

英才教育研究

*Journal of Gifted/Talented Education*

2004. Vol 14. No 3, pp. 97-104

**Keynote Speech 9 : 17:30~18:10 E15 (Auditorium)**

## **Creativity, Intelligence, and Morality**

**-- What is the most importance in creativity education?\***

**Jiannong Shi**, Academy of Sciences, China

Creativity is good or not? Human being as a sort of creature survived on earth for millions of years. It distinguishes itself so greatly from other creatures with its unique mental power. The most significant mental power of human being is creativity. With its enormous creativity, human being changed the natural world into an invented world. Meanwhile, it becomes smarter and smarter on one hand, but on the other hand, the world becomes more and more unfavorable for many other kind of creatures. And human being itself is threatened by endless war regionally and world widely. In the present speech the issues about creativity, intelligence, and morality will be discussed.

### Introduction

Since Guilford's APA president speech in 1950s (Guilford, 1950), the study on creativity of human being and its development has attracted attention world-widely (Albert & Runco, 1999; Sternberg, 1988, 1999). More and more studies pertaining to issues about creativity have been conducted in different countries under different cultural background. This revolutionary movement greatly

---

\* Preparing this paper was supported by NSFC Grant (No. 30370489) and key project of Knowledge Innovation Engineering of Chinese Academy of Sciences (No.KSCXZ-SW-211). Any correspondence about this paper please contact Jiannong Shi, Institute of Psychology, Chinese Academy of Sciences, Beijing 100101, CHINA. E-mail: shijn@psych.ac.cn.

stimulated Chinese society, as it was regarded that Chinese cultural did not care to cultivate people's creativity in its history. Enormous number of scholars from Taiwan, Hong Kong and Mainland China have been appealing the importance of creativity cultivating for the society which has been edified by Confucianism for thousands of years. A number of books, articles, and research papers were published (Dong, 1993; Wu & Ye, 1993; Chen, 2001; Yu, 1996; Shi, 1995; Shi, Zha, & Zhou, 1998a, 1998b, 1998c; Shi & Xu, 1999; Shi & Qu, 2004). We searched the most comprehensive or inclusive academic data bank CNKI with Chinese keyword *chuangxin* (creativity and originality). The number of publications on creativity increased rapidly during the last ten years from 1994 (see Figure 1).

Among these issues, how to improve students' creativity is one of the most intriguing topics (Zhang & Chen, 1996; Xu, 1999; Qu & Shi, 2003). According to Wu (2002), creativity cultivation or education is widely concentrated because the Chinese traditional culture does not good for the development of creativity. Wu pointed out in his article that there are 11 unfavorable factors for creativity development in Chinese society. These unfavorable factors include over weighing IQ, over weighing extrinsic motivation, over weighing knowledge and formal education, and over weighing the result of examination, and so forth. Meanwhile, he made 12 suggestions for creativity cultivation in Chinese society. These suggestions are obviously reasonable and directive. Besides these suggestions, I would like to bring out another issue about human creativity and its cultivation from a perspective of human nature.

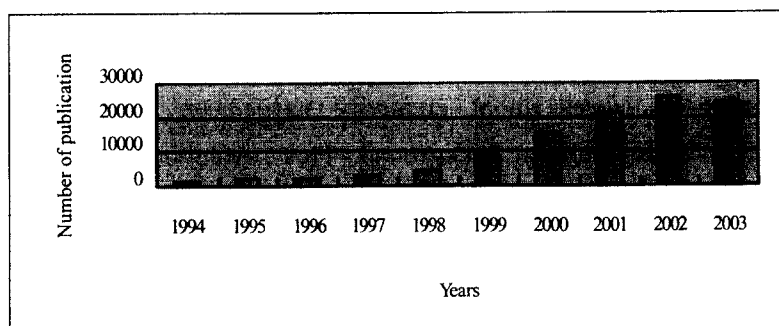


Fig. 1 Number of publication on creativity during the last ten years

### **The nature of human being**

When we say "creativity" we are talking the creativity of human being rather than the creativity of other kind of creatures. In other words, it is necessary for us to concentrate the nature of human if we try to study human creativity thoroughly.

In order to discuss the nature of giftedness, we need to look at the nature of human being first.

What are the natures of human being? Firstly, the biological feature is one of the most important natures of human being. According to the taxonomy, man or *Homo sapiens*, belongs Primate, is a kind of animal. It is a capitalized 'ANIMAL'. As a kind of animal, man has all its biological features. As a kind of animal, human being needs to survive in the world. In order to survive in the world, human being has to make the physical world more feasible to live and sometimes it has to change itself.

Secondly, man is so called man, because he is an intelligent 'ANIMAL'. He is different from any other animals, because he has consciousness, spirit, and intelligent power. Hence, the levels of one's consciousness, the state of one's spirit, and the capacity of one's intellectual ability are the essential features of mental nature of human being. This is the second category of human nature. And all psychological aspects, such as perception, memory, thinking, emotion, motivation, willingness, and so on, are included in this category. The ability of human being to modify the physical world is the most significant one. This kind of ability is called "creativity".

Thirdly, according to the living manner of human being, human is a kind of 'ANIMAL' living in a specific society. The manner of an individual's behavior in the society in which this individual lives is very important for him/her to be accepted or not. We may describe the manner of an individual's behavior in a society as his/her social characteristics. As an individual in the society, he/she has to be modified by the culture, restricted by social rules, evaluated by other people, and accepted by his/her society. In a word, he/she has to behave in a proper way

in his/her society. Obviously, the third category of human nature is the social behavioral features. As a social individual, his/her social features are very essential. In order to survive in a society, to be accepted by others in the society, an individual has to be aware of him/herself, of the situation of a society, of the relations between him/herself and the others. In this third category of human nature, say, social natures of human being, variables about self-consciousness, self-regulation, self-confidence, collaboration, obligation of social duties, legalization, obedience of the morality of a society, communication with others, and expression of oneself, and so forth are very important.

### **What is creativity?**

After knowing the nature of human being, we should discuss human creativity from bio-psycho-social perspective (Dacey & Lennon, 1998; Shi, 1998). Creativity is a kind of ability, as well as a kind of product. As a kind of ability, it is a trait of a unique individual. It is influenced by other kind of personality traits. As a kind of product, it is a unique product of a society. As a product of society, it needs to communicate with others, and be evaluated and accepted by others in the society. In this case, human creativity can be looked as a manifestation of one's intellectual activities that are influenced by the environment and culture in which one grows up (Shi, 1995; Shi & Xu, 1999b, 2004). In the Handbook of Creativity (Sternberg, 1999), Mayer (1999) reviewed several definitions of different creativity researchers and summarized that there are at least two aspects widely accepted by different authors. The two widely accepted common aspects are newness or originality and appropriateness or usefulness.

### **Creativity, intelligence and morality**

As the creativity is defined as a manifestation of human intellectual ability, human intelligence plays very important role in the system of creativity (Shi, 1995). Shi (1995) indicated that there are four most significant factors or variables must be considered in the relations between creativity and intelligence. These four variables are intellectual level, attitude about creative action which is influenced by many

factors from inner and out world, the task which may be positively evaluated, and the task which may never be positively evaluated. One's intellectual level or intelligence potential serves as a power supplier. The task positively evaluated by society serves as target and the task not evaluated as non-target. And one's attitude serves as a power switch connect the intelligence current to what he or she thinks worthwhile or disconnect the intelligence current to what not worthwhile. More straightly, the intelligence current directed to a creative activity is controlled by one's attitude towards the task he/she is dealing with. There are two forces that may have effects on and change one's attitude towards a specific task. One force is driven by intra-individual factors, such as one's interest on a task, curiosity about the task, persistency in conducting the task, and motivation of fulfilling the task. In many cases, people do not fulfill the task not because they are not able to do it, but just because they are not willing to do it. Another force is driven by inter-individual factors, namely, factors from the outside world of an individual, such as expectations and demands of parents or family, feedback evaluation about one's creative production from society or from the public, or factors such as economic or physical supports from the surroundings. When people say "evaluation", it is related to value norm of a specific society in special, and of whole world in general. The value norm is related to morality of a society or of whole world. In many cases, a new product can be accepted as a creative one by some people, but hated by others or be respected as a great achievement by some people, but rejected by others. In these cases, we may say creativity is society specific. Different cultures will give different values to the same product.

The appropriateness of creativity is a two-side sword. It means that a new product may be appropriate for some people but not for others, be useful for some individuals but harmful for the society, be respected in a country but notorious in other countries, be evaluated by human society but destructive for other creatures. There are many such examples in the history that the products were created intentionally for the purpose of killing others. For example, when atomic energy is purposefully used to produce electricity, the production of such atomic energy is of

course creative. But when the atomic energy is intentionally used to produce atomic bomb, can we still regard such atomic product creative?

Therefor, besides originality and appropriateness, we would like to emphasize the third aspect of creativity reflecting one's morality. This aspect is intention or purpose of one's activity.

The development of human being is not only the development of ability, not only the development of the ability of changing physical world, but also the development of his/her personality, emotion, and motivation (Fox, 1981), as well as socialization. The development of socialization includes self-awareness, self-regulation, awareness of society, awareness of collaboration, and awareness of morality.

In practice, it is important to keep in mind that developing a good morality is the most necessitous in cultivating the creativity of our young generation.

## References

- Albert, R. S., & Runco, M. A. (1999). A history of research on creativity. In R. J. Sternberg (Ed.). *Handbook of creativity* (pp. 16-31). Cambridge University Press.
- Chen, L-A. (2001). *Theory and practice of teaching creative thinking*. Psychology Press.
- Dacey, J. S., & Lennon, K. H. (1998). *Understanding creativity: The interplay of biological, psychological, and social factors*. Jossey-Bass Publishers, San Francisco.
- Dong, Q. (1993). *Development of children's creativity*. Zhejiang Education Press.
- Fox, M. N. (1981). Creativity, intelligence, and personality. *Annual Review of Psychology*. 32. 439-476.
- Guilford, J. P. (1950). Creativity. *American Psychologist*, 5, 444-454.
- Mayer, R. B. (1999). Fifty years of creativity research. In R. J. Sternberg (Ed.). *Handbook of creativity* (pp. 449-459). Cambridge University Press.
- Qu, X. & Shi, J. (2003). Improving Students' Creativity in Senior High School. Presented at the 15<sup>th</sup> Conference of WCGTC, Aug. 1-5, 2003, Adelaide.
- Shi, J. & Qu, X. (2004). Psychological study on creativity in China in the last 25 years. *Creativity's Global Correspondents*, 8. (in press)
- Shi, J. & Xu, F. (1999). Intelligence, motivation and creativity of supernormal and normal children. *Australasian journal of Gifted Education*, 8(2), 11-15.
- Shi, J. (1995). System model of creativity. *Developments in Psychology*, 3,1-5.
- Shi, J. & Xu, F. (2004). *Developmental psychology of supernormal children*. Hefei: Anhui Education Press.
- Shi, J. (1998). The relationship between gifted education and quality education. Paper presented at the *Conference of Study on Gifted and Talented Children in China for 20 Years*. Aug. 19-23, Beijing, China.
- Shi, J., & Xu, F.(1999). *Recognizing the gifted children*. Beijing: Esperanto Publishing House..

- Shi, J., Zha, Z., & Zhou, L. (1998a). A cross-cultural study on the development of numerical creativity of supernormal and normal children between China and Germany. In Z. Zha (Ed.). *The mystery of the development of supernormal children - The collection of research on psychological development and education of supernormal children in China in the last 20 years* (pp. 69-76). Chong Qing: ChongQing Publishing House.
- Shi, J., Zha, Z., & Zhou, L. (1998b). A cross-cultural study on the practical creative thinking of supernormal and normal children between China and Germany. In Z. Zha (Ed.). *The mystery of the development of supernormal children - The collection of research on psychological development and education of supernormal children in China in the last 20 years* (pp. 77-86). Chong Qing: ChongQing Publishing House.
- Shi, J., Zha, Z., & Zhou, L. (1998c). A cross-cultural study on the development of mental folding ability of supernormal and normal children between China and Germany. In Z. Zha (Ed.). *The mystery of the development of supernormal children - The collection of research on psychological development and education of supernormal children in China in the last 20 years* (pp. 87-97). Chong Qing: ChongQing Publishing House.
- Sternberg, R. J. (1988). *The nature of creativity: contemporary psychological perspectives*. New York: Cambridge University Press.
- Sternberg, R. J. (Ed.)(1999). *Handbook of creativity*. New York: Cambridge University Press.
- Wu, J-J. (2002). Enticing the crouching tiger and awakening the hidden dragon: Recognizing and nurturing creativity in Chinese student. *Research in Applied Psychology*, 15, 17-43.
- Xu, Q. (1999). An experimental study of creative thinking training with grade 3-5 pupil. *Chinese Journal of Applied Psychology*, 5(2), 54-58.
- Yu, G. (1996). *Psycholog of Creativity*. Hangzhou: Zhejiang People's Press.
- Zhang, J. & Chen, Z. (1996). A study on the experiment of creativity teaching for children. *Acta Psychologica Sinica*, 28(3), 277-283.