THE VOICE OF HAN

漢　之　聲

An Educational Journal in Chinese Studies and International Relations

中國研究和國際關係的教育雜誌由海鴻基金會出版

Volume 5 第五冊 **January 2012 2012年1月**

2011 APEC summit was held in Honolulu, Hawaii in November 2011年11月亞太會議于夏威夷檀香山舉行

- **Great Indian Founding Father Mahatma Gandhi, Comments on 2010 Nobel Peace Prize and 2011 Inner Mongolia's Protests 偉大印度國父聖雄甘地，2010年諾貝爾和平獎評論暨2011年內蒙示威抗議**
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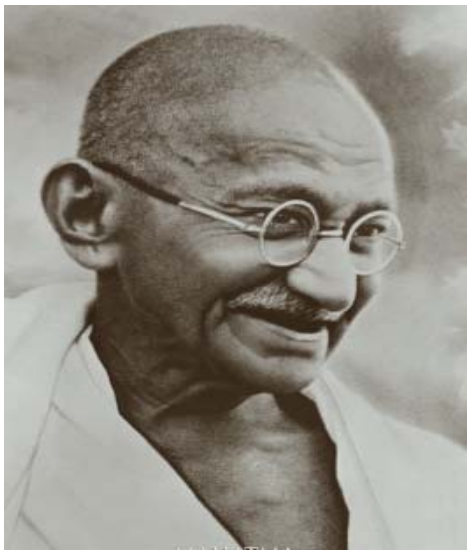
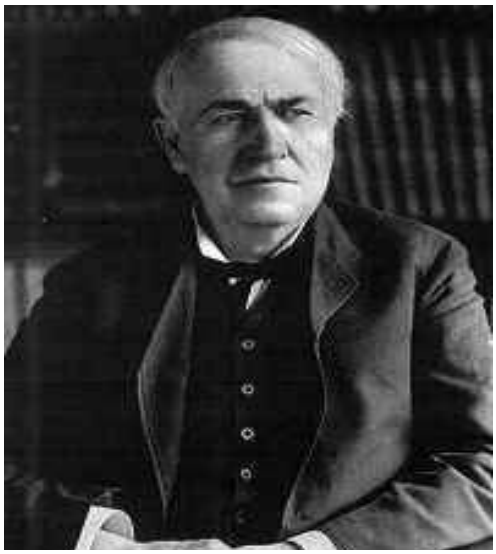


Mahatma Gandhi (1869-1948) pioneered *satyagraha* (non-violence) which helped India to independence. 偉大印度國父聖雄甘地 利用和平非暴力促使印度獨立

2011 G20 summit was held in Connie, France in October. 2011 年 10 月 20 國家領袖群會議在法國康尼召開

Ma Yinjio won the re-election of 2012 Taiwan's President (left), and Ma Yo Yo received the US Presidential Medal of Freedom in 2011 馬英九榮獲 2012 台灣總統連任(左); 國際知名大提琴家馬友友於 2011 年獲美國總統自由獎章.



Thomas A. Edison (1847-1931) was possibly the greatest inventor in the world, and had 1100 inventions. 愛迪生可能是世界上最偉大的發明家, 他專利了 1100 樣發明項目.

Editor's Remarks 編者的話

2011 was a year of calamities, man-made and natural. In January, Egypt cut its people off from the internet as the "Arab Spring" began. In Syria, Tunisia, Libya and elsewhere, citizens used social media to organize street protests. In March, a magnitude 9.0 earthquake rocked Japan, followed by a tsunami that devastated towns and left about 20,000 dead or missing. In July, 91 people were killed in Norway island massacre and capital blast. In September, the United Nations warned that about 750,000 people could perish as the drought in Somalia worsen, and declared a famine crisis. Recently, there were floods in Thailand and Pakistan, which destroyed properties and human lives alike. We express our deepest sympathy and condolence to families of those people who died in all incidents. Our best wishes for health, peace, and prosperity for people throughout the world in 2012!

2011 年是不幸的一年,可謂天災人禍。1 月當「阿拉伯春」開啟,埃及切斷人民们的電腦網;敘利亞,突尼西亞,利比亞及其他國人们用社會媒體組織街道對抗遊行。3 月日本發生 9.0 級地震導致掃蕩本州東北一帶,約 2 萬人死亡與失蹤。7 月挪威的島嶼與首都發生槍殺,導致 91 人喪生。9 月聯合國警告,由於桑馬立亞嚴重旱災,產生饑荒危機,約 75 萬人將死亡。最近洪水淹沒泰國與巴基斯坦,吹毀了許多人命及財產。我們對所有遇難家屬,表示最誠摯的憐憫與慰問。在這嶄新 2012 年的來臨,我們對全世界所有人们,呈獻最佳祝福,健康,和平與興盛!

21 leaders of countries convened at the 18th APEC summit in Honolulu in November, 2011, and the declaration contained: the 19th APEC economic leaders' meeting, strengthening regional economic integration and expanding trade, promoting green growth, regulatory convergence and cooperation, and looking forward to the fruits of these international agreements. Earlier, the 2011 G20 summit was held in Connie, France in October, which was resulted in little progress on the issues under discussion, although there was an agreement to allow increased use of Capital controls as a defense against international speculators.

2011 年 11 月第 18 屆亞太經濟合作會議包括 21 國家領袖於夏威夷檀香山舉行,其宣言包含:19 屆亞太經合會議,加強地區經濟整體與擴展貿易,提昇綠化成長,收集與合作規則化,與展向未來。稍早 2011 年 10 月,20 國家領袖群在法國康尼召開,雖然有一同意允許增加利用資本來控制對抗國際冒險投機者,但對討論題目獲得很少進展。

Congratulations to Ma Yinjio for wining the re-election of the President of Taiwan in 2012. Taiwan's democracy is a role model for China. Ma YoYo was one of 14 civilians who received the US Presidential Medal of Freedom in 2011. He is a world renowned cellist and 16-time Grammy award winner. Xian's International Horticultural Expo and Taipei's International Flora Expo attracted millions of visitors in the world in 2011.

恭賀馬英九榮獲 2012 年台灣總統連任,台灣民主是中國的榜樣. 2011 年馬友友是 14 位之一獲美國總統自由獎章者,他是國際知名大提琴家曾獲葛瑞米音樂獎 16 次,彈奏古典和國際音樂.2011 年西安世园與台北花博并蒂綻放双博双赢,吸引世界百萬民眾.

The Voice of Han **漢 之 聲**
Volume 5, January 2012 第五冊, 2012 年 1 月
Publisher: Hai Hung Foundation 出版所: 海鴻基金會
Web Site: http://haihungfound.org 網站
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The Voice of Han is an educational journal in Chinese studies and international relations published by the Hai Hung Foundation. Hai Hung Foundation is a non-profit organization established in Virginia, U. S. A. in 2000. The objectives of the foundation are: 1. to award scholarships for university or college students in financial need in Virginia, U. S. A. and Guangdong province, China; 2. to publish "The Voice of Han".

「**漢之聲**」是一份致力於中國研究與國際關係的教育雜誌，由海鴻基金會出版。海鴻基金會是一非營利組織，於 2000 年成立于美國維吉尼亞州。其目標一: 美國維吉尼亞州及中國廣東省大學清寒獎學金; 目標二: 出版 「漢之聲」。

Submissions: *The Voice of Han* (bilingual, English and Chinese) welcomes the submissions of articles from experts and scholars in Politics, Economics, Science, Engineering, Education, Literature, Philosophy, History, Culture, Religion, etc. Although we are more interested in Chinese studies and international relations, an excellent article in any area involving any country will be published. One volume of the journal is published every three years. Articles should normally not exceed 30 pages (including English and Chinese). Please send your articles or letters to: webmaster@haihungfound.org

投稿:「**漢之聲**」(英文與中文雙語雜誌)歡迎專家學者投稿於政治、經濟、科學、工程、文學、哲學、歷史、文化、宗教等。雖然我們對中國研究與國際關係較感興趣，但若一篇關於任何課題涉及任一國家的佳作將會被出版。這雜誌每 3 年出版一冊，一篇文章最長 30 頁(包括中英文)。請將您的文章或信件寄至: webmaster@haihungfound.org，您若只能用一種語言撰寫文章，編輯委員會將幫助您翻譯成另一語言。

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偉大印度國父聖雄甘地, 2010 年諾貝爾和平獎評論 暨 2011 年內蒙示威抗議

Shan Shui 山水

"I have nothing new to teach the world. Truth and non-violence are as old as the hills."
「我沒有什麼新事務教導這世界，真理與非暴力陳舊如同高山。」

–M. K. Gandhi 甘地

Introduction 序言

Mohandas Karamchand Gandhi (is known as Mahatma Gandhi, 1869-1948) was the great preeminent political and spiritual leader for Indian independence. He was the pioneer of *sayagraha*—resistance to tyranny through civil disobedience, a philosophy founded on non-violence. This non-violent philosophy helped India to independence and inspired many movements for civil rights and freedom throughout the world. **Gandhi is officially honored as the Father of India, and his birthday, 2 October, is commemorated as Indian National Holiday and worldwide as the International Day of Non-Violence.** It is widely held—in retrospect —that Gandhi should have been the very man to be selected for the Nobel Peace Prize. He was nominated several times, but unfortunately, was never awarded the prize.

馬漢搭斯•甘地 (1869-1948)是促使印度獨立偉大優秀的政治與精神領袖，他是「撒亞格若哈」(印度語)哲學的先驅, 這是一門根源於非暴力的哲學，即經由文明的不服從，反對專制獨裁。這非暴力的哲學幫助印度獨立，並激發了全世界許多維護民權及自由的運動。**甘地被國家榮譽推舉為印度國父，其生日被公訂為印度國家紀念日及全世界國際非暴力日**。大家都公認追憶甘地應該是諾貝爾和平獎的最佳得主，他被提名數次，但是很不幸的，從來未獲此和平獎殊榮。

2010 Nobel Peace Prize was honored to the jailed Chinese dissident Liu Xiaobo, 54, who was sentenced to serve 11 years prison for undermining state power in December, 2009. He had demonstrated "a long and non-violent struggle for human rights in China," described by the Norwegian Nobel Committee. However, Chinese communist government in Beijing branded the decision an 'obscenity'. In fact, Liu Xiaobo is only one representative of tens of thousands of Chinese political advocates, who strive for China's democracy for decades.

There were some controversies domestically and internationally whether he was the appropriate recipient for this Nobel Peace Prize or not. But, when Liu Xiaobo first heard the news from his wife Liu Xia, "this peace prize is for all the sacrificed heroes for 1989 pro-democracy demonstrations in the Tiananmen square," he said.

2010 年諾貝爾和平獎得主中國異議囚士 54 歲的劉曉波，他於 2009 年 12 月被判刑顛覆國家罪作牢 11 年。挪威諾貝爾獎委員會形容，他證實了「為中國人權做長時期的非暴力的奮鬥與掙扎」。但是中國共產黨政府斥責這是荒謬絕倫的決定。事實上，劉曉波僅是長年以來數以萬計的眾多追求中國民主人士们代表之一，在中國與國際有一些議論(有些正面的，有些負面的)，劉曉波是否值得此和平獎殊榮的最佳人選。然而，當劉曉波面對前來報信的妻子劉霞道出第一句話:「這個獎是給 1989 年天安門亡靈的。」

In May-June 2011, there were a series of protests occurred in Inner Mongolia. Because two incidents related to two Inner Mongolian herdsmen who intended to protect their environments for pollution to prevent exploring coal mines, they were killed by two coal truck drivers in two conflicts. These two incidents stimulated many Inner Mongolians and young students who went onto streets for protests to confront with many communist policemen. In order to suppress the protestors, Chinese communist government deployed many best trained troops from Beijing to impose austerity in Inner Mongolia. The government captured or detained suspected teachers and students, and closed schools and institutions, which caused a horrified situation in Inner Mongolia for a while. It attracted the attentions of many Mongolians domestically and internationally, and people in the world.

2011 年 5 月- 6 月間內蒙古發生一連串示威抗議活動，起因於兩庄事件，分別有關兩位蒙古人抗議開礦煤礦污染環境，與運煤卡車司機發生衝突，被撞一死，一重傷後不治而亡。這兩事件，刺激內蒙當地民眾青年與牧民們，走上街頭與公安武警對峙，遭致毆打與逮捕，中共為加強鎮壓，從北京軍區調遣精銳部隊，對內蒙古實施戒嚴，逮捕嫌疑師生及封鎖學校機關，造成白色恐怖，引起世界各地蒙古人的抗議與聲討，與國際的關注.

This article contains four parts: 1) biographical sketch of Indian Father Mohandas K. Gandhi and his struggle for Indian independence, 2) comments on 2010 Nobel Peace prize, 3) 2011 protests in Inner Mongolia, and 4) what lessons can Chinese learn from Gandhi, 2010 Nobel Peace prize, and 2011 protests in Inner Mongolia.

這篇文章包括四部份：1) 印度國父甘地簡介及其對印度獨立的奮鬥; 2）2010 年諾貝爾和平獎評論; 3）2011 年內蒙發生示威抗議活動; 4）中國人如何從甘地聖雄及 2010 年諾貝爾和平獎及 2011 年內蒙示威抗議學習課訓。

1. Biographical Sketch of Mahatma Gandhi and his struggle for Indian independence

1. 印度國父甘地生平簡介及其對印度獨立的奮鬥

Early life Mohandas Karamchand Gandhi was born on 2 October 1869 in Porbandar

(Gujarat now), India. His father, Karamchand Gandhi (1822-1885) participated in Hindu Modh community and served as the Prime Minster of Porander State, a small princely state in British India. His mother Kasturbai Makhanji who came from the Hindu Prnami Vaishnava community, was Karamchand's 4th wife (his previous 3 wives died in childbirth). The young Mohandas was very influenced by his devout mother and the Jain traditions of the region such that he was compassioned for living beings, became a vegetarian, fasted for self-purification, and mutual tolerated between individuals of different creeds.

早期生活 馬漢搭斯・甘地出生於 1869 年 10 月 2 日于印度波本打(現在的糾格瑞特)，他的父親(1822-1885)參予印度教馬地社區及擔任波本打(英國殖民地印度一小省)省長，他的母親凱絲塔白・馬克漢季來自印度教馬地社區，是甘地的第四妻子(其前三妻子去世於生產)。 甘地被他虔誠的母親及其地區的傳統影響很深，使他對生命動物起慈悲心而成為素食者，淨身絕食，及對不同的行為能夠互相容忍。

The story of Harishchandra, a well-known tale of an ancient Indian king and a truthful hero, had a great impact on Gandhi in his boyhood. In Gandhi's autobiography, he wrote: "It haunted me and I must have acted Harishchandra to myself times without number." Gandhi's early self-identification with truth and love is traceable to his identification with these epic characters.

一位聞名的古代印度國王哈瑞士千朵及其英雄故事，對甘地的兒童時期具有深刻的影響，在「甘地自傳」中他描述：「它抓住了我的心，我必須行動和哈瑞士千朵一樣。」甘地早期對真理與博愛，可追溯於這歷史角色。

In 1883, Mohandas (13 years old) married Kast urbai Makhanji (14 years old) in an arranged child marriage, based on the custom of the religion. In 1885, when Gandhi was 15, the couple's first child was born, but survived only a few days; Gandhi's father had died earlier that year. Gandhi and his wife had four more children, all sons: Harilal (born in 1888), Manilal (born in 1892), Ramdas (born in 1897), Devdas (born I 1900). At his middle school and high school, Gandhi was an average student. He passed the matriculation examination at Samaldas College in Bhavnagar, Gujarat with some difficulty. During that time, he was not happy since his family wanted him to be a barrister.

根據宗教習俗，孩童被安排婚姻，1883 年甘地(13 歲)娶的了凱絲塔白・馬克漢季(14 歲)。1885 年甘地 (15 歲)他們第一個孩子出生幾天就夭折，同年隨後他的父親去世。甘地與其妻有四個小孩: 海瑞拉出生於 1888 年，馬尼拉出生於 1892 年， 潤達斯出生於 1897 年，德夫達思出生於 1900 年。在初中與高中時期，甘地是個中等學生。他有點困難的通過大學入學考。那時他並不快樂，因為他家長要他成為律師。

In 1888, Gandhi went to London, England to study law at University College London, the imperial capital, was influenced by a vow he had made to his mother in the presence of the Jain monk Becharji, upon leaving India, to observe the Hindu precepts of abstinence from meat, alcohol, and promiscuity. Although he adopted British customs, he could not eat meat and it was hard for him to find one of London's few vegetarian restaurants. Influenced by

Salt's book, he joined the Vegetarian Society, was elected as its executive committee, and started a local Bayswater chapter. Some of the vegetarians he met were members of the Theosophical Society, which had been founded in 1875 to further universal brotherhood, and which was devoted to the study of Buddhist and Hindu literature.

1888 年甘地到英國倫敦的倫敦大學學習法律，在他離開印度前，他被他對母親於貝家基和尚前的發誓，皈依授印度戒: 不食肉，不飲酒，不邪淫，深受影響。雖然他採取英國習俗，但他不能吃肉，卻很難找到倫敦的素食餐館，被鹽書影響，他參加素食學會被選為執行委員會，及開始從事地區團會，他遇見的一些的素食者成為神學學會(成立於 1875 年)會員，其更進一步結交國際兄弟，獻身於學習佛教及印度教教義。

In 1891, when Gandhi learned that his mother had passed away, he left London and returned to India. During that time, he attempted to establish a law practice in Bombay, but failed. Afterwards, he returned to Rajkot to make a living for drafting petitions for litigants, which was forced to close when he ran afoul of a British officer. In April, 1893, he accepted a year contract from Dada Abdulla & Co., an Indian firm, to a post in the Colony of Natal, South Africa, then part of the British Empire.

1891 年當他得知他母親去世的消息，他馬上離開倫敦返回印度。那時他設想在龐貝設一個律師事務所，但是失敗了。後來他靠撰寫訴訟案謀生，當他與一英國官員起衝突，其被迫關閉。1893 年 4 月他接受了一個在南非(當時英國屬地)的印度公司的聘約。

Civil rights movement in South Africa (1893-1914) Gandhi had stayed in South Africa for 21 years from 1893 to 1914. During that time, Gandhi faced discrimination towards Indians several times. Once, he was thrown off a train at Pietermaritzburg for refusing to move from the first-class to a third class coach while holding a first –class ticket. Traveling farther on by stagecoach he was beaten by a driver for refusing to travel on the foot board to make room for a European passenger. He suffered other hardships on the journey as well, including being barred from several hotels. In another event, the magistrate of a Durban court ordered Gandhi to remove his turban-which he refused to do. These incidents were a turning point in his life, which awakened him to social injustice and affected his subsequent social activities. Through witnessing the racism, prejudice and injustice against Indians in South Africa, Gandhi began to think about his Indian people's status within the British Empire, and his role in society.

在南非的人權運動 (1893-1914) 從 1893-1914 年甘地在南非共待了 14 年，在那時期，他遭受幾次對印度人的歧視。 有一次，他在彼得馬瑞堡被摔到車外，因為他擁有頭等艙車票，他拒絕從頭等艙移到三等艙。旅遊至更遠，他在座位上被駕駛員捶打，因為他拒絕為一歐洲人留位子。在旅途中，他還經歷許多困難，包括禁止住在幾家旅社。有一次都本法庭的法官命令甘地脫掉他的頭巾(印度教徒帶頭巾)，但他拒絕。這些事件是他生命的轉捩點，喚醒他對的社會不公的問題，及影響他以後的社會運動。經歷目覩人種歧視偏見及不公，甘地開始思索他的印度人民们在大英帝國的地位及其社會的角色。

While Gandhi stayed in South Africa, he began to assist Indians in opposing a bill to deny them the right to vote. Through failing to halt the bill's passage, his campaign was successful in drawing attention to the grievances of Indians in South Africa. He helped to found the Natal Indian Congress in 1894, through which he molded the Indian community of South Africa into a political force. When Gandhi arrived at Durban in January 1897, he was attacked by a mob of white settles and escaped by the assistance of the police superintendent's wife. But, he refused to sue any member of the mob, it marked the beginning of his principles not to seek revenge for a personal wrong behavior at a court.

當甘地在南非時，他開始幫助印度人反對一個否決他們投票權的法案。經由失敗阻止此一法案，他的活動成功的抓住印度人在南非痛楚的注意，他幫助成立那大爾印度國會于 1894 年，其使他在南非的印度社區形成政治團體模式。1897 年 1 月他被一群白人攻擊，經由警察局夫人幫忙而遣逃。但是他拒絕控訴任一個團員，其標誌甘地主義之一的開始，對一個人的錯誤行為不尋求報復。

When the Transvaal government declared a new act compelling registration of the colony's Indian population in 1906, a protest meeting on a large scale held in Johannesburg on September 11. Gandhi adopted his philosophy of *satyagraha* (devotion to the truth), or non-violent protest, for the first time, requesting his fellow Indians to defy the new law and suffer the punishments for doing do, rather than resist through violent acts. His fellow Indians adopted his plan, which led thousands of Indians to be sentenced a seven-year in prison including Gandhi. They were flogged or shot for striking, refusing to register, burning their registration cards or engaging in other forms of non-violent resistance. Through many ordeals and hardships, South African General Jan Christiaan Smuts negotiated a compromise with Gandhi. Gandhi's concept of *satyagraha* was formed and matured during this struggle.

1906 年當傳思瓦政府頒布一新法案，逼迫殖民印度人民们的註冊，一大型抗議會議於 9 月 11 日在約翰尼斯堡舉行。甘地第一次採取「撒亞格若哈」(印度語獻身於真理)或非暴力抗議，要求他的印度夥伴们不服從新法案及接受處罰，而不用暴力反抗。他的印度夥伴们採取他的計畫，導致數千人被判服刑監獄七年包括甘地。他們被鞭打或槍殺為了罷工，拒絕註冊，燒毀註冊卡，或其他非暴力抗議。經歷了許多折磨與苦難，南非將軍真基督司馬庇與甘地商討了一個妥協 。在這奮鬥期間，甘地「撒亞格若哈」的思想，正式形成而且成熟。

Gandhi inspired generations of South African activists seeking to end the White rule, which affected Former President of South Africa Nelson Mandela to become a follower of Gandhi. This legacy connects Gandhi to Nelson Mandela … in a sense that Mandela completed what Gandhi started.

甘地激發了南非數代的革命運動家，追求結束白人階級統治，其影響了前南非總統尼爾孫・曼達拉成為甘地的追隨者，此繼承連結了甘地運動起始於南非與曼達拉運動完成於南非。

The Zulus in South Africa killed two British officers, after the British imposed a new

poll-tax in 1906. To retaliate their acts, the British declared a war against the Zulus. Gandhi encouraged the British to recruit Indians and he urged Indians to support the war in order to legitimize their claims to citizenship. However, the British refused to use Indians as army officers. Instead, they accepted Gandhi's idea to let a detachment of Indians volunteer as a stretcher-bearer corps (which was lead by Gandhi) to treat wounded British soldiers. On 21 July 1906, Gandhi wrote in *Indian Opinion*: "The corps had been formed at the instance of the Natal government by way of experiment, in connection with the operations against the Natives consists of 23 Indians."

1906 年英國政府增加賦稅以後，南非的入拉司人殺了二位英國官員，為了報復他們的行為，英國向入拉司人宣戰，甘地鼓勵英國僱用印度人，他請其印度人支持這戰爭，促使他們要求成為公民合法化。但是英國人反對僱用印度人做陸軍軍官。而他們接受甘地的想法，讓印度人分離而成為擔架團(由甘地領導)去幫助英國傷患官兵。1906 年 7 月 21 日他在《印度意見》敘述: 「這個團體被那投政府由實驗型成，這操作反對本國國民包括 23 印度人 」。

Leading role for Indian Independence (1915-1945) Gandhi had struggled for Indian Independence from1915 to1945. He returned to India from South Africa in 1915. The Viceroy invited Gandhi to a War Conference in Delhi at the end of World War I in 1918. To show his support for the Empire and Indian independence, Gandhi agreed to recruit Indians for the war effort. When Gandhi recruited volunteers for the Ambulance Corps, he tried to recruit combatants, which was different than the Zulu War of 1906 and the outbreak of World War I in 1914. Gandhi wrote a note titled, "Appeal for Enlistment" in 1918 as follows: "To bring about such a state of things we should have the ability to defend ourselves, that is, the ability to bear arms and to use them…If we want to learn the use of arms with the greatest possible dispatch, it is our duty to enlist ourselves in the army." However, he sent a letter to the Viceroy's secretary that he "personally will not kill or injure anybody, friend or foe." Gandhi's war recruitment campaign raised a question about his consistency on non-violence. His friend Charlie Andrews ever said, "I have never been able to reconcile this with his own conduct in other respects, and it is one of points where I have found myself in painful disagreement."

印度獨立領導角色(1915-1945) 甘地從 1915-1945 年為印度獨立奮鬥掙扎。 他於 1915 年從南非返回印度，於 1918 年第一次世界大戰末， 菲斯羅邀請甘地到新德里參加戰事會議，表示他對大英帝國及印度獨立的支持，為了戰事甘地同意僱用印度人，當他為救護車團僱用自願者，他僱用戰鬥員，其不同於 1906 年入拉司戰與 1914 年第一次世界大戰。甘地寫了一個名為《懇求名單》的短箋如下: 「目前情形，我們必須有能力防衛我們自己，也就是配戴武器及用它們。如果我們要學習遣用武器，這是我們的責任列入陸軍名單。」但是他寄了一封信給菲斯羅的祕書說「他不會殺害或傷害任何人，朋友，或敵人。」甘地僱用新人措施，導致一問題，即關於他的非暴力的一致性。他的朋友曾說:「我無法和他的行為協調，這是我自己察覺痛苦的不同意。」

Gandhi's first major accomplishments were formed in 1918 with the Champaran agitation and *Kheda Satyagraha* which was indigo and other cash crops instead of the food crops needed for their survival. They were suppressed by the militias of the landlords (mostly British), and were given little compensation such that they were in poverty. The villages were very dirty, unhygienic, alcoholic and chaotic. In this devastating famine, the British levied a tax on increasing. The problem was the same in Kheda as in Gujarar. Gandhi established an ashram there, organizing many of his veteran supporters and volunteers from the region. He organized a survey of the villages, accounting for the atrocities and suffering.

甘地 第一件主要的功績是於 1918 年來自千杷堙巒鼓動與克黑達的「撒亞格若哈」(印度語,非暴力)是靛青及其他現款團體取代食物團體為了他們的生存。他們被甘地主義勇軍壓迫且被給很少補償使他們陷入貧困。鄉村間非常骯髒、非消毒、酗酒、亂七八糟。在這貧困的饑荒，英國加重賦稅。在克黑達及糾格瑞特，這些問題是一樣的，甘地在那建立了印度修道院，從那地區組織了很多他的退休支持者及自願者，他作了一個調查，計算殘忍及痛苦者。

Gandhi's major influence upon people increased when he was arrested by police on the charge of creating unrest and was ordered to leave the province. Hundreds of thousands of people protested and rallied outside the jail to demand for his release. Gandhi led organized protests and strikes against the landlords who signed an agreement granting the poor farmers small compensations and control over farming, and cancellation of revenue increases until the famine ended, under the British government. Due to this agitation, Gandhi was addressed by the people as Bapu (Father) and Mahatma (Great Soul). In Kheda, Sardar Patel represented the farmers in negotiations with the British, who suspended revenue collection and released all the prisoners. As a result, Gandhi's reputation spread throughout the nation, and he earned the title, "Father of India."

當甘地被警察逮捕，犯製造全群眾暴罪及被迫離開此省，他在人們的主要影響力增加到數以萬計的民眾聚集監獄外要求釋放他。甘地領導有組織的對抗及罷工反對在英國政府指導下，僱主簽約給貧窮農夫很少補償，控制農業及取消增加工資，直到饑荒結束。因為這政治煽動，甘地被人們稱為「國父」及「偉大靈魂」。在克黑達，撒答鈀泰勒人们代表農夫们與英國人談判，因此他們取消增加工資及釋放所有囚犯。結果甘地的名聲傳播整個國家及他贏得「印度國父」的封號。

Gandhi adopted non-cooperation, non-violence and peaceful resistance as his weapons in the struggle against the British Raj. In Punjub, the Jallianwala massacre of civilians by British troops caused sad trauma to the nation, leading the public anger and acts of violence. He criticized the brutal action of the British and the retaliation with violence by Indians. Gandhi wrote a resolution to offer condolences to British victims and to condemn the riots after initial attack in the party, which was accepted following his speech advocating his principle that all violence was evil and could not be justified. After the massacre and subsequent violence, Gandhi's mind concentrated on self-government and control of all

Indian government institutions, maturing into *Swaraj* (self-rule) right away or achieving individual, spiritual, political independence.

甘地利用不合作，非暴力，及和平當作武器，對抗英國人们。在砰糾鼻，嘉聯瓦拉人民们被英國軍隊大屠殺，製造了國家的大悲傷，其導致大眾憤怒及暴力行為。甘地批評英國殘忍的行為與印度的暴力反擊。他寫了一個解決策略，慰藉英國受害者及譴責黨內的初步暴動，在甘地支持他的主義演講之後，其策略被接受。所有暴力都是罪惡且無法證實的。在這屠殺與暴動之後，甘地專心致力於自我政府及控制所有印度政府機構，馬上成熟到「斯瓦瑞」(印度語, 自我規則), 或完成獨自的，精神的及政治的獨立。

In December 1921, Gandhi obtained the executive authority on behalf of the India National Congress. Under his leadership, the Congress established a new constitution, with the goal of *Swaraj* (self-rule). Membership in the party was opened to anyone ready to pay a token fee. A hierarchy of committees was established to improve discipline, transforming the party from an elite organization to a popular national appeal. Gandhi extended his non-violence act to include the *swadeshi* policy — the boycott of foreign-made goods, especially British goods. This act related to his advocacy that *khadi* (homespun cloth) be worn by all Indians instead of British-made textiles. Gandhi encouraged Indian men and women, rich or poor, to spend time spinning *khadi* in support of the independence movement. In addition to boycotting British products, Gandhi urged the people to boycott British educational institutions and law courts, to resign from government employment, and to discard British titles and honors.

1921 年 12 月甘地取得印度國會的執行權，在他的領導之下，國會制定新憲法含「斯瓦瑞」(印度語, 非暴力)。黨會員費是公開對任何人付會費，階級員會被建立，以改進訓練，改變政黨從一個優越份子組織，成為一個國家歡迎政黨。甘地擴張他非暴力行為包括「思挖地西」政策((印度語) – 即反對用外國製造品，尤其是英國製造品。這行為關係於他支持所有印度人們穿自己製造的布做的衣服而不穿英國布料。甘地鼓勵所有男、女、貧、富製造印度布料以支持他使印度獨立。除了不買英國製造品之外，甘地鼓勵印度人們不上英國學校及法庭，取消英國政府的僱用，拋棄英國的標誌及榮譽。

"Non-cooperation" policy had gained wide spread support and success, which increased excitement and participation throughout India. As the movement reached almost its climax, unfortunately, it ended a result of a violent clash in Chauri Chaura in February 1922. Gandhi was worried that the movement almost turned toward violence, he called off the campaign of mass civil disobedience. Gandhi was arrested on 10 March 1922, and was sentenced to imprisonment for six years. He began his sentence on 18 March 1922 and was released in February 1924 for an appendicitis surgery, only served for two years.

「不合作」政策取得廣泛的支持與成功，其從全印度增加了刺激與參與，當此運動正到達高潮時，不幸於 1922 年 2 月，它就此結束於一暴力活動于招瑞召剌。甘地擔心此運動幾乎轉變成暴動，他馬上取消大眾不服從活動。1922 年 3 月 10 日甘地被逮捕作牢六年。他於 1922 年 3 月 18 日開始作牢，1924 年 2 月因動手術被釋放，儘作牢兩年。

When Gandhi was in prison, the Indian National Congress was divided into two parties, one party led by Chitta Ranjan Das and Motilal Nehru favoring party participation in the legislatures, and the other party led by Chakravarti Raijagopalchari and Sardas Vallabhbhai , opposing this move. Moreover, the cooperation among Hindus and Muslims, which had been tight at the non-violence campaign, was breaking down. Gandhi tried to bridge their differences by many ways, including a three-week fast in the autumn of 1924, but with a little success.

當甘地作牢期間，印度國會被分成兩黨派，一黨派由期他壖間大斯及莫帝拉尼如領導，其贊成政黨參與立法，令一黨派由俠克瑞瓦帝・來家勾扒加瑞及撒達思・瓦拉海領導，其反對黨參與立法。印度教徒们與回教徒们於非暴力宣傳期間的合作被破壞。甘地嘗試用許多方式，溝通他們的不同，其中包括於 1924 年秋季三星期的絕食，但取得很少成功。

In the 1920s, Gandhi stayed out of politics and concentrated on resolving the relationship between the Swaraj Party and the Indian National Congress. He also expanded initiatives against alcoholism, ignorance, poverty and un-touchability. He returned to the political front in 1928. One year ago, the British government had appointed a new constitutional reform commission under Sir John Simon, which did not include any Indian members. The result was a boycott of the commission by Indian political parties. Gandhi imposed a resolution at the Calcutta Congress in December 1928 requesting the British government to grant Indians or face a campaign of non-cooperation with independence for the country as its final objective. Gandhi had not only moderated the views of younger men like Subhas Chandra Bose and Jawaharlal Nehru, who sought a demand for immediate independence, but also reduced his own call to a one year wait, instead of two. The British did not respond. On 31 December 1929, the flag of India was unfurled in Lahore. Indian National Congress celebrated 26 January 1930 as India’s Independence Day at a meeting in Lahore. This day was commemorated by almost all the Indian organizations. Gandhi then launched a new satyagraha against the tax on salt in March 1930. This was highlighted the famous Salt March to Danhi from 12 March to 6 April, where he marched 388 kilometers (241 miles) from Ahmedabad to Dandi, Gujarat to make salt himself. Tens of thousands of Indians participated this march led by him to the sea. The campaign was one of the most successful at upsetting British hold on India; British responded by imprisoning over 60, 000 people.

1920 年期間，甘地退出政治圈及專心解決「斯瓦瑞」(自我規則)黨派及印度國會的關係，他還擴張初衷反對酒醉、不理會、貧窮及不接觸。1928 年他回到政治前線，1927 年英國政府指定一些憲法改革委員會在約翰賽門之下，其中為未包括任何印度成員，這結果是抵制印度政治黨派委員會。1928 年 12 月甘地於丐庫他國會制定一決議，要求英國政府允許印度人或面對不合作活動，以印度獨立為其最終目地。甘地不僅緩和青年人如布斯與內魯要求印度立刻獨立，而且他對自己的印度獨立也從二年減到一年。英國人

们不理睬。1929 年 12 月 31 日印度國旗飄揚在臘豪，印度國會慶祝 1930 年 1 月 30 日為印度獨立日于臘豪，這大日子几乎被所有的機關團體慶祝。甘地又於 1930 年 3 月推出新政策反對鹽稅，其被大加張顯聞名的「三月鹽」，從 3 月 12 日到 4 月 6 日，他遊行了 388 公里，從阿馬大拔到糾格瑞特的丹尼，自己製造鹽，數以萬計的印度人民们加入他的行列，遊行到海邊，這舉動是最成功的，讓英國人頭痛的佔領印度，英國人將六萬人關入監獄作以回報。

Afterwards, the government led by Lord Edward Irwin negotiated with Gandhi. The Gandhi-Irwin Pact was signed in 1931. The British government agreed to set all political prisoners free, in return for the suspension of the civil non-cooperation movement. As a consequence of the pact, Gandhi was invited to attend a Round Table Conference in London as the major representative for the Indian National Congress. Since the conference only emphasized the Indian princes and minorities rather than a transfer of power, Gandhi was disappointed. Moreover, Irwin's successor, Lord Willingdon, started a new campaign of controlling the Indian's movement. Therefore, Gandhi was arrested again. The government tried to isolated him from his followers, but it failed.

此後，政府由劳得愛德華埃汶主導與甘地談判， 甘地-埃汶條約於 1931 簽訂。英國政府同意將所有政治犯釋放，以取消不合作運動作交換，此條約簽訂的結果，甘地成為印度國會的主要代表，被邀請參加倫敦圓桌會議，但是此會議僅加強討論印度王子及少數優势而不談權力轉移，甘地覺得很失望。更進一步，埃汶的接班人劳得威靈棟展開了新的控制印度運動，因此甘地又被逮捕，政府嘗試隔離他及其隨從人们，但失敗了。

Through the campaigning of the Dalit leader B. Ambedkar in 1932, the government offered untouchables separate electorates under the new constitution. Gandhi did a six-day fast to protest in September 1932, which resulted the public cry to force the government to adopt a more fair arrangement via negotiations mediated by the Dalit cricketer turned political leader Palwankar Baloo. This was the beginning of a new campaign by Gandhi to improve the lives of untouchables, whom he named Harijans, children of God. Gandhi started a 21-day fast of self-purification to help the Harijan movement. This new campaign was not welcomed in the Dalit community, as the leader B. R. Ambedkar condemned Gandhi's use of the term *Harijians* as saying that Dalits were socially immature. Ambedkar and his fellows also thought Gandhi was undermining Dalit political rights. Although Gandhi was born in Vaishya, he believed that he could speak on behalf of Dalits, despite the presence of Dalit activists such as Ambedkar.

經過 1932 年大力特領導安布卡的運動，在新憲法下政府提供不可接觸者的分離選票，同年 9 月，甘地做了 6 天絕食以反對此舉動，使大眾哭求政府採取比較公平的交易，經由大力特板球選手轉變成政治領導拋亡卡巴陸。這是由甘地領導的新運動開始以改善不可接觸者的生命，甘地稱他們是哈瑞建群眾，上帝的孩子們。甘地開始了為期 21 天的絕食以自我淨化幫助哈瑞建人群眾運動。這新運動在大力特區是不歡迎的，當領導安布卡責備甘地用哈瑞建群眾的名詞說大力特是不成熟的社會，安布卡及其同伴们也想甘

地在破壞大力特的政治權利。雖然甘地出生於汎徐亞，他相信他能代表大力特發言，儘管大力特運動領導安布卡的出現。

There were some unsuccessful things occurred in Gandhi's life in the summer of 1934. When the Congress wanted to contest elections and accept power under the Federal scheme, Gandhi resigned from party membership. He did not disagree with the party's direction, but thought that if he resigned, his popularity with Indians would cease to stifle the party's membership, that varied from socialists, students, trade unionists, religious conservatives, to those with pro-business convictions and that these different voices would have a chance to be heard. Gandhi also intended to avoid as a target for Raj propaganda by leading a party that had temporarily accepted political accommodation with the Raj.

1934 年夏天，一些不成功的事情發生在甘地生命當中，當國會要試驗選舉及接受中央的權力，甘地取消他的黨會員證，他不是不同意政黨的方向，但他想如果他放棄黨會員證，他對印度人們的知名程度會停止消除黨會員證，其不同於社會主義者、貿易公會、學生、保守宗教，對那些促進經濟的信念及其他不同的聲音意見有機會被聽見，甘地也要避免為瑞族人們宣傳的目標，其領導一政黨暫時接受瑞族人們。

Gandhi returned to politics again in 1936, with the Nehru presidency and the Lucknow session of the Congress. Although Gandhi wanted to focus on independence, he did not oppose the Congress from adopting socialism as its objective. Gandhi had a clash with Subhas Bose, who had been elected president in 1938. Their main topics of contention were Bose's lack of commitment to democracy and faith in non-violence. Bose won his second term despite Gandhi's criticism, but left the Congress when most of Indian leaders resigned in protest of his abandonment of the principles introduced by Gandhi.

甘地於 1936 年重新返回政治擔任內汝會長及國會陸克鬧班，雖然甘地要專心於獨立，但他不反對國會採取社會主義為目標，甘地與撒布哈不斯不合，其於 1938 年被選為總統，其爭論的主題是不斯缺乏對民主的承諾及非暴力的信念，仰儘管甘地的批評，不斯仍取得第二聯任，但他離開了國會，當大部分的印度領導者辭職，以反對其棄除甘地主義。

World War II and Quit India In 1939, World War II broke out as Nazi Germany invaded Poland. Gandhi proposed "non-violent moral act" to confront with the British, but some other congressional leaders opposed it. After long deliberations, Gandhi declared that India could not participate in a war to fight for democratic freedom ostensibly, but that freedom was denied to India itself. As the war moved on, Gandhi intensified his demand for independence, drafting a resolution requesting the British to *Quit India.* This was Gandhi's and the Congress most definitive revolt to force the British out of India.

第二次世界大戰與放棄印度 1939 年第二次世界大戰爆發當納粹黨進攻佔領波蘭，甘地主張運用「非暴力道德行為」去面對英國人，但是一些國會領導者反對。經過長時期的思量，甘地宣告，印度不能表面參加一戰爭爭取平等自由，當那自由否定印度自己。當戰爭持續，甘地擴大他的需求，要求印度獨立，草擬一決策要求英國人「放棄印度」，

這是甘地與國會最肯定的反抗，迫使英國人退出印度。

Some Congressmen and other political groups, both pro-British and anti-British, criticized Gandhi. Some thought that not supporting Britain more against Nazi Germany was in-moral. Others thought that Gandhi's refusal for India to participate in the war was insufficient and more direct opposition should be taken, while Britain fought against Nazism yet continued to contradict itself by refusing to grant India Independence. *Quit India* became the most impelled movement in the history of the struggle, with many arrests and violence on a large scale. Thousands of pro-democracy and freedom advocates were killed or injured, and hundreds of thousands were arrested. Gandhi and his supporters announced that they would not support the war unless India was granted independence. He proclaimed that the movement would not stopped if the individual acts of violence were committed, describing that "ordered anarchy" around him was "worse than real anarchy." He urged all Congressmen and Indians to maintain discipline via ahimsa, and Karo Ya Maro (do or die) for ultimate democracy and freedom.

一些國會議員及其他政治群體包含有贊成英國人與反對英國人批評甘地，一些人認為沒有支持英國人反抗納粹黨是不道德，其他人認為甘地反對印度參與戰爭是不足的，一些直接反對是應該的，當英國人反抗納粹黨，但繼續自我矛盾拒絕允許印度獨立。放棄印度變成最逼迫的運動在印度獨立奮鬥史，很多人们被逮捕及大量暴動促發，數以千計的民主自由支持者被殺及受傷，數以萬計被逮捕，甘地及其支持者宣佈他們不支持戰爭，除非印度被允許獨立，他宣稱此運動不停止如果個別的暴動促發，敘述「控制專制」比「真實專制」更糟。 他鼓吹所有國會議員繼續接受訓練，為最終民主自由奮鬥或犧牲。

On August 9, 1942, Gandhi and the Congress Committee were arrested by the British in Bombay. Gandhi was held in the Aga Khan Palace in Pune about two years. During that time, there were two tragedies occurred. He lost his 50-year old secretary Mahadev Desai (who died of a hearty attack 6 days later) and his wife Kasturba (who died after 18 months in prison in 22 February 1944). He also suffered a severe malaria 6 weeks later. He was released before the end of the war on 6 May 1944 due to his failing health, and he required a surgery. The Raj also hoped that he did not die in prison to enrage the nation. Although the *Quit India* movement had some success in its objective, the suppression of the movement brought order to India by the end of 1943. The British indicated that power would be transferred to Indian people at the end of the war. At this moment, Gandhi called off the struggle, and about one hundred thousand prisoners were released, including the Congress Committee.

1942 年 8 月 9 日甘地及一些國會議員被英國人逮捕，甘地被關在普納的阿加侃宮，在這時期，兩件悲劇發生，他失去了 50 歲的秘書(關牢 6 日，去世於興心臟病)及其妻子(關牢 18 月，去世於 1944 年 2 月 22 日)。 6 星期後他也瘧嚴重的瘧疾，由於他的健康很差需要動手術，他於世界大戰結束前 1944 年 5 月 6 日被釋放，瑞族人們也希望他不要死亡於監獄，以導致全國憤怒。雖然「放棄印度」在目標上有一些成功，但對此運

動的鎮壓與平定，於 1943 年終於帶給印度定數，英國人指出於世界大戰結束，權利將轉移給印度人们，這時甘地停止奮鬥掙扎，約 10 萬人包括國會議員们被釋放。

Partition of India Gandhi was opposed to the partition of India as it contradicted with the religious unity. On 6 October 1946, he wrote in *Harijan* about the partition of India to create Pakistan:

> *[The demand of Pakistan] as put forth by the Moslem League is un-Islamic and I have not hesitated to call it sinful. Islam stands for unity and the brotherhood of mankind, not for disrupting the oneness of the human family. Therefore, those who want to divide India into possibly warring groups are enemies alike of India and Islam. They may cut me into piece but they cannot make me subscribe to something which I consider to be wrong […] we must not cease to aspire, in spite of the wild talk, to befriend all Moslems and hold them fast as prisoners of our love.*

分離印度 甘地反對分離印度因為它與宗教統一違背。1946 年 10 月 6 日，他寫「哈瑞堅」(印度文)有關分離印度以建立巴基斯坦:

> *【巴基斯坦的需求】 巴基斯坦是回教國家，而非伊斯蘭教，我不猶豫的稱他們是有罪的。伊斯蘭教代表大一統及人類是父兄姐妹，而不是干擾人们家庭的統一。因此那些要分離印度可能戰爭的群眾们是敵對的如同印度與伊斯蘭，他們可能將我砍殺成脆片，但是他們不可能要我做我認為是錯的…。我們不要停止促發，儘管荒謬的談話，與所有的印度人與伊斯蘭人友好在一起，如同我們監獄親愛的的夥伴。*

But, in the Homer Jack's notes of Gandhi's correspondence with Jinnah on the topic of Pakistan: "Although Gandhi was personally opposed the partition of India, he proposed an agreement …which provided that the Congress and the Moslem League would cooperate to attain independence under a provisional government, after which the question of partition would be decided by a plebiscite in the districts having a Moslem majority."

但是在傑克烘馬的有關甘地與金那描述巴基斯坦的記載:「雖然甘地個人反對分離印度，他提議一同意書，其提供國會與回教組織可以合作以取得獨立，在臨時的政府之下，其後分離問題，可以由回教大眾公民投票決定。」

Both the Hindus and Muslims criticized Gandhi for the two topics about the partition of India. Muhammad Ali Jinnah and contemporary Pakistans condemned Gandhi for undermining Muslim political rights. Vinayak Damodar Savarkar and his allies accused Gandhi that he politically appeased Muslims without observing their atrocities against Hindus, and allowed the creation of Pakistan, despite having publicly declared that "before partitioning India, my body will have to be cut into two pieces." Some people such as Pakistani-American historian Ayesha Jalal thought that Gandhi and the Congress's

unwillingness to share power with the Muslim League hastened partition; other people such as Hindu nationalist politician Pravin Togadia argued that the weakness of Gandhi's part led to the division of India.

印度教大眾與回教大眾批評甘地關於兩個分離印度的論題，金那與巴基斯坦人们指責甘地剝奪回教大眾的權利，撒瓦卡及其聯盟則控告甘地政治上他平息回教大眾，僞裝沒看見他們對印度教大眾的殘忍，及允許巴基斯坦的成立，不管曾在大眾前宣告「在分離印度以前，我的身體必須分成兩伴。」一些人如巴基斯坦美國歷史學家嘉腊想甘地及國會不願與回教大眾分享權力促進了印度分離；其他人如印度國家主義政客濤格達爭論甘地的弱點引導印度分離。

In the late 1930s, Gandhi also expressed his unwillingness for partition corresponding to the partition of Palestine to create Israel. He described in *Harijan* on October 26, 1938:

> *Several letters have been received by me asking me to declare my views about the Arab-Jew question in Palestine and persecution of the Jews in Germany. It is not without hesitation that I venture to offer my views on this very difficult question. My sympathies are all with the Jews. I have known them intimately in South Africa. Some of them became life-long companions. Through these friends I came to learn much of their age-long persecution. They have been the untouchables of Christianity […]. But, my sympathy does not blind me to the requirements of justice. The cry for the national homes for the Jews does not make much appeal to me. The sanction for it is sought in the Bible and the tenacity with which the Jews have hankered after return to Palestine. Why should they not, like other peoples of the earth, make that country their home where they are born and where they earn their livelihood? Palestine belongs to the Arabs in the same sense that England belongs to the English or French. It is wrong and inhuman to impose the Jews on the Arabs. What is going on in Palestine today can not be justified by any moral code of conduct.*

1930 年時期末，甘地也表示他不願意分離印度，針對著巴勒斯坦分離成立以色列：

> *我接到了幾封信，詢問我對阿拉伯及猶太人在巴勒斯坦問題及在德國執行猶太人的觀點。它並不是毫不猶豫的，我冒險的在這困難的問題提供我的觀點，我的同情心是在猶太人，在南非我對他們已經很了解，一些猶太人變成我終身的朋友，經由這些朋友，我得知了他們長期的宗教迫害，他們曾是基督教非機接觸者…。但是我的同情心不讓我對正義需求的盲目，猶太人需求國家的哭聲不吸引我，猶太人回到巴勒斯坦是聖經認可及他們的固執渴望的，為什麼他們不應該像地球其他民族一樣，使他們出生及生活的家園成為其國家? 巴勒斯坦屬於阿拉伯如同英格蘭屬於英國人或法蘭西屬於法國人把猶太人放在阿拉伯是錯誤與不仁道的，現在發生於巴勒斯坦的是不能由道德行為證實的。*

Gandhi suggested the Congress to reject the proposals the British Cabinet Mission offered in 1946, when he was dubious about the grouping proposed for Muslim-majority states—Gandhi viewed this as a precursor to partition. However, this became one of the few times the Congress broke from Gandhi's advice, as Nehru and Patel knew that if the Congress did not approve the plan, the government would pass to the Muslin League. There were over 5,000 people were killed in violence in 1946-1948. Gandhi was deeply opposed to any plan that partitioned India into two counties. However, a majority of Muslims living in India, along with Hindus and Sikhs, favored partition. Moreover, Muhammad Ali Jinnah, the leader of the Muslim League, commanded widespread support in West Punjab, Sindh, North-West Frontier Province and East Bengal. The partition plan was approved by the Congress leadership as the only way to prevent a Hindu-Muslin civil war on a large scale. Congress knew that Gandhi would desperately opposed partition, and it was impossible for the Congress to go ahead without his agreement due to Gandhi's strong support in the party and in India. Gandhi's closest colleagues had accepted partition, since he thought that it was the best way for India. Sardar Patel tried to convince Gandhi that it was the only way to avoid civil war., and he finally accepted it.

甘地提議國會拒絕英國內閣於 1946 年提供的計劃，當他對於群眾計劃為回教大眾提出的，甘地觀看這計劃如同分離印度的預兆，但是在印度的回教大眾與印度教大眾及斯克思人们贊成分離印度，更而甚之，回教大眾的領袖金那大量支持西滂加伯、 新地 、西北省及東孟加拉。分離印度被國會領導人们同意，這是唯一的辦法可以避免印度教徒大眾與回教教徒大眾的大內戰。國會知道甘地會非常反對分離印度，國會不可能沒有取得他的同意而作決定，因為甘地的在政黨及印度堅強的支持。甘地的最好的朋友已經接受分離印度，因為他想這是對印度最佳的辦法，鈀德勒嘗試說服甘地這是避免印度內戰的最佳的辦法，最後甘地終於接受分離印度。

Gandhi conducted a dialogue with Muslim and Hindu leaders to cool passions in northern India and Bengal. Despite the Indo-Pakistani War in 1947, he was troubled when the Government decided to deny Pakistan the 55 crores (550 million Indian rupees) due as the agreements made by the Partition Council. Leaders such as Sardar Patel was worried that Pakistan would use the money to bankroll the war against India. Gandhi was also devastated when the request was rising for all Muslims to be deported to Pakistan, and when Muslim and Hindu leaders expressed frustration and were unable to resolve the problem. Gandhi's arrival in Delhi became an influential activity to end this riot, and he visited Muslims *mohallas* to restore faith of the Muslim populace. He launched his last fast-unto-death on January 12, 1948, and requested that all violence be ended in Delhi, Muslim's homes be restored and the payment of 550 million rupees be made to Pakistan. Gandhi feared that the instability and insecurity in Pakistan would increase their anger against India, and violence would spread across the borders. He was also worried that Hindus and Muslins would produce their enmity,

which would cause civil war. After debates with his colleagues, Gandhi refused to budge, and the Government declined its policy to make the payment Pakistan. Hindu, Muslim and Sikh community leaders announced that they would renounce violence for peace. Hence, Gandhi broke his fast by sipping orange juice.

甘地對回教領導者與印度教領導者做了一個對話，以平靜北印度與孟加拉的情緒。儘管 1947 年印度與巴基斯坦的戰爭，甘地被染上麻煩當政府決定否定印度付巴基斯坦 550 百萬盧布，此定案由巴基斯坦議會決定，鈀德勒擔心巴基斯坦會用這筆錢款儲存以準備戰爭對付印度。甘地感覺糟糕透了，當所有需求將回教大眾驅逐出境到巴基斯坦，及當回教領導者與印度教領導者表示咀喪，無法解決這問題，甘地到達新德里變成具有影響力的舉動，去結束這暴動，他還訪問回教廟宇以恢復回教大眾的信仰。1948 年 1 月 12 日，他在新德里做了最後的幾乎至死的絕食，及祈求所有的暴動結束，回教大眾的居所被恢復，及 550 百萬印度盧布付給巴基斯坦，經由與同事的辯論之後，甘地拒絕更改其意，政府取消其政策及付錢款給巴基斯坦，印度教徒、回教徒及斯克族文領導宣佈他們將題停止暴動為和平，因此甘地破絕食以吸取橘子汁。

Assassination On January 30, 1948, Gandhi was assassinated while he was walking to a platform where he planed to address a prayer meeting. The assassin, Nathuram Godse, was a Hindu nationalist connected to the extremist Hindu Mahasabha, who claimed that Gandhi was responsible for weakening India by insisting upon a payment to Pakistan. Godse and his co-conspirator Narayan Apte were later convicted, and were executed on November 15, 1949. Gandhi's memorial (or Samadhi) at Raj Ghat, New Delhi, bears the epigraph "He Ram", which may be translated as "Oh God". These may be Gandhi's last words after he was assassinated. Jawaharlal Nehru addressed the nation through radio:

"Friends and comrades, the light has gone out of our lives, and thee is darkness everywhere, and I do not quite know what to tell you or how to say it. Our beloved leader, Bapu as we called him, the father of the nation, is no more. Perhaps I am wrong to say that; nevertheless, we will not see him again, as we have seen him for these many years, we will run to him for advice or seek solace from him, and that is terrible blow, not only for me, but for millions and millions in this country." Gandhi's ashes were placed at Aga Khan Palace (Pune, India)

暗殺 1948 年 1 月 30 日，當甘地走上台要做一個祈禱的演講，他遭受到暗殺，暗殺者勾德斯是印度國教徒，他與印度教極端份子馬哈撒伯哈有關係，他說甘地對印度衰弱有責任，由於他堅持付錢款給巴基斯坦。 勾德斯與他的同謀者阿匹他 於 1949 年 11 月 15 日被執行死刑，甘地在新德里的墳墓記載著碑文「黑漢」(印度語)意思是「嘔!天阿!」這是甘地被暗殺最後的語言。那瑞對全印度收音機廣播：

「朋友與同胞们：光明已經消失於我們的生命中，到處都是黑暗，我不知道如何告訴你，

如何勿訴說它，我們敬愛的領袖，我們稱他「巴僕」即 「國父」已經不存在了，我這樣說或許是不對的，儘管如此，我們再也看不見他了，過去我們看見他許多年，我們總向他求教、建議與慰藉；這實在是沉重的打擊，不僅是對我個人，且對全印度國家千千萬萬的同胞们。」 甘地的骨灰被安置在阿加瞰宮殿(印度的彭那城)。

2. Comments on 2010 Nobel Peace Prize 2. 2010 年諾貝爾和平獎的評論

2010 Nobel Peace Prize was honored to the jailed Chinese dissident Liu Xiaobo, 54, who was sentenced to serve 11-year jail for undermining state power in December, 2009. Actually, Liu Xiaobo is only one representative of tens of thousands of Chinese advocates who strive for China's democracy for decades. There were some controversies domestically and internationally whether he deserved this Nobel Peace Prize or not. It was symbolized at the ceremony by a vacant chair on 10 December 2010, as he was serving jail sentence for subversion. Chinese communist government also placed his wife under house arrest, thus she did not attend in his place. We will discuss some positive and negative arguments for this peace prize in the context.

2010 年諾貝爾和平獎得主中國異議囚士 54 歲的劉曉波，他於 2009 年 12 月被判刑顛覆國家罪作牢 11 年。事實上，劉曉波僅是長年以來數以萬計的眾多追求中國民主人士们代表之一，在中國與世界國際有一些議論，劉曉波是否值得獲此殊榮。2010 年 12 月 10 日諾貝爾獎頒獎典禮，其座位是空的，由於他正在坐牢，他太太也被中國共產黨政府軟禁，沒有出面代替他領獎。我們將討論一些正面與負面的評語。

The Committee chair Mr. Thorjorn Jaglan said that "We can to a certain degree say that China with its 1.3 billion people is carrying mankind's fate on its shoulders; If the country proves capable of developing a social market economy with full civil rights, this will have a huge favorable impact on the world; If not, there is a danger of a social and economic crises arising in the country, with negative consequences for us all."

諾貝爾獎委員會主席說:「我們可以若干程度的說，中國擁有 13 億人口在其肩膀上擔負著人類的命運，如果這國家證明，其能進展一個具有人權的社會市場，這對世界將有很大的幫助與影響。如果不是，這國家的社會與經濟掘起，將給我們大家帶來危機。」

According to the Nobel Peace Prize 2010 — press release [3]: "For over two decades, Liu Xiaobo has been a strong spokesman for the applications of fundamental human rights in China. He took part in the Tienanmen protests in 1989; he was a leading author behind Charter '08, the manifesto of such rights in China which was published on the 60th anniversary of the United Nations' Universal Declaration of Human Rights, the 10th December, 2008. The following year, Liu was sentenced to 11 years in prison and two years' deprivation of political rights for 'inciting subversion of state power'. Liu has consistently maintained that the sentence violates both China's own constitution and fundamental human rights." "Article 35 of China's constitution lays down that 'Citizens of the People's of

Republic of China enjoy of freedom of speech, of the press, of the assembly, of association, of procession and of demonstration'. In practices, these freedoms have proved to be distinctly curtailed for China's citizens."

根據 2010 諾貝爾和平獎獎新聞報導 [3]: 「二十年來，劉曉波是中國人權及其應用的強力發言人，他參加 1989 年北京天安門民運，他是<<零八憲章>>的領導作者，其出版於聯合國 '國際人權' 宣言 60 週年紀念日, 2008 年 12 月 10 日。隔年，劉曉波被判刑顛覆國家罪作牢 11 年，及剝奪政治權利兩年，此判決違反了中國自己的憲法及基本人權。」 「中國憲法第 35 章敘述：『中國人民共和國的人民们有言論自由、新聞自由、集會自由、組團自由、擁有自由、及示威運動自由。』但是，在實際執行上，中國人民们，明顯的缺乏這些自由。」

Charter '08 (about 3 pages) was announced on December 10, 2008 with 303 signatures of Chinese in China and overseas. It contains (I) five faiths: freedom, human rights, equality, republic, democracy; (II) 19 suggestions: 1. constitution reform, 2. power balanced, 3. legislature by people, 4. independent judiciary 5. public test winners serve public offices 6. protections of human rights, 7. public elections, 8. equality of cities and rural areas, 9. freedom of association, 10, freedom of assembly, 11. freedom of speech, 12, freedom of religion, 13. education of citizens, 14. protection of properties, 15. tax reform, 16. protection of society, 17. environmental protection, 18. federal republic, 19. transformation of justice.

「零八憲章」(約 3 頁) 於 2008 年 12 月 10 日公佈，中國海內外 303 人簽署。(壹) 他們的基本理念:自由、人權、平等、共和、民主。(貳) 他們的基本主張包括: 1. 修改憲法, 2. 分權制衡, 3. 立法民主, 4. 司法獨立, 5. 公器公用, 6. 人權保障, 7. 公職選舉, 8. 城鄉平等, 9. 結社自由, 10. 集會自由, 11. 言論自由, 12. 宗教自由, 13. 公民教育, 14. 財產保護, 15. 財稅改革, 16. 社會保障, 17. 環境保護, 18. 聯邦共和, 19. 轉型正義。

The five faiths and most of suggestions were mostly adopted from USA or Western Europe, which were not much creative. China has implemented a "Provincial System" for over two thousands years since Qin and Han Dynasties. Apparently, China is suitable for a "Provincial System", but not "United States or Republic". If China wants to democratize completely, constitution reform is not enough. Chinese have to establish a new constitution that China across the Taiwan Strait which shall have a new birth of freedom and the government of the people, by the people, for the people, shall not perish from the earth. The 19th item, transformation of justice, was the only thing different. It means to request compensations for those people whose family and relatives were sacrificed during the ten years of cultural revolution in 1966-1976, and in the1989 pro-democracy protests in the Tienanmen square. They want Chinese government to establish a task force committee to investigate the true story and to provide a public accounting of those killed, detained or missing, and to request the compensation for justice.

他們的五種基本理念與大部分基本主張乃取法美國與西歐，沒有多少創意。其中

「聯邦共和」，明顯不適合中國國情，中國自秦漢以來實行「郡縣」二千多年，根深蒂固，中國適合「行省制」而不適合「聯邦共和制」。如果中國真正要走向民主泱泱大道，修改憲法是不足夠的,必須斬釘截鐵，制定「中國新憲法」,以促使臺灣海峽兩岸成立民有、民治、民享的「民主新中國」,將千秋萬世永遠不朽於地球。唯獨第 19 項轉型正義有些所不同，它是針對中國 1966-1979 十年文化大革命與 1989 年六四民運所制訂。希望中國政府對歷次政治運動遭受政治迫害人士及其家屬，國家給予賠償，釋放所有政治犯，成立真相調查委員會，清查歷史事件，伸張正義。

Many China's pro-democracy advocates in China or overseas, especially those who participated in the Tienanmen protests, think that Liu Xiaobo was the appropriate recipient of the 2010 Nobel Peace Prize. A few thoughts of a well-known China's pro-democracy advocate (who played a leading role in the Tienanmen protests, and was nominated for the Nobel Peace Prize for three times) about the peace prize, are summarized as follows: 1. Liu Xiaobo left the comfortable environment in USA, and returned to China to participate the Tienanmen protests, which demonstrated that he deserved the Peace Prize. Although he was sentenced into prison four times, he never gave up his struggle and endeavor to fight for China's democracy and human rights. 2. In recent years, China has achieved tremendous developments in economy and military such that it has risen in the world peacefully. However, China still holds the communist dictator's and bureaucratic system. People are worried about China's rising without democracy and human rights. 3. "This peace prize is for all the sacrificed heroes in the Tiananmen square in 1989," Liu said. He understood that this prize was for many people or associations who have strived for China's democracy for decades. There are many other people who were qualified for this peace prize, and he believed that the mothers of Tienanmen (mothers who lost their children in 1989 Tienanmen protests) were the most qualified recipients for this peace prize. 4. Liu Xiaobo won 2010 Nobel Peace Prize which would have produced a great impact on China's democratic movements. 5. Call on China's communist government to release Liu Xiaobo unconditionally. It has ruined China's reputation and image for sentencing Liu into prison for 11 years. Furthermore, they request China's government to release all the Chinese dissidents from prisons.

中國與海內外很多的民運人士们認為劉曉波是 2010 年諾貝爾和平獎的適當人選，尤其是那些曾參加 1989 年民運的青年學生與人士们。中國留美一位知名民運人士(1989 民運學生領袖之一，曾獲諾貝爾和平獎提名三次)的幾點感想摘要如下: 1. 劉曉波獲 2010 年諾貝爾和平獎名副其實， 1989 年他放棄美國舒適環境,毅然參加學生運動,前後坐牢四次,從未放棄為中國人權與民主大聲疾呼。 2. 最近幾年，中國掘起已關係到全球的發展，中國的經濟與軍事日益壯大，但是政治制度依然維持共產黨權威統治，民主與人權得不到任何保障, 中國掘起讓人憂心忡忡。 3.劉曉波說:「這個獎是給天安門亡靈的。」其實他明瞭這和平獎是頒給多少年來為中國民主化運動不斷努力的中國海內外團體與人士。中國民主夠資格獲此獎的人很多，他認為天安門母親们最有資格獲此和平獎。 4.劉曉波獲 2010 年諾貝爾和平獎必將對中國民主化進程產生重大的影響。 5.要

求中國共產黨政府無條件釋放劉曉波，中國既然要掘起，把一個民運人士諾貝爾和平獎得主關押在監獄中，損壞泱泱大國形象，我們還呼籲釋放所有的關押在大牢民運人士们。

On the other hand, [4] reported that most people neither knew nor cared about Liu Xiaobo in China, before the award. Andrew Jacobs also wrote in the international Herald Tribune, an "official survey of university students taken since the prize was awarded found that 85% said that knew nothing about Mr. Liu and Charter '08." Moreover, a Norwegian Sinologist indicated that younger Chinese do not care about Liu. Older Chinese are interested in discussing the award, but many think that Mr. Liu is not a suitable recipient. The article also mentioned that if Liu's politics were well-known, most people would not favor him for a prize, because he is a champion of war, not peace. Liu has endorsed the invasions of Iraq and Afghanistan, and he applauded the Vietnam and Korean was retrospectively in a 2001 essay. All these conflicts have entailed massive violations of human rights. Yet in his article *Lessons from the Cold War*, Liu argues that "The free world led by the US fought almost all regimes that trampled on human rights … The major wars that the US became involved in are all ethically defensible." During the 2004 presidential election, Liu warmly praised George Bush for his war effort against Iraq and condemned Democratic party candidate John Kerry for not sufficiently supporting the US's wars.

另一方面, 根據一篇文章[4]報導，在 2010 諾貝爾獎公怖得獎主之前，大部分中國人們不知道劉曉波是誰，也不在乎他。安都潔傑克勃在<<國際郵報>> 寫著，在一正式大學生調查;於 2010 諾貝爾獎公怖得獎主之後，85%大學生们說，他們不知道劉曉波及<<零八憲章>>。一名挪威的中國專家也指出，年輕人们不在乎劉曉波，年老人们有興趣談論諾貝爾和平獎，但是很多人们認為劉曉波不是適當的人選。這篇文章來還指出，如果劉曉波的政治哲學是聞名的話，大部分人們將不贊同他獲此和平獎，因為他是戰爭鬥士，而不是和平鬥士。在劉曉波 2001 年的一篇文章中，他同意美國入侵伊拉克及阿富汗，及對越南戰爭與韓戰鼓掌，這些行為都是違反人權的。還有在他的另一篇文章中「冷戰的教訓」，他說:「由美國領導的自由世界几乎所有的戰爭，都是為糟蹋人權所打…美國捲入的主要戰爭都是道德上可進攻的。」於 2004 年的總統選舉，劉曉波贊賞布希進攻的伊拉克的戰爭及指責民主黨後選人約翰科瑞不夠熱心支持此戰爭。

3. 2011 Inner Mongolia's demonstrations for protests 3. 2011 內蒙示威抗議

According to the news report, there were a series of protests occurred in Inner Mongolia in May-June, 2011, duo to the killings of two herdsmen. On 5 May 2011, Mo Zegen, a herdsman of Xiwuchi race was killed by a driver of coal mine truck, since he intended to protect the green pasture from pollution, barred the truck way, and conflicted with the driver. On 15 May 2011, Wen Wenlong, another herdsman of Baigachi race was injured seriously by a coal mine truck, because he wanted to protect the pollution of the environment and had quarrels with miners. After he was delivered to hospital, he already died. These two incidents

stimulated many youngsters and herdsmen in Inner Mongolia to go onto the streets for protests to prevent exploring new coal mines and to protect their homeland from environmental pollution. They confronted with many armed policemen and were, beat, knocked and arrested. On one hand, Fu Chunwha, the communist secretary of Inner Mongolia dialoged with teachers and students, and quickly investigated the two incidents for trials. One diver was sentenced for death penalty and the other one for life in prison. On the other hand, central communist government dispatched the best trained troops from Beijing to Inner Mongolia to suppress the protests and riots, and imposed austerity. It caused a very horrified situation which attracted many attentions of Inner Mongolians domestically and internationally, and people throughout the world.

根據新聞報導，2011年5月-6月間內蒙古發生一連串示威抗議活動，起因於錫林郭勒草原兩位牧民被害事件。5月5日一位是西烏旗蒙族牧民莫日根，因不滿運煤卡車破壞草原，攔路抗議，被卡車司機蓄意撞死。 5月15日另一位是阿巴嘎旗滿族青年聞文龍抗議煤礦污染環境，與礦工發生衝突，遭礦區車輛被撞重傷，不治死亡。這兩事件的起因是當地民眾保衛家園，反對開礦，與肆意破壞草原生態的漢族發生衝突，刺激內蒙當地民眾青年與牧民們，走上街頭與公安武警對峙，遭致毆打與逮捕，當局立刻採取軟硬兼施。一方面與由自治區書記胡春華出面與當地師生對話安撫，下令煤礦停產整頓，速審速判，一人死刑，一人無期徒刑；另一方面， 中共為加強鎮壓，從北京軍區調遣精銳部隊，對內蒙古實施戒嚴，逮捕嫌疑師生及封鎖學校機關，造成新一輪的白色恐怖，引起世界各地蒙古人的抗議與聲討，與國際社會的密切關注。

Recalling the China's history for recent 30 years, it seems that Inner Mongolia is more stable politically than other autonomous regions. There are four factors called **"Inner Mongolia's special theory"** as follows: **1. Geographical environment.** Inner Mongolia (about 1.1 million square miles) is not like Tibet (about 1.2 million square miles) and Shinjiang (about 1.6 million square miles) geographically far away from Beijing. If there is any political emergency in Inner Mongolia, central communist government is easy to suppress. **2. Population**. Comparing to Tibet (about 93% Tibetans, 6% Hans and 1% other minorities) and Shinjiang (about 45% Weirs, 40% Hans and 13% other minorities), Inner Mongolia does not have so many Mongolians people (about 17% Mongolians, 3% other minorities and 80% Hans). If Mongolians have any political dispute with Hans, it is difficult to win. **3. History.** In 1947, the communist party educated and produced Wu Lianfu, an Inner Mongolian representative in Yenan, Shannxi Province (Mo Zedong's original war place). Wu successively convinced the leader of Inner Mongolia such that the communist party liberated it easily. Moreover, Inner Mongolia ever assisted the communist party to fight with Kuo-Ming party's millions of soldiers and won the war. It is not like Shinjiang that it took the communist party three wars to liberate it in 1949. Also, the communist party first entered into Tibet peacefully in the early 1950s. **4. Economy**. Inner Mongolia's GDP is 49,467 Chinese Yen (about 7,610USD), lower than Shanghai Tainjin, Beijing, Jianshu, Zhejiang, which is

ranked at the 6th place in China, better than Guangdong (7th), and much better than the 25th Shinjiang (2,3080 Yen, about 3,550USD) and 30th Tibet (19,483Yen, about 2,997 USD). Inner Mongolians may be more satisfied then people in other autonomous regions based on the GDP.

回顧最近 30 年，內蒙古給人印象比較穩定，可謂「**內蒙特殊論**」原因有四點: **1. 地理環境**。內蒙古(約 110 萬平方公里)不像西藏(約 120 萬平方公里)與新疆(約 160 萬平方公里)那麼遙遠，靠近北京，若一旦鬧事，中央容易採取措施，發兵鎮壓。**2.人口因素。**內蒙不像西藏(藏人約占 93%，漢人約占 6%，少數民族約占 1%)與新疆(維吾爾族約占 45%，漢人約占 40%，其他民族約占 13%)當地主體民族依然占有相對優勢比例，蒙族約占一成七加上少數民族約占二成，漢族約占八成，若蒙漢發生對抗，內蒙人難占上風。**3. 歷史因素**。1947 年延安培養的蒙古人代表烏蘭夫，成功的說服以哈圭阿為代表的東蒙自治政府，1949 年前後共產黨輕而易舉解放內蒙，而且內蒙還幫助共產黨在東北與華北打敗了國民黨數百萬政府軍， 漢人與蒙人一向有良好的歷史關係。不像新疆，共產黨經歷了三大戰役於 1949 年底才解放新疆。關於西藏，共產解放軍 1950 年初才「和平進藏」。 **4. 經濟因素**。內蒙古的富裕程度，超過許多發達內地省份，更遠勝過其他民族自治區，內蒙人的每年平均所得 GDP 49,467 元，位居全國第六，僅次於上海、天津、北京、江蘇、與浙江，高於廣東(第七)，遠超過第 25 的新疆(23,080 元)與第 30 的西藏 (19,483 元)。若按貧富推理，內蒙人不滿程度應該較低。

However, “Inner Mongolia’s special theory” may be destroyed due to two recent Mo Zegen and Wen Wenlong incidents. We illustrate briefly based on [6] as follows.但是「內蒙特殊論」由於莫日根 與聞文龍二事件可能瓦解，我們根據[6] 解釋如下:

1. The relationship between Inner Mongolians and Hans. In the 1950s, Wu Lianfu led the Inner Mongolia to obey Mo Zedong’s principles. Although he did some ridiculous and absurd business, he benefited people to prevent them in famine more than the leaders of other provinces. Moreover, he assisted some people from other provinces to avoid famine. This merit policy may attribute to abundant resources and free economic policy. Inner Mongolians can farm, plant and hunt for living. Unfortunately, this policy only lasted over 10 years. In the mid 1960s, there were a few political disputes since the central communist party failed the Great Leap in Beijing. Thus Mo Zedong tried to enhance stratum fight to maintain his dictatorship. In the eve of the Cultural Revolution, the central communist party passed a resolution in a long meeting in northern China on 21 May-25 July, 1966, and opened the prelude of 10 years long revolution. Mo led the central communist party to play down and to fight with Peng Jen and Liu Zen in Beijing, Wan Xiaotan and Zhang Weishan in Tainjin, Lin Tei in Hobei, Wei Heng in Xianxi and Wu Lianfu in Inner Mongolia, due to their strong military and political power. The central communist party formed a task force to rebel Wu Liangfu and his supporters in Inner Mongolia, and other rebellion groups. During the Cultural Revolution (1966-1976), there were about two to three millions people in Inner Mongolia,

more than 480,000 (about 1/5) were sentenced into prisons, which caused 16,222 people dead, .and 87,188 people injured, i.e., 103, 410 dead and injured total. What a terrified tragedy! There are 22 provinces, 5 autonomous regions and 4 municipal cities in China. Based on the casualties in Inner Mongolia, it is hard to imagine how many people were dead and injured during the Cultural Revolution. When Wu Liangfu passed away in 1988, Deng Xiaopeng did not participate his funeral ceremony.

最近的莫日根與聞文龍事件「內蒙特殊論」似乎已破產，根據 [6]以下列四點簡略加以說明: **1. 蒙漢關係的恩怨情仇**。1950 年代烏蘭夫所領導的內蒙古自治區，曾經較好的維護各族人民的利益，雖然內蒙不得不服從毛澤東與黨中央，也幹了一些破壞民生的蠢事，但比起多數省份普遍愚蠢還是好些，基本上沒餓死過人，還幫助一些內地來的農民，擺脫死亡，這些德政主要歸功內蒙有相當的自主和比較寬鬆的經濟政策，能開荒、種地、打獵，起碼可混肚皮飽，但僅維持十幾年。1960 年中期，因北京上層大要躍進失敗，意見分岐，毛澤東試圖以強化階級鬥爭，維持個人獨裁，文革前夕，通過華北局馬拉松會議(1966 年 5 月 21 日至 7 月 25 日)，拉開文革序幕。鬥垮北京的彭真、劉仁，天津的萬曉唐，張維三，河北的林鐵，山西的衛恆，與內蒙古的烏蘭夫。當時烏蘭夫於內蒙古集軍政於一身，共產黨強行製造了「烏蘭夫反黨叛國集團」,「新內人黨徒」等，**文革期間，不過二、三百萬的內蒙古人，關押的約 48 萬多(約五分之一)，導致 16,222 人死亡 87,188 人受傷，死傷總數高達 10 萬 3 千，嗚呼哀哉!大哀慟哉!** 全中國有 22 省 5 自治區及 4 直轄市，以內蒙古為一例推算，文革期間，全中國死傷人數，難以想像。1988 年烏蘭夫去世，鄧小平連其追悼會也不參加。

2. Mismanagements of economical developments. In the 21th century, China's economic developments grow tremendously. According to the survey, Inner Mongolia's GDP is better than Guangdong's, and there have been many new buildings and skyscrapers constructed recently. A few people have become millionaires due to the sales or the compensations of real estates, and the explorations of coal mines. However, most herdsmen and farmers are still poor, and do not really gain any benefits from the economic growths. The green pastures and environments are destroyed, which have ruined the livings for many generations to come. We briefly discuss main reasons as follows. **(1) Officials and businessmen are colluded and ganged up together.** Numerous owners of coal mines, real estates, and officials have become millionaires quickly. Although they have only contributed very tiny proportions of their profits to poor people (e.g. low taxes, funds, etc), the small profits are not enough to help people to prevent poverty. Therefore, there is a huge gap between the earnings of wealthy people and poor people, and wealthy people are richer and poor people are poorer. **(2) No efficient managements and tax rectifications.** General speaking, abundant resources should belong to all the people. In fact, Inner Mongolia supplies oil, power, and gas to other provinces in low prices such that the debts are carried by the local government. Some people may be compensated a lot from dismantling or removing their houses, but many herdsmen

are compensated very little or nothing from the pollution of green pastures and environments. Most people are very poor, and can not afford daily necessities (e.g. a bottle of tea leaves). For instance, a professor in Guangdong may earn about 7,000 - 8,000 Chinese Yen monthly, but a professor in Inner Mongolia m just earn about 3,000 Yen. People describe that the abundant resources in Inner Mongolia are attributed to the wealth of millionaires and corrupted officials, and the poverty of people and local government. (3) **Vicious cycles of environmental pollution causing living problem.** Due to the levels of coal mines are shallow, most coal mines are explored and developed without digging the ground deeply. Consequently, most green pastures were dug without green surfaces such that the wind blows the black sands and dusts all over the places. The water sources are also contaminated by radiation or poisonous pollution. People have no choices, but desert these pastures and environments. If all the coal mines are dug out exhaustedly, and all the developers are moved out in the future, how do the herdsmen and framers to make livings?

2. 經濟發展的是是非非。進入 21 世紀後，全國各省快速發展，資源材料儲量豐富的內蒙也不例外，表面上內蒙的 GDP 已超過廣東，城市日新月異，也出了不少身家上億的地產商與煤礦老板，有些土地被徵收的農牧民，也獲得了不少金錢補償。實際上各族普通百姓(特別是農牧民)並沒有從經濟起飛分享到相應成果，大多數勞動人民不但淪為弱勢群體，而且徹底毀壞了子孫後代賴以為生的草原生態環境。有三個原因使大多數人對內蒙的暴發富不滿。**(1) 官商勾結攫取超額利潤。**不少煤老板、房老板、和貪官污吏，迅速成為億萬大戶，但給予當地人民们的所謂補償款與扶貧金，不過是九牛一毛根本，無法幫助人民们脫貧致富。**(2)缺乏合理監管與稅收分配機制。**資源本應歸人民们公有，但實際上並非如此。內蒙向內地輸送的油、電、氣、經常低價供應，由政府承擔虧損。有些礦區城區居民也許也獲得很高拆遷補償，但同樣蒙受開礦污染的大多數農牧民，所得很少，甚至於無，窮的連磚茶都買不起。例如廣東省高校正教授月薪平均七、八千，但內蒙古教授月薪平均只有三千左右，人们形容內蒙發展能源結果是「富了商人與貪官，窮了政府與百姓」。**(3) 惡性發展，導致後患無窮**。內蒙煤層很淺，多數露天開採，原本碧綠的草原，被挖的滿目瘡痍，塵土飛揚，一片灰黑，慘不忍睹。百頓卡車到之處，地表草皮徹底消失。人畜賴以為生的水源，經過放射性塵埃的毒化污染，不得不永久放棄。如此大規模的瘋狂開發，等到礦產掘盡，開發商撤走，草原百们如何謀生?

3. The young generation is innovated by technology. Currently, all the university or college students, and high school students were born in 1980s or 1990s. Although they have not suffered like their parents and grand parents spiritually and physically during the Cultural Revolution in 1966-1976, they understand the past history. The chain reactions of youngsters about Mo Zegen incident were impossible without innovative technology. To suppress people, the communist government blocked the websites, stole the conversations of telephones, and cut off the signals of cell phones. No matter how the government prevented the

communications, the youngsters had the power of digital technology to overcome the difficulties. The innovation of technology provides youngsters the best way to organize and to prepare the demonstrations for protests.

3. 科技革命造就新生一代。目前內蒙古的中學與大學生都是 80 與 90 年後的新生代，他們雖然沒有經歷父輩與祖父輩在文革所受的精神與肉體的折磨，但是他們知道是怎麼回事。這次莫日根之死所引起的連鎖反應沒有現代化的資訊聯絡手段是難以想像的，雖然當局採取封鎖網路，監聽電話，甚至切斷手機信號鎮壓，但「道高一尺，魔高一丈」，青年人研究如何破網，如何繞過防火牆，科技資訊革命給青年人们組織起來，提供集體發聲的技術條件。

4. **The influence of the world trend**. The last reason is the most important factor. The world trend provides the encouragements of the people of all races. Briefly, **(1) other minorities inspire Mongolians.** People in the autonomous regions communicate and concern all together. The Tibet's riot on 14 March 2008 and the Urumqi's racial incident in Shinjiang on 5 July 2010 had great impacts on all the races such as Mongolians, Muslims, Manchulians, Dywour, Eilunchun, etc. Whenever the high officials in Beijing talked about Tibet's and Shinjiang's independences, they always mentioned that they were confident in Inner Mongolia due to the past history. Mongolians were loyal to the communist government and they often followed Mo Zedong sincerely. Mongolians felt that they were not aggressive, while hearing such comments. Hence, Tibet's and Shinjiang's riots inspired Mongolia's demonstrations. **(2) The influence of Han's protests for human rights.** Currently, the dilemmas of Chinese social problems almost reach the climax. Many Han's protests for human rights prevail in many provinces in China, and the communist policemen are exhausted to confront with all the protests. There is a rumor that the budgets for managing the Han's protests for human rights are exceeding the defense budges. Therefore, the Han's protests could attribute to one factor of the Mongolia's incidents. **(3) The democratic revolutions in Africa.** Recently, the democratic revolutions suddenly occurred to several countries in Africa to force dictators to step down, and a few countries succeeded. General speaking, Africans are the most conservative and they are harder to accept the world trend. Concerning Gaddafi in Libya and Asad in Syria, they imitated. Deng Xiaoping ever used government's armed forces to kill and to suppress people. We know that Gaddafi died recently. However, we don't know how long the chaotic situation in Syria, will last and whether people will success or not. The United Nations and Atlantic Treaty Allies reached an agreement that they will apply military sanctions to a dictator in any country. He/She uses government's armed forces to suppress people who demonstrate for human rights peacefully. China also voted "Yes", which indicated that the Teinanmen massacre in 1989 was committed to a crime for this international law. Due to this world action, Mongolians were not dared to go onto streets for protests.

4. 世界潮流的深遠影響。最後一個因素，也是最重要的因素，是世界民主潮流對中國各族人民的影響與鼓動，可分三方面解說 **(1) 其他少數民族對內蒙的啟發。**中國各地邊疆民族, 往往互相關聯，2008 年 3 月 14 日的西藏暴動，與 2009 年 7 月 5 日新疆烏魯木齊的種族事件，對內蒙古各族(蒙、回、滿、達斡爾、鄂倫春等)當然有影響。每次北京大官聲討藏獨與疆獨時總是提到「黨中央對內蒙最放心，歷史證明你們緊跟著共產黨與毛主席，從來無二心。」內蒙人民们聽到後起反感，覺得他們窩囊沒出息 (一內蒙學生告訴老師[6]) ，西藏與新疆對內蒙有啟發作用**。(2)漢族維權抗暴的感染。**最近中國社會的矛盾似乎已到臨界點，各地漢族維權抗暴事件層出不窮，公安民警疲於奔命，力不從心，據說維穩經費已經超過國防經費，這次內蒙示威抗議，和中國內地頻頻發生局部動亂不無影響。**(3) 非洲民主革命的鼓舞。**最近非洲民主革命來的非常突然，按理非洲最保守，最不容易接受普世價值，但一夕之間人民群眾们忽然走上街頭，要求民主改革，迫使專制政府下台，居然幾個國家取得成功。最近利比亞的卡扎菲已經死亡，但對敘利亞的阿薩德, 尚不知人民们的成敗。拒絕順應世界潮流，試圖學習鄧小平，用屠殺維護其專制，是否成功還沒有定數。聯合國與北約開了先例，對鎮壓和平示威的極權政府，動手制裁，包括轟炸卡扎菲的宮殿與軍隊，**對此決議，中國也投了贊成票，等於宣佈六四鎮壓是非國際法行為**。世界局勢的這一根本性的改變，無形中給和平維權的人民群眾，助威壯膽。

4. What lessons Chinese can learn from Gandhi, 2010 Nobel Peace Prize and 2010 Inner Mongolia's protests

4.中國人如何從甘地總統，2010 年諾貝爾和平獎及 2011 內蒙示威抗議學習課訓

We briefly recall the tragic contemporary history of China that many Western countries and Japan had invaded China repeatedly, since the first Opium War with Great Britain in the early 1840s. Right after, the second Opium War followed, and Great Britain in collusion with France invaded China. It turned out that the unjust treaties of Tianjin and Beijing were signed by China and with Great Britain and France. Russia also invaded China and the unjust treaties of Tianjin, Beijing and Aihui were signed between two countries. In 1895, China ceded Taiwan to Japan for 50 years in the unjust treaty of Ma-Guan, after a naval battle defeat. Moreover, in 1990, an alliance of eight countries led by Russia and Japan invaded China and the unjust treaty of Xinchou was signed between China and 11 countries in 1901. With this treaty alone, China was forced to pay reparations in the amount of 982,230,000 ounces of silver to Great Britain, France, Russia, Japan, U.S.A., Italy, Austria, Spain, Belgium, and Holland, etc. China was devastating, and many Chinese were in famine and dying. Chinese people were crying, and their hearts were bleeding.

我們簡略的回憶中國慘痛的近代史，自 1840 年中英第一次鴉片戰爭以來，很多西方國家及日本屢次入侵中國，緊接著第二次鴉片戰爭，英法聯軍入侵中國，中國先後英

法簽訂天津與北京不平等條。蘇俄也侵略中國，先後簽訂天津、北京、瑷琿不平等條。1895 年中國在中日甲午戰爭的馬關條約割讓台灣給日本 50 年。更而甚之，1900 年以蘇俄與日本為首的八國聯軍進軍北京，1901 年中國與 11 國簽訂辛丑不平等條約，單此條約中國被強迫賠款共九億八千二百二十三萬兩銀給英國、法國、德國、蘇俄、日本、美國、義大利、奧地利、西班牙、比利時、荷蘭等十一國，此賠款鉅大，中國不勝負荷，民不聊生，很多百姓们被餓死，中國人民们在哭嚎且內心在流血。

After ten failed uprisings, Dr. Sun Yat-Yen led the 11th successful Xin-Hai revolution to establish the Republic of China in 1911, which overthrew the Qing Dynasty. He devoted all his life to strive for China's democracy, and unfortunately, he passed away in 1925, and left an unfinished task and will for us. Afterwards, Chinese had civil war between the Kuo-Ming Party and the Communist Party, and Japanese invaded China in 1937-1945. During that time, Moa Zedong was influenced by Russia tremendously, behaved like a gang, and used his gun fire, violence, lies, cheating and sneakiness to establish the peoples of Republic of China in 1949. There were Chinese characters and culture reforms, land reforms, the Great Leap in 1950s, stratum fight, the devastating Cultural Revolution in 1966-1976, etc. Tens of millions of people were killed during the Cultural Revolution. My parents managed to evacuate from Guangdong to Taiwan in 1949, and my grandparents on my father's side also evacuated from Guangdong to Taiwan through Indonesia and Hong Kong in 1957. My grand parents on my mother's side both were killed (in their early 50s) innocently in Guangdong by poor people who learned the stratum fight from Moa Zedong during the Cultural Revolution. **My grandparents told my aunt at the moment of dying with tears: "You must tell your brother in-law and sister in Taiwan how we are killed innocently and tragically, please reveal our innocence for justice."** Furthermore, Chinese communist government cracked down the pro-democracy protesters in Tiananmen Square in 1989 such that thousands of people were killed by Chinese liberation army. 2011 was the 100 anniversary of the founding of the Republic of China in 1911. Let us commemorate for those tens of thousands heroes who sacrificed for our country for democracy, and salute them with the highest respects. Chinese have suffered many wars in turmoil for about 170 years, and desperately need non-violence and peace to strive for China's democracy.

繼 10 次革命失敗，孫中山先生領導第 11 次辛亥革命成功，推翻滿清，締造民國。他致力革命為中國自由、民主、平等奮鬥 40 年，1925 年逝世，可惜功虧一簣，遺留「孫中山先生」遺囑。緊接著，國共內戰及 1937-1945, 八年對日本抗戰。毛澤東受蘇俄共產黨影響，以槍桿子出政權，利用暴力與欺騙，於 1949 年成立中華人民共和國成立, 其篡改文字, 先後文化改革, 土地改革, 三反五反，三面紅旗，大躍進，人民公社, 階級鬥爭, 至 1966-1976「文化大革命」, 中國上百千萬百姓们死傷無數，怨聲載道。我父母於

1949 年逃到台灣，祖父、祖母於 1957 年先後經由印尼及香港逃到台灣。我外公、外婆在廣東於 50 歲初在文革被鬥死，**他們臨終時淚流滿面遺囑給我阿姨:「一定要轉告妳在台灣的姊夫與姊姊，我們如何悽慘的被鬥死，要為我們洗冤，還我們清白。」** 我姑丈, 外叔公，外伯公，舅婆，…等很多親戚都在文革被鬥死。更而甚之, 中國共產黨政府掃蕩 1989 年天安門民運，中國解放軍槍殺自己數千無辜青年百姓們。2011 年是中華民國生 100 週年紀念，值此之際，我們遙念為中國民主前仆後繼殉難的千萬英勇壯士豪傑們，並致以最崇高的敬意。中國歷經戰亂動盪不安約 170 年，中國人民們迫切需要運用非暴力與和平促進中國民主。

Gandhi was the first to apply the principle of non-violence to politics on a large scale, though he was not the originator of it. The concept of non-violence and non-resistance has a long history in Indian religious philosophy and has had many revivals in Hindu, Buddhist, Jain, Jewish and Christian contexts. We quote part of Gandhi's philosophy of life in his autobiography *The Story of My Experiments with Truth* [1] or Gandhi's principles of non-violence from http://pacebene.org as follows.

甘地是大量應用非暴力主義到政治的第一人，雖然他不是創始者。非暴力與非反抗思想在印度宗教哲學已有很長的歷史，及在印度教、佛教、猶太教、基督教的教文已有很多的復甦，我們從甘地自傳 <<我對真理實驗的故事>> 引述其生活哲學，或從網站 http://pacebene.org 摘取甘地非暴力主義 如下:

- ***When I despair, I remember that all through history the way of truth and love has always won. There have been tyrants and murderers and for a time they seen invincible, but in the end, they always fall- think of it, always.* 當我失望時，我記得世間所有歷史，其經由真理與真愛的，總是獲得勝利。曾有一些專制者與謀殺者，曾一時無敵的，但最終他們總是失敗倒塌。**
- ***What difference does it make to the dead, the orphan and the homeless, whether the mad destruction is wrought under the name of totalitarianism or the holy name of liberty and democracy?* 對死亡者、孤兒、無家可歸者有何不同？這苦難在獨裁專制之下的煎熬或在自由與民主聖名之下?**
- ***There are many causes that I am prepared to die for but not causes that I am prepared to kill for. All life is one.* 有好多情況下，我都準備死亡，但我從沒有準備殺害別人。世間所有的生命都是一體的。**
- *We each have a piece of the truth and the un-truth.* 我們每一個人都有一分真理與非真理。
- *We are called to celebrate both our differences and our fundamental unity with others.* 我們被叫喚去慶祝我們與其他人们的不同及與基本相同。
- *We reaffirm our unity with others when we transform "us" versus "them" thinking and doing.* 我們強調我們與其他人们的統合一體，當我們站在他們的立場思維與運作。
- *The non-violent journey is a process of becoming increasing free from fear.* 非暴力旅程

是演變成解脫恐懼感的過程。

In applying these principles, Gandhi did not balk from taking them to their most logical extremes in envisioning a world where even government, police and armies were non-violent.
在應用這些主義時，甘地沒有談及更邏輯激進想像，在世界上就連政府警察與敵人都是非暴力的。

Gandhi dedicated his life to the purpose of discovering *Satya* (truth). He tried to accomplish this by learning from his own mistakes and conducting experiments on himself. He called his autobiography *The story of My Experiments with truth.* Gandhi described that the most important battle to flight was overcoming his own demons, fears, and insecurities. Gandhi summarized his beliefs first when he said "God is Truth". He would later change this statement to "Truth is God". Thus *Satya* (Truth) in Gandhi's philosophy is "God".

甘地獻身他的所有生命，尋找真理目標，他嘗試實現這目標，從他的錯誤學習及自己親身體驗，故他稱他的自傳 <<我對真理實驗的故事>>。甘地描述最重要的是克服自己的心魔、恐懼、不安全感，最初甘地摘要他的信仰: 「上帝是真理」 後來他改變他的說詞:「真理是上帝」。因此甘地哲學的真理是上帝。

All the Chinese people across the Taiwan Strait should unit together to learn and to apply Gandhi's great non-violent principles to strive for China's democracy. For Chinese well-being and China's long enduring, we strongly urge Fu Jintao not to implement and to force Mao Zedong's principles to Chinese, release all the political dissidents from prisons, give Chinese more freedoms of human rights, not to pull China's politics backwards to communism before 1980s.

所有台灣兩岸的中國人民们應該聯合團結在一起， 運用甘地偉大的非暴力主義促進中國和平統一與民主。為了中國人民们的福祉與利益與中國的長治久安，我們奉勸胡錦濤，勿強加毛澤東的馬列共產社會主義於人们，放棄以共產黨在國家之上的專制獨裁，釋放所有的民主異議人士囚犯们，給予中國人民们種種人權自由，勿將中國人民们拉回 1980 年前的共產主義。

In the Charter 08, Liu Xiabo called for a western-style political system in China and privatization of enterprises and farm land, which are not accessible and incorrect according to Dr. Sun Yat-Yen's ideology, the Founding Father of the Republic of China in 1911. **He devoted 40 years for China's democracy, and authored several magnificent books such as "The strategic plan for the establishment of China", "The principals of the establishment of China", Three principles: the government of China, of the people, by the people, and for the people", etc., to guide us to take over his unfinished will and task, and strive for China's democracy peacefully. Comparing to Dr. Sun's great publications, Charter 08** (about 3 pages) **is like a piece of sand in an ocean, which is no importance at all.** In fact, there is no need for China's government to capture Liu Xiaobo into the prison, which strongly demonstrates that the communist government plays down human rights in

China. **All Chinese people no matter who support Liu Xiaobo for 2010 Nobel peace prize or not, they all think that China should have a new birth of freedom and the government of the people, by the people, and for the people**.

在「零八憲章」中，劉曉波要求在中國實行西方式的政府制度及企業與農地私人化，根據孫中山先生思想，是行不通且不正確的。**孫中山先生致力於國民革命 40 年締造中華民國於 1911 年，其先後著作偉大<<建國方略>>，<<建國大綱>>，<<三民主義>>…等鉅著，引導我們如何完成他的遺囑及中國民主使命。與孫中山先生的這些偉大鉅著相比，劉曉波所擬「零八憲章」**（約 3 頁），**如同滄海一粟，渺可忽視。**事實上，中國政府沒有需要捕捉劉曉波下獄，此行為再度有力的證明中國共產黨打壓人權，給全世界人們淪為笑柄。**所有中國人民們，無論他們是否支持劉曉波 2010 年諾貝爾和平獎，皆認為且渴望中國將新誕生一個自由及民有、民治、民享的民主新中國**。

Although 2011 Inner Mongolia's protests appear to be ended peacefully in May-June, it doesn't mean that the problems have been resolved completely. China's communist parliament in Beijing proposed seven principals to help Mongolia's developments immediately. If the government officials can not implement the seven principles, then the principles are just like void checks. The high officials only compensated or subsidized herdsmen a little bit fund or money, who do not intend to do many improvements. For those activities including exploring new coal mines, the pollution of environment, the suppress of Mongolians' dissatisfactions, and the captures of protestors will continue forever. If China's political system does not change or alter one day, then these kinds of problems will continue to occur in Tibet, Shijiang, Inner Mongolia, and other autonomous regions again in the future.

2011 年 5-6 月的內蒙古示威抗議表面上似乎和平收尾，國務院及時提出七條加速內蒙古發展總原則。雖然事態暫告平息，但並不代表內蒙古問題徹底獲得解決，國務院的七條決議若沒實施，基本上是空頭支票，除了給受害牧民們一點的補貼性的扶貧款之外，官方能做與想做的事不多。對礦產資源的瘋狂開採，對生態環境的繼續破壞，對各族民眾的不滿情緒的強烈壓制，對帶頭抗議的抓捕判刑，這千古不變的老套，還會繼續下去。只要中國共產黨體制不改，政治與社會改良停滯，西藏，新疆、內蒙古及其他民族區高度自治不能實現，往後可能出現同類似的新版本，我們拭目以待。

Because China's communist government sealed or blockaded many documents, and covered or distorted many facts and recent history, Chinese and young generations don't understand China's modern and contemporary history. It is very sad. China's rapid economic developments have not brought happiness and benefits to the people in autonomous regions. It is obvious that money is not all powerful. Ironically, the conflicts and dissatisfactions in autonomous regions are growing daily due to the influences of the protests of human rights in municipal cities and provinces. In summery, the Tibet's riot on 14 March 2008, the Urumqi's racial incident in Shinjiang on 5 July 2010, and Inner Mongolian's protest in May-June 2011 remind us that all the Chinese are desperately thirsty for freedom, democracy and constitution by law. The 1989 Tienanmen's protests have forced the China's communist government to

"Economic Maketization", since China had economic reformed at opening door in 1978. The next and most crucial procedure is "Political Democratization." **We sincerely hope that all the Chinese people across the Taiwan Strait and all the Chinese in foreign countries throughout the world unite together to apply Gandhi's non-violent peaceful principles to strive for China's political democratization, and to take over and accomplish Dr. Sun Yat-Sen's unfinished will and task about 100 years ago.**

由於中國共產黨官方長期封鎖檔案，與掩蔽甚至歪曲事實，弄的我們自己及下代的中青年们都對中國現在史缺乏基本了解，實可悲矣!中國的經濟快速發展並沒有給民族自治區帶來更多的和諧與安寧，可見金錢並非萬能，相反的，隨著中國各省市的維權運動風暴的高漲，邊疆地區的矛盾與利益衝突也會日益增長。總而言之, 2008 年 3 月 14 日的西藏暴動，2009 年 7 月 5 日新疆烏魯木齊的種族事件，與 2011 年 5-6 月的內蒙古示威抗議，再次提醒全中國人民们渴望自由、民主、法治。中國自 1978 年經濟門戶開放以來，在 1989 天安門民運年的衝擊之下，已經逼迫「中國經濟市場化」；下一步最難也是最關鍵的一步是「中國政治民主化」。**我們竭誠希望台灣海峽兩岸中國 13 億同胞们，與全世界中國海內外僑胞们共同團結在一起，運用甘地非暴力和平主義，全力以赴，努力貢獻並完成孫中山先生一百多年的遺願「中國政治民主化」。**

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Golden BRICS renamed including five developing countries in 2011

2011 年金磚五國正式出爐

Chin Yun

(Translated into English by Chu Huang)

慶雲

（由黃代元翻譯成英文）

The 3rd summit of BRICS (Brazil, Russia, India, China and South Africa) was held in Sanya, Hainan Province, China on April 14, 2011. Five leaders including Indian Prime Minister Manmohan Singh, Russian President Dmitry Medvedev, Chinese President Hu Jintao, Brazilian President Dilma Vana Roussoff, South African President Jacob Zuma gathered at the meeting.
金磚五國領袖 2011 年 4 月 14 日在中國三亞召開高峰會，左起為印度總理辛哈、俄羅斯總統麥維德夫、中國國家主席胡錦濤、巴西總統羅瑟夫、南非總統祖馬。

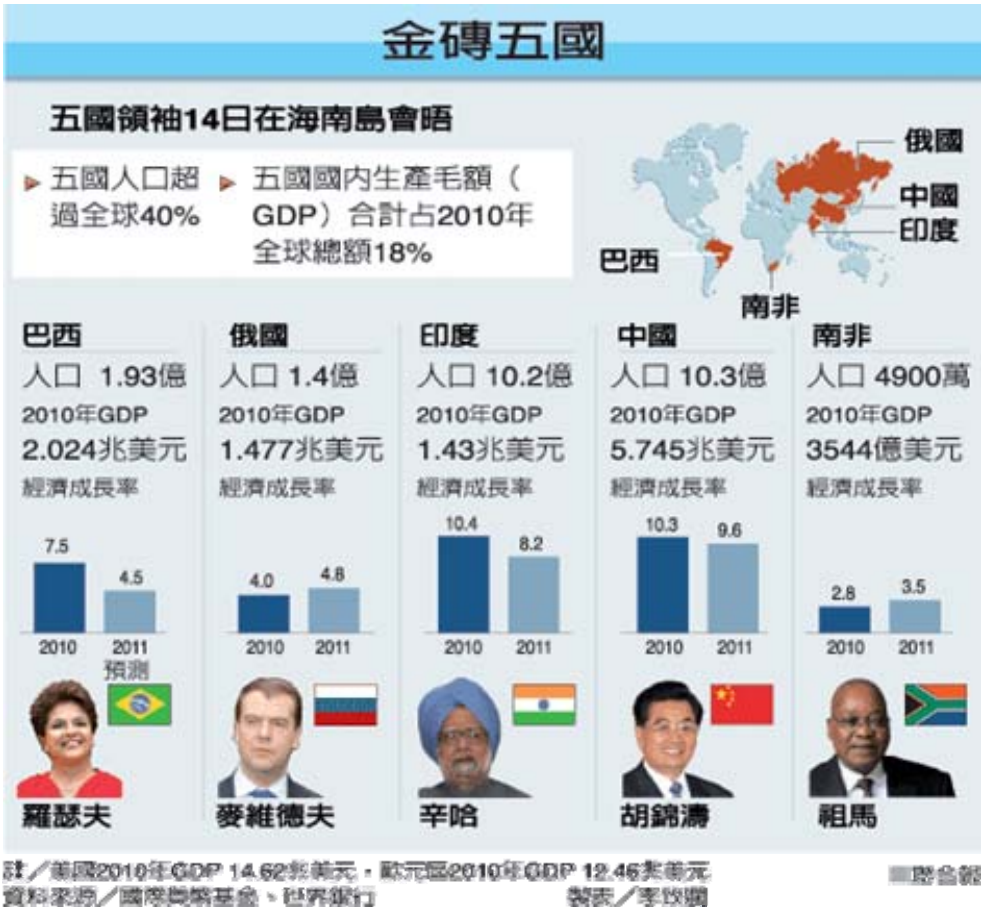
On April 14, 2011, the leaders of five major emerging markets -- Brazil, Russia, India, China, and South Africa ("BRICS") – convened at the 3rd summit in the city of Sanya on Hainan Island to work together to strengthen their voices on the world stage. At the summit, the leaders signaled support for broadening the basket of currencies used in the Special Drawing Rights (SDRs), an international reserve fund created by the International Monetary Fund, and spoke out against the use of military force in Libya and other Arab nations. BRICS has gradually emerged as a counterpart to the alliance of Western countries.

全球五大新興經濟體、所謂的「金磚五國」領袖 2011 年 4 月 14 日在海南島的三亞舉行高峰會，尋求結合五國力量在世界舞台爭取更大發言權，會後發表宣言，表示樂見以特別提款權（SDR）取代美元國際準備貨幣地位的討論，並一致反對對利比亞和其

他阿拉伯國家用兵，一個與西方集團抗衡的新集團隱然成形。三亞高峰會是金磚國家第三次年會，除原來的「金磚四國」巴西、俄羅斯、印度與中國外，南非今年首次加入成爲第五個成員。金磚五國人口占全球 40%、國內生產毛額達全球 18%，並貢獻全球經濟成長的 45%，具有舉足輕重的分量。 五國領袖發表共同聲明，警告大宗物資價格劇烈波動，將延緩全球經濟復甦，大量資本流動也對開發中國家不利。金磚國家官員曾警告，開發中國家面臨資本流動的風險，主要是受已開發國家實施寬鬆貨幣政策影響。官員指出，各經濟體仍面臨通膨壓力和資產泡沫的經濟過熱問題。

The Sanya Declaration of the BRICS Leaders Meeting stated: “We call for more attention to the risks of massive cross-border capital flows now faced by the emerging economies.” The Declaration also stated: “Excessive volatility in commodity prices, particularly those for food and energy, poses new risks for the ongoing recovery of the world economy.” The BRICS member nations also supported reform of the international monetary system: “Recognizing that the international financial crisis has exposed the inadequacies and deficiencies of the existing international monetary and financial system, we support the reform and improvement of the international monetary system, with a broad-based international reserve currency system providing stability and certainty.” The preceding statement is evidence that the member nations support replacing the U.S dollar as the dominant international currency. As stated in the Declaration: “We welcome the current discussion about the role of the SDR in the existing international monetary system including the composition of SDR's basket of currencies.” However, the Declaration was silent as to adding the Chinese yuan to the SDR’s basket of currencies because of restrictions on exchanging Chinese yuan. SDR’s basket of currencies currently includes the U.S. dollar, the Euro, the Japanese yen, and the British pound.

宣言說，「我們呼籲更關注當前新興經濟體面臨資金大量跨境進出的風險」，「商品價格劇烈波動，尤其是食物和能源價格，對全球經濟復甦帶來新風險」。五國也支持國際貨幣制度改革，「建立穩定、確定和基礎廣泛的國際準備貨幣體系。」此舉顯然是要弱化美元做爲全球主要準備貨幣的地位。宣言說：「我們樂見對提升特別提款權（SDR）角色及改變其組成貨幣的討論。」 但五國對人民幣是否該加入 SDR 的一籃子貨幣議題避而不談，原因爲人民幣迄今仍無法自由兌換。特別提款權現由美元、歐元、日圓與英鎊構成。



In another blow to the U.S. dollar, each member nation's development bank signed a framework agreement to expand local currency settlement and lending to facilitate trade and investment within BRICS.

金磚國家對美元發動的另一個攻擊，是各國開發銀行簽署「金磚國家銀行合作機制與金融合作框架協議」同意建立以各自貨幣計價的信用額度，擴大本幣結算和貸款，以利彼此的貿易和投資。

Known for its gold production, South Africa became a BRICS member this year and BRIC (comprised of China, India, Russia, and Brazil) became BRICS.

有著黃金之國頭銜的南非,日前正式獲邀進入“金磚國家”,使得“金磚四國”(指中國、印度、俄羅斯和巴西)擴容爲“金磚五國”。

In response to journalists' questions during a routine press meeting at the China's Ministry of Foreign Affairs, the Ministry spokesperson Jiang Yu said that China was this year's host for the BRICS summit and together with Russia, India, and Brazil agreed to invite South Africa to join BRICS. President Hu Jingtao welcomed South African President Zuma to participate in the 2011 BRICS summit in China. The addition of South Africa will enhance the development of BRICS and lead to greater cooperation among the emerging economies.

在外交部例行記者會上,外交部發言人姜瑜答記者問時稱:中國作爲“金磚國家”合作機制輪值主席國,與俄羅斯、印度、巴西一致商定,吸收南非作爲正式成員加入該合作機制。胡錦濤主席已就此致函南非總統祖馬,並邀請祖馬總統出席 2011 年在華舉辦的“金磚國家”領導人第三次正式會晤。南非的加入將有利於“金磚國家”合作機制的發展,促進新興市場國家之間的合作。

Outside analysts believe that the accession of South Africa to the group increased South Africa's status on the international stage, was a formal step in establishing itself as one of the regional powerhouses of the world, and indicated the economic heft of Africa. The addition of South Africa may also signal the future expansion of BRICS, with Indonesia,

Mexico, and Turkey being potential future member nations.

外界分析認爲,南非加入“金磚國家”,表明南非國際地位得到進一步提升,正式跨入全球地區性大國行列,也表明瞭世界經濟格局中非洲籌碼的加重。此外,也意味著“金磚國家”擴容的開始,印尼、墨西哥、土耳其等國,有可能陸續加入到“金磚國家”行列中來。

China encouraged South Africa to participate 中國全力推動南非加入

South Africa said that receiving an invitation to join BRICS was the “best Christmas present.” South Africa quickly established lines of dialogue with China, Brazil, India, and Russia to strengthen cooperation.

對於加入“金磚四國”合作機制,南非方面表示,是南非收到的“最好的聖誕禮物”,南非已經做好準備,加快與中國和巴西、印度、俄羅斯的溝通與協調,以促進互利合作。

This past year has been full of fortuitous events for South Africa, the strongest influence on the African continent. South Africa successfully hosted the 2010 World Cup and showcased its local culture on the world stage. At the end of year, South Africa was invited to join BRICS so that South Africa could better represent the interests of the African continent and increase economic development and opportunities for Africa.

過去的一年,對於南非這個非洲影響力最大的國家來說可謂喜事連連。2010 年南非世界盃足球賽,南非向全世界展示了其特有的風采,贏得了世界的尊重;而臨近年底,南非獲邀加入“金磚國家”,使得南非可以更好地代表非洲國家的利益,爲非洲經濟發展謀取更大的國際合作空間。

South Africa was extremely enthusiastic in joining BRICS. Beginning in August 2010, South African President Zuma visited all four BRIC member nations with hopes of cooperating with BRIC in trade and investment. And in the prior month at the G20 summit in Seoul, President Zuma officially requested to join BRIC.

在加入“金磚國家”方面,南非表現十分積極。從 2010 年 8 月份開始,南非總統祖馬先後訪問了四個“金磚國家”,希望借訪問促進南非和“金磚四國”在經貿、投資等領域的合作;在上個月舉行的 G20 首爾峰會期間,南非正式申請加入“金磚”集團。

South Africa is the largest economy on African continent and is one of the most powerful influences on the continent. The GDP of South Africa accounts for 1/3 of the total GDP of the area south of the Sahara. Even though South Africa’s economic growth cannot compete with those of the BRIC member nations; however, South Africa is rich with natural

resources and human capital. South Africa's Department of International Relations and Cooperation Minister Mashabane believes that South Africa will serve as a gateway to Africa for BRIC member nations while at the same time increasing the prominence of African issues internationally.

南非是非洲最大的經濟體,也是非洲最有影響力的國家之一,其國內生產總值約佔撒哈拉以南非洲國家經濟總量的 1/3。儘管南非發展速度不如“金磚四國”,卻有豐富的自然資源和人力資源,南非國際關係與合作部長馬沙巴內表示,南非將成爲“金磚國家”進入非洲的門戶,同時也有利於增加國際上的非洲議程。

Political prospective more than economic prospective 政治意義大於經濟意義

The term and the idea of BRIC were first proposed by Goldman Sachs Asset Management Chairman Jim O'Neill (known as the father of BRIC) in 2001. In the past few years, the economies of BRIC countries have developed rapidly and after withstanding the 2008 financial crisis intact, the rest of the world has increased its admiration of BRIC.

“金磚四國”這一概念最早由高盛首席經濟師吉姆·奧尼爾(被稱爲“金磚四國之父”)于 2001 年提出,“金磚四國”以其近年在經濟上的快速發展,特別是金融危機後的突出表現,受到全球矚目。

When O'Neill first proposed BRIC, the population of a country was an important issue. Since the population of South Africa is far less than the populations of China, India and Brazil, it has not been taken into consideration.

奧尼爾當初推出“金磚國家”概念時,將人口權重作爲一個關鍵性指標來考察,所以人口不到 5000 萬,規模遠小于中國、印度、巴西的南非並沒有成爲奧尼爾最初的選擇。

From an economic perspective, South Africa is only 31st in economic rankings. South Africa's GDP in 2010 was approximately US $300 billion, which is only a quarter of the GDP of Russia, the BRIC member nation with the smallest GDP. “South Africa's economy is very small,” said O'Neill at a news conference. “For South Africa to be treated as part of BRIC doesn't make any sense to me. But South Africa as a representative of the African continent is a different story.”

從經濟總量看,南非現在只是世界排名第 31 位的經濟體,其 2010 年國內生產總值只有 3000 億美元左右,只有“金磚四國”中經濟總量最小的俄羅斯國內生產總值的 1/4。“南非的經濟規模非常小,在我看來,在‘金磚國家’裏算上南非沒有什麼道理。不過如果南非代表著整個非洲大陸,那就是完全不同的一個故事了。”奧尼爾在接受彭博新聞社採訪時表示。

From a geo-political perspective, South Africa's entry has unquestionably increased strengthened the position of BRICS as an international organization. BRIC had representative countries from Asia, Europe, and America; however, there had been no member nations from the rapidly developing African continent. Thus, inviting South Africa to join BRIC not only expands the geographic scope of the organization but also increases the international presence and influence of BRICS.

從地緣政治的角度考慮,南非的加入,無疑有助於增強“金磚國家”作爲一個國際集團的影響力。“金磚四國”分佈于亞、歐、美三大洲,而當前經濟快速發展的非洲大陸,目前還沒有一個成員國。因此,邀請南非加盟“金磚國家”,無疑有助於改善“金磚國家”的地緣分佈,有助於增強國際代表性和國家影響力。

Indonesia may be the next golden country “金磚國家”下一個或是印尼

O'Neill stated that the economies of many emerging markets are much larger than South Africa's and if South Africa can join, so many other emerging markets should be to join as well, based on their economic size: "This would include Indonesia (approximately $700bn), Mexico ($1,050bn), Turkey ($725bn) and South Korea ($1,000bn)."

奧尼爾指出,國際上很多新興國家的經濟規模要比南非大很多,如果南非能加入這一機制,也就意味著更多的新興國家將加入。“印尼(7000 億美元)、墨西哥(1.05 萬億美元)、土耳其(7250 億美元)、南韓(1 萬億美元)等國家,它們的經濟實力和經濟前景都滿足條件。”

Yuan Gangming, a professor at the Chinese Academy of Social Science's Institute of Economics pointed out that BRICS is headed in the direction of expansion and allowing South Africa to join BRIC would open the way for more emerging markets to join the organization.

中國社科院經濟研究所研究員袁鋼明教授指出,引入南非加入,“金磚國家”機制將更加開放,可以讓更多的更具代表性的國家繼續加入這個組織,這是“金磚國家”的發展方向。

Indonesia, for example, is the largest economy in the Association of Southeast Asian Nations. Indonesia is blessed with abundant resources, a large population, and bright economic prospects. A report issued by Standard Chartered predicted that by 2020, Indonesia would become one of the ten largest economies and by 2030 would become the fifth largest economy. Indonesia may well become the next BRICS member nation after South Africa.

以印尼爲例,印尼是東盟最大的經濟體,印尼具有資源優勢、人口紅利等後發優勢,其經濟發展前景十分光明。渣打集團的一份研究報告則稱,印尼將在 2020 年晉身世界經濟十強,並在 2030 年成爲全球第五大經濟強國,南非之後,印尼很有可能成爲下一個“金

磚國家”。

At the summit, BRICS leaders plan to discuss the price fluctuation of bulk commodities along with global financial and economic issues. China hopes to reach a consensus on these issues by the G20 summit in Cannes this November. If a consensus is reached, BRICS member nations will have a unified and powerful voice in discussions on how to resolve the global financial crisis at the G20 summit.

金磚國家領導人峰會計劃討論大宗商品價格波動等全球金融和經濟問題，中國希望與會各國能在今年 11 月法國戛納召開 20 國集團(Group of 20)峰會之前就這些問題達成一致。若它們果真形成共同立場，在 20 國集團討論如何解決全球經濟失衡問題時，就可提高金磚國家在談判過程中的整體話語權。

Bloomberg News

在 4/14 週末峰會前夕,一位工作人員經過"金磚五國"標誌.

The term BRIC was first named by Goldman Sachs economist Jim O’Neill in 2001. His purpose was to bring attention to these emerging markets. At the time, he thought that these four countries would become more important players on the world stage. Since then the acronym BRIC has been used primarily by investors.

“金磚四國”這個詞是由高盛(Goldman Sachs)經濟學家奧尼爾(Jim O'Neill)2001 年創造的，目的是喚起國際社會對四個新興經濟體的注意。他當時認爲，這四個經濟體將在國際舞台上發揮越來越大的作用。多年來，這個詞主要被用作投資者，是四大新興市場的簡稱。

What was once just a term has been transformed into an organization by BRIC countries. One of the goals of BRIC countries is to advance the interests of developing countries, similar to one of the goals of the G7, an organization of developed countries. The entry of South Africa into BRICS advances this goal as it extends the interests of BRIC

member nations beyond that of the rapidly growing economies of China and India to more developing countries.

而金磚四國卻把這個詞發展演變爲一個組織，其目的之一就是推動發展中國家的利益，跟七國集團(G-7)在發達國家中的作用非常相似。而讓南非等國家加入金磚國家之列可幫助實現這個目標，把該組織關注的重點擴大至更多發展中國家，而不僅是中國和印度等快速增長的國家。

In 2009, BRIC member nations held its first summit in Russia. The leaders discussed reforming the international financial system and the possibility of replacing the U.S. dollar in the international reserve fund. As host of this year's summit, China invited South Africa and formally changed the name of the organization to BRICS. Wu Hai-Long, Assistant to China's Foreign Minister, stated this month that China would not oppose other developing nations becoming member nations of BRICS. However, he did not name which nations were interesting in joining BRICS. There is formal process for a nation to become a member of BRICS. Using South Africa as an example, only in recent months did China and Brazil state that all four BRIC member nations agreed to have South Africa join BRIC.

金磚四國曾於 2009 年在俄羅斯舉行了第一次峰會，內容是討論國際金融體系的改革和用一種新主導儲備貨幣替代美元的可能性。作爲東道主的中國今年邀請南非與會，並正式將其稱爲“金磚國”(BRICS)。中國外交部長助理吳海龍本月曾說，其它新興市場國家表示有意加入這一組織，而中國對此持開放態度。不過他沒有具體提及是哪些國家有意加入。加入“金磚組織”並沒有一個明確的入會程序。就拿這次南非的加入來說，中國和巴西官員只是在最近幾個月裡說過，金磚四國成員已同意南非作爲新成員加入到其組織當中。

The simple acronym BRICS hides the political differences between the member nations. India, Brazil, and South Africa are democratic countries with flourishing opposing political parties and non-governmental organizations; Russia and China, on the other hand, have authoritarian regimes.

“金磚組織”這一簡單稱呼掩蓋了其成員國情況大不相同的事實。印度、巴西和南非都是充滿活力的民主國家，有多個彼此叫板的反對黨和民間社團，相比之下，俄羅斯和中國的社會制度則更爲專制。

China currently has the second largest economy, nearly three times the size of Brazil's economy, nearly four times the size of the economies of Russia and India combined, and approximately sixteen times the size of South Africa's economy. Russia and Brazil are commodity export giants, whereas China is a commodity import "giant". China believes that the rising price of commodities contributes to high inflation rates and at the moment, China is trying to control inflation in the country.

中國目前是世界第二大經濟體，其經濟規模是巴西的近三倍，印度和俄羅斯的近四倍，南非的 16 倍左右。俄羅斯和巴西是大宗商品的出口大國，中國則是全球很多大宗商品的最大進口國。中國認爲，大宗商品價格不斷上漲在一定程度上推高了本國的高

通脹率，而中國目前正在努力抑制通脹。

Also, each BRICS member nation has its own foreign exchange policy. The President of Brazil Dilma Rousseff arrived in Beijing on Monday for an official state visit before the BRICS summit. She bluntly told Chinese leaders that she opposed China's strict control over the foreign exchange rate of the reminbi. Keeping a low foreign exchange rate for the reminbi allows Chinese exports to maintain lower prices in foreign markets.

另外，金磚五國還就匯率政策各持己見。巴西總統迪爾瑪・羅塞夫(Dilma Rousseff)已於週一抵達北京，在峰會召開之前對中國進行國事訪問。她反對中國嚴控人民幣匯率，並且越來越直言不諱地表達出自己的這種看法。人民幣匯率較低可使中國出口商品在外國市場上保持相對較低的價格。

Wu Hai-Long, Assistant to China's Foreign Minister, stated that the BRICS summit agenda did not include the topic of China's foreign exchange rate. BRICS member nations have differing views on this issue, which may weaken the influence of the organization. Moreover, including Indonesia and other developing countries (so long as BRICS remains an organization of developing countries) but excluding major economic powerhouses, may weaken the influence of BRICS.

中國外交部長助理吳海龍說，金磚五國峰會的議事日程上沒有討論人民幣匯率這一項。金磚國家對這類問題存在意見分歧，這可能有損於其整體影響力。另外，到目前爲止把印尼等主要發展中國家以及(如果金磚組織仍是一個僅面向發展中國家的組織)世界上絕大多數規模最大的經濟強國排除在外，可能同樣也不利於其影響力的發揮。

Nick Lardy, the Chinese economy expert at the Peterson Institute for International Economics, said, "I'm a little skeptical that they're going to emerge as a global force in shaping the world economy."

彼得森國際經濟研究所中國問題專家拉迪(Nick Lardy)說，我有點懷疑它們是否能成爲影響世界經濟的一支全球力量。

South Africa was happy to be joining BRICS, an organization not comprised of any of the Western economic powerhouses. For many years, South Africa has promoted a foreign policy agenda favorable to the African continent and developing nations, but it is currently unclear how BRICS will be able to help South Africa achieve its foreign policy goals.

對於加入一個被視爲獨立於西方經濟強國的金磚組織，南非感到十分高興。多年來，南非一直試圖制定一項推動非洲和發展中國家利益的外交政策，不過目前仍不清楚它將如何通過加入金磚五國來實現這一點。

Nevertheless, people are more concerned about the influence of China on South Africa's industry than the influence that Germany has as the largest exporter to South Africa. At one of the breakfasts during the summit, several industry leaders expressed concern that China might cajole South Africa to sacrifice its economic interests for political symbolism, resulting in South African industries and workers overwhelmed by the flood of Chinese exports. Historically, China has considered itself to be a protector of the interests of

developing countries and has sought those developing countries as allies against developed nations on issues such as human rights and climate change.

儘管如此，人們對於作爲亞洲國家的中國對南非企業重要性增加的關注已超過了對德國近年來成爲南非最大進口來源地的關注。在一次有關本次峰會的早餐討論中，一些業界領袖就表示，擔心中國的花言巧語會讓南非實現爲了政治象徵意義而犧牲經濟利益，從而使得南非企業和工人難以招架中國大量出口商品的衝擊。中國政府歷來都以發展中國家的捍衛者這一形象自居，於是不斷尋求其它相對貧困的國家在人權和氣候變化等問題上的支持，與發達國家叫板。

Scholars at the Chinese Academy of Social Sciences said in a recent paper that emerging economies need to further increase and improve cooperation, speak with one voice, and aggressively participate in international rulemaking; only with these steps can emerging markets and developing nations have a greater voice and development rights.

中國官方智庫中國社會科學院的多位學者最近在一份報告中說，新興經濟體要進一步加強並改善彼此間的合作，協調立場，積極參與全球的規則制定，只有這樣，新興市場和發展中國家才能擁有更多話語權和發展權。

The deputy director of Peking University's Center for International and Strategic Studies, Zhu Feng, said that BRICS recognizes its own limit as a counter to the United States; but this limit could help China in its relationships with other developing countries, therefore both expanding BRICS and meeting the long-term goals of China. Zhu said that one of China’s important goals is to increase cooperation and unity among emerging markets.

北京大學國際戰略研究中心副主任朱峰說，金磚五國知道自己要與美國抗衡還存在諸多限制；儘管如此，這個組織可幫助中國緩解自己與其它新興國家之間的某些緊張關係，而擴大金磚國家的隊伍也符合中國的長期目標。朱峰說，中國的一個重要目標是讓新興經濟體能夠相互合作，團結一致。

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Toward an Inter-Americanist Literary Paradigm

面向美洲国家之间的文学新范式

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In his 1932 presidential address to the American Historical Association, Herbert Eugene Bolton, a historian from Berkeley, called for a new historiography of America that has stirred controversy ever since. Delivered in Toronto, his address surpassed exceptionalist history by placing the United States within a broader hemispheric context. Bolton derived his title, "The Epic of Greater America," in response to *The Epic of America*, a bestseller from 1931 by James Truslow Adams, which constructed a national narrative by privileging the developmental journey of European immigrants in their pursuit of what he was first in calling "The American Dream." Adams had already published popular volumes on British settlement, revolution, and nation-building in New England and had received a Pulitzer Prize for history in 1922. A representative historical monograph from the period, *The Epic of America* was based upon the trendsetting work of Frederick Jackson Turner, who proposed in a famed address from 1893, titled "The significance of the Frontier in American History," that the experience of migration from the Atlantic to the Pacific bolstered the development of a distinct national character.

伯克利大学历史学家赫伯特·尤金·博尔顿在他 1932 年的美国历史协会主席演说中呼吁采用一种新的美国编史机构方式，由此产生了极大争议。在多伦多发表的那场演说因将美国放在更加广泛的半球环境而超越了例外主义史学。演说的题目《大美洲史诗》对于詹姆斯· 特拉斯洛·亚当斯 1931 年编写的畅销书《美国史诗》作出反应。《美国史诗》以追求作家所说的“美国梦”的欧洲移民为主，着重描写了他们的发展历程，从而创造出国家叙述。亚当斯曾出版过有关英国的殖民、美国的革命与在新英格兰的国家建设的流行书本，1922 年还获过普利兹历史奖。《美国史诗》是代表当时的史学专题文章，建立在弗雷德里克·杰克逊·特纳创新风的作品的基础上。特纳在 1893 年发表的有名演说《边疆在美国历史中的意义》提出，从大西洋到太平洋的移居经历加强了独立国民性的发展。

In contrast, "The Epic of Greater America" outlined the wider latitudes of the New World historical experience. Bolton rejected the appropriation of the term "America" as a synonym for the United States and, instead, created a historiography that was guided conceptually by the nomenclature, geography, and transatlantic lineage of the western

hemisphere. This consolidation of the Americas, he argued, would yield a history that was comparative, such that "each local story will have clearer meaning when studied in light of the others." Because he believed that "much of what has been written of each national history is but a thread out of a larger strand," Bolton argued that historians must recuperate the greater American narrative suppressed in official chronicles. To this end, he proposed his synthetic treatment of the Americas along two directives: first, the increasing importance of promoting sound U.S. relations with its hemispheric neighbors; second, the demands of honest and accurate scholarship; for, a unified approach to New World history was also "desirable from the standpoint of correct historiography."

与此对照，《大美洲史诗》概括出美洲历史经历的更加广阔的范围。博尔顿拒绝接受"America"（原指美洲）变成"美国"的同义词，相反，他创作出的编史机构方式概念上以西半球的术语、地理与跨越大西洋的传承为导向。他认为，如此使得美洲国家历史合并将会产生具有比较性的史学，他说道："有了其他地方的故事作比较，每个地方本地故事的意义会更加明确。"博尔顿还认定："各个国史大部分不过是一大根线的几小缕而已。"因此坚持称历史学家必须挽回美国大事记里所抑制的大美洲叙述，而为此给他所提出的美洲综合性论述指明了两个发展方向：首先，美国与西半球邻国之间的良好关系越来越重要；其次，史学必须诚实而准确，因为从正确史学的立场出发，美洲历史联合方式也是值得想往的。

Bolton developed his comparative method from his initial work on what he named the "Spanish Borderlands," formative sites of contact and exchange throughout the southern fringe of the United States that amplified traditional American chronicles in relation to the Spanish presence in North America. As a comparative historian who was familiar with Hispanic documents, as well as a precursor to Chicano studies, Bolton even felt that U.S. academics were largely guilty of propagating the Black Legend of Spanish cruelty and fanaticism as a foil to the exceptionalist history of Anglo-Americans.

博尔顿当初的作品与自己所命名的"西班牙边墙"有关，而以之来发展他关于美国历史的比较性方法。所谓西班牙边疆，指遍及美国南部边境与西班牙裔美国人的彼此联络并交流开始成形的地点。这扩大了美国传统大事记中涉及到西班牙裔人在美存在的内容。由于他是一名对于西班牙裔美国人的文件并不陌生的比较史学家，并且是墨西哥裔美国人学业的先驱，博尔顿觉得美国学家应对宣传所谓的"黑传"（指作美国例外主义陪衬，在美洲的西班牙人残忍并狂热的谬论）负责。

In "The Epic of Greater America," Bolton based his analysis upon a complex set of factors that shaped the entire western hemisphere, including the European competition for overseas colonies, the conflict with Amerindians over transatlantic migration and settlement, and the giant sweep of revolutions from 1776-1826 that ruptured the political hold of European monarchies in the New World. Having provided a transamerican framework for independence, Bolton can thus conclude that the American Revolution "did not end in Yorktown." From a comparative vantage point, the separation secured by British colonists

starting in 1776 is the first in a series of battles for national sovereignty, and continues with the emancipation of Haiti in 1804 and the Latin American wars of independence through the mid-1820s. Bolton began implementing this comparative methodology in "History of the Americas," a two-semester course that he created at Berkeley in 1920. Because it could only provide a broad survey, however, Bolton understood the academic pursuit of western hemispheric history to be a collaborative enterprise; his courses were meant to coexist with offerings in national and regional histories that would be enhanced and made more meaningful from placement along the former scheme. For Bolton, this approach positioned the United States within a system of parallels, overlaps, and interrelations that, not unlike a synthetic model of European history, reflected more fully the course and interplay of American civilizations.

在《大美洲史诗》中，博尔顿的分析以一些影响整个西半球的复杂因素为根据，即欧洲国家之间有关海外殖民地的竞争、因跨越大西洋的移居并殖民而与美国原住民发生的冲突和在 1776 年到 1826 年之间发生的那些使得欧洲王国失去殖民地的控制权的革命。在他提出的泛美国家独立框架之上，博尔顿从而断定美国的独立战争并没有在约克顿结束。相对而言，英属殖民地从 1776 年起赢得的独立是为了独立自主的一系列斗争的初战，这一直持续到 1804 年在海地的解放和 19 世纪 20 年代中位于拉丁美洲的各个国家的独立战争。1920 年，博尔顿在伯克利大学创造了一门叫做"美洲历史"的两学期课程，并由此时开始实施他的那套比较性方法。但是，因为学习西半球历史只能提供概略，博尔顿认为它是一个合作性事业；因此他的课程原本就是要与国家、地区历史课程共存，而这种课程方案可以给其他历史课程以更为深刻的意义。博尔顿认为，这种方式把美国放在一个具有相似地方、重叠部分与相互关系的系统，这样可以像欧洲的综合性历史理论一样更加完全地体现出美洲各个文明的历程与相互影响。

In the United States, the Bolton thesis was largely ignored, particularly as the academy grew intellectually and politically conservative during the post-World War II era. A notable exception to this general neglect, however, is the 1964 publication of *Do the Americas Have a Common History? A Critique of the Bolton Theory*. Edited by Lewis Hanke, the book was the first to provide an in-depth analysis of Bolton by republishing his address, along with numerous rebuttals, including a vitriolic response from Mexican historian and philosopher Edmundo O'Gorman. Of all the criticism engendered by the Bolton thesis, none is more unyielding than that which O'Gorman published originally in 1939 as part of the essay "Hegel y el moderno panamericanismo." In polemical fashion, O'Gorman adamantly dismisses "The Epic of Greater America" based upon what he interprets as Bolton's failure to account for the cultural and spiritual life of Latin America. Most notably, O'Gorman claims that, far from yielding a more accurate historical narrative, Bolton's thesis incarnates the ideology of U.S. foreign policy as pronounced the following year by Franklin Delano Roosevelt: "Truly, Professor Bolton with his well-intentioned, leveling vision, and with much of what—for causes baffling all reason—is called nowadays the 'Good Neighbor' policy,

presents us with an inhuman history, an ample chronicle of an enormous organism indifferent to its salvation or to its perdition." Because he neglects the spiritual uniqueness of Latin America, which presumably exists within an isolated cultural realm that is incomparable, Bolton fails to establish a unified history based upon "that spiritual complex which gives body to a historical entity." O'Gorman's humanist and anti-imperialist critique, however, appears to be as much directed at U.S. foreign policy as it is toward Bolton's thesis, so much so that he considers the extended notion of a hemispheric history as culturally imperialistic. Meaning to counter the institutional pan-Americanism that he sees as an extension of U.S. foreign policy, O'Gorman stresses the ideological divide between the Americas. Ultimately, however, he does so by embracing a Hispanic essentialism that can denounce a formulation that he perceives as the academic analogue of the "Good Neighbor."

大体来说，博尔顿的论点在美国是被忽略的，主要是因为第二次世界大战后的学术界思想并政治上变得保守。一个特例是 1964 年出版的《美洲是否具有共同历史？博尔顿理论讲评》。刘易斯·汉克编辑的这本书首次对于博尔顿的理论认真作出透彻分析，也为此再版了他的演说与他人的许多反驳意见。墨西哥历史学家及哲学家埃德蒙多·奥戈尔曼的尖锐批评为其中之一。他的评论原来是 1939 年的散文《黑格尔与现代泛美主义》的一部分，而博尔顿理论引起的批评当中，尤以这篇最为猛烈。奥戈尔曼之所以坚定不移地拒绝接受《大美洲史诗》中的提法是因为他认为博尔顿并未解释拉丁美洲的文化与精神生活。最明显的是，他认为博尔顿理论远未促成更为准确的历史叙述，反而体现出富兰克林·德拉诺·罗斯福总统翌年宣布的美国外交政策意识形态，他还辩称："博尔顿的看似平等，出于善意的远见以及那个不合理地叫作"善邻政策"的大部分内容，给我们展示了一个非人性的历史，一个对巨大生物体的存活与消亡莫不关心的历史。"拉丁美洲的精神独特性大概存在于一个孤立而并无可比性的文化领域，博尔顿因将其忽略而未能创造他所说的一个以"那个使历史上实体有形的精神综合结构"为本的综合性历史。然而，奥戈尔曼的从人道主义出发并反对帝国主义的批评看似不只指向博尔顿的理论，也指向美国对外政策；他甚至于认为连半球历史的引申概念也是一种文化帝国主义。机构性泛美主义被奥戈尔曼所理解为美国外交政策的扩展，他为了表示反对而强调南美与北美之间的思想分歧。最终，他为此采纳拉丁裔美国人的本质主义，因为它能够谴责他认为学术界中有着与"善临政策"情况类似的构想。

Paradoxically, *The Invention of America*, O'Gorman's later book that treats the historical significance of the New World (delivered originally as a series of lectures at Indiana University in 1958 and published in revised and expanded form in 1961), legitimates, I would argue, the very comparability between the United States and Latin America that he had dismissed in his response to Bolton. In arguing that America was not so much "discovered" as it was invented, O'Gorman establishes a platform for recuperating the transatlantic heritage of the New World through the European projection of fantasy as a point of origin for fiction of the Americas. Originally, these fantasies were the products of cultural encounters between Europeans and Amerindians that shaped the representations of

monsters, mythical men, and marvelous geographies in the travel narratives, maps, and book illustrations printed and reprinted throughout Europe and America during the early modern period. Bolstered by the new medium of the printing press, this transatlantic archive of texts and images is the basis for a New World imaginary filled with monsters and marvels drawn from Biblical and Greco-Roman mythology. From the mismapping of the "The Terrestrial Paradise" to the search for "The Fountain of Eternal Youth," accounts confirm that many explorers, missionaries, and mapmakers envisioned mythical places, such as the "New Jerusalem," "Atlantis," and the "Island of California," within the same spatial radius as giants, mermaids, and amazons. In the cartographic imagination, in particular, monstrosity became coextensive with terrains that were unexplored and/or perceived as dangerous; many early maps of the Americas fill land and sea with iconic images of feasting cannibals and sea dragons toppling ships headed to and from the New World.

自相矛盾的是，笔者认为奥戈尔曼反驳博尔顿理论时拒绝接受的美国与拉丁美洲国家之间的可比性观点在他后来编写的《美洲的发明》（起初是 1958 年于印第安纳大学所做的讨论美洲历史意义的系列讲座，1961 年修订并详细阐述后被出版）中被证实了。奥戈尔曼辩论说美洲并非被发现，而是被"发明"；由于欧洲人的幻想是关于美洲虚构的起源，他便提供了一种可以恢复美洲的跨越大西洋传统的纲领。最初，这些幻想是欧洲人与美洲原住民之间的文化遭遇的结果，它们影响了在欧洲与美国近代一再出版的旅行记录片、地图以及插图中的怪物、神话人物及奇异地貌。这些收集了正文与图像跨越大西洋的档案被印刷机的发明所支持，这也是使美洲意象充满着圣经与希腊罗马神话里的鬼怪和奇迹的原因。如"人间天堂"的错误测绘与"青春之泉"的追求，从记录可得到证实，许多探险者、传教士以及制图员想像出"新耶路撒冷"、"阿特兰蒂斯"与"加利福尼亚岛"等神话中的地方，同时想象出巨人、美人鱼和亚马逊女战士在同样的地区生存。特别是在制图学者的想像中，未经勘探或被看做危险的地区与怪物具有同等范畴。许多早期美洲地

In order to demonstrate how this paradigm of European invention enriches the possibility for theorizing the Americas, we might briefly consider the relation between these early modern discourses and subsequent literatures from the New World. During the national periods, in particular, many authors throughout the Americas labored to establish New World identities separate from Old World cultural models. Nineteenth-century writers ranging from James Fenimore Cooper, Henry Wadsworth Longfellow, and Herman Melville in the United States to José María Heredia, José de Alencar, and José Martí in Latin America combined European, Amerindian, and African traditions to create a New World poetics that projected a distinguished and vigorous American cultural identity. They often plundered and reinvented a repository of early American images and narratives in order to construct new regional, national, and pan-American literary traditions. Turning to Melville's *Moby-Dick* for a key illustration, we may notice that the iconic White Whale recalls the sea monsters present as objects of wonder and curiosity in early modern maps that chart European

possessions in the New World.

为了表明这种欧洲发明范示如何使得设想中的美洲的更加丰富，我们可以简单地从考虑这些近代文章与后来美洲文学的关系入手。国家独立时期，美洲的许多作家争取创造与欧洲文化模式不同的美洲新特性。19 世纪，美国的詹姆斯·菲尼莫尔·库柏、亨利·沃兹沃思·郎费罗与赫尔曼·梅尔维尔以及拉丁美洲的何塞·马利亚·埃雷迪亚、若泽·得·阿伦卡尔与何塞·马蒂等作家将欧洲、美洲原住民与非洲传统结合起来，创造了一个表露出独具特点并充满活力的美洲史诗。那些作家经常利用并翻新美洲早期的图像和故事来创作新的地区、国家与泛美文学传统。就梅尔维尔的《白鲸记》而言，故事里边有名的白鲸使人记起近代欧洲人绘制领土的地图中怪异并好奇的海怪。

Starting in 1539, the *Carta Marina*, printed in Venice by Swedish priest Olaus Magnus, establishes a core lexicon of fabled sea creatures in its depiction of the Nordic region. The nightmarish beasts on the chart exist in such a dazzling abundance that they rival the physical geography of Scandinavia itself. These beasts resurface most conspicuously in Abraham Ortelius' map of Iceland from his *Theatrum Orbis Terrarum* from 1570, the first modern atlas to appear in Europe and a veritable summation of cartographic knowledge during the sixteenth century. Immensely popular and translated into multiple languages in many different editions, the map features an alphabetical index with corresponding descriptions of the images on the reverse. Similar monsters later reappear in early maps of the New World, thus illustrating the cartographical process of recycling images, even long after new information was ascertained regarding Amerindians cultures, as well as the physical geography and wildlife of the continent. A number of these creatures, including spouting whales, appear in full view in the famous map of South America and the North American coast drawn by Spanish cartographer Diego Gutierrez in 1562. The map reuses the marine bestiary from the Nordic charts but places it, along with mythical beings derived from Classical mythology, into a circum-oceanic context. In the British tradition, early illustrations of the North American coastline that attempt to map English possessions in the New World, such as John White's *La Virgenia Pars* from 1585, reproduce the monsters in documents that formed part of the correspondence between explorers and private entrepreneurs in joint-stock companies. John Smith's map of Virginia from 1612, which also functioned as propaganda for English overseas settlement, includes two such creatures traveling along the Chesapeake Bay. These beasts then travel north, where maps such as Samuel Champlain's *Carte geographique de la Nouvelle France* from 1613, documented French settlement in North America.

从 1539 年起，瑞典牧师奥劳斯·马格纳斯在威尼斯出版的《海洋地图》描绘了斯堪的纳维亚区域，并且建立了有关神话中海怪的基本词汇。地图上青面獠牙的怪物多得好像在与斯堪的纳维亚的千姿百态的自然地理竞争。亚伯拉罕·奥特柳斯 1570 年的《世界概貌》是在欧首次问世的地图册，并且也是 16 世纪制图学问的集大成者，前文提过的怪物在其中的冰岛地图上重新出现。那本地图册非常流行，被译成许多种语言，多次再

版，以音序索引和图像的背面有相应的描写为特色。了解美洲远殖民的文化以及美洲地理与野生动物之后，类似的怪物仍然在早期美洲地图再现，这说明制图学图像再生利用的过程。涌出气泡的鲸鱼等不少怪物在西班牙制图者迭戈·古铁雷斯 1562 年绘制的南美和北美海岸地图上全部都看得到。那幅地图再次使用斯堪的纳维亚地图动物寓言集里的怪物，但把它们同一些希腊罗马古典神话中的怪物放在一个环海洋环境。依据英国的传统，约翰·怀特 1585 年的《弗吉尼亚土地》等早期试图绘制英国在美领土的北美海岸地图在探险者与股份公司企业家之间的信件使那些怪物再次出现。约翰·史密斯 1612 年绘制的弗吉尼亚州地图（同时作为殖民地的开拓宣传）包括两个类似动物正在向切萨匹克湾移动。而后，这两个怪物往北走，又出现于塞缪尔·尚普兰 1613 年的《新法兰斯地形图》等记录法国人在北美的殖民的地图中。

Viewed through the lens of early modern cartography, the White Whale is neither a metaphysical monster, nor a U.S. symbol of New England commerce (which represent two traditional interpretations); rather, it is a New World icon that recalls a pre-national vision of a single landmass, the *quarta orbis pars*, or forth part of the world, as it was first coveted by European monarchs, explorers, conquerors, missionaries, and finance capitalists. In *Moby-Dick*, Ahab's obsessive hunt for the White Whale overlaps with the transatlantic colonial enterprise before the postcolonial division of the hemisphere into separate republics. This cultural continuity between early American paradigms and the literature of the Americas attests to a mobile archive of transatlantic texts and images that authors used in their search for New World themes during the early national periods.

依据两个传统解释，梅尔维尔的白鲸是一个高度抽象的怪物或是美国新英格兰贸易的象征，但考虑到近代制图学，它是国家成立前美洲的象征，令人记起欧洲君王、探险者、征服者，传教士和资本家所梦寐以求的那大片陆地，那个梦想。《白鲸记》中呀哈布顽固地追踪白鲸与殖民地时期后西半球分化成很多共和国之前的跨越大西洋殖民地事业同时发生。在早期美洲范式与美洲文学之间的文化连续性证实了国家成立后时代，作家在寻求美洲题材时采用了交互使用的文字与图像的事实。

With the current vogue in hemispheric studies, however, we need to interrogate how the academy conceives and supports a branch of research that began in earnest during the 1980s with books written primarily by scholars in comparative literature. A partial list of groundbreaking works that engaged in multiple and multilingual traditions includes: Vera Kutzinski's *Against the American Grain: Myth and History in William Carlos Williams, Jay Wright, and Nicolás Guillén* (1987), Lois Parkinson Zamora's *Writing the Apocalypse: Historical Vision in Contemporary U.S. and Latin American Fiction* (1989), and *The Usable Past: The Imagination of History in Recent Fiction of the Americas* (1997), Earl Fitz's *Rediscovering the New World: Inter-American Literature in a Comparative Context* (1991), as well as collections ranging from Bell Gale Chevigny and Gari Laguardia's *Reinventing the Americas: Comparative Studies of Literature of the United States and Spanish America* (1986), Gustavo Pérez Firmat's *Do the Americas Have a Common Literature?* (1990), and

José David Saldívar's *The Dialectics of Our America: Genealogy, Cultural Critique, and Literary History* (1991).

然则，由于半球学如今出现了新潮流，因此必须询问学术界如何构想并支持这种20世纪80年代大部分以比较文学家编写的书本为真正开始的研究。论述不同传统和不同语言传统的突破性作品的一部分如下所列：威拉·库津斯基1987年的《违反美国的意愿：威廉·卡洛斯·威廉斯、杰伊·莱特与尼古拉斯·吉伦的作品中的神话与历史》、洛伊斯·帕金森·萨莫拉1989年的《描写世界末日：当代美国并拉丁美洲小说中的历史眼光》与1997年《可用的过去：近来美洲小说中的历史想像》、厄尔·菲茨1991年的《重新发现新世界：比较环境下美洲国家之间的文学》以及贝尔·盖尔·舍维尼与加莉·拉瓜迪亚1986年的《重新发明美洲：美国与西班牙美洲文学对比研究》、古斯塔沃·佩雷斯·菲尔马特1990年的《美洲是否具有共同文学》与何塞·大卫·萨尔迪瓦尔1991年的《我们美洲的辩证法：系谱学、文化评论与文学历史》等文集。

In 1980, Fitz, an inter-Americanist pioneer who had just developed six courses in the field at Penn State University, made the following forecast: "It is our contention that inter-American literary studies, naturally of a comparative nature, will prove themselves to be a major trend of the near future, one which will eventually establish itself as a permanent and vital part of every comparative literature department and program in the country." Fitz, of course, was only half right. While inter-American studies is currently at the intellectual forefront, the majority of academic positions and fellowships designated as "Literature of the Americas," "Transnational American Studies," or "Hemispheric American Literature," are currently housed and/or function under the framework of Departments of English, where Anglophone literature holds precedence over other hemispheric literatures. As a result, most programs remain monolingual and national in scope and often perpetuate a vision of Latin American literature as exotic and unrelated to the British American tradition. At best, this limited approach might locate the existence of a hemispheric imaginary within U.S. fiction, but without de-centering that national tradition through comparative analysis.

菲茨是美洲主义的先驱，并且在宾夕法尼亚州立大学开设过有关这个领域的六门课程。他1980年预测说："我们认为，具有比较性的美洲国家之间的文学研究将会成为近期主要趋势，最终也会变成全国每个比较文学学系和课程的一个固定而重要的部分。"当然，他只说对了一半。虽然美洲学在学术界的最前沿，但叫做"美洲文学"、"跨国美洲研究"或"半球性美洲文学"的学术地位与研究员职位中大部分由以英国文学为主的英文系管理。因此，大多数课程的范围仍然限于一种语言、一个国家，而且经常延续拉丁美洲文学非本土而且与英美传统无关的概念。这样有限的方式，充其量，可能找着美国小说中半球形想像的存在，但无法以比较分析来对国家传统作调整。

Rather than shutting down legitimate inquiry, however, this state of affairs suggests to me just how much our current academic practice, including that resulting from the institutionalization of hemispheric studies, has done to dissolve our perception of any common ground between the cultures of the Americas; as a result, both U.S. and Latin

Americanist scholars continue to engage in a two-way exceptionalism that obfuscate the wider latitudes of transatlantic history and intercultural exchange across the hemisphere. Thus, while I remain suspicious of the Bolton thesis for its underlying political misconceptions about the cooperative role of the Americas, I find it equally impossible to ignore the simultaneous emergence of a dynamic site of interdisciplinary research. I invoke this formative moment, then, in order to affirm what strikes me as a bold comparative trajectory, although one that admittedly underestimates the cultural lives of the people who form the subject of that varied and complex body of knowledge.

依我看来，这种情况并不能阻止合理的调查，而相反，它显示出现今的学术研究包括由半球学的机构化引发的结果在多大程度上消解了我们认为美洲不同文化间有共同点的看法。美国与拉丁美洲学家因此而坚持的双方例外主义使跨越大西洋的历史及半球内不同文化间的交流混淆。虽然笔者因其对于美洲合作任务的基本政治误解而仍然怀疑博尔顿理论，但是不可忽略的是一个充满活力的跨学科研究同时出现。此时此刻，我要支持这个革新的比较过程，虽然这个复杂多样知识体系无可否认地低估了作为其主体的那些人的文化生活。

Recently, Fitz defined the Comparative Americas discipline as a broad intellectual inquiry that is "much more based on a recognition and acceptance of difference, albeit a difference understood as existing not in isolation but within larger patters of cultural, linguistic, and historical development." Fitz responds to O'Gorman and other critics of the hemispheric approach by arguing that, in successful inter-American research, it will be "the differences that will occupy most of our analytical time and energy, for it is here, in the differences, that what is most unique and distinctive about each New World culture, or each New world author or text, can be dealt with most accurately and honestly. Indeed, as an analytical discipline Comparative Literature itself tends to accept and explore difference more than it cultivates the similarities between texts, and this is why the comparative approach which focuses more on difference than on similarity, will go a long way toward alleviating the concerns of scholars like Fernández Retamar who fear that the very real historical differences between the United States and the rest of the Americas are so great that they make valid comparative study all but impossible."

最近，菲茨将美洲比较学科解释为一个"基于差异的认出并接受"的广泛学术探索，但"此差异并不孤立，而存在于文化、语言与历史发展过程的更多领域。"对于奥戈尔曼等半球方式的批评者，他说在成功的美洲研究中："我们时间和心血的大部分要花费在分析差异上。考虑差异才能准确而如实地考虑每个美洲文化、作家和文本的特点。"费尔南德斯·雷塔马尔与一些学家担心美国与美洲其他国家实际历史差异过大，其间无法做比较研究；但比较文学是分析学科，倾向于接受并探索差异，不常讨论文章之间的相似之处。因此，舍共性而取差异的比较方式能够让那些学家放心。

In keeping with Fitz's advocacy of the field, I envision a comparative model of American literature that is, first and foremost, geographically correct (i.e., inclusive of the

literatures of Canada, Latin America, and the Caribbean, as well as the United States). Accordingly, this multinational and multilingual framework should allow for multiple points of entry across and between New World traditions, promoting comparative analysis of not just the United States and its ethnic and border cultures, but other hemispheric literatures within transatlantic and transpacific contexts (a type of research admittedly more characteristic of Latin Americanist scholarship, which quite often deals with Hispanic traditions across nations and regions). No doubt, this huge body of work calls for extensive collaboration between scholars working in different literary traditions and periods of specialization who stand committed to a fuller intercultural perspective. For, just as inter-American studies can only exist as a collaborative project, so too is an Americanist scholar, by definition at least, a comparatist. The question remains: can the U.S. academy ever establish a cooperative literature of the Americas program that is truly hemispheric and that remains unwilling to reconcile differences as well as resist the perpetuation of convenient cultural stereotypes? While this uncertainty should make us increasingly sensitive to the politics of our own research, I would hope that we could also avoid retreat into a culturally isolationist deadlock that leads to the undervaluing of the inter-American paradigm. In my view, we can negotiate this difficulty only by bringing a comparative perspective to what is currently a too-narrowly-defined American Studies.

与菲茨对此领域的主张相一致，我构想美洲文学的一个首先在地理上正确的，包括加拿大、拉丁美洲、加勒比海地区与美国文学的比较范式。这个多国多语的结构具有许多美洲传统之间的文化切入点，不只提倡美国及其民族及边疆文化之间的比较分析，也提倡其他半球文学在跨越大西洋以及跨越太平洋环境的比较分析。因为拉丁美洲学家的研究经常涉及到其他国家和地域的西班牙裔美国人传统，由此更反应出他们的特性。当然，这个大工程需要各种文化传统与专业领域的学家的广泛合作，需要他们致力于更加丰富的不同文化间的观点研究。因为美洲学科必然是合作项目，所以就本身而言，研究美国的学者也必然是比较学家。但依然存在问题的是，美国学术界能否建立一个真正的半球背景下的美洲文学合作项目，不去调和差异而同时也不轻易接受文化的偏见？

A Brief History on the Development of Chinese Strategic Nuclear Weapons

中國戰略核武器發展簡史

Soon H. Leong, Ph.D. 梁蓀河博士

Introduction

Almost half a century has past since China had conducted the first atomic bomb test; and **yet, a comprehensive historical record of her nuclear weapons development is difficult to come by,** whether it is written in Chinese or in English. In the mid-1980s, this veil of secrecy began to lift as three important documents were published in China: The "Nie Rong Zhen Memoir, 1984" Ref. 1; "Ministry of Nuclear Industry Publication, "1985, Ref. 2, and Contemporary Chinese Nuclear Industry," Ref. 3 . The contents of this article rely heavily on Ref. 4 and 5. This article is organized in a chronological order beginning with the historical forces which drove the Chinese leadership to build the bomb. Then we will describe the many critical challenges and finally the first atomic bomb test. We will also introduce a number of key Chinese scientists, engineers and program managers and examine their contributions to the nuclear weapons development program. Their stories illuminate the extraordinary range of talents the Chinese nation could mobilize to solve so many technical and managerial problems even under the harshest political and economic environments.

序言

中國的第一顆原子彈的實驗,至今已經快半個世紀了.可是記載原子彈的發展和製造過程文件,無論是英文或中文,都是稀罕的像鳳毛麟角.到了八十年代中葉,這個保密的窗簾才初露一線曙光..中國政府部門出版了三份重要的刊物.一九八四年出版了"聶榮臻回憶錄"[參考一],一九八五年出版了"核工業部出版物"[參考二],一九八七年出版了"現代中國核工業"[參考三]. 這篇文章的材料很多是來自以下的兩本參考書:"中國的雲",一九六八年[參考四],"中國製造炸彈", 一九八八年[參考五].以下的內容的組織,是按照時間的次序來表達.從歷史的狂流,逼迫著一個貧困的民族,不惜任何代價地來追尋超殺傷力的武器.我們描述技術人員面對的各種困難和挑戰,一直到了第一次的試爆.我們還簡單地介紹幾位最重要的科技和行政及管理人員,以及他們的貢獻.他們的故事,顯出中國有能力推動無限的人才,來解決天下最困難的科技計劃,即使他們處在險惡的政治和經濟環境之中.

The Quest for Security: Motivation and Decision to Develop the Bomb

To understand where the motivational force comes from, which drove the Chinese people to obtain the bomb at just about any cost, it is necessary to examine Chinese contemporary history between the First Opium War, circa 1842, and Post-Korean War and at the height of the Cold War. According to economic historians, in 1820 the Chinese gross domestic product (GDP) was the largest in the world (approximately 30% of world total). Yet, she was unable to stop the West (supported by the British Royal Navy) from dumping hundreds of thousands of chests of opium on the Chinese mainland. By the turn of the 20th Century, practically every Western nation plus Japan and Czarist Russia had territorial concessions in China. In 1895, China ceded Taiwan to Japan and by 1931, Japan occupied the northeastern region of China. This free for all aggression against China finally culminated in Japan's all-out invasion of China in 1937.

國家安全的追求:發展核武器的激發與決定

要瞭解中國人民爲甚麼不惜代價的來追求核武器,我們必定要回顧中國的近百多年的現代史,從一八四二年第一次鴉片戰爭,直到高麗戰爭之後與及世界冷戰高峰期.根據經濟歷史學家的估計,中國一八二零年的國內生產總值居世界之冠,約佔全世界百分之三十.擁有這樣龐大經濟體的國家,爲甚麼沒有能力來阻止歐美國家,在大英皇家海軍的掩護下,把成千上萬箱鴉片運入中國?到了二十世紀,所有歐美國家,加上俄國及日本,都在中國境內擁有所謂"租界"的半殖民地.日本人的侵略更變本加厲.一八九五年割據台灣,一九三一年侵占全東北地區.到了一九三七年終於全面進攻中國.

The obvious question is: why a country with the world's largest economy at the time was unable to defend herself against a handful of invaders who had to travel all the way from the other side of the globe. The obvious answer is that China may had the largest economy but she was bypassed by the industrial revolution and did not have any defense industry to speak of.

最簡單的問題是:爲甚麼有這樣龐大經濟體的國家竟然沒有能力擊去來自萬里外的敵人?答案是很明顯的西.歐國家的工業革命在它的頭上躍過了.它沒有科技工業,更沒有國防工業可言.

Fast-forward to the Korean War in 1950. Supreme Commander of the United Nations Forces in Korea, General Douglas McArthur, led a delegation to Taiwan to discuss the possible role which the Republic of China can play in the Korean conflict, Fig. 1. McArthur suggested that the US Air Force would drop atomic bombs along the Chinese-Korean border to prevent Chinese forces from crossing into the Korean peninsula, while Taiwan would launch an amphibious assault on the southern coast of China. Generalissimo Chiang Kai-shek was cool to the idea but he was willing to supply a large number of Nationalist Chinese troops to fight in Korea. Historical records indicated that McArthur was never authorized by the White House nor by the

Department of Defense for his trip to Taiwan and subsequently, his plans were rejected by President Harry Truman as the latter did not want the war to extend beyond the Korean Peninsula. Western European leaders were especially concerned that expanding the war may involve the Soviet Union, which at the time had an army of 30 to 50 divisions facing Western Europe. Whether McArthur intended to drop atomic bombs in China or invade the Chinese mainland, nobody knows for sure; but let's look at some of the events which took place at the time.

跨越到一九五零年韓戰時期.聯合國部隊最高統帥[麦克阿瑟]將軍率領了一個代表團到台灣去[圖一].這個訪問的目的是研討台灣如何參加朝鮮半島的戰役.[麦克阿瑟]提議一方面美國空軍在鴨綠江中朝邊界投下原子彈,以切斷中國步隊進入朝鮮的來路.另一方面,蔣介石在台灣的部隊則在廣東福建沿海兩棲登陸.不過蔣介石對這個提議並沒有濃厚的興趣.可是他願意提供任何數目的軍隊到朝鮮去參戰.根據歷史的記載,他到台灣的訪問,根本沒有得到國防部聯席參謀長或是總統府的允許.他的計畫終於給[杜魯門]總統否決了.原因是後者不想把朝鮮的戰役擴大.西歐的領袖們尤其恐懼朝鮮的戰火會引起蘇聯參戰,把戰火燒到他們的眉心.那個時候,蘇聯有四十多個師,把矛頭指向西歐.[麦克阿瑟]有沒有真意用原子彈轟炸中國東三省和支持蔣介石反攻大陸,我們不得而知.不過,我們且來看看以下的事件及其過程:

First: Let's examine the ultimatum McArthur issued at the beginning of the Korean War. We quote him in part:

"Of even greater significance than our tactical successes has been the clear revelation that this new enemy, Red China, of such exaggerated and vaunted military power, lacks the industrial capability to provide adequately many critical items necessary to the conduct of modern war. He lacks the manufacturing base and those raw materials needed to produce, maintain and operate even moderate air and naval power, and he cannot provide the essentials for successful ground operations, such as tanks, heavy artillery and other refinements science has introduced into the conduct of military campaigns. Formerly his great numerical potential might well have filled this gap but with the development of ***existing methods of mass destruction*** *numbers alone do not offset the vulnerability inherent in such deficiencies*……[Is this a thinly veiled threat on the use of the atomic bombs against China?]

…….The enemy, therefore must by now be painfully aware that a decision of the United Nations to depart from its tolerant effort to contain the war to the area of Korea, through an ***expansion of our military operations to its coastal areas and interior bases, would doom Red China to the risk of imminent military collapse****……."*Ref. 6.

第一: 讓我們來詳細閱讀他[麦克阿瑟]向中國發出的最後通牒.在此,我們直接引用他的最後通牒裡的內容.

*"比我們在戰術上的成就更重要的是我們的新敵人,紅中國,明顯地表露出他們的誇張和吹噓的軍事力量.他們缺乏工業能力來供應現代戰爭必須的物品.他們缺乏製造基地和原材料來生產,維修,來操作一個很有限的空軍和海軍武裝.他們沒有能力供給陸戰的必需品,如坦克,大砲,和其他從尖端科技引進到了戰場上.以前他們的龐大人數也許能夠彌補這個漏洞.可是,**以現存的殺傷力大的武器來看,只靠人數是萬萬不能彌補這個致命的弱點**.*[這不是略微掩飾著的原子彈威脅嗎?] 所以,我們的敵人必定沉痛地領會到,聯合國能決定放棄容忍的方針,不把戰爭限於朝鮮境內,而把軍事行動擴張到沿海的地區和內陸的基地.這樣就注定了紅中國的軍事垮台的冒險.[參考六]

Second: At a press conference on 30 November 1950, just a few days after the Chinese Peoples Liberation Army had crossed the Yalu River and engaged McArthur's forces, Truman was asked about the use of nuclear weapons, Ref. 7:

第二: 一九五零年,十一月三十號,中國抗美援朝的志願軍度過鴨綠江與美軍交上手幾天後.在一個記者會上,[杜魯門]總統被問起關於原子彈使用的問題[參考七].

THE PRESIDENT*: Good morning, everybody. Sit down.*

I have got a statement I want to read to you. There will be copies available when you get ready to leave here. I will take it as slowly as I can.

[Reading] *"Recent developments in Korea confront the world with a serious crisis. The Chinese Communist leaders have sent their troops from Manchuria to launch a strong and well-organized attack against the United Nations forces in North Korea. This has been done despite prolonged and earnest efforts to bring home to the Communist leaders of China the plain fact that <u>neither the United Nations nor the United States has any aggressive intentions toward China."</u>*

[杜魯門]總統: 你們早,各位請坐.

我有一個聲明書要讀給各位聽.你們離開前,可以拿到一個副本.我盡我的能力來慢慢地讀.

[宣讀] 最近在朝鮮發生的事件,給世界帶來了極大的危機.中國共產黨領導人從東北派兵發起強大而有組織性的向聯合國在朝鮮的部隊攻擊.即使我們費了很長的時間和很大的努力來向中共領導人說明國聯和美國並沒有侵略中國的意圖,他們仍然這樣做.

{With no reliable communication channels between the Chinese and American governments at the time, and in view of McArthur's delegation to Taiwan, can the Chinese government take comfort in Truman's words? }The press conference continues:

{在兩國完全沒有對話的管道的情形下,加上[麥克阿瑟]在台灣的活動,[杜魯門]的甜言蜜語,聽在中國領導人的耳哩,有意義嗎?}

記者會繼續下去:

Q. *Mr. President, I wonder if we could retrace that reference to the atom bomb? Did we understand you clearly that the use of the atomic bomb is under active consideration?*

Truman: ***Always has been .It is one of our weapons.***

Q. Does that mean, Mr. President, use against military objectives, or civilian—

Truman: *It's a matter that the military people will have to decide. I'm not a military authority that passes on those things.*

Q. Mr. President, perhaps it would be better if we are allowed to quote your remarks on that directly?

Truman: *I don't think—I don't think that is necessary.*

Q*. Mr. President, you said this depends on United Nations action. Does that mean that we wouldn't use the atomic bomb except on a United Nations authorization?*

Truman*:* ***No, it doesn't mean that at all****.* ***The action against Communist China depends on the action of the United Nations. The military commander in the field will have charge of the use of the weapons, as he always has.***

記者: 總統先生,請問您,我們能否重複談談關於原子彈的事嗎?我們對您的話的了解是正確的嗎?原子彈的使用是在積極的考慮的嗎?

總統: 向來都是.牠是我們的武器.

記者: 總統先生.這表示是用來對付軍事目標還是平民…--

總統: 這些事務,是由軍人來決定.我不是軍事家來傳遞這些事務.

記者: 總統先生,也許最好是讓我們來直接引用您對此的談論?

總統: 不,不---這是不必要的.

記者: 總統先生, 您說這是決定於國聯的行動.這是不是意味著我們不使用原子彈,除非是國聯下達命令?

總統: 不!! 完全不是這個意思.對中共的進攻,是根據國聯的行動.在戰場上的指揮官有權利來控制和使用武器.向來都是這樣.

The implication was that the authority to use nuclear weapons had been handed over to MacArthur. Truman was forced to issue a clarification that "only the President can authorize the use of the atom bomb, and no such authorization has been given." And yet, the reality was that on 5 April 1951, the Joint Chiefs of Staff drafted orders for MacArthur authorizing attacks on Manchuria and the Shandong Peninsula if the Chinese launched airstrikes against his forces originating from there. The next day Truman met with the chairman of the United States Atomic Energy Commission, Gordon Dean, and arranged for the transfer of nine Mark 4 nuclear bombs to military control. The Joint Chiefs were not entirely comfortable about giving them to MacArthur, for fear that he might prematurely carry out his orders. This was overtaken by the events of MacArthur's relief, and the orders were never sent.

這含意著使用原子彈的權力已經交給了[麦克阿瑟].後來[杜魯門]被迫發出一個公布來澄清他以上的談話, 那是 "只有總統才有權力授權使用原子彈,這個授權的命令沒有

發出去.”然而,事實是這樣的:一九五一年四月五號,美国参谋长联席会议預備了一個命令給[麦克阿瑟],授權他用原子彈轟炸東三省和山東半島,如果中國空軍利用這些基地來攻擊美國在朝鮮的部隊.第二天,[杜魯門]會見了美國原子能委員會的委員長,[哥頓,迪安].他們安排好九枚 Mk-4 原子彈轉移到軍隊裡.由軍隊控制.把原子彈交給[麦克阿瑟],聯席參謀長們覺得很不妥當,因爲他們怕他不等命令的到來,就發出核武器攻擊.可是,爲了別的事件的發生,這個命令被取消了.[杜魯門]以違背命令爲由,開除了[麦克阿瑟]的兵權.所以,使用原子彈的命令並沒有發出去.

The events in Korea, Indochina and the Taiwan Strait, culminated with the signing of the U.S. Taiwan Mutual Defense Pact on December 2, 1954. The U.S. Seventh Fleet patrolled the Taiwan Strait while the U.S. Air Force built airbases in Taiwan. These American actions constituted the proximate cause of the Chinese leadership's decision to build a national strategic nuclear force with deterrent power. These events galvanized the leadership to act in the winter of 1954-55 and gave special urgency to the strategic weapons program in the decade thereafter. The Chinese sentiment in this respect is succinctly summarized by Field Marshall Chen Yi's somewhat coarse but honest sentiment: "We rather have the atomic bomb even if we have to give up our pants."

從朝鮮半島,越南,台灣海峽引來的一系列事件之後,終於在一九五四年十二月二號,美國和台灣簽訂了一個[中美共同防御條約].美國的第七艦隊巡邏台灣海峽,美國空軍在台灣設立基地.這一系列的美國軍事行動,是最有力的因素來逼迫中國領導人來下決心去建立一個有效的核威攝能力.中國周邊的軍事威脅,激起了中國領導人對擁有核武器的緊迫性.這推動了他們一九五四-五五年冬天,著急地籌畫他們發展核武器的計畫.在這方面,中國人民對這個計畫的態度是最好用陳毅元帥的粗俗但正確的話來形容:"寧要核子,不要褲子."

Early Organization of the Chinese Nuclear Weapons Program

On January 15, 1955, the highest level of Chinese leadership made the decision to establish a program to develop strategic nuclear weapons, but an all-out effort was not initiated until sometime in January 1958 when the Central Military Commission finally issued a directive to pursue this goal with the utmost effort. At the beginning, there was high expectation that the Soviet Union would provide a significant amount of assistance in nuclear technology when Marshall Nie Rong Zhen signed an agreement on October 15, 1957; however, as the political philosophies between the two countries diverged, the Soviet Union tore up the agreement unilaterally in June, 1959 and cancelled all assistances. The Chinese used the name Project 596 [equivalent to the United States' Manhattan Project in the early 1940s] as the code name for their nuclear weapons program to remind themselves the importance of self-reliance.

中國核武器發展的初期組織和管理機構

一九五五年正月十五日,中國高層領導人決定立下一個方案來發展核武器,但是,一直到了一九五八年正月,[中央軍事委員會]才發出命令,動員全國的人力財力物力,來全力開發戰略核武器.開始的時候,很多人都預期蘇聯也許在一些科技領域上,會供給中國有力的援助.這期望是基於[聶榮臻元帥]在一九五七年十月十五日和蘇聯簽了關於科技援助的條約.不過,到了兩國的政策發生了嚴重分歧的時候,蘇聯在一九五九年六月單方面撕破這個條約,完全中止對中國的援助.中國人用[59 工程],等於美國的[曼哈頓計劃]來做核武器工程的密號.不用說,這是一個臥薪嚐膽的教訓,也是直接領會到自力更生的重要.

From that point onward, thousands of dedicated and talented men and women across the land, most of them in their 20s and 30s, began their quest and overcame every conceivable problem: financial, technological backwardness, foreign sanctions, and above all else, the recurrent follies of the Chinese political leadership in the late 1950s and through the 1960s, the so-called Great Leap Forward and Cultural Revolution Movements.

從那天起,成千上萬來自全國富有才幹而又志氣高昂,多半是二三十歲的男女,開始他們長遠而艱辛的征途.他們克服了由經濟和科技落後帶來的問題,以及外國的封鎖.尤其最令人嘆息的是中國領導人所發起的各種悲劇般的政治運動,所謂甚麼[大躍進],[文化大革命],這些動亂,給[596 工程]的每一個工作人員帶來了一個莫大的打擊.

The highest organizational units over-seeing the nuclear weapons development program came from two wings of the Chinese government: The Ministry of National Defense on one side and the State Council on the other. At the top of the echelon, which oversaw the working units, was the Defense Science and Technology Commission headed by Marshall Nie Rongzhen. The National Defense Industry Office under the State Council was head by Luo Ruiqing from 1961. All the theoretical analysis, experimental works, and bomb design were conducted in the Second Ministry of Machine Building [Henceforth, we shall refer this as the Second Ministry], headed by Song Renqiong and replaced by Liu Jie in 1960. [The First Atomic Bomb Test Commission], with General Zhang Aiping as the commissioner, was responsible for test-site construction and bomb testing. The Second Ministry consisted15 bureaus, which included the Institute of Atomic Energy with Qian Sanqiang as the director and the [Ninth Bureau] with Li Jue as the director, responsible for the design, construction and testing of nuclear weapons,. He also double-headed as director of the [Northwest Nuclear Weapons Research and Design Academy], generally referred to by the code name the [Ninth Academy], a unit under the [Ninth Bureau],which served as an interface with the test-site people; and therefore, he also reported to General Zhang Aiping at the [First Atomic Bomb Test On-Site Headquarters]. The [Ninth Academy's] main function was to support the operations of the Lop Nur Nuclear Weapons Test Base.

最高的核武器發展管轄來自兩個單位.一個是國防部轄下的國防科技委員會.主任是[聶榮臻]元帥.另一個是國務院轄下的國防工業辦公室.主任是[羅瑞卿]大將.兩個單位之下設立了[第二机械工业部].以後我們用[第二部]的簡稱.[第二部]的部長是[宋任窮].直到了一九六零年才給[劉傑]代替.[國防部]直轄的[第一顆原子彈試驗委員會]是由[張愛萍]將軍來率領.這個組織的責任是建設試驗場所需的各種設備.[第二部]設有十五個局,包括[原子能研究院],院長[錢三強]和[第九局],局長[李覺].[第九局]的責任:原子彈的設計,製造,和最後的實驗.[李覺]還有另外的一個職位:他擔任[西北核武器研究和設計院]的院長.這個部門的簡稱是[第九院].這個單位的作用是代表[第九局]和試驗場人員的聯繫.它最重要的責任是支持試驗場的各種高科技的工作.

The First Challenge: The Quest for Fissile Materials

When the Americans initiated the Manhattan Project to develop the first atomic bomb in 1941, they did not have the advantage of knowing which fissile material, U235 or Plutonium 239, would lead to a successful bomb, so they pursued both routes simultaneously and, of course, both approaches proved to be successful.

第一個挑戰:搜尋可分裂的核材料

當美國在一九四一年組織[曼哈頓計畫]來建造第一顆原子彈的時候,他們不知道那種易分裂的核材料能夠製成原子彈,鈾-235 還是钚-239.所以,他們用雙管齊下的方法,兩種元素都列入研究的範圍內.當然,後果是這兩樣元子都能製成原子彈.

The Plutonium 239 Approach:the Chinese scientists had a priori knowledge that both U-235 and Pu-239 would lead to a successful atomic bomb; so they too pursued both approaches, at least in the beginning. Both approaches have advantages and disadvantages. In principle, plutonium is easier to obtain from a reactor pile through element transmutation by bombarding U-238 with deuterium than separating uranium 235 from U-238 through agas diffusion process as natural uranium consists 99.3% U-238 and only 0.7% U-235; however,the plutonium bomb is much more difficult to design and construct.

利用钚 239 的方法 中國科學家有一個很大的有利條件.那是他們知道鈾 235 和钚 239 都可以製成原子彈.所以他們像美國一樣,開始的時候,也把兩種方法同時進行.這兩種方法,各有各的優點和缺點.钚-239 的材料通過原子反應堆的處理後,比較容易生產.鈾-235 的生產是非常困難.那是因爲鈾礦裡 99.3%是鈾-238 而只有 0.7% 是鈾-235.把鈾-235 和鈾-238 分離到百分之九十是鈾-235,是一個很艱巨的過程.至于原子彈的設計和結構,钚-239 原子彈則複雜得多.

In 1958, China began planning the first plutonium production reactor in Jiuquan Prefecture, Gansu Province. Marshall Nie Rongzhen personally picked out this isolated spot tucked away in the foothills of Qilian Shan. The precise location is in Beisu (Northern Gansu) Mongolian Autonomous County, about a hundred miles south of Dunhuang. By 1960, however, they were forced to abandon the plutonium approach for

the following reasons: (1) The Soviet Union had unilaterally withdrawn all technical assistance, (2) the nuclear weapons project was badly buffeted by the economic calamity brought on by the so-called "Great Leap forward", (3) the plutonium production project was lagging badly behind the U-235 extractioneffort.

一九五八年,中國計劃在甘肅省的北部,酒泉州的地區,建設一個核子反應堆來提煉钚-239.[聶榮臻]元帥親自選擇了一個在祁連山腳的一個地點.精確的位置是[蒙古自治縣],在[敦煌]南部一百英里內.可是到了一九六零年,他們被迫放棄了這個計劃.其原因有三: (一) 蘇聯單方面的撤去了援助.(二)[大躍進]時期帶來的禍患.(三) 提煉钚-239 的工程遠遠落後於鈾-235.

The Quest for Uranium The discovery of uranium in China can be traced to the year 1934, when the geologist Zhang Ding Zhao found traces of uranium among other minerals in southern Jianxi Province. A systematic effort for the prospecting of uranium ore actually began in 1954, four years before the strategic weapons program was officially established. This involved the three standard phases of an exploration program which the West have adopted: (1) preliminary reconnaissance, (2) detailed geologic studies, and (3) physical exploration.

鈾礦的勘探 中國最早發現鈾礦是在一九三四年.地質學家[張定照]在[江西省]的南部發現礦物裡藏有微些鈾.其實,一個有系統性的來努力勘探鈾礦始於一九五四年,比全方面來發展核武器的日期還早了四年.這個勘探企業所經過的步驟,是根據西方國家立下的規格: (一)初步偵察,(二) 詳細地質研究,(三) 當地勘察.

In March 1955, the State Council established the Third Bureau under the Ministry of Geology and assigned bureau chief Lei Rongtian to organize a nationwide uranium prospecting grogram. Two prospecting teams were immediately created to cover china's Central South Region and Xinjiang Autonomous Region. These two teams were assigned the code numbers 309 and 519 respectively. By the end of 1956, the number of people engaged in uranium prospecting exceeded 20,000.

一九五五年三月,國務院在[地質部]設立了[第三局]並派遣局長[雷榮天]去組織一個全國性的綱領來開發鈾礦.他們立刻建立了兩支勘探隊來覆蓋華南的中南部和[新疆].這兩支隊伍,分別授予以下的密號:[第三零九隊]和[第五一九隊].到了一九五六年年尾,從事勘探鈾礦的人數已經超過了二萬.

The Chinese geologists used the three years from 1955 to 1958 to develop the minimal scientific and technical foundation for their all out hunt for uranium and came relatively close to the international standard for exploration. This scientific work paid off and by 1956, Teams 309 and 519 had identified large numbers of potential uranium provinces. Team 519 had discovered three rich deposits in western Xinjiang (in Daladi, Mengqiku'er, and Kashi). Team 309 had equally good luck as its first pin-pointed aerial reconnaissance took place over southern Hunan Province in 1956. By April 1958, a preparatory team of about 1,000 miners were settling at the bottom of Mount

Jinyinzhai. Their task was to build near the county town, the Chenxian Uranium Mine, the first such mine in China [The name Chenxian has been changed to Chenzhou.]. By 1965 eight mines were put into operation. These early uranium mines were located in the Provinces Hunan, Jiangxi and Zhejiang. By the late 1960s, the number of major uranium mines grew to 26 where Guangdong Province (the Nan Ling region) also became a major mining and metallurgical complex.

中國地質學家利用從一九五五年到一九五八年的三年時間來建立了最基本的科技基礎來全面勘探鈾礦.他們的勘探能力已經接近國際的水平.這些科技工作,得到很厚的報酬.兩隊人馬都認定很多個擁有鈾礦的省分.[第五一九隊]在[新疆]發現了三個龐大的鈾礦床.[第三零九隊]得到了同樣的好運氣.一九五六年他們在[湖南省]的南部第一次用空中偵察的方法來準確地認定礦床的位置.一九五八年四月,一個千人先鋒隊來到[金銀寨山]的腳下.他們開始在[郴縣]的縣城附近建設[郴縣鈾礦],中國第一個鈾礦.[郴縣]這個地名現在已經改爲[郴州].到了一九六五年,共有八個鈾礦投入生產.這些前期的鈾礦分布在[湖南],[江西]和[浙江].到了一九六零年代末,大型的鈾礦增加到了二十六個.[廣東省],[南嶺]的地區也成爲鈾和其他金屬的開發地.

Hardships During the Early Stages of Uranium Mining in [Chenxian], Southern Hunan.

J. Robert Oppenheimer, director of the Manhattan Project, which built the first atomic bombs, once made the comment that making the atomic bomb required 1% genius and 99% hard work. This was especially true in China's case because the country was poor and extremely backward technically at the time. Furthermore, the government program emphasized so much in finding and extracting uranium ore, that health and safety were compromised. To house the 1,000 miners at the [ChenxianMine], the workers spent most of their first weeks there building livable shelters; and in a half year they had constructed 20,000 square meters in floor space. That was in spite of the fact that there were few building materials in the local area and no roads leading to the site. They even had a shortage of ordinary tools such as hammers, and all ground preparation was done by hand.

前期[郴縣鈾礦]面對的困苦

[罗伯特•奥本海默],美國[曼哈顿計劃] 的主任曾有這一段話:製造原子彈需要百分之一天才,而百分之九十九苦工.這句看起來是誇張的話,其實對中國的[596 工程]工作人員來說,這一點也不誇張.五六十年代的中國,科技經濟落後,加上政府的重點,是放在找到和提煉鈾原料,而不是工人的安全.開始的前幾個星期,他們得先解決一千多人在[郴縣鈾礦]住房的問題.六個月後,他們蓋起了二萬平方米的房屋.這個成就是從最差的環境中爭取來的.這個地區缺乏建築材料.甚至連通往礦地的道路都沒有.即使最普通的手工具如鐵鎚都缺少.所有的沉重工作,如搬運泥土,都是依靠人力來做.

In the early 1960s, during the so-called “Great Leap Forward”years, working in the uranium mine was particularly difficult as all units, including some in the military, suffered from dropsy due to malnutrition. In those years, all the workers at the Chenxian Mine were puton short rations. Drillers received 16.5 kilograms (36.3 pound) of rice per month, and the others 12.5 kilograms (27.5 pounds). All received about one-tenth of a kilogram (3.5ounces) of edible oil and one-quarter of a kilogram (8.8 ounces) of pork. To ward off the spread of edema, the miners sent their families in search of edible wild herbs. Yet, despite these handicaps, the work at the mine proceeded, and the Chenxian Uranium Mine became partially operational on September 1, 1960.

六十年代[大躍進]時期給礦場的工作人員帶了的困苦真是難以形容.各個單位的人員,包括軍人,很多患上缺乏營養引起的浮腫病.在這些年代,所有礦場的工作人員及家屬,他們的口糧都受到很嚴格的配給.幹苦活的如當鑽石孔的工人,每個月得到大米 16.5 公斤(36.3 英磅).其他的工作人員則得到 12.5 公斤(27.5 英磅).所有的人員每個月只能得到十分之一公斤(3.5 英兩)食油和 1/4 公斤(半英磅)豬肉.爲了防止浮腫病的擴張,工人們吩咐他們的家屬到野山區去尋找可吃的植物.即使處在這個惡劣的環境中,[郴縣鈾礦]依然在一九六零年九月一日開始部分生產.

The Gaseous Diffusion Plant in Lanzhou, Gansu Province

During the days of the Manhattan Project, the Americans built an uranium diffusion plant in Oak Ridge, about 30 miles west of the city Knoxville, Tennessee. Everything about the operation in the Oak Ridge plant could be described as “BIG”. It contained thousands of filters/converters (for thediffusion cascade)and powerful pumps, a half million valves, thousands of coolers, three million feet of corrosion-resistant piping (generally made ofhigh-puritynickel) plus thousands of instruments. Since these instruments and material can not be purchased from the west or the Soviet Union, China would have to produce them by themselves. Furthermore, the huge number of massive pumps and compressors for such a plant would consume an enormous quantity of electrical power, they would also have to build gigantic power plants to serve such an operation.

蘭州的[鈾化六氟]氣體擴散工廠群

當美國執行[曼哈顿計劃]的前期-一九四二年,他們在[田納西省],[诺克斯维尔城]三十里英里外的西部[橡樹嶺],建起了一個龐大的工廠群,來提煉高純粹鈾 235 材料.這裡的事物,每一件儀器,每一個結構,都可以用“大”這個字眼來形容.來支持龐大的氣體擴散系統,這裡有數以千計的過濾器和高馬力的水泵,五十萬多個活門,幾千多個冷卻器,三百萬英呎不腐蝕管(多半使用純粹鎳),加上數以千計的各種儀器.以上所說的材料和儀器,都不能從西方國家或蘇聯進口.所以中國必須自己動手來製造.這樣多的高馬力的水泵和壓縮

機,需要龐大的電力來支持.所以他們在附近建起了一個大型的發電廠,來供應這個工廠群.

Many considerations led to the siting of the uranium enrichment plant in Lanzhou, Gansu Province. The city had the advantage of interior remoteness from U.S. reconnaissance planes and the nearby Yellow River for hydro-electrical power and cooling water. In February 1957, the site-selection committee had finally settled on a location on the bank of the Yellow River, about 25 kilometers northeast of Lanzhou.At about the same time, the city saw an explosive growth in a number of industrial plants such as machine-building, metallurgical and chemical factories, which play a direct or supporting role in the uranium enrichment program. In 1953, the city of Lanzhou had a population of about 370,000 and by 1958 it grew to 732,000.

[蘭州]被選擇爲題煉铀 235 的位置,是經過很多因素的考慮.這個內陸遙遠的城市的優點是(一)可以避免美國的空中偵察,(二)可以利用黃河的水資源,(3)附近的煤礦可以供應電力.所以,一九五七年二月,高層終於選擇了位於[蘭州]東北部二十五公里外在黃河岸上的地方.同一個時期,這個城市產生了一大批新工業,如機械生產,化學工業,冶金工業等.這些新興工業對提煉鈾 235 起了很大的作用.一九五三年[蘭州]的人口只有三十七萬,但到了一九五八年這個數目增加到了七十三萬.

The problems encountered at the uranium enrichment plant were simply overwhelming. The three most serious problems the director of the plant,Wang Jiefuencountered,occurred at about the same time, which almost gave the plant operation a fatal blow. The first was the withdrawal of the Soviet technical assistance. The last four advisers left Lanzhou in early 1960, who even took all the blueprints with them.

[蘭州]的鈾濃縮工廠面對的問題接連而來.廠長[王介福]面對的三個非常嚴重的問題幾乎給這個工廠致命的打擊.第一個問題是蘇聯把顧問撤走,最後的四位人員一九六零年初離開中國.他們離開的時候還把所有的藍圖拿走.

The second problem was the Great Leap Forward movement when each individual was urged to innovate. Low level technicians and engineers at the plant would disassemble and modify the sophisticatedequipmenton their own and claimed that they have made innovations. Just imagine the turmoil created by such insane behavior. Even the plant director, Wang Jiefu, could not stop this madness. He had to travel to Beijing to request for assistance from his superiors and Song Renqiong, [minister of the Second Ministry until 1960], made a personal appeal to Mao Zedong himself. Consistent to his style, the enigmatic leader gave a semi-crypticdirective as follows: “Xian xie kaishu, hou xie caoshu –First write in print letters then write in cursive.” This directive from the Chairman was interpreted to mean that the workers must not modify the equipment until they have mastered the basic technology and operational principles.

第二個問題是[大躍進]時期的口號”人人變成專家”所引起的.廠裡的低級技術人員和工程師擅自把新進的儀器打開,再把內裡的零件更改.他們把這愚蠢的行爲當作”創新”.即使廠長[王介福]也不能制止這種瘋狂的行爲.他只得親身前往北京向他的上司求救.[宋任窮],[第二部]的部長,立即進宮到御前表達他們面臨的問題.毛主席下了他的典型,像謎語一樣的批示:”先寫楷書,後寫草書.”主席的批示被解讀爲”工作人員要先掌握基本科技和運行的原理,然後才能創新.”

No sooner than the two waves of problemsquietdown, the full force of the Great Leap Forward struck as the entire country was engulfed in a famine. Even workers at the plant, who were tasked with the nation's most important strategic project and arduous tasks, were not spared from the famine as two-thirds of the staff and workers were afflicted with dropsy, a sickness caused by malnutrition and manifested by swollen body tissues. Some workers even suggested that they should move to south China to escape the famine and then return when it is over. Of course, Wang Jiefu did not want to hear this nonsense. Instead, he sought to set an example for the Party members by joining in workers' expeditions to forage for wild herbs. The times from 1960 to 1962 were remembered as the "three hard years".

這正所謂一波未平,一波又起.[大躍進]的全面衝擊把整個國家籠罩在飢荒的陰影下.即使這個工廠的任務是屬於國家最重要的戰略性的工作,裡面的工作人員也不能避開這場災難.三分之二的人員患上缺乏營養引起的浮腫病.有些人還提議他們到南方去避荒.待情形轉好了再回來.當然,[王介福]連聽也不聽這種廢話.相反地,作爲一個領導人,他要立下個好榜樣,他跟工人們一起去尋找可吃的野生植物.一九六零年至一九六二年,在他們的回憶中,是”三個艱苦年.”

The two questions which kept coming up through Wang Jiefu's head were: "First, was it possible to produce U235 at the required purity? Second, was it possible for the plant to acquire the product at the highest speed?" Discussions on these two questions were initiated at the Lanzhou plant and the response from a young scientist, Wang Chengxiao surprised him. The young scientist claimed that he has a plan which could advance the production schedule at least six months. His plan and calculations were sent immediately to the Institute of atomic Energy for re-calculation and confirmation. Wang Chengxiao's revised plan was affirmed and approved by the ministry in late 1962, which effectively advanced the production timetable ahead to January 1964. Partial test runs of some units in 1963 revealed a number of faults in the plan. They spent half a year meticulously revising the plan, and in late December 1963, Wang Jiefu issued the order to commence the initial run. After only 72 minutes, they succeeded in operating the key units of industrial equipment to produce U235 in quantity. On the morning of January 14, 1964, Wang Jiefu and his colleagues went to the central control department and issued an order for the enriched uranium to be drawn off automatically into

specially constructed containers. The technicians recorded that event at 11:05 A.M. – the target for uranium 235 enriched to 90% purity had been met.

兩個重要的問題老是在[王介福]的腦海裡波動著.第一:把鈾 235 濃縮到必須的純度的可能性,第二:這個廠能不能在最短的時間內得到產品? 他讓這兩個問題在廠裡公開討論.一個名叫[王誠曉]的年輕科學家的回應領他覺得驚訝.這個年輕人聲稱他有一個計劃能夠把生產的時間表提前最少六個月.[王介福]立刻把他的方案,計算和各種參數都寄給[原子能研究所]的科學家們來重算和核定.他們的結論是"這個計畫是正確的".一九六二年年尾,[第二部]終於批准了[王誠曉]的計畫.這等於把開始生產時間表提前到一九六四年正月.一九六三年某些單位部分運行時發覺這個計畫有好幾個缺點.他們化了半年間來謹小慎微的重復修改這個計畫.到了一九六三年十二月,[王介福]命令開始營運.七十二分鐘之後,主要的單位已經開始生產出可觀的鈾 235.一九六四年正月四日的一個早上,[王介福]和他的同事們到了中央控制部門,命令把濃縮的鈾 235 裝進特製的箱裡.技術師們記錄下這件事是發生於早上十一時零五分.把鈾 235 提煉到百分之九十的純度的目的已經達到.

The Design and Manufacture of the Bomb

The Northwest Nuclear Weapons Research and Design Bureau (Ninth Bureau)

In the summer of 1957, Song Renqiong, Minister of the Second Ministry, recommended Li Jue to the higher authorities to head the ministry's planned top-secret nuclear weapons research and design bureau, cryptically known the Ninth Bureau, which actually had the official name The Northwest Nuclear Weapons Research and Design Bureau. Before the permanent site was selected and the facilities were built, Liu Jue's group worked on the bomb design in temporary quarters in Beijing called the Beijing Nuclear Weapons Research Institute (Beijing Hewuqi Yanjiu Suo).

原子彈的設計和製造

[西北核武器研究及設計局] 一九五七年的夏天,[第二部]的部長[宋任窮]向高層舉薦了[李覺]來擔任[第二部]正在籌畫中的高秘密的[西北核武器研究及設計局],密號爲[第九局].在永久的設備還沒有建立起來之前,[李覺]的工作人員都在北京的臨時設立的場所[北京核武器研究所]來做他們的原子彈研究及設計工作.

The search for a location to built the nuclear weapons design and construction facilities, LiJue traveled hundreds of miles in the northwest. His criteria for the site selection was exactly the same as that of J. Robert Oppenheimer, director of the United States' Manhattan Project: Total isolation was necessary for securityeven at the sacrifice of good transportation and communication facilities. Thus, Oppenheimer chose Los Alamos in New Mexico and Li Jue chose a site in Haiyan County, located east of Qinghai Lake in Qinghai Province.In early 1958, the initial contingent were some

2,000 highly skilled construction workers supported by 2,000 soldiers plus more than 7,000 peasant workers from across the land. To support such a gigantic operation, the PLA Railway Corp built a network of rail lines into the base.

爲了找尋適當的地方來建起一個核武器研究所,[李覺]在西北的地區跋涉了千多里路.他的要球跟美國[曼哈顿计划]的主任[罗伯特•奥本海默]的一樣:爲了保密,與世隔絕的地方是必要的.即使交通和通信的條件很差也值得接受.[罗伯特•奥本海默]選擇了[新墨西哥州]北部荒漠的[洛斯阿拉莫斯],[李覺]則選擇了[青海省],[青海湖]東部的[海宴縣].第一批到達這個地方的人馬是二千多個高技術建築工人和二千個士兵.不久後又加上了七千來自內地的農民工人.爲了支持這個龐大的作業,[人民解放軍]的[鐵路兵團]還在這個基地修建了一個鐵路網.

The First Leadership Group at the 9th Bureau Director of the bureau, Li Jue, picked three principal colleagues as his deputies to run the NinthBureau, first at the temporary headquarters in Beijing and then in Qinghai. The three were Wu Jilin, Zhu Guangya and Guo Yinghui.

[第九局]的第一批領導人 來營運[第九局],局主任[李覺]選擇了三位同事來做他的重要助手,首先在北京,後來在[青海].這三位是:[吳際霖],[朱光亞]和[郭英會].

The first, Wu Jilin, was a chemist by training as he studied chemistry in college. Later on Chen Yun, Minister of the Ministry of Heavy Industry, took an interest in Wu Jilin and had him transferred to the ministry. In the latter half of 1957, it was Chen Yun who recommended Wu Jilin to Song Renqiong for the post in the Ninth Bureau. At first, he took responsibility for the bureau's organizational work as a principal deputy director, but by 1962 he double-headed as the director of a leading technological committee and made outstanding contributions to the construction of China's first atomic bomb.

第一位是[吳際霖].他在大學唸的基本科是化學.後來[重工業部]部長[陳雲]把他調到這個部裡.一九五七年[陳雲]又舉薦他給[宋任窮]到[第九局]去工作.身爲副主任,他當初的責任是組織和管理.但到了一九六二年時,他還率領了一個科技委員會.後來對中國的第一顆原子彈的製造做了很大的貢獻.

The second member of the Ninth Bureau deputy directors, Zhu Guangya, joined the bureau on July 1, 1959. A graduate of the National Southwest China Associated University - the name used for Beijing University, Qinghua University and Nankai University - which set up a campus in Kunming, Yunnan Province between 1938 and 1946 during the Japanese invasion. After the Second World War, he received a fellowship to study at the University of Michigan, where he received a doctorate in physics. As chief of scientific research at the Ninth Bureau he placed the utmost importance on the combine theoretical and applied studies and imbued his workers on the importance of technical quality control.

第二個副主任是[朱光亞].他在一九五九年七月一號加入[第九局].他畢業於[国立西南联合大学].這是中国抗日时期在云南昆明，從一九三八年到一九四六年,由當时的国立北京大学、国立清华大学及私立南开大学共同组成的一所大学.第二次世界大戰結束以後,他得到了一個獎學金到美國的[密斯跟大學]深造.後來獲得了物理學博士.他擔任[第九局]的首席科學家.他把他的工作重點放在理論和應用的結合.他像播道一樣使工作人員銘記科技工作質地控制的重要性.

The third member of the leadership group, Guo Yinghui, made his contribution principally in management and organizational works in such a vast operation. Of course, the four top leaders were supported by over a dozen of very capable and extremely dedicated senior scientists who headed or supported the various technical departments. This would include luminaries such as Chen Nengkuan, Deng Jiaxian, Zhou Guangzhao, Yu Min, Qian Jin, Yu Daguang, Qian Sanqiang, and others.

第三個副主任是[郭英會]. 作爲[李覺]的助手,他的主要工作是行政和人員管理.當然,這四位領導人之下還有很多位能幹而又專心致志的科學家和工程師.這包括以下的傑出人物:[陳能寬],[鄧稼先],[周光召],[于敏],[錢晉],[俞大光],[錢三強]等.

Bomb Design and Construction The Chinese scientists had the advantage of a priori knowledge that both U235 and Plutonium 239 can be used to build an atomic bomband that there are two possible ways to induce a sustained chain reaction which leads to an explosion. They also knew that designing and building an U235 bomb using the gun-barrel assembly is relatively simple. Onesimply fires a uranium slug down a gun barrel (Using gun powder, not high explosives.) which then hits another uranium slug at the end of the gun barrel to achieveand sustained a chain reaction. In fact, during the Manhattan Project, American scientists were so confidant with the gun barrel design using U235 that it was never tested before it – nickname “Little Boy” was dropped over Hiroshima killing 150,000 people.

原子彈的設計和建造中國科學家們有一個很大的有利條件.他們預先知道鈾 235 和钚 239 都可以用來製成原子彈,而且引爆的方法有兩個.他們還知道鈾 235 可以用相當簡單的設計來引爆.只要把鈾做成的子彈射向在炮管裡的另一顆鈾塊就能引起連環反應和核爆炸.實際上,美國在[曼哈頓計劃]期間,對這個設計的信心高到了他們根本沒有試驗第一顆炮管式鈾 235 原子彈.這顆諢名爲[小男孩]的原子彈第一次爆炸是在[廣島]的上空,不夠一秒鐘就殺了十五萬人.

In principle at least, one can also use the gun barrel design for a plutonium bomb, but one would have to use a very long and heavy gun barrel to drive the fissile slug down the barrel at a very high speed in order to achieve an instantaneous explosion. Of course such a bulky and heavy device can not be carried by any aircraft or missile. High speed is necessary due to the fact that Pu-239 contains a significant amount of the isotope Pu-240 which is rich in neutron. If the impact between the two Pu-239 is too

slow, the initial fission would just blow the bomb apart scattering the fissile material. The implosion technique, on the other hand, uses about three dozens of high explosive shells wrapping around the fissile core in a particular pattern to form shock wave lens focused on the center of the fissile core.The speed generated by the shock wave lenses can be thousands of times faster than gun powder can drive a slug down a gun barrel. Furthermore, the ignitions of these shells must be timed to within micro-seconds in order for the explosives to form an inward shock wave converging at the center of the fissile sphere and thus compressing the material uniformly and almost instantaneously. A second technical challenge in the implosion design is that an initiator must be inserted into the core of the bomb in order to provide a rich source of neutrons. The initiator is an element such as lithium or beryllium rich in neutrons so as to saturate the bomb core with neutrons to initiate the chain reaction. Historical records showed, however, the first Chinese atomic bomb used polonium as the initiator material. For an illustration of the two types of atomic bomb designs, please see Fig. 2.The placement of the explosive shells and initiators around the fissile core is illustrated in Fig. 3. The fact that the first Chinese atomic bomb is based on the implosion design is apparent when we look and compare Fig. 4a through Fig. 4c. The shape of the Chinese atomic bomb resembles “Fat Man” , not “Little Boy”.

從理論上來說,钚 239 也可以用炮管型來引爆,問題在於需要很長很大而又重的炮管來使子彈達到了高速而引起核的連環反應.高速度的要求,是因爲钚 239 也包含不少的钚 240.後者比前者擁有更多引起連環反應的中子.如果兩顆钚 239 在炮管裡相撞的速度太慢,則初步的核反應發出來的能量就把整個裝置炸破和分散了核燃料.內爆的設計與炮管型全然不一樣.高壓力不是來自火藥,而是來自圍繞著原子彈核心的烈性炸藥.強烈炸藥引起的激震波的速度,比火藥燃燒的熱波快數千倍.不過,圍繞著原子彈核心的三十多塊烈性炸藥片,引爆的定時裝置的準確度要達到一百萬分之一秒.這樣才能夠把三十多塊烈性炸藥片形成聚焦鏡來把激震波引向中心會合.否則,激震波引起的能量,就會四面八方的分散. 內爆設計第二個挑戰是核心內裡要安置一個”發起者”富於中子像鋰和鈹這類的元素來把核心充滿中子而引起連環反應.根據歷史檔案,中國的第一顆原子彈內裡的“發起者”是使用釙.原子彈的兩種設計示範,請看[圖二].核心周圍的炸藥片和引爆管的位置,我們示範於[圖三].中國的第一顆原子彈是內爆型是很明顯的.它的外觀像”大胖子”而不像 ”小男孩”,[圖四-A-B-C].

Naturally there were heated debates among the lead scientists on which design type to pursue: The A-1 device (implosion) or the A-2 device (gun-barrel) both using U-235. Wu Jilin argued that the implosion technique should be the Bureau’s objective, even though it is far more difficult to design and manufacture. The reasons for his choice were that it is more advanced and more efficient. In other words, using the implosion technique, a bigger explosive yield can be obtained with the same amount of U-235 or the same explosive yield can be obtained with less U-235. His foresight turned

out to be prescient, as the implosion device is needed as the trigger to ignite a hydrogen bomb.

當然,在當時中國科學家的高層,也經過一個很熱烈的討論.用 A-1[內爆]還是 A-2[槍管型],而兩者都是用鈾 235.那個時候,中國的科學家們的用語是[內爆 A-1],他們叫[壓進],而[砲管型-A2]他們叫[壓攏].[吳際霖]大力主張用[內爆]的設計.他的理由很簡單.這個新進的設計效力大,可以節省很多鈾材料.反過來說,用同一樣重的鈾,原子彈會發出更大的威力.他的遠見,後來大有用處,因爲氫氣彈的引爆器,是靠[內爆]式的原子彈.

In early 1960 they initiated the experimental program on the development of an effective explosive shock wave lens. This team consisted over 30 men was led by Chen Nengkuan and among them were luminaries such as Qian Jin, Yu Daguang, Wang Ganchang and Guo Yonghuai.After more than a year of intensive work, the team achieved the needed breakthrough. In early September 1962, the team's design was perfected to the extent that Chen Nengkuan could reliably predict that his team would produce the explosive assembly for China's first bomb as his associates had molded about 2,000 pounds of high explosives into shaped lenses and determined the placement for the more than two dozen ultra-sensitive detonators around the assembly.For those who are interested in more details on the design and construction of the atomic bomb, one of the best source is found inRef. 8.

一九六零年早期,他們開始了一個實驗計劃來發展一個有效的激震波聚焦鏡.這個三十多人的實驗組是由[陳能寬]來領導.成員包括很多位天才科學家如[錢晉],[俞大光],[王淦昌]和[郭永懷].經過一年多的積極工作後,這個組得到了突破性的成就.一九六二年九月上旬,這個組的設計達到的完美度,已經使他們有信心製造出可靠的激震波聚焦鏡.[陳能寬]和他的同事們把二千來斤的烈性炸藥塑造成激震波聚焦鏡.他們再在裝配上放置了二十來個超敏感的起爆管.讀者如果有興趣進一步了解原子彈的原理與結構,請參考資料[參考八].

The Final Cut (Machining the Nuclear Core and the Final Assembly) By April, 1964, the project had advanced to the point where the bomb was ready for its final assembly including machining the uranium core. In anticipation of this work, the best machinists at the plant have begun to conduct practice runs six months earlier. During these training sessions, the work was so arduous and stressful that one master machinist, Yuan Gongfu, lost over 30 pounds of his body weight. Besides the demand for extremely high accuracy, the job was very cumbersome due to the need to wear a protective mask, protective garment, and thick gloves because of the highly radioactive uranium.

最後的一刀(核心的切削和最後的裝置) 到了一九六四年四月,[五九六工程]的進展已經到了最後裝置,這包括鈾核心的切削.爲了預備這一天的到來,全體最優秀的機械師早在六個月之前就開始練習這個特殊工作.這種工作帶來的壓力令一個高級技術師[原公

甫]消失了三十磅的體重.除了高精密度的須求之外,工作的艱難度還來自特殊安全保障的需要,如穿戴笨重的衣服,手套和面具等,因爲他們操作的材料是高輻射性的鈾.

As the date approached, everybody agreed that Yuan Gongfu was the best qualified for this task. At first, he appeared to be full of confidence, but on April 30, 1964, the day he was authorized to machine the uranium core, a large crowd of distinguished kibitzers, including the Vice-Minister, Yuan Chenglong, joined the entire workshop crew and all these people nodded as a gesture of respect to the master lathe operator. As the drama unfolded, Yuan Gongfu suddenly realized that his work would determine the success or failure of thousands of people who had labored over ten years. Furthermore, he realized he was machining lethal radioactive uranium, not the simulation stuff. At this point, he lost his nerves totally and was visibly trembling as he felt dizzy and sick in the stomach. At this point, the distinguished audience adjourned the exercise and reassembled the crew outside the machine shop while Zhou Zhi, director of the atomic energy complex, tried to calm him down by talking to him soothingly and offered him a glass of milk to calm his stomach.

由于操作的日子越來越近,所有的機械技術師都不約而同地說[原公甫]是最具有資格來擔當這個使命.起初,他本人也充滿信心,但到了一九六四年四月三十號,上層授權他切削鈾核心的那天,一大批觀眾,包括[第二部]的副部長[袁成隆]在內,來倒車間觀看大師級的技術師工作.他們還向他微微的點頭打招呼表示致敬.當這個戲劇的劇幕打開時,[原公甫]突然領會到千千萬萬人十多年來的苦幹,現在成敗都落在他一個人的肩膀上.還有,他知道他手裡拿著的是有強烈輻射性的鈾,而不是在練習時使用的模仿物.這時,他喪失了他所有的勇氣.他渾身明顯的開始抖動.他覺得頭昏,他覺得肚子不舒服.這時,來自高層的幹部和工地所有的人員只好離開車間到外面去.同時,[原子能工廠]的主任[周智]試圖把他安靜下來.他用很平靜的話來安慰他,還給了他一杯熱牛奶來鎮靜他的肚子.

By then, it was already late at night, but Yuan Gongfu agreed to go back to the lathe and begin again. This time, he was totally concentrated and put his heart and soul into the task. By the next morning, May 1, 1964, the nuclear core for the bomb was ready. The final assembly of all the parts of the bomb, including the uranium core, the initiator, the high explosive shells around the core and the associated electrical assembly took place between July 20 and August 19, 1964.He later received the exalted moniker “Yuan The First Cut!”.

那個時候已經到了傍晚,但是[原公甫]依然同意回到車間再從頭開始.這一次,他全心全力的投入工作.到了第二天凌晨,一九六四年五月一日,原子彈的鈾核心終於完工了.原子彈的最後裝置,如鈾核心,起爆管,鈾核心周圍用烈性炸藥做成的貝殼,各種電路的裝置,都是從七月二十日至八月十九日完成.後來人們給了他一個令人尊敬的綽號”原一刀”.

Search for the Test Site

On August 10, 1958, a handpicked unit of officers and men from a garrison in Henan Province boarded a train for a remote region in northwestern China. Their mission was to select the location of the nuclear test base and to operate as the core unit to build it. This was heady news indeed as every one realized that they were about to witness history in the making.By November 1958, several potential sites had be selected, and the Soviet advisers assigned to the survey team had especially recommended a location some 140 kilometers northwest of Dunhuang. Furthermore, their plan had specified that the site can accommodate a maximum explosion of 20 kilotons of TNT. Back in October, the Central Military Commission has designated Zhang Yunyu to be the commander of the test base. After carefully reviewing all the data, the new commander rejected all the proposed sites. He deemed that these possible sites were too close to Dunhuang and the city would be directly downwind from ground zero and in jeopardy from radioactive fallout. Furthermore, he knew that the United States and the Soviet Union had already exploded megaton hydrogen bombs, so the 20 kiloton limit was simply not acceptable to him. He wanted to start the search allover again but would go much further west; subsequently, he moved his survey team from Dunhuang to Tulufan City (Turpan), Xinjiang Autonomous Region.

尋找試驗場

一九五八年八月十日,高層在河南一個衛戍部隊裡千挑萬選的組成了一個千人單位,很快的乘火車到西北遙遠的地方去.他們的特殊任務是尋找適當的原子彈試驗場,還負起建立和營運這個基地的骨幹部隊.在當時,這是一個使人頭腦發昏的命令.因爲人人都知道他們將成爲歷史的見證人.到了一九五八年十一月,好幾個地方已經被認定是有極高可能性的.派來支持這個單位的蘇聯專家們特別舉薦在[敦煌]西北一百四十公里的地點.他們還指定這個地點能夠承受最高至二萬噸黃色炸藥威力的原子彈.同年十一月,[中央軍委]選派[張蘊鈺]爲這個原子彈試驗基地的指揮官.經過詳細的複查各種數據和資料,這個新到任的指揮官拒絕接受所有選定的地點.他認爲,這個地點離[敦煌]太近,風向還會把幅射塵帶到這個城裡.還有,他知道美國和蘇聯早就試爆了有幾百萬噸黃色炸藥威力的氫氣彈.只能承受到二萬噸的試驗場是他不能接受的.他要從頭開始尋找.他要往西部更遠的地方去.隨後,他把他的測量隊伍及所有的支持人員都從[敦煌]搬到[新疆],[吐魯番]去.

After two years of labor involving over 1,000 men and assisted by aerial surveillance, finally a site was found which could serve as ground zero, scientific facilities and living quarters. If one were to draw a line between the south-eastern tip of Lake Bositeng and the northern tip of Lake Lop Nur, ground zero would lie approximately mid-way between these two points. It is located about 320 kilometers south of Tulufan City. The exact geographical location of this spot is latitude north 41.5 degrees and longitude 88.5 degree. It is rather interesting to see how desolate this area is, Fig. 5.

一千多人,加上了空中偵察,費了兩年的時間後,他們最後找到了合適的地點來做"地零點-或爆心投影點",各項科技的設備和宿舍.假如我們畫一條直線,從[博斯騰湖]延伸到[羅布泊湖]的西北角,這個地點就在這條直線的中間,在[吐魯番]南部三百二十公里外.精確的地理點是北緯 41.5 度,經度 88.5 度.這地帶的荒蕪度,真是匪夷所思[圖五].

The Final Countdown

Like any important historical event, the first Chinese atomic bomb test had its own folklore. It was said that on October 1, 1964, a technician by the name of Yang had prophesied the date and hour of the test in a dream. He said the zero hour is represented by three fifteens: 15-15-15. The first fifteen presented the 15th anniversary of the founding of Peoples Republic of China. The second 15 presented the number of days after today, which would make it October 16. The last 15 represented the detonation time at 1500 hour, making it 3 o'clock in the afternoon.

最後的倒數

像任何有重要歷史性的事蹟一樣,中國試驗他們第一顆原子彈也產生了一個民間神話.據說,有一個姓楊的年輕技術師在九月三十日的夢中得到了一個三個數字的預言,他靠著三個數字來測出何年何月何日何時中國的第一個原子彈試爆.那就是中國原子彈的年庚.這三個數字是:十五,十五,十五.他的解釋是這樣的:第一個十五代表年份.中華人民共和國成立十五周年,那就是一九四九加十五等於一九六四.第二個數字代表月份和日子.那就是今天十月一號加上十五就是十月十六號.第三個數字代表爆炸的時刻.十五用阿拉伯數字寫是:15:00.那就是下午三點鐘.對這,信不信由你.

The bomb test tower was 120 meters above the desertfloor equipped with an elevator to facilitate the movement of the technicians and test instruments. In the final preparation, the tower crew chief, Chen Nengkuan issued the order to hoist the bomb up the tower. The test crew installed the bomb and inserted the detonating caps in the implosion assembly while technicians made one last check on all the electrical connections.

這個建在荒漠裡的實驗塔是一百二十公尺高.爲了給工作人員搬運器具的方便,內裡還安裝了升降機.在最後的準備工作完成後,試驗塔的主任[陳能寬]下令把原子彈拉升到塔頂.工作人員把原子彈安裝好,再把引爆管插進炸彈的裡面.另一組工作人員則進行最後的電路檢驗.

The tower team then moved to the test-site control room some 23 kilometers away. Here Li Jue handed over the key to the tower electrical controls to the control room chief. This formal step had been introduced as a security measure so that the bomb could not be exploded with anyone near the tower. Just seconds before 1500, on October 16, 1964, the count-down was initiated and finally the command was issued:

"Fire! – Qibao!". At the sight of the mushroom cloud, every one present was overcome with the emotions released after so many years of trial and hardship.

整個試驗隊伍都轉移到二十三公里外的控制室.在這裡,[李覺]把進入試驗塔控制室的鑰匙交給控制室的主任.這個莊重的儀式是用來保障試驗塔周圍沒有人原子彈才能引爆.一九六四年十月十六號,下午三點鐘以前,倒數的時間終於到來了.跟著,一聲號令"起爆".蘑菇雲的出現使每一個在場的人都把多年的艱辛和壓住的感情都跟著第一顆原子彈一起爆發了.

Zhang Aiping, as head of the First Atomic Bomb Test Commission, it was his responsibility to report the test success to the higher authorities in Beijing. He telephoned Liu Jie, head of The Second Ministry of Machine Building who in turn called Premier Zhou Enlai, who reported it immediately to Chairman Mao Zedong. When Mao Zedong received the news, he wanted to know and directed his underlings to verify that indeed it really was a nuclear explosion.

[張愛萍],身爲[第一次原子彈試驗委員會委員長],負責向北京高層報告這個莫大的好消息.他打電話給[第二部]部長[劉傑].[劉部長]打電話給[周恩來總理].[周總理]則立刻打電話給[毛主席].當[毛主席]接到這個消息後,他下令部下再重複證實這是真正的核爆炸.

The Development of the Hydrogen Bomb

The Chinese leadership decided early on to pursue the next level of a more advanced strategic nuclear weapon, as they knew that the US and the Soviet Union already have tested multi-megaton hydrogen bombs back in 1952 and 1955 respectively. As their work progressed steadily toward the development of the fission bomb, their confidence grew and they had reasons to believe that it could be easier to go from an atomic bomb to a hydrogen bomb than it is to create an atomic bomb from scratch since they already had all the talented scientists, engineers and technicians well organized into productive teams and a vast technologicalcomplex to support their work. Such a plan to transition from the work on a basic type of nuclear weapon to a high-yield weapon occurred as early as 1959. In 1960, even though everybody was still pre-occupied with the development of the atomic bomb, the Institute of Atomic Energy was directed to form a leading group, composed of Qian Sanqiang, Huang Zuqia and Yu Min, to study and accumulate data and basic parameters related to the process of thermonuclear fusion.

氫氣彈的發展

中國領導人很早就決定追尋更高層次的新進戰略核武器.這多半是基於他們知道美國和蘇聯早在一九五二年和一九五五年相繼試驗了有數百萬噸黃色炸藥威力的氫氣彈.當他們在原子彈研發得到順利的進展時,他們有理由相信,氫氣彈的研發,比原子彈還容

易.因爲他們已經組織成一個龐大的科技陣容和擁有新進的設備及儀器.從基本原子分裂核武器過渡到氫氣溶合的超級核武器,這個計畫始於一九五九年.即使人人還在緊鑼密鼓的研發原子彈的時候,[原子能研究院]組織了一個小組由[錢三強],[黃祖洽],和[于敏]來領導.他們的使命是研究和積累關於熱能核融合的程序和各種數據.

The Basic Concept of a Fusion Nuclear Weapon One common misconception on how a fusion weapon such as the hydrogen bomb works isthatwe mistakenly believe that the fusion process is set off by the heat energy from an atomic bomb. If that were the case, the shock wave from the atomic bomb, which travels much faster than heat wave, would shatter the hydrogen fuel column long before heat energy can reach it, thus preventing the fusion process from occurring.In reality, the energy responsible for compressing the hydrogen fuel to initiate the fusion process comes from X-ray and gamma ray generated by the atomic bomb, which travels at the speed of light and would arrive at the hydrogen fuel column long before the heat wave reaches it.

溶合核武器的基本原理一個很普通的誤解是一般人以爲氫氣彈的溶合反應是由原子彈釋放出來的熱能所引起的.如果事實是這樣的話,從原子彈發出來的沖擊波早在熱波還沒有到達時就把氫氣燃料炸散而不能引起溶合反應,因爲後者的速度比前者的速度慢得多.把氫氣壓到使原子溶合反應的能量是來自從原子彈爆炸時發出的 X-光和 Gamma-光.這兩種光的速度都是跟光速度相等,所以牠們比熱量波先到達氫氣燃料圓柱.

Simply speaking, the hydrogen bomb consists four components: (1) A hydrogen column enriched with deuterium, tritium and lithium deuteride, is enclosed in (2) a U238 tampa wrappedaround the hydrogen column, (3) a type of plastic similar to polyethylene in turn wraps around the U238 tampa, (4) an atomic bomb of the implosion type is placed at the end of this cylindrical column. The sequence of events is as follows: (1) The detonation of the U235 (or Pu239) fission bomb creates a tremendous amount of X and Gamma radiation traveling at the speed of light, (2) which ionizes the plastic, (3) and compresses the U238 tampa, (4) which in turn compresses the hydrogen column causing a fusion reaction and releases a large amount of energy, (5) the fast neutrons created by the fusion process in turn causes a chain reaction leading to fission in the U238. Thus, **a hydrogen bomb is a three-stage device consisting U235 fission, hydrogen fusion and U238 fission with a large amount of the energy yield coming from the last stage.**For a simple illustration of the various components of the hydrogen bomb, please see Fig. 6. For further details on the workings of the hydrogen bomb, see Ref. 9.

用最簡單的話來說,氫氣彈可以分爲四個部分,(1)氫氣圓柱內含有大量的二重水素,三重水素和鋰化二重水素,(2)氫氣圓柱外面的鈾 238 套子,(3)一種塑料把鈾 238 套上,(4)另一段的氫氣圓柱安放一枚原子彈.各項反應的過程是這樣的:(1)原子彈的爆炸發出了強烈的 X 和 Gamma 光, (2)把塑料電離化, (3)電離子把鈾 238 套子向內發出強烈的壓

力,(4)這種壓力傳到氫氣燃料而引起溶合反應, (5) 溶合反應發出來大量的高速中子引起鈾 238 連環反應,核子分裂而釋放很大的能量. 由此可見,氫氣彈是一個三層的器具: (1)鈾 235(或是钚 239)分裂,(2)氫氣溶合,(3)鈾 238 分裂. 最後的核分裂發出很大的能量.要明瞭氫氣彈的各個部份,請看[圖六].要明瞭氫彈的詳細原理和構造,請看[參考九].

An Intensive Effort to Design and Build the Hydrogen Bomb After they have successfully tested the atomic bomb in October 16, 1964, all efforts were turned to the development of the hydrogen bomb. Theoretical analysis, design work, experimental work and material production were conducted concurrently whenever feasible. One of the critical taskwas the productionof lithium-6 deuteride, a key ingredient in the hydrogen bomb fuel, followed by the measurement and analysis of its molecular properties. In February 1965, Qian Sanqiang, director of the Atomic Energy Institute, assigned 50 of his top scientists and engineers to the task. He Zehui, Fig. 7, was designated as the leader in charge and coordinated this critical and delicate research.

全力以赴來研發氫氣彈 當他們在一九六四年十月成功試爆了原子彈之後,所有的人力,物力,財力,都轉移到氫氣彈的研發.理論分析,設計工作,各種實驗和材料的生產,若是可能的話,都同時進行.其中一個危急的工作是鋰 6 化二重水素,氫氣彈燃料中的關鍵物品.隨後測量和分析這個分子的特性.一九六五年二月,[原子能研究所]主任[錢三強]選派他所裡五十個最優秀的科學家及工程師來擔當這項工作.這個小組由[何澤慧],見[圖七],來管理和協調各個部門.

At first, the calculations and experiments at the Qinghai Ninth Bureau were concentrated on the possible designs for the hydrogen bomb's igniter as a first step toward the understanding of the entire fusion detonation process. In round-the-clock shifts, scientists under Deng Jiaxian worked out the theoretical basis for the most promising design by the end of 1965.The important theoretical work of this period depended on the extensive calculations performed in Shanghai using the most advanced computing facility in the country. This effort was headed by Yu Min, the deputy director of the Theoretical Department.

開始的時候,[青海第九局]所有的計算和試驗都是關於氫氣彈爆發引起的過程,這是爲了明瞭溶合引爆的第一步.在[鄧稼先]領導下,科學們日以繼夜的工作.到了一九六五年年未,他們終於立下了希望最高的設計.這段時期,最重要的理論工作是靠[上海]國內最新進的電子計算機的廣泛計算來完成.這個規劃,是由[理論系]的副主任[于敏]來擔當.

The design group's principal work on the H-bomb took fourteen months. On May 9, 1966, they were ready to perform preliminary tests on the Deng-Yu design as a fission bomb boosted with thermonuclear material lithium-6 was dropped from a Hong-6 bomber with a yield of 200-300 kilo-tons of TNT, 10 to 15 times the energy of the first atomic bomb. On December 28, 1966, a second "boosted" bomb was tested from a tower with a yield of 300-500 kilo-tons of TNT. They knew they were well on

the road to a successful design of a three-stage thermonuclear bomb. In deed, on June 17, 1967, a thermonuclear bomb was dropped froma Hong-6 bomber with a yield of 3 Mega-tons of TNT.

氫氣彈的設計組的主要工作需要十四個月來完成.到了一九六六年五月九號,他們已經準備好基於[鄧-于]設計的初步實驗.這個設計是用一個基本分裂式的原子彈再加上熱核材料鋰-6.他們把這顆核彈從轟-6 投下,所發出的爆炸力是等於 200-300 公噸黃色炸藥,比第一個原子彈高了 10 至 15 倍.一九六六年十二月二十八號,他們在一個鐵塔上試驗了他們第二個"增強力度"的核彈.發出的的威力是從 300 之 500 公噸的黃色炸藥.對此,他們已經知道,前往正裝三層熱核炸彈的目標,他們已經踏上正確的途徑.

If the claim that the first thermonuclear bomb was air droppedfrom a medium bomber, that would be an incredible feat because when the Americans tested their first thermonuclear bomb, it was actually a "device" and not a bomb, as it was to big and too heavy to be carried by any aircraft or missile. The first Chinese thermonuclear bomb on the other hand, was not only a full fledged H-bomb, but they also had it miniaturized to the extent that a medium bomber like the H-6 (A derivative of the Tu-16 of the Soviet era) was able to carry and drop it over the target. The impressive achievements of the Chinese scientists, engineers and technicians are clearly illustrated by the speed at which they progressed from the atomic bomb to the thermonuclear bomb as indicated by Table I below:

如果中國的第一個氫氣彈真的是從一架中型轟炸機 H-6 投下,那中國的科學家,工程師和技術員的成就,真說得上是破天荒的.美國第一個氫氣彈說不上是炸彈,它只不過是一個器具,因爲這個器具太大太重而沒有飛機或導彈能把它運到目標上.中國的第一枚氫彈不但是一個完美的氫彈,他們還把它微型化,而能把這枚氫彈用轟-6 這種中型的轟炸機運送到目標上空投下.他們的成就還有另一個令人欽佩的一面,那是他們從原子彈發展到氫彈的速度.請見以下的[目錄一].

Table I. Comparison between Countries on the Time It Took to Advance from the Atomic Bomb Test to the Hydrogen Bomb Test.

目錄一: 各個國家從原子彈試驗發展到氫彈試驗所需要的時間

Country 國家	**A-Bomb Test 原子彈實驗**	**H- Bomb Test 氫彈實驗**	**Time(from fission to fusion)原子到氫彈的過程時間**	**Fusion Bomb Yield (in Megatons of TNT) 氫彈威力(百萬噸炸藥)**
United States 美國	July 16, 1945 一九四五七月十六	Nov. 1, 1952 一九五二十一月一號	7 yrs and 4 months 七年四個月	10.6(Note 1)

Soviet Union 蘇聯	Aug. 29, 1949 一九四九八月二十九	Nov. 22, 1955 一九五五十一月一號	6 yrs and 3 months 六年三個月	1.6
United Kingdom 英國	Oct. 2, 1952 一九五二十月二號	Nov. 8, 1957 一九五七十一月八號	5 yrs and 1 month 五年一個月	1.8(Note 2)
France 法國	Feb. 13, 1960 一九六零二月十三	Aug. 24, 1968 一九六八八月二十四	8 yrs and 6 months 八年六個月	2.6
China 中國	Oct. 16, 1964 一九六四十月十六	June 17, 1967 一九六七六月十七	2 yrs and 8 months 兩年八個月	3

Note 1: Not a true bomb as it was too heavyand too big to be carried by any aircraft or missile.

注一: 不算是一枚炸彈,因爲太重和太大,沒有飛機或導彈能攜帶到目的地.

Note 2: It took the British far shorter than the Russians and French to develop the H-bomb because a British team was sent to Los Alamos to help the Americans on the Manhattan Project so they had hands-on experience in building the atomic bomb. This kind of experience surely would help their H-bomb development project as well.

注二: 英國發展氫彈比蘇聯和法國快,那是因爲他們曾經在四十年代初派了一個代表團到美國參加[曼哈頓計劃]的原子彈研究.這種直接得來的經驗,給他們將來發展氫彈莫大的幫助.

Meritorious Awards

On September 18, 1999, at the fiftiethanniversary of the founding of the People's Republic of China, or almost 35 years after China had exploded its first atomic bomb, 23 scientists and engineers received meritorious awards for their contributions for the development of the "two bombs and one star", which refers to the atomic and hydrogen bombs and the artificial satellite that was put into orbit on April 24, 1970. We are listing their names in the order according to the number of strokes in their surnames along with the dates of their births, field(s) of contribution and the institutions of higher learning which they had attended whenever such information are available:

功勳榜

一九九九年九月十八日,中華人民共和國成立五十周年,也是中國的第一顆原子彈爆炸後三十五,國家領導人授予二十三位科學家們和工程師們國家功勛獎章,來表彰他們當年研製"兩彈一星"作出突出貢獻.所謂"兩彈一星"是指原子彈,氫氣彈和一九七零年四月二十四日中國發射了第一顆進入軌道的人造衛星.我們現在把這些爲國家國防科技立下汗馬功勞的科技工作人員的名字,出生與去世的年份,他們的專業及母校等,分列在下面.次序是根據他們姓名的畫數.

Yu Min (1926.8.16 -) Atomic and hydrogen bomb, Beijing University. The Chinese hydrogen bomb is generally referred to as the Deng-Yu design since Deng Jiaxian headed the Theoretical Department while Yu Min headed the group which performed the calculations at the Shanghai Computation Center. (Yu Min and Qian Ji were the only two scientists who had never studied abroad.)

于敏(一九二六八月十六 -).原子彈和氫彈.北京大學.人們都叫中國的氫氣彈爲[鄧-于設計],因爲理論組是由[鄧稼先]來領導而計算工作則由[于敏]在上海的[電子計算中心]來進行.(在二十三人中,只有他和[錢驥]沒有出過國留學.)

Wang Daheng (1915.2.26-2011.7.21) Satellite, atomic bomb, Qinghua University, London Imperial College, England.

王大珩(一九一五二月二十六 - 二零一一七月二十一) 原子彈,衛星.[清華大學],英國[倫敦帝國學院].

Wang Xiji (1921.7.26 -) Missiles and satellites, National Southwestern Associated University. [This school was formed by combining Beijing University, Qinghua University and Nankai University which moved to Kunming, Yun-nan Province during the Japanese invasion. It operated from 1938 to 1946.] ,Virginia Polytechnic Institute, USA.

王希季(一九二一七月二十六 -) 火箭,衛星.國立[西南聯合大學].這是抗日戰爭時,從一九三八到一九四六年,[北大],[清大]及[南開大學]搬到[雲南][昆明]的聯合大學,美國[維珍尼亞理工學院].

Zhu Guangya(1924.12.25-2011.2.26) Atomic and hydrogen bombs, National Southwestern Associated University, University of Michigan, USA.

朱光亞(一九二四十二月二十五 – 二零一一年二月二十六) 國立[西南聯合大學],美國[密斯根大學].[第九局]副主任,後任[國防科技委員會]副委員長.

Sun Jiadong (1929.4.8-) Missile and satellite, Ha-er-bin Industrial College, Air Force Engineering College, USSR.

孫家棟(一九二九四月八日 -) 導彈,衛星.[哈爾濱工業大學],蘇聯[空軍工程學院].

Ren Xinmin (1915.12.5-) Missile and satellite, Chongqing Military Engineering School, University of Michigan, USA.

任新民(一九一五十二月五日 -) 導彈,衛星.[重慶兵工學校],美國[密斯根大學].

Wu Ziliang (1917.12.25-2008.5.24) Atomic bomb, Beiyang University, Carnegie Institute of Technology,(re-named Carnegie Mellon University) USA.

吳自良(一九一七十二月二十五 – 二零零八五月二十四) 原子彈.[北洋大學],美國[卡内基理工学院]後改爲[卡内基梅隆大学].

Chen Fangyun (1916.4.23- 2000.4.29) Satellite, Qinghua University, A.C. Cossor Wireless Factory Research Bureau, England.

陳芳允(一九一六四月二十三 – 二零零零年四月二十九) 衛星,[清華大學],英國[考薩爾無線電廠研究所].

Chen Nengkuan (1923.5.13-) Atomic and hydrogen Bombs. Jiaotong University, Tangshan Engineering College, Yale University, USA.An exceptionally gifted experimentalist, he was largely responsible for the implosion design of China's first atomic bomb, and later directed the first test in Lop Nur.

陳能寬(一九二三,五月十三 -)原子彈,氫氣彈,[交通大學],[唐山工程學院],美國[耶魯大學].他是一位天才實驗物理學家.他對[內爆式]的原子彈設計作了很大的貢獻.第一個原子彈的試驗,是由他來指揮.

Yang Jiachi (1917.7.16-2006.6.17) Satellite, Jiaotong University, Harvard University, USA.

楊嘉墀(一九一七,七月十六 – 二零零六,六月十七)衛星.[交通大學],美國[哈佛大學].

Zhou Guangzhao (1929.5.15 -) Atomic and hydrogen bombs, Qinghua University, Beijing University, the Join Institute for Nuclear Research, Dubna, USSR.

周光召(一九二九,五月十五 -)原子彈,氫氣彈.[清華大學],[北京大學],蘇聯[核子聯合研究所].[第九局]的[理論組]的副主任.對原子彈的機械設計做了很大的貢獻.

Qian Xueshen (1911.12.11–2009.10.31) Missiles and Satellites, Jiaotong University, Massachusetts Institute of Technology, California Institute of Technology, USA.His contributions to the developments of rocketry and ballistic missiles rightly earned him the title of [Father of Chinese Rocketry and Ballistic Missiles].

錢學森(一九一一,十二月十一 – 二零零九,十月三十一)火箭,導彈,衛星.[交通大學],美國[麻省理工學院],[加省理工學院].他對火箭及導彈發震的貢獻,不慚稱爲中國火箭,導彈之父.

Tu Shou-e (1917.12.5-) Missiles, , National Southwestern Associated University, Massachusetts Institute of Technology, USA.

屠守鍔(一九一七十二月五日 -)火箭,導彈.國立[西南聯合大學],美國[麻省理工學院].

Huang Weilu(1916.12.18-) Missiles, National Central University, London Imperial college, UK.

黃緯祿(一九一六十二月十八 -)火箭,導彈.[中央大學],英國[倫敦帝國學院].

Cheng Kaijia(1918.8.3 -) Atomic & hydrogen bombs, Zhejiang University, University of Edinburgh, UK.

程開甲(一九一八,八月三日 -)原子彈,氫氣彈.[浙江大學],英國[爱丁堡大学].

Peng Huanwu (1915.10.6 – 2007.2.28) Atomic & hydrogen bombs, Qinghua University, University of Edinburgh, UK.

彭桓武(一九一五十月六日 – 二零零七,二月二十八)原子彈,氫氣彈.[清華大學],英國[爱丁堡大学].

Wang Ganchang (1907.5.28 – 1998.12.10) Atomic and hydrogen bombs. Qinghua University, University of Berlin, Germany.

王淦昌(一九零七,五月二十八 – 一九九八十二月十日)原子彈,氫氣彈.[清華大學],德國[柏林大學].

Deng Jiaxian (1924.6.25 – 1986.7.29) Atomic and hydrogen bombs, National Southwestern Associated University, Purdue University, USA.

鄧稼先(一九二四,六月二十五– 一九八六,七月二十九)原子彈,氫氣彈.國立[西南聯合大學].美國[普渡大學].他與[于敏]兩人領導氫彈的理論和設計工作.中國的氫彈設計都用[鄧-于設計]這個名稱.

Zhao Jiuzhang (1907.10.15 – 1968.10.26) Satellite, Qinghua University, University of Berlin, Germany. **[Mr. Zhaowas prosecuted and committed suicide during the Cultural Revolution.]**

趙九章(一九零七,十月十五 – 一九六八,十月二十六)衛星.[清華大學],德國[柏林大學]. **文革時被逼害至自殺.**

Yao Tongbin (1922.9.3 – 1968.6.8) Missiles, rocketry. Jiaotong University, Tangshan Engineering College, University of Buckingham, UK. **[Mr. Yao was beaten to death at home during the Cultural Revolution.]**

姚桐斌 (一九二二,九月三日 – 一九六八,六月八號)導彈,火箭.[交通大學],[唐山工學院],英國[伯明翰大學].**文革時被殺害.**

Qian Ji (1917.12.27 – 1983.8.28) Satellite, National Central University.

錢驥 (一九一七,十二月二十七 – 一九八三,八月二十八)衛星,[國立中央大學].

Qian Sanqiang (1913.10.16 – 1992.6.28) Atomic and hydrogen bombs, Beijing University, University of Paris, France. Director of the [Institute of Atomic Energy], Vice-minister of [The Second Ministry].

錢三強 (一九一三,十月十六 – 一九九二,六月二十八)原子彈,氫氣彈.[北京大學].[法國[巴黎大學].[原子能研究所]所長,[第二部]副部長.

Guo Yonghuai (1909.4.4 – 1968.12.5)Atomic and hydrogen bombs, missiles, Nankai University, Beijing University, University of Toronto, Canada, Massachusetts Institute of Technology, USA.Deputy director of the [Ninth Bureau],made important contributions to the design and testing of the atomic bomb. **Mr. Guo died in an airplane accidence in Beijing while on duty.**]

郭永懷 (一九零九,四月四日 – 一九六八,十二月五日)原子彈,氫氣彈,導彈.[南開大學],[北京大學],加拿大[多倫多大學],美國[加省理工學院].[第九局]副局長.對於原子彈的設計和實驗做了很大的貢獻.**郭先生爲了公事在北京機場發生意外身亡.**

The above honorees were created by the Party Central Committee, the State Council and the Central Military Commission. The author would like to supplement the above list by including the following individuals who had made critical contributions in the area of organization,management, scientific (or for some extraordinary tasks and projects) for such a vast and lengthy project: The development of the atomic and hydrogen bombs.

Marshall Nie Rongzhen As vice-chairman of the Central Military Commission and director of the Defense Science and Technology Commission, he was the most senior leader heading the overall day-today operation of the strategic weapons development program.His influence and authority in Beijing provided [**The Ninth Bureau**] numerous material and logistics support and assistance. During the "Great Leap Forward" famine, he appealed personally to the Beijing Military Region and the Guangzhou Military Region for help. As a result one half a million pounds of soybeans and canned food were sent to the [Ninth Bureau].

聶榮臻元帥 身爲[中央軍事委員會]副委員長,[國防科技委員會]主任,他是戰略核武器計畫的最高領導人.他在北京的權力和影響力給這個計畫莫大的幫助.在"大躍進"的饑荒時期,他親自向[北京軍區]和[廣東軍區]求援.後得到近五十萬磅的黃豆和罐頭食品送往在西北的[第九局].

Zhao Erlu Deputy director of the National Defense Industry Office (under the State Council). Together with Nie Rongzhen, they had joint oversight of the Second Ministry.

趙尔陸 [國務院]所屬單位[國防工業辦公室]副主任.他和[聶榮臻元帥]共同管轄[第二部].

General Zhang Aiping Deputy chief of the General Staff. Director of the First Atomic Bomb Test Commission. Commander of the First Atomic Bomb Test On-Site Headquarters.

張愛萍將軍 解放軍副參謀長,[第一顆原子彈試驗委員會]主任.[原子彈試驗場總部]指揮官.

Song Renqiong Minister of the Second Machine Building Ministry (1956-1960).

宋任窮 [第二機械工業部]部長(1956-1960).

Liu Jie Vice minister of the Second Machine Building Ministry (1950-1960). Succeeded Song Renqiong as minister in 1960.

劉傑 [第二部]副部長.1960 年繼承[宋任窮]接任部長.

Liu Xiyao Vice-minister and later minister of the Second Ministry, deputy commander of the First Atomic Bomb Test On-Site Headquarters. Under his leadership, the hydrogen bomb project developed rapidly.

劉西堯 [第二部]副部長,後爲正部長,[原子彈試驗場總部]副指揮官.在他的領導下,氫彈的研發得到很快的進展.

Yuan Chenglong Vice-minister of the Second Ministry in charge of all nuclear production. From 1963 to 1964, he remained at the Lanzhou Gaseous Diffusion Plant and the Nuclear Component Manufacturing Plant to help solve key technical problems.

袁成隆 [第二部]副部長負責所有的核材料生產.從 1963 到 1964 他留在[蘭州]的[鈾氣體擴散廠]和[核部件生產廠]幫助解決各種科技問題.

Li Jue Director of the Ninth Bureau (his position is equivalent to that of J. Robert Oppenheimer, director of the Manhattan Project), responsible for the research, development , construction and testing of the atomic bomb.

李覺 [第九局]主任(這個職位等於美國的[曼哈頓計畫]的主任[[罗伯特•奥本海默]].他負責原子彈的研發,製造和試驗.

Guo Yinghui He served as assistant to Li Jue and headed the bureau's administrative wing.

郭英會 他是[李覺]的副手負責[第九局]的行政和管理.

Wang Jiefu Director of the Lanzhou Gaseous Diffusion Plant which producedenriched U235.

王介福[蘭州鈾氣體擴散廠]主任,負責濃縮鈾 235.

Wu Jilin Deputy director of the Ninth Bureau and Li Jue's most important assistant.**[Prosecuted and died in the Cultural Revolution.]**

吳際霖 [第九局]副主任,[李覺]的重要副手.**[文革]時被逼害致死.**

Zhang Yunyu Commander of the Lop Nur Nuclear Weapons Test Base in overall charge of preparations for all the nuclear tests.

張蘊鈺 [羅布泊原子彈試驗基地]指揮官,負責所有的核武器試驗.

Zhu Linfang Deputy Chief of the Nuclear Component ManufacturingWorkshop of the Nuclear Component Manufacturing Plant in Jiuquan Prefecture, responsible for the smelting, casting, and machining of the uranium core for the first bomb.

祝麟芳 位於[酒泉州]的[核部件生產廠]的副廠長.負責鈾的熔煉,鑄件,和核心最後的銑工.

Cao Benxi Chemist and chief engineer of the Second Ministry's [Fuel Production Bureau]. Contributed to the production of uranium hexafluoride and the chemical separation of plutonium.

曹本熹[第二部]轄下的[燃料生產局]總工程師.對於生產鈾六化氟和钚 239 分離作出很大的貢獻.

Jiang Shengjie Nuclear chemist. Chief engineer and first deputy director of the Jiuquan Atomic Energy Complex. Made contributions to the smelting and casting of the nuclear components.

姜聖阶核子化學家.[酒泉原子能複合體]的總工程師.對核原料的熔煉和鑄件做了極大貢獻.

Long Wenguang Engineer and principal assistant to Guo Yonghuai. Worked in the Ninth Bureau's Design Department and helped designing the configuration of the bomb.

龍文光[郭永懷]的副手.後任[第九局]的[設計組]主任,負責原子彈的整體布局.

Lu Fuyan Headed the test production of both uranium oxide and uranium tetra-fluoride and later supervised the mass production of uranium oxide.

祿福延負責生產氧化鈾和鈾四化氟.後來管理大量生產氧化鈾.

Qian Jin Associate professor at Huabei University. Refined the techniques for manufacturing the high explosives and the electric spark detonators of the first bomb**. [Prosecuted and died in the Cultural Revolution].**

錢晉 [北京大],[華北大學工學院]副教授.改進強烈炸藥如塑料粘结炸药的生產和第一個原子彈的火花起爆管.**[文革時被逼害致死.]**

Wu Zhengkai Chemist and head of the chemistry department at Fudan University. Performed theoretical calculations for the Lanzhou Gaseous Diffusion Plant and did the trial production of uranium hexafluoride.

吳征鎰 [復旦大學]化學系主任.給[蘭州鈾氣體擴散廠]提供理論數據和測試鈾六化氟的生產.

Yu Daguang Professor of electrical engineering at Ha'erbin Industrial College. Designed the overall multiple-line synchronous firing mechanisms for the explosive assembly.

俞大光 [哈爾濱工業學院]電機系教授.原子彈的引爆裝配同步電路設計.

He Zehui Qinghua University,University of Berlin, Germany. Led a team of 50 senior scientists and engineers to study and analyze lithium deuteride, the key ingredient of the hydrogen bomb.[Fig.7].

何澤慧 [清華大學],德國[柏林大學].領導和協調一個高級科技工作組來研究和分析二重氫化鋰,氫彈的重要燃料.[圖七].

Yuan Gongfu Also known as "Yuan the First Cut". The senior lathe operator who machined the uranium core for the first bomb.

原公甫又名[原一刀].高級銑工技師,負責第一個原子彈核心的最後銑床工作.

Conclusions

Inevitably many people would ask the question, "Why would the Chinese people waste such a vast amount of resources to build the nuclear weapons, especially at the time when the country was just trying to get up on its feet politically and economically? The simple answer to the above question is that the Chinese people have learned first-hand that without an arm force equipped with modern weapons, their destiny is controlled by the foreign powers. They have also learned from first-hand experience that there are no shortcuts or easy ways to obtain the most advanced technologies and weapons. Many historical events, which at the time of occurrence seemed to be a disaster, but in the long run, it turned out to be a blessingin disguise. Take the example of the Soviet withdrawal of all technical assistancefrom China in June 1959. At that time, the unilateral action of the Soviet Union threw the re-construction efforts of the country into total chaos as many critical projects were left unfinished while the Russian technical experts even took all the blue prints with them. If the Russians had helped the Chinese building the atomic bomb, it would be a certainty that they would

never possess the hydrogen bomb andfuture generations of advanced nuclear weapons. When some one else helps you with a project as vast and complex as building nuclear weapons, they decide what you should know and the chance is that you will not learn all the critical parts and the atomic bomb would be just a magic black box and the Chinese would not know what is in there. The chance is that they would spent precious time and resources just to learn how to reproduce them.

結論

爲甚麼像中國五十年代的一個一窮二白的國家花費那麼龐大的人力財力來研製核子武器?尤其是中華人民共和國剛剛建立起來,在政治和經濟上還沒有站住腳的時期.這是不可避免的問題.最簡單的回答是因爲中國人親身經歷到,如果一個國家沒有新進武器的武裝力量,牠的命運肯定會被操在世界列強的手裡.他們也親身領會到,擁有最新進的科技與武器,不能靠運氣或捷徑而得到的.歷史上很多重要的事件,發生時看來似乎一個災難,但過些時候,反而因禍得福.蘇聯在一九五九年單方面廢除對華援助條約就是個好例子.如果當年蘇聯幫助中國製造原子彈,我相信到了現在中國也許還沒有氫彈.你靠他人來幫你搞高精尖科技,你能得到的,只是人家的過時舊貨.同時,你得到的是一個"黑盒子",你不一定能掌握內裡的基本原理.到後來,只知其然而不知其所以.到後來,還費了寶貴的人力財力來做仿製品.

A second example of a great disappointment which later turned into a blessing comes from the International Space Station (ISS). From early on, China had express a strong interest in joining the other 16 nations as a partner in the construction of the International Space Station, but China was excluded from the ISS membership by the United States.If they had become a partner of the ISS, they may be quite satisfied with such an accomplishment and may not have ventured into such an ambitious project as building a space station all by themselves. This is accomplished in spite of the total technological sanctions imposed on China by the western nations. The irony of all these is that by 2020, they may decide to abandon the ISS. If this turns out to be true, then China will be the only nation on earth operating a space station.

第二個事例從失望到了得益是關於[國際太空站計畫].開始的時候中國有濃厚的興趣來參加這個國際太空科技工程,但中國申請成爲[國際太空站]遭到美國的強烈反對.如果中國參加了[ISS} 的建造,他們也許不會化那麼大的財力物力來建造他們自己的太空站.中國在航天航空這方面的成就,是在西方國家對中國科技,器材,和知識全面封鎖下幹的.最有諷刺意義的是,到了二零二零年,[ISS]的成員也許會同意放棄[ISS].到那時,這個被排擠的國家反而成爲世界上唯一擁有太空站的國家.

Another concern many people raised is that the exceptional accomplishments, under the most difficult economic and political environments, in the developments of nuclear weapons, ballistic missiles and rocketry were done by scientists, engineers and mathematicians who had advanced training at universities of the western world. This

fact is undeniable as we look at the list of honorees above. Only two among the 23 individuals, who were cited for their contributions on the development of nuclear weapons, ballistic missiles, rocketry and artificial satellites, (Yu Min and Qian Ji had never studied abroad.

還有一個令人擔心的地方是,老一輩對於核子武器,導彈,火箭及衛星的輝煌成就,是在極惡劣的經濟和政治環境中幹出來的.可是這群傑出的科技人員都是到過西方國家留學深造的.這個事實無可否認.二十三位授予[兩彈一星貢獻獎]之中,只有兩位沒有出過國留學[于敏和錢驥].

So, the question is what has the indigenously trained younger generations have accomplished so far? If we examine Chinesescientific and technological accomplishments of the last decade, it would make the pioneering generation proud. In the area of strategic ballistic missiles, they have progressed from the Dong Feng 2 (DF-2) in the 1950s, which had a range of a few hundred kilometers to the present day DF-31A, which can hit a target at any point on this planet. Chinese strategic nuclear weapons is now on a par with western nations in its ability to put multiple nuclear warheads into multiple independent re-entry vehicles (MIRV) that can hit many targets independently. This type of ballistic missile alsohas another very unusual capability. At mid-course of its flight, it can change from a ballistic to a supersonic cruise missile to attack moving targets. Up to this point, as far as we know, this may be the only exiting ballistic missile which can hit a moving target. These MIRVs can even be carried in China's indigenously built nuclear power submarines. Perhaps the most dramatic accomplishments are rocketry and space technology as they progressed steadily from Shenzhou-1 in 1999 to Shenzhou-8 and Tiangong-1 in 2011. Then there is the Beidou Satellite Navigational System, which already has about eight (8) satellites in orbit, and by 2020 there will be 32 satellites in orbit to cover the entire globe. Without doubt, the pioneering older generation, who toiled in such poor economic and political environment, would be envious and proud of the younger generation.

我們要問的當然是:中國本土親自培養出來新一代的科技人員,在國防科技,太空科技這方面有甚麼表現?來給這個問題一個正確的答案,我們只需回顧這十年來中國在國防和太空科技上的發展.他們已經從五十年代的[東風-2]進展到[東風 31A].前者的射程只有數百公里,而後者的射程能蓋覆全球.中國的戰略核武器也已經達到國際水平,與列強並駕齊驅.[東風 31A]洲際導彈能戴運多彈頭,同時獨立地打擊不同的目標.這型彈道導彈還有一個很特殊的用途,那是到了中途的時候,導彈會改變成巡航彈,可以用來打擊移動目標.到目前爲止,也許這是世界上唯一個能夠打擊移動目標的彈道導彈.這類型的多彈頭的導彈還可以裝置在中國國產的核能潛水艇上.可能最有戲劇性的是他們在火箭和太空科技上的表現.從一九九九年的[神州-1]到了二零一一年的[神州-8]和[天宮-1].作爲開路先鋒的第一代科技人員,奮鬥在最惡劣的環境下來創下輝煌的業績,看了年輕一代的表現,毫無疑問,他們都爲了年輕一代的成就而覺得羨慕及自豪.他們可以說[後生可畏].

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Acknowledgement: I hereby acknowledge the many useful suggestions and corrections made by Mr. & Mrs. Mark Eng and Mr. Gordon M. K. Yee.

致謝:我在這篇文章中,得到**伍卓志**,**黃薇薇**伉儷,及**余文廣**先生,提供很多重要的參改意見,謹此致謝.

Figures 圖片

Fig. 1. At the beginning of the Korean War, MacArthur lead a delegation to Taiwan to discuss plans for the Chinese Nationalist Army to participate in the Korean War and open a counter-offensive to re-capture the Chinese mainland.History has shown that he had never received permission from the U.S. Department of Defense or the White House. He is shown in the above picture shaking hands with General Sun Liren. Generalissimo Chiang Kai-shek is visible in the background.
圖一: 高麗戰爭開始不久,[麦克阿瑟]將軍率領了一個代表團到台灣去討論關於台灣到高麗參戰和反攻大陸的事宜.歷史證明他這個使命沒有得到美國國防部或總統府的批准.[麦克阿瑟]在這個照片裡和[孫立人將軍]握手,我們還可以見到[蔣委員長]站在後面.

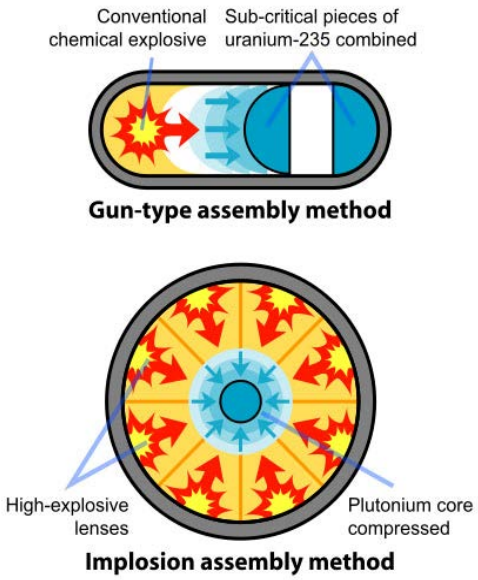

Fig. 2. The Two Types of Atomic Bomb Assembly.圖二: 原子彈的兩種裝配,炮管型和內爆型.這兩種設計,中國科學家叫[壓攏]和[壓進]

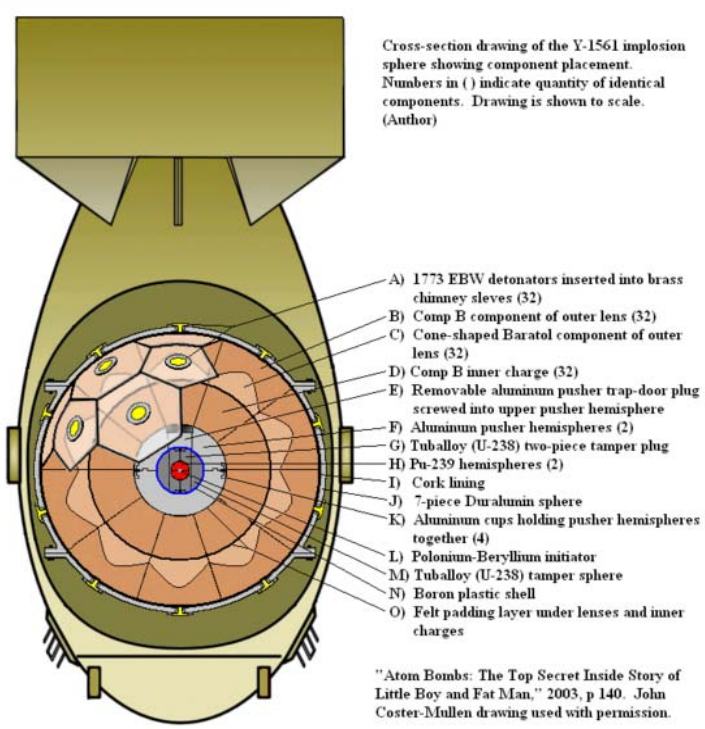

Fig. 3. Placement of the various high explosive charges are shown in this illustration for the implosive Plutonium “Fat Man” atomic bomb.
圖三:這個圖片示範了钚 239 內爆型原子彈內裡的強烈炸藥和引爆管的安裝位置.

Fig. 4a. The first Chinese Atomic Bomb (mockup). It is rather obvious that it looks like “Fat Man”, although the fissile material used is U-235 and not Pu-239.
圖四-A:中國的第一顆原子彈(模型).它明顯地像”大胖子”,不過,內裡的核燃料是鈾-235 而不是钚 239.

Fig. 4b. American Implosive Plutonium Bomb, “Fat Man”.
圖四-B:美國的內爆型钚 239 原子彈.又名”大胖子”.

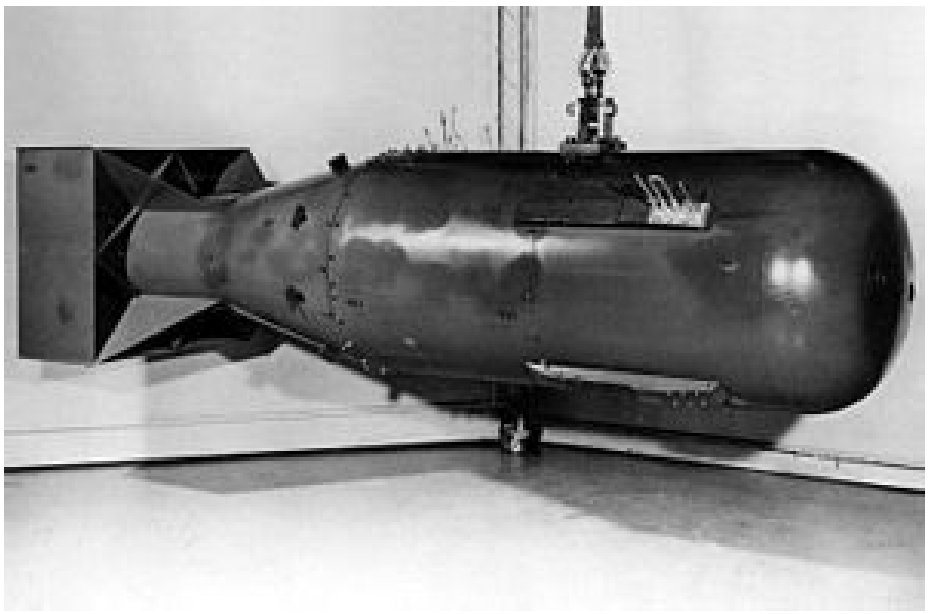

Fig. 4c. American Gun-barrel Type U235 Atomic Bomb“Little Boy”.
圖四-C:美國的砲管型鈾-235 原子彈,又名”小男孩”

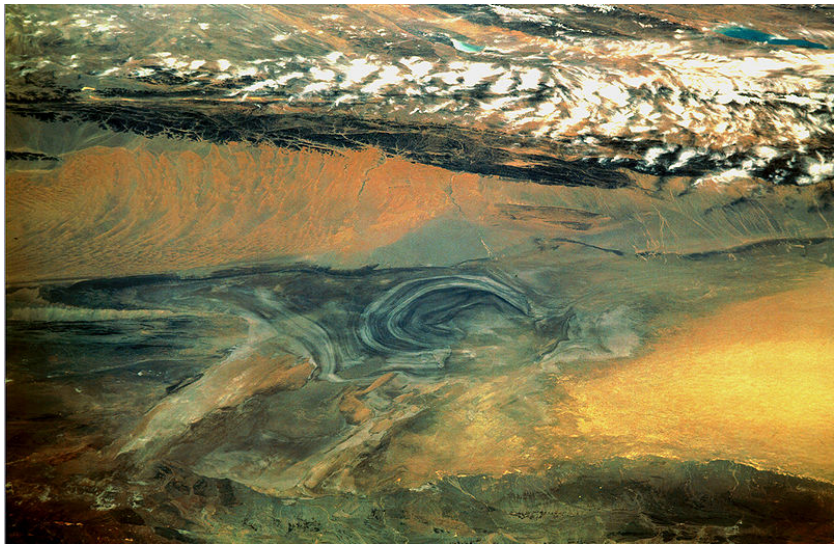

Fig. 5. A Bird's Eye-view of Lop Nur, China's atomic bomb test site. The desolation of this region is apparent in this picture.
圖五: [羅布泊]鳥瞰,中國的原子彈試驗場.從這張照片我們可以看到這個地區的荒蕪程度.

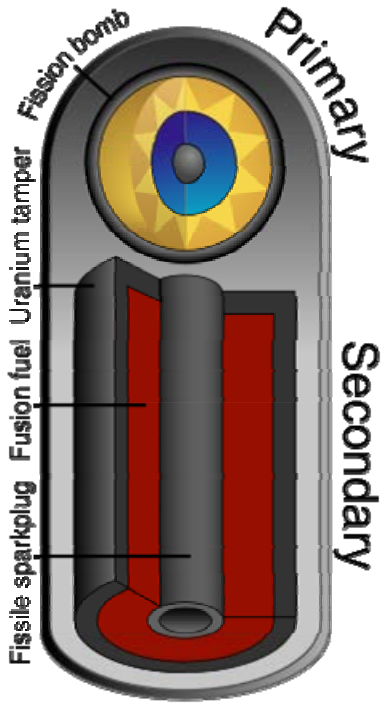

Fig. 6. Illustration of the major components of the hydrogen bomb.
圖六: 氫氣彈的重要組成部分.

Fig. 7. He Zehui, 1936 Qinghua University Graduation Picture. This is considered a rare picture as it was accidentally discovered by a man who now lives in Wuhan, Hubei Province. According to the information on the Internet, the back of this picture contains the signature of Academician Dr. He Zehui. Since I am a born Doubting Thomas, I cross-referenced this picture with a few pictures of Dr. He with her husband, Academician Dr. Qian Sanqiang. I now unconditionally accept the above picture as genuine.

圖七: 何澤慧,一九三六年[清華大學]畢業照.這張照片可能是很稀罕的.根據互聯網上的資料,一位先生在[武漢]無意中發現這張照片.據說,照片的後面還有[何院士]簽的名字.不過,我是本性疑惑的人.所以,我把這張照片跟幾張[何院士]和她的丈夫[錢三強院士]合照的相片對比.現在,我無條件的接受以上的照片是[何澤慧]的一九三六年的[清華園]畢業照片.

Dilemmas of China's Modernization: Population Problem and the Strategy of Sustainable Development (2)

中國現在化的困境:人口問題與可持續發展站戰略 (2)

Hongbo Tang 唐洪波

CHAPTER III : THE HISTORICAL REASONS OF CHINA'S POPULATION PROBLEMS

第三章: 中国的人口问题的历史原因

Several historical factors are responsible for the above plight of China's population. Focused on the influence of the population policies, this paper will discuss China's population growth in the Qing Dynasty and Mao Zedong and Post-Mao eras respectively.

造成中国人口以上的困境有若干历史因素。本文将以人口政策的影响为重点，分别讨论中国在清代与毛泽东时代以及后毛泽东时代的人口增长。

Population Policy of the Qing Dynasty and Population Growth

清代人口政策与人口增长

The large population base of China traces its history to the eighteenth century. China's population saw a slow increase throughout a long period of A.D. 0-1700. It just grew from 60 million to 140 million. The dramatic increase began at the eighteenth century. Kang-xi and Yong-zheng, the two emperors with illustrious names in the Qing Dynasty, issued two influential policies in 1712 and 1723 "Newborns will not be taxed" and the "Merger of population tax into land tax". Almost all Chinese historians praised these merciful and wise policies that lessened the burden of Chinese people. As they were implemented for nearly two centuries, they brought with China an unpredictable consequence -- China's population increased with a striking growth rate-- 2.5% per year. As a result, China's population rose to 200 million in 1762 from 100 million in 1712; then reached to 300 million in 1790; and again rose to 400 million in 1834. It accounted for over 40% of the total population of the world at

that time. [1] In other words, China's population doubled within 50 years and doubled again within the following 72 years.

中国庞大人口基数的历史可追溯到十八世纪。从公元元年至 1700 年中国人口一直长期增长缓慢，仅从 6 千万增长到 1.4 亿人，十八世纪才开始剧增。清代著名的康熙和雍正皇帝，分别于 1712 和 1723 年颁布了两项颇具影响力的政策：“滋生人口永不纳税”和“丁税合一”。几乎所有的中国历史学家均称赞这两项仁慈明智的政策减轻了民众的负担， 然而在它们实施了近两个世纪之后，却给中国带来了未曾预测的后果 ：全国人口以每年 2.5％的速度显著增长，从而使全国人口从 1712 年的 1 亿人增长到 1762 年的 2 亿人，1790 年更达到 3 亿人，1834 年又上升到 4 亿人，占了当时世界总人口的 40％。换句话说，中国人口在 50 年内翻了一番并于之后的 72 年内又翻了一番。

To China's modernization, the pressure of rapid population growth was an accomplished fact and a potential challenge before China began its industrialization in the middle of the nineteenth century and became an on-going problem and a significant challenge through the whole process of its modernization in the past one and a half centuries. Such a heavy burden on Chinese society and economy can explain the serious social crisis in the nineteenth century, such as the Taiping Rebellion from 1851 to 1864, which caused by both class contradictions (such as most farmlands were collected by minority landlords whereas majority peasants lost their farmlands) and the pressure of the population boom on the arable land, resulting in a disastrous consequence: the death of over 100 million people, nearly one-third of China's total population at that time. Between 1851 and 1949, China experienced "a century of rebellion, social upheaval, and suffering" such as Opium War I (1840-42), the Taiping Rebellion (1851-64), Opium War II (1856-1860), the Boxer Rebellion (1900-01), the Sun Yetsan Revolution (1911), the Civil War I (1912-1927), the Civil War II (1927-38), the Sino-Japan War (1938-1945), the Civil War III (1946-49). As the result, the absolute growth of China's population over this century was relatively lower, increasing "only by another 100 million" on the base of its 432 million in 1851. [2] In other words, the frequent national and international wars kept China's population within its limits before 1949. The high reproduction rate, however, allowed China's population to recover soon. After the wars, China still kept its status as the most populous country in the world. The People's Republic of China had a population of 540 million when it was founded in 1949, among which the urban population merely reached 10.6% of the national population. [3]

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[1] Liang Fangzhong, *Statistic on historical population, lands and taxes of China: Qing Dynasty.* (Shanghai: Shanghai People' Press, 1980) p. 359-423.

[2] Ge, 6-7.

[3] Jiang Tao, "Re-examine on the Population Problems of Modern China," *Guangming Daily,* 28 Feb. 1994.

对中国的现代化来讲，开始于十九世纪中叶的工业化进程中，始终伴随着人口剧增的压力这样一个既成事实和潜在挑战，而且在过去一个半世纪的现代化建设过程中，依旧成为一个持续问题与重大挑战。十九世纪严重的社会危机可说明 它对中国社会和经济造成的沉重负担。例如 1851~1864 年的太平天国运动，正是由于阶级矛盾（土地兼并严重而造成广大农民丧失土地）和人口增长的压力造成了灾难性的后果：超过 1 亿人死亡，占中国当时总人口的近三分之一。从 1851 到 1949 年中国经历了“一个世纪的叛乱、社会动荡和苦难”，如鸦片战争（1840~18 42 年）、太平天国运动（1851~1864 年）、第二次鸦片战争（1856~1860 年）、义和团运动（1900~1901 年）、辛亥革命（1911 年）、第一次内战（1912~1927 年），第二次内战（1927~1938 年）、抗日战争（1938~1945 年）、第三次内战（1946~1949 年）等。结果是中国人口在该世纪的绝对增长值相对较低，在 1851 年 4.32 亿人的基础上“仅增长了 1 亿人”。换句话说，频繁的国内和国际战争使 1949 年以前的中国人口保持在一定的限度内。然而，高生殖率又令中国人口很快恢复增长，战后的中国依然是世界上人口最多的国家。1949 年成立的中华人民共和国有 5.4 亿人口，但其城镇人口仅占全国人口的 10.6％。

Population Growth in Mao Zedong Era **毛泽东时代的人口增长**

When the Chinese Communist leaders set the goal for China’s modernization---“to realize industrialization rapidly” based on “poor and blank domestic economy,”[4] Their had to face the dilemma of “a powerful state in politics and population” and “a weak state in economy.” Just as Chairman Mao Zedong said in 1957: “You (China) have so many people and so much land, as well as abounding natural resources; you (China) also have socialist advantages-- then, if you could not surpass the United States within 50-60 years, you (China) should be expelled from the earth! Therefore, it is not only possible but also absolutely necessary to surpass the United States. If not, we Chinese nation should have a guilty conscience to all nations in the world, and our contribution to the human beings would not be great.” [5] Unfortunately, they assumed optimistically they could keep the problems in control by rapid industrialization.

基于“一穷二白的国民经济”，中共领导人确定中国的现代化建设目标为“迅速实现工业化”时，他们不得不面对“一个政治与人口大国”同时是“一个经济弱国” 的困境。正如毛泽东主席在 1957 年所言：「你（中国）有这么多人，这么多土地，还有丰富的自然资源; 你（中国）也有社会主义的优越性 --那么，假如你不能在五、六十年内超过美国，你（中国）就该被逐出地球！所以不仅可能、而且必须超越美国，否则我们中华民族就愧对世界，我们对人类的贡献就不够大。」不幸的是，他们盲目乐观地认为他们能够通过迅速工业化来解决这个问题。

In addition, the development of China’s society and economy after 1950 made it

[4] Mao Zedong, *Mao Zedong Xuan-Ji* (Selected Works of Mao Zedong), Vol. 5 (Beijing: The People’s Press, 1977), 174.

[5] Mao, Vol. 5, 296.

possible to accelerate its increasing population. With a stable society-- improvement of medical and health conditions, and development of production-- China witnessed a rapid population growth, reaching 807 million in 1969. In detail, the Government of China controlled the previous factors affecting the increase of population: wars, pestilences (such as smallpox, which resulted in mass people's deaths in previous years), regional diseases, and famines --except for the Great Famine which took place after the Great Leap Forward, the greatest man-made famine in Chinese history, which caused 38 million deaths of Chinese people during 1959 to 1961 and led to a negative natural population increase rate of –0.46% in 1960. [6] After the three-year food shortage crisis, however, its population growth accelerated. Although China still was a poor country, and most of its huge population lived barely above the basic subsistence level before 1980s, this did not impede the growth of population.

此外，1950年以后中国的社会经济发展促进了其人口的迅速增长。在社会稳定、医疗卫生条件改善、生产发展 的条件下， 中国人口迅速增长，到1969年达到8.07亿。具体而言，中国政府控制住了以前影响人口增长的诸因素：例如战争、传染病（像造成大批民众死亡的天花之类）、地方病、饥荒等等。--除了“大跃进”之后史上最大的人为大饥荒，在1959-1961年间造成了3800万中国人的死亡，并导致了1960年人口-0.46%的负增长率之外。然而三年困难时期一过，中国人口又很快增长起来。 尽管中国仍然贫穷，多数人口在20世纪80年代以前仅勉强维持基本生活，却并未影响其人口的增长。

Another important reason is that the Chinese traditional values have led to mistakes in the policy of China's population. Ordinary Chinese people have this deep-rooted logic: "the more children, the more good fortune" and "many sons bring much riches". [7] China is a developing state where most people have lived in poverty until recently. Its economic level and social property are limited, and its social security system is far from being comprehensive. This basic situation has convinced ordinary Chinese people that they must rely on themselves and their family when approaching old age. In addition, the rural families feel shame if they have no sons to continue their family trees. No wonder almost all Chinese agreed with what Mao Zedong advocated in the 1960s "the more people, the stronger we are". [8] In addition, socialist ideology made it easy to dismiss the population threat. "For Marx, the fact that people were producers as well as consumers meant that the resource limits emphasized by the classical economists could arise under capitalism, but not under

[6] Shen Jianfa, "China's Future Population and Development Challenges," *The Geographical Journal* 164, no. 1 (Mar. 1998): 32

[7] Li Yinhe, *Reproduction and Village Culture in China,* (Hong Kong: Oxford Press, 1994), 36.

[8] Mao Zedong, *Mao Zedong Xuan-Ji* (Selected Works of Mao Zedong), Vol. 3 (Beijing: The People's Press, 1977), 140.

socialism."[9] Marx's insight into this matter has been used for making population policy by Chinese socialist leaders. Mao Zedong said in the 1950s: "even if China's population multiplies many times, she is fully capable of finding a solution; the solution is production" [10] They did not realize that a person's work created social property, while people themselves consumed social property. If a higher population consumed more social property than what they created, how could a society accumulate capital and thereby develop its economy? In other words, they failed to realize that their excessive human reproduction would severely hurt the promotion of public welfare.

另一个重要原因是中国传统的价值观导致了中国人口政策的失误。普通中国民众有根深蒂固的"多子多福"和"儿多生财"观念。作为一个多数人才摆脱不久贫困的发展中国家，中国的经济水平和社会财富比较有限，社会保障体系还远未完善。这一基本国情令普通民众相信，他们年老时要靠自己及家人养老，农村家庭也会为没有儿子继承香火感到羞耻。 难怪几乎所有人都认同毛泽东 60 年代所倡导的"人多力量大"。此外，社会主义理论能轻易化解人口威胁论。"马克思主义认为，人既是生产者又是消费者意味着，古典经济学家所讲的资源有限论仅仅可能出现在资本主义制度下，而非社会主义制度下"。马克思的这一论点被用于社会主义领导人制定其人口政策。 毛泽东在 50 年代讲到："即使中国人口再增加几倍也有办法解决，这个办法就是生产"。他们没有意识到，人类生产创造社会财富，而人类自身也消费社会财富。如果人类消耗的社会财富比他们创造的社会财富多，一个社会如何能积累资本，从而发展其经济？换句话说，他们没有意识到过度的人类生育将严重损害社会福利的提升。

Not only did the ordinary Chinese people lack awareness of the importance of birth control for a state, but also the leaders of the Chinese Government insisted on a mistaken idea concerning this issue. As early as in January 1952, Mao Zedong urged *The People's Daily* to publish an editorial titled "Limited reproduction will lead to subjugate China", and encouraged women to give birth rather than to promote birth control. In 1957, Dr. Ma Yingchu, a famous demographer-economist and the President of Beijing University, published "*A New Population Policy*", which accurately indicated that, related to the weakness of China's economic policy, overpopulation would hinder China's productivity and the accumulation of capital and hamper the rise of the standard of living. He suggested that the Government promote birth control, which predated promotion of family planning policy of the 1970s by about 20 years. As a result, Dr. Ma was purged and severely criticized as Rightist, Anti-socialist, and Anti-communist, and his theory was criticized as an imitation of the "capitalist and reactionary Malthusian Theory." [11] Another serious consequence to the

[9] Michael S. Teitelbaum, "The Population Threat," *Foreign Affairs* 71, no. 5 (winter 1992), 67.
[10] Mao, 452.
[11] Ge, 233-235.

state was that China embraced another peak of population growth: from 1962 to 1975, China witnessed a rise of 350 million people in its population.

不仅普通中国民众对国家控制生育的的重要性缺乏认识，就连国家领导人也对这一问题观点有误。早在 1952 年 1 月，毛泽东敦促人民日报发表题为“节制生育会导致亡国”的社论，鼓励妇女生育而非节育。 1957 年著名人口学家、经济学家、北京大学校长马寅初博士发表了“*新人口论*”，准确指出中国经济政策的相关缺陷，认为人口过多有碍于中国的生产率和资本积累，有碍于生活水平的提高。他建议政府提倡节育，比 70 年代提倡计划生育政策还早了约 20 年。结果马寅初被定为反党反社会主义的右派分子遭到严厉批判，其人口论被当作“反动的资产阶级马尔萨斯论” 遭到批判。而另一个对国家的严重后果则是，中国人口迎来了再次增长高峰：1962 至 1975 年全国人口增长了 3.5 亿。

Figures 2 and 3 indicate the natural growth rate and the birth/death rate in China during 1949 and 1999. Based on the data released by the National Bureau of Statistics of China, it is easy to see a rapid increase in the natural growth rate and a decline in the death rate except for the period of 1959-1961. The birth rate surpassed 2.5% before 1976 except for the same period of 1959-1961 and saw a continued downward trend since then.

图 2 和图 3 表明，1949~1999 年期间中国人口的自然增长率和出生死亡率。从国家统计局公布的数据中显而易见，除了 1959~1961 年间之外，人口自然增长率快速增和死亡率下降的趋势。除 1959~1961 年间以外，1976 年以前出生率均超过 2.5%，之后呈持续下降趋势。

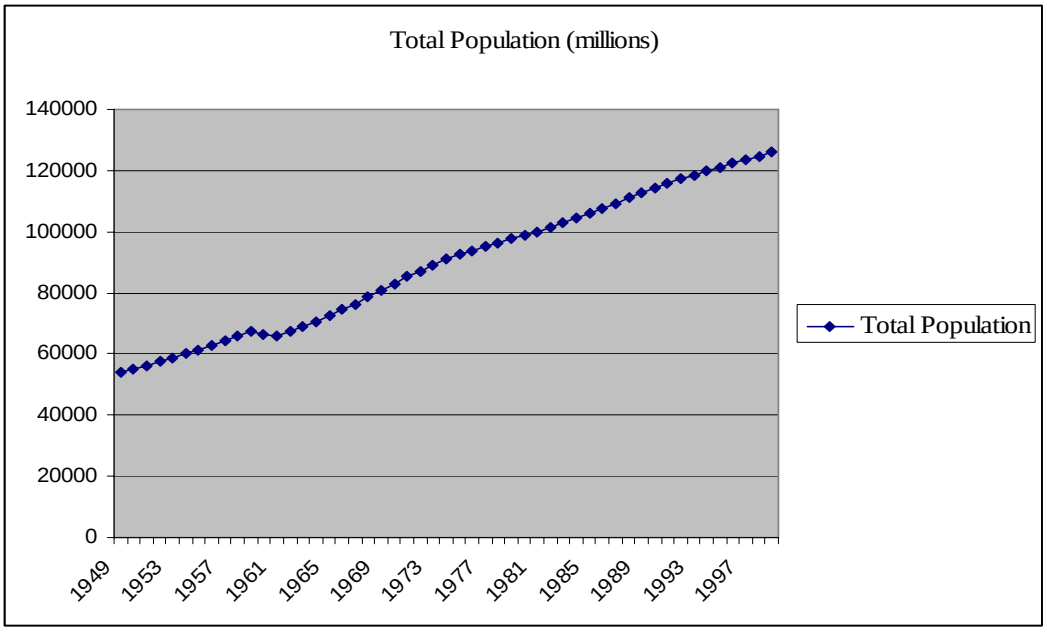

Figure 2: Natural Growth Rate in China, 1949-1999

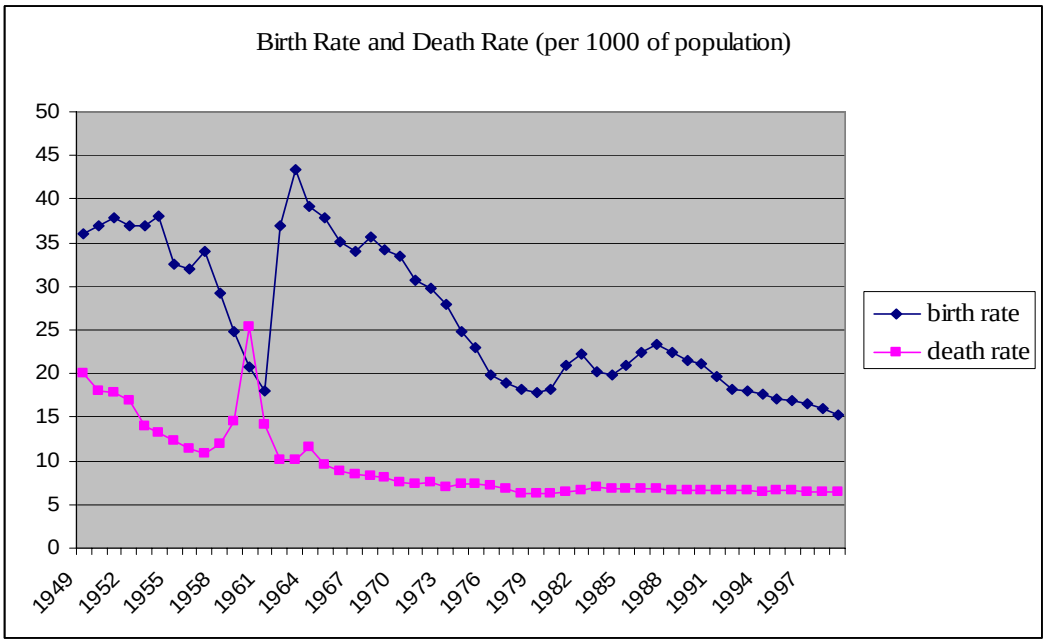

Figure 3: Birth Rate and Death Rate in China, 1949-1999

*Sources: National Bureau of Statistics of China, "China Statistical Yearbook 2000," (14 may 2002) http://www.cpirc.org.cn/en/year.htm (accessed 16 Mar. 2007).

Family Planning Policy in Post-Mao Era 后毛泽东时代的计划生育政策

Not until 1973 did the Chinese Government implement the family planning policy by efforts of Premier Zhou Enlai, with a slogan "One is best, two at most, but never a third." As to the specific regulations, China has limited each urban couple to one child. Rural couples are allowed to have a second child if the firstborn is a girl or two children have a four-year spacing. China's 55 ethnic minority groups have no restriction on family size. In the 1990s, the family planning regulates limited ethnic minority couples in rural areas of minority autonomous regions to 2-3 children, but rural Tibetan people still have no restriction on family size. [12] The implementing of this stringent population control policy, however, actually became effective in 1978 when "every township and town had a Birth Planning Commission" directed by the State Family Planning Commission (SFPC). Inserting the word "Population" in its name in 2003, SFPC was replaced by "the State Family Planning and Population Commission" (SFPPC) as the "inter-ministerial agency in charge of population policy formulation and implementation." This was actually a change in the commission's functions to "tackle a much wider range of population-related problems" besides birth control.

[12] Peng Xizhe, "Is It Time to Change China's Population Policy?" *China: an International Journal* 2, no. 1 (2004), 136-137.

[13] Evidence showed that “the commission's work was very effective,” and the birth control policies had brought the beginning of a decrease in birth rate since the end of the 1970s. For instance, according to census results in 1990, China’s total population was 1.1 billion with a birth rate at 1.47%. In 1995 its population was 1.2 billion with a birth rate of 1.12%. By the end of 2003, the birth rate stood at 1.24% with a mortality rate of 0.64 %, leaving a natural growth rate of 0.6%. [14] Let me explain these data in another way: during the first twenty years’ of the implementation of this policy it prevented 300 million peoples’ births accumulatively-- about the size of the national population of today’s United States-- and thereby “saved $4,000 billion (yuan) of the strain on food production and other resources”; and “the number of children born to each Chinese family decreased to 1.8” in the 1990s, only reached half the number of what they had before 1975. [15] Table 5 presented the continued upward trend of “only-child” birth rate since the Chinese Government implemented the family planning policy in 1973.

在周恩来总理的努力下，中国政府直到 1973 年才实施了计划生育政策，当时的口号是“一个不少，两个最好，三个多了”。具体规定每个城市夫妇只许生一个孩子；农村夫妇允许生两个孩子，前提是头胎是一个女孩或两个孩子的年龄间隔四岁；对 55 个少数民族则无生育限制。到了 90 年代，少数民族自治区的农村少数民族夫妇限制生 2-3 胎，但对西藏的农村夫妇仍无生育限制。实际上直到 1978 年中国才真正严格执行了计划生育政策，在国家计生委领导下，“每个乡镇均设有计划生育委员会”。 2003 年国家计生委的名称中加入“人口”一词，改为“国家计划生育与人口委员会”，成为“跨部委的制定和实施人口政策的主管机构”，实际上使该委员会的职能由控制生育而扩大为更广范围的“解决所有与人口有关的问题”。证据表明“该委员会的工作非常有效”，计划生育政策令出生率从 70 年代末开始下降。例如据 1990 年人口普查结果，中国总人口为 11 亿，出生率为 1.47％；1995 年全国总人口为 12 亿，出生率为 1.2％；截至 2003 年底，全国的出生率为 1.24％，若减去 0.64％的死亡率，仅有 0.6％的人口自然增长率。换句话说，这项政策实施的头二十年内就累计少生了 3 亿人 （相当于当今美国的全国人口），从而“节省了 40 亿元人民币的粮食与其他资源的消耗”。到了 90 年代，“中国减少到每个家庭平均 1.8 个孩子”，只有 1975 年以前的一半数量。表 5 可见中国政府在 1973 年实施计划生育政策后，“独生子女”率持续上升的趋势。

Table 5: Share of First, Second, and Third or Higher-order Births in China, 1973-2000
(Percent of Birth Rate)

	1st birth	2nd birth	3rd birth and above
1973	21	21	59

[13] Xinhua Agency, “Population Timeline,” *China Daily,* 20 Aug. 2003.
[14] CPIRC, “China to Usher in Major Changes in Population Policies.”
[15] Chen Qin, 295.

1980	38	27	35
1987	52	32	17
2000	68	26	6

*Source: Nancy E. Riley, "China's Population: New Trends and Challenges," *Population Bulletin* 59, no. 2 (June 2004), 16.

Thus, China claimed "a decisive victory in population control efforts by the 1990s".[16] The "one-child-per-family policy", however, is responsible for the plight of the gender ratio imbalance, the aging society, "4: 2: 1 family model", as well as the psychosocial defects of the only-child. In fact, this policy has been a controversial topic worldwide since the 1980s (I will discuss this very question in the final section.). For example, China's family planning policy was accused by the West of violating its people's Human Rights. Politically and academically, these accusations were challenged by many government officials and scholars. Just as anthropologist Susan Greenhalgh states, "Wedged between an anti-totalitarian, China-demonizing discourses emerging from conservative forces in the United States…Most western Feminists and Chinese specialists have avoided the topic, perhaps deeming it too politically sensitive and ideologically troubling to touch."[17] Other related problems as to the accuracy of official census figures, "floating population", and baby booms, however, appeared gradually and influenced the efficiency of China's birth control program.

自此中国宣布"到 90 年代时人口控制工作已取得了决定性胜利"。然而，"一胎化政策"又带来了性别比例失衡、社会老龄化、"4：2：1 家庭模式"以及独生子女的心理缺陷等负面问题。事实上该政策自 80 年代以 来， 一直是一个有争议的全球话题（作者将在最后一节讨论该问题）。例如，中国的计划生育政策被西方指责为侵犯人权。在政治上和 学术上，许多政府官员和学者亦挑战这些指控。 正如人类学家苏珊格林哈尔希指出，"在反极权主义思潮中，美国保守势力又兴起妖魔化中国话题... ...大多数西方女权主义者和中国学者回避该话题，也许因为它在政治上太过敏感，在理论上招惹麻烦"。毕竟像官方人口普查数字的准确性问题与流动人口、婴儿潮等相关问题已逐渐出现， 并影响着中国计划生育的成效。

First, the accuracy of China's official census figures is doubtable. According to Zhu Zhixin, general director of the National Bureau of Statistics, the census figures in 2000 showed that "China's population has grown by 132 million since 1990, an increase of 11.7%; annual growth was 1.07% --down 0.4% from the rate in the 1980s." He declared: "the census showed that China's compulsory birth-control policies were effective in holding down

[16] CPIRC, "China to Usher in Major Changes in Population Policies."
[17] Susan Greenhalgh, "Fresh Winds in Beijing: Chinese Feminists Speak Out on the One-Child Policy and Women's Lives," *Signs* 26, no. 3 (Spring, 2001): 847.

population growth." [18] Some Western independent analysts, who "put the number of Chinese as high as 1.5 billion," however, believed that those official census figures substantially underestimated the actual growth of China's population because "many Chinese are reluctant to co-operate with the census takers." Just as Rupert Wingfield-Hayes, the BBC Beijing correspondent, reported that "serious questions remain over the accuracy of the figures…as tens of millions of people with extra children are thought to have hidden them from the census takers for fear of being punished." [19] As another example, when the result of the gender ratio of Chinese new births of 112: 100 in 1990 demographic census was published, a majority of Chinese researchers doubted the accuracy of this figure. They believed that the actual situation of gender ratio imbalance of Chinese new births was not as serious as what the figure showed. The reason the figures were higher than their estimates resulted from deceptive reporting of downplaying statistics on baby girls on purpose. [20] Undeniably, many false reports and statistics, which were made intentionally by some officials of local governments to indicate their political achievement or to avoid punishment, made China's official census figure unbelievable to the West.

首先,中国官方人口普查数据的准确性令人质疑。据国家统计局局长朱志新称,2000年人口普查的数据显示,"全国人口自1990年以来增长了11.7%,为 1.32亿人,年增长率为1.07% ,比80年代下降了0.4%。 所以该数据表明,中国的计划生育政策有效地遏制了人口增长"。然而一些西方独立分析人士却认为,"中国人口已高达15亿人",官方人口普查数据大大低估了中国人口的实际增长,因为"许多中国人不愿意 配合普查员的工作"。 正如英国广播公司驻北京记者鲁伯特温菲尔德 海斯报道说:"这些数据的准确性存在严重问题...上千万超生者因惧怕遭处罚而对普查员隐瞒实情"。 再比如,当1990年人口普查发布112:100的男女婴儿出生性别比例的结果后,很多中国研究人员怀疑这一数字的准确性。他们认为全国新生儿 性别比例失衡的实际情况并未达到该数字显示得那么严重,其原因是故意隐瞒女婴的统计。不可否认的是,一些地方政府官员为了昭示其政绩或避免惩罚而故意造假数据,致使中国的官方人口普查数据令人难以取信于西方。

Second, China's soaring rural immigration made population control difficult. With the transition to the market economy system from the planned new economy system 30 years ago, household registration became relaxed, and rationing has been gradually cancelled. Chinese farmers "were encouraged to engage in industrial and commercial activities and migrated to cities and towns. The number of people living in places other than their registered home

[18] BBS News, "China's Population Growth 'Slowing'."

[19] BBS News, "China's Population Growth 'Slowing'."

[20] Yu Xuejun ed, *Review on the Development of China's Population: Reexamining and Prospect* (Beijing: The People's Press, 2000), 176.

towns doubled from 70 million in 1993 to 140 million in 2000." [21] Such a situation affected not only the enforcement of birth control policy but also the accuracy of census figures. The Government of China used to tightly control the family planning program by administrative means, such as food rationing, household registration, job and housing allocation, besides economical punishment. These administrative means used to be effective in the 1970s and 1980s when the Chinese society was characteristic of a rigid "dual-system of city/countryside division" --"a system of wage and welfare rewards or rationing that favored urban residents". [22] Also, the government had absolute power to control the arrangement of all social resources at that time. From the 1990s, however, with the lessening of the government's intervening in people's economic lives in a market economy system, the official implementation of population control policy lost effect to some extent. Chinese farmers who did not benefit from previous policies had nothing to lose and, thereby, had no fear of being punished due to excessive reproduction. In particular, they had chance to flee from the land and to make lives out of their hometowns, and finally became the "floating population" who were out of the control of local governments to a large extent.

其次，中国的农村移民增加了人口控制的难度。随着 30 年前从计划经济体制向市场经济体制的过渡，户籍管理松动了一些，配给制也逐步取消了。中国农民"被鼓励进城从 事工商业活动。从户籍所在地方迁居异地的人口从 1993 年的 7 千万翻番到 2000 年的 1.4 亿"。这种情况不仅影响到计划生育政策的执行，而且影响到人口普查数据的准确性。中国政府过去通过行政手段，譬如食品配给、户籍登记、就业和住房分配，外加经济处罚来严加控制计划生育。这些行政手段曾在上世纪 70~80 年代，当时中 国社会还是僵化的"城乡二元体制"（即工资和福利或配给仅优惠城镇居民的体制）下乃行之有效，况且当时政府拥有绝对权力来安排一切社会资源。然而 从 90 年代起，在市场经济体制下，随着政府对民众经济生活干预的减少，官方执行计划生育政策在一定程度上失效了。未曾从以往政策中受益的农民如今无所畏惧，不怕超生处罚，尤其当他们有机会逃离乡土外出谋生，最终成为在很大程度上地 方政府难以控制的"流动人口"时。

Third, the regularity of population reproduction influenced the efficiency of China's birth control program. The development of population has its own periodicity and regularity, (for example, the periodicity of a baby boom usually is 20 to 30 years), which hardly yields to any artificial, coercive measures. Therefore, it is impossible to solve the long-term population problem within one or two generations. For example, owing to China's huge base of fertile population, we can not expect the appearance of a miracle like zero growth of its population before 2050, even taking the strictest "one-child-per-family" policy and the "later-longer-fewer" policy (which targeted three reproductive goals -- "later marriage, longer

[21] Liang and Ma, 478.
[22] Chen Qin, 370-371.

between first and subsequent children, fewer children." [23] The reality is well-known: China experienced the first baby boom from 1950 to 1958 and the second from 1962 to 1975. China has just passed its third baby boom, and, demographically speaking, it expects to embrace another one between 2020 and 2040 whether it wishes to or not.

第三，人口繁殖规律影响着中国计划生育的成效。人口发展有其自身的周期性和规律性（例如婴儿潮的周期通常为 20~30 年），几乎不为任 何人为或强制手段而转移。因此，在一两代人之内难以解决长期的人口问题。 比如，由于中国的生育人口基数庞大，我们不能指望在 2050 年之前出现人口零增长的奇迹，哪怕采取最严格的“独生子女”政策和“晚生晚育”政策。众所周知的现实是：中国于 1950~1958 年经历了第一次婴儿潮，1962~1975 年为第二次婴儿潮，又刚刚从第三个生育高峰期通过。人口规律性决定了无论情愿与否，中国都将在 2020~2040 年间迎接另一个生育高峰期。

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[23] Bongaarts and Greenhalgh, 586.

2010 International Congress of Mathematicians in Hyderabad, India

2010 年國際數學家國會於印度亥德瑞貝市舉行

Jenny 臻你

Introduction 介紹

The most recent largest conference in mathematics— 2010 International Congress of Mathematicians (every four years) was held at the Hyderabad International Convention Centre on August 19-27. There were about 4,000 professors and mathematicians throughout the world participating this spectacular and magnificent scientific event including about 3,000 foreigners and 1,000 Indians. The opening ceremony was inaugurated on 19 August by Srimati Pratibha Patil, the President of India, Professor Laslo Lovasz (President, International Mathematical Union), Dr. K. Rosaiah and Mr. E. S. Narasimhan (Chief Minister and Governor of Addhra Pradesh), Professor Martin Grotschel (Secretary of IMU), Prof. M. S. Raghunathan (Chair, Executive Organization Committee), Professor Louis Nirenberg (the recipient of Chern's prize), Professor Rajat Tandon (Secretary of EOC), Professor Seyed E. Hasnain (Vice-Chancellor, University of Hyderabad), etc. They delivered a series of speeches in an arranged order.

最近的最大世界數學會議—2010 國際數學家國會(每四年舉行一次)於 8 月 19 日至 27 日在印度亥德瑞貝市國際會議中心舉行，全世界約 4,000 數學家及教授们參加這壯觀與高階科學會議，其中包括約 3,000 外國人與 1,000 印度人。開幕典禮於 8 月 19 日由印度帕帝爾總統偕同國際數學聯盟會長勞襪茲教授、當地首長若薩博士及省長那瑞西馬先生、國際數學聯盟會秘書長格特期教授，執行籌劃委員會主任瑞格漢慎教授、尼倫伯格教授(陳省身獎得主)、執行籌劃委員會秘書長潭東教授，亥德瑞貝大學副校長哈斯那教授…等共同揭開，他們連續給予一連串的演講。

"ICM is an old tradition more than a century old," said Professor Lovasz. He mentioned that it serves as a forum for discussion of important issues in mathematics and is an occasion for the IMU to award their main prizes. India had long tradition in mathematics said Lovasz and cited by Bhaskara and Ramahujan. He described that this event should contribute to the developments of mathematical research and education throughout the world. "The Congress will be focus on the importance of mathematics as a discipline as well as a tool in Science and Technology and in many other practical matters," said Dr. Rosaish. "The ICM being held in India is of historical significance and that it is an opportunity to interact with the best mathematical minds," said Prof. Raghunathan.

勞襪茲教授說:「國際數學家國會是 100 多年的傳統，其提供一個論壇，討論數學

的重要問題，及讓國際數學聯盟頒發重要的獎章。」 他、巴司克拉教授、瑞格漢慎教授說印度在數學有很長的傳統。勞襪茲教授還說這會議應該貢獻於世界數學研究與教育的發展。當地首長若薩博士說:「國際數學家國會將加強集中於數學學科的重要性，以及科學與科技工具及其他很多方面的實際應用。」瑞格漢慎教授說:「國際數學家國會在印度舉行是具有歷史的重要性，與世界最佳的數學心靈接觸的一個機會。」

The most prestigious IMU prizes were endowed upon the recipients by Srimati Pratibha Patil, the President of India. The Fields Medals were presented to Professors Elon Lindenstrass, Ngô Bâo Châu , Stanisiav Simirnov and Cédric Villani. The Rolf Nevanlinna Prize was awarded to Professor Daniel Spielman. The Carl Friedrich Gauss Prize for applications of mathematics was presented to Professor Yves Meyer. The first winner of the Chern Medal Award was given to Professor Louis Nirenberg.

國際數學聯盟最珍貴的數學獎由印度帕帝爾總統頒發斐爾茲獎頒贈給四位傑出數學家: 林燈司榻斯教授、趙教授、思米耨夫教授、威藍尼教授；尼文利那獎頒給司皮爾門 教授；高斯獎頒給眉爾教授；陳省身獎頒給尼倫伯格教授，總共 7 位得獎者。

President Srimati Pratibha Patil congratulated all the prize winners and said that she was exhilarated to be among mathematical scholars. She indicated that the Pythagoras theorem appears many times in ancient Indian texts and remembered Indian mathematicians like Aryaghata, Brahmagupta, Bhaskara, Madhava and Srinivasa Ramanujan. She also mentioned that mathematics is an integral part of India's science policy and plays a role in information technology, industry and finance.

印度帕帝爾總統恭喜所有得獎主，她說非常興奮處在這些數學學者们之中，畢式定理出現在古印度書籍中很多次，及記得幾位聞名的數學家。她還說數學是印度科學政策其中的一個整體部分，數學在資訊、科技、工業、財政佔有重要腳角色。

- **Fields Medalists** **斐爾茲獎得主**

Professor Elon Lindenstrass (Hebrew University, Jerusalem, Israel). Citation: **"For his results on measure rigidity in erogic theory, and their applications to number theory."**

林燈司榻斯教授(以色列耶路撒冷希伯來大學): **「由於他在埃若機克理論的度量硬度，及其在數論的應用所作出的貢獻 。」**

Lindenstrauu has achieved great advances in ergodic theory, the study of measure preserving transformations. It is very impressive that his work on a conjecture of Furstenberg and Margulis concerning the measure rigidity of higher rank diagonal actions in homogenous spaces has led to many applications. The collaborated work with Einseidler and Katok, he established the conjecture under a further hypothesis of positive entropy. It has striking applications to the classical Littlewood Conjecture in the theory of Diophantine

approximation. Developing these as well as other powerful ergodic theoretic and arithmetical ideas, he resolved the arithmetic quantum unique ergodicity conjecture of Rudnick and Samak in the theory of modular forms. His work is exceptionally deep and its impacts far beyond ergodic theory.

林燈司榻斯在度量保持變換的研究，埃若機克理論作出深入的貢獻。他的工作在發斯坦堡及馬格立斯推測，關於在共型空間的高維度量硬度，其引導了很多的應用，令人印象非常深刻。在他與挨隨得與卡投的合作論文中，他建立了 一個更進一步的推測，在對古典立投晤推測在搭凡探的逼近理論，其有令人震撼的應用。除此之外，在其他權威埃若機克理論及算術思維，他解決了陸得匿克及撒馬克的算術量子力學的唯一埃若機克推測，他的工作非常深奧，及其影響遠超過埃若機克理論。

Professor Ngô Bảo Châu (Universite Paris-Sud Orsad, France). Citation: **"For his proof of the fundamental Lemma in the theory of automorphic forms through the introduction of new algebra-geometric methods."**

趙勾伯教授(法國巴黎大學): **「由於他在自決形式理論的基本引理的證明，經由新代數幾何方法，所作出的貢獻 。」**

Robert Langlands formulated various unifying principles and conjectures relating automorphic forms on different groups, Galois representations and L-functions in the 1960s and 1970s. These led to what is so called the Langlands programme today. The main tool in establishing some cases of these conjectures is the trace formula and in applying it for the above purposes a difficulty intervenes: to establish some identities in harmonic analysis on local groups as well as ones connected to arithmetic geometric objects. This problem is known as the Fundamental Lemma. Châu's beautiful proof of this important conjecture is partially based on the introduction of geometric objects and techniques into this sophisticated analysis. His accomplishment, connecting algebraic geometry, group theory and automorphic forms, is leading to many striking advances in the Langlands programme and topics linking with it.

在1960年 and 1970年期間，.籃格濫德斯作出不同型式統合原則及推測關於自決形式在不同的群中高挖代表及L函數，其成為今日的籃格濫德斯計劃，主要工具在建立這些推測的一些情況是跡式及應用它到上述目地很困難的組合: 建立一些等式在調和分析在局部群，如同人们聯合算術幾何物件，這問題是所謂的基本引理。趙勾伯漂亮的證明這重要推測部分根據幾何物件及技術到這繁雜的分析，他的貢獻是聯結代數幾何、群論、及自決形式，其引導很多另人震撼籃格濫德斯計劃及其關聯項目。

Professor Stanisiav Simirnov (Universite dé Genèva, Switzerland). Citation: **"For the proof of conformal invariance of percolation and the planar lsing model in statistical**

physics."

思米耨夫教授(瑞士日內瓦大學):**「由於他在過濾共形不變的證明,及在統計物理平面埃形模型,所作出的貢獻 。」**

It was predicted that the scaling limit of various two dimensional models in statistical physics has an unexpected symmetry, i.e., it is conformally invariant, in 1990s, and used in many applications. Simirnov was the first to prove this rigorously for two important cases: percolation on the triangular lattice and the planar Ising model. The proof is elegant and it is based on insightful combinatorial arguments. His work gave the foundation for important methods in statistical physics like Cardy's Formula, and provided an important missing step in the theory of Schramm-Loewner Evolution in the scaling limit of various processes. He was born in St. Petersburg, Russia in 1970. He studied analysis with Viktor Havin at St. Petersburg University, and then moved to the Caltech which he received his Ph. D. under Nikotai Makarov.

在 1990 年代,根據推測,不同二維模型在度量極限統計物理,有意想不到的對稱,即是它是共形不變的,其有很多應用。思米耨夫是第一嚴格的證明兩個重要情況:在三角格及平面埃形模型的過濾。他的證明很漂亮,其以深入組合討論作基礎。他的工作在統計物理給予重要方法,比如卡帝程式,及提供重要遺失的程序在施拉密-摟擬演變方程於不同步驟度量極限。他於 1970 年出生於蘇俄、聖彼得堡。他向哈汶學習分析於聖彼得堡大學,隨後搬遷到加州理工學院,他於此校在馬克洛夫指導下,獲得博士。

Professor Cedric Villani (Institut Henri Poincaré, Paris, France). Citation: **"For his proofs of nonlinear Landau damping and convergence to equilibrium for the Boltzmann equation."**

威藍尼教授(法國巴黎龐克瑞學院):**「他在非線性籃道鐘擺及包茲曼方程式平衡收斂的證明,所作出的貢獻。」**

One of the controversial theories of classical physics is Boltzmann's kinetic theory of gases. Instead of tracking the individual motion of billions of individual atoms, it studies the evolution of the probability that a particle occupies a certain velocity. The equilibrium probability distributions are well known for more than a hundred of years, but to understand whether and how fast the convergence to equilibrium occurs has been very difficult. Villani (joint with Desvillettes) obtained the first result on the convergence rate for initial data not close to equilibrium. Later in a collaborated paper with his student Mouhut he rigorously established the non-linear Landau damping for the kinetic equations of plasma physics, settings a long-standing debate. He has been one of the pioneers in the applications of optimal

transport theory to geometric and functional inequalities, and published a timely and accurate book on mass transport.

古典物理理論的一個議論是汽油包茲曼動力學。取代尋查上億的原子的個別行動，它研究一粒子具有某種速度機率發展行為。機率分配率的平衡已揭曉約一百多年，但是瞭解是否與多快初值平衡收斂率是很困難的。威藍尼(與答斯威立特合作)獲得了初值收斂趨近平衡的第一結果。隨後他與他的學生模哈合作，他嚴格的建立一個非線性籃道鐘擺為生態物理動力方程式，成為長時間的辯論。他是最佳變換理論運用到幾何與泛函不等式的先驅之一，他即時的出版了一本關於變換的書(其對他獲獎有幫助)。

- **The Rolf Nevanlinna Prize** **尼文利亞獎得主**

Professor Daniel Spielman (Yale University, USA). Citation: **"For smoothed analysis of Linear Programming, algorithms for graph-based codes and applications of graph theory to Numerical Computing."**

司皮爾門教授（美國耶魯大學)**:「他在線性程式平滑的分析， 以圖形作基礎電碼的演算法，及以圖形理論應用到數值計算所作出的貢獻。」**

The oldest algorithm for linear programming, the Simplex Method, performs very well in practice, but mathematicians have been puzzled about this efficacy and have tried for long to establish this as a mathematical theorem. Spielman and his collaborator Shenhua Deng developed an elegant method and proved that, while the method fails, slight modifications of any pathological example yields a "smooth" problem on which the Simplex method works well. His second contribution is in the area of coding. An important technique to make both coding and decoding efficient is based on well-connected graphs called expanders. He and his coauthors have designed very efficient method for coding and decoding. These codes provide an efficient solution to problems such as packet-loss over the internet and are very useful in multicast communications. They also provide of the best known coding techniques for minimizing power consumption required to achieve reliable communication in white Gaussian noise.

線性程式最老的演算法是辛普森方法，實際演算的很好，但數學家疑惑有關它的有效且已經試驗很長的一段時間，以建立一個數學理論。司皮爾門與他的合作者鄧申華(英譯)發展一個漂亮的方法及證明當此方法不適用時,稍微修改其方法導致一個「平滑」問題，辛普森方法在此問題上處理工作的很好。他的第二個的貢獻是電碼，一個重要技術是有成效的製碼與解碼，以好的連結圖形作基礎其稱為擴張圖。司皮爾門與他的合作者設計了很有成效製碼與解碼，其製解碼對此問題提供了有效的解決，例如網上的檔案遺失及多元化連通，他們還提供最知名的製解碼，以減低能量消耗在白色高氏雜音，以成就可靠的連通。

- **The Gauss Prize** **高斯獎得主**

Emeritus Professor Yves Meyer (École Normale Supérieure de Cachan, France). Citation: **"For fundamental contributions to number theory, operator theory and harmonic analysis, and his pivotal role in the development of wavelets and multi-resolution analysis."**

衛斯・眉爾教授（法國科簽高等師範大學）: **「由於他在數論、算子理論、 調和分析，與他在波形設計及多元化解決分析的領導角色，所作出的貢獻。」**

Meyer has made great contributions to numerous areas of mathematics. In 1970s, he developed the theory of model in number theory, which has become an important tool in the mathematical study of quasi-crystals (space filling structures that are ordered but lack of translational symmetry) and aperiodic order. Collaborated with Ronald Coifman and Alan Maclntosh, he brilliantly proved the continuity of the Caucy integral operator on all Lipschitz curves, along-standing problem in analysis. He also played a leading role in the modern development of wavelet theory, which has had a spectacular impact in information sciences, statistics and technology. Fourier analysis is a universal tool in applied mathematics, and due to the great and large contributions of Meyer's work, wavelet theory has become the new name for Fourier analysis. He constructed the first non-trivial wavelet bases and wave packets that dramatically extended the expressing power of wavelets. This led to many applications in practice in image processing, data compression, statistical data analysis and elsewhere.

眉爾在數學的許多項領域作出貢獻。1970 年間他發展數論模型理論，其在伪晶體的數學研究及週期性的次序成為重要的工具。他與其合作者寇夫門及馬克令投斯的文章中，他智慧的證明了科西積分運算在利普西茲曲線的連續性。他也在現代波形理論擔任領導角色，其在資訊科學、統計及技術，具有巨大的影響。富利頁分析是應用數學的全面工具，由於眉爾的大量工作貢獻，波形理論已經成為富利頁分析的新名詞。他製造了第一個非平凡波形基底及波形包裹，神奇的擴充了波形的形式權威，其在影像處理數據壓縮統計數據分析及其他方面引導了很多應用。

- **The Chern's Medal Award** (for the first time) **陳省身獎得主**

Emeritus Professor Louis Nirenberg (Courant Institute of Mathematical Sciences, New York University, USA). Citation: **"For his role in the formulation of the modern theory of non-linear elliptic partial differential equations and for mentoring numerous students and post-docs in this area."**

尼倫伯格教授:「由於他在當代非線性橢圓偏微分方程式理論的角色，及在此領域指導很多博士學生與博士後，所作出的貢獻。」

Nirenberg is one of the outstanding analysts and geometers of the 20th Century. He has made great contributions to the understanding of linear and non-linear partial differential equations and related areas of complex analysis and geometry. He developed intricate connections between analysis and differential geometry and applied them to the theory of fluid flow and other physical phenomena. His theorem with August Newlander on the existence of almost complex structures has become a classic. One of the most popular quoted results in analysis is that a priori estimates for general linear elliptic systems, which he obtained with Shmuel Agmonand Avron Douglis. His fundamental work with Fritz John on functions of bounded mean oscillations was crucial for later work of Charles Fefferman on the space of such functions. In joint work with Joseph Kohn, he introduced the notion of pseudo-differential operators, which has been influential in many areas of mathematics. He has published 185 papers and has advised 46 students.

尼倫伯格是 20 世紀傑出的分析學家與幾何學家之一,他在線性與非線性橢圓偏微分方程式理論及其有關複變分析及幾何作出偉大的貢獻。他在分析與微分幾何發展了深入的聯合及應用到流體力學及其他物理現象。他與紐籃德的定理有關几乎複變結構的存在性已經成為典型。他最普遍結果之一是在線性橢圓偏微分方程系統預測評估，其與搭格力斯共同獲得。他與約翰共同獲得在有界平均振動函數，對以後與飛斐門的工作在這函數空間是重要的。他與科恩介紹伪微分算子，其在數學的很多領域是有影響力的。他有 185 篇著作與指導 46 位博士學生。

There were about 500 professors and mathematicians to participate the American Mathematical Society Summer Institute on Differential Geometry at UCLA in 1990, and all the paper presentations were dedicated to Professor S. S. Chern's 80th birthday, where I delivered "Spectral Geometry of V-Manifolds and its Applications to Harmonic Maps" [5]. Chern and my PhD adviser Professor Joseph H. Sampson were good friends for many years. "Is Joe coming?" he asked me. "I don't know," I answered. "Is he still with his Japanese wife together?" his wife asked. "Yes", I said. We then chatted about harmonic maps for a while. At 2010 ICM, I congratulated to Professor Nirenberg and told him that Chern must be very pleased that he received his prize, $500,000 USD (the highest monetary at ICM), half for him, half for his designated institution. "Oh, you knew Chern," he said. "Yes!" I answered. I then asked him how to approach my difficult project "Well-posedness of biwave maps", and he told me to utilize energy estimates (which I was using).

1990 年美國數學學會在 UCLA 舉辦了微分幾何暑期數學研究院，約 500 位教授與數學家參加，所有的論文演講呈獻給陳省身教授 80 歲生日，我講了「V-流型的譜幾何及其在調和映射的應用」[5]。陳省身與我博士指導森普遜教授是多年的好朋友，陳省身問我:「約瑟・夫森普遜來嗎?」我說:「我不知道」，緊接著他的夫人問我:「他與日本

太太還在一起嗎？」我說:「是的!」然後我們談論調和映射一陣子。今年在國會我恭喜尼倫伯格教授，且告訴他陳省身在天之靈一定很高興他得其獎—五十萬美元，一半予他，一半給他指定的大學作數學研究。他說「哦！你認識陳省身。」我然後問他如何逼近我困難的計劃「2-波形映設的好行為」,他告訴我用能量評估(我是正在用能量評估)。

There were a few special lectures delivered by seven recipients, and numerous professors presented laudations to seven winners, which were magnificent and impressed. There were many plenary lectures and invited lectures given by many well-known professors in 20 sections of subjects. I also presented my paper “Some Properties of Biwave Maps” [5] in Section 5: Geometry on August 22. The paper has been accepted and will appear in the *Journal of Geometry and Physics.*

所有得獎主給予特別講座，及一些教授給予七位得獎者讚賞文，其令人印象深刻與讚詞絕佳。總共有 20 領域的班別，其中還有很多有名教授給予正式演講與邀請演講。我也在第五班:「幾何」領域，呈獻我的文章「2-波行映射的性質」[5] 於 8 月 22 日，此文章已經被接受，將出版於「幾何與物理數學學術期刊」。

There are about 45% vegetarians in India including their Prime Minister. I have enjoyed their vegetarian food very much, since I am a Buddhist. I took a three-wheeled electrical cart to downtown in Hyderabad with an Indian Professor, and had a pleasant tour. India is like a tale of two cities, rich people are very rich, but poor people are suffering famine. Indians are very friendly and have treated us well, and we really appreciate their hospitality for hosting 2010 ICM. Finally, our best wishes to Indian government and people for developing economy quickly like China to resolve their famine problems. Overall, I had a wonderful and fruitful visit in Hyderabad, India.

在印度約有 45%的素食者包括其總理，因為我是佛教徒，我很享用印度的素食。我與一位印度教授乘坐三輪電車到亥德瑞貝市區，看見了其中貧富的一切，感觸良深。 印度如同「雙城記」富者很富，但很多窮人們仍鬧饑荒。印度人们是友善的，我們很感激他們殷勤的招待與舉辦 2010 年國際數學家國會。最後我們誠懇祝福印度政府與人們快速發展經濟如同中國，擺脫饑荒。我在亥德瑞貝市有一個豐碩與愉快的訪問。

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The Life of Thomas Alva Edison and Science Education

發明家愛迪生的生活與科學教育

Dr. Winston C. Chow 周棋博士

Introduction 介紹

Thomas Alva Edison (1847-1931) was very possibly the greatest inventor the world has known. His inventions such as the phonograph and electric light bulb had so much impact in the lives of humanity that the effects are greatly felt even to this day. He patented over 1100 inventions during his life.

愛迪生 (1847-1931)可能是舉世聞名最了不起的發明家， 他的發明例如留聲機、電燈、電燈泡等，對全世界人類至今的生活，仍具有偉大的震撼作用。在他的一生當中，他專利了 1100 樣發明項目。

With only 3 months of formal education, Thomas Edison, with strong parental encouragement, was mainly self-educated. Yet the attributes that contributed to his ingenuity holds many lessons to follow on educational excellence.

愛迪生只接受了 3 個月的正規教育， 他在父母百般鼓勵下，主要是靠自學的。 他的天生聰明機巧，得到許多課訓 以導致優秀教育。

Education and Edison's Words, "1 Percent Inspiration and 99 Percent Perspiration"

「1%啓發和 99%血汗」是愛迪生有名的術語。

Curiosity about the world around him, persistence with hard work, imaginative creativity with willingness to think "outside the box" for new ideas were traits Edison possessed. He was not at all afraid to make mistakes and was skilled in the use of "trial and error" methods to test new ideas. These traits probably contributed greatly to his achievements, and encouragement of them to students may greatly help their scholastic developments.

愛迪生對世界周遭的求知慾，堅持與堅苦工作，有想像力的創造性，認爲「在箱子之外」仍有新觀念是愛迪生擁有的特徵。 他不是害怕犯錯誤，而是熟練在對「嘗試與錯誤」方法測試新的想法，這特徵對他的一生的成就具有很大的貢獻，或者鼓勵學生们嘗試趴他的特徵，對他們的學術發展也許很大地幫助。

Time magazine dated July 05, 2010 explains how interest in science by American students seemed to be declining. At one time, the ratio of science & engineering diplomas to the college age population in the US was among the top. Now it is near the bottom of 23 countries that collected data on this issue. In 2007, although 22,500 doctoral degrees in science & engineering was awarded in the US, over half of them were awarded to foreigners.

紐約的時代雜誌(週報)2010 年 7 月 05 日說明美國學生们對科學興趣似乎在下降。 在過去美國的科學比率及工程文憑相對學院年齡人口是全世界首位; 但現在根據數據調查 ，美國的科學比率及工程學文憑位於 23 個國家之後。 於 2007 年，雖然美國授予了 22,500 個科學及工程學博士學位，但是有一半授予了外國人们。

History seem to show Edison believed talents and even geniuses in large part could be developed by motivation and persistence and not giving up. He said a genius is "1 percent inspiration and 99 percent perspiration". His attributes, explained above, serves as role model for developing research scientists. His sense of imagination allowed him to dream new ideas instead of only following old established ones. His curiosity of the world around him gave him enthusiasm to pursue his quests. These traits, namely understanding ingenuity can be developed by persistence, imagination to search for new ideas in addition to only memorizing and/or following old ones, intense curiosity, and other attributes that was described earlier here, are essential to aspiring scientists. Yet these traits can be promoted in any student by encouragement and training. They require no inherited genes at all. When promoted in students, there may be a revival of scientific fascination and interest among young people and a new surge in tomorrow's PhDs.

歷史似乎顯示愛迪生相信，天分和天才大部分可能通過刺激和堅持和不放棄而開發。 他說天才是「1%啓發和 99%血汗」。 他如上解釋，對於開發的研究科學家可起榜樣作用。他的想像力允許他作新的觀念而不是建立舊想法。他對世界的求知慾，讓他熱情追求他的需求。 這些特徵，即瞭解的機巧可以由堅持，想像力開發尋求新的想法，除了記憶並且或者跟隨的老舊觀念之外，這裡及早被描述的強烈的求知慾，對令人想往的科學家是根本的。 這些特徵對所有學生是可以被由鼓勵和訓練促進的。 他們根本不需要繼承的基因。 當促進學生時，也許有復興科學和利益青年人浪湧之中的明天博士们。

Early Life **早期的生活**

Thomas Edison was born in Milan, Ohio on February 11, 1847. His parents were Samuel and Nancy Elliot Edison, and he was the youngest of his parents' 7 children. He was called Al or Alva by his family.

愛迪生出生在俄亥俄州米蘭于 1847 年 2 月 11 日。 他的父母是山姆和南希艾略特・愛迪生，他是父母最年幼的的第 7 個孩子。 他的家人稱他埃爾或埃瓦。

He exhibited great curiosity starting as a young boy, leading him to ask numerous questions about the world surrounding him. Some of them are how hens hatch chickens or how can birds fly.

當他是一小男孩時，他具有巨大求知慾，使他詢問許多圍繞他的世界問題; 例如母雞如何孵化雞或鳥如何飛行。

At age 7, Alva moved with his parents to Huron, Michigan and was entered into public school. His numerous questions irritated his teacher, and he was considered a dunce and

called "addled". This enraged his mother, who withdrew him from school, marking the end of his 3 months of formal education. So his mother taught him until he learned so quickly shortly afterwards that his mother could no longer keep up with him. Alva's inquisitive nature was again demonstrated when his mother got him a chemistry book when he was aged 9. He would not accept statements in the book as factual and must test them out for himself.

在他 7 歲時，愛迪生與他的父母搬到密西根州休倫湖，進入了公立學校。 他的許多問題激怒了他的老師，并且他被認爲笨蛋并且叫「腐壞」。 這觸怒了他的母親，把他從學校撤出，標記他結束 3 個月的正規教育。 因此他的母親教導了他，不久之後，他那麼迅速進步，他的母親無法跟上他。愛迪生的好奇自然再被顯示了，當他 9 歲時，他的母親給他化學書， 他不會接受書籍上的聲明作爲事實，必須他自己作實驗。

When Thomas Alva Edison was 12 years old, he worked for Grand Trunk Railway, selling merchandise on the train. On the train during spare times, he performed chemistry experiments. At one time after accidentally setting on fire the baggage car, he was thrown off the train with all his belongings. Some believed that his partial deafness was caused by the conductor's alleged blows on his ears, but there are other theories.

當愛迪生 12 歲時，他爲大樹幹鐵路站工作，在火車賣商品。 在業餘時間，他在火車執行了化學實驗， 有一次不小心意外，在火車行李車廂導致起火，他與所有他的財產被丟拋下火車， 一些人認爲他的部份耳聾是由火車指揮揪他的耳朵造成，但也有其他理論。

In 1862, Alva rescued a young boy from being run over by a freight train car. As a reward, his grateful father taught him telegraphy. This started his new endeavor as a telegraph operator, and from 1863-1867, he worked as an operator in various cities. He went to Boston in 1868 to work for Western Union but resigned in early 1869 to become a full time inventor.
1862 年，愛迪生從被碾過貨車汽車搶救了一個年輕男孩，其感恩的父親教他電信法作爲獎勵， 從 1863-1867 年當電報員，他開始了他新的努力，他在各個城市作爲一名操作員。 1868 年他到波士頓爲西部聯合工作，但在 1869 年初辭職，成爲一位發明者。

Achievements **成就**

During that time period of his employment for the telegraph company in Boston, he created his first invention, a machine that electrically recorded votes. This was the first of his patented inventions. He wanted to sell the machine to the US Congress, but it was not well received. This frustrated the inventor, and he made a vow to not invent anything again that no one wanted.

愛迪生在他的就業於波士頓通信機公司的那時期，他創造了他的第一個發明，電子記錄表決機器， 這是他第一個給予專利的發明。 他想賣這機器對美國國會，但他們不願受接納，其 沮喪了愛迪生，他發誓願不再發明沒人想要的任何東西。

In 1869 he left Boston and traveled to New York City with almost no money and studied how to improve the stock ticker, a device that transmitted stock quotes by way of telegraph and

printed the information on tapes. He made major improvements to the machine and the president of the Gold and Stock Telegraph Company bought his patents for $40,000, which was a lot of money for that time. He opened a workshop in Newark, NJ, using this money, and started to manufacture his model of the stock ticker. Also, in 1874 he devised an improved version of the typewriter that can type faster than previous models.

1869 年愛迪生離開波士頓到了紐約，沒有金錢并學習如何改進證券報價機，即通過通信機在磁帶傳送股市行情并且打印信息的設備。他對此機器做了重大改進對，并且黃金股票電報公司廠長買了他的專利爲$40,000 美元，在那時間是很多錢。他使用這金錢在紐澤西州紐瓦克， 開了一個車間開始製造他的證券報價機的模型。 1874 年他構想了可能快速地打鍵比早先模型打字機的一個改進的版本。

Edison relocated to Menlo Park, NJ in 1876. He set up his famous workshop and laboratory in Menlo Park. Also in 1876, he invented the carbon microphone mouthpiece for use in the telephone. This type of transmitter has been in use even during recent times and was much more sensitive to sound than what was previously used. He also set up his workshop in West Orange, NJ in addition to Menlo Park.

於 1876 年他發明了碳麥克風喉舌其用於電話。 這個類型的發射機即使在最近時期間仍在使用，其對聲音比以前的較敏感。除了紐澤西州門樓公園，他也在西部桔子城也設定了他的車間工廠。

The most creative and original of Alva's inventions was the phonograph in 1877, as no one before him has constructed a devise that even resembled it. This was the first invention that won him fame, and as Randall Stross of the July 5, 2010 issue of Time said, "It was the product of a well-prepared but wandering mind". In other words, this is a true example of creativity and "thinking outside the box", even more so than his other inventions.

愛迪生最具創造性和原物的發明原物是 1877 年製作的留聲機，因爲沒人在他構想之前製造類似的東西， 這是贏取他名望的第一個發明。紐約的時代雜誌 2010 年 7 月 5 日期，軟蹈・思投斯說， 「它是一個準備充分，但漫步的頭腦的產品」。 換句話說，這是「思維在一個真實的箱子之外」的例子，比他其它的發明更具創造性。

The idea occurred to him while he was working on techniques to record telegraph messages on paper. He thought that besides recording telegraph signals, he could also record vibrations made by sound onto moving paper. Under his direction, his assistant built a device that used a diaphragm that vibrated with sound and was attached to a needle. The paper strip can be moved through rollers, while someone spoke into the diaphragm mouthpiece with needle. This caused the needle to scratch grooves onto the paper. Afterwards, sound can be reproduced by resting the needle on the newly scratched markings and moving the paper. They spoke "Mary had a little lamb" onto the device. The team later used tinfoil wrapped onto a cylinder in place of the paper. A crank was attached to the cylinder to turn the tinfoil for recording and playback.

當愛迪生在工作記錄通信機消息起了想法， 他認爲除了錄音通信機信號以外，他

可能也記錄聲音做的振動以移動紙。 在此方向之下，他的助理建立了使用一張膜片振動與聲音和附有針的設備。 而某人講了話入膜片喉舌與針，紙帶可以通過路輾被移動。這造成針抓凹線本文，以後聲音在最近被抓的標號可以通過休息針和移動本文再生產。他們講了「瑪麗有一隻小的羔羊」到設備。 他們後使用了錫箔被包裹圓筒代替紙， 曲柄連接圓筒對輪錫箔爲錄音和放音。

Thomas Alva Edison worked out the electric light idea in 1879. Although a great milestone for society, the phonograph was much more original, as many other inventors have also been working on the electric light. In 1878, he took a trip to Connecticut to visit inventor William Wallace's design of electric arc lights, which sent a current through two carbon sticks emitting an extremely bright light. The electricity was generated by a steam powered dynamo. Edison understood the great potentials of the dynamo. Yet, he wanted to invent an electric light that was not so bright to make it usable both indoors and outdoors. Other than the arc light, the main source of light at that time was powered by gas.

1879 年愛迪生產生制造電燈的想法， 雖然對社會是一個巨大里程碑，但留聲機是他最具原始潛能天賦的發明，因爲許多其他發明者也制作電燈。 1878 年他到康涅狄格州參觀發明者威廉華萊士對電弧光的設計，通過散發極端明亮的光的二根碳棍子產生電流。這電是由蒸汽供給動力的發電機發的。 愛迪生瞭解發電機的巨大潛力。 然而，他想發明不是那麼明亮的使它能用戶內和戶外的一個電燈。 除弧光燈之外，那時主要光源由瓦斯供給動力。

Edison did extremely extensive search and experimentation to find a filament that glowed from the resistance of an electric current but did not easily burned out. He even sent agents to foreign countries in search. He placed the filament in a bulb, and air was removed to reduce oxidation, delaying burn-out. After numerous failures, he used a cotton sewing thread that was carbonized and placed in a vacuum bulb on October 19, 1879. The bulb shined until October 21st. The inventor became world famous and was nicknamed "The Wizard of Menlo Park".

愛迪生做極端廣泛的查尋和實驗發現從電流的抵抗發光的細絲，但不容易燒光。他甚而請他的代理到外國查尋。 他在電燈泡安置了細絲，并且取消空氣減少氧化作用，耽擱燒壞。 在許多失敗以後，他使用棉花縫合的螺紋被碳化在真空電燈泡內，其安置在 1879 年 10 月 19 日， 電燈泡發光了直到 10 月 21 日。發明家愛迪生因此變得舉世聞名的「門樓公園的巫術師」。

With the introduction of his electric light and the use of the electric dynamo generator, a major business competition and power struggle started. Edison used direct current (DC) in his creation. That was challenged by industrialist George Westinghouse, as the DC current generators cannot send electricity economically for more than very short distances. Westinghouse got patents for the use of alternating current (AC) electricity, and it was used to transmit high voltages over much longer distances. This was opposed by Edison who felt it was unsafe. Furthermore, no one knew how to build a motor that ran on AC. Nikola Tesla

solved this problem in 1888, and Westinghouse bought Tesla's patents. History obviously showed that Edison's DC was overtaken by Westinghouse's AC, but Edison will always be famed for his electric light bulb, which remained structurally the same even to this day.

由於愛迪生對電燈的介紹和發電機發電的利用，主要企業競爭和權力爭奪開始了。 愛迪生在他的創作使用了直流電(DC)，被實業家喬治・西屋電器使用交流電(AC)挑戰，因爲直流電對當前發電器不可能爲便宜送電，只限於非常短的距離。 西屋電器得到了專利爲對交流(AC)電的使用，它可用於傳送高電壓更長的距離。 愛迪生反對它是不安全的。 此外，沒人會修造在 AC 運行的馬達。 1888 年尼克拉地思樂解決了這個問題，并且西屋電器買了地思樂的專利。 歷史明顯地表示，愛迪生的直流電 DC 由西屋電器的交流電 AC 追上，但是愛迪生總以他的電燈泡著名，至今仍然是這樣。

Toward the end of the 1880's he worked with William K. L. Dickson, his associate, on producing a motion picture camera. In 1891 they applied to patent a movie camera known as the kinetoscope, which used a peephole viewer. Initially, Edison was reluctant to work on an actual projector, as he felt peephole viewers had better financial futures than projected images. Edison later on fired Dickson after he helped competitors. Great competition and power struggle did follow, as with the electric light. In 1913, Edison worked on corresponding motion pictures with sound and developed a device that used his invented phonograph to synchronize sound with motion picture.

往 1880 年代尾，愛迪生與他的屬下威廉狄克生一起工作，在生產一臺電影照相機。1891 年他們申請給予專利電影攝影機以 kinetoscope 著名，使用一個窺視孔觀察者。 最初愛迪生勉強在一臺實際放映機工作，如同他感到窺視孔觀察者比投影圖像有更好的金融前景。 在他幫助了競爭者之後，愛迪生稍後解雇了狄克生。跟隨著電燈， 巨大競爭和權力爭奪隨之而來。 1913 年，愛迪生研究對應的電影與聲音，并且發展了使用他的留聲機與電影同步聲音的設備。

In 1885 Thomas Edison had a winter home, called Seminole Lodge, built in Fort Myers, FL, where he went with his wife, Mina Miller Edison, and he also set up a laboratory at that location.

1885 年愛迪生有一個冬天家，稱 Seminole Lodge，修造在佛羅里達州邁爾斯堡，他去與他的妻子，麥納米勒・愛迪生在一起，并且他也設定了實驗室在那個地點。

There were other devices that the inventor either invented or improved, including the alkaline storage battery, in addition to ones written here. His last invention was, as Hugh Russell Fraser stated in The World Book Encyclopedia of 1964, volume 6, "a method of making synthetic rubber from goldenrod plants".

愛迪生還發明其他儀器或者發明或改進，包括碱性蓄電池，除這裡描述的發明，他的最後發明載於休・羅素世界書百科全書陳述的 Fraser 1964 年第 6 冊「由金毛茛植物合成橡膠製造方法」。

Personal Life **個人生活**

The inventor married Mary Stilwell in 1871, and they had three children, Marion Estell, Thomas Alva Jr., and William. His wife died in 1884. His second wife was Mina Miller. They had three additional children, Charles, Madeleine, and Theodore.

1871 年愛迪生與瑪麗 Stilwell 結婚，并且他們有三個孩子、Marion Estell，托馬斯 Alva Jr. 和威廉。 他的妻子 1884 年去世。 他的第二個妻子是麥納米勒， 他們有三個孩子、查爾斯、馬德琳和西奧多。

Edison's achievements came from working nearly all the time, where he often forgot to eat or sleep. When new ideas came to his mind, he studied everything possible about them and sometimes made thousands of experimental tests with his assistants' help. His wives have complained about the fact that he devoted most his time to working.

愛迪生的成就來自幾乎一直工作，他經常忘記吃或睡覺的地方。 當新的想法來到他的頭腦，他學習了一切可能關於他們的知識和有時做數以萬計實驗性測試與他的助理幫助。 他的妻子抱怨，他致力大多數他的時刻於工作。

Automobile icon Henry Ford was Edison's friend, who also obtained a house in Fort Myers, FL, only a few hundred feet away from Edison's winter home. During the 50th anniversary celebration of the invention of the electric light on October 21, 1929, Henry Ford helped create a permanent monument of the milestone by moving Edison's original laboratory in Menlo Park to a museum in Dearborn, MI. The museum was known as Greenfield Village.

汽車大王亨利福特是愛迪生的朋友，在佛羅里達州邁爾斯堡中有一個房子，距離愛迪生的冬天家庭仅幾百英尺。 在電燈的發明的第 50 週年紀念慶祝期間於 1929 年 10 月 21 日， 亨利福特幫助創造一座永久紀念里程碑，移動愛迪生的原來在門樓公園的實驗室到麻薩諸塞州 Dearborn 的博物館，此 博物館現在名爲 Greenfield 村莊。

In Fort Myers, Edison joined the Fort Myers Civitan Club. He greatly supported the works of this club. The Civitan Club, which still exists, does volunteer service helping people in need. He believed this club did a lot to help people and thus felt honored to be its member. He occasionally brought Henry Ford to the meetings.

在邁爾斯堡中，愛迪生參加了邁爾斯堡 Civitan 俱樂部。 他大力支持這家俱樂部工作。 Civitan 俱樂部，至今仍然存在，在需要志願服務作公益幫助人民。 他相信這家俱樂部做很多幫助人民的好事，因而感覺榮幸是它的成員， 他給會議偶爾地帶來了亨利福特。

The inventor also associated with John Burroughs and automobile tire entrepreneur, Harvey Firestone, who did visit with Thomas Edison in Fort Myers. However, in the overall, Edison had difficulty making close friendships due to being at work nearly all the time.

愛迪生也和約翰· 菠羅斯和汽車輪胎企業家哈衛·菲爾思棟有來往，他與愛迪生同訪邁爾斯堡。 然而，在總體來說，愛迪生有困難保持友誼因爲他一直在工作。

Later Life **晚年生活**

During the October 21, 1929 fifty year anniversary celebration of the electric light in

Dearborn MI, where, as explained, Henry Ford created a permanent monument, Edison re-enacted how he invented the electric light. Along with Henry Ford, President Herbert Hoover, John D. Rockefeller, Jr., George Eastman, Marie Curie, and Orville Wright also attended the celebration.

在 1929 年 10 月 21 日， 五十年週年電燈發明紀念慶祝在麻薩諸塞州 Dearborn 的博物館舉行，按照說明，亨利福特創造一座永久紀念碑，愛迪生重立法解說他如何發明了電燈， 與福特一起出席的，還有胡佛總統、 洛克菲勒、喬治 Eastman， 居里夫人和 Orville 懷特也出席了慶祝。

He received numerous awards in addition to the celebration in Dearborn. Thus, as in contrast to some people who made great contributions, he was greatly recognized during his lifetime.

除慶祝之外，他在 Dearborn，接受了許多獎。 因此，在他的一生期間，和某些人做大貢獻相比，在那時他是特大地被認可了。

During the 1920's Edison’s health deteriorated. However, he still continued to do additional experiments. His last patented invention was the synthetic rubber, explained above.

在 20 年代期間愛迪生的健康惡化了。 然而，他仍然繼續做另外的實驗。 他的前個給予專利的發明是合成橡膠(如以上解釋)。

His health problems continued to grow worse during the final 2 years of his life. He died at the age of 84 on October 18, 1931 in his home in West Orange, New Jersey due to problems originating from diabetes.

在最後的 2 年生活期間，愛迪生的健康問題繼續變壞。 他在 1931 年 10 月 18 日在新澤西州西部桔子城，逝世于他家由於糖尿病的問題，享年 84 歲。

Conclusions **結論**

Thomas Edison was perhaps the greatest inventor in history, and he was one of history’s most prolific inventors. His achievements were the result of nearly ceaseless work to the exclusion of nearly all other activities as well as his other characteristics described in the beginning of this article.

或許在歷史上愛迪生是最了不起的發明家，并且他是歷史上其中一位最多產的發明家。 他的成就是不間斷的工作的結果，到幾乎排除所有其他活動，及其他特徵如求知慾描述在這篇文章的開端。

Emphasizing these characteristics in school, namely hard work & persistence without giving up, creativity & thinking outside the box in addition to only memorizing & following old thoughts, curiosity, being unafraid to make mistakes, and skills in trial & error, are traits that may greatly nurture student scholarship. They absolutely require no special “born with” genes but only encouragement and training. Such encouragement may revive fascination and interest in science among youths and produce a surge in extraordinary scientists and inventors of the future.

強調這些在學校的特徵，即沒有放棄的堅苦工作及堅持而不放棄，除了只記住和跟隨老舊想法之外，認爲在箱子之外的創造與思維，求知慾及不害怕的做錯和嘗試試驗及錯誤的技能，也許是很大地哺育學生學術的特徵。 他們绝對不要求特別「天賦」的基因，而仅是鼓勵和訓練，這樣鼓勵在科學上，也許復興青年人们其具有興趣及狂想，在未來，非凡科學家和發明者將大量擁出。

One of Edison's weaknesses was the fact that his only actual interest seemed to be his work. This did frustrate both of his wives, and he may have had troubles making close friendships other than the ones mentioned here. He often also forgot to eat or sleep due to working. Thus he may have neglected needs, responsibilities, and interests outside of work. However, he did join the Fort Myers Civitan Club. With regards to education, there are important benefits in teaching students to be "well-rounded" in all aspects of living.

其中一個愛迪生的弱點也是事實，即他的實際興趣似乎是他的工作。 這挫敗了他兩位妻子，并且他也許有麻煩做親近的友誼，除了以上所提之外。 他經常也忘記吃飯或睡覺由於工作。 因而他也許忽略了在工作外面的需要、責任和興趣。 然而，他參加了邁爾斯堡 Civitan 俱樂部。 關於教育，有重要好處在是教的學生在生活方面「圓滿完成」。

Today people enjoy many of the fruits of Thomas Alva Edison's labors. The incandescent light that he invented is still in use today. His phonograph was used until very recent years and even today serves as a blueprint for all the current sound devices. He made the telephone more workable. The benefits that all people enjoy today, both directly and indirectly from his labors are too numerous to count, and his legacy will always be remembered.

今天人們享用許多愛迪生勞力成果。 他發明的白熾光仍然使用在今天。 他的留聲機使用直到最近歲月，其作用供給所有現在的設備。 他使電話是使用無遺。 所有人们今天享受的好處，直接地和間接地從他的勞力成果，多不可勝數，愛迪生偉大的遺產總將永遠被全世界人们記住。

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Research Universities in China: Basic Concepts, Characteristics and Proposed Strategic Policies (1)

研究型大学的基本概念特征及其建设对策 (1)

Hongyi Zhao 赵 弘 毅

摘 要 概述了研究型大学概念的内涵及其演变；阐明了研究型大学的主要特征；提出了创建研究型大学的主要对策。

Abstract: This paper briefly interprets the basic concepts, characteristics and evolutions of research universities in China. It then proposes the strategic policies of research universities in China.

关键词 研究型大学 概念 特征 建设对策

近多年来，我国一些著名大学，特别是“985 工程”与“211 工程”大学，陆续将自己的办学目标定位成研究型大学；有的大学还专门设立了研究型大学的研究机构或课题组；学术界也相继出版了一批探讨研究型大学建设问题的专著，发表了数百篇论文；教育部与财政部在 2002 年出台的《关于充分发挥高等学校科技创新作用的若干意见》中，首次以政府名义提出了，要在国内“逐步形成一批具有较强科研力量和较高科研水平的研究型大学”；2007 年 7 月 18 日，教育部又出台了《关于加快研究型大学建设，增强高等学校自主创新能力的若干意见》。研究型大学越来越成为，高教领域各级领导与专家们关注的热点。至此，对研究型大学的研究，已发展到从自发到有序，从自由探索到实施阶段了。然而，对研究型大学的定义与划分标准，至今尚无权威性规定。对什么是研究型大学，怎样建设研究型大学，众说纷纭。因此，弄清这些基本问题，仍然具有现实意义。本文拟就此方面谈点粗浅看法，以求方家指正。

In recent years, some of China's leading universities, especially the “985 Engineering” and “211 Engineering” universities, gradually promote themselves as research universities. Some universities have established research organizations or university research groups, with hundreds of papers on research universities being published. In 2002, the Ministry of

Education and the Ministry of Finance issued a document “Comments on the role of higher education in scientific and technological innovation,” advocating the development of a group of research universities with strong scientific research facilities and high quality research publications. On July 18, 2007, the Ministry of Education issued another document, “Speed up building research universities and strengthening the capability of independent innovation of the universities.” The concepts of research universities increasingly become hot topics in higher education. The study of research universities has grown from a spontaneous stage to a planned stage, from a free exploration to an implementation phase. Nevertheless, the definitions and criteria of research universities have no regulations in China. There are many different opinions on what is the standard of a research university is and how to develop a usual into a research university. This paper intends to clarify some basic issues on research universities.

一. 研究型大学的基本内涵及其演变

真正意义上的大学自中世纪起，就在西欧出现，而研究型大学 (Research University)一词却最早源于美国，其标志是 1876 年借鉴德国洪堡关于科研与教学相统一的教育理念而建立起来的约翰·霍普金斯大学。该校当时强调以研究生教育为重点，以科学研究与人才训练相结合为主要功能。1900 年美国大学协会诞生，标志着研究型大学的发展从自发走向有序。该会确定研究型大学的标准是，是否建有研究生院和是否为美国大学协会成员。是年，该会只有 12 所研究型大学，到 1920 年发展到 16 所。二战时期的研究型大学，强调以研究生培养质量、图书馆藏书量和为科研事业做出贡献为特征。

1970 年，曾任美国加利福尼亚大学总校校长的克拉克·克尔(Clark Kerr)，在出任卡内基高等教育委员会主席期间，依卡内基教学促进会（建于 1906 年）首次提出、后经多次修订的《高等教育机构分类》，制定出了新的分类标准，取代了美国大学协会对研究型大学的认可作用，提出了以博士学位授予数和科研经费获得数为标准，判断是否为研究型大学。1987 年卡内基金分类标准将全美 3000 多所高校按其功能划分为 5 类 10 种（研究型大学 I 、II；授予博士学位的大学 I 、II；文理学院 I 、II；二年制社区初级与技术学院），其中研究型大学 I 的标准是，能提供领域广泛的学士学位计划，承担

直到博士学位的研究生教育，给研究以高的优先权；每年至少获得 3350 万美元的联邦政府科研费（研究型大学 II 此标准为 1250 万美元）；每年至少授予 50 个博士学位。当时美国研究型大学 I 类有 19 所，II 类有 10 所。1994 年又按《高等教育机构分类》办法，将研究型大学标准修订为：能提供从学士学位到博士学位的教育，每年至少授予 50 个博士学位；置科学研究于优先地位，每年至少获得来自联邦政府的研究经费 4000 万美元（研究型大学 II 为 1550 万美元至 4000 万美元）。是年，全美研究型大学已达 126 所。1998 年 4 月，美国卡内基教学促进会前主席博耶（Ernest·L·Boye）在其《重建本科生教育：美国研究型大学发展蓝图》中，对研究型大学定义做了比较明确的界定：研究型大学是能够提供从本科生到研究生乃至博士学位的全面教育，且科学研究处于优先地位。2000 年版的卡内基分类标准，将研究型大学分为研究综合型——研究型大学（其标准是能提供学士、硕士、博士学位课程，每年至少在 15 个学科领域授予 50 个以上博士学位；每年获得联邦政府资助科研经费 4000 万美元以上）和研究密集型——研究型大学（其标准是能提供学士、硕士、博士学位课程，每年至少在 3 个学科领域授予 10 个以上博士学位或总共授予 30 个以上博士学位；每年获得联邦政府科研资助 1500—4000 万美元），强调注重科研的同时，突出了博士学位授予的学科范围。是年，全美两类研究型大学 158 所。到 2003 年，卡内基教学促进会又把美国研究型大学分为广博型（标准是每年至少在 15 个学科授予 50 个博士学位）和集中型（每年至少，在 3 个学科授予 20 个博士学位）。两类其科研经费标准与 2000 年要求一样。按此标准，是年有广傅型研究型大学 151 所，集中型研究型大学 99 所，共计 250 所。总之，从美国研究型大学形成发展历程和分类标准看，美国研究型大学是美国大学分类体系中的最高层次，是美国高层次科学研究的主要承担者和高层次人才培养的主要基地，但对研究型大学却至今没有一个内涵十分清晰而明确的定义，它似乎是一个动态发展变化中的模糊概念，博耶的观点比较明确，但却无权威性机构认定。

在西欧和日本原来没有研究型大学称谓，法国至今仍无。德国长期奉行“同等质量大学教育”理念，也没有研究型大学之说，去年却出台了“竞争卓越战略”，出巨资创建“科学的灯塔”著名大学。在英国，1994 年成立了研究型联盟，导致出现了研究主导型大学和教学主导型大学，前者如牛津大学、剑桥大学、伦敦大学、沃尔克大学等。日本在八十年代末九十年代初，建立了两所研究生教育和科学研究为主要任务的新大学：综合研究生院大学和国际发展研究生院，2002 年又推出了“21 世纪卓越中心”，

促进研究型大学的发展。他们对研究型大学概念的界定，也未见到明确的说法。

研究型大学概念传入我国，约在上世纪九十年代中期。1994 年出现第 1 篇有关研究型大学的论文，2000 年出现 10 篇。进入新世纪后，引起了不少高校领导乃至政府高官的关注，北大、清华、上海交大、中国管理科学研究院等单位陆续设立了有关研究型大学的研究机构或课题组，承担国家“十五”规划重点课题，专门探讨研究型大学及其分类评价问题。到 2005 年全国已有 521 篇论文发表（该年就有 158 篇），目前已有多部专著向世。然而，国内对研究型大学的界定仍存在许多争议，主要集中在对高校层次分类、研究型大学评价标准、科研能力及建设数量等方面。对研究型大学定义的界定就有多种说法。北京师范大学王一川认为，“研究型大学是指那些能够提供从本科生到研究生乃至博士学位的全面教育，且科研处于优先地位的高校”；福州大学校长吴敏生则说：“研究型大学是承担高素质、高层次和创造人才培养的重要摇篮，是国家和区域科技创新的主力军，也是促进科技成果向现实生产力转化的主要基地”；全国学位与研究生教育发展中心王战军对研究型大学的定义是，“以知识的传布、生产和引用为中心，以产生高水平的科研成果和培育高层次精英人才为目标，在社会发展、经济建设、科技进步和文化繁荣中发挥重大作用的大学”；由北京大学前常务副校长王义遒主持的“中国研究大型大学成形与发展战略研究”课题组，将研究型大学界定为“学科综合性强，每年授予的博十学位数多，培养的人才层次为本科及本科以上，满足的是社会对高层次研究型人才和研究型成果的需求，其中研究生要占到 20—25%，甚至更高，每所学校每年授予博士学位数的最低标准为 50 个。”该课题组还于 2003 年 11 月借鉴美、英研究型大学评估指标体系，以大学功能为依据，将中国高校划分为研究型大学，教学科研型大学，教学型本科院校，高等专科学校与高等职业学校四类（也有划分为五类和三类的），并结合中国顶级大学的学术声誉、师资队伍、学科建设、人才培养、科学研究等情况，提出了中国研究型大学的评估指标体系。以清华大学何建坤为首的“研究型大学技术转移模式与制度安排”课题组，把研究型大学界定为：“以政府财政支持为主体，以与国内外组织保持广泛而良好的合作关系为基础，拥有完善的教学及科研设施（如图书馆、实验室等），一流的师资与科研队伍，以创新性人才培养及科学研究为中心，以

高层次创新型人才、原创性科研成果、多学科系统集成、先进创新文化及优资社会服务的最大输出为主要目的，为国民经济持续、健康、协调发展与社会全面和谐共处，提供关键人才、核心技术支持及必要社会需求服务的组织”。中国管理科学研究院“中国大学评价”课题组，提出研究 I 型大学评价标准是，研究生创新环境高于研究型大学平均水平，且每年授予博士学位不少于 100 人。从上述所举数例，可以明显看出国内对研究型大学定义的界定仍无统一的权威性认定。上述各说，虽都具一定的代表性，但有的是美国博耶定义的翻版；有的忽视了社会服务功能；有的局限于公办大学；有的虽加上了中国色彩，但过于繁琐。愚以为，对以大学功能为主要依据划分出来的研究型大学的定义之界定，应以简明、扼要、准确的文字，全面体现此类大学教学、科研、社会服务三大功能的本质属性与社会地位即可，不必将评价指标与特征列入，尤如人们对世界一流大学的定义，只有一句话：“位居全世界大学最前列，达到卓越的国际标准。”因此，对研究型大学可定义为：实行教学、科研并举，以培养博、硕士研究生为主，且科学研究处于优先地位，并能提供优质社会服务，在国内外享有崇高社会声望的大学。

1. Definition and evolution of research universities

Mordern universities were founded in Western Europe in the Middle Ages. But research universities originated in the United States, marked by John Hopkins University developed in 1876 based on Alexander von Humboldt’s philosophy on the unity of research and teaching. The university emphasized graduate education, and the combination of scientific research and talent training. Association of American Universities (AAU) was founded in 1900 to advance the international standards of U.S. research universities. Membership in AAU is by invitation and is based on the quality of academic research, scholarship, undergraduate program, graduate program, and professional education in a number of fields, as well as general recognition that a university is outstanding due to the excellence of its research and education programs. In 1900, the Association had only 12 research universities; by 1920 it increased to 16. During the World War II, great emphasis had been placed on the quality of graduate education, library holdings, and contribution to knowledge. In 1970, former president of the University of California system Kerr Clark, who served as the president of the Carnegie Commission on Higher Education sponsored by the Carnegie Foundation for the

Advancement of Teaching (founded in 1906), first proposed a new classification standard ,“A Classification of Institutions of Higher Education”.

The Carnegie Classification has been the leading framework for recognizing and describing institutional diversities in U.S. higher education for the past four decades. Starting in 1970, the Carnegie Commission on Higher Education developed a classification of colleges and universities to support its program of research and policy analysis. Derived from empirical data on colleges and universities, the Carnegie Classification was originally published in 1973, and subsequently updated in 1976, 1987, 1994, 2000, 2005, and 2010 to reflect changes among colleges and universities. This framework has been widely used in the study of higher education, both as a way to represent and control for institutional differences, and also in the design of research studies to ensure adequate representations of sampled institutions, students, and faculty.

The Carnegie Classification replaced the Association of American University recognition of the roles of research universities and used the number of doctoral programs and research grant fundings as the criteria for research universities. In 1987, the Carnegie Classification classified more than 3,000 American colleges and universities into the following categories according to their functions: research universities I, II; doctorate-granting universities I, II; arts and sciences I, II; two-year community colleges. For research universities I, the standard is : to offer a full range of baccalaureate programs and doctoral programs with a high priority to research; to receive at least $ 33.5 million annually in federal government grants (research universities II of this standard was $ 12.5 million); award at least 50 doctoral degrees annually. At that time, there were 19 research I universities, 10 research II universities. In 1994, according to the Classification of Institutions of Higher Education, the research universities standard was modified as: to be committed to graduate education through the doctorate programs, award 50 or more doctoral degrees annually, give a high priority to research, receive annually $ 40 million or more in federal support (research universities II was between $15.5 million and $40 million). The Carnegie Foundation reported that 126 institutions met these criteria. In April 1998, the former president of the Carnegie Foundation for the Advancement of Teaching Ernest Libode presented a clear definition of research universities in his article, “Reconstruction of undergraduate education: a blueprint for the development of American research universities”. Research universities are to provide undergraduate to doctoral degrees at a full range and give high priority to research. According to the edition of the Carnegie classification in 2000, the research universities were classified into research extensive universities (the standard was to provide bachelor, master, and doctoral degree programs; award 50 or more doctorate degrees in 15 or more subject areas; receive annually $ 40 million or more in federal support) and research-intensive universities (the standard was to provide bachelor, master, doctoral degree programs, award 10 or more

doctorate degrees in 3 or more subject areas, or at least 30 doctorate degrees in total; receive annually $15-40 million in federal support), highlighting the ranges of disciplines. In 2000, there were 158 research universities in the United State. In 2003, the Carnegie Foundation for the Advancement of Teaching again modified the standards: research extensive universities posessed at least 50 Ph.D.s in 15 subject areas and research intensive 20 Ph.D.s in 3 subject areas. The funding requirement remained the same. According to this standard, there were 151 research extensive universities and 99 research intensive universities, a total of 250 in the US. In short, by reviewing the formation and classification criteria of research universities in the US, we can see American research universities are at the highest standard and quality in the classification system, assuming the responsibility of conducting high level scientific research and training high level talents. So far there is still no clear definition for research universities. It seems to be a vague concept with dynamic change in the development. Boyer's view was clear, but not identified by any authority body.

In the Western Europe and Japan, there were no such titles as research universities. Today France still has no research universities. Germany has long-term adherence to “same quality of higher education” concept and has no research university either. However, in 2007 it developed a “superior competitive strategy” investing a large amount of money to create “beacon of science” universities. In Britain, a research alliance was established in 1994, leading to the emergence of research-oriented universities and teaching-oriented universities, the former includes Oxford, Cambridge, and the University of London. In late nineteen eighties and early nineteen nineties, Japan developed two new universities emphasizing graduate education and scientific research. In 2002, it launched “the 21st Century Centre of Excellence” to promote the development of research universities. However, the definition of research universities in Japan has not defined clearly.

In China, the concepts of research universities appeared in mid-1990s. The first article on research universities was published in 1994. There were about 10 related articles published in 2000. In this new century, the ideas of research universities have drawn the attentions of higher education leaders and senior government officials. Peking University, Tsinghua University, Shanghai Jiaotong University, China Institute of Management Science and other institutions have established research groups to undertake national “Tenth Five Plan” projects, exploring research universities and their classification criteria. By 2005, 521 articles and many books had been published (158 articles in 2005). However, in China, the definition of research universities remains controversial, mainly in the hierarchical classification of colleges and universities and research universities evaluation criteria. There are many definitions of research universities. Wang Yichuan of Beijing Normal University thinks that “research universities are those that can provide undergraduate and doctoral education, and give a priority to research”. Fuzhou University President Wu Minsheng said, “Research universities are important cradles to train high-quality and high-level talents, the national and regional

scientific and technological innovation centres, and the main base to convert scientific and technological achievements into practical productive forces." Wang Zhanjun of National Academic Degrees and Graduate Education Development Center, defined research universities as "the centre of the dissemination, production and reference of knowledge.The goal is to produce high-level scientific research and train high-level talents, playing a major role in social and economic development, technological progress, and cultural prosperity." Former vice president Wang Yiqiu of Peking University conducted a project "The development and strategy of Chinese research universities." Research universities should have "comprehensive and strong disciplines with 20%-25% graduate programs and award at least 50 Ph.D. degrees annually." In November 2003, the task force borrowed American and British classification criteria and classified Chinese universities into research universities, teaching and research universities, teaching-oriented institutions, baccalaureate colleges, and tribal colleges. It also developed an evaluation system in terms of academic reputation, faculty, academic programs, facilities, and research resources. He Jiankun of Tsinghua University led a project on " the Technology transfer model and system in research universities", in which research universities were defined as "has government as the main financial support, maintain active relationships with domestic and foreign academic organizations, own state of the art teaching and research facilities (such as libraries, laboratories), and first class faculty and research teams, with innovative training and research centre and multi-disciplinary system." Chinese Academy of Management Science proposed the research university I evaluation criteria: graduate research innovation environment is better than average and award 100 or more Ph.D.s annually. Based on the literature review, it is clear that Chinese research universities still have no authorized definition. Basically, they are a replica of Boyer's definition though stressing different aspects. Some neglect social services, some are limited to public universities, and some emphasize the Chinese characteristics, but are too cumbersome. We think that based on the main functions of universities, the definition of a research university should be simple, concise and accurate, fully reflecting three essential attributes and its social status: teaching, research, and social services. It is unnecessary to include evaluation index and methodology on how to evaluate a university. For instance, the definition of world-class universities only has one sentence "among the best universities in the world, achieving international standards of excellence." Therefore, research universities can be defined as follows: to emphasize both teaching and research with focus on graduate and doctorate education and priority to research, to provide quality social services, and enjoy a high reputation at home and abroad.

二、国外研究型大学的主要特征

由于国内对研究型大学尚无权威性明确认定，只好就国外、特别是美国研究型大学的特征加以论述。由于国外研究型大学并没有固定的模式，每个大学都有自己独特的历

史文化积淀与传承，形成了自己独特的定位与特色，美国学术界对其特征的说法也各异，具有代表性的有两个，一是前已提及的博耶，他认为美国研究型大学的特征是，拥有一批致力于创造新知识的研究型教师；研究生教育是这类大学的主要任务；具有基本的科研环境；面向世界吸引来自世界各地的学生，增强校园文化的多样性；重视视觉与表演艺术的特殊作用。另一位是曾任美国康乃尔大学校长 18 年，担任过里根总统国家科委主席、布什总统教育咨询委员会主席、美国大学联合会和卡耐基教学发展部主席、现任美国哲学协会主席的弗兰克 H·T·罗德斯，他认为美国 21 世纪新型的研究型大学的特征是，保持学校自治，教师的独立性和学术自由，同时具有强有力的、公正的公共管理和果断负责的校长；不断得到私人支持和承担更多的社会责任；根植于本国而具有国际视野；学术上保持独立，同时也是建设性合作伙伴；以学生为中心，以知识为基础，以教育为中心，以研究为推动力；被先进的高科技术武装，但对社区仍有依赖性；追求高质量和高效率；专业教育和人文教育相结合。这两种论述，前者侧重于对现状的描述；后者侧重于对未来的展望。本文拟从同国内外大学相比较角度，尽可能寻找国外研究型大学的共同特征，加以介绍：

II. Characteristics of Foreign Research Universities

Since there is no authorized definition for a research university in China, this paper focuses on the characteristics of western, especially American research universities. There is no fixed model for research universities; each university has its own unique historical and cultural tradition, as well as position and characteristics. In the United States, there is an argument about the characteristics of research universities. Of the two representatives, one is Boyer's as mentioned before. He thought the characteristics of research universities as follows: a group of research professors committed to creating new knowledge; graduate education is the main task of teaching; own basic research recourses; to attract students throughout the world; to enhance cultural diversity on campus; to emphasize on special effects of visual and performing arts. The other one is Frank H.T.Rhodes, former president of Cornell University for 18 years, who served as the Chairman of President Reagan's National Science Board, the Chairman of Education Policy Advisory Committee of President Bush. He also served as the chairman of the governing board of the American Council on Education, the American Association of Universities, and the Carnegie Foundation for the Advancement of Teaching. Rhodes believes the characteristics of new research universities in the 21st as follows: to keep the university autonomy, independence and academic freedom of faculty; to have a strong, fair public administration and decisive and responsible president; to continue to get more private support and assume social responsibility; rooted in national and international perspective; to be academic independent and collaborative; a student-centred, knowledge-based research- driving force; equipped with high-technology, but rely on the community; the pursuit of high quality and high efficiency; combination of professional

education and liberal art education . Of the two representatives discussed above, the former emphasized on the description of the status quo; the later emphasized on the vision for the future. Based on the comparison and literature review, this paper summarizes the common characteristics of research universities as follows.

（一）研究型大学办学规模宏大，教育功能齐全，教学、科研、社会服务三大功能紧密结合。

美国研究型大学是在高等教育体系所具有的巨大规模下，多样化与统一性相集成的特点基础上形成的。规模宏大除表现在校园面积大、学科类型多，学术领域广（大多拥有 10 个以上乃至 20 多个学术领域）之外，主要表现在师生人数多。比如，2004 年美国前 10 位私立研究型大学平均在校生 14142 人，教师 2372 人（师生比为 1：6），其中康乃尔大学学生 20334 人，教师 3241 人；哥伦比亚大学学生 23650 人，教师 3224 人。规模相对小的也有，但教师比例很高，比如加州理工学院，学生只有 2172 人，但教师多达 1147 人（师生比达 1：1.9）。前 10 位公立研究型大学，平均在校学生 34011 人，教师平均为 3006 人（师生比为 1：14），其中华盛顿大学学生 42757 人，教师 3360 人；密西根大学学生 36047 人，教师多达 5007 人。英国研究型大学规模较小，但位列全英前 10 位大学，学生平均也达 20443 人，教师平均 2400 人（师生比为 1：9.4）。他们的经验是，只有规模大，才能产生规模效益和卓越研究所需能量。

教育功能齐全，不但体现在教学、科研、社会服务三大功能俱有，而且教学、研究与服务紧密结合，以研究为重点；本科生教育与研究生教育紧密结合，以博士生教育为重点；社会服务也是通过充分发挥知识与技能的作用来体现。美国研究型大学本来是组合了本科学院、职业教育学院、研究生院基础上发展起来的，但体现学校和教师价值与地位的主要因素是声望更高的研究生教育与科学研究，本科教育在研究型大学中已处于次要地位。也就是说，研究生教育与科学研究是体现研究型大学总价值、结构与功能特色的主要因素。在校学生中研究生比例与国际化程度都很高，2004 年美国前 10 位私立研究型大学中，本科生/研究生比为 1：1，（其中麻省理工学院与加州理工学院是 0.7：1；哈佛大学与哥伦比亚大学是 0.6：1；芝加哥大学是 0.5：1，研究生都远远起过了本科生），外国留学生比高达 18%（麻省理工学院高达 26%）。前 10 位公立研究型大学中，本科生/研究生之比平均为 2.8：1。英国前 11 位顶尖研究型大学中，本科生/研究生之比平均为 2.5：1，外国留学生比高达 19.4%（其中牛津大学高达 25%，伦敦大学高达 26%）。

(1) Large-scale, close combination of teaching, research, social services

American research universities are developed with enormous scale and integration of diversity and unity in higher education system. In addition to large campuses, full range of programs, and broad academic areas (most have 10 or more, some even have more than 20 areas), research universities have low student- faculty ratios. For example, in 2004, U.S. top 10 private research universities have an average of 14142 students, 2372 faculty (student –faculty ratio 6:1). Cornell University has 20334 students and 3241faculty;

Columbia University has 23650 students and 3224 faculty. Some universities are smaller with a high proportion of faculty. For instance, California Institute of Technology has only 2172 students, but the faculty has up to 1147 members (student- faculty ratio 1.9:1). The top 10 public research universities in US have an average of 34,011students and 3006 faculty members (student-faculty ratio 14:1). University of Washington has 42757 students and 3360 faculty members; University of Michigan has 36047 students and up to 5007 faculty members. British research universities are smaller, but in top 10 universities, the average student number is 20,443 and an average faculty 2,400 (student faculty ratio 9.4:1). Their experience is that only large-scale universities can generate economies of scale and the energy needed for research excellence.

Research universities have full range education with the functions of teaching, research, social services, which are closely integrated with research as priority. Undergraduate education and postgraduate education are closely linked with an emphasis on doctoral education. Social service is provided by offering knowledge and skills. American research universities are developed on the basis of undergraduate colleges, vocational colleges, and graduate schools. But the value and status of a university and its faculty are determined by the reputation of graduate education and scientific research. Graduate education and research determine the value of a research university, as well as its structure and functional characteristics. In 2004, undergraduate/graduate ratio is 1:1 in top 10 American private research universities (Massachusetts Institute of Technology and California Institute of Technology 0.7:1; Harvard University and Columbia University 0.6:1; University of Chicago 0.5:1). In top 10 American public research universities, undergraduate / graduate ratio is 2.8:1. In British research universities, undergraduate- graduate ratio is 2.5:1. Graduate programs in research universities are more internationalized. On Average, 18% of the students in American private research universities are intentional students (up to 26% in the Massachusetts Institute of Technology). In Britain, the international student's proportion is 19.4% (Oxford University 25% and University of London 26%).

（二）研究型大学学科体系齐全，拥有一流名牌学科，具有很强的核心竞争力。

学科是大学的标志，学科品牌的强弱，决定着大学地位的高低。在美国研究型大学中，各学科均有学士学位专业，绝大多数学科拥有从硕士到博士学位的授予权。研究型大学腾飞的关键，在于重视和培育自己的核心学科和核心竞争力。所谓核心竞争力，就是学校在长期发展中所形成的内在优势和获取外部资源渠道的基础上，构建以核心学科为标志，以特色文化为内核，能有效整合各类教育资源，使学校获得长期竞争优势的能力体系。这个能力体现最直接的就是学科的竞争力。美、英研究型大学都是以学科门类或学科群为单位，对教学和科研工作进行组织的，学科是大学的基本单元，大学的教学、人才培养、科学研究与开发，都是以学科为基础的。也就是说，研究型大学的核心竞争力，是以学科门类或以学科群为单位构筑的，核心竞争力往往表现为若干学科门类或学

科群的竞争力，具体则体现在学科专业原创性科研成果、重大科研项目、创新基地、创新平台、以及研究生综合素质等方面的综合实力。这种综合实力，决定着研究型大学在长期的竞争中处于独有的优势地位，而维系这种长期竞争优势的核心，却在于大学所独有的文化。国内有人将这种核心竞争力的构成，表达为强势学科、核心专长和大学文化三重结构，是有道理的。近多年来，国内已有不少大学为构筑自己的核心竞争力，强调实施以优势学科建设为龍头，构建学科群，带动学校整体工作上台阶的发展战略，是完全符合创建研究型大学发展规律的。

(2) Research universities with complete disciplines in world-class having strong competency

Academic disciplines are the hallmark of a university. The strength of disciplines determines the level of university status. All research universities in the United States have various disciplines in undergraduate and graduate programs. Most disciplines can grant masters to doctorate degrees. The success of a research university lies on emphasizing and nurturing its own core disciplines and core competency. A core competency is the result of a unique set of skills or production techniques that deliver value to the customer. The university core competency is developed based upon long-term development of inherent advantages and access to external resources. Core competencies are competitive academic advantages over other universities which provide the fundamental basis for the provision of added value. Core competencies are the collective learning in organizations. They involve how to coordinate diverse academic recourse and effectively integrate multiple academic disciplines and educational resources to enable universities to obtain long-term competitive advantages. For instance, U.S. and British research universities are based on disciplines or subject areas as a unit, conducting teaching, research, and services. In other words, a research university's core competency is based on disciplines or subject areas, and is often manifested in a number of disciplines or subject areas' competitiveness. Original research results, innovative centres, innovation platforms, and the overall quality of graduate students are the factors of competitive strength measurements. This competitive strength determines the unique position of a research university and long-term competitive advantages. How to maintain the core of the long-term competitive advantages lies on the university's unique culture. Some researchers think the core competency consists of strong disciplines, faculty expertise, and university culture. To build their own core competencies, many Chinese universities emphasize the advantages of the disciplines as leading factors. They try to build a group of subject areas and move the overall universities to next level. All these development strategies are fully consistent with the rules of the development of research universities.

English Translation of Two Famous Poems in Sung Dynasty

英譯宋詞二首

Translated into English by Dr. Edward C. Chang 張暢繁博士翻譯成英文

蘇軾（1037-1101）

水調歌頭

丙辰中秋歡飲達旦，大醉作此篇，兼懷子由。

明月幾時有，把酒問青天。不知天上宮闕，今夕是何年。我欲乘風歸去，又恐瓊樓玉宇，高處不勝寒。起舞弄清影，何似在人間。 轉朱閣，低綺戶，照無眠。不應有恨，何事偏向別時圓。人有悲歡離合，月有陰晴圓缺，此事古難全。 但願人長久，千里共嬋娟。

Su Shi

Tune: Shui Diao Ge Tou

Mid-Autumn Moon

When did the bright moon appear for the first time?
Holding a cup of wine, I ask the blue sky:
In the celestial palace what year is it tonight?
I wish to return there by riding with the wind,
but am afraid that those beautiful buildings
up there are too high and chilly for me to be in.
Here on earth I can dance with my
own moonlit shadow whenever I like.
Where else in the universe can I
be so carefree to please my mind?

The moon now shifts her beam from the red pavilion
to the lower window and door.
She then shines on this person who is
unable to fall asleep at all.
The moon is not supposed to hold grudges.
But why does she always show her round face
when parting is about to take place?
Separation and reunion, sadness and delight.
Ah, these are part of human life.
The moon may be in the full or on the wane.
Sometimes she is gloomy and sometimes she is bright.
Imperfections do exist since ancient times.
I can only wish we will lead a long and healthy life.
But for now, let's enjoy moonlight together
over a thousand miles.

李清照(1037-1101)

聲聲慢

尋尋覓覓，冷冷清清，凄凄慘慘戚戚。乍暖還寒時候，最難將息。三杯兩盞淡酒，怎敵他、晚來風急。 雁過也，正傷心，卻是舊時相識。 滿地黃花堆積。憔悴損，如今有誰堪摘。守著窗兒， 獨自怎生得黑。梧桐更兼細雨，到黃昏、點點滴滴。者次第，怎一個、愁字了得。

Li Qing Zhao

Tune: Sheng, Sheng Man

Sad Feelings

For what am I looking?
For what am I seeking?
So chilly, so dreary;
so miserable, so woeful, and so sorrowful.
At a time of sudden warmth and sudden chill,
it is hard to keep my mind still.

Two or three cups of light wine
hardly can quiet the gust wind at night.
Seeing a flock of geese passing by
only breaks my heart.
For they in the past conveyed messages
to me from afar.

The ground is piled up with yellow flowers,
so pallid, hurt, and withered.
Who now cares to pick them up?
Alone by the window, how long must I
wait until it gets dark?
Drizzling rain drifts
from the parasol tree at dusk,
drip by drip, drop by drop.
To sum up my feelings
at this very moment,
how can one single word of “sorrow” be enough!

The Picasso of Oriental Art: Zhang Daqian, the Greatest Chinese Artist in the Last Five Hundred Years (3)

東方畢卡索 五百年來一大千(3)

Ou wen
(Translated into English by Hongbo Tang)

我聞
（由唐洪波翻譯成英文）

Zhang Daqian felt that he was gradually getting old. One day when he tried to move a big stone in Ba De Garden, he suddenly felt dark. Later, it was found out by inspection that his eye capillary vessels were broken due to extra use. He went to America and Tokyo for treatments, but the eye problem tortured him. Afterwards, he stayed in Taiwan Rong Min Hospital due to his heart disease. He made up his will in Taipei, when he was 81. However, Zhang Daqian still had many social activities in his late age. He had contacts with Tai Jingnong and Zhang Xueliang couples, and wrote letters to some Taoists. While he was in Taiwan, his mind was in the mainland China. His physical and physiological problems and staying away from hometown made him homesick with desolated and lonely life in his later years. The mind of his old age could be described as the following poem: “My hometown in China millons of miles away appeared in my dream frequently, but when can I return to my hometown by boat?”

但同時張大千也漸漸地感到了衰老。 有一天，他在八德園搬動巨石時，突然感到雙眼睛發黑，後來經檢查為眼底毛細血管因過度用力而破裂。他去了美國、東京等地進行治療。此後眼疾一直折磨著他。後來常因心臟病而住臺灣榮民醫院。八十一歲的時候他在臺北立下了遺囑，但是晚年的張大千依舊有著豐富的社交活動，他和台靜農、張學良夫婦保持著來往，還寫信給道士問安。但是大千的心始終牽掛著海峽另一邊的祖國。生理上的衰竭再加上多年的漂泊以及對故鄉的思念，使得張大千安逸的晚年生活帶上了淡淡的冷清與孤獨。 "萬里故山頻入夢，掛帆何日是歸年。"正是他晚年心境的寫照。

In March of 1983, Zhang Daqian went to Rongmin Hospital in Taiwan again due to his heart blood vessel sclerosis. At about 6:40 a.m. of April 2, his condition became worse. A few minutes later, the great master of Chinese painting stopped his heart beating, Zhang Daqian passed away at 8:15 a.m. at the age of 85.

1983 年三月，因心臟血管硬化等病又一次住進了臺北榮民醫院。四月二日上午六時四十分左右，他的病情開始惡化，數分鐘後，這位國畫大師終於停止了心臟跳動，經搶救無效，于上午八時十五分逝世，享年八十五歲。

The outstanding artist Mr. Zhang Daqian teaches us how to treat the ancient cultural heritage, how to inherit and develop the Chinese tradition paintings, and how to honor our national culture. He shared the great title “East Zhang and West Picasso” during the years when he lived abroad. Both of the Chinese people and other oriental nationalities are proud of him! (End)

張大千先生在一生的藝術生涯中，為我們如何對待古代文化遺產，如何繼承、發展中國傳統繪畫，如何弘揚民族文化指明了一條道路。他在旅居海外期間獲得了"東張西畢"的榮譽，他是中國人的驕傲，也是東方人的驕傲！(全文完)

Chronology:

1899 – Born in Zhangs’ family at Neijiang County, Sichuan Province, on May 19th, 1899 (first day of the fourth month in the lunar calendar). His original name was Zhengquan. His family experienced a period of economic depression.

1905 – Obtained primary education after his elder sister. He could not eat any meat when he was young, and became a vegetarian.

1907 – Started to learn drawing of flowers after his mother and sister. His second elder brother Zhang Shanzi went back to Sichuan from Japan.

1909 – Learned at private school, directed by his elder sister Qiongzhi at most time.

1911 – Entered the American-Chinese elementary school at Neijiang run by Christians, and accepted the modern education.

1914 – Entered Qiujing Middle School, Chongqing; family conditions improved. Zhang Shanzi, his second elder brother, having participated in anti-Yuan Shikai campaign and fled to Japan.

1916 – Kidnapped by gangsters on his way home for summer vacation, and forced to be an advisor there until about 100 days later when he managed to escape.

1917 – Went to Shanghai from hometown; then went to Japan to meet his brother, learnt commercial weaving and textile dyeing, and painting in Kyoto.

1918 – Made friend with Japanese 和田升一.

1919 – Returned to Shanghai from Japan; began to study under calligraphy Zeng Xi (1861-1930), a famous scholar of former Qing Dynasty. Became a Buddhist believer at Chanding Temple, Songjiang with the Buddhist monastic name of Daqian, but three months later resumed his secular life. Returned to Sichuan and got married to Zeng Qingrong before studying calligraphy under Li Ruiqing (1867-1920) in Shanghai.

1920 – Made friend with Li Qiujun, a gifted lady in Shanghai; Returned to Sichuan after Li Ruiqing's death.

1921 – Lived in Li Weizhuang's house in Shanghai; started to copy and collect ancient paintings and calligraphy.

1923 – Moved to Songjiang; and sold copies of Shi Tao's paintings in Shanghai.

1924 – His father (1820-1924) died. Began to contact with the art society in Shanghai, and take part in Qiu Ying Society with a house name Da Feng House; Started to grow a beard.

1925 – His first personal painting show held at Ningbo Guild House, Shanghai. His family condition decayed.

1927 – Traveled to Mount Huang the first time, and other famous mountains and rivers in China, as well as scenic spots in Korea.

1929 – Acted as a council member for the First National Art Exhibition.

1931 – Second time to Mount Huang accompanied by his brother Shanzi; Made friend with Huang Junbi (1898-1991) at Guangzhou.

1932 – Moved to Wangshi Garden, Suzhou.

1933 – Modern Chinese Paintings shows held in Paris, France; His art work, *The Lotus*, collected by a museum in Paris, and another art work, *the Scenery of Southern China*, collected by Moscow National Museum; Traveled to Mount Heng.

1934 – Took the professor position of Chinese paintings at the Department of Fine Arts, the Central University, Nanjing. Traveled to Mount Hua, also to Japan and Korea; Married with an actress named Yang Wanjun in Peking (today's Beijing).

1935 – The word "Southern Zhang and Northern Pu" appeared in Yu Fei'an's article for the first time. Traveled to the Dragon Gate Cavity, Mount Huang and Xi'an, and painted for General Zhang Xueliang. Art shows held in Peking, and made a name for himself in the art world with the huge paintings of Mount Huang.

1936 – Traveled to Mount Huang the third time. His Mother (1861-1936) died; *The Art Work of Zhang Daqian* was published by the Chinese Books Company in Shanghai, in which the preface written by Xu Beihong.

1937 – Japanese aggressors entered Peking, China, and there Zhang felt trapped at the Summer Palace, Peking.

1938 – Left Peking in May, and arrived in Hong Kong via Shanghai by sea. In August, traveled to Guilin with Xu Beihong, and returned to Sichuan; resided in Shang Qing Temple of Qingcheng Mountain, Guan.

1939 – Traveled to Mount Emei, Jiange, Sichuan; held art shows in Chengdu and Chongqing respectively. His brother Shanzi went to West Europe and North America, presented works of Art by Zhang Shanzi and Zhang Daqian for contributions to anti-Japanese activities.

1940 – Visited Dunhuang the first time, leaving for Sichuan quickly due to Shanzi's death at Chongqing. His

first son died at Xi'an; Arrived in Gansu Province in winter.

1941 – Went to Dunhuang the second time in March; Begin his two-year career of learning and copying Buddhist painting.

1943 – Returned to Sichuan from Dunhuang after staying there, and copied Frescoes for two years and six months for 276 copies. Visited Yulin Grottos and Wanfuo Canyon in Shaanxi on his way to Sichuan.

1944 – Art Show of Copies of Dunhuang Frescoes held in Chongqing; *Anthology of Da Feng House's Copies of Dunhuang Frescoes* published.

1945 – Lived at Zhaojue Temple, Chengdu. *The Four-screen Giant Lotus* and *the Eight-screen Scenes in the West Garden* were completed and exhibited in Chengdu.

1946 – Art work exhibited in Paris, Xi'an and Shanghai. Collected ancient calligraphy and paintings in Peking, including *Painting of Gu Hongzhong and Han Xizai's Banquet.*

1947 – Art show in Chengdu and Shanghai; *The Latest Works of Daqian Jushi* Vol. 1 and Vol. 2 published; Married with Ms. Xu Wenbo. Traveled to Hong Kong and held art show. Knew and made friend with Mei Lanfang in Shanghai.

1948 – Traveled Taiwan for art show the first time. Returned to Sichuan and moved his family to Hong Kong.

1950 – Visited India and held a painting show at New Delhi. Went to and stayed in Ajanta Grottoes in Maharashtra State, India for three months to make copies of frescoes. Lived at Darjeeling and studied poetry and painting, with many fine works finished there.

1951 – Returned to Hong Kong and held a painting show. Visited Japan.

1952 – Moved to South America and stayed in Mendoza, Argentina in the end of autumn, named his new house "Niyan House".

1953 – Visited Japan. Art exhibitions held in Taiwan and Hong Kong; Traveled to the United States the first time; Presented 125 pieces of Copies of Dunhuang Frescoes to Sichuan Museum.

1954 – Move to Sao Paulo, Brazil, and purchased land and built Ba De (Eight Virtues) Garden; He lived in Brazil for 25 years since then.

1955 – Famous *Da Feng House Paintings* (four volumes) published in Japan. His family numbers in hometown presented some of his art works to Sichuan Museum again.

1956 – Traveled to Europe the first time; Studied the art works of three famous artists in the Western Renaissance; Met Pablo Picasso and exchanged paintings with each other.

1957 – Art show in New York; Went to USA seek for treatment of his eye disease.

1958 – Granted a gold medal by the International Fine Arts Association in New York for his art work *Begonia*.

.1959 – His personal painting show held at History Museum the first time; Went to Taiwan after visiting several European counties via Japan.

1960 – Paintings exhibited in Europe. Finished his famous painting *The Large--screen Splashed-ink Giant Lotus*.

1961 – Paintings exhibited in Europe continually. Visit Japan and Hong Kong. His painting *The Splashed-ink Lotus* collected by Modern Museum of New York

1962 – His famous painting *The Four-screen Mount Qingcheng* exhibited at History Museum, which lay a foundation for the splashed-ink-and-color technique in his painting style. Visited Yokohama, Japan.

1963 – Art show held in New York in October. In the United States, his famous painting *The Large--screen Splashed-ink Giant Lotus* (six huge paintings of lotus on large screens) sold for US$140,000 and bought by the *Reader's Digest*.

1964 – An art show in Bangkok, Thailand and Cologne, West Germany. Visit Japan and Hong Kong and returned to Taiwan.

1965 – An art show in London. Went to USA seek for treatment for his gall-stone disease.

1966 – Art shows in Hong Kong and Sao Paulo.

1967 – Art shows in Stanford University Museum and the National Museum of History in USA.

1968 – Praised himself that he had mastered the splashed-ink-and-color technique in his painting completely; Completed the huge *Thousands of Miles on the Yangtze River*; Lectured at the Princeton University on Chinese fine arts.

1970 – Painting exhibition in California.

1971 – The show of recent paintings held in the Hong Kong City Hall.

1972 – *Retrospection of Zhang Daqian's Paintings in 40-Year* (1928-1970) held in San Francisco, California.

1974 – Art show held at Central Gallery of Japan, Tokyo.

1975 – Move to Taiwan and resided there for his left life.

1977 – Started to build his new house, called the Dbode of Maya-Painter at the suburb of Taipei.

1978 – In August his family moved to the new house.

1979 – In January, Saintings by *Three Masters in Contemporary China---Zhang Daqian, Pu Xinshe, and Huang Junbi* held by Chinese Cultural Association, Hong Kong.

1980 – Two volumes of collections of Zhang Daqian's paintings published; 7 volumes published by 1990.

1981 – In July, started his creation of *The Panorama of Mount Lu*.

1983 – Passed away in Rongmin General Hospital, Taipei on April 2nd at the age of 85. (End)

年譜:

1899 農曆四月初一〔陽曆五月十日〕出生於四川省內江縣安良之張氏大族，取名正權，家中一度清貧。
1905 由長姐起蒙教育。自幼不能進葷食，長年吃素食。
1907 從母、姐學習花卉。二哥張善子由日本返回四川。
1909 在家塾念書，多由大姐瓊枝教導。
1911 就讀天主教福音堂學校，接受新式教育。
1914 就讀重慶求精中學，家境好轉。二哥善子反袁，逃亡日本。
1916 暑假返家途中遭土匪綁架，迫為師爺，百日後始脫困。
1917 離川赴滬，留學日本京都學習染織，與二哥善子會合。
1918 結識日本友人和田升一。
1919 由日本返滬，拜前清名士曾熙(1861-1930)為師，學習書法。遁入松江禪定寺為僧， 法名"大千"，三個月後逃禪，回四川與元配曾慶蓉成婚。返回上海再拜名家李瑞清(1867-1920)門下學習書法。
1920 結識上海才女李秋君(1899-1971)。李瑞清逝世，回四川。
1921 借寓上海李薇壯宅，臨摹歷代名跡書畫，且精涉於收藏。
1923 卜居松江，往來上海，致力於石濤。
1924 父懷忠公(1820-1924)去逝。與上海文藝界往來，參加"秋英會"雅集，始用"大風堂"名號。開始蓄鬚。

1925 於上海"寧波同鄉會"舉行第一次個人展。家境變壞。1927 首次遊黃山勝景，以及國內名山大川。赴朝鮮遊覽名勝。
1929 出任第一屆《全國美術展覽會》幹部。
1931 與二哥再游黃山。與黃君璧(1898-1991)論交于廣州。
1932 移居蘇州。
1933 參加巴黎波蒙美術館所舉行的中國美術展覽會，作品〈荷花〉一軸為該館收藏。會後巡迴展時，作品"江南春色"一幅亦由莫斯科國立博物館收藏。遊南嶽橫山。
1934 應南京中央大學校長羅家倫之聘，任藝術系教授。游日本、韓國、華山。 納北平藝人楊宛君為三夫人。
1935 于非庵撰文提出"南張北溥"一詞，聲名大噪。游龍門石窟、華山、西安，為張學良作畫。北平展覽，筆下大幅黃山奇景，藝壇矚目。
1936 三探黃山奇景。母親曾太夫人過世(1861-1936)。上海中華書局出版《張大千畫集》，徐悲鴻序。
1937 日本侵華，遭日軍軟禁於北京頤和園。
1938 五月逃難北平，經上海至香港。八月與徐悲鴻游桂林後返回四川。卜居灌縣青城山之上青宮。
1939 與黃君璧同遊峨嵋、劍關等地。成都重慶個人展。二哥善子赴歐美宣傳抗日，爭取援華。
1940 往敦煌考古，因二哥善子病逝重慶而速返。長子病逝西安。年底至甘肅。
1941 三月至敦煌，開始兩年佛畫潛修工作。
1943 臨摹工作結束,前後兩年六個月,完成壁畫摹作共 276 幅。返四川, 順遊陝西榆林窟, 西安萬佛峽。
1944 重慶舉行張大千敦煌壁畫摹本展覽造成轟動，並印行《大風堂臨摹敦煌壁畫》畫冊。
1945 借寓成都昭覺寺，完成並展出《大墨荷通屏》、《西園雅集》巨幅作品。
1946 參加巴黎、西安、上海畫展。回北京後以高價購買《江堤晚景、夜晏圖、瀟湘圖、及巨然江山晚與圖卷》等數作。 1947 上海、成都舉行畫展。"大千居士近作"一、 二集上海印行。與徐雯波女士結婚。
1947 南遊香港並舉行畫展。於上海初識梅蘭芳。
1948 首次來台舉行畫展。返川接家眷赴香港暫住。
1950 訪印度於新德里舉行畫展，至 Ajanta 觀摩印度壁畫三個月。僑居大吉嶺潛心詩畫，尤多工細精品。
1951 返港暫住，並舉行畫展。並訪問日本。
1952 秋末舉家遷居阿根廷之 Mendoza，新居名"尼燕樓"。
1953 訪遊日本，港臺畫展，並首度訪美國。敦煌壁畫摹本 125 幅移交四川博物館。
1954 二月遷居巴西聖保羅市郊，耗鉅資建中國庭園"八德園"自此僑居巴西十五年。,
1955 "大風堂名跡"四冊于東京出版。留川家人再將對象移交四川博物館保存。
1956 首次游歐，觀研西方文藝復興三傑壁畫塑。七月底會晤畢卡索於法國南部，並互贈作品。紐約畫展。眼疾，赴美就醫 。
1958 以寫意小品〈秋海棠〉一作獲紐約《國際藝術學會》金質獎章。
1959 歷史博物館首次個展。遊歷歐洲各國後，經日本返台。
1960 於歐洲各地舉行畫展。作《大潑墨荷花通屏》。
1961 繼續於歐洲各地舉行畫展。訪問日本、香港。紐約現代美術館收藏《墨荷》軸一件。
1962 歷史博物館展出《青城山四通屏》，奠定潑墨畫畫開展之基礎。遊日本橫濱。
1963 十月紐約畫展，《讀者文摘》以十四萬美金高價購藏其《大潑墨荷花通屏》。
1964 曼谷、德務展覽。返台並旅遊港、日。 1965 倫敦首次個展。膽結石赴美就醫。
1966 巴西、香港展覽。 1967 加州、國立歷史博物館展覽。
1968 自誇已能將石青、石綠的潑彩技法運用自如。作"長江萬里圖"。 新澤西 Princeton 大學發表中國藝術演講。 1970 加州再開畫展。
1971 香港大會堂展近作。 1972 三藩市《四十年回顧展》(1928-1970)。
1974 日本東京中央美術館畫展。 1975 返台定居。
1977 於臺北士林外雙溪籌建新居"摩耶精舍"。 1978 八月，摩耶精舍落成，遷入新居。
1979 一月參加香港《中國現代畫壇三傑》(張,溥,黃)作品展. 1980 出版《張大千書畫集》一,二集。至 1990 共七集。
1980 七月於摩耶精舍開筆繪製〈廬山圖〉。 1983 四月二日上午，病逝於臺北榮民總醫院，享年 85 歲。

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(全文完)

Who Understands the Spirit of It—the Taste and Sensation of *The Red Chamber* (3)

誰解其中味－<<紅樓>>的吃與情 (3)

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(Translated into English by an editor)

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(由編者翻譯成英文)

(ii) The meaning of "Sweet-smelling"

"Scent" in a dream of *The Red Chamber* was out of voice and color, which presents the special appreciation and evaluation of the author's taste and spirit.

(ii)「聞香」的象徵意涵

「香」的體會在《紅樓》一夢中，往往逸出了聲色之外，呈現了作者獨具的審美品味和精神之愛。

In the 2nd section, through the Lan Zeshin's view, Boyu chased ladies "put skin powder, rings and bracelets" which reflect youths' favorites nowadays. The scent of powder represented that Boyu were sympathetic and cared about ladies, and the warmth of colored power revealed that the author cared for human beings (not only women).

早自第二回起，透過冷子興的視野，書中的主角寶玉在抓周時就「只把些脂粉、釵環」,「喫胭脂」也成了他青少年時期的雅癖；其中胭脂的香氣表現了他對女子的憐惜，而胭脂的暖色調也暗含作者對芸芸眾生（不單只有女子）的深厚同情和處處關心。

Boyu's "smelling fragrance" appeared in 19th section, "loving whisper at the night; warm feeling during the day." When Shiren left Jia's family, she advised Boyu that

Never denounce any monk, play girls around; never kiss the powder and the redness on any lady's face and mouth.

In the same section, Boyu visited Shiowchan's house, Daiyu saw Boyu's face had a button size of blood. She touched the blood which was not caused by a finger, but she tried to help open the powder cosmetics and touched a little bit. Then Boyu made up a story about a middle school student stealing candies, which resulted in "Miss Lin is a fragrant potato." It corresponded to the 8th section, while Bochai with pills of cold fragrance. Daiyu was the warm fragrance of Boyu.

寶玉「聞香」最生動的實證是在十九回〈情切切良宵花解語　意綿綿靜日玉生香〉出現的，起先襲人想藉由離開賈府規勸寶玉，說：

> 再不可毀僧謗道，調脂弄粉；還有更要緊的一件，再不許吃人嘴上擦的胭脂了，與那愛紅的毛病兒！

之後在同一回中，寶玉走訪瀟湘館，黛玉因看見寶玉左邊腮上有鈕扣大小的一塊血漬，便久身湊近前來，以手撫之細看，原來不是指甲刮的，是「纔剛替他們淘漉胭脂膏子，蹭上了一點。」談笑之間，寶玉忽聞得一股幽香自黛玉袖中發出，之後寶玉編了一個耗

子國中小耗偷菓的故事，結果推出「林老爺的小姐纔是真正的香芋」！相對於上引第八回中探望寶釵時的冷香丸，黛玉無異是寶玉心中的那塊「暖香」！

In the 44th section, when Ping was angry by Feng sister. Boyu tried to ease her and he opened a box with rose rouge and said:

This is a high quality rouge combining with florist dew. If you put a little bit into your hand and mix it with water, it rouges into your face.

Ping followed his instructions and looked pretty with sweetness and fragrance on her cheeks. Today was a memorial day of Jinchang. The act compensated Boyu's regret without smelling the fragrance last time (in the 30th section). From smelling fragrance into understanding the sensation, imagination in the air is a key issue.

而四十四回〈喜出望外平兒理妝〉中，平兒被鳳姐波及受氣後，寶玉正好可在平兒前稍盡片心，他體貼地拿著小小白玉盒子，內盛玫瑰膏子似的胭脂說：

這是上好的胭脂擰出汁子來，掏澄淨了渣滓，配了花露蒸疊成的。只用細簪子挑一點兒抹在手心裡，用一點水化開抹在脣上，手心裡就夠打頰腮了。

平兒依言妝飾，果然嫵媚鮮豔，而且「甜香滿頰」。這天正好是金釧的祭日，也略微彌補了寶玉那次（三十回）不捨聞香低語而造成的愧悔。

從聞香到悟情，太虛幻境的經驗無疑是一大關鍵。

In the 5th section, Boyu hunted ladies through the imagination of the air due to Qing Koching's sleeping room " the picture of begouia's spring sleep" and Qing Taichu's writing "early winter locked the dream due to the chill of spring; sweetness-smelling touched people due to the wine." Boyu loved Daiyu the best. Her previous life was hungry for love, but her current life almost was secluded. In the 38th section, at the banquet of crabs, Dayu was afraid of eating much, only tasted a little bit. Daiyu's Shiowchan house had a special fragrance such that Boyu could smell the special scent from the screen window of her house. In the 40th section, Grandma Liu visited the great garden. We could see that Bochai's house had a garden with a variety of flowers and plants. When peopled entered the garden, they could smell the fragrance.

Mother Jia saw th eclear coast and asked: "Is it the house of Shei Bochai?" "Yes!" people answered. Mother Jia climbed up the coast and walked along the stairs into the house, and smelled fragrant. Those herb and green plants turned flowers into seeds or fruits, and looked lovely. When she entered the room like a snow carve with nothing, but a vase with a few chrysanthemums and two books and a tea pot with a few small tea cups. (44th section of "The Dream of Chamber)

第五回中，寶玉因秦可卿臥房的《海棠春睡圖》和秦太虛寫的「嫩寒鎖夢因春冷，芳氣籠人是酒香」而進入了群香薈萃的「太虛幻境」；而他最鍾情的黛玉，其前身「絳珠草」則飢食覓情果、渴飲露水，今生的她，幾乎不食人間煙火。例如第三十八回中耗資不少的「螃蟹宴」中，「黛玉獨不敢多吃，只吃了一點兒夾子肉，就下來了。」 黛玉的瀟湘館又不時散發優雅的香氣，使走至窗前的寶玉聞道「一縷幽香從碧紗窗中暗暗透

出」(二十六回)。透過四十回的姥姥遊園，我們看到寶釵的居所也遍植各色香草，一進蘅蕪苑只覺「異香撲鼻」:

> 賈母因見岸上的清廈曠朗，便問「這是你薛姑娘的屋子不是？」眾人道:「是。」賈母忙命攏岸，順著雲步石梯上去，一同進了蘅蕪苑，只覺異香撲鼻。那些奇草仙藤愈冷逾蒼翠，都結了實，似珊瑚豆一般，累垂可愛。及進了房屋，雪洞一般，一色玩器全無，案上只有一個土定瓶中供著數枝菊花，並兩部書，茶奩茶杯而已。(《紅樓夢》第四十回)

When she took "the pills of cold fragrance", she thought these pills "from the mountain of spring formed from the sea water, and winded with cold pearl, and made from the imaginary sky." Hence, Professor Ou Lijuang thought that Bochai took the pills of cold fragrance to hide her desire and love. It is similar to the reflections of implications in the 5th section of the imaginary world "the sprits of many ladies died", "thousands of redness one carve (cried)", "many pretty women felt sad". It is characterized that the pains and bitterness of Bochai and all ladies in the ancient time were under the binding of old tradition.

而她時時服用的「冷香丸」，在脂胭齋的眉批中，以爲此藥是「從放春山採來，以灌愁海水合成，煩廣寒玉兔搗碎，在太虛幻境空靈殿上炮製配合者也」；因而歐麗娟教授以爲寶釵服食「冷香丸」，以抑制先天的情意與追求，一如第五回太虛幻境中的「群芳髓(碎)」、「千紅一窟(哭)」、「萬豔同杯(悲)」的符號指涉，象徵著金陵十二釵乃至世間女子，在社會制約之下共同經歷的甘苦。[24]

In addition, in the Boyu's Yiyuang Garden, "there is only a oven on a table without date, it fills with joss sticks" (in the 58th section, cf. Ou lijuang's "comments on the dream of the Red Chamber with poems", p. 422). It implies that the images of pretty ladies are reflected from the fragrance of flowers in the books and joss sticks in the oven.

此外，寶玉的怡紅院更在「案上只設一爐，不論日期，時常焚香」(第五十八回，並參歐麗娟《詩論紅樓夢》頁 422)，可見群芳的意象，不斷在書中透過花香、燃香來傳示。

It is interesting that in the banquet, ladies and gentlemen in the garden used "sweet dream fragrance" to measure the time. In the ancient days, Chinese used sand drops to measure the time, and sometimes, played the drum to tell the time. When sweet dream fragrance gradually disappeared, people had to create some works. In fact, sweet dream fragrance was frequently the time measurement in the ream of the *Red Chamber.*

有趣的是，在宴飲之間，大觀園兒女計時用的碼表，也叫「夢甜香」。計時的東西在中國有時是沙漏；有時是打更；而在三十八回的螃蟹宴中，用的是「夢甜香」。當香一陣一陣的變成灰時，是一定要交出作品的，夢甜香其實也是紅樓夢裡不斷出現的計時方式。

Time measured the wisdom, which hinted that the chamber of Jia was gradually

[24]在上引歐麗娟〈「冷香丸」新解——兼論《紅樓夢》中之女性成長與二元襯補之思考模式〉一文中，認為十二代表著中國文化中時間的循環往復，也意謂著十二金釵乃至世間女子的宿命。

corrupted, luxurious and falling. When all the people in the chamber died and disappeared, the only thing left in the chamber was the fragrance.

時間考驗著智慧，也暗示著賈府敗亡的倒數計時。當煙消人散之際，唯一縈繞胸懷的，或許只有那甜甜的清香吧！

(iii) The combination of tea and wine **(iii) 茶酒香的複合意象**

Tea helps people digest and clean. However, wine let people be drunken and unaware. Besides food and flowers, "fragrance" was the only characteristic such that Boyu likes ladies. But, *the Red Chamber* did not forget meeting-leaving-happiness-sadness in life, besides smelling the fragrance. It reminds people that "sensation" is a closed feeling, it could be overlooked.

茶，使人清；酒，令人醉；而香，則引人親近。除了食物與花草器物之外，「香」，是最令寶玉心馳神往的女兒特質。而在「聞香」的沈醉之餘，《紅樓》從不曾忘記在一次次的離合悲歡之後，提醒「情」雖可親，「情」亦可輕！

According to Ou Lijuang's analysis, in *the Red Chamber*, "tea, wine, fragrance" three combine into one. The characteristics of Boyu's loving ladies reflected in the 5th Section "the imaginary world", warning that Boyu watched "Jinlin's 12 chais (decoration of a lady)" in the text and "let him re-enter the imagination of love and food". Use tea and wine as the alternatives to describe the way. The tea in the "thousands of redness one carve (cried)", and the wine in the "Tens of thousands of sadness". Both tea and wine are made from water which implies that water is the adjective of a lady. Tea, wine and plus the spirits of a group of ladies form the structure of the imaginary world.

據歐麗娟教授的分析，在《紅樓》所建構的龐大象徵代碼中，「茶」、「酒」、「香」是三位一體的複合意象，而且在寶玉悟情之初就被賦予特殊的女性象徵意涵——第五回的「太虛幻境」中，警幻仙子在寶玉看過「金陵十二釵」正冊和又副冊的判詞依然不悟後，又引其入室，「令其再歷飲饌聲色之幻，或冀將來一悟」，使茶酒等「飲饌」之物成爲悟道的媒介——包括名爲「千紅一窟」的茶和「萬豔同悲」的酒，兩者皆以水的質地而等同於以水爲骨肉的女兒化身；另外加上「群芳髓」的香料，三者共同構築了太虛幻境的女性象徵。[25]

In *the Red Chamber*, through soup, tea and snow, Boyu enjoyed and played with many ladies day and night. Between known death and unknown future, Boyu used tea and wine as the motivation of living in the dream of the midnight, it connected well before and after the dream. "Good things in the world won't last long; colored clouds in the sky are easy to scatter (Bo Juyu's poem). Once waking up from the dream, the chamber was empty, cups without tea and lamps with weak light. The slight left over fragrance became an exclamation mark of culture which may be a blank of loving life with hardship.

《紅樓》的生活情境中，透過夜晚時「喚茶湯」、「索烹茶」和「試茗掃雪」等風雅

[25] 參歐麗娟《詩論紅樓夢》頁 420（台北：里仁 2001 年）。

之舉，寶玉在《紅樓夢》裡便合理地聚集婢女侍兒一起共享人世繁華，也使容易流於清寂的夜晚藉之活潑繽紛起來；而夜晚已然如此繽紛，白晝的熱鬧更是不言可喻，由此遂彰顯此夢之中不分晝夜的「富貴溫柔」性質。在已知的死亡和未知的新生之間、在黑夜夢境中斷的夾縫裡，寶玉便藉由茶酒維持做此人生大夢的動力，使片斷的夢境得以前後銜接，聯繫爲不致斷裂的整體。而「世間好物不堅牢，彩雲易散琉璃碎」（白居易詩），一旦夢醒樓空、杯盡燈殘，只有餘香嫋嫋，化爲文化的驚歎號，抑或是一個「情天難補」的留白？

4. Conclusion

4. 尾聲

(1) Taste could be light and sensation could be closed

（1）味可輕而情可親

In the Qing Dynasty, Zhow Sheichin's writing abouthappiness-sadness-meeting-leaving played at every corner of China. Wealthy and high officials lived with luxurious food, clothing and houses through author's narrative description, which warn people that happiness and pain go together. Daiyu could not swallow a pill of pearl due to jamming her throat, and Boyu played with her. During the interaction between Boyu and Daiyu, there was never food shortage, which overlooked the traditional hierarchy, sex and prejudice. Dayu's poem was stated as follows.

Discuss one's ambition with bow about self-outstanding a pretty lady with bright eyes look ahead the dark future; live and appear in the public, how can it look down a strong female?

在大清帝國的極盛時期，曹雪芹筆下一場場的悲歡離合，在百餘年來似乎仍不斷的在每一個角落上演、落幕；那些吃穿用度的驚人排場，已然超越了口腹之慾；藉由作者的剪裁穿插，鎔鑄成禍福相倚、警人耳目的精神象徵。因而，「嘛不下玉粒金波噎滿喉」的黛玉，在與寶玉的互動中，少有物質的授受；但儼然化身爲士大夫的不屈與不畏，跨越了傳統中的階級、名利和性別歧視。她所歌詠的〈五美吟〉中的紅拂女，正是自身的寫照：

長揖雄談態自殊，美人巨眼識窮途；尸居餘氣楊公幕，豈能羈縻女丈夫！

Zhow Sheichin's narrated the banquet skillfully, it was the most touched point that he described Boyu's real spirit which reflected his perspectives in the real world. We can use in the 101th section to verify between the mandarin ducks devoted to the sky and Kochin's dialogue as follows:

The word "sensation", is one's personality, before expressing happiness, madness, sadness and delight, it is one's sentiment after expressing those feeling. For the love between you and me is similar to the sprout, it is going to become a full flower. When it is fully expressed, it is gone.

曹雪芹寫宴飲出神入化，但最動人處卻是在無滋味處的情味——他不但寫出了寶黛玉之愛的精神面相，更有著作者對人間情味的真切解讀。我們可以用《紅樓》一百一十

回，鴛鴦殉主魂歸太虛時與可卿的對話來映證：

……情之一字，喜怒哀樂未發之時便是個性，喜怒哀樂已發便是情了。至於你我這個情，正是未發之情，就如那花的含苞一樣，欲待發泄出來，這情就不為真情了。

(2) Feedback **（2）回響**

In this lesson, let's take a look of Wen Zeihen's view about *the Red Chamber:*

Maybe visit the imaginary world, inspect the real and the imaginary, can a thousand of cups of redness and one cry urge people speculate the real world? Like angles flying the sky. Such a fragrance let many people to speculate. A thousand of cups of redness and one cry collided together as a piece of fragrance which produce many love stories, and then fade away. This is exactly "a piece of pure land, how can God deal with it."

在課前問卷裡，一檢溫若涵對紅樓有如是的品味：

或許共遊太虛幻境，遨翔於真與虛之間後，一杯千紅一窟能否讓我看透紅塵？想像仙袂飄飄的異世界中，這股清香又是如神之筆，平添了多少遐思，對情、對人，對幻、對實。也許這是痴人說夢，但又何嘗不是冀望飛翔的美麗？「千紅」同在「一窟」，卻能同融成一流清芬的純美；有如紅樓裡多少嬌媚，結果卻同樣只能長眠，正是「幽微靈秀地，無可奈何天！」

The Read Chamber is a Chinese love dictionary, which is also an art. It is said good bye to youth and wealth, and all other good things. Life is a process of farewell. "*Life has its own meaning, it is not related with wind or moon.*" (by Ou Yangsio "Yulo Spring"). Hold and take advantage of the current moment, put feeling and sentiment aside, and turn them into wine and poem, which is the true testimony of permanent sentiment, and also is a purified voice.

My world is more convenient each day, however, I can not find a real love;
I don't want to run marathon with you, but I know that life is a great gift.
Hopefully, there is a love in this life. If none, try to find a love story.
You may slowly fall in love secretly. ("Beside Plum Tree" composed by Wang Lihong and versed by Ashin) (End)

《紅樓夢》，作爲中國的愛情經典，它可以是生活美學的，更可以是告別美學的創調。告別青春、告別富貴、告別所有美好的事物……，人生，不就是一段告別的歷程嗎？

而「人生自是有情癡，此恨不關風與月！」（歐陽脩〈玉樓春〉） 珍惜當下，將美好的滋味與情味典藏心中，入酒成詩；既是至情的永恆見證，也是真空妙有的清音！

我的世界一切越來越方便　但　奇怪還是沒有辦法找到一種愛
我不要跟你們賽跑　因為我知道　生命是個禮物　不希望這一輩子
沒有愛而馬不停蹄　好想掉進那故事裡　步奏慢點兒　氣氛神秘

～節錄自〈在梅邊〉（阿信詞，王力宏曲）(全文完)

The Patriarchs of Buddhism (4) 佛祖道影（4）

Collected by Master **Hsu Yun** 虛雲老和尚編集
Instructed by Master **Hsuan Hua** 宣化和尚講述
(Translated into English by DRBA)

Seventh Patriarch Ayra Vasumitra 七祖：婆須密尊者

尊者，北天竺國人也。因六祖遊化，見尊者手持酒器，逆而問曰：「師何方來？欲往何所？」祖曰：「從自心來，欲往無處。」尊者曰：「識我手中物否？」祖曰：「此是觸器，而負淨者。」尊者曰：「師識我否？」祖曰：「我即不識，識即非我。」後為披薩圓戒，付以大法。尊者得法已，行化至迦摩羅國，廣興佛事。後付法於佛陀難提，即入慈心三昧。復起，示眾曰：「我所得法，而非有故。若識佛地，離有無故。」語已，還入三昧，示涅槃。

Interpretation: Revering, north India people. Because six ancestors swim, sees revering to grasp the drinking vessel, goes against asked said: "Where does the teacher come? Wants toward 何所?" The ancestor said that, "From comes from the heart, to want toward the there is no place." Revering said that, "Knows in my hand the thing otherwise?" The ancestor said that, "This is touching, but negative only." Revering said that, "The teacher knows me otherwise?" The ancestor said that, "I namely do not know, know namely must me." Latter for 披薩 the round abstention, pays by is big method. Revering gets the knack of already, the line to 迦 touches the Luo country, broadly is popular the Buddhist ceremony. The latter method of payment is difficult to the Buddha to raise, namely enters the compassion secret. Turns round, shows the audiences to say: "I get the knack of, but must has therefore. If knows the Buddha place, to has for no reason." Language already, but also enters the secret, shows 涅 the plate.

白話解: 尊者，北天竺國人也：第七祖，名字叫婆須密，是北天竺國的人。他常常穿著潔淨的衣服，手拿著酒器，遊行街里，或者吟誦，或者長嘯，所以人們都認為他是個狂人。 **因六祖遊化，見尊者手持酒器：**第六祖彌遮迦者尊者，本來是中印度的人，得法後，就四處遊化教導眾生。有一天，他來到了北天竺國（北印度），看到城牆上避箭的短牆上，佈滿金色的祥雲，瑞氣騰空，忍不住贊歎說：「哦！這是道人的氣，這兒一定有聖人可以繼承我的法脈！」於是就進城了。進城後，六祖見到尊者手上拿著一個酒器，在街里遊行。這時，婆須密尊者一見到六祖， **就逆而問曰：師何方來，欲往何所？**逆，就是迎上前去。他就迎上前去問六祖：「師父，您是從什麼地方來的？又要到什麼地方去呢？」 **祖曰：從自心來，欲往無處。**六祖回答：「我從自性來，沒有一個去處。」

尊者曰：識我手中物否？他又問：「您認識我手中的東西嗎？」 **祖曰：此是觸器，而負淨者。**六祖就說了：「這是一個髒的容器；雖然是個不潔的器皿，但是裏頭裝的卻是乾淨的東西。」觸，就是骯髒不潔。**尊者曰：師識我否？**婆須密尊者又說：「那師父您認識我嗎？」**祖曰：我即不識，識即非我。**六祖就說了：「我不認識你啊！我怎麼會認識你呢？我若認識你的話，那個就不是我了！」又說：「你說說自己的名字姓氏吧！我會告訴你過去的因緣。」婆須密尊者就回答：「我從無量劫以來，乃至於生到這個國家，姓頗羅墮，名字叫婆須密。」六祖就說：「我的師父提多迦尊者曾經說過：佛住世的時候，有一次遊化來到了北印度，告訴阿難尊者說：『我滅度三百年後，這個國家會有一聖人出世，姓頗羅墮，名婆須密，而他將是第七代祖師。』你看！世尊早就為你授記了，所以你應該出家。」於是婆須密尊者就放下酒器，頂禮六祖，側立一旁說：「我回想起在過去無量劫中，曾經是一個施主，當時我供養寶座給一位佛，那位佛就為我授記說：『你將來會於賢劫釋迦牟尼佛的法中，宣揚傳播聖教。』這與師父您現在所說的，正相符合，請您度脫我出離生死吧！」**後為披薙圓戒，付以大法：**所以六祖就為他落髮出家，再為他授具足戒，並且傳給他以心印心的法，囑咐他勿令正法斷絕，其傳法偈如下：

無心無可得　說得不名法　若了心非心　始了心心法

尊者得法已，行化至迦摩羅國，廣興佛事，後付法與佛陀難提：婆須蜜尊者得法以後，遊方行化到了迦摩羅國，到處傳揚佛法。以後就在這個國家，把心印的法傳給八祖佛陀難提尊者。**即入慈心三昧，復起，示眾曰：**八祖受印證之後，婆須密尊者就入慈心三昧的這種定，又出定，對大眾說：**我所得法：**我所得到的這種法，**而非有故：**並不是有個「有」的緣故，不是有所得。**若識佛地：**你若是識得佛的境界了，**離有無故：**那是因為你離開了「有」和「無」──也沒有一個「有」，也沒有一個「無」了。**語已，還入三昧，示涅槃：**婆須密尊者說完後，又再入定，就圓寂了。

贊曰: 雲呈祥瑞，金色晃燁：這個雲呈現一種很吉祥的瑞氣，把天空照得一片光亮亮的金色。**手持酒器，歸源路直：**他手上拿著一個酒器；拿著個酒器，這也是一種表法。「歸源路直」，回家的路很直接的；這是說他認識本來面目了，不會迷途了。**現慈心相，膠盆拈出：**他入慈心三昧，示現一個慈心的相；「膠盆拈出」，就好像從膠盆中拿出來似的。**說法示眾，胡餅呷汁：**他給大眾說法開示，「胡餅呷汁」，就好像從燒餅裏頭吸出來糖汁一樣。

或說偈曰: 北天竺國生聖人：北天竺國出了一個聖人，這是說七祖婆須密尊者。**手持觸器問前因：**他手上拿著一個酒器，來請問六祖他前世的因緣。**從自性來無所去：**六祖跟他說：「我從自性來，沒有一個去處。」**識即非我有何人：**我若認識你的話，那個就不是我了！不是我，又是誰呢？這就是叫他去參去。**慈心正定聽去入：**婆須密尊者得到慈心的正定，他出定入定是平常事。**悲光遍照滿乾坤：**他那個慈悲的光照滿了大地。**金色蓮華接學者：**佛於靈山會上，拈金色蓮花示眾，大眾默然，唯有金色頭陀──迦葉尊者破顏微笑。佛就將正法眼藏，傳給迦葉尊者。迦葉尊者又傳給二祖阿難尊者，這法脈一代一代流傳下來，接引後學。**摩訶般若秘靈文：**這以心印心，秘而不宣的大智慧法門，是天地的靈文、天地的正氣，妙不可言！

Elder Master Venerable Hsu Nobel Yun's Self-Description of His time and Instructions (5)

上虛下雲老和尚自述年譜暨開示（5）

Edited by Tzen Shai Lu
(Translated by an editor)

岑學呂編輯
(由編者翻譯成英文)

行住坐臥歌

山中行。 踏破嶺頭雲。 迴光照。大地無寸塵 。 － 虛雲和尚作

Song of walking, living, seating and lying

Walk in the mountain; step through the cloud in the sky. Enlighten one's mind; there is no dust on the earth. By Master Hsu Yun

Master Hsu Yun's Self- Description of his time **虛雲老和尚自述年譜**

◎光緒十年甲申四十五歲 **◎ In the 45th year of Emperor Guan Shu**

正月初二日由洪福寺起拜香。抵懷慶府。復回寺寄宿。初三日告別德林老人。大哭不捨。珍重而別。是日到府。城內小南海。不許掛單及留宿。即出城外宿路邊。是夜腹痛極劇。初四早仍拜行。晚發冷病。初五起痢疾。每日仍勉強拜。至十三日抵黃沙領。山頂祇一破廟。無遮蔽。至此已不能行。歇下。不進飲食。日夜瀉數十次。起動無力。廟在山頂。無過往行人。瞑目代斃而已。無悔念也。十五深夜見西邊牆有人燃火。疑為匪類。細看久之。見是文吉。心中大喜。呼文先生。彼執火來照。「大師父你怎麼還在這裡。」予將經過向伊說。文即坐身邊安慰我。拿水一杯給我喝。是夕得見文吉。身心清靜。十六日。文吉將予之污穢衣服換洗並給一杯藥與予喝。十七病退。食黃米粥二碗。大汗內外輕快。十八病癒。予謝文吉曰。「兩次危險。都蒙先生救濟。感恩不盡。。感恩不盡。」文曰。「此小事。」問文「從何處來。」曰。「長安。」問。「何去。」曰。「回五臺。」予曰。「可惜我在病。又是拜行。不能追隨先生。」文曰。「看你從去臘到今。拜路不多。那年能到。你身體又不好。決難進行。不必定拜。朝禮亦是一樣。」予曰。「先生美意可感。但我出世不見母親。母為生我而死。父僅得我一子。我竟背父而逃。父因我而辭官。而促壽。昊天罔極。耿耿數十年矣。特此發願朝山。求菩薩加被。願我父母脫苦。早生淨土。任他百難當前。非到聖境。死亦不敢退願也。」文曰。「你誠孝心堅固。也算難得。

我今回山。亦無甚急事。我願代你負行李。伴送行程。你但前拜。輕累許多。心不二念。」予曰。「若能如此。先生功德無量。倘我拜到五臺。願以此功德。一半回向父母。早證菩提。一半奉送先生。以酬救助之德。如何。」文曰。「不敢當。你是孝思。我是順便。不必表謝。」文吉在此照應四日。病已大退。

On the 2nd day of the 1st lunar month, I bowed and worshiped starting from the Hongfu temple, arrived at the Huaiqing House, and returned to the temple for lodging. On the 3rd day, I said farewell to Elder Master Delin, and felt upset. Later, I arrived at a small town in the south, where was not allowed for lodging. Therefore, I stayed on a street outside the city overnight, and felt very painful in my abdomen. On the 4th day, I continued to bow, and caught cold. On the 5th day, I had dysentery and bowed reluctantly. On the13th day, I arrived at a sand collar mountain, where had a dilapidated temple without roof. I was very sick, and could not walk any more. I could not eat and drink, and had diarrhea more than ten times a day. The temple was on the top of the mountain, where no passengers passed by at all, and I was waiting to die. On the 15th day, I saw a fire in the west, and suspected some gangsters hiding there. Fortunately, it was Master Wen Ji (my old friend who helped me last time). I was very pleased to meet Mr. Wen here. I called him loud, “Why Master is still here?” He made a cup of water for me to drink. I felt much more comfortable in my mind. Master Wen changed my dirty dresses and washed them for me, and then gave me a cup of Chinese herb tea to drink. On the 17th day, I recovered well, and felt better physically and mentally. I could eat two bowls of cooked yellow rice. On the 18th day, my illness was gradually healed. "You saved me from danger twice. Thank you so much!” I appreciated him very much from the bottom of my heart. "It is a little thing," Wen replied. "Where are you from?" Wen asked. “I am from Xi’an,” I said. “Where are you going to?” Wen asked again. “I am going to Wutai,” I replied. "Your health is no good. You bow slowly for a short distance, since last lunar December. How can you arrive at your destination? You don’t have to a full bow to the ground, half bow is fine,” Wen said. “Thank you very much for understanding! My mother gave my birth and died, and my father had me the only son. I evacuated from home secluded, and my father resigned and quit his job due to me, and died young. I am not filial to my parents at all. I have thought in my mind for many years, and make a vow that I have to make a full bow to the ground completely, and pray Buddha and Bottissava to save my parents from hell to paradise. No matter how difficult it is, I swear to finish my mission,” I said. “You are so filial to your parents. I can take your luggage so that you can concentrate on your bowing without worry,” Wen said. “ If I arrive at Wutai, I will return half of the merits to my parents and half of the merits to you,” I answered. “You are so filial to your parents, and your heart is great and precious. There is no need to appreciate me,” Wen said. He took care of me for four days. My health had recovered well.

十九日扶病起香。從茲荷物作食。都由文負擔。予妄想頓息。外無物累。內無妄念。病亦日愈。體亦日強。辰旦至暮。可拜行四十五里。亦不覺苦。至二月底到太谷縣離相寺。住持參學林下。見知客禮畢。顧文吉問予曰。「這位是你甚人。」告以故。知客厲聲曰。「出門行腳。不達時務。這幾年北地飢荒。朝甚麼山。甚麼大老官。要人服侍。欲想享福。何必出門。你見何處寺門。有俗人掛單。」當下聽其呵責。不敢回聲。予認錯告辭。知客曰。「豈有此理。由你

自便。誰叫你來。」予聽話頭不對。即轉過話說。「這位文先生。請到客店住。我在此打擾一單何如。」知客曰。「可爾。」文曰。「此去五臺不遠。我先回去。你慢慢來。你的行李。不久有人代你送上山的。」予苦留不得。取銀酬伊。不受。辭去。後知客改顏悅色。和氣送單。到灶房熱坑上茶。親做麵。陪吃。奇其舉動。又顧左右無人。問曰。「此間常住多少眾。」曰。「我在外江多年。回來住持。連年歲荒。僅留得我一個。糧亦止此。適才舉動。是遊戲耳。幸勿見怪。」予十分難過。啼笑皆非。勉吃麵半碗。即行告辭。彼留住亦無心答應也。遂到街上旅店找文吉無著。時四月十八。夜月正明。予欲追文吉。星夜向太原府拜香前進。心急起火。次日腦熱。鼻流血不止。二十日到黃土溝白雲寺。(此寺為孚上座道場)知客見予口流鮮血。不准掛單。勉強過一夜。二十一早進太原城。至極樂寺。飽受責罵。不掛單。二十二早出城禮拜。北門外遇一青年僧。名文賢。見予近前招呼。接過拜凳行李。請進寺內。愛敬如親。領到方丈。陪茶飯。談次予問。「大和尚似廿餘歲。又係外省人。何以在此住持。」曰。「我父親在此做官多年。後在平陽府任上。被奸臣所害。母亦氣殞。我含淚出家。此間官紳舊有往還。故邀至此。早想擺脫。今瞻上座道風。心甚傾服。請在這裏長住親近。」予告以發願拜香緣由。住持甚敬信。堅留十日乃放行。送衣物旅費。予概弗受。臨別代攜拜凳相送十餘里。灑淚而別。時五月初一日也。予向忻州前進。一日早。在途中拜香。後面來一馬車。緩行不越前。予覺避之。車中官人下車。問。「大師在路拜甚麼。」告以故。官人亦湘人也。談甚暢洽。彼曰。「若此。我現住峨口白雲寺。你朝臺必經之地。你之行李。我代你先送到。」予感謝之。上車逕去。仍是每日拜香。別無延誤。五月中到白雲寺。代送行李者。即該營營官也。見予歡迎至營部。優待。休息三日。告辭。送路費禮物不受。彼另派兵將行李銀物逕送顯通寺。予起香到圭峰山祕魔巖。獅子窩龍洞等處。山水奇蹤。說之不盡。予以拜香故。未能領略也。五月底至顯通寺。兵弁已將行李送來。下山去矣。到顯通寺住下。先到附近各剎進香。**遍問文吉其人。無有知者。後與一老僧說及情由。老僧合掌曰。「文殊菩薩化身也。」予即頂禮謝。**二十二日起香。兩日拜至東臺。月朗星輝。進石室上香。在室內朝夕禮誦。禪坐七日。下臺拜那羅延窟。裹糧已盡。六月初一日回顯通寺。初二起香。上華嚴嶺。過夜。初三拜北臺。在中臺過夜。初四拜西臺。過夜。初五回顯通寺。初七拜南臺。在南臺打七。十五下臺回顯通寺。參加六月大佛會。**至是為超生父母。拜香三年願畢。此三年中。除為疾病所困。風雪所阻。不能拜香外。一心正念。禮拜途中。歷盡艱難。心生歡喜。每每藉境驗心。愈辛苦處。愈覺心安。因此纔悟古人所謂消得一分習氣。便得一分光明。**忍得十分煩惱。便證少分菩提。又於中途所歷諸名勝。自普陀而江浙。而中州。而黃河。而太行。勝地名山。說之不盡。古今遊記。言之甚詳。然不及身歷其境者之為快。若五臺為清涼聖境。文殊放光。千丈寒巖。萬年積雪。石橋橫鎖。樓閣懸空。則非他處所及。予以拜香期內。不及觀賞。還願已畢。稍為涉足。不欲靈山笑也。大會圓滿。上大螺頂。拜智慧燈。第一夜無所見。二夜見北臺頂一團火。飛往中臺落下。少頃分為十餘團。大小不一。第二夜又見中臺空中三團火。飛上飛下。北臺現四五處火團。亦大小不同。七月初十日。拜謝文殊菩薩下山。由華嚴嶺向北行。至大營渾源南境。朝北嶽恆山。至虎風口。直上。有「朔方第一山」石坊。詣廟雲級插天。穹碑森立。進香下山。至平陽府(臨汾)朝南北仙窟。城南有堯廟。甚壯麗。南至蒲州(晉西南)盧村。禮漢壽亭侯廟。渡黃河。越潼關。入陝西境。至華陰。登太華山。禮西嶽華山廟。所經攀鎖上千尺幢。百尺峽。及老君犁溝。名勝甚多。留八日。慕夷齊之聖。遊首陽山。至陝境西南香山觀音寺。觀莊王墳。入甘肅境。經涇川平涼等。

至崆峒山。歲云暮矣。回香山過年。

On the 19th day, I started to bow with sickness. Wen took care of everything for me. I had no delusion from twilight to dusk. My illness was gradually gone and my body was stronger day by day, and could bow and worship 45 miles a day. I felt healthier and stronger to bow each day. In late February, I bowed to the Li-Chan temple in Taigu county. The manager inquired me about my guest, and I told him the truth. He said that if you wanted to be comfortable, why you don't stay home. In our temple, no ordinary people stay here. I said that Wen would stay in a hotel, and I would stay in the temple. "Wutai mountain is not far from here, I can leave now, and will send your luggage to you later," Wen answered immediately. Afterwards, the manager told me that there was very little food left due to famine problem, I purposely wanted to keep you only. " I felt very bad, could not stay long, and was eager to look for Wen. On the 18th of April, I kept seraching for Wen. Time passed by quickly, and I still could not find Wen. On the 20th of April, my nose started bleeding, and the manager of Baiyun temple did not allow me to live. I stayed outside one night reluctantly. On the 21st of April, I went to Taiyuan city and arrived at the Jila temple, where I could not stay, and was treated badly. On the 22nd of April, I met a young monk named Venshan, who led me to his temple and respected me very much. He introduced me to the leading monk of the temple who asked me "You look like with age of 20th coming from other place, why you stay here?" "My father was an official in Peiyuang city for many years, and he was the victim of a traitor. My mother also passed away with unhappiness. Many of my father's old friends were still here, and they invited me here. Since I admire you very much, may I stay here for a few days?" I asked. I told him the true story about my worship and bowing so that he respected and trusted me very much. I lodged here about 10 days. While I was leaving, he offered me money and clothing which I did not accept. He accompanied me for walking about 10 miles, and we said farewell and cried each other. On the 1st of May, I bowed and met an official jumping from his cart and asked me "Master! Why are you bowing?" I told him the reason and he respected me. He was from my hometown Xianxian in Hunan, and we were pleased to chat with our dialect. In mid May, I bowed to Baiyun temple and met the official, and we were very delighted to meet again, and I stayed there for three days. I kept bowing and worshiping and arrived at Gutong temple in late May. I stayed there for a few days. I asked many people about Wen Ji's information, but nobody knew him. Finally, I met an old monk and I told him the whole story. He said that "**Mr. Wen Ji is Bodhisattvas Wenshushrli!"** I saluted him and said goodbye! On the 22nd of May, I started to bow and arrived at the East station for two days. I then meditated for 7 days and got up without food. I went back to the Gutong temple. On the 3rd of June, I worshiped to North station, on the 4th of June, I bowed to West station, on the 5th of June, I returned to the Gutong temple, on the 7th of June, I bowed to South station, meditated for 7 days, and returned to the Gutong temple. I then participated a big Buddhist assembly to worship Bodhisattvas and Buddha, and returned all the merits to my parents. **Finally, I had completed and finished my task for bowing and worship for my parents for three years successfully.** Through these three years, I had encountered many difficulties and ordeals. I felt stronger and stronger, when I overcome one ordeal after one. Through the tests of

many ordeals and harships, I had obtained a peaceful mind into bliss and a strong physical body. Through Putuo Zhejiang, Jiangsu, the Central Plains, the Yellow River, the Taihang Mountain, I traveled and did incredible sightseeing of many ancient and modern sceneries and constructions. It was hard to describe how wonderful and beautiful those natural scenes were. Five stations were sacred places with pavilions which were very attractive. When the Buddhist assembly was completed, I went to climb the spiral top and to worship the wisdom light. On the first night, it was dark. On the second night, I saw a big fire at the north station, which flew through the middle station, and then dropped into ten small groups of fire. Again, I saw three fires through the middle station and dropped. Also, there were four or five small fires in the middle station with different sizes. On the 10th of July, I said farewell to Bodhisattvas Wenshushrli, passing through Hua-yen, Tai Ying Hunyuan, South territory, toward the Hengshan, to the tiger air. There was a "first mountain Shuofang" of stone memorial. I then traveled through Yi Temple, Dome monument, Sen Li.Pilgrimage, Pingyang government (Linfen) toward the north and south cents cave. There was Yaomiao south, which looked spectacular. I passed south Puzhou (southwestern Shanxi), Lu village, Hanshou Tinghou temple, and crossed the Yellow River. Afterwards, I walked through Tongguan into the Shaanxi border, passing Hua Hin, Teng Tai Mountain, and Mount Hua temple. I climbed a few mountains with thousands of feet high. I stayed to visit many ancient buildings and scenes for 8 days in Shannxi, and then entered into Ganshu and arrived at Xiangshan Guanyi Temple and stay there for Chinese lunar New Year.

一月十九日在重慶慈雲寺開示

(民國 32 年)

菩薩們。這箇法會。虛雲太不知自量。不知各位上殿過堂。還要應酬佛事。辛苦萬分。晚上還要請各位念佛。聽開示。豈不是打閒岔嗎心中有點說不出的意思。所謂諸佛菩薩。難滿眾生願。因爲有許多居士。在法會中想聽開示。但昨天我也說過。拜懺與打七不同。沒有講開示的必要。他們發心。也很難得。我現在不是虛雲。變成虛名了。說不出來的話。我已曾同當家師說過。這次法會。討各位受辛苦些。當自己事做。如他方打淨七。天天無休息時間。這邊常住。田無一塊。瓦無一片。不應酬佛事不成功。應酬佛事。不能打七用功了。但佛事很忙。天黑大殿還要放燄口。所以再此時講一講。以便居士們過河回家。但拜懺四十九人。不能停聲。換人亦不停聲。常住最忙。這二十四人不可下壇。所謂開示者。開即開啓。示即表示。講爲人之善惡。開顯本來面目。但這面孔無大小方圓聖凡男女等色相。凡所有相。皆是虛妄故也。是諸相非相。即見如來。但盡凡情。別無聖解。學道的人。須真實。不可掛羊頭賣狗肉。但向己求。莫從他覓。但有言說。都無實義。說是假。行是真。充一人而多人。一家而一國。而多國。展轉變化。全世界大治而化矣。學摩不論修何法門等。總已持戒爲本。如不持戒。縱有多志。皆爲魔事。楞嚴二十五門。各證圓通。故云方便有多門。歸源無二路。自己則一門爲正行。餘者爲助行。須福慧雙修。單福則屬人天有漏。單慧則爲狂徒。修行不斷殺心。臨終非

作土地即城隍。我看見很多的人。吃素半世。學密宗即吃肉。實可悲痛。完全與慈悲心違背。孟子都說聞其聲不忍食其肉。何況爲佛弟子也。取他性命。悅我心意。貪一時之口福。造無邊之罪惡。何取何捨。何輕何重。每見出家釋子吃肉的也不少。我的嘴不好。叫我講我就無話不說。望大家共勉之。

The instructions in the Chongchin Zhe Yun Monastery on the 19th of January in 1943

Hello Bodhisattvas! In this assembly, Hsu Yun did not know that you all have experience to attend a temple. You work hard in the day time, and recite Amitaba in the evening. At night, you listen my instructions and I feel embarrassed to interfere with your work. I now give a lecture since many people request my instructions. Yesterday, I said that repentance and reciting Amitaba are different. Repentance is not necessary to instruct. Since you all are very sincere, I try to fulfill your requests. This assembly is very tense and tight. There is no time to rest, socialize, and talk each day. For repentance, 49 people take turns to recite and repent, and can not stop the sound. There are 24 people under the altar, and can not leave. Instruction in Chinese means “Openness & Expression”. Openness means inspiring wisdom, and expression means showing the way. Don’t talk about other people’s mistakes and misconducts, but retrospect oneself behavior. Talking is useless, but carrying out in action is important. Actually, talking is useless, and action is real. Don’t boast oneself for little accomplishment. Among all the cultivations, holding five precepts: no killing, no smoking, no lying, no alcohol and no illegal sex, are the most significant paths for cultivation If one can cultivate oneself well, one can generalize the cultivation to a family, a country and then the whole world for peace. There are 25 people cultivating 25 ways in Flower Adornment Sutra that each person cultivates to become a Bodhisattvas! How wonderful it is! There are many methods for cultivating, but one only needs to practice one true way and other ways are auxiliary. When one cultivates, one has to cultivate for both happiness and wisdom. If one only cultivates happiness, not with wisdom, then one will become a spirit with a lot of happiness without wisdom. If one only cultivates wisdom, not with happiness, then one will become a wise but selfish person without happiness. If one cultivates with killing, then one would become a soil man or a city temple man. I saw many people who ate meat and died with a lot of pains. It is very sad that one’s conduct disobeys the principles of Buddhism, the compassion and kindness. Menfucius ever said: “When I hear the voice of an animal killed, I feel reluctant and sympathetic, not to eat its meat.” For the taste of one’s mouth, killing an animal is full of evil. You all must keep it in mind and no killing. Finally, let us encourage and inspire one another, and my best wishes for true practice and cultivation.

THE SCHOLARSHIPS OF HAI HUNG FOUNDATION

In each summer, the Board of Directors (formed by three directors) and the Committee (formed by four PhDs) evaluate all the applications based on four criteria: statements of academic goals and objectives, transcripts, financial statements, references, and decide the recipients and awards. We have awarded scholarships to 151 university/college students in financial need in Virginia, USA and Guandong, China, since 2000. The recipients in Fredericksburg, Virginia are:

1. 2001: Mohamed Chakhad, Jennifer E. Hendrick, Dawn Zbell, Joshua Hickland, Robert M. Worster III, Jessica Pellegnnno, Christopher J. Barkley.
2. 2002: Erik C. Johnston, Evangeline W. Cornwell, Mary B. Ramsey, Matthew D. Welz, James F. Pierce, Jaime A. Miller.
3. 2003: Robyn L. Fielder, Kristen R. Payne, Jason B. Echols, Lindsay N. Briggs, Jennifer Golladay, Elizabeth M. Griffiths.
4. 2004: Damian Watson, Robyn L. Fielder, Kristen R. Payne, Pamela Medley, Cara A. Campbell, Daniel Bowers.
5. 2005: Graham Richardson, Mahvash Mujahid, Kathryn Astley, Gina Marie Vitale, EmilyLovins, Adele Chapin, Laura Titus.
6. 2006: Karena Jordan Carlson, Mahvash Mujahid, Gustavo Ramallo, Erin Leach-Kemon, Erin P. Keegan, Jay Sinha, Karin Anne Curtis.
7. 2007: Amanda Macdonald, Morgan Jones, Jonathan Stallings, Laura Mandeville, Lindsay D'Adamo, Melisa A. Shepherd, Gustavo Ramallo.
8. 2008: Jonathan Stallings, Lindsay D'Adamo, Fiona Cobb, Jillian Brodie, Caitlin Poteet, Stephine Rzepka, Sarah Jane Marshall.
9. 2009: Amy Sams, Carolyn Hannoch, Rachel Covington, Virginia Osella, Justin Anderson, Farrah Tek, Mirey Elias.
10. 2010: Amy Sams, Carolyn Hannoch, Rachel Covington, Virginia Osella, Justin Anderson, Farrah Tek, Mirey Elias.
11. 2011: Amy Smetana, Kyle McCartt, Rachel Grosmann, Diana Weigel, Anum Shaikh, Mattew Baker, Mairin Martin.

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2012 Harbin ice world was displayed in Jan. 2012 年 1 月哈爾濱冰雪大世界

2011 World Flora Expo and Inter. Horticultural Expo were held in Taipei and Xian, and Hao Longbin and Chen Bogan exchanged emblems **台北花博西安世园**郝龙斌與陈宝根交換吉祥物

Indian President Srimati Pratibha Patil with seven prestigious prize winners and organizers at the recent International Congress of Mathematicians (every 4 years) in Hyderabad, India, August 19-27, 2010. 最近的 2010 年國際數學家學會(每 4 年)於印度亥德堡舉行(8 月 19-27 日),印度總統與七名最高數學榮譽得獎者及會長等合照。

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