Research on the China’s Contemporary Education From the Perspective of Sociobiology

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Abstract
Since the college entrance examination system was renewed, China’s contemporary education reopening has been carried out for nearly four decades. In the process from Elite Education at the beginning of reform in 1977 to the present universal quality education, we meet endless problems in education. This paper tends to analyze the causes of these problems by the principle of minimum energy sociobiology, survival principle, diversity of rules and altruism, and this thesis tries to improve existing educational status from the following aspects, training of interest, personalized counseling, experiential education, survival education, and setbacks education.

Key words: Education; Sociobiology; Minimum energy dissipation principle; Altruism

INTRODUCTION
In China, from Elite Education at the beginning of reform in 1977 to the present universal quality education, college admission rate also has undergone great changes. In 1977 national college entrance examination average admission rate was 4.8% (elo.cn., 2013, August 19), while in 2014 the figure reached 74.3% (cnr.cn., 2014, June 9). After nearly forty years of development, China’s whole family education mode has turned to the status that the parents attach great importance to education and the children are tired of education. While in the past, the family education mode is so-called Laissez-faire style. Many problems emerge during this process, such as the students’ weariness, the improper teaching methods, the insufficient education ability training, the lack of national education investment, and the confusing education system concept. These problems lead to the students’ poor self-care ability, improper learning methods, learning objectives fuzzy, poor academic performance and poor employment. This article attempts to analyze the causes of these problems from the perspective of sociobiology.

1. DISCUSSION ON WEARINESS BY MINIMUM ENERGY DISSIPATION PRINCIPLE

1.1 The Generation of Weariness
Emotional weariness of students is not informed suddenly, it is a result caused by the family, society and education institutions, instead of the students’ lazy behaviors. China’s family and the whole society overemphasize on students’ scores, so the teacher often pays more attention on how to rise students’ scores. The society advocates ability, but the score is the main standard to judge the effect of education, so focus on how to improve students’ score is the most direct and effective, simple, and fair way for teachers and schools reach the goals. So based on the above factors, the students feel unprecedented pressure, weariness gradually forms. Weariness is caused by the big learning pressure, the excessive repetition learning process and improper learning methods.

1.2 The Reasons Caused Weariness
There is one sociobiology experiment, every student involved in the test is asked to recite and spell five words
every day, all of them can complete the task on schedule to get a happy learning experience. We can ask twenty students to form a small class, and five students are made in a group. They are asked to know, spell, dictate and recite words for twenty minutes every day. Generally, the students can complete the task on schedule. Then, we gradually add the task with the passing of time. Some children will feel more and more difficult to meet the requirement during the process, but children with good study habits and basic knowledge can keep up with the schedule. When the task is added to a certain number, for example ten words, students will begin to have serious differentiation, but they won’t cheat the manager. When the task gradually increases to twenty words, some students can’t keep up and the incorrect “cheating” behavior will appear, and this is the auspice of excessive pressure.

Nowadays, many parents and teachers are constantly overweight on students, which eventually make children feel tired of studying, and weariness will be formed. This experiment tells us the reason which makes students feel tired and the weariness emerge is that the parents and teachers give them too heavy studying tasks, which turn a negative reinforcement. In fact, the learning process is a process of conditioned reflexing, and the purpose of repeating is to achieve positive reinforcement. In the process of reinforcement, improper methods will turn positive reinforcement to negative reinforcement, and gradually lead to weariness.

1.3 Discussion on the Indolent Behaviors by Minimum Energy Dissipation Principle

From the perspective of sociobiology, the creatures are driven by the principle of minimum energy dissipation, which means that they will try to produce the best effect with the lowest energy. When the individuals fully understand it, they will generate the challenge motivation and automatically, and try to do more difficult things. But when they meet things they can’t overcome, the inhibit nerve conduction will be produced and then produce the feeling of depression. A long-term of depression will lead to anxiety to boredom.

Most creatures’ natural state is indolent, which is different from laziness, its purpose is to save the limited energy. In the process of producing behavior under external stimuli, biological organisms will generally learn to master the behaviors through repeated practice. After this period, they will turn to a basic idle state, which means they will only have to keep vigilance for consuming energy usually to save energy. The state of indolent is different from the state for lazy. The weariness of students will produce as the following process, firstly they will lose learning interest, and then they will counter the insatiable demands from parents and teachers of weariness behavior to avoid the unfavorable state. Creatures will explore things they are interested in patiently and take circuitous circumvention against harmful thing themselves to relieve anxiety. They will play to their advantages to attack the weaknesses of others in order to achieve the purpose of survival.

1.4 To Strengthen the Interest Education and Develop Students’ Enthusiasm for Learning

From the perspective of sociobiology, we should strengthen the interest education and develop students’ enthusiasm for learning to dissipate the heavy weariness mood of students. Interest is the base of creativity and the fundamental source and power of creativity, so it is necessary to pay more attention to culture the students’ interest in the process of the education. However, the training of interest and enthusiasm for learning is such a long process, so we should need patience and skill and method, especially for little children. We should start this project with primary education. And, this object can be achieved by many methods, such as teaching in small class and strengthening teacher who educates student’s abilities practices, respecting for soft strength of teacher, stopping judge teachers’ achievement by score. We should respect student’s privacy. Education is a long-term process like climbing mountains or running, everyone’s speed is different. So when evaluating the teachers and students, we should focus on the long-term performance.
error behavior is a kind of instinctive exploratory learning behavior, we will master survival skills such as the feeding, hunting, attack though long-term trying.

2.2 The Consequences of Improper Education Methods

Nowadays, education methods used by many families are inappropriate. There are many different performances, such as the lack of training of children’s self-care abilities, kidnapping children’s heart in the name of love that makes the children lose the ability to act independently, and the lack of setback education. Many Chinese families do not pay attention to cultivate children’s self-reliance and setback education, they emphasize on their scores, which makes the students feel blind and helpless when meeting with frustration. The parents emphasis on the scores instead of helping them analyze the reason of failure, since they don’t understand that the correction process of error is way to improve and the process to form analyzing ability gradually, and the ability to discover, analyze and solve problems is a fundamental capability in human progress. In China, many children will seek the help from their parents when dealing with emergency events since they lack the ability to analyze these events and solve problems by themselves. In the terms of students, most students learning goals are not clear and their learning methods are not proper since they don’t know what they like and what they should do and what they want to do. In terms of parents, many parents think that education is the teachers’ task, which is none of their business. They don’t understand that the family is the first teacher in education and family has much greater influence on children’s growth than the school education. They don’t understand that doing nothing to children’s education is different from you can’t do well in education.

2.3 Inspired by the a Typical Education Instance

One student’s father is a doctor and his mother is a foreign language teacher. This boy likes the military while his parents want him to learn medicine, in the struggle process he went to two universities successively. As the class teacher in his second university, I found that he didn’t want to battle with his parents directly, although he had no interest in the current academic. As a result he was sent down a grade for his failure in the examination, he couldn’t work well with his new teacher. Finally, he was ordered to quit school since his examination results slipped heavily. His parents found me before he left school, we had a deep dialogue. I understood his growth process in psychology and his desire, so I gave some advice to his parents though this dialogue. The child returned home later and entered a military academy after joining the army. It took him four years to realize his real dream.

For another student, his parents are illiterate. His parents knew the importance of education, but they would not waste any time to talk about the importance of education. They conveyed the idea that they should depend on themselves instead of his parents, so he had understood he has to win his future by himself. Although his family cannot give him so much help as the rich family, his professional knowledge is better than any other students in his class. English was his weakness. He knew this very well and he tried his best to improve his English, the professional priority principle he followed by himself made him do very well. If he persisted in the way, his comprehensive ability will become much stronger in a short period of time.

2.4 The Role of Teachers

As a teacher in primary school, they should cultivate the students’ learning habit, in addition to imparting the basic knowledge. Teaching objectives require us to make all the students understand and master knowledge, but in China we usually cannot meet this requirement since teachers have to manage a lot of students at the same time. For the students who can keep up with the schedule, they can do well. The students who often wander are also called “problem students” because they cannot get detailed guidance, and they will evolve into lagging-behind students gradually.

In order to pursue graduation rates, middle school teachers take index strategy, mainly focusing on the education of top students. As a result, there may be only a small part of students can understand fully, and majority of students cannot understand. All students have to finish their tasks by helping each other, because the teachers’ energy is limited, and they have no time to attend to every students’ response. The students at middle level will not slip down in school record if they can do homework or learn from the top students after class to understand these difficult or unclear questions. And, the students at middle level will turn to students at lower level is they adopt the attitude of slackening. This kind of students will mainly focus on the things they are interested in since they couldn’t understand the knowledge in class. They may get a deep understanding of these things, but they may gradually feel powerless since their ability is limited.

The university teachers will focus on guiding education and the cultivation of students’ self-learning ability. For students who learn carefully in the class, they may get twice result with half effort. To the students who doesn’t learn carefully in the class learning is a quite hard thing, and they may lose interests in learning gradually. The ultimate purpose of university education is to help students know how to learn by themselves without the help of the teachers. Teachers only teach them the methods to do things, and they should not replace the students to do and practice.

Although individual education is helpful to students, only the teachers with dedication spirit do this kind of job because the officials do not recognize teachers’
outcome though this way and the current evaluation mode cannot measure this part too. But in the education to post graduate students, they can do one-on-one education and personalized coaching is basically realized.

Survival education is a very complex issue. We need to face from childhood until to adult with continuous learning and thinking. Reading and learning can help children to have the more wide ideas and the ability to solve problems. Only if the students have the ability of lifelong learning, they can continuously improve themselves to survive better.

2.5 To Strengthen Survival Education and Help Students Cope With Setbacks

In order to solve the lack of survival education, we should not only strengthen survival education and help students cope with setbacks actively, but also develop education concept based on the theory of sociobiology. During the students’ growth process, they are eager to display themselves. Sometimes, their self-seeking may be inconsistent with the social needs of displaying process, and this kind of contradiction is likely to affect the healthy growth of students. It is progressive to study to face the setback and to accept a challenge of living calmly on advancing. It’s a performance of growing if we could change ourselves to meet the needs of society when facing a challenges. Parents and teachers should cooperate with each other to strengthen survival education to students and cultivate their survival ability. Finally, we can help them to be become an independent personality who can contribute to both family and society.

3. BIODIVERSITY DIVERSITY PRINCIPLE AND DEVELOPING COMPREHENSIVE ABILITY

3.1 Research on Comprehensive Ability Training Based on Biodiversity Diversity Principle

The diversity of Biological development expands living space, like people have five fingers with different size, length and functions. But the ultimate goal is to use the function of the hand better. To realize the diversification of education needs more investment. The teachers’ role is to instruct students to learn knowledge and master basic skills. This is a long and obscure line. Humanity’s survival needs many abilities such as taking care of themselves to survive, the ability of learn, having good comprehension, implementation capacity, communication skill, the ability to face the frustration of endurance and so on. This cannot be fully realized by a teacher, since the cultivation of the ability is the result of the joint action of family, teachers and society. Ability of daily life is the result of the training from parents and preschool teachers. This stage is the most important for children to develop the good habits of life. During this period, children learn to gargle, brush teeth, eat, and tidy up the toys, etc..

In primary school, children learn to read and understand the correct meaning of the words from others' expression, learn self-expression of requirement, develop the good learning habits. It also requires the cooperation between parents and teachers, in order to get twice the result with half the effort in the educational procession. In foreign countries, students of grade five or six in the primary school must learn to wash clothes, iron clothes, and keep the room cleaning and other household duties. They learn to do a new and simple meal once a week. They will have the basic life self-care ability after one semester. Our country’s education is missing in this regard. In addition, they will lead the students to carry on diversified experience, to find their own interests and hobbies. The students will keep sustained attention on the thing which they are interested in for a long period of time. Parents and teachers should guide pupils correctly. Although the entrances are different, the ultimate goal is the same. The interest can be driven by the learning. Currently, our main task for teachers is that they should teach students to know how to read, writing, arithmetic, do handwork, etc. China’s education did well in learning to read, writing, arithmetic, did not well in the aspect of reading and doing handwork. Parents also strengthen the influence of score on students too much, and ignore the cultivation of the ability to survive. Parents and teachers tend to ignore the feelings of students in the communication. Chinese children are so timid that they afraid to express themselves positively. Therefore, more Chinese children’ psychology is conservative.

In middle school, the students’ academic is aggravating. Parents overlook the developing of the interests of students. Teachers complete the teaching task granted by the ministry of education as the main purpose. They have no energy to consider other things in the long-term stress. And parents also ignore the training of children’s acting ability and spirit of exploration.

In high school, for the purpose of the examination, parents and teachers will work together to cultivate the students’ examination ability, and evade the cultivation of students’ exploration, organization, operation, communication ability.

The students won’t have time to cultivate their own interests until they go to colleges, and they can increase their mutual communication and coordination ability though participating in various community together with the students of the same age. In the education process, we pay too much attention to the culture of knowledge and neglect the development of ability, we focus on training diploma and ignore culturing skills, which eventually lead to the deviation of educational goals.

3.2 To Strengthen the Experiential Education and Individualized Counseling

Based on the law of biodiversity, the training and improvement of students’ comprehensive ability requires
to strengthen the without experiential education and individualized counseling. Experiential education can help increase students’ understanding and positioning of themselves to plan their own life better. Individualized counseling can help to develop their strengths though accentuating their strengths rather than managing their weaknesses. Therefore, we should strengthen the students’ experiential education and individualized education.

Nationalities should increase investment in education to enable students to participate in experiments and practice, and we can develop their operational abilities and enterprising spirit though this way. Teachers and classroom teachers should unite up and give students targeted psychological guidance and school work counseling to help their healthy growth of talent.

4. DISCUSSION ON THE EDUCATIONAL INVESTMENT BASED ON THE MINIMUM ENERGY DISSIPATION PRINCIPLE

Education is never free, and the free education is just a slogan. Education has never been free of charge ever, so educational investment is an unavoidable topic. Education investment includes three different parts, the national investment, the family’s investment and time input. With the development of economy and society, there are large differences in the educational investment in different times and social stratum. However, this phenomenon can be explained by the minimum energy dissipation principle.

4.1 The National Investment Is Insufficient

Nowadays, China’s investment in education can’t match the sustained economic growth in the recent 30 years, which don’t match the population base in China too. In the last 30 years, China’s averaging growth rate in GDP is over 8%. In 2012, the rating of the state financial educational funds expenditure in GDP exceeded 4% for the first time, which reached 4.28%. And in 2013, this ratio just reached 4.30% (Sina.com., 2014, November 7). In 1970s, the middle school students can do some classroom experiments such as physics, chemistry, biology, and so on. Some survey found that there are few experiments in present high-school teaching practices, which show that the national investment in education is far from enough.

The competition between countries not only includes the dispute in technology and economy, but also the dispute in the relevant talents. Besides, China’s talent reserve is far less than the western society’s. In fact, this has a great relationship with the difference between Chinese and western education system and the difference of talents training mode. Some researches show that China’s compulsory education is superior to the indulgent, indolent Western education mode, and is inferior to the democratic education in Western countries. China’s education mainly focusses on the compulsory education, and takes the democratic education as an alternative choice. The goal of China’s education is to increase the popularity of education. Due to limited China’s national strength, the educational investment is insufficient. Actually, at the present stage, it is difficult to realize the democratic education and let every educated love education and like education.

The primary task of education is to teach students learn to survive, ignite their ideas, and help them find the path and direction of future. What’s more, education should make the students start to work for the unification of the individual ideal and the national ideal. In order to achieve this goal, the educational investment in different countries and families is different.

In summary, affected by the minimum energy dissipation principle, China’s education excessively emphasis on the increase of the educational popularity instead of the increase of educational investment, which finally results in the inadequate national investment in education. Teaching staff cannot meet the student’s needs, the quality of education is obviously becoming lower and lower.

4.2 Families’ Educational Investment Varies a Lot

Most families’ life are affected by the minimum energy dissipation principle, and every family wants to get superior returns with a lower invest. But, since the actual economic situations vary a lot between different families, the impact of this principle to every family is at different levels, and the educational investment varies a lot among different families.

In China, the amount of family investment in education is directly related to the family economic status. And, they can be divided into the following three kinds: families with good economic foundations, families with weak economic foundations and middle-income families which are neither poor nor rich. Different family circumstances and educational investment will also affect the child’s study and growth. Families with good economic foundations won’t be easily influenced by other factors since they have good payment capacity, and their investment in education is much greater than other families’.

What’s more, these kinds of families also have a greater ability to absorb and employ some social resources. Overall, students from such families will spend less time and energy during their learning processes, but their situation are not similar because of their different growth environment. The most notable difference exits among the children from rich families, some of them become playboys making their parents feel pain, a few of them become the cream of society, and most of them are doing well.

Because the families with weak economic foundations always have a weak payment capacity, their educational investment is much lower than other families’. The family’s economic and living status usually has a great
impact on the children’s growth and education, and the disadvantage of such families will eventually translate into the children’s learning advantage. Students from these families often know the meaning of self-reinforcing and the importance of study better. Most of them cherish the opportunity to receive education, and they study hard with clear objectives. Although they may spend more time and energy, they will finally realize the value of life through their own efforts. Their time input may be lower than others, but the majority of them become the middle or upper levels of society after growing up.

The situation for those middle-income families, who is neither too poor nor too rich, is in an awkward condition. The group is the majority ones. Most families choose to increase the investment in education to make their children receive as much education as possible influenced by the traditional Chinese culture. But the result is not entirely satisfactory, some children’s professional knowledge is still weak after receiving higher education, and they feel confused and helpless about the future. Generally, those children will be roughly differentiated into the following three types. The first type is those who turn themselves to study, and most of them ultimately create ideal paths for professional advancement though studying. The second type is those who don’t regard studying as the only way out, they start to do social practice in college, and most of them will find a job after graduation due to rich practice experience. Some of these students try their best to start a business, and parts of them ultimately have some assets. The third type is over dependent on family, these children are cowardly, and most of them have an ordinary university life, and can find a job after graduation. But, there are still a few students will be one member of the unemployed army due to their improper employment idea. Some of them even become so-called boomerang generation. The amount of whole education investment of this kind of family is at middle level. Most of these children’s time input is higher than others, and the difference between individuals is the most visible.

4.3 The Time Invested in Education Is Not Enough
As an important part of the educational investment, the time invested in education is also influenced by the minimum energy dissipation principle. However, affected by the content of family education, behavior methods and other factors, the time invested in education varies among different countries and families.

In the countries with relatively advanced economy, such as the United States, the majority of adult students feel ashamed to receive parents’ financial aid, so they participate in social practice actively while completing their education tasks. These students’ studying goal is quite clear, they will often get out more learning effect. Nowadays, with the acceleration of economic globalization, multinational study is becoming more and more popular. Because of language barriers, many international students’ study may be not going well at the beginning. But most international students are hard-working; those who keep working will be succeeding in their studies ultimately. For them, the time and energy cost of their pay for progress is often higher than normal ones.

In different regions of China, the time input in education by the society and families is varied too. Take Fujian Province as an example, the majority children from rich families often end their study in school quietly early because their academic performance are below par, they need to take over the family business, or some other reasons. Their parents will use this period of time to develop their survival skills directly and enhance the ability of independent though helping them attend actual business practices by cultivating a competitor to their own business instead of making them participate in the management of family business. By this way, they finally get an echelon mode to cultivate talents. In this field, the experience for Fujian Province is better than those in the foreign countries. They make their children to be talents by guiding education instead of giving up management. So, the investment in education will appear the differentiation because the difference in national education systems and individual learning ability.

4.4 Increase the Investment in Education to Improve the Quality of Education
In a word, the national investment, the family’s investment and time input in education are all governed and impacted by the minimum energy dissipation principle. Under different economic and social background, this principle has different effects on individuals, and the difference is great. To add to the investment in education is the prerequisite condition to improve the quality of education. Therefore, it is necessary to strengthen publicity and weaken the influence of the low-energy principle on the investment in education. We can improve the level and efficiency of educational investment from this three levels: the state, family and personal time investment.

5. DISCUSSION ON THE EDUCATIONAL PHILOSOPHY BASED ON THE ALTRUISM
5.1 The Connotation of Altruism
The altruism in the process of biological evolution is a natural attributes, rather than community property. Altruistic behavior is not always absolutely beneficial to the individual, but it is absolutely beneficial to its affiliated groups to optimize and strengthen the whole population. Therefore, altruism in social biology is not a unconscious and expecting act the mutual aid within groups, instead of the so-called unconditional altruism, which is irrational and seeks nothing for repay. Education should develop and cultivate students’ altruism, and guide
them to achieve win-win situation though cooperating with others, to become persons who concern about the partners’ interests as concerns about their own rather than being egoistical ones.

5.2 An Analysis of Educational Philosophy Based on the Altruism

Deeply influenced by the traditional culture and some other factors, some Chinese people often praise highly on the profitability of education ignoring the culture of cooperation, solidarity and openness. Currently, there are a lot of blind spots in Chinese education. For example, the score is regarded as the sole standard to measure students’ performance and the quality of education, which can’t meet the diverse needs for talents, individualized education conducted under the principle of diversity is ignored which is beneficial to the development of students’ specialties, and the teaching method is to simplified which is not conducive to training of talents.

Although China’s education is still some way away from the democratic education, there are also some mitigating virtues in China’s education. Some studies show that democratic education is superior to compulsory education, and the compulsory education is better than indulgence education. Although the probability for the Chinese students who have been studied abroad to become successful may be higher than those who finish his whole education in China. Currently, a significant proportion of students who are studying abroad don’t focus on learning more knowledge, so their learning objectives are not clear and the learning outcomes is inevitably poor. Most of them come from wealthy families.

5.3 Transform the Current Educational Philosophy and Strengthen Education of Altruism

We can conclude that one of the most serious problems of China’s education is the lack of altruism education. When money, position and fame become the whole society’s standard to judge the achievements of youth, the altruism of education begins to be farther away from us. At present stage, China’s evaluation system to students and education is too unilateral, which will be profitless to the development of individuals.

Therefore, we need to conduct researches on the diversified evaluation criteria for students, and use diversified standards to evaluate the education and students. What’s more, we should take a variety of teaching methods to suit the needs of different students achieve educational benefit, in order to reach a win–win situation in education.

CONCLUSION

With the acceleration of economic globalization and the arrival of the age of knowledge, the importance of education is particularly highlighted. Influenced by the marketing economy, the developing environment of education is opened like a Pandora box, and China’s education is no longer a piece of pure land, it is affected by many factors. In China, the idea that studying is useless and lazy behaviors among students during studying is becoming more and more popular. There are many outstanding problems, such as the heavy emotional weariness among students, the improper teaching methods used by parents and some teachers, the vacancy of national survival education, the insufficient national education investment, and the lack of altruism education ideas. Today’s education market is in confusion, many questions are in the dispute, like the real object of education.

These issues are unfavorable to the development of nationality, education and society. Only if we strengthened interest education, experiential education, individualized education, and survival evaluation, and we innovated innovative educational evaluation system based on the relevant theories in sociobiology, we can improve the level and quality of education to make education become fully effective. Every educator should not only fully exert his subjective initiative and innovative working methods and theoretical knowledge to do their jobs well, but also appeal to relevant departments to take measures to solve the problems exist in education.

With the gradual strengthening of the economic ties between different countries, education is no longer a question of just one country, and it is becoming an important issue related to the human development. Education is an issue of the whole country, which matters the long-term development of the whole country, so we cannot ignore it. Therefore, to solve the problems in education needs the exploration from all sectors of the society. This paper just makes an explorative attempt, and we are looking forward to more and more people with visions in the world can do some in-depth research to form new insights.

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