2009 alone – the recent upswing in returnees was helped by the global financial crisis. Moreover, the majority of these returnees were students who went abroad for short-term degrees. Thus, China was still not attracting the very best "talent,"[31] a situation the CCP would have to resolve if it wanted to move China into the top ranks of innovative societies.

Data from the US Energy Department's Oak Ridge Institute for Science and Education under the National Science Foundation highlight China's dilemma. US-educated PhD graduates in the sciences and engineering reflect highly qualified Chinese talent, yet among the group who received doctorates in 2002, 92 per cent still remained in the United States five years after graduation. China's score is the highest in the world – with India's staying rate at 81 per cent, Canada's at 55 per cent, Taiwan's at 43 per cent, Japan's at 33 per cent, Mexico's at 32 per cent and Thailand's at 7 per cent (see figure 1). Thus the efforts of the first five years of the new century had had almost no impact on the very top talent overseas.

28 Simon and Cao 2010, 43–4.
29 Miao 2010, 897.
30 Ibid.
31 Cao 2008, 331–45.

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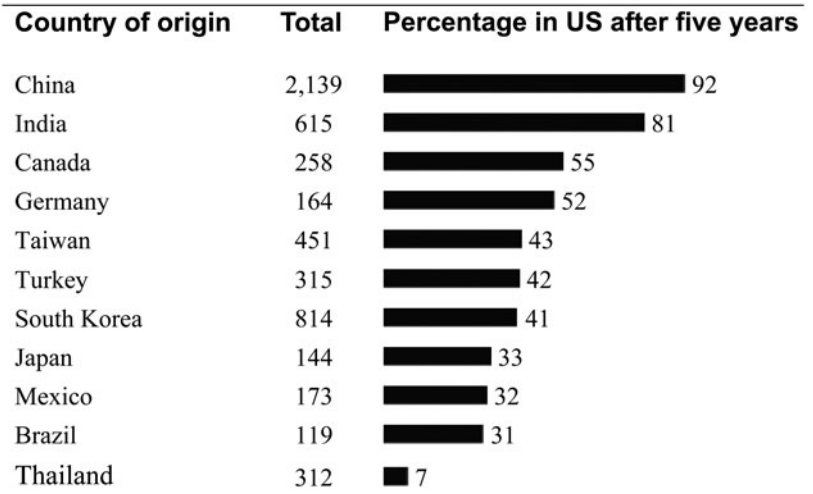
Figure 1: **Staying after School: Percentage of International Students Receiving US Science and Engineering Doctorates in 2002 who were in the US in 2007**



Source:
US Energy Department Oak Ridge Institute for Science and Technology.

The Ministry of Education's 2007 plan

In response to the "Medium to Long-Term Plan for the Development of Science and Technology, 2006–2020,"[32] and almost two years before the Organization Department took over the policy on returnees through its "1000 Talents" programme, the Ministry of Education (MOE) in March 2007 proposed a plan to "strengthen the work of attracting returnees."[33] The MOE sought three types of talents: international leaders in their fields who had created innovative teams; "sturdy" (*zhashi* 扎实) basic researchers who had the ability to make breakthroughs and the potential to become excellent academic leaders; and core (*gugan* 骨干) young professors and researchers who could elevate the quality of research and teaching.

Each locality was to assess its future scientific and technical needs and determine whether returnees could solve those needs. The MOE would build a data set of China's needs in education, research and innovation and discover who overseas and within China engaged in such work. Education consuls overseas would build lists of researchers in their locality, including their speciality and whether they were inclined to return; and if they were so inclined, consuls were to strengthen links with them and make concrete plans about how to bring them home. The MOE would spread the message on *Shenzhou xueren* 神州学人,

32 Simon and Cao 2010, 43–44.
33 Miao 2010, 438–39. China also included a special section on talent development in its 11th Five-year Plan (2006–2010).

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its website for overseas study. Returnee organizations (local and abroad) would link with expatriate researchers and bring them back bi-annually to meet potential employers. The MOE sent delegations of potential employers or investors abroad to meet them. Under the scheme, all programmes – such as the "100 Talents" programme, the Cheung Kong scholars programme (*Changjiang xuezhe jiangli jihua* 江学者奖励计划) and "Spring Light" programme (*chunhui jihua* 春晖计划) – were to be utilized to attract people to visit, teach part time, and join projects such as the "Start-up Fund for Returnees." The MOE was to ease the process of resettling in China for citizens or for long-term residences holding foreign citizenship

The MOE also developed a programme focusing on overseas entrepreneurs. The Chinese Service Center for Scholarly Exchange,[34] under the MOE, encourages overseas researchers to submit reports on their current projects which are assessed by a panel of experts. The best projects are introduced to potential domestic partners and the overseas entrepreneurs are brought to China to meet them. By 2010, over 350 innovative entrepreneurs had been brought back to work in China under this programme.

The idea of turning China into a "creative" or "innovative society" (which was later a highlight of Li Yuanchao's own views) and the "1000 Talents" programme emerged in this period. Chen Zhili 陈至立, the State Councillor responsible for education, speaking at a March 2007 celebration of the Cheung Kong Scholars programme, admitted that universities lacked enough talent to make China a "creative" society (*chuangxinxing guojia* 创新性国家).[35] China, she said, needed "new ways of thinking" (*xin silu* 新思路) and "new methods" to bring people back to China, including using research money to hire mature "world class professors."

In August 2007, six ministries called for greater global cooperation and exchange with top overseas universities and with MNCs to utilize overseas resources to educate students in fields where China faced a shortage of human talent.[36] This document might have influenced the CCGT, which on 14 February 2008 proposed the "1000 Talents" programme using almost identical language. Despite its policy innovation and leadership, the MOE lacked the administrative capacity and authority to coordinate the myriad organizations, regulations and competing interests involved in such a massive endeavour, which included changing rules on household registration, taxes, jobs for spouses

34 Interview at the China Service Center on Scholarly Exchange, Beijing, November 2010.

35 Miao 2010, 438–39.

36 The document was called "*Guanyu jin yibu jiaqiang guojia zongdian lingyu jinque rencai peiyang gongzuo de yijian*" (An opinion on progressively strengthening the work of training human talent in key sectors of the state where there is a shortage). The six were the ministries of Education, Finance, Personnel, and Science and Technology, as well as the Development and Reform Commission of the State Council and the State-owned Assets Supervision and Administration Commission. Miao 2010, 69.

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and schools for children. Only the CCP and its Organization Department had the power to compel cooperation.

Li Yuanchao's views on building China through talent

In October 2007, at the First Plenum of the 17th Central Committee, Li Yuanchao, former Party secretary of Jiangsu province, became head of the Central Committee's Organization Department and the head of the CCGT.[37] As Party secretary of Jiangsu province, he had tested various human resource policies, including open criticism of cadres hoping for promotion. His "530 Plan" had successfully encouraged the city of Wuxi to become an investment partner with entrepreneurs to encourage them to set up shop in the city.

After taking control of policy, Li visited research centres, gave talks about returnees and high tech development in China, and met with returnees in small groups to understand their motivations. Li is wedded to the idea that talent is the "core" (*hexin* 核心) of a nation's global creativity and competitiveness, and that to be globally successful, Chinese firms must attract very talented returnees. For him, human talent is a "strategic resource" (*zhanlüexing ziyuan* 战略性资源) and bringing returnees back is a "strategic investment" (*zhanlüe touzi* 战 略投资).

Li's views are humanistic, even if his language sounds slightly militant. In December 2008, he called for creating a welcoming environment based on three kinds of "*kuan* 宽" (relaxed) – *kuansong* 宽松, *kuanrong* 宽容 and *kuanhou* 宽厚 that is, "relaxed, tolerant and lenient." The term "tolerant" may reflect the influence of theorist Richard Florida, who says that cities seeking the best talent need a "tolerant" environment where people can be creative. This point is particularly important as it fits the assertion that to facilitate "return migration" governments must overcome "bias" against returnees.

Li told executives of organizations to appeal to returnees' hearts (*yixin yinxin* 以新引心), including their love of country (*aiguo xin* 爱国心), their love of their careers (*shiye xin* 事业心) and their heartfelt need for self-esteem (*zizun xin* 自尊心).[38] Underutilizing or ignoring the returnees in their ranks, slowing their promotions and harming their self-esteem – thereby ignoring the desire for career and personal development which brought them back in the first place – would push them overseas again.

Li's model state-owned enterprise would utilize research and development strategies – common in Western multinationals – that link manufacturing and research, by establishing R&D centres in Chinese firms. In July 2009, he lauded the Low Carbon Clean Coal Energy Research Center in Beijing, where returnee researchers had joined the firm's management team. These firms could catch up with the West by combining innovative leaders with scientists who bring back "core technology" (*hexin jishu* 核心技术) from abroad to trigger a

37 Miao 2010, 443.
38 *Ibid.*, 442–43.

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"transformative upgrading" (*zhuanxing shengji* 转型升级) of the firms, making China an "innovative nation." He also applauded the National Institute of Biological Sciences in January 2009 for introducing Western standards in hiring and allocating funding to research teams based entirely on merit.

Round two: the "1000 Talents" programme

In December 2007, following the 17th Party Congress and Li's ascent to Chair of CCGT, several ministries led by the Organization Department drafted three documents about returnees, focusing on improving their working conditions, short-term methods for increasing the flow, and on special privileges to be awarded to them in terms of livelihood.[39] By the end of the month, the CCGT issued its new "1000 Talents" plan, under which China would bring back 2,000 highly talented people over the next five to ten years.[40]

The document emphasized that "human talent is the most important resource" (*rencai ziyuan shi diyi ziyuan* 人才资源是第一资源) and that attracting China's overseas talent was "absolutely necessary" if China were "to raise its global competitiveness" and become "an innovative society." While there was no mention of "global leaders in academic fields who run large research teams," as had appeared in the MOE's 2007 plan, this plan called for the return of people who could make breakthroughs in key technologies (*nenggou tupo guanjian jishu* 能够突破关键技术) and serve as scientific leaders who could bring forward newly emerging fields (*daidong xinxing xueke* 带动新型学科). Each locality was to devise a plan combining socio-economic development and the restructuring of the local economy, and go out and bring in overseas talent that could facilitate those changes. Cities were to establish firms in their high tech zones, much like Wuxi's model.

In autumn 2009, at meetings nationwide, localities discussed and proposed the type of talent that their locality needed. Wang Huiyao's 王辉耀 book, *Talent War*, was a primer for the campaign. Cities all over China made commitments as to the number of highly talented returnees they would recruit. Beijing announced a target of 500 people – with Zhongguancun Science Park in their city, such a target was plausible – Guangzhou set its goal at 300, while Jinan, Shandong province, promised to recruit 150, with all work to be completed within three to five years.[41]

Thereafter, city and provincial government and CCP officials set out across the globe on recruitment drives. In December 2009, Shanghai sent out a team to recruit 115 people for their financial sector alone, a task made easier by the global financial crisis. The plan was to visit New York, Toronto and Singapore. The

39 Apparently there were three documents (Miao 2010, 957).

40 Xinhua she. 2009. "Zhongyang jueding zuzhi shishe haiwai gao cengci rencai yinjin jihua" (The Central Committee decides to organize and bring into effect a plan to bring in high quality overseas talent), January 2009.

41 China Economic Net. 2010. "Chinese job fair in US tried to woo talent," http://en.ce.cn/Business/Macro-economic/201004/26/t20100426_21326070.shtml. Accessed 26 April 2010.

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salary package was reportedly competitive, while the city government promised to resolve all housing, education and healthcare problems.[42] Officials from Jinan visited Toronto, New York and Silicon Valley, seeking to fill 150 positions in five years, under its "5–150 jobs campaign."[43]

In December 2010, at the annual Guangzhou Convention of Overseas Chinese Scholars in Science and Technology, Li Yuanchao introduced a new "1000 Talents" youth programme aimed at attracting 2,000 talented people under the age of 40. The CCP has also launched a new "1000 Foreign Talents" programme aimed at "high-end foreign scientists, engineers and managers from developed countries."[44]

The original content of the programme

Under the initial requirements of the "1000 Talents" plan, awardees had to have a foreign PhD, be below 55 years of age, and be willing to work in China for no less than six months each year. The programme was seeking (a) experts and scholars with titles on a par with professors in prestigious foreign universities and scientific research institutes; (b) senior technical and management professionals working in well-known international companies; (c) entrepreneurs owning proprietary intellectual property rights or who had mastered "core technologies," with overseas experience as entrepreneurs and familiarity with international practice; (d) other urgently needed high-level innovative and entrepreneurial talents. Start-up capital had to come from their own funds, using their technology's appraisal as capital stock, or foreign venture capital that accounted for over 50 per cent of the capital investment.

Employers were to provide favourable working conditions for the returned entrepreneurs and allow them to assume leadership positions. Livelihood benefits included "permanent residence status for aliens" and/or multiple entry-exit visas good for two to five years. The employers had to find their spouses a job and guarantee their children admission to top schools. They were free to settle in any city of their choice. They received a one-time subsidy of RMB1 million and were entitled to medical care and social insurance, including pensions, medical insurance and work-related injury insurance. They would receive a housing and food allowance, subsidy for home leave, and a children-education allowance, all tax free. Their salary, based on consultation, was to be reasonable in light of their previous salary overseas. The Ministry of Human Resource and Social Security's Overseas Students and Experts Service Center was expected to establish a team to help returnees manage issues such as permanent residence, urban registration, medical treatment and school enrolment of children.

42 China Economic Net. 2009. "Shanghai to recruit overseas financial talents," http:// en.ce.cn/ National/ Local/200912/05/t20091205_20562105.shtml. Accessed 15 December 2009.

43 China Economic Net. 2010. "Chinese job fair in US tried to woo talent," http://en.ce.cn/Business/ Macro-economic/201004/26/t20100426_21326070.shtml. Accessed 26 April 2010.

44 Simon and Cao 2011, 18.

Assessment involved a two-step process: first, local and foreign experts from the same fields would make an anonymous assessment, followed by comprehensive appraisals by a committee of experts in the relevant field. No fixed evaluation committee was to be established, as each evaluation would be based on a group of experts who were randomly selected from a data base of experts. All awardees had to be approved by the Working Group for the Introduction of Overseas High-level Talents.

Transferring authority and changing the policy climate

CCP involvement put much greater pressure on government officials to respond to policy directives. With the emergence of the Organization Department in this process, lines of authority and the atmosphere surrounding the policy changed. In 2008, a Group on Coordinating Talent (*rencai xietiao xiaozu* 人才协调小组), directed by the Ministry of Personnel (renamed the Ministry of Human Resources and Social Services – MHRSS), under the State Council, was replaced by the CCGT, under the CCP's Organization Department, and its Office of Human Talent, which runs the policy on a daily basis. All key line ministries responsible for the reverse brain drain are members of the CCGT, but leadership rests with the Organization Department, which uses its higher authority to coordinate the competing interests and its political leverage to insure the policy's success. The MHRSS holds the post of Vice-chair of the group.

Locally, formal administrative authority has changed little. Only Beijing's Service Center for Scholarly Exchange, an organization under the MHRSS and the MOE, was transferred out of the government and into the Party system, directly under the central Organization Department. Perhaps Li Yuanchao wanted to ensure the policy's success in Beijing, which would be easier if it was directly under his command.[45] Otherwise, no other city has undergone a similar shift in its formal lines of authority.

However, informal authority has changed significantly. Although the service centres for scholarly exchange in large cities, which have for many years helped returnees readjust to China, remain under the MHRSS bureau in the municipal government, they now report on their work to the local Coordinating Group on Talent, which is directly under the municipal CCP Committee. Meetings on returnees are now run by the local Party Committee and its Organization Bureau, so essentially these government officials now work under the CCP. And while these service centres remain within the government system, officials in them are wary that their unit will be taken over by the CCP.

The policy environment changed as well. As mentioned above, in autumn 2009, cities were mobilized to evaluate their community's needs in terms of technical and scientific expertise and commit to find these specialists overseas. With

45 View of a local official, 2011.

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the policy now under the local CCP Committee, bureaucrats face more pressure to meet these commitments, though the quotas to which they committed are reportedly "soft" and will not affect people's careers if they are not accomplished.[46] But as one local official commented, "the policy is now under the CCP's leadership, so of course the pressure is greater."[47] In his view, expectations are especially heavy for "units that employ people" (*yongren danwei* 用人单位), including universities, high tech parks, research institutes and SOEs, which are expected to go overseas to recruit top talent and to improve their internal environment so returnees will be willing to stay.

During interviews, officials from one such "unit that employs people," a good university in a large city in north China, attested to these new pressures, but also to the added unpublicized incentives that come with a well-funded programme administered by the CCP.[48] First, the city itself has established its own "1000 Talents" plan and encourages the university to bring in talent to help it meet its quota. As a result, the deans of the various colleges within the university are busy searching for highly talented people who can meet local or national level criteria. Thus, while the university officially notified the faculty about the programme in October 2008, they had informed the faculty six months earlier, asking them to contact friends and former students to consider coming back. As one HR staffer at the university said, "I have no pressure, but my dean does." One of the reasons for that pressure is that "the government is eager to see the achievements of this project quickly."

As for the incentives, if a college in this university brings in a candidate who is approved as a national level "1000 Talent" – regardless of whether they return full-time or part-time[49] – the school gets RMB12 million (almost US$2 million), and while the returnee gets the bulk of the monies for his own research, the dean redistributes some of the monies to other faculty, making the awarding of a "1000 Talents" fellowship a positive event for the whole college. Reportedly, colleges with locally approved "1000 Talents" receive RMB8 million, of which they can keep some funds; however short-term fellows (less than two months) under the municipal project only get an air ticket, enhancing the incentives to return full time. The college also gets considerably less than the RMB8 million.

To meet these quotas, some localities have given awards to people who have already returned to China, as there has not been enough time to persuade very talented people who are entrenched overseas to come home. Guangzhou, which should have some attractiveness, gave only six "1000 Talents" awards in 2009 and 20 in 2010, and had no recipients who had returned after the programme began.[50] In fact, officials in the city felt that their quota of 300 over five years would be difficult to meet. Local officials in another city saw it as

46 Interview in South China, June 2011.
47 Interview in South China, June 2011.
48 Interview in North China, November 2011.
49 At this university, 25% of rewards were short term.
50 Interviews in Guangzhou, May 2011.

unfortunate to award people who had already returned, but they too needed to show results.

Finally, policy related to the "1000 Talents" plan remains somewhat secretive. The Organization Department will not publicize a current list of awardees, though an original list of over 360 awardees was posted on a website. Secrecy could be the result of the policy's sensitivity. After all, the plan is to recruit very talented expatriate mainlanders, many of whom have jobs and commitments to organizations abroad, and once those potential returnees engage in negotiations or begin the process of relocation, they may confront trouble in their host units in the West. For example, Wang Xiaodong, a professor at Ohio State University (OSU), who was in the midst of negotiating a "1000 Talents" award through Nankai University in Tianjin, was the target of a complaint by a colleague at OSU about the amount of time he was spending as "dean" of a new college of pharmacy he reportedly set up at Nankai.[51] Similarly, overseas executives who are being courted by the CCP may prefer to keep these negotiations private. According to one outside observer, "so many of the recruits hold concurrent positions at Western institutions, the disclosure could embarrass them and even cause them to lose their permanent positions overseas, which are more secure."[52]

CCP officials feared that involvement of the Organization Department would scare off potential returnees who prefer to keep their distance from the CCP. The secrecy may also be attributed to Li Yuanchao's efforts to join the Politburo Standing Committee at the 18th Party Congress in autumn 2012. With his role in promoting and attracting talent a key part of his "election platform," it behoved him to ensure that his pet project, the "1000 Talents" programme, retained a positive glow.

Measuring Success

Success for this policy would be a dramatic rise in the quality of Chinese science, but this will take five or more years to materialize. Nevertheless, according to data released by the Chinese Academy of Personnel Science (CAPS),[53] in 2009–11, of a total of 6,200 applicants for this award, 1,510 highly talented people had been selected as national level "1000 Talents," involving a relatively high rejection rate of 75 per cent. Also, in the view of the CAPS, this inflow is of historic proportions; it may be the largest influx of high quality talent over such a short period of time in China's history.

The policy was also intended to change the research climate, but observers doubt such a major change can occur overnight. Li and his colleagues recognize that the environment within the nation and organizations must undergo

51 Hao 2009, 535.
52 Cong Cao, personal communication with the author, 8 August 2011.
53 Wu 2011.

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significant changes – "intolerance" does not become "tolerance" overnight. Thick personal ties that hamper the efficient allocation of resources and slow China's progress will not melt away in a fortnight. Leaders of SOEs, who themselves may lack management training, will hesitate before appointing high flying expatriate mainlanders. They may face internal opposition from colleagues in the SOE who have not been abroad. Also, expatriate mainlanders who read articles by professors Shi Yigong 施一公 and Rao Yi 饶毅 in *Science* magazine, may hesitate to return because these two heading researchers, who gave up academic chairs at Princeton and Northwestern universities to return to Qinghua and Beijing universities, respectively, lamented that the allocation of funds, grants and awards in China still depends too heavily on who you know, not what you know. They see reforms undermined by the generation of earlier returnees, now ensconced in positions of authority in China's scientific establishment, who resist reforms that would put more funds in the hands of the star scientists returning under the "1000 Talents" programme. Such public lamentations, while sending important messages to top leaders, also warn expatriate mainlanders that major changes to China's scientific environment have yet to be completed.

The concessions described above suggest that flaws existed in the initial strategy underlying the "1000 Talents" programme. As mentioned above, some awards have been bestowed retroactively on people who have already returned. Second, while the initial award was intended only for those who returned full time, the programme now involves both "A" and "B" schedules, with those assigned to the "B" level spending a few months a year in China, and essentially unwilling to commit to return full time. A few recipients of the "B" category are less than stellar candidates who have engaged in some degree of academic fraud. Thus Cong Cao argues that "while the program has attracted some top-notch academics back, its problems have overshadowed any positive outcome and could have long-term negative impacts on China's scientific and educational community by turning the best and the brightest away as they don't want to be in the company of shoddy academics, even if they make up only a handful."[54] An earlier policy supporting short-term visits, whereby expatriate mainlanders received a generous financial package without fixed obligations, led local scientists to argue that high salaried scientists who contribute little to China's long-term advancement essentially take the money and run.[55]

Critiques on the Chinese websites

China's cyberspace has seen frank comments about the programme. A professor at Huazhong University of Science and Technology, in Wuhan, a top-ten science school, says that while attracting very senior people may promote a school's prestige, they, as with most Nobel prize winners, are unlikely to make any new major

54 Cong Cao, personal communication with the author, 8 August 2011.
55 Hao 2006, 1721–23.

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breakthroughs during the rest of their career; by age 50 their truly creative burst has come and gone.[56] Yet such famous professors are expensive, and since most will come for only two months a year, they will contribute little. His suggestion? Bring back 10,000 recent PhDs, give them the platform and opportunity to be creative and they will produce very significant breakthroughs.

A second critique focused on several aspects of the policy.[57] First, despite high salaries, the positions under the programme are all contract posts, not tenured: "This in essence means that for people abroad who already have tenure overseas as full professors, the programme simply does not have enough attraction." He felt that funds spent on researchers who come for only two months a year are greatly misused. He also felt that the rapid cave-in on the two month issue suggested that organizations working on talent policy lack systematic coordination; as a result, the policy's actual content and what was being advertised were totally different, making the people managing the policy looks silly. Finally, the same critique highlighted the problem of personal ties in the domestic research culture. While he believes that the overpowering role of personal ties in ministries, bureaus and laboratories can eventually be overcome, it is a long term process. Therefore many overseas scholars, who have "little confidence that they can adjust to the domestic scientific research environment," do not return.

Officials in the MOE feel that this policy, which they have administered for decades, has been taken out of their hands. But the Organization Department, despite its leading role, lacks the staff overseas to contact and encourage mainlanders to return. That work still falls on the shoulders of the education counsellors in overseas consulates and on the MHRSS. In the words of one MOE official, "we do the work but the policy is implemented under the leadership of the Organization Department" (*yi zuzhibu daitou* 以组织部带头), suggesting that those who deserve the credit do not get it.

An empirical evaluation of the programme

To obtain a more in-depth view of the programme, we collected the names of awardees from various sources. Initially we found some information on 600 awardees, but after searching news, company, university and websites of the Chinese Academy of Sciences (CAS), we compiled a more complete data set for a total of 501 names.[58]

56 "*Qian ren jihua xu wan ren jihua lai peitao*" (The 1000 Talents Plan needs a 10,000 Talents Plan to accompany it), http://www.sciencenet.cn/m/user_content.aspx?id=329080.

57 "*Kexue xinwen jizhe, Di Lihui, caifang Meiguo Guandao daxue guanli xueyuan zuli jiaoshou gonggong guanli yu faxue yanjiu bu zhuren Li Ning*" (Science Net reporter Di Lihui interviews Li Ning, an assistant professor from Guam University's Management School and Director of the Institute for Research on Public Administration and Law), http://www.sciencenet.cn/m/user_content.aspx?id=328284.

58 Thanks to Sam Sun for this research work and analysis. Even for academics in universities, we started with news reports (especially from campus media) and then searched for the official records since news reports are often incomplete. Universities and companies promote such reports to show they are attracting talent. We never relied on one single source; only when multiple sources all showed the same information, did we record it.

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Table 1: **Age Distribution of "1000 Talents," 2011**

Age	Percentage
Over 55	8.1
51–55	26.6
45–50	54.8
Under 45	9.9

Source:
Various websites.
Note:
N = 274 or 54.7 per cent of the total sample.

There are three types of returnees in our data set: A, B, and C. Originally, the programme had only two types of returnees, "innovative" (*chuangxin* 创新), who do research, and "entrepreneurial" (*chuangye* 创业), who run businesses in China. However, some in the "innovative" category work in companies (9 per cent), rather than in universities or research institutes. So, to make it less confusing, we split "innovators" into two types, Innovator A (in research institutes and universities – 374 or 74.7 per cent) and Innovator B (in companies), leaving the C "entrepreneurs" (82 or 16.4 per cent) alone. Information on some variables, such as age and "workplace abroad," were particularly hard to find for B "innovative" and C "entrepreneurs." Also it was not always easy to determine whether they had returned full-time or part-time: some people who reported themselves as full-time were only part-time, as there is some fabrication over this issue. But if we found evidence of part-timers, we recorded it as such.

These are a very talented, mature group of researchers and entrepreneurs. Their average age is 50, with 54.9 per cent of them between the ages of 45 and 50 (see table 1).[59] Among the group, 34.9 per cent gained their PhD between 1986 and 1990, and 44.7 per cent got it in 1991–95. Only 4.5 per cent received their PhDs after 2000, again reflecting academic maturity (see figure 2). A majority (55.9 per cent) of their PhDs came from the US, also the last point of residence for 68.7 per cent of awardees (table 2), but if one combines the UK and Europe, returnees from the EU comprise 19.2 per cent of this group. Interestingly, the US was able to attract PhDs trained in Japan, China, Europe and the UK. Six per cent had already returned to Greater China – Singapore, Hong Kong and Taiwan – before joining the programme, even though less than one per cent got their degrees in these societies. In this case, Hong Kong and Singapore, which trained only three PhDs, were now home to 27 awardees, suggesting that these locations are good places to work. People resident in these two cities were also quite hesitant to return full-time to China, despite receiving the award (see table 2).

When one compares the percentage of returnees holding overseas PhDs (88.2 per cent in our sample), versus three other key programmes established to attract

59 We only have the age of 56% of them.

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Figure 2: **Year "1000 Talent" Recipients Obtained their PhD (% of Total Recipients)**

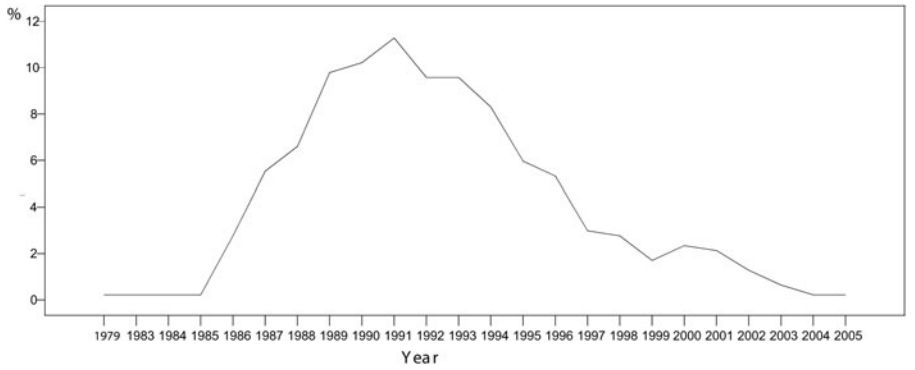

Table 2: **Country of PhD, Last Residence and Percentage Change of "1000 Talents"**

Country or Region	Country of PhD		Workplace Abroad		Change	
	No.	%	No.	%	No.	% of Total
US	274	55.9	334	68.7	+60	12.8
China	59	11.8	N/A	N/A	−55	−11.8
Europe	52	10.6	36	7.4	−16	−3.2
UK	42	8.6	37	7.6	−5	−1.0
Japan	23	4.7	16	3.3	−7	−1.4
Canada	19	3.9	19	3.9	0	0.0
Australia	16	3.3	15	3.1	−1	−0.2
Hong Kong	2	0.4	16	3.3	+14	+2.9
Singapore	1	2	11	2.3	+10	+2.1
Taiwan	0	0.0	2	0.4	+2	0.4
Brazil	1	0.2	0	0.0	−1	−0.2
Total	490	100	486	100		

Source:
Various websites.

returnees – CAS's "100 Talents" programme, the MOE's Cheung Kong Scholars programme or the Natural Science Foundation of China's (NSFC) "Distinguished Young Scholars" programme (with their percentages of 43.6 per cent, 37.2 per cent and 32.8 per cent respectively) – the "1000 Talents" programme far surpasses them in terms of bringing back overseas trained PhDs (see table 3).

Several other positive factors are worth mentioning. First, while the majority of these returnees were trained overseas, allowing China to benefit from investment by overseas institutions in these peoples' human capital, 55 of them were Chinese-trained PhDs who went abroad to work or for a post-doctoral position. In their cases, China was following the Indian pattern of "educate–migrate," which is

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Table 3: **Measures of Success of Major Government Programs for Returnees**

Program (1)	Years of the Program	Total No.	With Overseas Experience (%)	With Overseas PhDs (%)
Natural Science Foundation Distinguished Scholar*	1994–2004	1176	98.5	32.8
MOE Cheung Kong Scholars*	1994–2004	537	90	37.2
CAS "100 Talents" programme*	1994–2004	899	86.5	43.6
Organization Dept., 1000 Talents Programme (2)	2008–11	1100	100	88

Sources

*Data from first three rows are from Simon and Cao 2010, 240.

Data on the Organization Department's "1000 Talents" programme from research by David Zweig, December 2011.

more expensive than "migrate–educate."[60] In the former case, the loss is greater, as students who studied in China, usually on government scholarships, and in whom China had made a major investment, were employing that human capital in overseas markets, mostly the US. Yet, in this case, they were recovering this lost brain power.

Finally, of 374 A-Innovative talents, 96 (25.7 per cent) were alumnae, returning to their home university, a relatively low percentage for China. Recruiting very talented people requires close personal connections, implying that former supervisors may have had a major impact on the decision to return. Given the difficulties returnees might face, it is wise to go to a unit where you have maintained strong links with senior researchers who can support you. As for regional distribution, over 26 per cent had settled outside the coastal territories, meaning that inland cities were also benefiting from this programme, and probably in a higher ratio than would have occurred under other programmes (see table 4).

Yet, the data document the concessions for which the plan has been criticized. Although the programme first stipulated that all awardees must return for a minimum of six months or one year, 58.5 per cent of the awardees for whom we have data are returning only part time, undermining their contribution to Chinese science. In particular, 73.5 per cent of returnees in scientific and academic institutes (A-Innovative), many of whom have excellent jobs overseas precisely because they are quite talented, are not giving up their tenured posts at their overseas university. The fact that academic positions under the "1000 Talents" programme are not tenured, but only given five-year contracts, is a serious disincentive to give up a tenured slot abroad. Also, younger people are more

60 One significant difference between China's and India's brain drains is that India loses its talent to developed countries after they are trained in India, hence the "educate–migrate" phenomenon, while Chinese who remain abroad were mostly trained in the developed world (i.e. migrate–educate). In this way, India's loss is considered greater since they have invested heavily in these researchers before they go abroad.

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Table 4: **: Regional Distribution of "1000 Talents" Programme, 2011**

Province/Major city	CAPS data		Web Data	
	No.	%	No.	%
Beijing	415	27.5	103	20.6
Shanghai	225	14.9	74	14.8
Jiangsu (Nanjing)	161	10.7	38	7.6
Zhejiang (Hangzhou)	93	6.2	37	7.4
Hubei	n.a.	n.a.	36	7.2
Hubei (Wuhan)	77	5.1	36	7.2
Tianjin	63	4.2	19	3.8
Sichuan (Chengdu)	n.a.	n.a.	26	5.2
Anhui (Hefei)	n.a.	n.a.	20	4.0
Shaanxi (Xi'an)	n.a.	n.a.	23	4.6
Hunan (Changsha)	n.a.	n.a.	10	2.0
Others	397	26.3	79	15.8
Total	**1510**	**100.0**	**501**	**100.0**

Source:
CAPS refers to data from the Chinese Academy of Personnel Sciences, while Web Data refers to data collected by David Zweig and Sam Sun.

likely to return full time, while the older talents tend to select part-time affiliations;[61] and given that half the part timers are over 46 years old, beyond the age of 42 when people still easily re-migrate, they are not very likely to return permanently.

On the other hand, those working in companies (80 per cent) or running their own firms (89 per cent) are far more likely to return full time. In the latter case, the complexity of China's economy and the intensity of competition necessitate such a commitment from entrepreneurs if they truly want their firm to succeed.[62] Another criticism is that the awards were often given to people who had already returned so that "units using returnees" (*yongren danwei* 用人单位) could demonstrate compliance with CCP directives. Thus, of the 201 people in our data set who have returned full time, 60.2 per cent (121) returned after 2008, suggesting that the plan influenced their decision, while 40 per cent were already back when they were awarded this title, suggesting that localities granted recognition to former returnees rather than change the policy.

Our data, however, present a mixed picture as to when people returned. Among 99 full time returnees in category Innovative-A, 86.9 per cent had returned after 2008, suggesting that they were newly recruited under the programme. Similarly, the majority (77.4 per cent) of full time returnees in the B-Innovative category (24 out of 31) had returned after the programme began. On the other hand, 89 per cent of entrepreneurs have returned full time, but the vast majority (84.3 per cent) had returned before 2008, suggesting that the programme has had little, if any, impact on their decision to return. More likely

61 The relationship between age and terms of returning is statistically significant, with a Chi-Square p = .021, a Pearson's R = .244, p = .000.
62 Interview with "1000 Talents" entrepreneur in Guangzhou, December 2011.

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Table 5: **Full-time or Part-time Returnees by Country or Region before Returning, "1000 Talents," 2011**

Terms of Returning		**Country or Region before Returning**									
		US	Europe	UK	Japan	Canada	Australia	Hong Kong	Singapore	Taiwan	Total
Part-time	Count	187	26	25	5	14	13	15	7	1	293
	%	63.8	8.9	8.5	1.7	4.8	4.4	5.1	2.4	.3	100
Full-time	Count	147	10	12	11	5	2	1	4	1	193
	%	76.2	5.2	6.2	5.7	2.6	1.0	.5	2.1	.5	100
Total	Count	334	36	37	16	19	15	16	11	2	486
	%	68.7	7.4	7.6	3.3	3.9	3.1	3.3	2.3	.4	100

Notes:

Pearson Chi-Square, $p = .002$, Pearson $R = -.134$, $p = .003$

market opportunities and the possession of a valuable technology developed while they lived and worked abroad has brought them back. For entrepreneurs, then, the "1000 Talents" programme is more a recognition by the CCP, and a confirmation by the local community, that they are indeed highly talented entrepreneurs.

The Organization Department has also introduced a "1000 Talents" plan for foreigners and some top academics have been recruited. Robert Glenn Parker, a UC Berkeley PhD and former University of Michigan professor now works at Shanghai's Jiao Tong University. Other examples include Ross Macallister, previously a partner at Atos Consulting in UK, who became chief information officer of Sinopec, a Fortune 500 company in China, and Mikhail Eremets, a German expert in high-voltage super conductors who now serves as a professor of physics at the South China University of Technology in Guangzhou. Similarly, hiring the former vice president of the University of Liverpool, himself a recipient of a "1000 Talents" award, as deputy director general of the talent bureau under the Organization Department to manage the programme could send a signal to Organization Departments around China that the central Party organization is quite serious.

Conclusion

Despite active intervention from the CCP in the policy, the return of large numbers of the very best and very brightest is still not happening. The very talented, who have numerous options both at home and abroad, are likely to opt for an environment that allows free thinking, debating and writing, and whether this can be achieved in China without significant political liberalization remains a major question.[63] Also, vested interests, extant power structures, non-transparent decision making and a relatively stifling bureaucracy, all of which scare expatriate Chinese, will not disappear overnight. Thus, while governments and institutions in the US, Europe, Japan, Australia and Canada may worry that they are about to lose some of their very top Chinese talent, this paper suggests that, while these expatriate Chinese are likely to be distracted by greater involvement with scientific development back in China, few of the very talented are about to leave their secure posts abroad. Much of their contribution to China will mirror Saxenian's "brain circulation,"[64] rather than reflect a powerful "reverse brain drain."

Yet, three factors support more optimism about the programme from China's perspective. First, Li Yuanchao targeted what many see as the key block to a reverse flow of the exceptionally talented – the problematic scientific environment in China. With the support of the new general secretary Xi Jinping 习近平 and prime minister Li Keqiang 李克强, the leadership may reform the hiring and

63 Simon and Cao 2011, 18.
64 See inter alia, Saxenian 2006. Also Saxenian, Motoyama and Quan 2002.

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promotion regimes. Second, to the extent that complications resulting from overlapping or unclear authority have undermined this policy in the past, the involvement of the CCP's Organization Department and its arm – the CCGT – and similar organizations under municipal Party committees around the country – may resolve many of these problems. Thus, when one "1000 Talents" awardee at a leading Beijing university could not enrol his child in that university's high school, the central Organization Department intervened directly and the student was admitted to the high school of a rival university, something far more difficult for the MOE to have accomplished.

Third, the active engagement of the Organization Department in recruiting specialists outside of its traditional Party cadres work, has led to greater involvement of talented Chinese abroad in China's scientific modernization than any previous programme. While the policy did not meet many of its original goals, it has played an important role in developing Chinese science. Still one must wonder if the state and the CCP can really bring about such significant changes. Countries such as Canada run programmes for academics, such as the Canada Research Chairs, which target primarily talented Canadian academics working abroad. However, most advanced countries rely on market forces and head-hunters to bring back their best talent working abroad. It remains unclear if the active intervention of the CCP in this policy process will accomplish what has not occurred for the past 30 years – attracting China's very best and very brightest back home.

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