

# **Ecological Maintenance: New Concepts and Approaches**

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*This study discusses the difficulties in current ecological maintenance, re-interprets the concept of technology under multicultural context, and explores the diversified development and environmental protection approaches. It is suggested that the current ecological crisis is not a qualitative, but a quantitative problem, which can be solved by human society itself. In order to construct a new concept on ecological maintenance, it requires humans to sort out the traditional ecological knowledge case by case, to inspire the confidence of people of all ethnic groups in their own knowledge, to improve the ecological knowledge and skills of the region, to give full play to the ecological knowledge value in this region, and finally to realize sustainable ecological maintenance.*

*Keywords: Ecological maintenance, ecological concept, multiculturalism, ecological crisis*

## **INTRODUCTION**

The global ecological crisis broke out in the contemporary era, and the industrial type culture in this era occupies the mainstream position (Luo et al., 2015). As a result, when people evaluate the gains and losses of ecological maintenance, they will point the finger at the industrial cultures, criticize its serious mistakes in ecological maintenance, and demand that the industrial ethnic groups bear all the consequences. As a process of cognition, this is not surprising and understandable, but it must not be made concrete. As there is no end to nature or society, but there is always a limit to human understanding (Cadotte et al., 2011). Industrial culture is only one part of human society, and the knowledge it forms is limited. It is not qualitatively different from other types of culture in human history. So it is understandable that there have been mistakes, even very serious ones, in the treatment of ecology. At the same time, it is impossible to take specific responsibility.

Specific ecological maintenance mistakes are committed by any ethnic group, but can be saved in the end (Schmidt, 2018). Therefore, only to investigate the responsibility of industrial ethnic groups cannot change the passive situation of human society in the face of ecological crisis. The only way to change this situation is that, to explore the nature of the mistakes and the process that led to the ecological crisis. Only with a broad understanding of this issue can one ensure that all ethnic groups in the world today are able to calmly face ecological challenges and coordinate in specific ecological maintenance actions.

## DIFFICULTIES IN DEALING WITH ECOLOGICAL PROBLEMS

A striking feature of the current ecological crisis is that many forms of material and energy movement from the inorganic world have been introduced into the life systems of the earth, and the main impetus for this introduction comes from the industrial-type ethnic groups (Yuan, 2018). Such introduction, which is the inevitable result of cultural development and the needs of human society, makes human society powerful enough to partially change the earth's surface living environment, thus improving the quality of life of human society. The problem, however, is that humans must clearly realize that such introduction should have a limit and not threaten the safety of life system on earth (Luo, 2014). In this sense, the current ecological crisis is not a qualitative problem, but a quantitative problem. If we humans do not absolutist industrial type culture, even if industrial type culture no longer exists, or all the ecological consequences of industrial type culture break out, human society and its culture have not come to an end (Simberloff, 2018). In other words, the current ecological crisis is not fatal to human society, but it can be solved by human society itself.

At present, the key question is whether human society can find a regulatory mechanism to control the consumption of non-renewable energy within the tolerance, or can find an alternative that would keep the quality of human life the same without consuming so much fossil and nuclear energy. Then all the ecological consequences caused by the current industrial culture can be gradually eliminated, and human society can also obtain sustainable development (Rees, 1992). To achieve this, it is far from enough to rely on industrial type culture alone. To ensure that the ethnic groups of any type of culture can equally participate in the global ecological maintenance, it is necessary to construct a premise that the values and cultural construction system of industrial culture cannot be imposed on other ethnic groups (Hann & Hart, 2011). Since the industrial type culture is in the mainstream status in the contemporary, the construction of such a premise obviously needs it to take responsibility. It also has the ability and obligation to assume such responsibility (Luo, 2009).

The global market system is a derivative of industrial culture. Human's understanding of this derivative product should also be divided into two sides (Luo, 2014). On the bright side, it is this system that gives mankind a macroscopic global perspective, thus giving the ecology a global perspective. This is a priceless treasure of human society. On the bad side, it is this market system that obscures the biological nature of human beings. So that the world's ethnic culture is led by the market. It is neglected that any culture must be parasitic in one or more specific ethnic ecosystems in order to continue and develop normally (Yang & Peng, 2015). The main enemy of ecological maintenance was that in pursuit of direct economic benefits, all ethnic groups almost ignored the ecological adjustment of culture. Ultimately, it reduced the total capacity of human society to adapt to life system on earth.

The system of life on earth is a complex, massive system. To maintain a safe parasitic relationship with it, it is necessary for human society to have rich and complex means (Jacobs, 2017). However, the globalization of economy has led to the unilateralization of market value. Such unilateral market values alone obviously cannot cope with the multiple feedbacks of the complex earth life system. Such a large system must be full of multiple and complex ways of feedback, and has an enormous variety of contingency. Once the values of human society are unified, the feedback of the earth life system may shake the stability of human society. This is another major mistake in the ecological maintenance of contemporary human society.

At present, economic globalization is a trend, which means that there will be ebb and flow. The best way for the world's peoples to respond to this trend is to acknowledge its existence, but cannot rely too much on it. People of all ethnic groups shall activate their own mechanisms of cultural exclusion and resistance, to keep this trend in check, lest people forget that one of the essences of culture is that culture needs ecological adaptation. Only in this way can people not be so deeply immersed in economic globalization that ethnic culture becomes its funeral objects when the tide receded. Industrial cultures have not only spawned the market system, but also raised the wave of economic globalization for its own interests. The ecological crisis caused by economic globalization is the result driven by the self-interest of industrial cultures. Therefore, industrial cultures must take corresponding responsibility for this.

Another major mistake of industrial cultures in ecological problems was that it transferred the responsibility of ecological disaster to other ethnic groups (Liu, 1992). The most advanced industrial ethnic groups in the world had been aware of the dangers of ecological problems in their infancy. But the ecological issues had not been on the agenda for a long time. When the ecological problems became extremely serious, they adopted another irresponsible attitude, that is, to transfer the ecological disaster to other ethnic groups (Yang & Yang, 2015). Under the cover of the market system, under the guise of false equality and human rights, this transfer had long blinded other types of peoples (Zhang & Wang, 2013). Until the laws of the system of earth life came into play. When those ecological disasters that had been transferred to other ethnic groups recoil through the operation of the system, and finally threaten the industrial ethnic groups. They were forced to acknowledge the global significance of ecological crisis and began to seriously treat the issue of ecological maintenance (Yang, 2006). This approach can mobilize people from all over the world to participate in ecological conservation.

It can be seen that the industrial ethnic groups had led to many ecological disasters in the process of development, but those were not their primary responsibility, because every new culture in human history has had this experience. The main responsibility of the industrial ethnic groups was to transfer the responsibility of ecological disaster to other ethnic groups. One question for other ethnic groups to consider is, for them, what should be the goal of development, to imitate industrial civilization unconditionally, or to take another road?

## **NEED OF RE-UNDERSTANDING “TECHNOLOGY” IN MUTICULTURAL CONTEXT**

The nature of culture determines that both ecological adaptation and social adjustment are essential for culture. The unilateral intensification of social adjustment is a dangerous try for non-industrial cultures (Xun & Bao, 2008). It is by no means a wise choice for other cultures to accept the transferred ecological disaster, in order to be similar to the industrial culture. The establishment of such knowledge is also essential to the construction of conscious ecological maintenance system (Yang, et al., 1992).

Another hidden danger in contemporary ecological maintenance is human's superstition to science and technology (Qiu & Chen, 2001). The formation and expansion of this concept is also related to the industrial culture. It is the industrial culture that uses the limited fossil energy as the basis for construction and development. While it has brought humanity great success, it has temporarily forgotten the fragility of this foundation. The energy crisis, parallel to the ecological crisis, is only the crisis of fossil energy, not the real energy crisis. But the overuse of fossil energy has created the illusion that technology can do everything (Luo, 2014). It is this illusion that leads to human's contempt of the traditional knowledge system. And thus develop into a trampling of the ecological wisdom and ecological skills of ethnic groups. As a result, human society must face the biggest ecological crisis ever.

The value of modern science and technology cannot be denied, but it is only a limited part of the human knowledge system and is only a periodic summary of knowledge (Luo & Liu, 2013). In principle, it can only be parallel and complementary to the traditional knowledge that human beings have and should not be placed above all human knowledge (Demerath, 2018). After all, all contemporary science and technology is only the ability to use resources, but never the ability to produce resources. Only the life system can provide resources for human beings. Without resources, science and technology would become meaningless, and ecological maintenance is to provide sustainable resources for human society.

In recent years, many scholars have mentioned the concept of “technological alienation” (Huan, 2017). It indicates that human beings gradually realize the inherent weakness of the knowledge system constructed by industrial culture, which cannot ensure the sustainable development of human beings. The current ecological crisis is largely the result of the abuse of the existing knowledge and technology system. And the most extreme form of abuse is to use it for profit, rather than to promote human wisdom and harmony among peoples (Pan, 2013). The utilization of knowledge in these aspects is exactly the most necessary content for ecological maintenance. Without a clear understanding of the relationship between human beings and the earth life system, the sustainable development of human society is out of

the question, cross-cultural coordination cannot be realized, and modern science and technology will bring more disasters than benefits to human society.

Therefore, all ethnic groups should have a clear understanding of modern science and technology, that it is only a tool at the disposal of human society. It is undoubtedly superior to any previous tool, but the first thing that human beings think about when they use tools is its range of application, unrestrained use will sooner or later lead to bitter fruit. Each ethnic group should seriously consider the application of modern technology and make rational choices based on the specific culture, study modern scientific theories, and put it on the same status as the traditional culture of the group to be treated. Only in this way can the ethnic groups be assured of their relative intellectual independence. Only in this way can the ethnic groups' people make conscious judgments when facing different feedback from natural ecosystems. And only in this way may the human society have as many strategies as possible to deal with the complexity of life systems on earth.

The diversity of ways of thinking among different ethnic groups is an integral part of maintaining the coexistence of diverse cultures. It would be very dangerous for the whole human race to think in one way. Since the coexistence of multiple cultures is the most effective pattern of human society to deal with the ecological crisis, it is imperative to clear the superstition of modern science. Many scholars have mentioned the integration of traditional knowledge and modern science (Chen, 2001). From the perspective of ecological maintenance, it is indeed necessary, because it is the basis of understanding to ensure the coordination of human ecological maintenance. However, hidden in it is the premise that traditional culture, including the traditional ecological wisdom and skills of various ethnic groups, must remain relatively independent, otherwise the integration will lose its meaning.

Therefore, traditional culture should never be simplified with modern science, which leads to the misunderstanding that traditional culture needs to yield to modern scientific theory. On the contrary, traditional culture and modern scientific theory can only be a parallel knowledge system, and they can reflect and communicate with each other, rather than being one in any form. This fundamental ideological principle must not be abandoned, being abandoned means the coexistence of diverse cultures in name only. It is also because modern scientific superstitions bring a kind of illusion to human beings, under which, ecological catastrophes tend to be more deceptive and difficult to cure. This is also the hardest mental block to break through in properly evaluating the effectiveness of ecological maintenance.

The one-way tilt of the earth's biological resources consumption expands to the global scope, which is the last mistake left by the industrial culture for the contemporary ecological maintenance. As the parasitic body of the earth life system, human society has no ability to yield to its own will, only to understand the essence of the earth life system so as to make balanced use of it. However, due to the need of adjusting inter-ethnic relations, social adaptation always covers up ecological adaptation. Thus, it leads to the deviation of the ethnic habitats to the natural ecosystem, which expands and superposes unconsciously. Thus the one-way tilt to the use of the earth's resources developed.

However, extending this one-way use mode to the whole world is a difficult problem for modern ecological maintenance left by industrial culture. To this day, human society has created a situation where human activities have cut off many original food chains and made the flow of living matter and energy and their information among many biological species yield to human will. Thus, the ecosystem loses the regulation function of self-repair and mutual replacement. In a sense, human society has had to replace some species to participate in the material and energy cycle of earth living system. However, human society does not care much about these circular channels of information control, resulting in the abnormal behavior pattern that uses without restraint, and does not follow the application rules. It is difficult for human society to co-exist with its host for long without changing the mode of operation that deviates from the earth life system.

Correcting this error is even more difficult, because human culture has its own weaknesses, that is, in order to ensure that culture is firmly maintained in the society where it lives, the more stable and consistent culture is, the better. Once the one-way consumption of the earth biological resources is accepted by the members of related ethnic groups, the correction must challenge the instinct of the continuation of cultural inertia, so it must involve the reconstruction of related cultures. At present, on the

issue of ecologic problems, humans have yet to be alerted to this error, which will have even greater adverse consequences.

## **APPROACHES TO EFFECTIVE ECOLOGICAL MAINTENANCE**

For different ethnic groups and countries, due to the differences in environment and social and economic development level, the ecological concept also presents their own characteristics in their development goals.

Since the beginning of the 21st century, scholars have put forward many useful insights on the construction of new ecological concepts from the perspective of their own disciplines. Chen (2001) argues that industrial civilization has not only contributed greatly to the prosperity of human society, but also brought about environmental and energy crises. It not only hinders the economic growth, but also puts the entire human society in a difficult position for its sustained development. Therefore, the ecological concept of mankind must turn to a new civilization, which is, taking ecological civilization as a sustainable development concept of harmonious co-evolution between human and nature. The characteristics of these ecological civilizations are embodied in: ecological material production, ecological lifestyle, and ecological social system. He put forward that there are two effective ways to achieve ecological civilization. First, improve the production processes and advocate clean production. Second, optimize human lifestyle and establish reasonable consumption concepts.

Since the 20th century, the ecological problems faced by human society are very complicated. It is embodied in the following aspects: the problems of overload utilization of various energy resources and the disposal of toxic “three wastes” cannot be solved scientifically. This is a consequence of the simplification of the way resources are used (Cadotte et al., 2011). However, the simplification of resource utilization mode is due to that after the disintegration of the original cultural system of restriction and balance, the new structure cultural restriction and balance relationship has yet to be constructed, and this is an inevitable corollary to this transition. Similar situations have been repeated many times in human history. It is just that the specific content and scope of the impact are slightly different from current society.

The goal of ecological anthropology is to shorten the transition period, and accelerate the construction of new cultural pattern. To achieve this goal, the ecological anthropologists need to find the weakness of the cultural operation of today’s powerful ethnic groups, help the disadvantaged people to obtain stronger ability to develop, promote the diversification of the use of resources of powerful ethnic groups with the guidance of culture reconstruction and cultural elements grafting, guide ethnic groups to complement and benefit each other in the use of resources by taking advantage of the objective differences in the utilization of resources among different ethnic groups, gather together the underlying biological adaptation mechanisms of various ethnic groups to develop new renewable resources from the “three wastes”, and take advantage of modern scientific and technological means to make ecological anthropology an important basis for human beings to solve relevant problems scientifically when facing ecological difficulties.

It can be seen that ecological maintenance is quite difficult, and there have been many mistakes in the work of contemporary ecological maintenance. But at the same time, industrial culture has also laid a solid material foundation for the new ecological maintenance, making it possible for human society to cope with the ecological restoration issue from a higher starting point.

Industrial culture has brought the human society extremely rich material wealth. Such wealth creates shocks and disturbances to the life systems of the earth, but humans can apply this wealth to ecological maintenance. For example, while fossil energy can also support human society, as soon as possible to eliminate the emerging ecological disasters, construct an ecological security system acceptable to all ethnic groups in the world, and make the responsibility of ecological maintenance specific to each group while each ethnic group shall fulfill its specific responsibility of ecological maintenance. At the same time, a universal ecological maintenance framework should be constructed to ensure that the ecological behavior of each ethnic group is coordinated (Zhang, 2013).

Industrial cultures have constructed efficient and convenient information network system for human society. It can bring the global events into an observable field in a brief time (Huan, 2017). Taking advantage of this system, global ecological security monitoring will be possible. This is obviously a necessary condition for the construction of a conscious ecological maintenance system. However, it is only material, and cannot replace various ethnic peoples' specific understanding of ecological skills. It is a research task for ecological anthropologists to break through the information barrier and complete the communication of ecological wisdom and skills of various ethnic groups.

The industrial cultures have constructed a series of international consultation mechanisms for the needs of market segmentation. Such a communication mechanism provides places for all human beings to articulate views and thoughts. Making good use of such places is of inestimable value for strengthening the coordination mechanism of various ethnic groups in ecological maintenance. In recent years, the Rio Declaration, the Kyoto Protocol etc. have provided mankind with some issues that need to be considered (Kowalczyk et al., 2015). All these issues are related to ecological maintenance. Therefore, such a communication mechanism can play an extremely significant role in global ecological maintenance, especially in attracting the broad participation of peoples from all over the world. This is an essential first step for extensive ecological maintenance.

## CONCLUSION

The existing ecological maintenance of human beings is based on specific cultures, the definition of ecological concept by different ethnic groups under different cultural conventions, however, varies with different types of culture. Under the background of globalization, as for the concept of ecological maintenance advocated by human beings, people should start from specific ethnic groups to explore and sort out their traditional ecological knowledge, stimulate the confidence of the people of all ethnic groups in their own traditional knowledge, constantly improve the ecological knowledge and skills of the region, give full play to the ecological knowledge value of each ethnic group in this region, and realize the efficient utilization and maintenance of the regional ecological environment.

The modern scientific research, driven by industrial cultures, has brought human society extremely rich of knowledge. It has helped humans raise awareness of life systems on earth and is the theoretical basis of constructing the extensive ecological maintenance system in the future. What's more, industrial cultures have brought a series of effective technologies to all mankind. These technologies will be of wonderful use in ecological maintenance as long as humans can clearly understand their range of application. With such science and technology, combined with the ecological wisdom and skills of various ethnic groups, extensive ecological maintenance can be done well.

In a word, industrial culture not only makes indelible contribution to global ecological maintenance, but also causes many mistakes. And now is the time to clean up these mistakes and start again on global ecological maintenance.

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