The Untold Stories: The University of Chicago-educated Chinese PhDs of 1915-1960

Frederic Xiong*

Abstract

In modern Chinese history, there have been three major waves of Chinese students going to study in the United States. The second wave began in the late 19th century and continued up to 1960. Through political turmoil, two Sino-Japanese Wars, the Chinese Civil War, the regime-change in 1911, the Communists' victory in 1949, and Korean War, 2,455 Chinese students earned Doctorates of Philosophy (PhD) degrees from 116 American colleges and universities. The University of Chicago (UChicago), a prestigious research university, educated 142 of those students, the fourth highest number among universities in the U.S.

This paper presents the first comprehensive list of Chinese scholars awarded PhDs at UChicago from 1915 to 1960, as well as descriptions of their achievements and what they did after graduation.

It also explores the lives of Chinese PhDs who chose to stay in the U.S., as well as those who returned to China after the Communists came to power. Those who stayed in the U.S. later helped China when it reopened its borders to outside of the world. Those who returned to China suffered greatly during the political upheavals—especially the Cultural Revolution, in which at least a dozen lost their lives.

PART I

Chinese Students Studying in the U.S.

In modern Chinese history, there have been three major waves of Chinese students going to study in the U.S.

The first wave can be traced back to 1847 when **Yung Wing** (容闳, 1828-1912) became the first Chinese student to study in the U.S. Yung attended Yale University from 1850 until he graduated in 1854. After he returned to China, he persuaded the Chinese government of the last imperial Manchu Dynasty to send a group of 120 young Chinese boys, age 10 to 15, to study in the U.S. in what is now called the Chinese Education Mission. Four groups of boys arrived in 1872 and studied in New England. But that mission ended tragically in 1881 when the Chinese government, led by conservatives, suddenly terminated the project out of fear that the Chinese students could eventually be westernized.

1978 was the beginning of the third wave, when the Chinese government decided to send students to study in the U.S. Fifty-two carefully selected Chinese visiting scholars arrived in New York on December 26, 1987. Between that day and 2019, more than 3.9 million undergraduate and graduate students have come to the U.S. from China to study various subjects. [1] Today, students from China can be seen on almost every American university and college campus.

***Frederic Xiong is a high school senior at Irvington High School in California. His paper is dedicated to the Chinese PhDs from the University of Chicago during 1915-1960, including his own great grandfather, PhD'34, and to celebrate the 130th anniversary of the University.**

The second wave was unique and had a big impact on Chinese history. It began after the First Sino-Japanese War of 1894-95 and lasted more than a half century until the early 1950s, when several important events occurred: the establishment a republic that overthrew the Machu Dynasty in 1911; the May Fourth Movement of 1919; the invasion and occupation by the Japanese from 1937-45; the Chinese Civil War of 1945-49; the defeat of the Chinese nationalist government that forced it move to Taiwan; the victory of the Communists in 1949; the Korean War of 1950-53; and the fall of the Bamboo Curtain in Communist China.

The origin of the second wave resulted from the Chinese defeat in the First Sino-Japanese War. No one anticipated that Japan could triumph over China. People in China were humiliated as the imperial Chinese government had to cede Taiwan and pay 30 million tael of silver (about 105 billion dollars today) to Japan. Thousands young students went to Japan to figure out what why this happened and how Japan had become so powerful.

William Woodville Rockhill (柔克义, 1854-1914) was a U.S diplomat, and served as special envoy to the U.S. President William McKinley. He has been credited with drafting a memo that was later approved by all the great powers (the U.S., Russian, Britain, Germany, France, Japan and Italy), creating the Open Door Policy toward China at the end of the Boxer Rebellion of 1899-1901.

In 1904, having seen the wave of Chinese students who went to study in Japan, Rockhill urged the U.S. Government to replace the American share of war reparations for the Boxer Rebellion with the Boxer Indemnity Scholarship Program in order to attract young Chinese intellectuals to study in the U.S. This was approved by the U.S. Congress in 1908.

In October 1909, 47 Chinese students, selected from 630 applicants through the first Indemnity Scholarship Qualified Exam, came to the U.S. Then, more government actions, private fellowships and personal funds brought Chinese students to study in the U.S. *The May Fourth Movement of 1919*, which promoted democracy and science in China brought even higher numbers of Chinese students to the U.S.

The second wave educated many Chinese students who went on to make great contributions not only to China but also to the world: more than 3,000 Chinese students received doctorates between 1905 and 1960 [2]. They include the prominent diplomats **Vi Kyuin Wellington Koo** (顾维钧, PhD'12), **Shih Hu** (胡适, PhD'17, Boxer Indemnity Student) and **Tingfu Fulier Tsiang** (蒋廷黻, PhD'23), all from Columbia; economist **Yin-chu Ma** (马寅初, PhD'14, Columbia) and **Franklin Lien Ho** (何廉, PhD'26, Yale); educator **Yi-fang Wu** (吴贻芳, PhD'28, Michigan); geologist and meteorologist **Coching Chu** (竺可桢, PhD'18, Harvard, Boxer Indemnity Student); engineers **Te-pang Hou** (侯德榜, PhD'21,Columbia, Boxer Indemnity Student), **Thomson Eason Mao** (茅以升, DSc'21, Carnegie Tech, Boxer Indemnity Student) and **An Wang** (王安, PhD'48, Harvard); scientists **Hsien Wu** (吴宪, PhD'19, Harvard, Boxer Indemnity Student), **Yu-tai Yao** (饶毓泰, PhD'22, Princeton), **Adam Pen-tong Sah** (萨本栋,DSc'27, Worcester Poly Tech, Boxer Indemnity Student), **Chen-ning Yang** (杨振宁, PhD'48, Chicago, Boxer Indemnity Student) and **Tsung-dao Lee** (李政道, PhD'50, Chicago); nuclear physicists **Hsue-shen Tsien** (钱学森, PhD'39, Cal Tech, Boxer Indemnity Student) and **Chia-hsien T**eng (邓稼先, PhD'50, Purdue). The list could go on.

In total, 2,455 Chinese students received a Doctor of Philosophy (PhD) from 116 American colleges and universities from 1905 to 1960. The first Chinese student to receive a PhD in the U.S. was **Chin-yung Yen** (严锦荣), who received a PhD from Columbia in 1905. [2] Table 1 shows the distribution of the Chinese PhDs from the top five universities. The University of Chicago contributed a total 142

doctorates over a 45-year span from 1915 to 1960, making it the fourth largest population of Chinese PhD graduates in the U.S.

No.	Institutions	Numbers of PhD's During 1905-1960
1	University of Illinois	204
2	Columbia University	166
3	Cornell University	144
4	University of Chicago	142
5	Harvard University	135

Table 1: The Distribution of the Chinese PhDs from the top five universities

Chinese PhD Students at the University of Chicago

The University of Chicago (UChicago), is a prestigious private research university in Chicago. It was first chartered by the legislature of Illinois in 1857. After years of preparation, especially after the donation of $400,000 from the America Baptist Education Society and $600,000 from business magnate and philanthropist John D. Rockefeller Sr., the University of Chicago was incorporated on September 10, 1890. It opened its doors to students in 1892. [3] In 1893, its first doctorate degree was awarded to Japanese student Eiji Asada (1865-1914), who received his PhD in Oriental Languages & Literatures. [4]

The first Chinese Boxer Indemnity Student at UChicago was **Treusinn Zoen Zee** (徐志诚, also known as Chih-cheng Hsu). He was one of 70 students chosen from 400 applicants after completing the second Indemnity Scholarship Qualifying Exam in China. He studied education at the University of Wisconsin from 1910 to 1912, and business administration at Harvard from 1912 to 1913. After he earned his M.A. in Sociology in 1914 at UChicago, he returned to China and used to work at Tsinghua University. [5]

Even before Zee, **John Yiu-bong Lee** (李耀邦, 1884-1939, PhD'15) is believed to have been the first Chinese student to earn a PhD at UChicago. He came to the U.S. as early as in 1896 and entered UChicago in 1903. After he received a BS in 1907, he continued his graduate study under Professor Robert A. Millikan and was awarded a PhD in Physics in 1915. After he returned to China in 1915, he worked on research in physics for a short time, before working with the YMCA until his death in 1939.

The first female Chinese PhD at UChicago was **Chi-che Wang** (王季茝, 1894-1979, PhD'18). She was granted a PhD in Economics and Household Administration in 1918. She made history because she was also believed to be the first Chinese woman to receive a PhD in the U.S. That was a milestone, since in China higher education for women was still rare—even just at the undergraduate level. In 1907, at the age of thirteen, Wang came to the U.S. as one of the first four Chinese girls sent by the Chinese government to study in the U.S. She first studied at Walnut Hill School of Arts, a college preparatory school for women and a feeder school for Wellesley. Three years later, in 1910, she officially started undergraduate studies at Wellesley and graduated there in 1914. During her four years of studies at UChicago from 1914 to 1918, she received a master's degree in 1916 and a PhD in 1918. In 2004, ***Chi Che Wang Playlot Park*** was named in honor of her by the Chicago Park District Board of Commissioners for her contributions to women and children in Chicago.

Photo 1: John Yiu-bong Lee in the 1907 *Cap and Gown* (Courtesy the University of Chicago Photographic Archive)

Photo 2: Chi-che Wang in the 1914 *Legends of Wellesley College* (Courtesy Wellesley Collage Archives)

Tables 2 to 5 below show the 142 Chinese PhDs at UChicago in chronological order, including their English and Chinese names, the years they received PhDs, and their academic field.

English Name	Chinese Name	Year of PhD	Field of PhD
Lee, John Yiu-bong (1884-1939)	李耀邦	1915	Physics
Yen, Kia-lok (1888-1968)	颜任光	1918	Philosophy
Wang, Chi-che (1894-1979)	王季茝	1918	Home Economics
Cheng,Ying-chang (1898- 1981)	程瀛章	1920	Chemistry
Wei, Sidney Kok (1896-)	韦慤	1920	Philosophy
Luh, Chih-wei (1894- 1970)	陆志韦	1920	Psychology
Loh, Ling-su (1896-1924)	陆麟书	1922	Education
Wang, Tsu-lien (1896-)	王祖廉	1922	Psychology
Lee, Shun-ching (1894-1972)	李顺卿	1923	Botany
Miao, Chester Chu-seng (1894-)	缪秋笙	1923	Practical Theology
Sun, Dan (1900-1979)	孙镫 (孙光远)	1923	Mathematics
Chuang, Chang-kong (1898- 1962)	庄长恭	1924	Chemistry
Tsai, Chiao (1897- 1990)	蔡翘	1924	Psychology
Tai, Kwenin (1888- 1927)	戴贯一	1925	Christian Theology & Ethics
Wang, Tsi-chang (1899-?)	王茝章	1925	Sociology
Woo, Yui-hsun (1897- 1977)	吴有训	1925	Physics
Chang, Ching-yueh (1898- 1975)	张景钺	1926	Botany
Chang, His-chun (1898-1988)	张锡钧	1926	Physiology
Chen, Ko-chung (1900-1992)	陈可忠	1926	Chemistry
Pan, Shun (1897-1988)	潘菽	1926	Psychology
Ho, Elbert Dung-wui (1895-1933)	何东伟	1926	Chemistry
Hsieh, Yu-ming (1895-1986)	谢玉铭	1926	Physics
Ho, Yun-hsuan (1901-)	何运暄	1927	Psychology
Lei, Barnabas Hai-tsung (1902- 1962)	雷海宗	1927	History
Liu, Shao-yu (1900-1981)	刘绍禹	1927	Psychology
Mei, Y-pao (1900- 1997)	梅贻宝	1927	Philosophy
Tan, Shao-hwa (1897-)	谭绍华	1927	Political Science
Wang, Hua-cheng (1903- 1965)	王化成	1927	Political Science
Wen,I-chun (1898- 1939)	闻亦传	1927	Anatomy
Zee, Tsoh-wu (1897-)	徐卓吾	1927	Chemistry
Chen, Shou-yi (1899- 1978)	陈受颐	1928	Comparative Literature
Hu, I (1904- 1994)	胡毅	1928	Education
Li, Fang-kuei (1902- 1987)	李方桂	1928	Comparative Philology
Teng, Chun-kao (1900- 1976)	邓春膏	1928	Philosophy
Tsai, Loh-seng (1901-1977)	蔡乐生	1928	Psychology
Wei, Hsioh-ren (1899- 1987)	魏学仁	1928	Physics
Wu, Ching-chao (1901-1968)	吴景超	1928	Sociology & Anthropology
Yang, Ko-chuen (1898- 1973)	杨克纯	1928	Mathematics
Chang, Yu-che (1902- 1986)	张钰哲	1929	Astronomy

Table 2: List of Chinese PhDs from 1915-1929

English Name	Chinese Name	Year of PhD	Field of PhD
Cheng, Nai-yi (1902- 1970)	程迺颐	1929	Psychology
Loo, Yu-tao (1905-1985)	卢于道	1929	Anatomy
Tzu, Lien-chao (1897-)	苏连炤	1929	Philosophy
Wu, Park Shing (1903-)	伍伯腾	1929	Political Science
Chen, Beh-kang (1900-1980)	陈伯康	1931	Zoology
Kuei, John Chih-ber (1900-1979)	桂质柏	1931	Library
Liao Wen-kwei (1905-1952)	廖文奎	1931	Philosophy
Tan, Pei-lin (1900-)	谭沛霖	1931	Business
Wang, Charles Kiloard Athen (1904-1974)	王微葵	1931	Psychology
Wong, Yue-kei (1903-)	黄汝琪	1931	Mathematics
Yang, Peter Suhsun (1900-)	杨树勋	1931	Chemistry
Chang, Tsung-han (1900-1985)	张宗汉	1932	Physiology
Hu, Kuen-sen (1901-1959)	胡坤陞	1932	Mathematics
Tsai, Liu-sheng (1902- 1983)	蔡镏生	1932	Chemistry
Tu, Yu-ching (1895- 1975)	涂羽卿	1932	Physics
Yen, Tsu-kiang (1900- 1978)	严楚江	1932	Botany
Chang, Stephen Hung-te (1906-1997)	张鸿德	1933	Physiology
King, Ernest Quong (1905-1986)	陈弥光	1933	Medicine
Ni, Chung-fang (1906-1974)	倪中方	1933	Psychology
Tam, Cheuk-woon (1900-1956)	谭卓垣	1933	Library
Tseng, Yuan-yung (1904-1994)	曾远荣	1933	Mathematics
Wang, Fung-chiai (1906-)	王风阶	1933	Education
Chao, Iping (1909- 1987)	赵以炳	1934	Psychology
Hsiung, David S. (1896-1979)	熊子璈	1934	Physics
Hu, Chi-nan (1905- 1989)	胡寄南	1934	Psychology
Tsang, Yu-chun (1901- 1964)	臧玉淦	1934	Psychology
Yen,Chin-yung (1905-1976)	严景耀	1934	Sociology
Yieh, Tsung-kao (1906-)	叶崇高	1934	Divinity
Chao,Siu-hung (1896- 1969)	赵修鸿	1935	Physics
Chu, Sheng-lin (1905- 2002)	褚圣麟	1935	Physics
Ku,Yih-tong (1903- 1996)	顾翼东	1935	Chemistry
Lo, Chuan-fang (1903- 1969)	骆传芳	1935	Psychology
Chi, Pan-lin (1901-)	齐泮林	1936	Education
Wei, Pei-hsiu (1906-	魏培修	1936	Physics
Chen, Wei-kiung (1910-)	陈伟钧	1937	Political Science
Dai, Binghan (1899- 1996)	戴秉衡	1937	Sociology
Lin, Mousheng Hsitien (1906-1978)	林侔圣	1937	Political Science
Shaw, Shyun-keq (1911- 1975)	邵循恪	1937	International Relations
Yung, Chi-tung (1908- 1987)	容启东	1937	Botany
Fang, Ssu-mien (1903-)	方嗣棉	1938	Physics

Table 3: List of Chinese PhDs from 1929-1938

English Name	Chinese Name	Year of PhD	Field of PhD
Ma, Tsu-sheng (1911- 2007)	马祖圣	1938	Chemistry
Chen, Wen-hsien (1904-1980)	陈文仙	1940	Sociology
Chau, Yau-pik (1905-)	周有壁	1942	Economy
Hu, Charles Y. (1910-)	虎矫如	1942	Geography
Wei, Heney (1909-)	韦文超	1942	International Relations
Wang, Hsi (1907-)	王熙	1943	Zoology
Wu, Kwang-tsing (1905-2000)	吴光清	1944	Library
Juan, Vei-chou (1912-1998)	阮维周	1945	Geology
Wu, Pek-si (1916-)	吴百思	1945	Sociology
Ma, Gioh-fang Dju (1913-2015)	朱觉方	1946	Sociology
Shiau, Guang-yen (1920-1968)	萧光琰	1946	Chemistry
Shih,Ching-cheng (1904-)	史景成	1946	International Relations
Lee, Rose Hum (1904-1964)	谭金美	1947	Sociology
Chao, Edward Ching-te (1919- 2008)	赵景德	1948	Geology
Chen, Lucy M. Chao (1912-1998)	赵萝蕤	1948	English
Kuo,Hsiao-lan (1915- 2006)	郭晓岚	1948	Meteorology
Ni, Ernest In-hsin (1913-)	倪因心	1948	Sociology
Ling, Gilbert Ning (1919-2019)	凌宁	1948	Physiology
Loo, Ching-tsun (1914-1995)	卢庆骏	1948	Mathematics
Yang, Chen-ning (1922-)	杨振宁	1948	Physics
Yeh, Tu-cheng (1916- 2013)	叶笃正	1948	Meteorology
Hsien, Yi-ping (1917-1995)	谢义炳	1949	Meteorology
Huang, Su-shu (1915-1977)	黄授书	1950	Astronomy
Lee, Shu-ching (1908-)	李树青	1950	Sociology
Lee, Tsung-dao (1926-)	李政道	1950	Physics
Tsou, Yi-chuang Lu (1913-2010)	卢懿庄	1950	Psychology
Pan, Ju-su (1910-)	潘如树	1950	Sociology
Ting, Kuang-sheng (1921-)	丁光生	1950	Pharmacology
Hsu, Yee-chuang (1924-)	徐以庄	1951	Physics
Lee, Chih-wei (1917-2008)	李志伟	1951	Economy
Teng, Lee Chang-Li (1926-)	邓昌黎	1951	Physics
Tsou, Tang (1918-1999)	邹谠	1951	Political Science
Cha, Yu-liang Chou (1923-2002)	周与良	1952	Botany
Chiang, Kenneth You-keng (1913-)	姜又庚	1952	Economics
Chow, Hua-chang (1917-1968)	周华章	1952	Economy
Fan, Chang-yun (1918-2009)	范章云	1952	Physics
Fu, Lo-shu (1920-2003)	傅乐淑	1952	History
Woo, Ching-chang (1915-)	吴景祯	1952	Geology
Yang, Nien-chu (1928-2008)	杨念祖	1952	Chemistry
Chen, Pearl Hsia (1919-)	夏路韵	1953	History

Table 4: List of Chinese PhDs from 1938-1953

English Name	Chinese Name	Year of PhD	Field of PhD
Chen, Shih-kan (1921-)	陈时侃	1953	Chemistry
Fong, Peter Ping-kwan (1924-2016)	冯平贯	1953	Physics
Siu, Paul Chan-pang (1906-1987）	萧振鹏	1953	Sociology
Huang, Lucy (1920-)	黄仁华	1954	Sociology
Tch'En, Tche-tsing (1924-1998)	郑志清	1954	Biochemistry
Chow, Gregory C (1929-)	邹至庄	1955	Economy
Liao, San-dao (1920-1997)	廖山涛	1955	Mathematics
Loh, Pichon Pei-yung (1928-)	陆培涌	1955	History
Marsh, Susan Su-shan Han (1926-)	韩素珊	1955	Political Science
Chu,Charles Chia-k"uei (1920-1999)	朱家恢	1956	International Relations
Mao, Jeffrey Yun-an (1916-2016)	毛雪安	1956	International Relations
Lee, Wan-ho Chao (1913-)	赵婉和	1957	Psychology
Tsien, Tsuen-hsuin (1909-2015)	钱存训	1957	Library
Wang, Yi-chu (1916-)	汪一驹	1957	Social Thought
Wong, Eugene You-she (1929-)	黄耀枢	1957	Chemistry
Wu, Yung-chih (1923-)	吴荣志	1957	Chemistry
Chang, Priscilla Chen-hsing (1930-)	章珍馨	1958	Organic/Biochemistry
Chao, George Yien-chi (1930-)	赵彦奇	1958	Geology
Chow, Yung-the (1915-2006)	周荣德	1958	Sociology
Sun, Siao-fang (1922-)	孙宵舫	1958	Chemistry
Yu, David C. (1918-)	俞检身	1959	Divinity
Tsang, Tung (1932-)	张通	1960	Physics
Yao, Joseph Zeu-tse (1930-)	姚瑞芝	1960	Mathematics

Table 5: List of Chinese PhDs from 1953-1960

1. The Number of the Chinese PhDs by Year

Table 6 shows the yearly distribution of the number of Chinese students who earned PhDs, which peaked in 1927, 1928 and 1948, with eight PhDs in each of those years.

Chart 1 illustrates the number of PhDs given to Chinese students in each decade, starting from the 1910s all the way up through the 1950s. The lower numbers in the 1940s were the result of the Second Sino-Japanese War of 1937-45 and the Chinese Civil War of 1945-49.

During the political turmoil in China from 1949-60, especially the closure of its doors to the outside world, there were no student visas issued to students in mainland China and Hong Kong, but visas issued to students in Taiwan continued. This explains why the numbers of Chinese PhDs were stable during that period.

Year	Number of Chinese PhD
1915	1
1918	2
1920	3
1922	2
1923	3
1924	2
1925	3
1926	6
1927	8
1928	8
1929	5
1931	7
1932	5
1933	6
1934	6
1935	4
1936	2
1937	5
1938	2
1940	1
1942	3
1943	1
1944	1
1945	2
1946	3
1947	1
1948	8
1949	1
1950	6
1951	4
1952	7
1953	4
1954	2
1955	4
1956	2
1957	5
1958	4
1959	1
1960	2
Total	**142**

Table 6: Distribution of Chinese PhDs by year

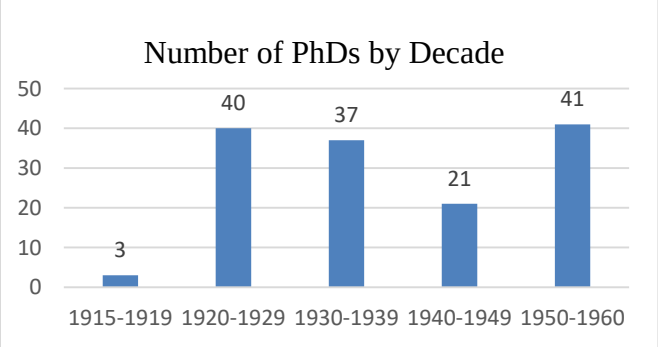

Chart 1: Number of PhDs in each decade

2. The Major Fields of Chinese PhDs

Table 7 shows the distribution of students by field. The top three were: 17 (12%) in physics, 16 (11%) in psychology, and 15 (10%) in chemistry.

Field of Ph.D.	Number of PhD
Business	1
Christian Theology & Ethics	1
Comparative Literature	1
Comparative Philology	1
English	1
Geography	1
Home Economics	1
Medicine	1
Pharmacology	1
Practical Theology	1
Social Thought	1
Sociology & Anthropology	1
Astronomy	2
Anatomy	2
Biochemistry	2
Divinity	2
Zoology	2
Meteorology	3
Education	4
Geology	4
History	4
Library	4
Physiology	4
Botany	5
Economy	5
International Relations	5
Philosophy	6
Political Science	7
Mathematics	8
Sociology	13
Chemistry	15
Psychology	16
Physics	17
Total	**142**

Table 7: The distribution of Chinese PhDs by academic field

3. Ages PhDs Received

The averages age of Chinese students to receive PhDs from 1915 to 1960 was 31, but average age varied by decade (Chart 2).

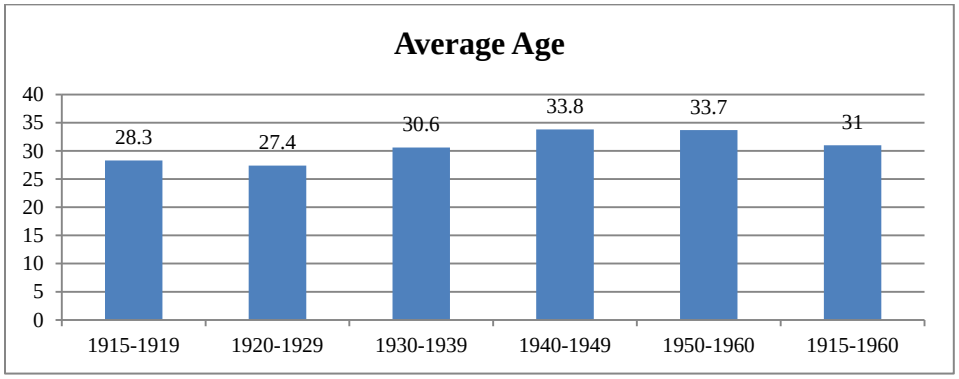

Chart 2: Distribution of average age by decade

4. The Rockefeller Foundation Fellowship and the Chinese PhDs

John D. Rockefeller Sr. and his son John D. Rockefeller Jr. were two of the three co-founders of the Rockefeller Foundation, and the foundation had close ties with UChicago. At least 14 Chinese PhDs were also Rockefeller Fellowship recipients (Table 8). [6]

Name	Year of PhD	Field of PhD	Duration of the Rockefeller Fellowship
Hsieh, Yu-ming	1926	Physics	1924-25
Zee, Tsoh-wu	1927	Chemistry	1926-27
Wei, Hsioh-ren	1928	Physics	1926-27
Loo, Yu-tao	1929	Anatomy	1929-30
Chen, Beh-kang	1931	Zoology	1927-30
Chang, Tsung-han	1932	Physiology	1932-33
Tsai, Liu-sheng	1932	Chemistry	1929-31
Tu, Yu-ching	1932	Physics	1930-32
Hsiung, David S.	1934	Physics	1932-34
Chao,siu-hung	1935	Physics	1933-35
Chu, Sheng-lin	1935	Physics	1933-35
Ku,Yih-tong	1935	Chemistry	1933-35
Wei, Pei-hsiu	1936	Physics	1932-35
Dai, Binghan	1937	Sociology	1932-34

Table 8: List of Chinese PhDs who were Rockefeller Fellowship recipients

5. The Family PhDs

It is very interesting that 8 Chinese PhDs were from 4 families: father & son; husband & wife, and two pairs of siblings (Table 9).

Name	Year of PhD	Field of PhD	Relationship
Yang, Ko-chuen	1928	Mathematics	Father
Yang, Chen-ning	1948	Physics	Son
Ma, Tsu-sheng	1938	Chemistry	Husband
Ma, Gioh-fang Dju	1946	Sociology	Wife
Chao, Lucy M.	1948	English	Sister
Chao, Edward Ching-te	1948	Geology	Brother
Tsou, Yi-chuang Lu	1950	Psychology	Wife
Tsou, Tang	1951	Political Science	Husband

Table 9: List of 8 Chinese PhDs from four families

Chinese PhD Students in the Physics Department

It is not surprising that the most Chinese PhDs were awarded in physics. This is because the Chinese thought that only science and technology could save China. By 1960, a total 177 Chinese students received PhDs in physics in the U.S. [2] And John Yiu-bong Lee was the first. [7]

Chinese students were attracted to the physics department at UChicago because of its world-wide reputation. In 1920 and 1930s, it was the top-ranked program in the nation, largely due to its prominent faculty members. From 1907 to 1960, there had been twelve Nobel laureates in physics who were affiliated with the physics department, and 9 were its faculty members (Table 10). [8] Some of the Chinese doctoral students discussed here were involved in the research that led to these Nobel prizes.

Nobel Laureate	Award Year	Year at UChicago
Albert A. Michelson	1907	Faculty, 1892-1927
Robert A. Millikan	1923	Faculty, 1898-1921
James Frank	1925	Faculty, 1938-1964
Arthur H. Compton	1927	Faculty, 1923-1945
Werner Heisenberg	1932	Visiting Lecture, 1929
Harold C. Urey	1934	Faculty 1945-1958
Enrico Fermi	1938	Faculty, 1946-1954
Chen-ning Yang	1957	Faculty, 1949-1950
Willard F. Libby	1960	Faculty, 1945-1959

Table 10: List of UChicago physics department faculty who were Nobel Laureates from 1907-60

Professor Robert A. Millikan published papers in 1910 and 1913 about his famous "Oil Drop Experiment," which measured the charge of the electron and brought him his Nobel Prize in Physics in 1923. In both papers, his PhD student **John Yiu-bong Lee** (李耀邦) was credited for the experiment results that fully supported Millikan's research on electron charges. [9] In his paper published in 1910, Millikan said that

> *The atomizer method of producing very minute but accurately spherical drops for the purpose of studying their behavior in fluid media, was first conceived and successfully carried out in January, 1908, at the Ryerson Laboratory, by Mr. J. Y. Lee, while he was engaged in a quantitative investigation of Brownian movements. His spheres were blown from Vood's metal, wax and other like substances which solidify at ordinary temperatures. Since then the method has been almost continuously in use here, upon this and a number of other problems, and elsewhere upon similar problems.* [10]

Then, in his paper published in 1913, Millikan further praised Lee, thanking him for his

> *able assistance… in making some of the [these] observations. Mr. Lee has also repeated with my apparatus the observations on oil atmospheric pressure with results which are nearly as consistent [mine]*." [11]

Of the 17 Chinese physics PhDs, 8 students fortunately had Nobel laureates as their PhD advisors. Other students also enjoyed guidance from prominent faculty such as Henry G. Gale, Edward Teller, William H. Zachariasen, Clarence M. Zener, Gregor Wentzel and Maria G. Mayer who herself received the Nobel Prize in physics in 1963 (Table 11).

Name	Chinese Name	Year of PhD	PhD Advisor
Lee, John Yiu-bong	李耀邦	1915	Robert A. Millikan (Nobel Laureate '23)
Woo, Yui-hsun	吴有训	1925	Arthur H. Compton (Nobel Laureate '27)
Hsieh, Yu-ming	谢玉铭	1926	Albert A. Michelson (Nobel Laureate '07)
Wei, Hsioh-ren	魏学仁	1928	Albert A. Michelson (Nobel Laureate '07)
Tu, Yu-ching	涂羽卿	1932	Arthur H. Compton (Nobel Laureate '27)
Hsiung, David S.	熊子瑔	1934	Arthur H. Compton (Nobel Laureate '27)
Chao,Siu-hung	赵修鸿	1935	Henry G. Gale
Chu, Sheng-lin	褚圣麟	1935	Arthur J. Dempster
Wei, Pei-hsiu	魏培修	1936	Arthur H. Compton (Nobel Laureate '27) William H. Zachariasen
Fang, Ssu-mien	方嗣棉	1938	William H. Zachariasen
Yang, Chen-ning	杨振宁	1948	Edward Teller
Lee, Tsung-dao	李政道	1950	Enrico Fermi (Nobel Laureate '38)
Hsu, Yee-chuang	徐以庄	1951	Clarence M. Zener
Teng, Lee Chang-Li	邓昌黎	1951	Gregor Wentzel
Fan, Chang-yun	范章云	1952	Herbert L. Anderson
Fong, Peter Ping-kwan	冯平贯	1953	Maria G. Mayer
Tsang, Tung	张通	1960	Clyde A. Hutchison Jr.**

** Clyde A. Hutchison Jr. was the professor of chemistry at UChicago

Table 11: List of Chinese Physics PhDs and their advisors

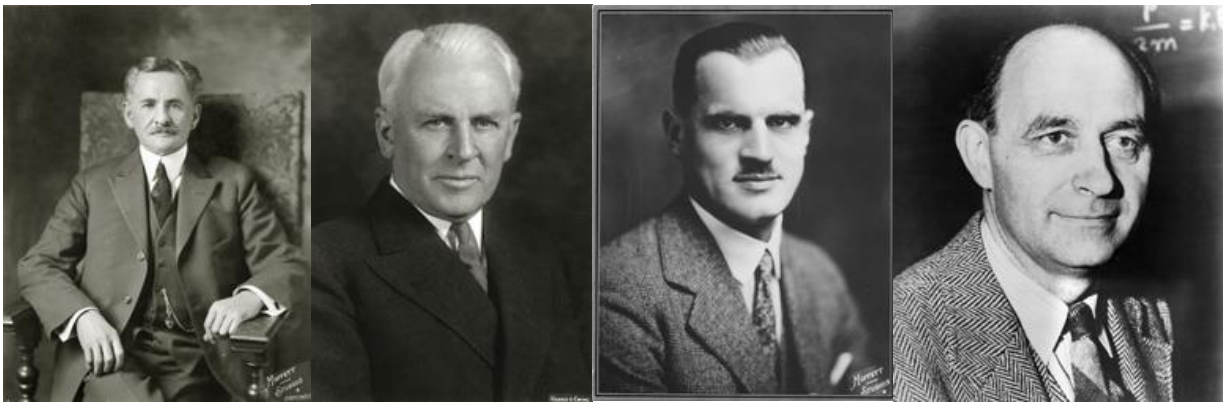

Photo 3: Four Nobel Laureates in physics that supervised eight Chinese physics PhD's, from left: Professors Albert A. Michelson, Robert A. Millikan, Arthur H. Compton and Enrico Fermi (Courtesy of the University of Chicago Photographic Archive)

Professor Arthur H. Compton has been recognized as one of the leading physicists in the world in the twentieth century, especially for his research on x-rays in the 1920s and cosmic rays in 1930s-40s. His two Chinese PhD students made contributions.

In 1922, Professor Compton made an important observation about how x-rays (high energy light) interacted with electrons. That effect, known as the Compton Effect, proved that light was not only a wave but also a particle, which was what Albert Einstein speculated 1905. His results, published in 1923, triggered a storm of controversy. While some tried to disprove his results, others, including his student **Yui-hsun Woo** (吴有训 1897-1977, PhD'25), substantiated them. In addition to two papers co-authored with Compton in 1924 and 1925, Woo published the results in February 1925 on his own in "The Compton Effect and Tertiary X-Radiation." Woo "made detailed studies of the relative intensity of the modified and unmodified lines from a wide range of scatters, all confirming the predictions of Compton's theory." [12] In Compton's classic book, *X-Rays in Theory and Experiment*, Woo and his experiment were mentioned 19 times. Compton was awarded the 1927 Nobel Prize in Physics for his discovery of the Compton Effect.[c] Many years later, Compton said that Woo and Luis W. Alvarez were his two best students, and he was not sure who was better. [13]

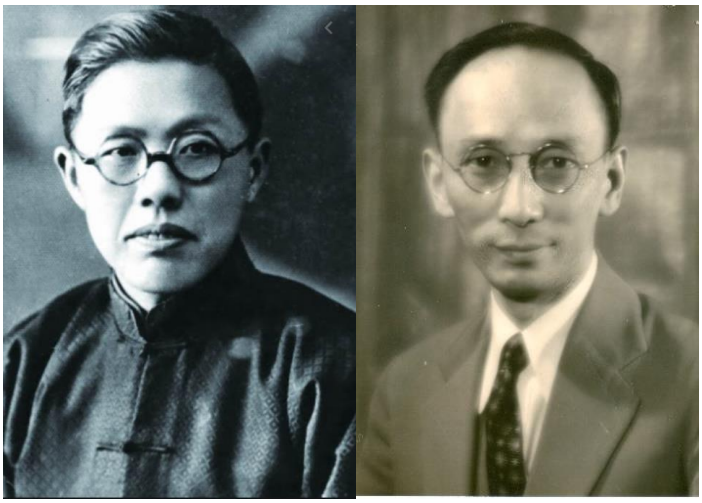

Photo 4: Yui-hsun Woo (left) and David S. Hsiung (right)

Around 1930, Professor Compton began to shift his interest from x-rays to cosmic rays by leading a world-wide study of cosmic rays. At that time there was a debate about whether cosmic rays were electrically charged particles—which was hypothesized by Compton—or were uncharged electromagnetic radiation, which Millikan believed. When **David S. Hsiung** (熊子璈 1896-1979, PhD '34), entered the physics department in 1932 as Compton's PhD student, he got actively involved in this debate. He performed a valuable experiment that was widely praised by his advisor, Professor Compton. [14]

Hsiung was the first person to present at the 193rd meeting of the American Physical Society on June 29, 1934, and was published in *Physical Review* on October 15, 1934. John A. Simpson of the physics department at UChicago issued an official statement on behalf the department in 1994:

> "*David Hsiung carried out a first-class experiment in 1932-34 which confirmed convincingly that there exist charged particles of high penetrating power deep in the atmosphere. This result in later years became important for establishing the nature of secondary cosmic radiation in the atmosphere, including the later discovered meson component*." [15]

Photo 5: Physics Department faculty and graduate students in 1926 at UChicago: 1. R.A. Millikan; 2.Henry Gale; 3. A. A. Michelson; 4. A. H. Compton; 5. Yu-ming Hsieh; 6. Pei-yuan Chou; 7.Yui-hsun Woo; 8. Hsioh-ren Wei (Courtesy the U.S. Navy Academy Archive)

Kia-lok Yen (颜任光 1888-1968, PhD'18) was another notable physicist in China. Having received a PhD in philosophy, not in physics, he also worked under Professor Robert A. Millikan as key contributor for the Oil Drop Experiment.

Photo 6: Kia-lok Yen

Two Chinese Nobel Physics Laureates

Two Chinese physics PhDs became the 1957 Nobel Physics Laureates themselves: **Chen-ning Yang** (杨振宁, PhD'48), and **Tsung-dao Lee** (李政道, PhD'50). They are also the first Chinese to receive a Nobel Prize (Table 12).

Name	Year of PhD	Field of PhD	Year to receive Nobel Prize	Nobel Prize Category	Reason for the Nobel Prize
Yang, Chen-ning	1948	Physics	1957	Physics	For their penetrating investigation of the so-called parity laws which has led to important discoveries regarding the elementary particles
Lee, Tsung-dao	1950	Physics	1957	Physics	

Table 12: List of two Chinese Physics PhDs who shared the 1957 Nobel Prize in Physics

Both Yang and Lee used to study at the same school in China in 1940s, the National Southwestern Associated University, which comprised three prestigious Chinese universities during the Second Sino-Japanese War: Peking University, Tsinghua University, and Nankai University. Yang completed his undergraduate and master's degree there before coming to UChicago in 1945. The reason he chose UChicago was his admiration for Enrico Fermi for his theoretical and experimental physics. But at UChicago, Fermi was working to establish the Institute for Nuclear Studies, which foreign students were prohibited from, so Fermi recommended that Edward Teller be his PhD advisor. Yang was granted a PhD in Physics in 1948.

The Chinese had witnessed the power of nuclear weapons that ended the WWII in 1945. Lee came to the U.S. in 1946 when the Chinese Nationalist KMT government wanted him and other students to learn how to make an atomic bomb. Upon their arrival, however, they found out that the area was not

open to foreign countries. So, as a sophomore, he was transferred directly to the graduate school at UChicago, first only auditing classes and then as a regular graduate student under Enrico Fermi. Lee received his PhD in Physics in 1950.

Yang and Lee started to work as early as 1949 when they, along with Marshall N. Rosenbluth (who was Edward Teller's PhD student) published their first paper in the *Physics Review*. Their collaboration continued until 1951, since both worked at the Institute for Advanced Study (IAS) in Princeton, New Jersey, where Dr. J. Robert Oppenheimer was the Director (1947-66). They co-authored thirty-two papers from 1956 to 1962 and shared the 1957 Nobel Prize in Physics.

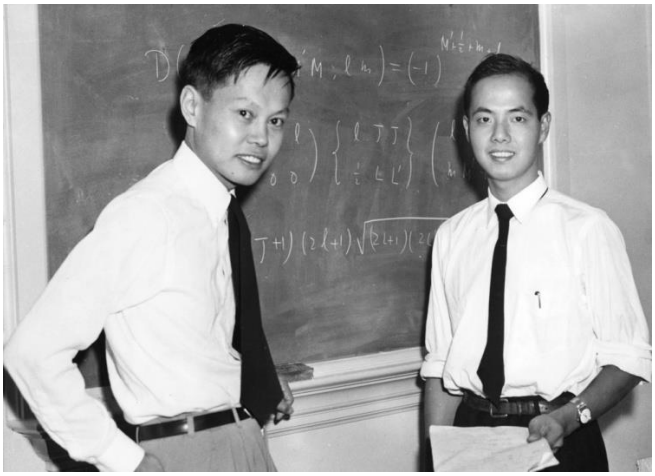

Photo 7: Chen-ning Yang (left) and Tsung-dao Lee (right) were working together at IAS. (Courtesy the University of Chicago Photographic Archive)

Unfortunately, their professional collaboration and personal friendship ended in June 1962. It has been said this was due a dispute about the order the author's names would appear on an article and over who first came up with the parity violation theory, a key element in the paper that led them to receive the Nobel Prize. For the last 58 years, their falling out has been considered a tragedy in the physics community.

Photo 8: Chen-ning Yang (1st from left) and Tsung-dao Lee (2nd from left) at the 1957 Nobel Prize Ceremony. (Courtesy the Chinese University of Hong Kong

Post-UChicago Achievements

The majority of these 142 Chinese PhDs worked in academia after UChicago. They made great contributions: 14 became university presidents (Table 13), 22 became college deans (Table 14), and 39 department heads (Table 15). Moreover, 21 were elected as academy fellows (Table 16).

English Name	Year of PhD	Field of PhD	University Presidents
Yen, Kia-Lok	1918	Philosophy	Hainan University (private), 1947-50
Wei, Sidney Kok	1920	Philosophy	Huaqiao University, 1964-70
Luh, Chih-wei	1920	Psychology	Yenching University, 1934-37; 1945-52
Lee, Shun-ching	1923	Botany	Anwei University, 1937-38
Chuang, Chang-kong	1924	Chemistry	National Taiwan University, 1948 (April-Dec.)
Woo, Yui-hsun	1925	Physics	National Central University, 1945-49 Shanghai Jiao Tong University, 1949-50
Chen, Ko-chung	1926	Chemistry	National Tsing Hua University (Taiwan), 1962-69
Pan, Shun	1926	Psychology	Nanjing University, 1949-57
Liu, Shao-yu	1927	Psychology	Sichuan Normal College, 1952-?
Mei, Y-pao	1927	Philosophy	Yenching University, 1942-45
Hu, I	1928	Education	Hebei Normal College, 1951-?
Teng, Chun-kao	1928	Philosophy	Lanzhou University, 1929-36
Tu, Yu-ching	1932	Physics	St. John's University, 1946-48
Chao,Siu-hung	1935	Physics	St. John's University, 1949-52

Table 13: List of Chinese PhDs who had been the university presidents

English Name	Year of PhD	Field of PhD	College Deans
Yen, Kia-Lok	1918	Philosophy	College of Science, Kwang Hua University
Cheng,Ying-chang	1920	Chemistry	College of Science, Chinan University
Sun, Dan	1923	Mathematics	College of Science, Nanking University
Chuang, Chang-kong	1924	Chemistry	College of Science, Central University
Woo, Yui-hsun	1925	Physics	College of Science, Tsinghua University; Southwestern Associated University
Chang, Ching-yueh	1926	Botany	College of Science, Peking University
Chen, Ko-chung	1926	Chemistry	College of Science, Taiwan Normal University
Hsieh, Yu-ming	1926	Physics	College of Science, Xiamen University
Mei Y-pao	1927	Philosophy	College of Liberal Arts, Yenching University
Tsai, Loh-seng	1928	Psychology	College of Liberal Arts, University of Nanking
Wei, Hsioh-ren	1928	Physics	College of Science, University of Nanking
Loo, Yu-tao	1929	Anatomy	College of Science, Fuhtan University
Yen, Tsu-kiang	1932	Botany	College of Science, Chungcheng University
Tseng, Yuan-yung	1933	Mathematics	College of Science, Szechuan University
Yen,Chin-yung(	1934	Business	Law School, Peking University
Chao,Siu-hung	1935	Physics	College of Liberal Arts, St. John's University
Chu, Sheng-lin	1935	Physics	College of Science, Yenching University
Ku,Yih-tong	1935	Chemistry	College of Science, Soochow University
Lo. Chuan-fang	1935	Psychology	College of Liberal Arts, Hua Chung University
Chi, Pan-lin	1936	Education	Teacher's College, Sun Yat-sen University
Yung, Chi-tung	1937	Botany	College of Science, Lingnan University
Juan Vei-chou	1945	Geology	College of Science, Taiwan University

Table 14: List Chinese PhDs who had been the college deans

English Name	Year of PhD	Field of PhD	Department Heads
Yen, Kia-Lok	1918	Philosophy	Department of Physics, Peking University
Cheng,Ying-chang	1920	Chemistry	Department of Mathematics, Chinan University
Luh, Chih-wei	1920	Psychology	Department of Psychology, Central University; Yenching University
Loh, Ling-su	1922	Education	Department of Education, University of Shanghai
Wang, Tsu-lien	1922	Psychology	Department of Education, the Great China University
Lee, Shun-ching	1923	Botany	Department of Biology, Peking Normal University
Sun, Dan	1923	Mathematics	Department of Mathematics, Central University
Chuang, Chang-kong	1924	Chemistry	Department of Chemistry, Northeast University
Woo, Yui-hsun	1925	Physics	Department of Physics, Central University; Tsing Hua University
Chang, Ching-yueh	1926	Botany	Department of Biology, Central University; Peking University
Pan, Shun	1926	Psychology	Department of Phychology, Central University; Nanking University
Hsieh, Yu-ming	1926	Physics	Department of Physics, Yenching University; Xiamen University; University of the East (in the Philippines)
Lei, Barnabas Hai-tsung	1927	History	Department of History, Central University; Southwestern Associated University
Chen, Shou-yi	1928	Comparative Literature	Department of Chinese, Lingnan University Department of History, Peking University
Hu, I	1928	Education	Department of Psychology, Hua Chung University
Wu, Ching-chao	1928	Sociology	Department of Sociology, University of Nanking
Yang, Ko-chuen	1928	Mathematics	Department of Mathematics Southwestern Associated University
Loo, Yu-tao	1929	Anatomy	Department of Biology, Fuhtan University
Chen, Beh-kang	1931	Zoology	Department of Biology, Guanxi Normal College
Hu, Kuen-sen	1932	Mathematics	Department of Mathematics, Central University; Chungking University
Tsai, Liu-sheng	1932	Chemistry	Department of Chemistry, Yehching University
Tu, Yu-ching	1932	Physics	Department of Physics, University of Shanghai
Yen, Tsu-kiang	1932	Botany	Department of Biology, Yunn University; Chungcheng University
Ni, Chung-fang	1933	Psychology	Department of Education, Kuomin Normal College
Tseng, Yuan-yung	1933	Mathematics	Department of Mathematics, Szechuan University
Hsiung, David S.	1934	Physics	Department of Physics, Ginling College
Hu, Chi-nan	1934	Psychology	Department of Biology, Fuhtan University
Chao,Siu-hung	1935	Physics	Department of Physics, St.John's University
Chu, Sheng-lin	1935	Physics	Department of Physics, Yenching University; Peking University
Ku,Yih-tong	1935	Chemistry	Department of Chemistry, Soochow University
Lo. Chuan-fang	1935	Psychology	Department of Foreign Languages Hua Chung University
Chi, Pan-lin	1936	Education	Department of Education, Sun Yat-sen University
Yung, Chi-tung	1937	Botany	Department of Biology, Lingnan University
Fang, Ssu-mien	1938	Physics	Department of Physics, Peking Normal College
Juan Vei-chou	1945	Geology	Department of Geology, Taiwan University
Lee, Rose Hum	1947	Sociology	Department of Sociology, Roosevelt University
Loo, Ching-tsun	1948	Mathematics	Department of Mathematics, Chekiang University
Chen, Lucy M. Chao	1948	English	Department of Western Languages & Literature, Yenching University
Hsien, Yi-ping	1949	Meteorology	Department of Geophysics, Peking University
Yu, David C.	1959	Divinity	Department of Religion, University of Virginia

Table 15: List of Chinese PhDs who had been the department heads

English Name	Year of PhD	Years to Be Elected	Place to Be Elected	Country
Chang, Ching-yueh	1926	1948	Academia Sinica	Republic of China
		1955	Chinese Academy of Sciences	China
Chuang, Chang-kong	1924	1948	Academia Sinica	Republic of China
Li, Fang-kuei	1928	1948	Academia Sinica	Republic of China
Tsai, Chiao	1924	1948	Academia Sinica	Republic of China
		1955	Chinese Academy of Sciences	China
Woo, Yui-hsun	1925	1935	Academy of Sciences Leopoldina	Germany
		1948	Academia Sinica	Republic of China
		1955	Chinese Academy of Sciences	China
Chang, His-chun	1926	1955	Chinese Academy of Sciences	China
Chang, Yu-che	1929	1955	Chinese Academy of Sciences	China
Pan, Shun	1926	1955	Chinese Academy of Sciences	China
Lee, Tsung-dao	1950	1957	Academia Sinica	Republic of China
		1959	American Academy of Arts and Sciences	U.S.A.
		1964	U.S. National Academy of Sciences	U.S.A.
		1982	Accademia dei Lincei	
		1994	Chinese Academy of Sciences (Foreign Member)	China
		1972	American Philosophical Society	U.S.A.
		1983	World Academy of Sciences	Italy
		2003	Pontifical Academy of Sciences	Vatican City
Luh, Chih-wei	1920	1957	Chinese Academy of Social Sciences	China
Yang, Chen-ning	1948	1958	Academia Sinica	Republic of China
		1983	World Academy of Sciences	U.S.A.
		1994	Chinese Academy of Sciences (Foreign Member)	China
		1997	Pontifical Academy of Sciences	Vatican City
		2017	Chinese Academy of Sciences	China
Teng,Lee Chang-Li	1951	1966	Academia Sinica	Republic of China
Chow, Gregory C	1955	1970	Academia Sinica	Republic of China
Juan Vei-chou	1945	1976	Academia Sinica	Republic of China
Tsai, Liu-sheng	1932	1979	Chinese Academy of Sciences	China
Hsien, Yi-ping	1949	1980	Chinese Academy of Sciences	China
Ku,Yih-tong	1935	1980	Chinese Academy of Sciences	China
Yeh, Tu-cheng	1948	1980	Chinese Academy of Sciences	China
		1981	Finnish Academy of Science and Letters (Foreign Member)	Finland
Yang, Nien-chu	1952	1982	Academia Sinica	Republic of China
Liao, San-dao	1955	1986	World Academy of Sciences	Italy
		1991	Chinese Academy of Sciences	China
Kuo,Hsiao-lan	1948	1988	Academia Sinica	Republic of China

Table 16: List of Chinese PhDs who have been elected as academy fellows

PART II

Difficult Decisions

Japan's invasion of China in 1937 set off the Second Sino-Japanese War that had lasted eight years, until August 1945 when Japan surrendered. Then, the Chinese Civil War erupted in 1946 between the Communists and the nationalist Kuomintang (KMT) government.

By the end of 1948, the KMT government's defeat seemed inevitable. It began a retreat plan to Taiwan, and relocated the elites of Chinese colleges and research institutions there. At the directive of the General and President **Chiang Kai-shek** (蒋介石), a rescue mission was planned in December 1948 to rescue and relocate the Chinese elites, who included heads of schools and institutions, the Academicians (Fellows) of the Academia Sinica, the scholars who had to leave due to political reasons, and many brilliant academics who had enjoyed national and international renown. The mission was led by his son **Chiang Ching-kuo** (蒋经国), who became President of the Republic of China in Taiwan in 1978.

Meanwhile, the Communists were working hard to undermine that plan. The underground Communists and left-leaning student groups launched a campaign to keep all schools, research institutions, and scholars on the list to stay in mainland China.

By December 1949, the rescue mission ended with failure: of the 81 Fellows of the Academia Sinica, 60 chose to stay in mainland China, 9 went to Taiwan, and 12 stayed in the U.S.

Among the UChicago-educated PhD's, all 3 university presidents, 8 out of 9 college deans, all 9 department heads, and 4 out of 5 Academicians (Fellows) chose to stay in mainland China.

On the other side of the Pacific Ocean in the U.S., the Chinese Students Christian Association in North America (北美基督教中国学生会, CSCA), which had a majority of the overseas left-leaning Chinese students, and the Association of Chinese Scientific Workers in the U.S.A. (中国留美科学工作者协会), which was dominated by underground Communists, began to coerce the Chinese students to go back to China. On December 18, 1949, more than three months after the new China was founded on October 1st, its premier Zhou En-lai (周恩来) officially made an invitation to the overseas Chinese students.

The U.S. government and Congress initially tried to help the Chinese students by providing financial aid. But because of the impact of McCarthyism in early 1950, especially in response to the Chinese government's involvement in the Korean War, the U.S. government started to ban American-educated Chinese students who studied science and technology from returning to their home country. The purpose of this detainment was to prevent China from getting the advantage in science and technology.

Whether those PhDs decided to stay in or return to China, they tended to dislike the corrupt KMT nationalist government. But they knew little about the Communists government. To them, the "new China" would be a new era politically and economically, and they had to face it emotionally and physically. Some were afraid if their rights of freedom speech and assembly would be guaranteed; others were worried that the new government could gradually become corrupt and autocratic as the nationalist KMT did.

Ultimately, their confidence and hope that only the Communists would make China stand up in the world triumphed over their fear and uncertainty. However, they found a completely different reality when they returned to China, and learned their lesson the hard way.

Hardships

Since their party was founded in 1921, the Communists launched a series political campaigns to shatter all regular standards involving the temporary suspension of whatever laws, norms and rules applied in "regular times." [16] It is estimated there were more than 20 political campaigns or movements between 1949 and 1976. The ones that most affected Chinese intellectuals were the *Thought Reform Campaign,* the *Anti-Rightist Campaign,* and the *Cultural Revolution Movement*.

The Thought Reform Campaign of 1951-52

After taking power in 1949, one of the challenges the Communists faced was how to manage Chinese intellectuals, especially those at colleges and universities. The Communists in general did not trust them because they were considered to be influenced by American values.

The Thought Reform Campaign was to reform Chinese intellectuals' thoughts through brainwashing or mind control so they would accept the thought of Marxism-Leninism and Maoism. During the campaign, individuals were grouped in meetings where they had to give up their pride and often were treated without respect at all. They were forced to make confessions, self-criticisms and self-condemnations about their past, and to study the theories of Marx, Lenin and Mao. Those ultimately declared to be clean were assigned.

The Anti-Rightist Campaign of 1957-59

The Hundred Flowers Campaign of late 1956 was when the Communists lifted restrictions of freedom of thought and speech by encouraging the Chinese to provide opinions. Alarmed at lukewarm response due to suspicion, Mao Ze-dong in early 1957 expressed enthusiasm about criticism from outside of the party. Suddenly, millions of letters, posters and speeches not only targeted the Communist party members and government officials, but also delegitimized the one-party ruling system. The rectification campaign was out of control and was called off in July. It was then replaced by the Anti-Rightist Campaign (ARC).

During the ARC, those who dared to challenge the Communists were labeled as Rightists. Some people who did nothing at all still were labeled because there was a quota to meet. They were persecuted, jailed and even killed. According official government data, there were 550,000 Rightists. The actual numbers could have been much higher. Ten UChicago alumni are identified as Rightists (Table 17).

By the early 1980s, even though most Rightists were vindicated, the Communists still claimed that the intention of the campaign was correct, but that the implementation had gone too far. To support their justification, the convictions for the Rightists were revoked to almost all but 96, among them 5 cases withheld by the central government and 91 by local governments.

English Name	Chinese Name	Tie to UChicago
Lei, Barnabas Hai-tsung (1902-1962)	雷海宗	PhD' 27
Teng, Chun-kao (1900- 1976)	邓春膏	PhD' 28
Mei, Ju-ao (1904-1973)	梅汝璈	JD’ 28
Wu, Ching-chao (1901-1968)	吴景超	PhD' 28
Yen,Chin-yung (1905-1976)	严景耀	PhD' 34
Lo, Chuan-fang (1903- 1969)	骆传芳	PhD' 35
Chen, Wen-hsien (1904-1980)	陈文仙	PhD' 40
Shiau, Guang-yen (1920-1968)	萧光琰	PhD' 46
Meng-chia Chen (1911-1966)	陈梦家	Visiting Scholar
Wu, Ning-kun (1920-2019)	巫宁坤	PhD Candidate '50

Table 17: List of Anti-Rightist Campaign victims who were UChicago alumni

The Cultural Revolution of 1966-76

After the failure of the Great Leap Forward Campaign of 1958-62 and the Great Chinese Famine of 1959-61, which led to the death of about 10 million people due to starvation, the Communist leader Mao Zedong had to abandon his active role and let his comrades drive the economy to recovery.

Convinced that the party and the country were being led in the wrong direction by the new leadership, Mao launched the Cultural Revolution in the summer 1966. It was a political movement that aimed at drastically changing the party and China. Since he could mainly count on a few left radicals led by his wife Madame Mao, Jiang Qing (江青 1914-1991) and his Defense Minister Lin Biao (林彪 1907-1971), he sought supporters outside of the party. Enthusiastic high school and college students were formed into a semi-military youth organization, the Red Guards. They helped Mao turn the Chinese political, social, cultural and economic structures upside-down over the ten-year period until Mao’s death in 1976.

Almost every Chinese family was impacted one way or another by what was an unmitigated disaster. It is estimated that 20 million deaths resulted from the Cultural Revolution. At least 11 of the UChicago alumni were persecuted or killed (directly or by suicide) (Table 18).

English Name	Chinese Name	Tie to UChicago
Yen, Kia-Lok (1888-1968)	颜任光	PhD' 18
*Yao, Yu-tai (1891-1968)	饶毓泰	AB '18
Yeh, Chi-sun (1898-1977)	叶企孙	AB’ 20
Luh, Chih-wei (1894- 1970)	陆志韦	PhD' 20
Wang, Chun (1898-1968)	王均	PHB '26
Chang, Ching-yueh (1898- 1975)	张景钺	PhD' 26
Wu, Ching-chao (1901-1968)	吴景超	PhD' 28
Tu, Yuching (1895- 1975)	涂羽卿	PhD' 32
Lo, Chuan-fang (1903- 1969)	骆传芳	PhD’ 35
*Shiau, Guang-yen (1920-1968)	萧光琰	PhD' 46
*Meng-chia Chen (1911-1966)	陈梦家	Visiting Scholar
*Chow, Hua-chang (1917-1968)	周华章	PhD' 52

*Died by suicide

Table 18: List of Cultural Revolution victims of UChicago alumni

The following are stories of some UChicago-educated PhDs during the political turmoil described above. They experienced severe hardships of persecution, humiliation, imprisonment, torture and even death. This was just the tip of the iceberg, based only on the information made public in China.

Chih-wei Luh (1894-1970, PhD'20)

Yenching University, founded in 1919 and supported by the United Board for Christian Colleges in China (UBCCC), used to be one of the best universities in China. Dr. John Leighton Stuart (司徒雷登, 1876-1962), its founder and first president from 1919 to 1934, was best known for his role in creating the famous Harvard-Yenching Institute in 1928. Furthermore, as a U.S. Ambassador appointed by President Harry Truman in 1946, he mediated between the Communists and the KMT government.

When **Chih-wei Luh (**陆志韦) returned to China after UChicago, he was first at the National Southeast University from 1920 to 1927. Starting in 1927, he taught at Yenching until 1934 when he became its second president. In 1941, after the Pearl Harbor attack, the Japanese army occupied the Yenching campus and Luh was imprisoned by the Japanese for five months. He resumed the presidency in October 1945.

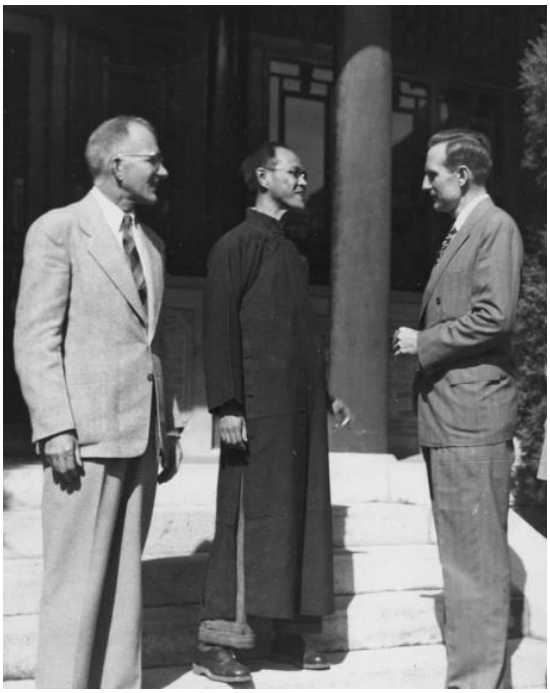

Photo 9: Chih-wei Luh (center) talking to John D. Rockefeller III (right) at Yenching campus (Courtesy the United Board for Christian Higher Education in Asia Archives)

On March 25th 1949, Luh joined other Chinese intellectuals in welcoming the Communist leader Mao Ze-dong at an airport in Peking. Then on April 5th 1949, he sent a letter to Dr. Robert J. MacMullen, executive secretary of UBCCC,

> "*To most of us conscientious Chinese, this is not China's dark hour, but rather a new dawn. In the three thousand years of China's modern history, we never had such a clean and responsible government. You will forgive us if we do not become despondent because the foreign policy of our old government did not land us where the masses of the Chinese people hoped to be. In fact, those of us who have chosen to devote our lives to Christian educational work should search our hearts and can be honest in saying we are not tied up with politics*." [17]

Not only did Luh want to keep Yenching open under the Communists, but he made a decision to stay himself, even though his personal friends Shih Hu (胡适, 1891-1962), the president of the National Peking University, and Yi-Chi Mei (梅贻琦, 1889-1962), the president of the National Tsinghua University, decided to leave for Taiwan.

As the president of Yenching University, Luh had good relationship with the Communists for a while. He was one of the Yenching faculty to attend the Chinese People's Political Consultative Conference two days before the new China was founded. Then he was invited to the official inauguration at the Tiananmen Square on October 1st 1949, when Chairman Mao Ze-dong proclaimed the foundation of People's Republic of China (PRC).

In the summer 1950, the Korean War escalated into a major confrontation between the Chinese and the U.S.-led United Nations forces. The anti-American campaigns were brought by the Communists to the U.S.-sponsored universities, including Yenching. This was followed by the U.S. ban on transferring funds to China. American faculty were ordered to leave China. Yenching was given two choices by the Communists: become either a national university or a private one supported by the Communists. After Luh discussed this with all the departmental heads in an emergency meeting, Yenching decided to be taken over by the Communists. In February 1951, the National Yenching University was officially formed with Luh as its new president. His appointment certificate was signed by Chairman Mao. Mao even sent the new Yenching University his personal calligraphy with the Chinese characters meaning Yenching University. [18]

Photo 10: Photos of Chih-wei Luh's appointment certificate, signed by Chairman Mao Ze-dong (left) and the Chinese characters of Yenching University from Chairman Mao's personal calligraphy (right) [18]

However, this honeymoon did not last very long. A big political storm was coming. To the Communists, cutting off ties with the U.S. financially was insufficient. They wanted people to do so ideologically and spiritually, and they wanted people to hate Americans. In January 1952, the Communists began to reckon with the influence of "U.S. Cultural Imperialism" through the slogan "Befriend the U.S., Worship the U.S., and Fear the U.S."

Luh was the first target at Yenching in the Thought Reform Campaign. His relationship with Dr. John Leighton Stuart was under scrutiny. Stuart was denounced by Mao Ze-dong in his famous essay "Farewell, Leighton Stuart." To Luh, Dr. Stuart was not only his former colleague at Yenching but a long-time personal friend. Dr. Stuart was the minister of his wedding ceremony in 1921. His letters to Dr. Stuart and other American faculty were displayed in public in an "American Cultural Invasion Crimes" exhibit.

Luh was criticized in meetings by dozens of Yenching faculty, staff, students, and even by his own daughter Yao-hua Luh, who was a sophomore at Yenching. The Communists even tried to force his maid to expose his wrongdoing. His son, who kept silence, was kicked out of the Chinese New Democracy Youth League, a youth organization run by the Communists. Under this extensive pressure, Luh had to condemn himself repeatedly in speeches to confess his "crimes."

By May 1952, Luh was removed as president of the National Yenching University, the position he had held for only 15 months. He was ordered to leave the Yenching campus where he had worked for 25 years. During the Cultural Revolution, he was sent to a labor camp in 1969 where his situation deteriorated. In October 1970, he was allowed to return to Beijing. He died one month later, with only a 16-year-old granddaughter at his bed side.

Ching-chao Wu (1901-1968, PhD'28)

In 1948, the well-known sociologist **Ching-chao Wu** (吴景超) was Shih Hu to KMT leader General Chiang Kai-shek as advisor for the social and economic reforms in Taiwan. Wu had come to the U.S. as an Indemnity Student and graduated Magna Cum Laude from the University of Minnesota in 1925. He then studied sociology at UChicago under Robert E. Park (1864-1944), where he received his MA in 1925 and PhD in 1928. His classmates included Herbert George Blumer, Everett Hughes and Robert Redfield. [19] After returning to China, he was professor of sociology at the University of Nanking and National Tsinghua University, a senior secretary in the Executive Yuan (the Cabinet) and the Economic Affairs Department in 1930s; and an advisor to the United Nations Relief and Rehabilitation Administration in 1946. He was considered a pioneer of urban sociology in China.

Wu decided to stay in China and asked the recommendation to be an advisor to General Chiang Kai-shek to be withdrawn. His two co-advisorss, Sho-Chieh Tsiang (蒋硕杰, 1918-1993) and Liu Ta-chung (刘大中, 1914-1975), went to Taiwan and played important roles in the rapid development of Taiwan's economy during 1966-88.

Photo 11: Ching-chao Wu (circled) was seen in the Chinese Student's Club in 1925 (Courtesy the University of Wisconsin Archive)

Before 1949, about 22 universities or colleges in China had sociology departments, and 10 of those were in American-sponsored missionary schools. By 1953, all sociology departments were abolished in China. In January 1957, Wu published a paper that questioned if sociology still had a place in new China. He recommended that sociology be established within philosophy departments. In April, a forum was called with more than 20 sociologists including Wu and **Chin-yung Yen** (严景耀 1905-1976 PhD'34). They discussed how to resume sociology departments in the country. A month later, their speeches were characterized by the Communists as an attempt to restore pseudo-bourgeoisie sociology, and all attendees were labeled as Rightists.

Wu was let go from Tsinghua University and demoted with a pay cut. He was also forced to attend meetings for self-condemnation and self-criticism. Eight years later when the Cultural Revolution broke out, he was singled out again and sent to live in a cowshed. In May of 1968, he died of liver cancer at age of 67.

Yu-ching Tu (1895-1975, PhD'32) [20]

The first time **Yu-ching Tu** (涂羽卿) came to the U.S. was in 1914 under the Boxer Indemnity Scholarship. He studied at Wesleyan University until 1915, followed by three years at MIT where he received his B.S and M.S. in 1918, and one year at Columbia. After he returned to China in 1919, he worked at Southeast University in Nanking during 1919-27 and the University of Shanghai during 1927-45. In 1932 he received a two-year Rockefeller Fellowship to study physics under Professor Arthur H. Compton at UChicago and was granted a PhD in 1932.

In 1946 he became the third President of St. John's University in Shanghai. Founded in 1879, it was a missionary university with a long history in China and had a lot of well-known alumni including V. K. Wellington Koo and T.V. Soong. Starting in 1942, he was Acting General Secretary and the General Secretary of the national committee of the YMCA of China.

Photo 12: Yu-ching Tu and his wife Muriel Hoopes Tu in 1919 [20]

In the U.S., Tu married a white American girl Muriel Hoopes (1898-1987). His interracial marriage, and his close ties to the American missionary and the YMCA of China made him a target in the Three-Anti Campaign of 1951 (anti-corruption, anti-waste and anti-bureaucracy) and the Five-Anti Campaigns of 1952 (anti-bribery, anti-theft of state property, anti-tax evasion, anti-cheating on government contracts, and anti-stealing state economic intelligence). He was targeted even though he did not fit any criteria of the campaigns, since he was not a government official nor businessman. Humiliated by his former students and even colleagues at the YMCA, he attempted suicide by jumping from a window on the 6th floor of a building, but he was stopped by his wife.

In 1966, during the Cultural Revolution, his past with Americans was brought up again. Dazibao, the big-character posters full of baseless accusations, were hung on walls at the campus of Shanghai Normal College where he had been the head of the physics department since 1957. The Red Guards looted his home and beat him up. Unable to tolerate further torture, he tried to kill himself for the second time by cutting his carotid artery. After being rescued, he told his wife and daughter that his final hope for survival had been dashed.

He was allowed to go back home until July 1968 when he and his wife were taken away separately. He was isolated and then arrested on suspicion of being an American spy in November 1969. No one knew whether he was alive or dead for two years until November 1972, months after Nixon's visit to China, when Tu was released. He was soon diagnosed with a mental disorder. Suffering physically and mentally, he died in September 1975.

Photo 13: Hoopes Murel Tu was invited to meet the visiting former U.S. President Jimmy Carter in the U.S. Consulate General in Shanghai on September 4, 1981 [20]

David S. Hsiung (1896-1979, PhD'34)

Two years after David S. Hsiung (熊子璈) returned from UChicago, he joined the faculty of Hua Chung University, also known as the College of Yale-in-China in 1936. The UChicago Magazine March 1938 reported that

> "*In addition to the usual academic duties of a physics professor, Dr. Hsiung is taking a leading part in the Hua Chung College Wartime Service Committee. The College is supporting, both financially and with volunteer workers a dressing station at Nien Yu Tiao, the railway station at Wuchang, where wounded soldiers are transshipped for upriver towns for hospitalization. Dr. Hsiung puts his practical knowledge of physics to use every day in assisting in the making of various instruments for military use; he was responsible for building the refuge-trenches for the students to take shelter in during air-raids.*"

And on the issue of Life magazine on November 4, 1940, it says that

> *Hua Chung's resourceful Physicist David Hsiung set up the only power plant within hundreds of miles by coaxing the engine of an old Studebaker bus to burn charcoal, a Diesel engine to run on walnut oil.*

He returned to Ginling College after World War II and was the chairman of the physics department before the Communists came. As an experimental physicist, he had a lot of connections in China. His former students at Huachung University were the senior officials in the KMT government. Additionally, his PhD advisor at UChicago, Arthur H. Compton, became Chancellor of Washington University in St. Louis. But when asked by his friends if he would leave China, he told them he didn't care about regime change and would still be a professor. He discouraged his son from studying abroad even though he received a two-year scholarship from Iowa State College. On April 23, 1949 he joined the parade to welcome the Communist's Liberation Army when they entered Nanking, the capital of the KMT government. Since 1952 he was professor of physics at Nanjing University, which was combined with the private University of Nanking and National Central University.

In the Pubic-Private Partnership Campaign of 1956 that transformed private ownership of machinery, houses, etc. to the government, two thirds of his residence was confiscated. The government also built a two-story apartment on his front lawn. His family was surrounded by neighbors who were factory workers.

Photo 14: David S. Hsiung (2nd right) on the Ginling campus in 1947 with Col. Morrill of the U.S. Army Advisory Group (AAG) (Courtesy the United Board for Christian Higher Education in Asia Archive)

When the Cultural Revolution started to sweep all of China, his house was raided by Red Guards in 1967. An overzealous neighbor took the clicking of the typewriter Hsiung usually used as evidence that he frequently sent telegraphs to Taiwan. They found the typewriter but not a transmitter. The angry Red Guards destroyed his house items, and burned his books, including his UChicago PhD diploma. Hsiung was taken to a labor camp the next day and his family was again moved to an even smaller space.

In the cowshed of the labor camp, the 71-year-old Hsiung was forced to do hard labor. He was also interrogated about his ties with the U.S., including his two visits to the U.S. (one at the University of Pennsylvania in the 1920s and the other at UChicago) and his association with an American Embassy official who gave Hsiung his car when he left China. He was suspected as a "sleeper agent" for the Americans, given that he did not leave China in 1949. Family members were only allowed to see him once a month, but talk was prohibited.

In one visit, he couldn't help telling his son how hungry he was. That was seen by a Red Guard. That night the Red Guards broke through his son's front door and took him away, leaving his three children of age 3~6 at home alone only with a maid. His son was questioned on what they talked about. Two days later his son was released but Hsiung remained there for years until after U.S. President Nixon's visit to China in 1972.

Guang-yen Shiau (1920-1968, PhD'46)

Guang-yen Shiau (萧光琰) went to UChicago in 1942 after he graduated from Pomona College. He studied under Professor James Frank, the 1925 Noble Physics laureate, and received his PhD in chemistry in 1946. He stayed in the chemistry department and the Metallurgical Laboratory before joined Indiana Standard Oil in 1947.

Shiau was active in the left-leaning overseas Chinese student group CSCA. Some of the CSCA meetings were even held at his home. Having foreseen the need for the refinement technology in the future Chinese oil industry, he purchased a large amount of books and had them brought back to China in the wake of the embargo. To avoid being examined by the U.S. immigration authority, he used the status of a summer registered student, rather than a graduate with a doctorate degree, to leave the U.S. in November 1950 and arrived in Beijing in March 1951. Two months later, his new wife, an American-born Chinese who barely spoke Mandarin, joined him. Since Shiau was born in Japan and only was in Shanghai in his teenage years, China was a new world to both of them.

Photo 15: Guang-yen Shiau

The Chinese Petroleum Ministry evaluated the documents he brought to China and considered them as significantly valuable. He was then assigned to the Dalian Institute of Chemical Physics of the Chinese Academy of Sciences.

He only had a good experience there for 9 months. In the Thought Reform Campaign, he was questioned about his motivation to return to China. The lifestyles he and his American wife had were criticized as overly admiring of foreign things. He felt socially excluded at work. Self-injury was his way of punishment and to vent his anger.

When the Cultural Revolution began, like countless Chinese intellectuals, Shiau became a target. In October 1968, he was arrested by the Workers' Propaganda Team that consisted of radical workers who were taking over the administration of the schools and research institutions. To force him to confess his wrongdoing, he was interrogated under torture to prove he was an American agent. One day in December, he was found dead. An autopsy showed he killed himself with an overdose of sleeping pills.

His wife was told of his death when she was in a labor camp. Two days later, the bodies of his wife and their 16-year daughter were found at home. The cause of their death was also due to sleeping pill overdose.

Years later, when his elder brother in the U.S. tried to visit his gravesite in Dalian, the local government lied about the real cause of his death by claiming he and his family were killed in a car accident. They even fabricated an empty grave.

Lucy M. Chao Chen (1912-1998, PhD'48) and **Meng-chia Chen** (1911-1966, Visiting Scholar)

Lucy M. Chao Chen (赵萝蕤) graduated from Yenching University in 1932. In 1937, her translation of British poet T.S. Eliot's *The Wasteland* drew the attention of Chinese intellectuals. In 1944 she went to UChicago where she received her M.A. in 1946. By the end of 1948, Lucy had defended her PhD dissertation and planned to attend the graduation ceremony in the Rockefeller Memorial Chapel in June 1949. She was going to lead the Western Languages and Literature Department at Yenching. Concerned about the deterioration in Peking due to the Chinese Civil War, she decided to leave early and ended up arriving in Peking on the eve of 1948.

Photo 16: Lucy M. Chao Chen (center) with her husband Meng-chia Chen (left) and her youngest brother Edward Ching-te Chao (right) in 1946 when she received her MA at UChicago.

Her two young brothers followed suit: C.H. Chao (赵景心 1918-2017), who was teaching Chinese for the U.S. Army in Honolulu, returned to China in 1949. C.L Chao (赵景伦 1923-2015) suspended his PhD program at Harvard University so he could go back to China in 1951.

The Thought Reform Campaign came to Yenching campus in 1951. In addition to Chin-wei Luh, her father T.C. Chao (赵紫宸 1888-1979), a leading Protestant theological thinker and the Dean of the School of Religion, was also a target. One of his charges was the elder Chao. He and the U.S. president General Dwight D. Eisenhower were awarded honorary doctorates from Princeton University at the same time in 1947.

Being T.C. Chao's daughter and the goddaughter of Chih-wei Luh, Lucy was under tremendous pressure to draw a clear demarcation between herself and them. Meanwhile, as the head of the Western

Language and Literature Department, she was demanded to self-criticize her "bourgeois thought." In 1952, Yenching was broken up and merged into the new Peking University. Lucy was transferred there. She was devastated that her dream to build the English department with the model of UChicago's English Language and Literature Department died.

Her husband **Meng-chia Chen** (陈梦家) went to UChicago in 1944 as a Visiting Scholar. Since he received grants from UChicago and Harvard-Yenching Institute for a catalog of Chinese bronze vessels, he was traveling in the U.S. while teaching Chinese at UChicago. After returning to China in 1947, he was a professor at Tsinghua University until 1952 when he was assigned to the Institute of Archaeology at the Chinese Academy of Sciences.

In the Anti-Rightist Campaign, because Chen was opposed to simplified Chinese characters, he was listed in 1957 as one of four "Biggest Rightists" in the history community of the Chinese Academy of Sciences. Another UChicago alumnus in the list was **Barnabas Hai-tsung Lei** (雷海宗 1902-1962 PhD'27). Chen was forced into exile to a farm until the end of 1962.

At the beginning of the Cultural Revolution, Chen was picked up again in the summer of1966 by the rebel group at his workplace. His collection of Chinese bronzes, rare books, calligraphy and painting was taken away. At first, he was a custodian in the day and ordered to write self-confessions at night. When the violence intensified, he was beaten and forced to kneel down outdoors under the heat for a long time. On the night of the August 24th, he left a suicide note and took sleeping pills. Unable to die, he was sent to a hospital.

Chen's brother recalled what was done to him and Lucy by the Red Guards the next day on August 25th:

> *They seated her and me on chairs in the courtyard. The first thing they did was shave off half of our hair. At that time, it was called the Yin-Yang Head, and it was a common punishment. After that, they took off their leather belts and started beating us.* [21]

Ten days later on September 3rd, Meng-chia Chen hanged himself. He was 51 years old.

Lucy survived the Cultural Revolution, but she had closed the door to her heart and never mentioned her experience. She devoted the rest of her time to translate the American poet Walt Whitman's *The Leaves of Grass* into Chinese. In 1981 she returned to UChicago for research and in 1991 she received the Professional Achievement Award from her alma mater.

In contrast to Lucy and her family in China, her youngest brother **Edward Ching-te Chao** (赵景德 1919- 2008) had a different experience. Edward also received a PhD at UChicago in 1948 but decided to stay in the U.S. He worked at the U.S. Geological Survey (USGS) from 1949 till his retirement in 1994.

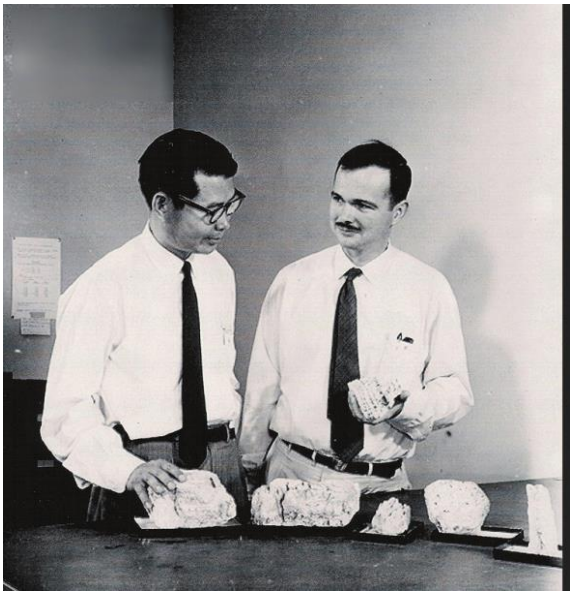

Photo 17: Edward Ching-te Chao (lefr) and Gene Shoemaker (right) in 1960 following their discovery of a new high-temperature/high-pressure phase of quartz, Coesite (Courtesy the USGS Archive)

Ning-kun Wu (1920-2019, PhD Candidate'50)

In 1942, Ning-kun Wu (巫宁坤), a sophomore of the National Southwestern University, joined the First American Volunteer Group, also known as the Flying Tigers, as an English interpreter. The Flying Tigers, led by Claire Lee Chennault, was to help the Chinese destroy about 500 Japanese planes. Then, in 1942, he came to the U.S. as an interpreter for Chinese aviators who received training on U.S. Army bases. After World War II, he enrolled in Manchester College and graduated there with his BA in 1948 before going to UChicago.

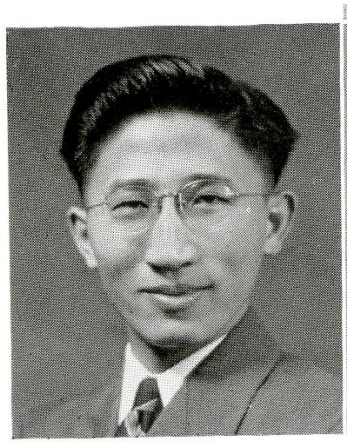

Photo 18: Ning-kun Wu in 1948 before going to UChicago. (Courtesy Manchester University Archive)

Since the winter of 1950, he had been preparing his PhD dissertation under Professor Ronald S. Crane. Unexpectedly, he received a cabled request in early 1951 from President Chih-wei Luh of

Yenching asking him to fill the position of professor of English there. After struggling for a while, he decided to accept the offer.

In mid-July 1951, when Wu was to board the USS President Cleveland in San Francisco en route to China, his friend **Tsung-dao Lee** (T.D.) who was working at UC-Berkeley came to see him off. Wu recalled:

> *When a photo had been taken and good-byes were being said, it occurred to me to ask, "Why aren't you coming home to serve the new China, T.D.?" He answered with a knowing smile, "I don't want to have my brains washed by others." As I could not figure out how brains could be washed, I did not at the time find the idea very daunting*. [22]

Pretty soon, he understood what Lee meant. Two months after he landed on the Yenching campus in August, he witnessed the anti-American hysteria in the Thought Reform of 1951. In 1953 he got involved in the political campaigns one by one. Finally, in 1957 he was labeled as "ultra-rightist." Since then, "he was exiled, sent to prison camps to do hard labor, and starved." [23]

Wu and Tsung-dao Lee met again it was in 1979. At that time, Wu had just been exonerated while Lee was a Nobel physics laureate and had been invited as the guest of the Chinese government to visit China frequently. Lee did not show "signs of strong interest or emotions" when Wu told of his past experience. "I quickly sensed we were living in two different worlds, across an unbridgeable gap." [22] He thought, "What would have happened if he had been the one to see me off to China on that July afternoon in San Francisco?" [22] If Tsung-dao Lee had returned to China in 1951, then the history of the 1957 Nobel Physics Prize would have to be rewritten.

Wu moved to the U.S. in 1990 and soon he published his famous memoir, *A Single Tear: A Family's Persecution, Love, and Endurance in Communist China*. He accepted a Doctor of Humane Letters award from Manchester College in 1993.

Chih-wei Lee (1917-2008, PhD'51)

Professor Milton Friedman was a well-known American economist and 1976 Nobel economics laureate. In 1940-50s, he had two Chinese students, **Chih-wei Lee**, also known as Li Zhi-wei (李志伟), and **Ching-hsi Lo**, also known as Lo Chengxi (罗承熙 1920-2008, AM'49). Lee was a 1944 Indemnity Scholarship recipient. When at UChicago, he began in the sociology department, then transferred to the economics department. He studied under Dr. Friedman for 6 years and received his PhD in economics in 1951.

In 1980, during Professor Friedman's first trip to China, he ran into his former student after almost 30 years. In his memoir, *Two Lucky People*, he described his relation with Lee:

> *Li was from Macau, not mainland China. Yet, like almost all overseas Chinese, he was extremely faithful to China.*
>
> *He got his degree in 1951, a time when relations were disturbed between Red China and the United States over Taiwan. We had lengthy discussions about what he should do. He recognized that his professional opportunities would be great if he stayed in the United States. But if he became a citizen, he might be drafted, and if hostilities developed between the U.S. and China, he doubted that he could bring himself to fight against China as his obligations to the United States*

would require. He finally concluded he could not do that and decided to return to China. For a time, he was employed by a Chinese agency in Hong Kong and I kept in touch with him. Then he moved to mainland China and I lost touch.

He was non-Marxist Western economist and only Marxist economics could be taught. Instead he taught English. Like so many other intellectuals, he had suffered during the Cultural Revolution, being forced to spend years as a manual laborer in the country separated from his family. When we saw him he was teaching statistics--still not economics... [24]

Friedman's wife Rose D. Friedman was also an economist. Lee used to teach her how to make lobster in their summer home in New Hampshire while he was writing his dissertation. She recalled:

Also, we never met his wife or his children when we were in Beijing. Somehow, to me, his stories were not entirely convincing. He didn't seem the straightforward young man that I remembered from his visit with us in New Hampshire. [24]

What Milton and Rose did not know was that Lee's wife had died during the Cultural Revolution. It is believed her death was related to her past experience of working for Voice of America in late 1940s and early 1950s.

Hua-chang Chow (1917-1968, PhD'52)

Hua-chang Chow (周华章) was considered one of the pioneers of econometrics in China. He went to UChicago in 1948. During his PhD program, he was fortunate to receive "benefit from the various invaluable suggestions by Professors Milton Friedman, D. Gale Johnson, Tjalling Koopmans and Lloyd Metzler." [25]

Upon his arrival in the U.S., he did not hide his pro-Communist opinions and participated in activities organized by the Association of Chinese Scientific Workers in U.S.A. After he received his PhD in economics in 1952 and left for China in 1953. He was then assigned to Tsinghua University. Even though he had been loyal to the Communist, he was accused of being an "American agent", "a counter-revolutionary" and a "reactionary bourgeois academic authority" during the Cultural Revolution. On September 30, 1968, he took his own life.

Photo 19: Hua-chang Chow

Conway Liang-cheng Cha (1918-1977, AM'52) and **Yu-liang Chou** (1923-2002, PhD'52)

Conway Liang-cheng Cha (查良铮), whose pseudonym was Mu Dan (穆旦), was a well-known poet and translator. He graduated from the National Southwestern Associated University in 1940 and remained there until 1942.

He was considered one of the most influential Chinese poets in 1940s. "In his poems he often described his war experiences and resulting disillusionment. His lyric style, characterized by complex imagery that was at times almost abstract, brought important innovations to modern Chinese verse." [26]

In May 1942, he joined the Chinese Expeditionary Army, also known as X Force, as an interpreter. The X Force was formed during World War II to support the Allies and was led by the U.S. Lieutenant General Joseph Stilwell against the Imperial Japanese Army. During the great retreat from Burma to India, Cha had witnessed the massive losses with 17,000 out of 42,000 either dead or wounded. That experience inspired many of his poems.

Photo 20: Conway Liang-cheng Cha in the Chinese Expeditionary Army as a lieutenant in 1942

After leaving X Force in September 1942, he had worked for the Nationalist Army and the UN Central Emergency Response Fund before entering to UChicago in August 1949. In December, he married long-time girlfriend **Yu-liang Chou Cha** (周与良).

At UChicago, Cha and his wife made up their minds to return to China after completing their studies. At the English Department, Cha took courses related to Russian for three semesters. His enthusiasm for Russia and Russian literature had to do with his desire to translate Russian poet Aalexander Pushkin's poems into Chinese, which he considered to be a gift to the new China. In 1952 he received his MA in English Language and Literature while Yu-liang Chou Cha earned her PhD in Botany. Even though they received offers from India and Taiwan, they still went back to China in 1953 and were assigned to Nankai University in Tianjin.

Photo 21: Conway Liang-cheng Cha and his wife Yu-liang Chou Cha on the UChicago campus in 1950

In a meeting in 1958, a verbal dispute with the head of the department that he worked for prompted an accusation of Cha being part of an "Anti-Party Team." Then the situation escalated when they called him a "Historical Counterrevolutionary." They criticized his past in the X Force that was organized by the National KMT government, and his years at UChicago were brought up. He was sentenced by a court to three years in a labor camp. He was expelled from the classroom, demoted, and had to take a cut in pay. He was also forced to work under surveillance in libraries and bathhouses. In the Cultural Revolution, he and his wife inevitably became targets. This time his wife was suspected of being an American agent. They were beaten by the Red Guards and their 6-person family was forced to move to a room with only 17 square meters (183 square foot). Exhausted by the harsh punishment, Cha died of a heart attack in 1977.

Yu-tai Yao (1891-1968, AB'18) and **Chi-Sun Yeh** (1898-1977, AB'20)

It is worth mentioning two of pioneering physicists and educators who have been considered the founders of modern physics in China, **Yu-tai Yao (**饶毓泰) and **Chi-Sun Yeh** (叶企孙). They studied physics as undergraduates at UChicago although they received their PhD's somewhere else.

English Name	Chinese Name	Ties with UChicago	Universities to receive PhD
Yao, Yu-tai (1891-1968)	饶毓泰	AB, 1918	Princeton University, 1922
Yeh, Chi-sun (1898-1977)	叶企孙	AB, 1920	Harvard University, 1923

Table 19: Two leading Chinese physicists and educators who were UChicago undergraduates

After Yu-tai Yao returned to China in 1922, he went to Nankai University to build its Physics Department and acted as its Chair. During wartime, he was Chair of the physics department at Southwest Associated University and held the position from 1937 to 1946. During that period, there were 131 undergraduates and 7 graduates, most of whom became prominent physicists years later in the U.S and China. From 1947 to 1952, he was head of the physics department at Peking University.

Chi-Sun Yeh was a 1918 Box Indemnity Student at UChicago. After Harvard, he returned to China in 1923 and started to lead the Physics Department in 1925 and then the College of Sciences at Tsinghua University. During his 27 years at Tsinghua, his former students were spread throughout China. It was reported that 79 Fellows of the Chinese Academy of Sciences were his former students at Tsinghua. In 1952 he was transferred to Peking University.

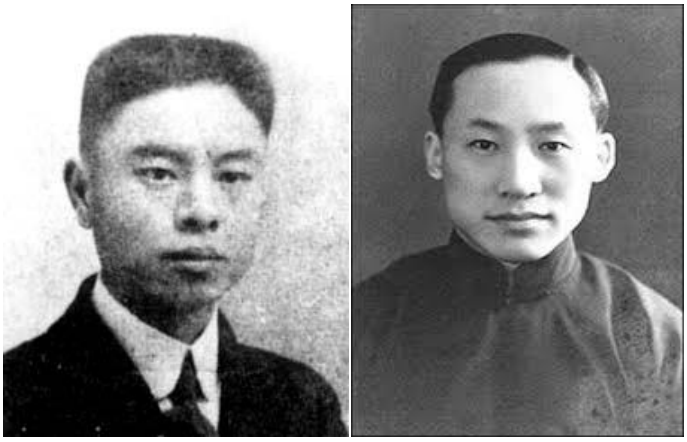

Photo 22: Yu-tai Yao (left) and Chi-Sun Yeh (right)

Both Yao and Yeh were elected Academicians (Fellows) of the Academia Sinica in 1948 and were targets of the Nationalist KMT's rescue mission, which tried to lure the Chinese elites to Taiwan in vain. They both refused and decided to stay and suffered during the Cultural Revolution.

According to Youqin Wang of East Asian Languages and Civilizations at UChicago, and owner of Cultural Revolution Web Memorial, the wider bloodshed at the Peking University campus resulted in the death of 10% of its full professors, and Yao was one of them. On October 16, 1968, Yu-tai Yao hanged himself at his home—the day before he was scheduled to "confess" his relationship with Shih Hu, the former President of Peking University. He was 75 years old. His daughter, who worked at Tsinghua University, had been accused of being a member of a "Counter-Revolutionary Group" and was arrested earlier in April. She was severely beaten and detained, so she knew nothing about her father's death. Yao's remains have never been found.

Chu-sun Yeh was put in prison for one and half years in April 1968 by the CCP's General Office of the Central Military Commission. He had been involved in an old case back in 1939, when his former student from Tsinghua University was secretly arrested for being a KMT agent and then executed by the Communist Army. As an advisor, Yeh was suspected of being a key KMT agent at Tsinghua, even though there was no evidence at all. In November 1969 he was returned to Peking University, but was still isolated and had no visitors until 1975. He died on January 13, 1977. Six days later, a small memorial service was held. Since the eulogy delivered by the government did not mention his contributions and did not exonerate him, his former student and colleague Yui-hsun Woo, who was the vice-president of the Chinese Academy of Sciences, walked out the memorial service in protest.

Both Yao and Yeh were rehabilitated after the Cultural Revolution ended: Yao in 1978, and Yeh in 1987.

Chun Wang (1898-1968 PHB'26)

In 1921, Chun Wang (王均) went to the College of Wooster in Ohio, and then in 1925 to UChicago. After he received his Bachelor of Philosophy in Education at UChicago in 1926, he took some courses at the Chicago Theological Seminary before returning to China.

According to Youqin Wang**,** Chun Wang became a pastor in 1927 and taught at the University of Nanking. [27]

His nightmare came during the Campaign to Suppress Counterrevolutionaries of 1951-53, the first political campaign launched by the Communists. He was arrested on the first day, March 12, 1952, while he was in a high school classroom teaching. In May, he was sentenced 8 years in prison. According to the official data released by the Communists in 1954, about 2.6 million people were arrested, 1.3 million were imprisoned, and 712,000 were executed.

After completing his 8 years sentence in 1960, he was kept in a labor camp until 1963, when he was sent back his hometown. In May 1968, during the Cultural Revolution, he was beaten to death. The day before he died, he told his wife he was afraid that he couldn't take much more, since he had been starved for days and the brutal torture had broken his bones. After that, his wife and 4 children did not see him alive, or even his dead body. It 1987, his 1952 conviction was overturned, but not the 1968 conviction that had led to his death. No one has ever been held accountable.

Citizen Diplomacy in the Warming Sino-US Relations

The icy Sino-US relations started to defrost in the early 1970s. Both the U.S. and China were looking to soften the tension between two countries, each with its own motivations. For China, the Sino-Soviet border conflict in 1969 put the two countries at the edge of a nuclear war. The U.S. was still stuck in the Vietnam War against the communists, who were China's ally, in addition to being in the Cold War with the Soviet Union. The breakthrough came from the Ping-Pong Diplomacy in Japan where the 1971 World Table Tennis Championships was held. An unintentional engagement between the U.S. and Chinese teams was followed by an all-expense paid invitation from Chinese leader Mao Ze-dong to the U.S. ping-pong team to visit China.

President Richard Nixon shocked the world by announcing his groundbreaking and historic trip to China in 1972. Chinese Premier Zhou En-lai hosted a welcoming banquet on February 21, 1972. In addition to the Chinese communist party, government and military officials who attended, a few scholars who studied in the U.S. before 1949 were unexpectedly invited. Among them, three were UChicago-trained educators: **Pei-yuan Chou**, **Chiao-chih Lim** and **Chieh-ping Wu**. This was unusual in a country where for more than twenty years those who studied abroad had been denounced and their loyalty to China had been questioned. The Ping-Pong Diplomacy was replaced by the Citizen Diplomacy before the U.S.-China relations were finally normalized in 1979.

Photo 23: The welcoming banquet for President Nixon (3rd left) hosted by Chinese Premier Zhou En-lai (4th left) on February 21, 1972, where three UChicago alumni were invited (Courtesy Richard Nixon Presidential Library and Museum)

Pei-yuan Chou (周培源, 1902-1993 AB'26, AM'26)

Chou was a prominent physicist and the president of Peking University at that time. His connection with UChicago was that he received both a B.A. and an M.A. there in 1926 before going to California Institute of Technology, where he received his PhD in physics in 1928. He was initially scheduled to lead the first delegation of Chinese scientists to visit the U.S. in October 1972, but there was opposition from Madame Mao, so he was left out of the delegation.

On September 27, 1975, Chou was finally allowed to lead a delegation of the Chinese scientists to the U.S. and met President Gerald R. Ford.

Photo 24: President Gerald R. Ford Met talked to Pei-yuan Chou and his Scientific and Technical Association delegation on September 27, 1975 at White House (Courtesy Gerald R. Ford Presidential Library)

After the Cultural Revolution, he returned to the U.S. in October 1978. This time he carried out a very important mission to talk with the Carter Administration about how to rebuild Sino-U.S. education relations. His negotiation with National Science Foundation Director Richard C. Atkinson, who was also a UChicago graduate (AB'48), ended with the U.S. agreeing to accept 500-1000 Chinese science and engineering students and visiting scholars, while 60 American students and scholars would study in China for the 1978-79 academic year. This was the groundwork that led to the third wave of Chinese students to study in the U.S.

Chiao-chih Lin (林巧稚, 1901-1983)

Lin was a devoted Christian and a leading gynecologist. She received her MD in 1929 at the Peking Union Medical College (PUMC). PUMC was founded by the Rockefeller Foundation in 1914 with the intention of reorganize Chinese medical education and to follow what the John Hopkins University School of Medicine had done. She studied at UChicago's medical school during 1939-40.

Eight months after attending the welcoming banquet 1972, as the only one who studied in the U.S., Lin revisited the UChicao campus on October 24th, 1972 with a 13-member delegation of physicians from China. The Chicago Tribune reported Lin's visit:

> *China's leading gynecologist yesterday had her first homecoming to Chicago since she was a student here 32 years ago. Although many new buildings have been constructed since she last visited the campus, she remembered the University of Chicago, where she spent 15 months studying pharmacology. Standing in front of the University of Chicago Hospital on Ellis Avenue, Dr. Lin smiled and said,"Yes, I remember these buildings. Lying-In (Children's Lying-in Hospital) is over there.*

12 – Section 3 ☆☆

Chinese Woman Physician Returns Here After 32 Years

BY RONALD KOTULAK
Pictures on Back Page

Dr. Lin Chiao-chih, China's leading gynecologist, yesterday had her first homecoming to Chicago since she was a student here 32 years ago.

Altho many new buildings have been constructed since she last visited the campus, she remembered the University of Chicago, where she spent 15 months studying pharmacology.

Standing in front of the University of Chicago Hospital on Ellis Avenue, Dr. Lin smiled and said, "Yes, I remember these buildings. Lying-In [Children's Lying-In Hospital] is over there."

She seemed awed at "all the changes and new buildings."

Dr. Lin is a member of the 12-member medical delegation from the People's Republic of China who are making a three-week tour of the United States. The group is scheduled to leave this morning for Kansas City, and then to San Francisco before they return home Nov. 1.

On Monday, the group visited Abbott Laboratories in North Chicago, ate dinner at the Stock Yards Inn, then topped off the day by going to the Ringling Brothers-Barnum and Bailey Circus.

Yesterday the group visited the headquarters of the American Medical Association, 535 N. Dearborn St., then toured the Museum of Science and Industry. Later they went to the university.

At the A. M.A., the Chinese doctors presented Dr. Ernest B. Howard, executive vice president of the association, with a two-foot-high acupuncture manikin complete with charts and needles.

Dr. Fu I-cheng, deputy head of the Chinese delegation, thanked the A. M.A. officials for the warm reception and said, "Tho our stay in this country is rather short, we are sure that our mutual friendship and understanding will increase."

Photo 25: A newspaper clipping of the report on October 25, 1972

Eleven days earlier, on October 14th, the delegation was met by President Richard Nixon at the White House, followed by a visit to the National Institutes of Health headquarters in Bethesda, MD. The New York Times reported:

> *The status of pregnancy cancer, known as choriocarcinoma, was discussed at the National Institute of Child Health and Human Development. The chief exchanges were between Dr. Griff T. Ross, clinical director of the reproduction research branch, and Dr. Lin Chiao-chih, a 71-year-old woman gynecologist who is professor at the Capital Hospital of the Academy of Medical Science in Peaking.*

Photo 26: President Richard Nixon met the delegation of physicians from China on October 14, 1972 at the White House including Chiao-chih Lin (5th right) (Courtesy Richard Nixon Presidential Library and Museum)

Chieh-ping Wu (吴阶平, 1917-2011)

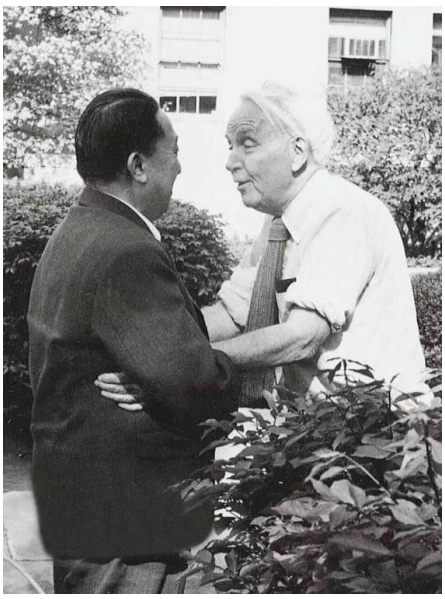

Photo 27: Chieh-ping Wu (left) had a reunion with Dr. Charles B. Huggins (right) in 1979

Wu was considered the “father of urology” in China and was personal physician to Chinese Premier Zhou En-lai. He received his MD at PUMC in 1942. During 1947-48, he studied urological surgery at UChicago under Dr. Charles B. Huggins (1901-1997), who later received the 1966 Nobel Prize in Physiology and Medicine. In 1979, Wu had a reunion with Dr. Huggins. In 1993, Wu was elected as the Vice-Chairman of the Standing Committee of the National People's Congress of the PRC, becoming the highest ranking official among the UChicago alumni in China.

Citizen diplomacy also paved the way to cooperation between universities in the U.S. and China. In November 1974, at the first official UChicago delegation, headed by President Dr. Edward Levi, he met three UChicago alumni, **Chiao Tsai** (蔡翘 1897-1990 PhD’24) who was the president of the Chinese army’s Academy of Military Medical Sciences, Pei-yuan Chou and Lucy M. Chao Chen.

Photo 28: The UChicago president Edward Levi (left), Chiao Tsai (center) and Pei-yuan Chou (right) during the UChicago delegation to China in 1974 (Courtesy the University of Chicago Photographic Archive)

Major Contributors to China's Rise

By 1970s, the UChicago-educated Chinese PhDs who stayed in the U.S. were U.S. citizens. They had lost contact with their home country after the Bamboo Curtain fell in the 1950s. For a long period, they had been considered traitors by the left radicals in China for not returning to contribute to the Socialist motherland. Their properties were confiscated, and their families received harsh treatment because of the overseas connection.

Most of them had been born in China and lived there until adulthood. Whether for good or for bad, they promoted good feelings toward China in the U.S. With the change of atmosphere in Sino-U.S. relations, they were gradually allowed, even sometimes invited, to visit China by the Chinese government. They chose to forget the past and move on.

The following stories tell about their critical roles and contributions in China's rise, especially after China reopened its doors to the world in 1978.

Tsu-sheng Ma (马祖圣, 1911-2007, PhD'38)

In 1980, Tsu-sheng Ma donated $100,000 to the chemistry department at Tsinghua University, his undergraduate alma mater. In 2001, he set up a Tsinghua University Class of 1931 Memorial Assistantship to help 100 students annually. After his passing in 2007, his wife, **Gioh-fang Dju Ma** (马朱觉方 1913-2015, AM'42, PhD'46), established a Tsu-sheng Ma Memorial Assistantship to help an additional 20 students each year by giving them RMB 3,000 each.

Chen-ning Yang (杨振宁, 1922-, PhD'48)

As early as November 11, 1949 the Chinese Academy of Sciences was established and started a nationwide survey of scientists. The National Scientists Survey of 1949-50 was completed by April 15, 1950. **Chen-ning Yang** was among the 43 physicists on the list with a note that he was in the U.S. next to his name.

In 1957, Yang's name emerged again as a frontrunner for the Nobel Prize. That summer he went to work in Geneva, and was eager to see his father there. Up receiving his cable that he was coming, his father, **Ko-cheun Yang** (杨克纯, also known as 杨武之 1888-1973, PhD'28), asked for help from Chinese Premier Chou En-lai. His request was granted quickly on the condition that he would persuade Yang to at least not to go to Taiwan, or to even go back to mainland China. During the two-month visit, the elderly Yang painted a picture of a bright new China, even though the Communists had just started a large- scale prosecution of Chinese intellectuals. He even took his son to the Chinese consulate in Geneva to watch a propaganda documentary.

On October 31, 1957, soon after the Royal Swedish Academy of Sciences announced that Chen-ning Yang and Tsung-dao Lee had shared the1957 Nobel Prize in Physics, three Chinese physicists, Yui-hsun Woo, Pei-yuan Chou and San-Tsiang Tsien (钱三强), sent Yang and Lee a congratulations cable on behalf of the Chinese Physical Society (CPS). **Yui-hsun Woo** and **Pei-yuan Chou** were not only his father Ko-cheun Yang's roommates at UChicago in the 1920s, they were his teachers at National Southwestern Associated University in the 1940s. The Chinese government sent his former advisor for his master's program, W. T. Chang (张文裕 1910-1992), to Stockholm for the Nobel Prize ceremony. Chang

passed Yang and Lee the message from the Chinese Premier Zhou En-lai that he hoped they would go back to work in China. But both Yang and Lee politely declined the invitation.

In the spring of 1960 and summer of 1962, the elderly Yang and his wife were permitted to meet with their son in Geneva. Yang's mother opposed returning to China given the conditions there. He had seen for himself the setback in China due to the Anti-Rightist Campaign of 1957, the Great Leap Forward Campaign of 1958-62, and the Great Chinese Famine of 1959-61. The attempt by the Chinese government failed. They did not return to China.

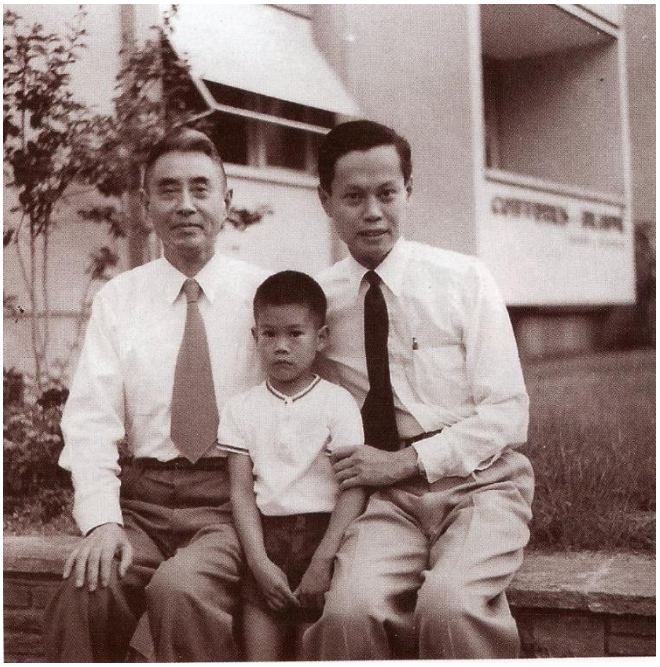

Photo 29: Ko-cheun Yang (left) and his son Chen-ning Yang (right) with his grandson in Geneva in 1957 [13]

At the end of 1964, Yang was lecturing in Hong Kong. By then he was already a U.S. citizen. His parents and siblings in China were all allowed to meet him there. Two years later, during the Cultural Revolution of 1966-76, he lost contact with his family in Shanghai.

In 1971, when Yang saw the report that the Nixon administration had removed China from travel bans and trade embargos on April 14—the same day that Chinese Premier Zhou En-lai had met the visiting U.S. ping-pong team in Beijing (formerly Peking)—the seized the opportunity to visit China. He notified the U.S. government, who encouraged his visit but told him he would have to get a Chinese entry visa on his own either in Canada or France.

On July 15, 1971, Yang got his Chinese visa from the Chinese Embassy in Paris. Coincidently, on the same day, President Richard Nixon revealed to the world the secret trip his national security advisor Henry Kissinger made to China from July 9-12, and that he himself would visit China in May 1972.

Yang started his return journey to China on July 19, 1971 after 26 years of separation. His last stop on the trip was Beijing, where he met his friends, classmates, and former university teachers,

including two UChicago alumni, Yui-hsun Woo and Pei-yuan Chou. The most important meeting was with Chinese premier Zhou En-lai which took almost five hours. They discussed a variety of subjects.

Yang was impressed by his visit to China. In November 1971, he told Gloria B. Lubkin of *Physics Today*:

> *China is a country poor in material resources," Yang noted, "although things are already infinitely better than they were when I lived there. But it does have a spirit and discipline that American society lacks.*

His trip to China dispelled further doubts other Chinese American scholars might have had, and laid the groundwork for visits by other Chinese Americans:

- In July 1972, by the first delegation of Chinese American scholars
- In Sept. 1972, by **Shiing-shen Chern** (陈省身 1911-2004), who worked at UChicago from 1949-60, and **Tsung-dao Lee**
- In 1973, by **Chien-Shiung Wu** (吴健雄 1912-1997), the leading experimental physicist and the first female president of the American Physical Society, along with her husband
- In 1975, by **Samuel C.C. Ting** (丁肇中 1936-), who was awarded the 1976 Nobel Prize in Physics

Less high-profile figures also visited China, such as **Duo-Liang Lin** (林多樑), a professor of physics at Buffalo State University in New York. In 1948, as a fresh high school graduate, he left his hometown for a tour in Taiwan and got stuck there because of the escalating Chinese Civil War. He came to Ohio State University in 1958 to study for his PhD.

By February 1972, it had been more than 23 years since Lin had left his family in mainland China, but he never stopped dreaming of seeing them again. He consulted Yang, who suggested that Lin write a letter to his parents. Given that all communication was monitored by the Chinese government, a response from his parents would be a green light from the government. More than 6 months later, Lin received a letter from his father, and then he knew he could go. While he was waiting for a visa the next month, the Chinese government also completed their background check on Lin's family. By May 1973, everything was ready for Lin to go on his homecoming journey.

Beginning in 1971, Yang visited China every year, sometimes multiple times. On his second trip in July 1972, he advised Chinese Premier Zhou En-lai that the Chinese government should pay more attention to the basic sciences. On his third visit in 1973, he was met by the Communists leader Mao Ze-dong. Mao asked Yang how to strengthen Chinese scientific development. Yang's suggestion was to translate the *Scientific American* into Chinese.

Yang's visits in the1970s resulted in many Chinese scientists and teachers being released from factories, villages, and even labor camps so they could return to research institutions and universities and implement his proposal. He even unintentionally helped save the Chinese nuclear weapon program. At his request, his longtime friend from high school and college **Chia-hsien Teng** (邓稼先, 1924-1986) was able to return to Beijing along with his colleagues. Teng, a nuclear physicist, was a leading organizer and key contributor to the Chinese nuclear weapons programs.

The day before Yang left Shanghai for the U.S., Chia-hsien Teng was authorized by Chinese premier Chou En-lai to tell Yang that no foreigner had ever participated in the Chinese nuclear weapon program before. After reading Deng's note, Yang could not help the tears filling his eyes. It was a big

shock. It meant that the Chinese had successfully developed nuclear weapons on their own. Yang recalled in a 1993 article commemorating Deng, "I did not know why I was so emotional. From pride of our nation or of Chia-hsien Teng? I don't know." [13]

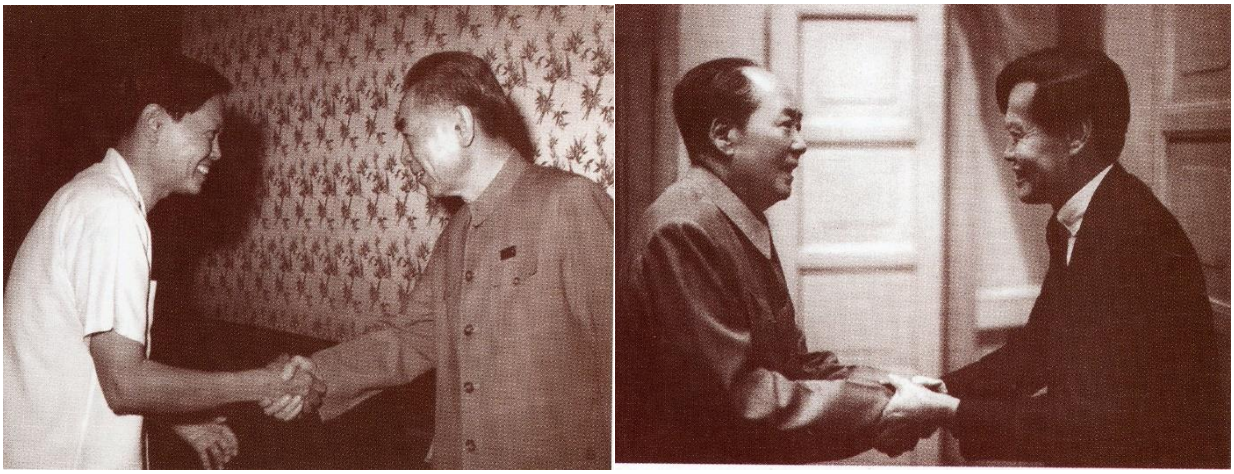

Photo 30: Chen-ning Yang met Chinese premier Chou En-lai on August 4 1971 (left) and Chinese Chairman Mao Ze-dong on July 17 1973 (right) [13]

After China opened its doors to the outside world in 1978, when China's supreme leader Deng Xiaoping controlled the country, Yang, as president of the National Association of Chinese-Americans (NACA), greeted Deng during his historic visit to the U.S. in early 1979. Yang then initiated a series of fundraising activities, such as the Committee on Education Exchange with China (CEEC). Between 1981 and 1992, they sponsored more than 80 Chinese scholars to work at the State University of New York at Stony Brook, where Yang had been professor since 1965 at the Advanced Academic Research Center of Sun Yat-sen University Foundation. This program existed from 1983 to 2007.

Tsung-dao Lee (李政道, 1926-, PhD'50)

In 1972, Tsung-dao Lee also made his first visit to China. He was met by Chinese Premier Zhou En-lai. On his second trip to China in 1974, Chinese leader Mao Ze-dong met with him. Mao liked Lee's proposal to prepare young basic science talents, comparing it to what Madame Mao had done for Chinese ballet dancers.

Even backed by Mao, implementation did not materialize until four years later in 1978, after Mao died and China opened its doors to the world. The first School of the Gifted Young was formed at the University of Science and Technology of China. That class had 21 genius students whose average age was 14 years-old, with the youngest being 11 years old.

Lee's greatest contribution to China could be the China-U.S. Physics Examination and Application (CUSPEA) that he started in April 1979 during his lectures in China. He was to echo the call of Chinese leader Deng Xiaoping to send more Chinese students abroad by proposing the CUSPEA program.

It was difficult at that time to evaluate Chinese students' academic potential simply through their GPA's since the Cultural Revolution was just over. The CUSPEA was then an admission process equivalent to the PhD qualifying exams in the U.S. It was utilized to select Chinese college senior physics

majors from the physics departments of top-ranked American universities and their counterparts in China. The exams were followed by interviews, and then qualified students attended participating American universities. The CUSPEA had solved the problem that after the ten-year Cultural Revolution, there were no standardized exams in China, such as the TOEFL for international students and the GRE for graduate school admission.

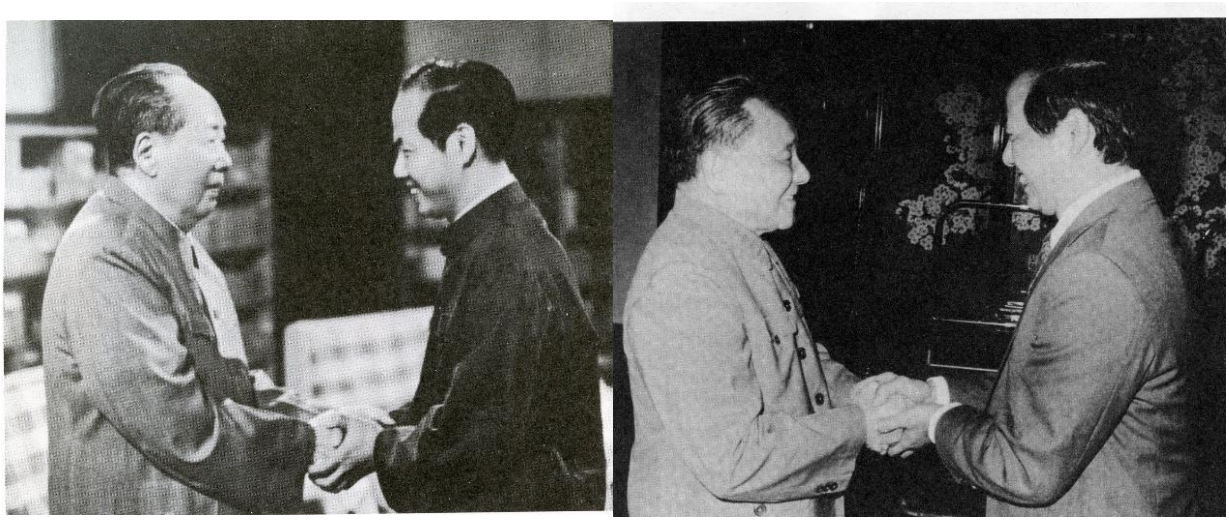

Photo 31: Lee met Chinese leaders Mao Ze-dong in 1974 (left) and Deng Xiaoping in 1978 (right) [28]

After the success of Pre-CUSPEA 1, which sent 5 students to Columbia University, and Pre-CUSPEA 2, which sent 13 students to 8 American universities in 1979, the official CUSPEA started in 1980. By 1988, there were 5,114 CUSPEA applicants from 95 Chinese universities and research institutions. 951 CUSPEANs, as they were called, were selected to go to 97 American universities, such as Columbia, Harvard, Yale, Cal Tech, Cornell, Princeton, Chicago, Massachusetts Institute of Technology, Carnegie-Mellon, University of Michigan, University of California Berkeley, Stanford, University of Illinois—Urbana-Champaign, and University of California Los Angeles.

Professor **Norman Christ** of Columbia University who interviewed 132 CUSPEA applicants in 1980 said that

> *CUSPEA was remarkable successful. Some of the most outstanding physicists in the US now were CUSPEA students 40 years ago. A number have also returned to China and I believe are having a large impact on science in China*. [29]

Of the 951 CUSPEANs, 28 went to UChicago (Table 20). [30]. Professor Sidney Nagel of physics department at UChicao said that

> "*The CUSPEA program was an excellent one. It helped physics departments in the US identify excellent young scientists in China who were interested in doing their graduate work in the US. We relied on that program while it was in existence to help us recruit some of the best students in the world into our program*." [31]

Today, 5 UChicago former CUPEANs are American Physical Society (APS) Fellows. One of them, **Chao Tang** (汤超 CUSPEAN'80 and PhD'86) , who is also a Fellow of the Chinese Academy of Sciences and the Chair Professor of Physics at Peking University, recalled of the CUSPEA 40 years later:

CUSPEA opened the door for college students to go the US for study and in a way open the door between China and the US. There were no TOFEL, GRE and any formal channels back then. So this was a landmark that changed the fates of many young people and had a huge impact on China's modernization.[32]

Photo 32: UChicago CUSPEAs from left: Li-ping Jin (1st), Zong-an Qiu (2nd) and Chao Tan (4th) at UChicago Campus. (Courtesy Chao Tan)

CUSPEA was the largest program like this since the Box Indemnity Scholarship, and the first one since the Communists seized the power in 1949, although it covered only physics. Spearheaded and inspired by Lee, similar scholarships for other fields blossomed:

- **Ray Wu** (吴瑞 1928-2008) of Connell University organized the China-US Biochemistry Examination and Application (CUSBEA) in 1981. By 1989, 422 Chinese students had gone to study biochemistry in the U.S.

- **William von Eggers Doering** (1917-2001) of Harvard University led the Chemistry Graduate Program (CGP) from 1982 through 1986, which brought more than 250 Chinese students to study chemistry at universities throughout North America.

Name	Chinese Name	CUSPEA Class	Year of Ph.	APS Fellow	Latest Position
Jin, Li-ping	金立平	1980	1987		Professor of Physics, Jilin University, China
Tang, Chao	汤超	1980	1986	1997	Professor of Physics, Peking University, China
Qiu, Zong-an	裘宗安	1980	1986		N/A
Lai, Zhao-wei	赖肇伟	1981	1990		N/A
Shao, Zhi-feng	邵志峰	1981	1988	2000	K.C. Wong Chair Professor and Associate Dean of School of Biomedical Engineering, Shanghai Jiao Tong University, China
Liang, Shou-dan	梁守丹	1981	1986		Professor of Biostatistics and Applied Mathematics, University of Texas M. D. Anderson Cancer Center
Hu, Xiao-ping	胡小平	1981	1988		Professor and Chair, University of California, Riverside
Wang, Shi-qing	王十庆	1981	1987	1997	Kumho Professor, Department of Polymer Science, University of Akron, Ohio
Wu, Lei	吴镭	1982	1990		CEO and President, Cygnus Biosciences, China
Ning, Xiao-hui	宁小辉	1982	1988		Founder and CEO at Sunex Inc, California
Wu, Xiao-zhong	吴晓忠	1984	1991		N/A
Deng, Xun-ming	邓勋明	1984	1990		Professor of Physics, University of Toledo, Ohio
Zhou, Su-min	周苏闽	1985	1992		Professor & Director of Medical Physics, University of Nebraska Medical Center, Nebraska
Liu, Chu-heng	刘楚蘅	1985	1993		N/A
Si, Qi-miao	斯其苗	1985	1991	2005	Harry C. and Olga K. Wiess Professor of Physics and Astronomy, Rice University, Texas
Lu, Zheng-tian	卢征天	1986	1994 (UC-Berkeley)	2006	Profess of Physics; Dean of School of the Gifted Young, University of Science and Technology of China, China
Dong, Hui	董辉	1986	1995		N/A
Dai, Wei-shen	戴微珅	1986	1992 2001(MD)		Radiological Consultant at Fairfax Radiological Consultants, Virginia
Zhu, Chang-hong	朱长虹	1987	1994		Former CIO, the State Administration of Foreign Exchange (SAFE), China
Tang, Hai	唐海	1987	1992		Managing Director, Andersen Tax, California
Niu, Li-cheng	牛立成	1987	1994		Principal Engineer, Axbio, California
Shi, Xiang-dong	施向东	1988	1994		Vice President of Engineering, GoCheck Kids, Tennessee
Chang, Xiao-yan	常晓燕	1988	1993		Software Engineer
Liu, Li	刘力	1988	1995		Executive Director, Morgan Stanley, Great New York City Area
Zha, Yu-yao	查宇遥	1988	1994		Portfolio Manager, Barclays Global Investors, Palo Alto, California
Wang, Jin-song	王劲松	1988	1994		Director, BMO Financial Group, Greater New York City Area
Li, Wen-shuo	李闻硕	1988	1995		Engineering Manager at Intel Corporation, Oregon
Luo, Xiao-chun	骆小春	1988	1994		Vice President, Credit Suisse, Great New York City Area

Table 20: List of CUSPEANs at UChicago from 1980 to 1988

Su-shu Huang (黄授书, 1915-1977, PhD'50)

In 1950, Huang refused to return to China, claiming that since he was a member of the American Astronomical Society, he could be beheaded.

However, later he was among the Chinese Americans to visit China. During his second trip to China he died of a heart attack in Beijing on September 15, 1977. At the memorial service in Beijing on September 25, a wreath was presented by Yui-hsun Woo, who was vice-president of the Chinese Academy of Sciences. Two years later, in 1979, the newly discovered main-belt asteroid 3014 Huang Sushu was named in his honor by the Purple Mountain Observatory in Nanjing, China. The Chinese Astronomical Society has also set a scholarship in his name to encourage and reward astronomers for outstanding achievements.

Photo 33: Su-shu Huang (Courtesy the University of Chicago Photographic Archive)

Lee Changl-li Teng (邓昌黎 1926- , PhD'51)

Photo 34: Chinese paramount leader Deng Xiaoping met Lee C. Teng in 1982

Born in Peking, Teng did his undergraduate studying at Fu Jen Catholic University. He received his master's degree in 1948 and PhD in 1951, both in physics at UChicago. As early as 1970, he was named Honorary Professor at Beijing Normal University in China. As a former Director of the Particle Accelerator Division at Argonne National Laboratory, and a recipient of the Robert R. Wilson Prize for Achievement in the Physics of Particle Accelerator by the American Physical Society, he has been an enthusiastic advocator for the Beijing Electron Positron Collider. He visited China many times and met with Chinese leader Deng Xiaoping twice, in 1977 and 1982.

Tang Tsou (邹谠 1918-1999, PhD'51)

As a student at UChicago, Tsou and his wife **Yi-chuang Lu Tsou** (卢懿庄 1913-2010, PhD'50), along with other follow Chinese students such as Chen-ning Yang, Tsung-dao Lee, Conway Liang-cheng Cha and Ning-kun Wu, formed a Chinese research team to debate whether or not they should return to China.

In 1975, Tang Tsou and his wife returned to China. Tsou became an honorary professor at Beijing University in 1986. In 1997, when the Chinese Academy of Social Science first made its membership available to foreigners, he was named an honorary academy member.

Photo 35: Tang Tsou.

Chang-yun Fan (范章云, 1918-2009, PhD'52)

Fang was part of one of the first batches of Chinese-Americans who visited in China in 1972. A professor of physics at the University of Arizona from that trip inspired him to help build close collaborations with his counterparts in China. He was the honorary professor at the Purple Mountain Observatory in Nanjing, China beginning in1979, and helped design of China's the first and second generations of the Fengyun Meteorological Satellites.

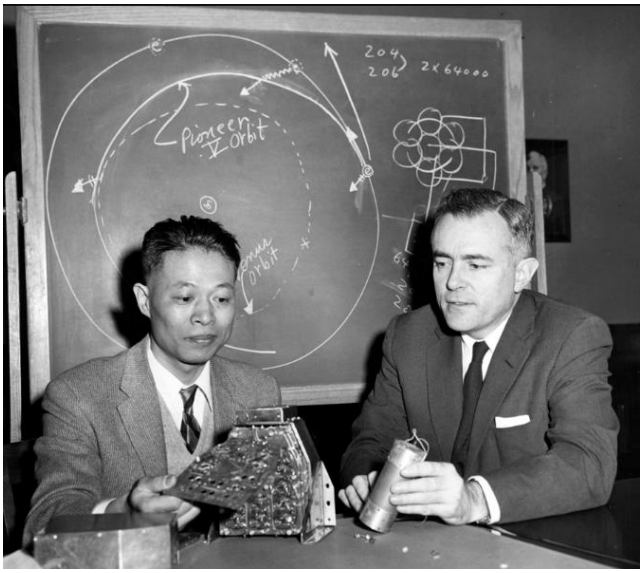

Photo 36: Chang-yun Fan (left) with Dr. John A. Simpson of the physics department at UChicago in 1960 (Courtesy the University of Chicago Photographic Archive)

Nien-chu Yang (杨念祖 1928-2008, PhD'52)

Yang was the UChicago faculty from1956 until his retirement in 2000. In 1979, he was made an Honorary Professor at the Chinese Academy of Sciences, becoming the first honorary professor from overseas after the Chinese Cultural Revolution.

Photo 37: Nien-chu Yang

Peter Ping-kwan Fong (冯平贯 1924-2016, PhD'53)

Fong was an active member of the Association of Chinese Scientific Workers in the U.S. (中国留美科学工作者协会) in the 1950s. In addition to his professional career as a professor of physics at Emory University, he was a freelance columnist for mainstream newspapers such as the New York Times, the Christian Science Monitor, the San Francisco Chronicle, the Atlanta Journal, and the Atlanta Constitution, where he promoted the unification of China, opposed the nuclear arms race, and advocated for the Three Gorges Dam.

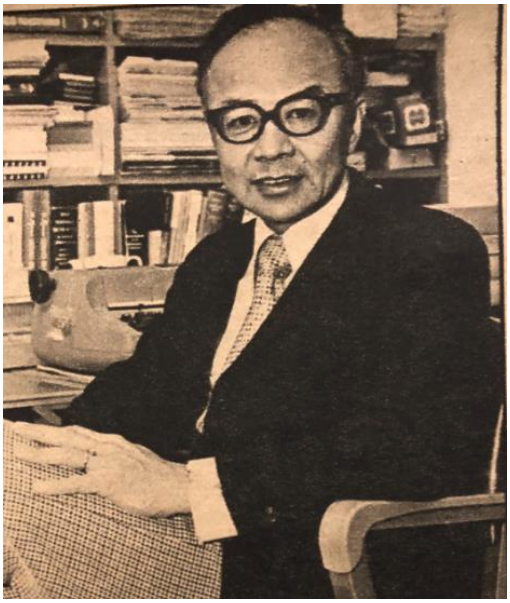

Photo 38: Peter Ping-kwan Fong in 1977 (Courtesy the Atlanta Journal-Constitution)

Gregory C. Chow (邹至庄 1929- , PhD'55)

As Chen-ning Yang and Tsung-dao Lee influenced the Chinese government on natural sciences, Chow played the similar role in macroeconomics. He was advisor to two Chinese premiers, Zhao Ziyang (赵紫阳) and Zhu Rongji (朱镕基) and helped Chinese economic reforms.

In 1985, Chow initiated a program called the Chow Test, to support the Chinese graduate students studying economics. Approved by the Chinese government, he was in charge of examinations. Most of the students received financial support from the hosting schools, some from the Chinese government, and some from the Ford Foundation. From 1985 to 1987, 165 Chinese students enrolled in universities in the U.S. and Canada to earn a PhD in economics. Many years later some of them became important figures in government and academia: Min Zhu (朱民 PhD from Johns Hopkins University) was Deputy Managing Director of the IMF; Xinghai Fang (方星海 PhD from Stanford University) was Vice-Chairman of the China Securities Regulatory Commission; and Lin Zhou (周林 PhD from Princeton University) was the Dean of the Chinese University of Hong Kong (CUHK) Business School. Xiaokai Yang (杨小), a PhD who was at Princeton University from 1948-2004, was considered one of the world's preeminent theorists

in economic analysis, and was nominated for the Nobel Prize in Economics in 2002 and 2003 by Nobel Economic Sciences Laureate James M. Buchanan.

Photo 39: Gregory C. Chow

In addition to scholarship programs to bring Chinese students seeking a PhD in economics to the U.S., Chow organized three macroeconomics workshops in China from 1985-87, also known as Ford Classes because they were partially supported by the Ford Foundation. The workshops attracted hundreds of people from schools, government, and research and planning organizations.

Tsuen-hsuin Tsien (钱存训, 1909-2015, PhD'57)

Tsien came to the U.S. in 1947. His mission was to arrange for the return of about 300,000 rare books by ship from China to the U.S. Library of Congress in 1941 for safe keeping during the Japanese occupation. But the outbreak of the Chinese Civil War made his duty impossible. So at the invitation of Dr. Herrlee G. Creel (顾立雅, 1905-1994), a well-known sinologist, Tsien took an offer to be the curator of the East Asian Library at UChicago while still studying towards his master's and PhD in library science.

During his tenure at the East Asian Library from 1949 to 1979, Tsien kept in contact with his counterparts in China. Even in late 1950s, when the Sino-US relations were at their worst, he managed to establish a publication exchange program between the Chicago's Library and a Beijing Library without interruption, even during the Chinese Cultural Revolution when everything else in Beijing Library was suspended.

In 1973, when the first official Chinese delegation of librarians visited Chicago since 1949, Tsien was the one who arranged their 5-day visit and showed them the blueprint of the Joseph Regenstein Library as a reference for the new Beijing Library building. In September 1979, after more than 30 years in the U.S., he returned to China with an American delegation of librarians, and visited many libraries, universities and research institutions, especially the Beijing Library where he had worked for 10 years. In July 1984, he attended a symposium held in Beijing on science and civilization in China. In 1987, he was invited to attend the inauguration of the new Beijing Library building. In December 1999, to celebrate the 90th anniversary of the National Library of China (former Beijing Library), a delegation from China went

to UChicago to present Tsien with a Distinguished Service Award in honor of his outstanding contributions to the National Library of China. In 2006, he donated more than 5,000 books and journals to Nanjing University, his alma mater, where the T.H. Tsien Library was established in 2007 in his honor. His friends and students have followed in his footsteps by also donating books to that library. His student at UChicago, **Cho-yun Hsu** (许倬云 1930- , PhD'62), was one of them.

Photo 40: Tsuen-hsuin Tsien with his wife and three daughters in 1957 after he was granted a PhD library [33]

Conclusion

Among the Second Wave of Chinese students who studied in the U.S. from 1915 to 1960, 142 were awarded Doctor of Philosophy (PhDs) at the University of Chicago (UChicago). A lot of them have made significant contributions, especially two who became Nobel Prize winners, 14 university presidents**,** 22 college deans, 39 department heads, and 21 academy fellows.

Behind the numbers, there was a major contrast between those who lived under a democratic government and enjoyed peace and freedom, and those who experienced severe hardships of persecution, humiliation, imprisonment, torture, and even death under the Chinese dictatorship.

This paper only covers 1915 to 1960. After that period, more prominent Chinese PhDs from UChicago have emerged. On that list are people like **Lien Chan** (连战 PhD'65), who was a Trustee Emeritus on the Board of Trustees of UChicago, as well as a former premier of the Republic of China; **Daniel Chee Tsui** (崔琦 PhD'67), who won the 1998 Nobel Prize in Physics; and **Justin Yifu Lin** (林毅夫 PhD'86) who served as Chief Economist and Senior Vice President at the World Bank.

More than 100 years after the first Chinese student landed on the UChicago campus, the UChicago Center is now open in Beijing, whose mission is to "enhance and strengthen the University's traditionally strong ties to Chinese thought and culture." [34]

Acknowledgements

My special thanks should first go to my father who shared with me a book, *Announcements of the University of Chicago, Register of Doctors of Philosophy 1938-1939*, the only one that was saved from the flames set by the Chinese Red Guards in the Cultural Revolution. That book intrigued me and has led me to a long journey of discovery of untold and forgotten stories of the University of Chicago-educated PhDs. His understanding, respect, inspiration, encouragement, and support over the last two years have made it possible for my research in my heavy high school years. I would also like to thank my uncle who, as a mentor, has provided me instructions and reviewed my manuscript.

I would also like to express my sincere gratitude to those at the University of Chicago. Without them, my research paper would not have been completed. Many thanks to Catherine Uecker, Christine Colburn, John J.W. Plampin and Ashley Gosselar of the Archives; Ellen Bryan of the Joseph Regenstein Library; Ian Olesak of the Alumni Association; Dawn Brennan, Jiaxun Benjamin Wu, Ed Shaughnessy and Xiaowen Qian of the East Asian Languages and Civilizations department; Mary Cook of Graduate Admissions; Gail Middleton of the Office of the Registrar; Sidney Nagel of the Physics Department; Charles Lipson, Dali L. Yang and Kathy Anderson of the Political Science Department.

The following definitely also deserve credit for this research paper: Michelle Drobik of Ohio State University Archives; Francesca Pettoello of the World Academy of Sciences; Miriam Intrator of Ohio University Archives; Jorma Selovuori and Nina Rapelo of the Academy of Finland; Renee Pappous and Bob Clark of the Rockefeller Archive Center; Jessica Venlet of the University of North Carolina-Chapel Hill Archives; Pat Cummings and Cindy Yochym of the State University of New York at Fredonia Archives; Anastasia Baranova of the Alumni Relations and Development of University of Auckland; Geraldo Gonzalez of the United Nations Dag Hammarskjöld Library; Sara Ludovissy of Wellesley College Archives; the Institute of International Education; Suzanne Ritchie of the American Association for the Advancement of Science; Loma Karklins, Penny Neder-Muro of Cal Tech Archives; April C. Armstrong of Princeton University Archives; Erica Mosner of the Institute for Advanced Study Archives; Anne Causey of University of Virginia Archives; Tyler A. Lehre, Ashley Thronson and Gil Taylorand and Cat Phan of University of Wisconsin-Madison Archives; The Reference Staff of Harvard University Archives; Birgit Zoglmeier of the Zeitschrift für Kristallographie Journal Editor; Sonya Rooney of Washington University Archives; Joan R. Duffy ofYale Divinity Library; Valerie Collins of the University of Minnesota Archives; David D'Onofrio and Adam Minakowski of the U.S. Naval Academy Archives; Evan Fay Earle of Cornell University Archives; Sean Stanley of Pomona College Archives; Liz Colvard of U.S. Geological Survey; Jianye He of UC Berkeley East Asian Library; Kathy Shoemaker and John Bence of Emory University Archives; Olivia Garrison and Amita Dayal of Iowa State University Archives; Angela Dombroski of Physics Today; Norman Christ of Columbia University; Morgen MacIntosh Hodgetts of DePaul University Archives; Jeanine Wine of Manchester University Archives; Denise D. Monbarren and Deena Williams of the College of Wooster Archives; Ryan Pettigrew of Richard Nixon Presidential Library and Museum; Lauren White and Elizabeth Druga of Gerald R. Ford Presidential Library; Laura Schwartz, Heather Smedberg and Chen Xi of UC San Diego Archives; Lindsay Strogatz of Harvard-Yenching Institute; Amanda Nelson of Wesleyan University Archives; Tang Chao and Hai Tang of former UChicago CUSPEANs.

References

[1] Data from the Institute of International Education
[2] *A Guide to Doctoral Dissertations by Chinese Students in America 1905-1960*, by Tung-li Yuan
[3] *The University of Chicago Magazine, 1914, Volume 7*
[4] *Announcements, the University of Chicago Register of Doctors of Philosophy, 1938-1939*
[5] *Who's Who of American Returned Students, 1917*
[6] *Rockefeller Foundation records, fellowships, fellowship recorder cards, SG 10.2 (FA426)*, Rockefeller Archive Center
[7] *American Influence on Chinese Physics Study in the Early Twentieth Century*, by Danian Hu, Physics in Perspective, V. 7, No. 4, 2016
[8] *Nobel Laureates, from the Chicago Physics Department and the Research Institutes*
[9] *Chinese Studies in the History and Philosophy of Science and Technology*, by Danian Hu and Robert S. Cohen, p.439
[10] *The Isolation of an Ion, a Precision Measurement of Its Charge, and the Correction of Stokes Law*. by Robert Andrews Millikan, Science, September 30, 1910
[11] *On the Elementary Electric charge and the Avagadro Constant*, by R. A. Millikan, Physical Review, 1913
[12] Science Paper of Arthur Holly Compton, X-ray and Other Studies, by Robert S. Shankland, 1973
[13] 杨振宁传, 杨建邺, 2011
[14] *Cosmic Rays as Electrical Particles*, by A.H. Compton, Physical Review, December 15, 1936
[15] Letters from J.A. Simpson on August 3, 1994
[16] *Political Movements, Change and Stability: The Chinese Communist Party in Power*, The China Quarterly, No. 159, Special Issue: The People's Republic of China after 50 Years (Sep., 1999), pp. 595-605, by Michael Schoenhals
[17] *Yenching Needs Our Aid*, Yenching News, Vol, XXVII, November 1948, No, 1, United Board for Christian Higher Education in Asia Archivers, Yale Divinity School Library
[18] 燕京大学, 陈远, 2013
[19] http://www.shehui.pku.edu.cn/second/index.aspx?nodeid=20&page=ContentPage&contentid=363
[20] *List We Forget*, by Li Yihua, 2009
[21] *Oracle Bones, A Journey Between China's Past and Present*, by Peter Hessler, HarperCollins Publishers, 2006, pp 434
[22] *A Single Tear*, by Wu Ningkun, the Atlantic Monthly Press, 1993
[23] https://www.legacy.com/obituaries/washingtonpost/obituary.aspx?n=ningkun-wu&pid=193670010
[24] *Two Lucky People:* Memoirs, by Milton Friedman and Rose D. Friedman, 1998, pp525-526
[25] *The Influence of Interregional and International Commodity and Factor Movement on the Distribution of Income*, Hua-chang Chow, June 3, 1952
[26] https://www.britannica.com/biography/Mu-Dan
[27] https://5455.org/history/127173.html
[28] 李政道传, 季承, 2010
[29] Email from Norman Chris on May 16, 2020
[30] *A Decade of CUSPEA, 2nd Edition*, by Wu Tang & Liu Huaizhu, Peking University Press, May 2002
[31] Email from Sidney Nagel on May 20, 2020
[32] Email from Tang Chao on May 19, 2020
[33] *Tsien Tsuen-hsuin Passes Away at 105*, by Cho-yun Hsu，Newsletter for Research in Chinese Studies, August 2015, 34:3
[34] https://www.uchicago.edu/research/center/center_in_beijing/