



## China's Economic Espionage Prowess

by Dr. Sheo Nandan Pandey

### Introduction

Over the past couple of decades, there has been a growing number of scholarly reports that speak of China's growing prowess in economic espionage. Andrew Jones, Head of Security Technology Research, BT Security Centre, Adjunct, Edith Cowan University, has called China's economic espionage operations an affair of 'hi-tech world'.<sup>1</sup> James Mulvenon, Director of DGI's Centre for Intelligence Research and Analysis, has found the 'innovation firms' around the world as most vulnerable targets to Chinese economic espionage operations.<sup>2</sup>

The Chinese spy defectors both diplomats and full time students, including Chen Yonglin, Han Guangshen, Li Fengzhi have handed over the names of several spies and details of their espionage activities in several industrialized countries in Europe, the US, Australia and Japan. In a similar vein, the arrest of Chinese national Huang Kexue on July 13, 2010 by the Federal Bureau of Investigation (FBI) in Westborough, Massachusetts, United States of America (USA) and subsequent interrogations leaves no one in doubt about the penchant of the Chinese nation and its people in this matter.<sup>3</sup>

Roger Faligot, credited for dozens of espionage-related books, including *The Chinese Secret Services from Mao to the Olympic Games*, has gone on record to put the number of Chinese secret agents, operating worldwide to over two millions. Belgium intelligence expert say the Chinese industrial espionage network is not only widely active but also very intrusive.. Besides, investigative studies, books including Ralph D. Sawyer's *The Tao of Spycraft: Intelligence Theory and Practice in Traditional China*, Nicholas Eftimiades's *Chinese Intelligence Operations*, Tod Hoffman's *The Spy Within: Lary Chin and China's Penetration of the CIA*, and John Byron's *The Claws of the Dragon: Kang Sheng- The Evil Genius behind Mao and His Legacy of Terror in People's China* largely describe Chinese activities in this field.

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<sup>1</sup> Andrew Jones, Industrial Espionage in a Hi-tech World, *Computer Fraud and Security*, Volume 2008, Issue 1, January 2008, pp 7-13.

<sup>2</sup> John Markoff and Baboza quoted James Mulvenon in his article in The New York Times, Feb 18, 2010: <http://www.nytimes.com/2010/02/19/technology/19china.htm>

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Economic espionage per se is not an exclusive Chinese activity. While being an illegal act, and more often than not outright unethical in form as well as substance, it thrives today much as it has over history. Nonetheless, it is rooted in the objective reality of competitive modern life, where a comparative edge over ones rival constitutes both a shield and promise for future.

As long as individual firm and/ or groups of them get to commit espionage, it can be left to nature for self corrections. What is worrisome is the involvement of a nation state. The 'default fallout' is a system disorder, in which 'quest for power' rather than 'cooperative co-existence' comes to rule the roost. There is bound to be no stopping until either the 'world order', built around the United Nations (UN) system, including the apparatus of World Trade Organization (WTO) develops a zero tolerance for such an activity and/ or the socio-economic cost of 'economic espionage led growth and development' turns counter productive.

Threat perception against various shades of the aftermath of China's economic espionage activities and practices, including snow balling effects of the phenomenon in developed as well as the developed world vary in intensity while the concerns about the net impacts in over all perspectives remain almost identical. The Australian Security Intelligence Organization (ASIO), the British Security Services (SIS/MI5), the German Bundesnachrichtendienst (Federal Intelligence Service), the Japanese Naikaku Joho Chosaitu (Cabinet Intelligence and Research Office), the US Bureau of Intelligence and Research (INR) and quite a few others have since cautioned stakeholders, including industries and firms and set out China's broad and specific intent, purpose and modus operandi in its intelligence operations.

In its perspective, this academic endeavour is aimed at examining the long and short of the Chinese economic espionage mechanism. In the run up, the paper looks into the dynamics and viability of China's endeavours. Schematically, the paper is thus, organized to focus on: Incursions and the Pulsating Force; Strategy and the Modus Operandi; Dynamic of Preponderance; and, the Limit of China's Endgame.

The assumptions of the study include: China is hitherto in the forefront of the countries that subscribes to state-sponsored unsavory espionage of business and industrial secrets, including intellectual property rights (IPR) for gaining competitive advantages; while numerous governments around the world have struck alarm bells, and set up new or improved counterintelligence or counterespionage entities to protect their country's interests in the public and private sectors, China's enterprise in the field in different forms and shape, including condoning, encouraging, and creating a mandate for its intelligence services continues; and stands in the way of individuals, corporate world and nations getting to compete creatively in the larger interests of the world at large.

### **Incursions and the Pulsating Force**

The first victim of economic espionage in the recorded history of the world at the hands of French Jesuit priest Francois Xavier d' Entrecolles (Chinese name: Yin Hongxu) was China during the reign of Kangxi Emperor in the late 17<sup>th</sup> century. China's ongoing stride to gain access to the guarded economic secrets of its existing and potential rivals through stealth dates back to the late 1970s when it shelved its self-imposed alienation of Mao epoch and joined

the global economic system.<sup>4</sup> It operates alongside the companies conducting what is called ‘competitive intelligence’ (CI), located in different industrial hubs in all the three Chinese economic zones.<sup>5</sup>

Where as the normal charter of CI operation in China as elsewhere constitute gathering, piecing together, systematically analyzing and last but not the least, managing business information on existing and potential rivals on the strength of business data collected through a rigorous process of gathering electronic and print media materials, the Chinese CI operatives use the auspices of assiduously planned and held international trade fairs in the country and outside both overtly and covertly to supplement, merging them with the wealth of information and knowledge obtained in the course of state-sponsored economic espionage.<sup>6</sup> The targets of all such Chinese adventures right now relates to ‘technology and heavy industries, including computer software and hardware, biotechnology, aerospace, telecommunications, transportation and engine technology, automobiles, machine tools, energy, materials and coatings, to name only some.

Both in form and spirit, China’s economic espionage operations resemble a military campaign, where business entities of different denominations reflect operational nuances of military formations on the lines of division, brigade, regiment and so forth. Their tangible and intangible assets, such as proprietary information, are perceived as modern arsenals which need protection and further improvement. The driving force at work behind all Chinese economic espionage adventures is the long standing state policy of ‘catching up fast and surpassing’ the world powers. It has been further fuelled by the resolution of the 4<sup>th</sup> Plenum of the 16<sup>th</sup> Central Committee of the Communist Party of China (CPC) in November 2004, later adopted by the 3<sup>rd</sup> Session of the 10<sup>th</sup> National People’s Congress in March 2005 to build China a ‘relatively affluent society in an all round way’.

## **Strategy and the Modus Operandi**

Over time, China has increasingly used economic espionage as a complementary, if not a parallel track to its ‘Three Step Development Strategy’ to achieve a commanding economic position in the world : Step One—to double the 1980 GNP and ensure that the people have enough food and clothing, was achieved by the end of the 1980s; Step Two—to quadruple the 1980 GNP by the end of the 20th century was achieved ahead of schedule in 1995; Step Three—to increase per-capita GNP to the level of the medium-developed countries by 2050— at which point, the Chinese people will be fairly well-off and modernization will be basically realized. Unprecedented increase in the size of the Chinese economy, taking it to a leading global position and overtaking United Kingdom (UK) and France in 2005, Germany in 2007, and now Japan, both in terms of nominal gross domestic product (GDP) and purchasing power parity, is discernibly attributable to this mix of growth and development strategy.

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<sup>4</sup> French Jesuit priest Francois Xavier d’ Entrecolles is considered pioneer in the world of economic espionage. After entering China in 1698 and subsequently joining Jesuit China Mission, he collected information secretly with the help of Chinese Catholic converts on Chinese technique of manufacturing hard-paste porcelain. He had passed on the information to Father Ory, S.J Proctor of the Jesuit Mission of China through a letter. Besides, he is believed to have used direct observation method and consulting printed technical sources.

<sup>5</sup> Tao Qingjiu and John E. prescot, “China: Competitive Intelligence Practices in an Emerging Market Environment”, *Competitive Intelligence Review*, Volume II, Issue 4, pp 65-78, 4<sup>th</sup> Quarter 2000.

<sup>6</sup> M. E Kabay, Industrial Espionage. [http://www.makabay.com/overview/industrial\\_esponage.htm](http://www.makabay.com/overview/industrial_esponage.htm)

The range of the Chinese economic espionage missions, in its perspective, encompasses a large terrain of human intelligence activities (HUMINT) . Following the arrest of Huang Kexue in Westborough, Massachusetts, US on July 13, 2010, it is an open secret that the Chinese intelligence agencies work hand in hand with the Chinese academic institutions and industry to steal industrial secrets and intellectual property of non-Chinese companies the world over. Nevertheless, the Chinese academic such as Huang Kexue could be a sleeper anywhere and inflict huge damage as it happened in the case of Dow AgroSciences, LLC (Dow) in the guise of a researcher.

There have of late been exposures, arrests and prosecutions of a sizable number of Chinese economic espionage operatives around the world. The prominent cases such as Jin Hanjuan, a Chinese software engineer with Motorola, Michigan based Chinese couple Du Shashan and her husband Yu Qin with General Motors, Yu Xiangdong of Ford, Hong Meng with DuPont, and Chung Dongfan with Boeing in America literally stand to testify the assertion of Walter Opfermann that China has since using an array of ‘polished methods’ from old time spies to phone tapping, and increasingly the internet, to steal industrial and corporate secrets.<sup>7</sup>

A wide range of Chinese and other media reports simultaneously bear out that China also uses insiders, called ‘pasty’ in intelligence lingo, diversely, both willing and under duress, to gather sensitive information. Going by a 14-page document, released by MI5 in UK to hundreds of British banks, businesses, and financial institutions, titled "The Threat from Chinese Espionage," the Chinese economic espionage agencies even lay ‘honey traps’ to blackmail Western businesspeople with sexual relationships.<sup>8</sup>

The Chinese operatives are believed to leave little untouched in the economic espionage game, including ‘dumpster diving’, innocuous market survey and the like for the purpose of gathering intelligence. The rise of the internet and other technological developments has made the Chinese task of gathering intelligence much easier. The areas most under attack include car manufacturing, renewable energies, chemistry, communication, optics, x-ray technology, machinery, materials research and armaments. Information being gathered was not just related to research and development but also management techniques and marketing strategies.

## **Dynamics of Preponderance**

To be fair, China is neither alone nor a pioneer in the field of economic espionage. It has, indeed, taken a leaf from others, including France, Germany, Israel, Japan, Russia and South Korea. Much of what is taking place can be attributed to Ben N. Venzke’s philosophy ‘why spend 10 years and US\$ 10 billion on research and development when you can bribe a competitor’s engineer for US\$ 1 million and get the same, if not better results.’<sup>9</sup>

The fact that an organization usually does not realize that they have been infiltrated until it has suffered the financial consequences allows the perpetrators to get away undetected relatively easily. Nonetheless, where it is even detected, the reluctance of the targeted organizations to report the crime out of fear of getting their trade secrets further exposed in public, serves as catalyst of perpetration by default. Notwithstanding, the vulnerability has been compounded and the prospect of the perpetrators going scot-free has increased with mode of movement and storage of documents by electronic means.

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<sup>7</sup> Quoted Kate Connolly, “Germany Accuses China of Industrial Espionage” *Guardian*, July 22, 2009; Also Quoted: *Letters From Taiwan* [http://lettersfromtaiwan.blogspot.com/2009\\_07\\_09\\_archive.htm](http://lettersfromtaiwan.blogspot.com/2009_07_09_archive.htm)

<sup>8</sup> Quoted Phillip Knightley, The History of Honey Trap, *Foreign Policy*, March 12, 2010 [http://www.foreignpolicy.com/articles/2010/03/12/the\\_history\\_of\\_honey\\_trap?page=full](http://www.foreignpolicy.com/articles/2010/03/12/the_history_of_honey_trap?page=full)

<sup>9</sup> <http://www.stealth-iss.com/pdf/Economic.pdf>

## China's Endgame

China's endgame is simple and straightforward. It has climbed the ladder of world economic power and, according to Gene Huang, Chief Economist, *Federal Express*, China has dreams of achieving 30 percent of the global GDP in 2020, the stage when the top performer of the time, the US will estimably contribute just 20 percent of the global GDP.<sup>10</sup> Harnessing best of its two pronged strategy, discussed in the previous section of this paper, China has the challenge of lifting 50 million people to a middle income category every year. Going by the optimism of Robert Fogel, in 2040, the size of the Chinese economy will reach US\$ 123 trillion, up from nearly US\$ 5 trillion in 2010.<sup>11</sup>

In China's economic stride as such, the shadowy contribution of economic espionage is simply immense. Conservative estimates, though yet uncorroborated, in a short run perspective, it could run to as much as the contribution of undervalued Chinese currency *renminbi* (Rmb) to China's over all trade surplus against different trading partners, and ultimately much of its foreign exchange reserves, now reaching staggering US\$ 2.6 trillion.<sup>12</sup> This is besides the gains, both now and in times to come through in several business contracts, including award of oil and other strategic metal rights the world over. In a long term perspective, Chinese economic espionage, along with other illegal measures taken to acquire foreign business technology, includes theft of new industrial designs, processes, products and software that can be copied or reverse-engineered, would yield yet another all time abiding competitive edge over the old and new rivals such as India.

However, in the new conditions, when the global economy is bound to be far more and better connected than ever, this Chinese development strategy is bound to face a 'diminishing return' in not a too distant future. Aware of the harsh truth, the Chinese political and economic leadership is of late making calls to turn to 'innovations'. As a first step, it has since summoned top Chinese minds in technology and auxiliary fields to engineer the future growth and development mode of China, including promoting the 'knowledge economy of China kind'. The question that haunts most is whether China's economic miracle built largely through dubious strategy will last for long and, in its generality, whether China would continue to hold centre stage in the world scene as it does today.

China is irrefutably a rich nation today. In the debate as to whether and / or when China will overtake the US in terms of nominal GDP criterion, I find Joel Kotkin is nearer the truth.<sup>13</sup> Demographic factor must not be ignored. Beyond all what Robert Fogel, Thomas Friedman and the ilk say, China has miles to go before it could shed its 'developing economy' status.<sup>14</sup> With home to a 400 millions young population in 2050, the US is well set to disprove all the prophecies of 'declinism'.<sup>15</sup> I look at the world no differently than what happened in the 1970s and 1980s that proved the predictions of George Lodge, Lester Thurow and Robert Reich to be wrong. Neither Japan nor Europe could come close to overhauling the United States.

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<sup>10</sup> Julie Quek, China to Overtake US Global GDP Contribution by 2020, Channel NewsAsia, Sep 23, 2010 [http://www.channelnewsasia.com/stories/afp\\_world\\_business/view/1083010/1/.html](http://www.channelnewsasia.com/stories/afp_world_business/view/1083010/1/.html)

<sup>11</sup> Robert Fogel, "China's Estimated Economy by 2040", *Foreign Policy*, January/ February, 2010 <http://www.foreignpolicy.com/articles/2010/01/04/123,000,000,000,000>

<sup>12</sup> Estimates of Rmb undervaluation varies. It is put at 15-50 percent.

<sup>13</sup> Kotkin, Joel (2010), *The Next Hundred Million: America in 2050*, The Penguin Press, New York, USA.

<sup>14</sup> There is not yet universally accepted convention of putting a country on 'developed' and/ or 'developing' country pedestal.

<sup>15</sup> By the end of the first half of the 21st century, the economically active cohort in the US in the age group of 15 to 64 is projected to grow by 42% while it will shrink by 10% in China.

The Chinese economic strategy, built on unsustainable pillars of economic espionage and skewed monetary and fiscal policies, has outlived its purpose. Anti-espionage Acts, put in place by an increasing number of countries will constrict the activities of Chinese intelligence agencies. Reengineering can seldom be a substitute for original innovations. However, there is little reason to lower the guard in the short term.

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*Remarks: Opinions expressed in this contribution are those of the author.*



Dr. Sheo Nandan Pandey, born Jan 14, 1947, served both institutions of higher learnings and the bureaucratic set up as member of Civil Services in India. He speaks several languages including Chinese mandarine. In area studies, China is his first love.