Chinese Space Achievements and Philosophy: Known and Inferred

By Terry Tang

KNOWN: Chinese Space Achievements[1]

In 2012, China considers Space as a significant symbol of the nation's strength. In 2006, China celebrated the 50th Anniversary of its Aerospace Industry and published goals to combine and streamline military and civilian research organizations to promote its scientific development. China's stated purposes for its goals were (1) to unveil the development of China's space program to the world and (2) to enhance international Space cooperation in order to develop its economy and realize modernization. The government stated that the exploration and utilization of outer Space should be for peaceful purposes. Expenditures on Space programs have increased from US$1.5 billion in 2007 to US$2.24 billion in 2010. Indications are that China is now accelerating investment in a satellite-based navigation system, human spaceflight, and Space Based Solar Power.

China's Space programs have developed through four stages beginning in 1956: (1) Pioneering (1956-1968), (2) Development (1968-1978), (3) Revitalization (1978-1992), and (4) Cooperation (1992-present). China's first satellite was launched in 1970 (Dong Fang Hong). In 2003, Shenzhou 5 achieved Earth orbit with Chinese astronaut Yang Liwei. China's first Lunar probe was successful in 2007 and its first Space Laboratory, Tiangong-1, successfully launched in 2011.

By 2012, China had a comprehensive system for Space development demonstrated by the launching of a spacecraft with three Chinese astronauts, one woman and two men, who returned safely to Earth after spending 13 days on a mission that made the *People's Republic of China the third nation ever to dock a manned spacecraft to another craft in orbit*. The *Shenzhou 9 space capsule landing was broadcast live on CCTV television June 29, 2012*. The mission, which included successful displays of manual and automatic docking, represented an important leap forward for China's space program's aim to construct a space station in orbit by the year 2020.

China's Traditional Philosophy [2] - Forecast for the Space Age [4]

The written language, the foundation for all later Chinese culture, was well developed by 1500 BC, when its literary history flourished. Famous Chinese orators were rare, but famous calligraphers were legion, reflecting a greater interest in the written word than the spoken. Because each Chinese ideograph carries from its cultural past its own distinct connotations, the acceptance of Chinese writing by others meant to an extent

their acceptance of Chinese cultural and moral values as well. Conversely, the Chinese script was a major barrier to the free entry of foreign ideas and values into Chinese culture, because such ideas and values could enter into Chinese consciousness only through the filter of the ideographs, with consequences of frequent failures and distortions of communication.

Of interest to us here are the social and political consequences. The high prestige of the written language and the difficulty of mastering it gave the scholar in China a status unequal in other societies existing during those times. The Chinese ruling elite were not nobles, priests, generals, or industrial or commercial magnates, but were scholar-officials, men educated from childhood in the Confucian classics who became members of officialdom through successful civil service examinations, which were written and humanistic in the context of maintaining a social harmony hierarchy with a Mandate from Heaven political bureaucracy.

Confucius was essentially interested in the problems of this world rather than the origins of life or the prospects of after-life. He was interested in the affairs of men that could bring tranquility with an ethics of moral education in proper social behaviors and ceremonies for stabilizing man's relationship with man. Such ceremonies were for respecting a social hierarchy among men on Earth and to countless spiritual entities in the Heavens, including those of ancestors and of mythology. This defines Confucianism as a philosophy and not a religion whose rituals are for expressing a relationship between a human and his or her God(s).

By contrast, Taoism emphasized man's relationship with nature, a mystical philosophy. A third major philosophy, Legalism, argued that man was evil by nature and therefore, should be controlled by a totalitarian government with a system of rewards and punishments. The fourth major philosophy, Buddhism, is concerned about achieving enlightenment. It tacitly accepts the Theory of Evolution, because no major principles of Buddhism contradict it. Questions about the eternity or infinity of the Universe at large are counted among the 14 unanswerable questions which the Buddha maintained were counterproductive areas of speculation. In comparison with other civilizations, China's history is notable for not identifying any prophet, priest, clergy, or spiritual leader whose activities led to significant nationally historic consequences.

China's Acceptance of Western Philosophy [3] - Forecast for the Space Age [4]
By the 1900s, traditional Chinese values idealized concepts like harmony, rule by precept and moral persuasion, and the central social idea of devotion and loyalty within the family circle. The Western emphasis on institutions, the rule of law, and individual rights were feared as socially divisive and politically subversive, but China's illiteracy,

poverty, economic backwardness and the failures and humiliation of China's national and international position motivated Chinese intellectuals to question China's cultural traditions.

The New Cultural Movement urged its followers to question all the old values and study every new idea available to them as the prerequisites to political change. *Their most immediate and significant achievement was replacing the difficult classical language with the vernacular as the common written medium in their new journals and schools.*

The *New Culture Movement* (simplified Chinese: 新文化运动; traditional Chinese: 新文化運動; pinyin: *Xīn Wénhuà Yùndòng*) of the mid 1910s and 1920s sprang from the disillusionment with traditional Chinese culture following the failure of the Chinese Republic, founded in 1912, to address China's problems. It began as a revolt against Confucianism and called for the creation of a new Chinese culture based on global and western standards, especially democracy and science.

Younger followers took up their call for (1) vernacular literature, (2) an end to the patriarchal family in favor of individual freedom and woman's liberation, (3) the view that China is a nation among nations and not a uniquely Confucian culture, (4) re-examination of Confucian texts and ancient classics using modern textual and critical methods known as the Doubting Antiquity School, (5) Democratic and egalitarian values, and (6) *an orientation to the future rather than the past.*

(The Romanization [using Latin alphabet for writing Chinese] method is pinyin in the PRC. Historically the British used the Wade method (1867), the French and others including Yale University (1953) had their own Romanization of the Chinese language.)

Soon the full scope of Western intellectual tradition and political thought from the Greek Classics to the Renaissance and on to contemporary thought was translated and understood within a century. Science and democracy became godlike to the movement's leaders, who influenced China to declare war on Germany in 1917, expecting that with peace would come a new era of national self-determination and an end to China's unequal treaties with other governments.

The 1919 Versailles Peace Treaty provoked a massive Chinese nationalist protest with two significant consequences: the West and Japan could not be trusted and China's intellectual leaders began to look elsewhere for a solution to China's problems: Russia.

Marxist theory rose triumphant out of the Russian revolution and many Chinese nationalists compared China's situation to that of Tsarist Russia and looked to Marxism

as a possible guide. Scientific truth proclaimed in Marxism was appealing because it condemned all old traditions, those of the East as well as those of the West.

Augmenting Marxism's claim of scientific truth was Lenin's philosophical questions concerning the relation between understanding the world and changing it. Lenin argued that there can be no impartial social science as long as class struggles continue. His centrality of class analysis by sociology, a science, and documented by history created the conditions for forming a disciplined revolutionary political party in China.

In 1921, a few Chinese intellectuals founded the Chinese Communist Party (CCP or CP), organizing themselves as a revolutionary group with a better chance of ousting warlords and uniting China.

Aristotle's *Nichomachean Ethics* offered guidance in its Chapter 1, *"Every art and every scientific inquiry, and similarly every action and purpose, may be said to aim at some good.*" Aristotle proceeds to separating different goals into a hierarchy and claims that Politics is the most comprehensive of the Practical Sciences, because its aim is the creation of the best possible conditions under which citizens can enjoy life. "Because politics can best serve the community by achieving the greatest good for all citizens, individual needs must naturally be subordinate to the common good."

Mao Tse-Tung was an inspiring orator and calligrapher who became a great leader. In 1949, The Chinese People's Political Consultative Conference accepted what he called the "people's democratic dictatorship" to impose a reversal of class relationships that had existed under warlords and later, the Nationalists. Mao looked to the Soviet Union as a model for developing China's philosophical foundation and political and military institutions. At the top of the ruling hierarchy is the Central Committee, which is elected by each national congress. The Central Committee, in turn, chooses the powerful Political Bureau.

The National People's Congress (simplified Chinese: 全国人民代表大会; traditional Chinese: 全國人民代表大會; pinyin: *Quánguó Rénmín Dàibiǎo Dàhuì*, abbreviated NPC, is currently the highest state body and with 2,987 members is the largest parliament in the world. In theory, the NPC is vested with great lawmaking powers. However, for most of its existence it has acted as a nearly powerless legislature, ratifying decisions that have already been made by the CP, the executive branch of government.

China's first Five Year Plan was announced at the National People's Congress in 1955. The heavy industrial complex the Japanese had left in Manchuria was the foundation for carrying out the plan, which succeeded. Two more plans of a five year span were

launched. To accelerate industrial, economic, and agrarian growth, a new body of technologists and scientists were educated with its Communist Party (CP) relying on the "wisdom of the masses" least it should succumb to bureaucratization.

Mao attended the 40th Anniversary of the Russian Revolution (1957) in Moscow and witnessed Soviet Space accomplishments. Although China's Space programs began in 1956, Mao knew China was far behind and understood the importance of catching up if he wanted to maintain his *Mandate from Heaven.*

As a Chinese scholar, intellectual and calligrapher, Mao knew the actual classical calligraphy (which my computer here in the USA is not readily able to print, but the computer I had access to in Hong Kong in April 2012 could) ideogram for *Qi* or the assumed equivalent in meaning, pinyin, *Chee*, meaning something like, "*Plugging into Cosmic Power*." In this sense, denotation by calligraphy, by ideogram, or by pinyin each had its own connotations.

All languages are reflections of the emotional, spiritual, and intellectual character of the person and peoples who use them. The older, more structured, and more exclusive a society and its language, the more words it has that have deep cultural implications. China is a quintessential example of a country in which "cultural code words" have a vital role in the lives of its people.

An ideogram is like, "a picture with 1,000 words." In this sense, denotation by ideogram, by calligraphy and by "Romanization," each has its own connotations. The ideogram for *Qi*, for example, in pinyin is *Chee* and in British Wade is "Chi."

The British word, "Mandarin," derived from a Portuguese word, may be in the dustbin of history, because it is being replaced by *Putonghua* or referred to as "the common people's language" in China. Millions of persons in China continue to use other Chinese spoken languages, such as Cantonese, Shanghaiese, Fukienese, Hokkien, Hakka, and Chin Chow. All of these have the same written ideograms or calligraphy "characters," but have different pinyin Romanizations and pronunciations.

INFERRED: Forecasted for the Space Age [4]

The PRC uses this history and concurrent philosophies as antecedents for guiding its CP's dictatorship of subordinate social administrative agencies, including its agency for Space exploration. A National People's Congress is to convene near the end of 2012 or the beginning of 2013. After its conclusion, new policies from the CP will guide the direction of PRC's Space exploration beyond that which has already been stated, to construct a space station in orbit by the year 2020.

The CP knows hypotheses such as those involving Social/Cultural/Human Evolution. It knows the Whorf hypothesis, which states the language of a cultural group determines its thoughts and perceptions. In other words, differences in the language applied to events lead to different ways of thinking about those events. Others argue that it may be the different conceptualizations of the event that lead to the differences in labels.

A CP commission concluded in 1956 that the Russian Cyrillic alphabet would not be as useful as the Latin alphabet, because the Latin was more widely employed globally. The pinyin system of Romanization was then developed.

Regardless of the arguments, however, the CP concluded that knowing English is important for the PRC. In 1982, it made English the main foreign language in education. Current estimates for the number of English learners in China range from 300 to 500 million. Chinglish, a hybrid of Chinese and English, is becoming pervasive in present-day China on public notices in parks and at tourist sites, on shop names and in their slogans, in product advertisements, and increasingly in literature.

Perhaps China's educational mission statement for its Space Exploration philosophy is, *"Learn from others who may and can help.*"

The lessons of history from 1800 to the present cause some to wonder if Evolution could offer guidance towards understanding past philosophical, superstitious, religious, and political errors that enabled humiliating domination by European, American, and Japanese colonialism only currently rectified as demonstrated by China's hosting the 2008 Summer Olympics**.** *Perhaps the PRC's philosophy and policies for its Space Mission Endeavors are the similar to those for hosting the 2008 Olympics?*

Perhaps its Space Mission leaders are striving to create a healthy space platform involving all nations cooperating on innovations for many goals so that many will benefit, that is, by collaborating on political and economic objectives and inviting the citizens of our one world who want to explore Space together to work together using a common language.

PRC has mandated that all public signs be in both Chinese calligraphy and English by specific target dates for specific locations, namely 2013 for the Guangzhou and other southern areas, although perhaps all of Beijing's public major highway signs are already bilingual because of its hosting of the 2008 Summer Olympics.

PRC also mandated that all students in public schools study English for a minimum of two years and has encouraged students to travel abroad for learning the STEM curriculum: Science, Technology, Engineering, and Mathematics. Biology is a subcategory of Science and the biological sciences use Darwinian Evolution Theory for guiding PRC studies.

Linguists have studied the evolution of language and can see how language has changed over time. Using English as an example shows English evolving over time from Old English (also known as Anglo-Saxon – Beowulf is a good example of this) to Middle English to Modern English. Reading Geoffrey Chaucer's *Canterbury Tales* written in Middle English illustrates how over the last two hundred years English has split into three major branches: British English, American English, and Australian English.

Over time these three branches may evolve further and further apart from each other. Perhaps Chinglish will become the fourth branch of English, as more and more persons speak both English and Chinese. But with the expansion of the Internet and international communication, such branches of English may form a synthesis with the languages of many nations for the creation of an *International English*, the concept of a global means of communication in numerous dialects also referred to as *Global English*, or *Globish* (en.wikipedia.org/wiki/International_English).

The *Oxford English Dictionary* defines the noun and adjective Chinglish, *n. and a. colloq.* (freq. *depreciative*). Brit. /ˈtʃɪŋglɪʃ/, U.S. /ˈtʃɪŋ(g)lɪʃ/. Forms: 19– Chinglish, 19– Chenglish [rare]. [Blend of Chinese *n*. and English *n*. A**.** *n*. A mixture of Chinese and English; esp. a variety of English used by speakers of Chinese or in a bilingual Chinese and English context, typically incorporating some Chinese vocabulary or constructions, or English terms specific to a Chinese context. Also: the vocabulary of, or an individual word from, such a variety. Cf. Singlish n.2 B *adj*. Of or relating to Chinglish; expressed in Chinglish. This dictionary cites the earliest recorded usage of *Chinglish* (noted as a jocular term) in 1957 and of *Chinese English* in 1857.

Having a global, universal, transparent language is important for world peace and understanding as well as for Space exploration. Having such a language is forecasted as a necessary condition for The Space Age of world peace, trust, prosperity, and infinite human possibilities.

Notes

[1] The information in this section of the article has its primary source in the recently published Aerospace Technology Workshop book by Langdon Morris and Kenneth J.

Cox, Ph.D. (eds.), *International Cooperation for the Development of Space* (ATWG, 2012), particularly Chapter 10, Le Wang, "Current Status and Future Developments in China's Space Program," 209-42.

[2] The information in this section has as its primary source *Dictionary of World History* (London: Brockhampton Press, 1997), 123-28; Horizon Book Division, *The Horizon History of China* (New York: American Heritage Publishing, 1969), 10-42; Brian Shaw and John Must, *China the Great Unknown* (Richmond Hill: ON: Mediavision, 1971), 5-83.

[3] The information in this section has as its primary source the references listed above and Henry C. Fenn (ed.), *Chinese Characters Easily Confused* (New Haven, CT: Yale University Press, 1953); David Lane, *Leninism: A Sociological Interpretation* (Cambridge: Cambridge University Press, 1981); Boye DeMente, *The Chinese Have a Word for It*, (New York: McGraw-Hill, 1996); Terry Tang, Research on thinking in Hong Kong. *Chung Chi Bulletin* (in English & Chinese) 54 (1973): 21 and 29; Terry Tang, Preface to the Chinese edition of Woodworth and Schlosberg's Experimental Psychology. *International Journal of Psychology* 9 (1974): 321-26; Terry Tang, A preface to experimental psychology in China. *Psychologia* 18 (1975): 37-41; Terry Tang, *Autonomic & Cognitive Indices of Semantic Conditioning & Generalization* (PhD Dissertation, University of Southern California, 1973).

[4] The information in this section has its primary source the references listed above and personal notes 6/7-8/3/1973 I took of faculty discussions at Beijing, Guangzhou, Shanghai Normal and other universities in China and personal notes 4/7-29/2012 of discussions I had in the above locations and in Hong Kong.

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About the Author: Terry Tang, PhD, is the director of Research for Kepler Space Institute. He is a Life Member, American Psychological Association, licensed psychologist with National Provider Identifier and a consultant in clinical and medical, research and forensic psychology. He has 35+ years working in three California State Hospitals, two Veterans Administration Hospitals, and three private hospitals. Faculty memberships were in Human Factors, University of Southern California Study Centers in California, Asia and Marshall Islands and in Experimental & General Psychology, Chinese University of Hong Kong, Ohlone College, and Pepperdine University. He was Researcher III, California Department of Corrections; Researcher, Public Systems

Research Institute, USC, and Medical Advisor, Office of Hearings & Appeals, Social Security Administration.

Editor's Notes: Terry Tang and I have enjoyed professional and personal collegiality since 1978 when we were both on the University of Southern California Faculty and teaching in the Pacific. From the Mountain Provinces of the Philippines to the International Space Development Conference 2010 in Chicago, we have shared experiences and ideas. Terry's Chinese heritage and education, continuing through his visit to the Mainland in 2012, and his position as Director of Research for Kepler Space Institute, made him perfect to author this article in our Journal of Space Philosophy. *Bob Krone, PhD.*

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