QUALITY OF HUMAN RESOURCES: NATURE OR NURTURE?

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ABSTRACT

This paper reexamines the age old question: Why certain nations become so prosperous, resourceful, and advanced in science and technology capability, while others remain deprived, powerless, and undeveloped. On one side, it is generally believed that the quality of human resources is genetically descended from generations to generations through a natural evolutionary selection process that has lasted for thousands of years. The outcome of this selection process determines that the superior species eventually get settled in environmentally favorable geographical regions of the world. So, here it is nature that plays the dominant role. On the other side, once a species is settled in any particular region, further genetical and cultural evolution of the species is strongly influenced by the circumstantial environmental factors. So in this case, nurture plays the dominant role.

Comparison between different nations of widely varying cultural development stages indicates that superior species, settling in favorable geographical and climatic regions, eventually develop an advanced society characterized with wealth, power, and sophisticated science and technology capability. It is concluded that the logical steps toward progress must first start with accumulation of wealth, then the wealth will allow the acquirement of power, and only after that the wealth and the power will open the way toward advancement in science and technology capability. Further observation indicates that nations thus far ridden with poverty problems, will never acquire power in the true sense, and this means that they will never progress toward science and technology capability. The acquirement of wealth and prosperity as the first and primary requirement toward further progress seems to be strongly influenced by demographical, geographical, and cultural factors. The demographical factor is suspected to be the most prohibitive one. Poor nations with overpopulation problem will usually be overwhelmed and helpless to solve the associated problems such as poverty, hunger, poor health and education services, wide scale unemployment, environmental and ecological degradation, and so on. This means that they will never progress toward achieving reasonable capability in science and technology.

Keywords: quality, human resources, nature, nurture.

INTRODUCTION

Comparison between different nations of widely varying cultural development stages indicates that superior human species settles in favorable geographical and climatic regions of the world and characterized with wealth, power, and sophisticated science and technology capability. Poor nations, on the other hand, usually settle in less favorable regions, both geographically and climatically or otherwise, and they are characterized with poverty, helplessness, and underdevelopment in many respects. Age old question has been asked for centuries, why there are such contrasting differences between rich nations and underprivileged nations.

One quick guess to answer the question is that the quality of the human resources is the dominant factor, thus it is nature that plays the dominant role. Further consideration may lead to the suspicion that local, geographical, climatic, and cultural factors may strongly influence further development of the human species, thus, in this case, nurture plays the dominant role. A compromise between the two schools of thought is that both nature and nurture play the same roles and that the roles may be concurrent. The ultimate quality of the human species depends strongly whether nature or nurture is the most dominant factor.

Early Development of Human Species

Modern human arose by multiple evolutionary events involving different survival of populations, geographic range expansions, and migrations. Studies show an overall pattern of group differentiation and movement across the world, suggesting that population expansions and genetic drift process might have been going on for thousands of years. The genetic information suggests an early diversification, dispersal and wide spread distribution of human populations within Africa. Paleo- anthropological records suggest that this occurred during an interglacial period 130.000 – 90.000 years ago. Formal evidence shows the presence of modern humans and east African animal species in the Middle East at this times. Paleo- climatic records suggest an onset of glacial climates 70.000 years ago, accompanied by the fragmentation of African environments. This isolated both northwest and northeastern most Africa from each other and the south. Isolations allowed African populations to evolve the variation later exported out of Africa more than once through multiple dispersals of different African groups. The current diversity found outside Africa is therefore a magnification of a process of diversification within Africa 90.000 to 50.000 years ago. Genetic study of the Y-chromosome shows further that various populations trace their ancestry to Africa, and the descendants replaced the archaic human chromosomes later on. Numerous Y-chromosome populations have been identified outside Africa, but their definition still requires more data and further study.

Around 120.000 years ago, the first species of modern human, usually called Homo Sapiens, emerged most likely in Central East Africa, from there migrated into the Middle East, South Africa, Europe, Central Asia and finally into American continent. The timing of Ice Age cooling, and the amount they lowered ocean levels, specifies the geological periods in which it was possible to migrate to land masses otherwise separated by sea water. When the last Ice Age reached its maximum, the sea level had dropped more than

seven meters below what it is today. By that time modern human had radiated out of Africa into Europe and most of Asia including Australia. The backwater of human evolution, Eastern Homo Erectus, lived in parts of Asia where ecology varied much less with climate than it did in Africa and Europe.

Further Adaptation to Local Factors

After migration and then settlement in any particular region of the world, the populations tend to adapt to local geographical and climatic environment. Human lifestyles evolved as an adaptation to the local environment. The adaptation is a continual and learned process. In addition to genetic adaptation that might influence the physical characteristics of one particular population, the cultural adaptation might be even more important.

The process of adaptation is a natural selection process that adapts the human species to the local environment and this takes place by weeding out some traits and reinforcing others. The harder the hardship imposed by the environment to the population, the stronger and the tougher the population will become in order to match the challenges of the environment. In very cold climate, for example, people will have to try very hard to cope with the hardship of the severe whether by building proper houses, providing heating for the house, wearing warm clothing, and eating sufficient nutritious food. With these kinds of challenges, only strong, healthy, and smart individuals will survive. The result is a population that is better able to develop higher levels of civilizations and culture characterized with wealth, power, and progress in many respects (science and technology, arts, music, life styles, etc.}

The populations that finally settle in regions with milder climate do not have to face the same hardship imposed by the very cold climate. Here, people do not have to wear warm clothes to survive the hard winter, to provide themselves with proper houses with heating because the weather is mild, they do not have to work hard to provide themselves with food because practically everything may grow in the backyard.. Such easy life certainly will not result in genetic evolutionary selection process in the positive sense.. On the contrary, the populations that have to face the severe hardship tend to become stronger in order to match the challenges. The populations that become too comfortable will not weed out the detrimental characteristics, and the result is a gradual degradation of the population quality. It is generally observed that populations that become too comfortable will tend to reproduce more rapidly than the resources can support. The more rapid the population growth, the more limited will be the resources, and it is obvious that it will soon lead to conditions of poverty, environmental degradation and even cultural degradation. It is to be noted that wealthier nations indicate much lower population growth in comparison to poorer nations.

Contrasting Differences Between Rich And Poor Nations

The contrasting differences between rich nations and poor nations are worth to be noted. History has indicated that there is a strong correlation between the per capita income of one nation with the science and technology capability. The higher the per capita income the higher will be the science and technology capability. Richer nations with very high

science and technology capability having only 20% of the world population control more than 80% of the world riches. Comparison between science and technology capability of rich nations and poor nations is very striking. Rich nations own 90% of the world scientists, and in terms of research budget rich nations even spend more than 98% of the world research expenses. The per capita research spending of poor nations is only 1/333 of those of rich nations.

The majority of the poor nations is helpless in developing their science and technology capability Many are even only able to spend much less than 1% of their development budget for research purposes. It is generally believed that it is almost impossible to develop a capability in science and technology under severe economic and financial constraints. It seems it is almost impossible for the poor nations to catch up with the richer nations, let alone to overtake them.

Logical Steps Toward Progress

In view of the foregoing discussions, it is assumed that the primary requirement to be able to move toward progress is first to become wealthy and prosperous. Only with the wealth and the prosperity, the first step toward progress could be made. Without the wealth and the prosperity, any nation would be powerless to achieve anything, let alone power and sovereignty. Poor nations will be vulnerable to outside domination in all respects: economics, politics, military, culture, and will be too dependent on outside help.

Constraints Toward Progress

The question that remains now is how poor nations could become wealthy and prosperous? Many developing nations have been trying very hard to catch up with more advanced countries by embarking on ambitious science and technology based development, only with failure and disappointment. Other nations have tried to reap benefit from the abundant natural resources available at their disposal only to realize that the resources are limited and depleting very rapidly and will soon run out before real prosperity could be realized.

Observations suggest that the key factor toward progress is not the abundance of natural resources but rather the quality of human resources. The quantity of human resources, in other words the over population problem, is certainly a weak point toward progress. Nations that are ridden with over population problem are usually overwhelmed by problems associated with over population such as poverty, hunger, poor education and health services, inability to overcome environmental degradation, wide scale unemployment, severe urbanization, social upheaval, acute energy shortage, etc. Many of the overpopulated nations are now already in critical situations with respects to those problems.

It is to be realized that no matter how bad the situation may look now, the longer term prospect is even worse considering that the population will very likely double within the next 35 to 40 years.

Conclusions

Comparison between different nations of widely varying development stages indicates that superior nations settling in favorable geographical and climatic regions of the world, eventually developed an advanced society characterized with wealth, power, and sophisticated science and technology capability. Less superior nations, on the other hand, settled in less favorable regions and usually remained deprived, helpless, and undeveloped.

It is concluded that the logical steps toward progress must start with the accumulation of wealth, and then the wealth will allow the acquirement of power, and only after that the wealth and the power will open the way toward advancement in science and technology capability.

Further observations indicate that nations thus far ridden with poverty problem will never acquire power in the true sense, and this means that they will never progress toward science and technology capability. The acquirement of wealth and prosperity as the first and primary requirement toward further progress seems to be strongly influenced by demographical, geographical, and cultural factors. The demographical factor is suspected to be the most prohibitive one. Poor nations with over population problem will usually be overwhelmed and helpless to solve the associated problems such as poverty, hunger, poor health and education services, wide scale unemployment, environmental and ecological degradation, immense social upheaval, and soon. This means that they will never progress toward reasonable capability in science and technology.