

A Way of Learning: Bridging Ancient Chinese
Philosophy of Education with Contemporary
Learning Assessment and Learning Organizations
一種學習方法：銜接古代中國的教育哲學
和當代的學習評估與學習組織

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Abstract

What are the processes by which education and learning occur? Why do some individuals and groups appear to benefit more from education and why do they appear to be more proficient learners than others? For nearly 2000 years the imperial dynastic systems of China, in particular, and East Asia, in general, were supported by an educated bureaucracy. For the elite, education began in the home. The least well-off formed village schools in an attempt to have a village member pass the civil service examination, ensuring an appointment and access to resources. From the family and village school to the state bureaucracy, the success of these groups was measured by their ability to produce valued outcomes. The educated became members of the bureaucracy, controlling the supply of natural and human resources and state power. These learning groups were for the most part self-monitored and goal orientated. The stakes were high. When these learning groups failed, people lost their livelihood, sometimes their lives, and in extreme cases the dynasty collapsed. More often than not, these learning groups were successful, and we should be able to learn from them. In this paper I argue that ancient Chinese approaches to activate and achieve student learning can inform contemporary concerns and approaches toward student learning outcomes. I argue that imperial China had its own form of "liberal education," and that contemporary American liberal education could enhance its global, multicultural, and world citizen concepts, ideals, values and beliefs by analyzing, integrating, and valuing other forms of learning and education.

摘要

教育和學習發生的過程是什麼？為什麼有些個人和團體似乎比較能從教育中獲益，為什麼他們的學習能力似乎比其他人更好？將近兩千年，籠統地說是東亞，具體地說是中國的王朝體系，一直是靠士大夫支撐。對菁英而言，教育是從家裡開始的。窮人在村子裡開學堂，希望有村民能通過科舉考試，務求得到一官半職和取得資源的管道。從家庭和村裡的學堂，到國家的官僚體系，衡量士大夫成功與否的標準，在於他們有沒有能力締造寶貴的成果。士大夫成員官僚體系的成員，主宰自然和人為資源及國家力量的供應。這些士大夫大多會自我監控，並且採取目標導向的作法。士大夫的身分非同小可。一旦他們失敗，有人就失去了生計，有時失去性命，在極端的情況下，連朝代都會滅亡。這些士大夫多半是成功的，也有值得我們學習的地方。筆者主張，當代有關學生學習成果的問題和處理方法，不妨參考古代中國激勵和成就學生求學的方式。筆者認為帝制中國擁有自己的「自由派教育」，同時當代美國的自由派教育可以藉由分析、整合和重視其他的學習和教育形式，來強化其全球性、多元文化及世界公民的概念、理想、價值觀和信念。

People seeking a fast means to make a lot of money might claim that the study of the classics, in particular, and the study of the humanities or the liberal arts, in general, is a waste of time. Although it may not be readily apparent, nevertheless, studies have shown that graduates with a liberal arts background have long-term life satisfaction and employment satisfaction. Liberal arts and social science majors earn more money over the long-term, have greater life satisfaction, and they are employed at pay-scale rates similar to graduates from the other, so-called, professional disciplines.¹ Three out of four business and nonprofit leaders say they would recommend a 21st Century liberal arts education for future employees.² Salaries are on the rise for liberal arts and social science majors over the past few years.³ So the study of the classics in particular and the Humanities in general are worthy endeavors for career success, personal cultivation, growth, and life satisfaction.

Every major ancient Chinese philosopher had something to say about the military. The binary expression *wenwu* 文武, that is being literary or refined and being martial, denotes the correlative tension in civil life that requires martial protection. In both ancient and modern times a literate culture, *wenhua* 文化, cannot survive without military protection. To fully grasp the importance of the classics, we must recognize the important role played by the military. A literate culture or a civilization cannot develop its group learning or investigate its mental models or assumptions about the world and life without acknowledging the importance of military protection and security. Every literate culture has also

1 Debra Humphreys and Patrick Kelly, *How Liberal Arts and Sciences Majors Fare in Employment: A Report on Earnings and Long-Term Career Paths* (Washington, D.C.: Association of American Colleges and Universities, 2014).

2 Hart Research Associates, "It Takes More Than a Major: Employer Priorities for College Learning and Student Success," April 2013, AAC&U.

3 NACE, "January 2013 Salary Survey," National Association of Colleges and Employers, available online at <http://www.nacweb.org>, accessed on Aug. 22, 2014.

developed a just war theory.⁴ To engage in a just war entails both military training for the troops and moral training for the commanders. Hence, we must not only consider the role of the military in defending literate culture, but also we need to recognize the importance of moral education provided by the classics and the branch of philosophy called ethics and the sub-branch of professional ethics. If the commanders are not educated in ethics, then they will not be able to deploy moral troops in a just war. A literate culture cannot study, let alone produce, classics without the peace of a golden age supported by military protection. The academic and economic growth of the Republic of China on Taiwan, Japan and Singapore stand as examples of this correlative tension between literate culture and military protection. So the role of the military cannot be over emphasized in understanding the importance of the classics. At the same time both the ancient and modern voices advocating Pacifism should be heard in balancing the tensions between literate culture and the military.

What are the processes by which education and learning occur? Why do some individuals and groups appear to benefit more from education and why do they appear to be more proficient learners than others? For nearly 2000 years the imperial dynastic systems of the Yellow River and Central Plains of China, in particular, and East Asia, in general, were supported by bureaucrats who were educated in the Confucian classics.⁵ For the elite, education began in the home. The least well-off formed village schools in an attempt to have a village-clan member pass the civil service examination, ensuring an appointment to a civil service office, and access to natural and human resources. From the family and village school to the state bureaucracy, the success of these groups was measured by their ability to produce valued outcomes. The educated became members of the bureaucracy, controlling the supply of natural and human resources and state

4 James D. Sellmann, "On Mobilizing the Military: Arguments for a Just War Theory from the *Lü-shih ch'un-ch'iu*," *Asian Culture Quarterly*, 11, 4 (Winter, 1983), pp. 26-43.

5 Chun-chieh Huang, *Humanism in East Asian Confucian Contexts* (New Brunswick: Transaction Publishers, 2010).

power. These "learning groups" were for the most part self-monitored and goal oriented. The stakes were high. When these learning groups failed, people lost their livelihoods, sometimes their lives, and in extreme cases the dynasty collapsed. More often than not, these learning groups were successful, and we should be able to learn from them. In this paper I argue that ancient Chinese approaches to activate and achieve student learning can inform contemporary concerns and approaches toward student learning outcomes. I argue that imperial China had its own form of "liberal education," and that contemporary American liberal education could enhance its global, multicultural, and world citizen concepts, ideals, values and beliefs by analyzing, integrating, and appreciating other forms of learning and education.

Philosophers have been branded as being disconnected from daily affairs, having their heads in the clouds and not taking note of what is under foot; that is, practical worldly affairs. Thales (624-546 BCE) falling in a ditch is the classic example. The masters and sages have always emphasized the importance of putting knowledge into practice and only pursuing ultimate goals, which have been rigorously examined, evaluated and deemed to be of "real" value. Thales cornering the market on olive oil presses is the classical counter example showing the practical abilities of a sage. The caricature of the disconnected, impractical philosopher or academician is not entirely unwarranted. At times throughout history the academy and its disciplines may become ossified, thinking about thinking without concern for outcomes, practical, theoretical, or otherwise; that is, failing to think about outcomes beyond preserving the status quo or the academicians' personal positions in the status quo. Of course there must be a balance between pure theory and practical application. Philosophers, scientists, academicians and others must be able to think about thinking, think about pure theory, or enjoy the flight of the imagination without a concern for practical or creative results. Thinking, theory, and the imagination have their contexts and their applications, too. Living the good life, living the scientific contemplative and theoretical life, living intellectually and morally require understanding in

action skillfully applied, criticized, and analyzed knowledge that engages understanding and ushers people toward enlightenment.

When Socrates declared that living an unexamined life was not worthy of a human being and was willing to die for his freedom to engage in rational discourse, and when Mengzi (Mencius 孟子, ca. 372-289 BCE) declared that despite his love for eating bear paws and living life, he would be willing to die for being appropriate or rightness (*yi* 義) because it has greater value, we see that philosophers from both the East and the West do have expectations about human values that place greater emphasis on living properly than on merely surviving. They may differ slightly on whether the Socratic rational life or the Confucian moral life take precedence over the other, but they do generally agree that properly evaluating the meaning of life and its outcome are of the utmost importance for a human being. They agree that dying for the cause is an acceptable outcome. But how do they know that their choice is the correct one? Is being willing to die for one's principles really the best outcome or the best approach to solving a hard problem? Are these philosophers, or are we, teaching people to fight to the death for their principles? Are we teaching people to fight for peace *at any price*? Philosophy and philosophers have always had the need to assess their teachings, theories, and the expected outcomes. Philosophers have long been concerned with the question: "how do we know what we know?" Present concerns to assess the outcomes of education and student learning are merely extensions of the epistemological turn in philosophy and the spirit of scientific discovery. We want to know and we want to know how we know, that is we want to know what evidence we have to know, that students are, in fact, learning.

What is the purpose and goal of education? At least in part the educational process is concerned with assisting people to find a reasonable, creative and meaningful way to live to find a meaning for, if not *the* meaning of, living a human life. Naturally there are many practical skills to be mastered, and people

do need meaningful employment. Children have to learn to walk, talk, tie a knot, calculate, read and write. Highly trained professionals have to learn to master detailed technical, mechanical, and intellectual skills. The practical skills are instrumental values that guide people toward intrinsic values. The skills and jobs are necessary for living well, but they are not sufficient. People require the ultimate values, concerns and meaning to live a complete life. If we follow Aristotle's lead by seeking what is unique about being human to find an ultimate, intrinsic value and purpose for living a human life, then we might begin with "seeking personal pleasure" as an answer. Pursuing the sexual orgasm is a popular proposal for the meaning of life, but quickly people discover that there is nothing uniquely human about copulation and orgasms. Aside from pleasure, the sex act is a means to establish a family. We know that families are not unique to humans, nor are they the end all of human meaning. The family is a means to establishing social and political order. Some believe the state to be the ultimate end of living a human life. The state, however, is a means to providing education and learning experiences so people can study, and maybe even discover, their purpose, significance, value and meaning for living whether that ultimate end be happiness or self-esteem, rationality, contemplation, awakening or enlightenment, harmony with nature, salvation, and so on. Some academicians propose that learning is the ultimate end and meaning of living a human life because it is so intimately tied to the experience of self-esteem, happiness, rationality, awakening and so on. Others argue that education and learning are means to the experience of an intrinsic, ultimate value. Whether learning has intrinsic value or only instrumental value is an interesting question that cannot be resolved here. It may be that many learning experiences have both instrumental and intrinsic aspects. For example, I learn to communicate more effectively, which has instrumental value, but that learning experience is fused with my self-esteem and becomes a value in itself. The importance of liberal education is that it frees people from mere mechanical and instrumental values to pursue more profound intrinsic and

ultimate values, purposes and meanings. Duke Maskell and Ian Robinson debate many of these issues, siding with the intrinsic value of liberal education.⁶

In Europe, the ideals of a liberal education began with Socrates (ca. 470-399 BCE) and were articulated by the Stoics.⁷ It was thought that a liberal education would benefit a free man. The idea that free people needed a higher level of education fitting to their status was not unknown in ancient China. Both the Daoists and the Confucians recognized the importance of learning (*xue* 學) and teaching (*jiao* 教); they both developed philosophies of education that share certain humanistic similarities to European liberal education. The ancient Daoists (Daojia 道家) and Confucians (Rujia 儒家) lived in a stratified society with slaves (奴) and free persons, and also like the Stoic notion of a basic human dignity shared by all, slave and master alike, the Daoists and Confucians developed an idea that any person could become a sage. Becoming a sage was precisely a matter of learning, an affair of self-cultivation, developing skills and mastery. In the middle ages, in the Tang (唐朝, 618-907) and Song (宋朝, 960-1279) dynasties, liberal education in China served much the same purpose as it did in mediaeval Europe in that it trained mostly aristocratic sons to administer government and religious institutions. For the most part, the Daoists trained their monastery and temple administrators, and the famous Daoist classic, the *Daodejing* 道德經, was used during the Tang dynasty 唐朝 as a source text for the imperial examination system.⁸ Of course the Confucian Literati, the Military (Bingjia 兵家) advisors, and the later day, Fajia 法家, bureaucrats (so-called Legalists, but better translated as Systematizers) maintained the state by training candidates to take the imperial exam. Government officials were appointed to office by one of three paths: either 1) being summoned by the emperor, usually

6 Duke Maskell and Ian Robinson, *The New Idea of a University* (Charlottesville, VA: Imprint Academic, 2002).

7 Martha C. Nussbaum, *Cultivating Humanity: A Classical Defense of Reform in Liberal Education* (Cambridge, Mass.: Harvard University Press, 1997).

8 Denis Twitchett and Frederick W. Mote (eds.), *The Cambridge History of China, Vol. 8, The Ming Dynasty, Part 2* (Cambridge: Cambridge University Press, 1998).

after being recommended by high officials, 2) inheritance, or 3) by passing the imperial examination. In all cases the candidate was expected to demonstrate an understanding of virtue and an ability to behave properly, that is to display the (Confucian) moral virtues, such as human-caring (*ren* 仁), practicing filial respect (*xiao* 孝), being appropriate (*yi* 義), being trustworthy (*xin* 信), properly performing ritual-action-and-propriety (*li* 禮), being wise (*zhi* 知) and so on. A complete understanding of liberal education in ancient China examines the Daoist counter-culture trends and the cultural mainstream represented by the Confucian, who had absorbed Fajia tendencies, and the Military (Bingjia) learning experiences.

It may seem counter intuitive to bring Daoism into a discussion concerning education with the *Daodejing* advocating that people move beyond purposive action, desire and knowledge (*wuwei* 無為, *wuyu* 無欲, *wuzhi* 無知). If we are to understand the mainstream cultural tendencies of the Confucians and the Militarists, then we must examine the alleged counter-cultural trends of Daoism. As travelers or wanderers seeking a path or way of living-well, learning-well, and teaching-well, educators *should* be open to entertaining iconoclastic ideas that attack the sacred, higher values and the importance placed on knowledge and action. What if too much knowledge or action prevents a person from fulfilling the meaning and purpose of living a human life? What if Socrates and Mengzi are excessive in being willing to die for a cause? The opening of chapter three of the Daoist text, the *Zhuangzi* 莊子, addresses this problem.

Your life has a limit but knowledge has none. If you use what is limited to pursue what has no limit, you will be in danger. If you understand this and still strive for knowledge, you will be in danger for certain! If you do good, stay away from fame. If you do evil, stay away from punishments.

Follow the middle; go by what is constant, and you can stay in one piece,
keep yourself alive, look after your parents, and live out your years.⁹

What is interesting about this passage is that it offers a lesson to be learned, and it states the expected outcomes to be acquired from the lesson, namely, to keep yourself intact, provide for your family and complete your natural life span. The passages that comprise the core chapters of the *Zhuangzi* were mostly written during the Warring States Period (*zhanguoshidai* 戰國時代, 470-221 BCE) when people regularly died young. The idea of living out your years or living a natural life span is a recurring theme in the *Zhuangzi*. Instead of seeking more, the Daoists are notorious for aspiring for less. Instead of willingly dying for a cause, they would merely seek to live out their life span. A life is precious such that living for the purpose of cultivating that life to its fullest realization is their ultimate goal. Dying for your principles exhibits great honor and courage, but it also cuts short the means by which a person advances those principles. Death precludes being able to live well and properly. *Zhuangzi* provides an alternative to Socrates' and Mengzi's respective proposals that some values are worth dying for. The Daoists appear to follow the teaching of Song Rongzi 宋榮子 (also known as Song Xing 宋鉞) an early pacifist and advocate of disarmament, who taught an antinomian philosophy based on moral autonomy or the journey of the heart (*xinzhixing* 心之行) holding the view that being insulted is not disgraceful.¹⁰ His view supports the idea of "living for a cause" rather than dying for a cause.

9 *Zhuangzi*, *The Complete Works of Chuang Tzu*, trans. by Burton Watson (New York: Columbia University Press, 1968), p. 50.

10 Gopal Sukhu, *The Shaman and the Heresiarch, A New Interpretation of the Li sao* (Albany, N.Y.: State University of New York Press, 2012), p. 123.

China's Learning Groups

Some educators and psychologists predominately focus on the individual's experience and memory in discussing learning. Focusing on the individual has its merits, and scientific discoveries and accomplishments have been made in this area. Social epistemology has also spawned important discoveries and achievements. The interconnectedness of cultures, societies, sub-groups, and individual persons exercise important roles in education, learning and the transmission of knowledge, skills, beliefs, and attitudes. In this regard I employ Peter Senge's work, *The Fifth Discipline*, as a guide for analyzing and understanding successful group learning.¹¹ In this section, I expose some of the philosophical ideas and especially the Han Chinese philosophical influences underlying some of Senge's ideas, and I use Senge's model to explain the success of ancient East Asian education and learning under the imperial dynasties.

In *The Fifth Discipline*, Senge and his colleagues generate the fifth discipline by integrating five disciplines or areas of lifelong learning and commitment that inform the learning organization. The five disciplines are: systems thinking, personal mastery, mental models, building shared vision, and team learning. Some introductory explanation is in order. Senge and his colleagues were interested in discovering and analyzing what makes some organizations, groups or businesses successful and others not. The fifth discipline quickly captivated the attention of corporate executives. It also gained appeal among civic organizations, religious groups, and educators. If an organization (culture or society) is to be successful, then the ability to adapt to change, and meet new challenges, that is, the ability to *learn*, must be fully understood. The fifth discipline offers an explanation of how groups learn and survive, or fail to learn and falter. The fifth discipline is a synergistic whole that is greater than the sum of its parts; it entails the five disciplines, but in seeking more than what is

¹¹ Peter M. Senge, *The Fifth Discipline: The Art and Practice of the Learning Organization* (New York: Currency Doubleday, 1994).

offered by each discipline, the fifth discipline becomes its own area of lifelong learning and commitment.¹²

What are the five disciplines? By systems thinking, Senge refers to a theoretical orientation that recognizes the interrelatedness, interconnectedness, complex causes and co-causal relationships that constitute the natural and social worlds. He gives the following definition:

Systems thinking is a conceptual framework, a body of knowledge and tools that have been developed over the past fifty years, to make full patterns clearer, and to help us see how to change them effectively.¹³

I argue that systems thinking has been developing for well over 2500 years! Systems thinking is an area of philosophy well-known to organic thinkers in Europe since Aristotle created the organic model, and it was revitalized by Gottfried Wilhelm Leibniz (1646-1716). Systems thinking is a mainstay of ancient Han/Chinese thinking, especially the Yinyangjia 陰陽家 that was integrated into Confucian and Daoist teachings. Senge employs examples from nature, such as the water cycle that would tantalize the Daoists, to illustrate how subtle and distant events are connected and have lasting results. Human organizations, businesses, schools, churches and so on are systems. If people want to make them lasting, successful and viable systems, then they need to know how to promote the growth of systems, and how to stop or slow their demise. The incessant flooding of the Yellow River forced the inhabitants of the central plains to develop hydraulic systems for flood control. These hydraulic systems are evidence of systems thinking in ancient China. The Lao-Zhuang Daoists advocated a natural and social system based on the *dao* 道, *de* 德 and *qi* 氣. The Confucians advanced the systems thinking idea that society and the

¹² Ibid..

¹³ Ibid., p. 7.

empire were complex organizations that behaved like extended families. The Militarists promoted the idea that the three branches of the army were a system that fits into the state bureaucracy that relied on the systems of nature. Using forces of nature, such as water and fire, were ancient military tactics that exhibit the utilization of systems thinking.

The discipline of personal mastery is not so much concerned with dominance as it is concerned with developing and maintaining "a special level of proficiency."¹⁴ Senge acknowledges the Eastern and Western spiritual and secular roots of this discipline. Developing personal mastery is a staple of all educations, and the benchmark of many religious and philosophical traditions. A person's accomplishment in personal mastery is intimately connected to the overall success of the group. "The discipline of personal mastery [.....] starts with clarifying the things that really matter to us, of living our lives in the service of our higher aspirations."¹⁵ In this sense personal mastery is based on the philosophical pursuit of the meaning, purpose and value for living a human life. Generally speaking Chinese literature and especially the classical philosophical literature contain examples of expert horse trainers, heroic strongmen, cooks, carpenters, artisans and so on who exhibit personal mastery. The *Zhuangzi* contains many stories about experts who have a special knack, exhibiting their personal mastery. Kongzi (Confucius 孔子, 551-479 BCE) noted that the consummate person is "not a vessel," which is interpreted to mean that such a person has mastery but is not limited like a craftsman (*Analects* 2.12).¹⁶ Personal mastery has always been a concern of the military in any culture. The importance of the Commander and his abilities are well-documented in the military literature. The past philosophical and educational traditions feed into the discipline of

14 Ibid..

15 Ibid., p. 8.

16 D.C. Lau (trans.), *The Analects (Lun Yü)* (Middlesex, England: Penguin Books, 1979); *Analects* 2.12.

personal mastery, and people pursuing personal mastery will continue to sponsor future trends in philosophy and education.

The discipline of mental models is complex, entailing an understanding of psychology, conscious and unconscious beliefs, drives and motivations that influence behavior, an understanding of linguistics and how thoughts and words construct our natural and social worlds, and what motivates some people to emphasize inquiry over advocacy or vice versa. As Senge defines it:

The discipline of working with mental models starts with turning the mirror inward; learning to unearth our internal pictures of the world, to bring them to the surface and hold them rigorously to scrutiny. It also includes the ability to carry on "learningful" conversations that balance inquiry and advocacy, where people expose their own thinking effectively and make that thinking open to the influence of others.¹⁷

Philosophers from all cultures have sought to expose and challenge the underlying assumptions that individuals and groups hold. Philosophers have usually encouraged conversations that promote learning, and the desire to balance inquiry and advocacy had its birth in the world's first philosophies. Balancing inquiry and advocacy can be identified in Socrates, Plato (427-347 BCE), Aristotle and the Stoics; it can also be seen in the works of Kongzi, Mengzi, Zhuangzi, and Mozi (479-381 BCE). Kongzi's statement that in the company of others he can learn from their strong points and guard against their weaknesses (*Analects* 7.22) is evidence of unearthing his world view. The *Daodejing* contains so many passages that expose biases in people's thinking that it has been adapted for contemporary management and leadership practices. For example, "to know that one does not know is best; not to know but to believe that

17 Peter M. Senge, *The Fifth Discipline: The Art and Practice of the Learning Organization*, p. 9.

one knows is a disease."¹⁸ The martial thinkers and military advisors are well-aware of the importance of challenging mental models in employing spies, not underestimating the enemy, understanding what will motivate the troops, or motivate the people suffering under a tyrant. The discipline of mental models is found in ancient and modern practices.

At first the discipline of building shared vision may appear to promote advocacy or even propaganda over inquiry. For Senge and others, one cannot build shared vision by extolling its virtues, let alone by imposing it. Shared vision is cultivated by leaders who can establish missions, goals, objectives and activities that create a context in which others can learn, develop personal mastery, foster mental models and systems thinking. The ability to maintain a "shared picture of the future we seek to create [.....] has inspired organizations for thousands of years."¹⁹ As Senge expressed it:

The practice of shared vision involves the skills of unearthing shared "pictures of the future" that foster genuine commitment and enrollment rather than compliance. In mastering this discipline, leaders learn the counter-productiveness of trying to dictate a vision, no matter how heartfelt.²⁰

Overly individualistic approaches to philosophy will not see much value in shared vision. In some sense, René Descartes' (1596-1650) *cogito ergo sum* inspired a vision of solipsism, or at least it inspired a vision of independent individuals. But why did Descartes write the *Meditations*? Did he not want others to adopt his world view, to share his vision? If the philosopher did not promote a shared vision, then certainly the disciples who followed and formed a school of

18 Philip J. Ivanhoe, *The Daodejing of Laozi* (New York and London: Seven Bridges Press, 2002) p. 74.

19 Peter M. Senge, *The Fifth Discipline: The Art and Practice of the Learning Organization*, p. 9.

20 Ibid..

thought had a shared vision. Pythagoras (580-500 BCE), Plato and Aristotle were masters of building shared vision and learning communities. Kongzi, Mengzi, Mozi, Zhuangzi, and later the *xinglixue* 性理學 philosophers of the Song and Ming dynasties, i.e. the Cheng-Zhu 程朱 school, built shared vision among their followers. The Kong-Meng 孔孟 and later the Cheng-Zhu schools promoted shared vision by expanding the family-clan model to build a bureaucracy and an empire by advocating the importance of education and ritual-action, maintaining aristocratic rule. The early Daoists attracted followers with the vision of personal freedom through harmony with nature, and the later temple Daoists expanded that vision to entail personal immortality (code for union with the *dao*), devotion and worship, which attracted the attention and subsequent participation of many people. The militarists shared a vision of aristocratic rule for social protection based on martial skills and military success.

The solipsism inherited from Descartes, grounded in what Alfred North Whitehead (1861-1947) called the fallacy of simple location, the presupposition of individual independence, inspires a mental model that prevents some people from considering the importance of systems thinking, social epistemology and team learning. Successful groups, teams or organizations that persevere, improve the quality of their group activities and outcomes or products (that is physical or intellectual outcomes) require team or group learning. For Senge, when groups cannot learn, the combined intelligence of the group members may be less than that of any one member of the group. When the group or team learns, then the group's or team's wisdom (knowledge put into action) exceeds the combination of that of the members. Senge proposes that two events occur with real team learning: (1) the group produces extraordinary results; and (2) the members of the team grow more rapidly than other wise.²¹ Open discourse and dialogue are the foundation of this discipline. Senge notes that:

21 Ibid., p. 10.

The discipline of dialogue also involves learning how to recognize the patterns of interaction in teams that undermine learning. The patterns of defensiveness are often ingrained in how a team operates. [.....] they undermine learning. If recognized and surfaced creatively, they can actually accelerate learning.²²

The disciples who assisted Thomas Aquinas (1225-1274) in compiling the *Summa Theologica* exhibited extraordinary results and Aquinas became a saint. They serve as a classic example of team learning in the context of European philosophy. The early Confucians compiling the canon of classics, and later the followers of the Cheng-Zhu philosophy exhibit fantastic results in China, Korea and Japan, with their respective annotations and commentaries on the canon and the Cheng-Zhu texts, improving the imperial examination system and the school masters excelled as individuals. During the imperial period, the learning teams recognized the shortcomings of only acquiring officials by imperial summons. The examination system was instituted to employ those people who passed the exams as officials who had been tested, measured, and demonstrated some proven intellectual and practical skills, and not merely a good reputation, or a well-connected family. The imperial exam was based on the Confucian canon of the classics and the orthodox interpretation. In this sense the learning and the teaching were very much in the genre of a liberal arts education, being mostly literary, having breadth, being broad and deep, focusing on leadership, and personal cultivation.²³ However, reading the stalks for divination may have been an easier task than finding the connection between a candidate's essay on the *Classic of Odes* (*Shijing* 詩經) and his appointment to an office such as Inspector of Dams.

22 Ibid.

23 Sheldon Rothblatt, *The Living Arts: Comparative and Historical Reflections on Liberal Education* (Washington, D.C.: Association of American Colleges and Universities, 2003).

Philosophers laid the ground work for each of the five disciplines and in turn they also developed themselves, their ideas and their followers or "schools" by employing the disciplines. Each of the five disciplines was represented in ancient China. How did the imperial system of East Asia benefit from the disciplines? If for argument's sake, we assume that the five disciplines were at work and contributed to successful outcomes, then how did the imperial organizations, especially those promoting education, behave as learning groups? I am not proposing that the dynasties employed the fifth discipline. Senge invented the hybrid fifth discipline out of the five disciplines. The fifth discipline is a modern phenomenon designed to bring each of the five disciplines to light and into the day-to-day activities of leaders who want to improve their organizations. Each of the five disciplines has been active for centuries and something like the fifth discipline *germinates* when skillful leaders promote each of the disciplines. The ancient imperial bureaucracies contained various learning groups that thrived when they used the disciplines and failed when competing groups proved better prepared.

The discipline of personal mastery is rooted in culture and human development. Joseph Campbell noted that most human cultures have myths or legends about a hero who usually goes on a journey, seeking a higher value.²⁴ The journey often entails the hero's transformation, maturation and successful achievement of obtaining a higher value (for example, immortality, discovering or inventing a cultural artifact, mastering a secret of nature or life, and so on). If nothing else, then based on human growth and development, we, humans, are the type of creature that matures and learns. Through the maturation process, people become aware that some people mature earlier than others, and that what seems to come naturally to some people must be arduously trained into and learned by others. Out of human biology and culture, education and learning are born and develop. Natural endowments, genes, culture, education and learning are the

24 Joseph Campbell, *The Hero with a Thousand Faces* (New York: Bollingen Series XVII, 1968).

primal roots of personal mastery. Ancient China is replete with stories about personal mastery. As noted above the major trends of ancient Chinese philosophy celebrated ideas of personal transformation resulting in mastery becoming a sage (*shengren* 聖人). The ancient *Classic of Documents* (*Shujing* 書經) relates the story of emperor Yao 堯帝 wanting to abdicate the throne to the most worthy person in the empire. Eventually Yao found a commoner, Shun 舜, who was a master-of-all-trades, inventor, versatile, and virtuous. The story inspired people's aspiration for personal mastery, social mobility and success. Of course modern people should not expect to find such noble ideals as gender equality, and democracy in ancient China, Korea or Japan, although Liang Qichao 梁啟超 proposed that ancient Chinese literature contains democratic ideals.²⁵ The story of Shun and the belief that commoner and noble shared the same ability to become a sage coupled with economic changes and social or class pressures for social mobility and status allowed some commoners to advance to the higher ranks of officialdom. Lü Buwei 呂不韋 (ca. 291-238 BCE), a merchant who became prime minister to the child king who became the self-proclaimed First Emperor of Qin, and Gong-Sun Hong 公孫弘 (200-121 BCE), a farm hand who raised pigs became chancellor under Han Wudi 漢武帝, in 124 BCE, are two early examples of commoners who rose to the highest rank available outside the royal family. They set the historical examples that inspired subsequent generations with the hope that personal mastery could reap great benefits. Following Kongzi, the Confucians, even those diametrically opposed such as Mengzi and Xunzi 荀子 (313-283 BCE), proposed that education and self-cultivation were the means to develop oneself to become a prince-of-virtue (*junzi* 君子 or consummate person). The Daoists employed self-cultivation techniques for personal growth, seeking to become a sublime person (*zhenren* 真人). The Confucians and Daoists have a litany of other labels and expressions to name and

25 Liang Qichao 梁啟超, *Xianqin zhengzhi sixiangshi* [History of Chinese Political Thought: During the Early Tsin Period] 先秦政治思想史 (Taipei: Chun Wa Book Company Ltd. 臺灣中華書局, 1968), pp. 10-11 and 150 ff.

describe different levels, degrees and types of personal mastery. Personal mastery is always highly valued in military circles. The troops need to be proficient in combat skills, and the commanders need to be competent in planning, tactics and strategy. As seen below the great masters and the most noteworthy Emperors show a knack for personal mastery and building shared vision in particular.

The discipline of systems thinking permeates ancient Chinese philosophy. A. C. Graham documents well the systems thinking, what Joseph Needham called "organismic philosophy," especially the philosophy of the Cheng brothers, Cheng Yi 程頤 (1033-1107) and Cheng Hao 程顥 (1032-1085) in the Song dynasty.²⁶ The systems thinking in Kong-Meng and Lao-Zhuang thought can be explicated with some effort. The Yinyangwuxingjia (陰陽五行家 Five phases and Yinyang) philosophies were combined and subsequently integrated into the Confucian philosophy by Dong Zhongshu 董仲舒 (179-104 BCE) and his followers. The Yinyangwuxing system became the paradigm for traditional Chinese medicine, astrology-astronomy, fengshui, geomancy, divination, court ritual, Daoist ritual, alchemy, and political thinking. The Yinyangwuxing system was pervasive, employed by almost every philosophical approach, even Buddhism adopted aspects of it, and as such the yinyang system kept the scholar-official bureaucrats acutely aware of the subtle, interrelated, complex and co-causal net-works operating in the physical, social and political realms. The scholar-officials were well-versed in their own forms of systems thinking.

The discipline of mental models is a bit more difficult to excavate in the practices of the scholar-officials who maintained the bureaucracy. The idea of serious self-examination was well-known in ancient China. Kongzi noted that when he identified a fault in another he examined himself for it (*Analects* 7.22). Zhuangzi exposed all types of social and personal bias in developing his

26 Angus C. Graham, *Two Chinese Philosophers* (La Salle, Ill: Open Court, 1992); Joseph, Needham, *Science and Civilisation in China, Vol. 2* (Cambridge, England: Cambridge University Press, 1956).

philosophy of perspectives. By the end of the Han dynasty models for understanding different personality types were being developed, for example the *Renwuzhi* 人物誌 by Liu Shao 劉劭 (424-453).²⁷ The syncretic and eclectic character of ancient Chinese philosophy, especially during and after the Han dynasty, is another indication of how open-minded and pragmatic the scholar-officials were in developing and practicing the discipline of mental models. Mental models have a way of becoming orthodox doctrines that are no longer open to examination, where advocacy overruns inquiry, and practices ossify. Under such conditions, success is unlikely. The viability of the discipline of mental models fits nicely with the dynastic cycle. After the founding of a new dynasty a "golden age" of prosperity and human flourishing occur in which the discipline of mental models is able to achieve a balance between inquiry into the condition of the empire and advocacy for the state agenda, but during times of social unrest and the decline of a dynasty, the balance between inquiry and advocacy are lost and dogmatism rules until the dynasty collapses under invasion or rebellion.

When the dynasties were in their golden age of prosperity, the family, village and private schools, and the Imperial Academy (*Taixue* 太學) were able to build the disciplines of shared vision and team learning. Each philosophical system promoted a vision of the world, human society and the political order. The Confucian vision became encapsulated and popularized in the *Datong* (大同 Great Commonality or Great Common Wealth), which describes an utopian community of peace and shared access to resources.²⁸ Expanding on the image of a simplistic Daoist community in poem 80 of the *Daodejing*, Han dynasty Daoist rebels promoted the idea of the *Taiping* (太平 great peace) in one or possibly two texts entitled the *Taipingjing* 太平經.²⁹ The militarists advanced an

27 Feng Youlan, *Zhongguo zhhexueshi xinbian* 中國哲學史新編, Vol. 4 (Beijing: People's Publishing House 人民出版社, 1982).

28 Kung-chuan Hsiao, *A History of Chinese Political Thought*, trans. by F. Mote (Princeton: Princeton University Press, 1979).

29 Max Kaltenmark, "The Ideology of the T'ai-p'ing ching," in Holmes Welch and Anna Seidel

image of peace after either offensive, liberating wars, or defensive battle against an oppressor, usually the invading tribal peoples. Shared vision was further encouraged by close family, clan, and ethnic bloodlines, personal relationships, and political advantages and power gained via a person's family relationships. The successful team learning is evidenced in the schools, philosophical systems, and government offices being able to change with the times, meet the challenges of flood, famine, invasion and other disasters to maintain the dynasty or to maintain the family or philosophical traditions after the fall of the dynasty.

In the archaic Shang 商朝 (ca. 1766-1041 BCE) and Western Zhou 西周 (ca. 1041-770 BCE) dynasties, education came primarily in the form of fathers taught their son and mothers taught their daughters their respective skills and trades. The aristocrats controlled the training of their sons to hold office and the training of their secretaries, attendants and knights (that is those who would later become the *shi* 士 class). Kongzi was apparently the first teacher to accept disciples from any social status. Kongzi recognized that the common people could not dedicate the time and energy to learning and study that he believed was necessary to cultivate a person's moral character. His favorite disciple, Yan Hui 顏回 (521-481 BCE), lived in poverty. Kongzi established the long-lasting imperative that proper training for office entailed moral self-cultivation, similar to aspects of Socratic, Stoic, religious and secular liberal education values that also promote moral self-cultivation. After Kongzi there were more opportunities for the labor and merchant classes to gain access to social mobility. The knight-scholars (*shi* 士) gained notoriety, mobility and access to resources and power during the Warring States period. In the state of Qi 齊國, under the patronage of the royal court, the Jixia 稷下 academy was formed, roughly between 357-284 BCE, where scholars debated the character of the natural and social worlds,

(eds.), *Facets of Taoism: Essays in Chinese Religion* (New Haven: Yale University Press, 1979), pp. 33-41.

compiling the book, the *Guanzi* 管子.³⁰ In the state of Qin 秦國, Lü Buwei attracted literally thousands of knight-scholars to his estate, and they compiled the *Lüshi chunqiu* 呂氏春秋 by 241 BCE. The importance of training officials was taking hold, and the significance of forming and supporting learning organizations and actual centers of learning were producing results that made them valuable.

The First Emperor apparently forgot the benefits gained from Lü Buwei's entourage of knight-scholars. The First Emperor's Fajia advisors, especially Li Si 李斯 (280-208 BCE), played-down the importance of learning and education. In the Han dynasty, the importance of building centers of learning had to be reconstructed. Han Gaodi 漢高帝 (r. 206-195 BCE) had to be convinced by the scholar, Lu Jia 陸賈 (240-170 BCE), that Gaodi could not rule the empire the way he had taken it "on horseback".³¹ Lu Jia was commissioned to write twelve chapters on the fall of the Qin dynasty and other ancient kingdoms, giving practical guidance on rulership. The eminent scholar Jia Yi 賈誼 (200-168 BCE) had difficulty convincing Han Wendi 漢文帝 (r. 180-157 BCE) regarding the importance of education, until he showed Wendi how the Second Emperor of Qin had failed because of a basic ignorance of statecraft. Wendi was persuaded. By 176 BCE the practice of assigning scholars to the royal princes was established, ensuring that Han emperors would be educated. Han Wudi 漢武帝 (r. 141-87 BCE) took the throne as a well-educated emperor. It was under his reign that the extant Five Classics (*Wujing* 五經) became the proper program of study for the *boshi* 博士, academicians, in 136 BCE, and that the commoner turned chancellor, Gong-Sun Hong, was appointed in 124 BCE. In that same year, 124 BCE, a quota of fifty official disciples (*dizi* 弟子) and students (*rudizi* 如弟子) at the Imperial Academy (*Taixue* 太學) was established. After one year of study and passing an exam on one of the Classics, at the Academy, a student could be

30 Kung-chuan Hsiao, *A History of Chinese Political Thought*.

31 Denis Twitchett and Michael Loewe (eds.), *The Cambridge History of China, Vol. 1, The Ch'in and Han Empires* (Cambridge: Cambridge University Press, 1986), p. 768.

appointed to a low-level or mid-level government office.³² The quota for disciples at the Academy was increased to 100 under Zhaodi 漢昭帝 (r. 87-74 BCE), to 200 under Xuandi 漢宣帝 (r. 74-49 BCE), to 1000 under Yuandi 漢元帝 (r. 49-33 BCE), to 3000 under Chengdi 漢成帝 (r. 33-7 BCE) and the quota was lifted under Wang Mang 王莽 (r. 8-23).³³

The imperial court and the Imperial Academy formed the core of the dynastic learning organizations of ancient China. In propagating knowledge, disseminating wisdom, training officials and administering the state, there was in ancient China, as there was in other culture complexes, a tension between using realistic, rational approaches, and trying to employ supernatural, non-rational or irrational means. The village schools, the Imperial Academy, and the government agencies had to grapple with this tension, and in part these organizations failed when they relied heavily on supernaturalism at the expense of real planning and actual effort. Once the Han Imperial Academy was established, it set the pace for subsequent centers of learning in China, Korea and Japan for centuries to come. There were constant calls for educational reform when the official disciples, and students at the Imperial Academies or National Universities, and the scholar-officials in the bureaucracy became excessively numerous and disconnected from the challenges and troubles of the day, usually associated with a lack of *corvée* labor, other taxes, land reform, or flood and famine.³⁴

Etienne Balazs argues that the scholar-officials who maintained the centralized, hierarchical, bureaucracy of the imperial dynasties for over 2000 years did so because the scholar-officials provided indispensable services for the stability and maintenance of the large agrarian society and economy.³⁵ Balazs details six indispensable institutions that were created by and preserved by the

32 Ibid..

33 Ibid., p. 769.

34 Ibid..

35 Etienne Balazs, *Chinese Civilization and Bureaucracy* (New Haven and London: Yale University Press, 1979).

scholar-officials: the calendar, controlling court ritual and agriculture; the hydraulic system, controlling floods, droughts, and transportation; the public granaries, controlling famine; the uniform weights, measures and currency, controlling trade; the military, controlling public safety and the survival of the state; and "[.....] finally the education, training, recruitment and reproduction of elites."³⁶ Balazs describes how the state was embodied in the scholar-officials who controlled the state monopolies on foreign trade, high demand trade goods (iron, salt, tea, wine and liquor), and education. For Balazs, in large part the success of the dynasties and the scholar-officials were due to the monopoly on education. The large agrarian economy and society were systematized and controlled by the scholar-officials or mandarins who created and preserved the centralized, hierarchic, bureaucratic imperial system. The state had dominion over all social activities, and was embodied in the officials. The state was totalitarian, and accepted a modified form of Confucianism as its ideology.³⁷ The imperial examination system introduced the appearance of a hypothetical democratic character for the recruitment and appointment of officials, but the democratic legend was employed to conceal the scholar-officials' monopoly on education. The monopoly was exacerbated by the scholars' ability to control other people's access to education and the civil service exams.³⁸ This type of monopoly is likely to develop when advocacy replaces inquiry and it will hamper creativity, innovation, and group learning. Therefore avoiding nationalistic monopolies of education is an important lesson that we can learn from those experiences.

After the Han, during the Three Kingdoms 三國 (220-280) and the Northern and Southern dynasties 南北朝 (304-589), there was a noticeable movement among the scholar-officials to withdraw from court and minor posts. Escaping the intrigue that often led to exile, prison or execution, the scholars

36 *Ibid.*, p. 9.

37 *Ibid.*, pp. 15-19.

38 *Ibid.*, pp. 7 and 19.

moved away from *qingyi* (清議 pure or righteous protest) to *qingtan* (清談 pure conversations).³⁹

During the period of diversity after the fall of the Han, the various dynasties rose and fell according to their ability to advance their respective shared visions and protect themselves militarily. Yang Jian 楊堅 (r. 581-604 or Sui Wendi 隋文帝), the founder of the Sui dynasty 隋朝 (581-618), established a unified empire in 589. According to Arthur Wright's study of the Sui dynasty, Yang Jian was a practical person and a successful military leader.⁴⁰ He was also anti-intellectual. Yang Jian believed that the Classic of Filial Piety (*Xiaojing* 孝經, which is usually recognized as an elementary text) was sufficient for a person's personal development and mastering the art of rulership. For twenty years, Yang attempted to recruit scholar-officials of high quality, but he was not satisfied with the results. He issued an edict in the sixth moon of 601, closing most of the schools that followed the Confucian curriculum. The edict discloses Yang's attitude toward the academy of his day:

The principles of Confucian learning are to train and instruct people, to bring them to understand the righteousness which informs the relationship of father to son and prince to minister, to make known the gradations of honorable and mean, of age and youth. [.....] Since we came to govern the empire, we have given thought to spreading virtuous teaching. We have for a long time assembled students and carefully established village schools. We have opened the way to official advancement and we have waited for men of wisdom and high quality. But though scholars in the state academy number almost a thousand, and the students in the prefectural and country schools are by no means few, they simply have their names enrolled and vainly waste their time. They

39 Feng Youlan, *Zhongguo zhexueshi xinbian* 中國哲學史新編, Vol. 4.

40 Denis Twitchett and John K. Fairbanks (eds.), *The Cambridge History of China, Vol. 3, Sui and Tang China, 589-906, Part 1* (Cambridge: Cambridge University Press, 1979), p. 74

have not the virtue to be exemplars for their time, nor the talent to serve the needs of the state.⁴¹

Interestingly, the history of the Sui, the *Suishu* 隋書, reports that Yang distributed sacred Buddhist relics throughout the empire on the same day he closed the Confucian schools. It appears as though Yang Jian had a Buddhist learning group of advisors, but they relied on supernatural means. Hence the Sui dynasty was not long lived, even though it was able to reunite the empire.

In the Song dynasty 宋朝 (960-1279) the syncretic philosopher, Zhu Xi 朱熹 (1130-1200), brought the Four Books, *Sishu* 四書, into the Confucian canon, modified the exam system and re-instituted a modified Confucian teaching as the state ideology, which greatly impacted Korea and Japan. The short lived, Mongol ruled, Yuan dynasty 元朝 (1279-1368) briefly stilled the advance of the Cheng-Zhu neo-Confucian school. The Mongol court had a strong military learning group to advise the Khan. During the Yuan dynasty the Confucian schools and Daoist temples maintained a low profile and survived as learning groups.

In the Ming dynasty 明朝 (1368-1644), the Confucian private and public schools and the examination system were re-instituted. According to Charles O. Hucker's study, after reforms in the school and examination systems in the 1440's, recruitment to official office by recommendation had vanished.⁴² The "regular paths" (*zhengtu* 征途) for recruitment into officialdom were through promotion out of the sub-official functionaries, and recruitment through examination after school certification. Various schools were patronized during the Ming. There were military schools (*wuxue* 武學), medical schools (*yinyangxue* 陰陽學), elementary community schools (*shexue* 社學), private,

41 Ibid., p. 75.

42 Denis Twitchett and Frederick W. Mote (eds.), *The Cambridge History of China, Vol. 8, The Ming Dynasty, Part 2* (Cambridge: Cambridge University Press, 1998), p. 30.

adult, academies (*shuyuan* 書院), and a system of subsidized Confucian schools (*Ruxue* 儒學). The *Ruxue* were located in the counties, sub-prefectures, and prefectures; their main function was to prepare young people for official careers by sending them to the modernized Imperial Academy, the National Universities in Beijing and Nanjing. The first Ming emperor, Hongwu 洪武 (or Ming Taizu 明太祖, r. 1368-1398) established government schools in 1370 with set quotas for state supported staff and students.

The whole array of Confucian schools at regional and local levels could hardly have been fully operational at any one time, but before the end of the Hongwu reign, 4,200 instructors were reportedly at work in them, and there is abundant evidence that, throughout the dynasty, the system functioned more or less as intended.⁴³

The prescribed curriculum was in keeping with the Cheng-Zhu teaching of neo-Confucianism, consisting of the Four Books and Five Classics, history and readings from the Cheng-Zhu texts. After 1436, a system of education intendents (*tixue guan* 提學館) was established; their sole function was to assess the quality of the students attending the local schools. Not only was the dynasty and its department of education developed as a learning organization, but also they were concerned about assessing the quality of their students.

Interestingly as education was made more accessible, its quality and prestige declined. Beginning in 1450, during a national emergency, the state offered university student status under a new category called "students by purchase" (*lijian* 例監 or *lijiansheng* 例監生) to men who paid grain or horses as their tuition for admission. The prestige of the national universities declined with the students by purchase and the prospering private academies. The examination system begun in the Early Han (206 BCE- 9 CE) came to full maturation in the

⁴³ Ibid., p. 31.

Ming as the means to enter an official career, especially for the highest civil service posts. The National Universities and the state schools coordinated with the civil service exam system became the educational and training centers for the exams. The exams were called "open" but a portion of the populace branded base, namely, beggars, entertainers, boat people, servants and others, were prohibited from sitting for the exam. Within a three year period, students were assessed by the education intendants. Certified students, called "budding talents" (*xiuca* 秀才), were permitted to take the exams held every three years. Four thousand or more students sat for the exams held at the provincial capitals. Eminent scholar-officials oversaw the examination. The grounds were guarded by military personal, ensuring that the candidates did not talk to each other or use books. Three all-day sessions were held over a week long period on the ninth, twelfth and fifteenth days of the eighth lunar month of the year. They were competitive written exams, which were copied and numbered, so the graders could not be biased by the student's name or calligraphy. Quotas were established for the number of graduates allowed from each province. The provincial graduates (*juren* 舉人) held their status and privileges without subsequent review, and were allowed to participate in the metropolitan examination (*huishi* 會試) held in Beijing and Nanjing in the second lunar month in the year subsequent to the provincial exams. Between 1000 and 2000 candidates sat for these three day-long sessions. Hongwu was not satisfied with the first group of 120 metropolitan graduates who passed the exams in 1371, so he suspended the second three-year exam. In 1384-85, he reinitiated recruitment by examination, and the system continued until the end of the Ming, graduating 24,874 scholar-officials over ninety exam cycles.

The exams lasted three days. The subject matter was based on the Five Classics, the Four Books and the imperial histories as they were interpreted by Zhu Xi. On the first day, the candidates were asked to explicate the meaning of four passages from the Five Classics and three from the Four Books. On the second day, the candidates wrote seven state documents in a prescribed style on

set topics or problems. In the final session, they wrote three to five long essays on current policy issues. The candidate was expected to demonstrate his grasp of history and the classics as interpreted by the Cheng-Zhu philosophy. By the 1480's the eight-legged essay style (*bagu wen* 八股文) was required. It has been argued that the civil service exam system weakened intellectual creativity and curiosity. First, there was an unprecedented focus on attaining office through the metropolitan exams such that all education and all other intellectual pursuits honed in on producing the metropolitan graduate alone. Second, talented people had little choice but to conform to the conservative, moralistic and anti-individualistic views of Zhu Xi and the Cheng-Zhu philosophy to pass the exams. Third, the eight legged essay constricted creative expression. Current trends in education and assessment might have something to learn from these criticisms of strictly imposed standards. In our modern attempts to balance inquiry and advocacy in our learning organizations and especially in our schools, colleges and universities, we must also balance the need to enforce standards while promoting creativity along with other practical outcomes. Creativity inspires growth, positive change and innovation and creativity is both an instrumental and an intrinsic value.

Although Balazs proposed that, by the Nineteenth Century, Qing dynasty 清朝 (1644-1911) China had the only national curriculum in the world, nevertheless, the Chinese national curriculum was established by the Cheng-Zhu school in the Song and Ming dynasties and had spread to Korea and Japan well before 1644.⁴⁴ Actually the national education initiative was well-established in the Ming dynasty. Oddly enough when the education complex and examination system were most highly developed and institutionalized in the Ming dynasty, including the assessment practices of education intendants, they had become the most ossified and overly bureaucratic practices, stifling individual and group creativity, ever established in China or elsewhere for that matter.

44 Etienne Balazs, *Chinese Civilization and Bureaucracy*.

Above I examined ancient China's learning groups through Senge's *Fifth Discipline*. Below I turn to discuss the role of liberal education and the anticipated outcomes for learning.

China's Liberal Education and Student Learning Outcomes

Above I hinted at the rudiments of a liberal education in ancient China. In this section I briefly flesh out some of those educational values and turn to the importance of assessing student learning.

The basic problems of human existence have not changed that much since antiquity; we still dwell in ignorance and desire, suffer, and die. At its root ignorance, a lack of knowledge, understanding, appreciation and moral empathy for others becomes compounded with greed, selfish desires, an over emphasis on the value of sexual orgasms, and hatred, ill-will, violence, and various criminal acts are perpetrated. The Confucians see the problem in terms of people having lost the *dao* 道 or the proper cultural way of life, creating social discord, *luan* 亂. They identify solutions found in Confucian-liberal education, learning the tradition of moral virtues and family values are expected to lead to the immediate goals of self-cultivation for the individual person, and social harmony. The ultimate goal is to generate peace in the empire.

The militarists see the problem more narrowly in terms of military threats from within and outside the state. Their solution is military training for the troops, and a more well-rounded education for the commanders. With proper training, tactics and strategy, the immediate goal of state security and the ultimate goal of unifying and pacifying the empire could be achieved.

The Daoist hold that life's ills are associated with the loss of the way, but the *dao* 道 of their concern was not cultural tradition but the way of nature. To

some extent the cultural tradition itself is a large part of the problem of human life. That is imposed social values distance people from nature, others and even from themselves. The Daoist solution requires training but it also entails forgetting, and getting beyond the conventional emphasis on taking charge, commanding knowledge, and indulging in desire. The immediate goals involve self-cultivation and living out our natural life span; the ultimate goals are harmony with nature and union with the *dao*. Military training is required in any culture to establish and maintain civil and inter-state control and order, but such training is not associated with what we call higher education or liberal education. The heart of liberal education in ancient China resides in the Confucian, and Daoist philosophies, and later in Buddhism.

The Confucian and Daoist traditions provide a type of liberal arts education. Confucius had established the six arts (*liuyi* 六藝), namely, ritual, music, archery, charioteering, calligraphy, and mathematics. These were considered to be the arts for aristocrats. Notice that archery and chariot driving are tied to military skill. The Confucian curriculum was built around the study of classical texts. By the Han dynasty the *Book of Music* 樂經 was lost. The five classics consisted of the: *Changes* 易經, *Odes* 詩經, *Documents* 書經, *Spring and Autumn Annals* 春秋, and the *Record of Rites* 禮記. Commentaries to the *Spring and Autumn Annals* and other texts were added to the curriculum to comprise the thirteen classics 十三經. In the Song dynasty, Zhu Xi's innovation was to focus the curriculum and the imperial examination on the Four Books, namely the *Analects* 論語 of Kongzi, the *Mengzi* 孟子, and two chapters from the *Record of Rites*, the *Great Learning* 大學 and the *Centrality and Commonality* 中庸 (usually mistranslated as the *Doctrine of the Mean*). The purpose of a Confucian education was to inculcate values and virtues. In their youth, the students were expected to memorize the texts. By adulthood, they were expected to understand how the positive and negative examples of past rulers and ministers applied to contemporary problems. The general idea was not to train future scholar-officials in a specific area or profession. The moral exemplar is not a specialist (*Analects*

2.12). Because his father died at an early age and the family suffered hardship, Confucius had to master various skills to earn a living, but he doubted that an exemplary person had such skills (*Analects* 9.6 and 9.7). This fits the guideline of a liberal education as opposed to a specialized or professional one.

The Daoists, despite their attacks on conventional learning and praise for forgetting conventions, had their training and education program. The Daoists are not opposed to all forms of learning; they do seek to learn the way. The *Daodejing*, *Zhuangzi*, *Liezi* 列子, *Huainanzi* 淮南子, *Wenzi* 文子 and various other texts stand as testimony to the valued literary tradition in Daoist thought. When the *Daoist Canon* (*Daozang* 道藏) was compiled in the Ming dynasty, it contained about 1200 titles. Modern scholars debate about the definition of "Daoism," attempting to demarcate a philosophy, a religion, various alchemical traditions and so on.⁴⁵ Internally, practitioners of Daoism do not delineate between the philosophy and the religion; such distinctions are foreign to them. They would rather distinguish the correct one (*zhengyi* 正一) from the charlatans and shamans. Similar to the Confucians, Buddhists, and other traditions, the Daoists distinguish lineages based on master-disciple relationships and the texts they used. In the formal training of a Daoshi priest, 道士, the acolyte must master various skills (ritual-acts, meditation techniques, music, dance steps, and so on) and an understanding of the texts and their concepts and ideas. The acolyte begins his or her education by studying the *Daodejing* and the *Zhuangzi*. After the Han dynasty, the training of a Daoist priest was similar to the training of a Medieval or even a modern Catholic priest. Those who served the masses receive the lower training in ritual skills; while the philosopher-theologians focused on the higher education of the person. The question remains: how does one know that learning occurs in higher education?

45 Holmes Welch and Anna Seidel (eds.), *Facets of Taoism: Essays in Chinese Religion* (New Haven Yale University Press, 1979).

To answer the question how do we know learning occurs, we have to have an idea of what learning entails. We need a list of key elements, taxonomy, which Benjamin S. Bloom developed. Bloom's taxonomy can be translated into classical or modern Chinese. First, Bloom developed the cognitive taxonomy consisting of: knowledge, comprehension, application, analysis, synthesis, and evaluation.⁴⁶ Later, Krathwohl, Bloom and Masia developed taxonomy for the affective domain consisting of: receiving, responding, valuing, organizing and internalizing.⁴⁷ There are fitting classical Chinese translations for these concepts. The ancient Chinese were very much concerned about knowledge, understanding (*zhi* 知 or 智), comprehension (*wu* 悟 or *dong* 懂), application (*xing* 行), a bit less concerned about analysis (*tui* 推), and very concerned about synthesis (*yi* 一, making into one, *he* 和, harmonizing), and evaluation (*jue* 決). They were also well-aware of the importance of receiving (*gan* 感), responding (*ying* 應), valuing, (*hao* 好), organizing (*lei* 類 and *zhi* 治), and internalizing (*nei* 內). More recently Bloom's disciple, Lee S. Shulman proposes another taxonomy, and it too can be translated into Chinese, namely: engagement and motivation (*zhen* 振, to arouse to action, and *yu* 慾, desire); knowledge and understanding (*zhi* 知, as clever knowledge and *zhi* 智, as wise understanding, or *dong* 懂, to comprehend and *hui* 慧, wise); performance and action (*li* 禮, ritual-action as proper performance and *xing* 行, as action); reflection and critique (*si* 思 or *xiang* 想, for thought and *bian* 辯, for critical argument); judgment and design (*jue* 決, to judge and *lun* 掄, to choose); and commitment and identity (*zhong* 忠, for dedication/loyalty and *cheng* 誠, for integrity/sincerity as people's identity or authenticity).⁴⁸ Many of these concepts are important in the ancient Chinese literary and philosophical vocabularies.

46 Benjamin S. Bloom et al., *Taxonomy of Educational Objectives, 1: Cognitive Domain* (New York: David McKay, 1956).

47 David R. Krathwohl, Benjamin Bloom and Betram Masia, *Taxonomy of Educational Objectives, 2: Affective Domain* (New York: David McKay, 1964).

48 Lee S. Shulman, "Making Differences: A Table of Learning," *Change The Magazine of Higher Learning*, 34, 6 (Nov., 2002), pp. 36-44.

How do the taxonomies work; how are they to be understood? Shulman warns that taxonomies have many applications, and that their interpretation is situational. He also recognizes that taxonomies may become ideologies, and he warns against this. He describes how Bloom's taxonomy can be presented as an extended metaphor, a limiting principle or a narrative.

Thus, Bloom's cognitive taxonomy tells the story of education beginning with the acquisition by rote of facts that someone else has taught you and which you are only expected to reproduce or repeat. The story becomes more exciting as knowing matures into understanding and application, and then even more adventurous as ideas are subjected to analysis, as new ideas can be created and synthesized, and finally at the highest level, as the learner becomes capable of judging and evaluating the truth or usefulness of the ideas themselves.⁴⁹

He also relates his taxonomy in story form:

Once upon a time someone was engaged in an experience of learning. And that engagement was so profound that it led to her understanding things she didn't understand before, and therefore gave her the capacity to practice and to act in the world in new ways. But once she started acting in the world, she realized that action doesn't always work out as intended, so she had to start looking at what she was doing and at the consequences of her actions. This meant reexamining her actions to see whether she might want to act differently. Through that kind of reflection on her own performance and understanding, she became wiser and capable of making judgments and devising designs in situations that were progressively more uncertain. And as she did so, she began to

49 Ibid..

internalize the values that she had been exposed to, at which point she was no longer merely engaged but truly committed. Those commitments, in turn, disposed her to seek out new engagements, which led ([.....] the story is a circle) to new understandings and practices.⁵⁰

The Confucian philosophy contains an implicit taxonomy mostly consisting of the virtues. A Confucian narrative might go something like this. Everyone is born into a family; even orphans are adopted into a family structure. As the child grows, her biological dependence on her parents becomes filial devotion (*xiao* 孝). She becomes aware of her position in the family and either serves as a role model for younger siblings or learns to follow and obey her elder siblings (*di* 弟 brotherly/sibling love). Through the various family relations, she learns to extend her love for family members to fellow villagers and ultimately to acquaintances, developing *ren* (仁), being human-hearted or loving. She learns that love and affection (*ai* 愛) must be expressed according to the rules of proper deportment and ritual-action, *li* (禮). There is an implicit ability to transfer understanding and virtuous action such that *xiao* (孝), filial devotion in the family, becomes *zhong* (忠), dedicated loyalty to the ruler and state. As the old saying goes, filial sons make loyal ministers.⁵¹ Family and public relationships require her to be honest and trustworthy, *xin* (信). She learns to be just and appropriate in all her actions, *yi* (義). Like Shulman's circle, the Confucian story is a spiral or series of concentric circles in which the past learning experiences must be transferred to present and future situations, which culminate in developing a knack for hitting-the-mark-in-moral-wisdom, *zhi* (知). She becomes a living sage, and at death is honored in ancestor veneration rites for generations to come. Finally her wisdom is past on for generations in learning groups.

⁵⁰ Ibid..

⁵¹ James D. Sellmann, "The *Lü-shih ch'un-ch'iu's* Proposal of Governing by Filial Piety," *Asian Culture Quarterly*, 13, 1 (Spring, 1985), pp. 43-62.

The Daoist story might go something like the following. People are born into nature content and free of restraint, but simultaneously people are born into a restrictive society. Before they know it, their natural place and perspective are lost to social conventions. People are led astray by society and forced to believe that they must suffer, labor, live in anxiety, and die an untimely death. Only after diligent self-cultivation based on acting by non-purposive action (*weiwuwei* 為無為), getting beyond conventional knowledge and desire (*wuzhi* 無知 and *wuyu* 無欲), forgetting (*wang* 忘), cutting lose the fetters of society (*jie* 解), awakening to the dream of life (*jue* 覺), modeling the spontaneous, self-so-ing (*ziran* 自然) course of nature can people return to the simplicity (*pu* 樸 uncarved block) of their original character, returning to union with the *dao* 道. The paradox in Daoism is that people must get beyond conventional learning; they must unlearn and forget the lessons of society and convention to really learn.

Generally speaking Chinese philosophy is down to earth and practical. There must be results, and the results must function. For the Militarists, the results must secure and maintain the state. For the Confucians, the results must be evidenced in a person's proper department in the family and the state. For the Daoists, the results must be seen in a person's ability to harmonize with the forces of nature. In Euro-American philosophy, results count. The American Pragmatists, the British Utilitarians, and the Positivists of all backgrounds seek positive, real, workable outcomes. All of the philosophies seeking the meaning of living a human life are tied to attaining results. The exception might be those philosophies dedicated to pure logic and pure theory, but even they have concerns for non-applied outcomes. So philosophy and philosophies of education have always been concerned with outcomes. Today we place greater emphasis on obtaining evidence that the result was achieved.

One of the main lessons to be learned from any philosophy of life or process of education is to learn what is worth living for and what is worth dying for, and to ensure that we use good evidence in making the determination. For Kongzi,

there is nothing worse than dying for the wrong cause. For Zhuangzi, there is nothing worse than living for the wrong cause. The followers of Kongzi had a saying, now found in the *Classic of Filial Piety*, to protect people, namely: "Stay on the road, do not take a short cut; stay in the boat, do not go swimming."⁵² The *Zhuangzi* contains a story about a body-surfer who shocks Kongzi. Allow me to briefly retell the story. Kongzi is sightseeing at Lüliang where there is a great waterfall and swift moving rapids. He sees a man dive into the rapids. Fearing the man might drown, he has his disciples head down to the bank of the river for a rescue. The man comes out of the water singing. Kongzi catches up to him and asks if he has a *dao* or method for such swimming. The man replies that he has none. He goes on to say that he was born on land and raised to know its security, but he grew up in the water and learned to feel safe in the water. Now it is his character and destiny to swim without knowing why.⁵³ Where Kongzi is concerned that the man might die for no good reason, that is, by swimming; Zhuangzi is disquieted by people living for the wrong reason that is living to satisfy social conventions only, being stressed-out, and thereby dying an untimely, early death. What is the best outcome to live for the right reasons or to die for the right reasons? The Pacifists position should be considered. Some might want to reconcile the two and try to do both by living and dying for the right reasons. Death is an ultimate conclusion and cannot be reversed such that dying for the right reason precludes living for the right reason. The art of contextualizing, the ability to negotiate our health, to negotiate with others and the forces of nature, to live with a purpose without resorting to killing others or self-martyrdom, these are aspects of living for a cause. For the time being and until better evidence is given, I flow with Zhuangzi. It is best to live in harmony with the forces of nature and keep on living to swim another day.♦

52 Ibid..

53 Paraphrasing Zhuangzi, *The Complete Works of Chuang Tzu*, trans. by Burton Watson (New York: Columbia University Press, 1968), pp. 204-205.

♦ Responsible editor: Yung-hsiang Yuan (袁永祥)

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