Exploring the Sources of Ecological Marxist Ideology

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Abstract
Ecological Marxism is an important product of the Western green political movement and one of the most influential schools of Western Marxism. It takes Marx's discourse on the relationship between human beings and nature as an important source, the Frankfurt School's theory of ecological crisis as a direct source, and the theoretical achievements of ecology and futurology as an indirect source, and melts the theoretical tone of ecological Marxism. Retracing the ideological sources of ecological Marxism has important theoretical significance for us to understand the new development of Western Marxism, and also has important practical significance for the construction of ecological civilization in our new era and the new socialist movement in the world.

Keywords
Ecological Marxism; Man and Nature; Frankfurt School; Construction of Ecological Civilization.

1. Introduction
Ecological Marxism is a new form of the development of Western Marxism in the Marxist camp. It differs from both anthropocentrism, in which everything is measured in terms of human interests and everything, such as nature, is regarded as an object of human conquest and possession, and ecocentrism, which places nature at the center and has postmodernist tendencies. Taking Marx's thesis on the relationship between man and nature as its theoretical source, ecological Marxism has gradually systematized on the basis of the Frankfurt School's theory of ecological crisis and the theoretical achievements of ecology, systematics and futurology, becoming one of the most influential social trends of contemporary Western Marxism. In the new era of ecological civilization construction in China, exploring the ideological sources of ecological Marxism and identifying the contemporary value of ecological Marxism is not only of great theoretical value for us to understand the new changes in contemporary Western Marxism, but also of great practical value for the construction of ecological civilization and the new socialist movement in the new era in China.

2. Important Source: Marx's Discourse on the Relationship between Human beings and Nature
Marx's discussion of the relationship between man and nature is an important source of ecological Marxist thought. In his criticism of capitalism and his discussion of the future outlook for society, Marx addressed the issue of the relationship between man and nature. In Marx's ecological discourse, the relationship between man and nature undergoes a process of negation and negation, in which the dialectical unity of man and nature is the natural relationship between man and nature; the ecological crisis and the rupture of the metabolism of man and nature under the domination of capital logic is the real relationship between man and nature; the realization of communism is the inevitable relationship between man and nature, and this inevitable relationship is manifested in the real world, the reconciliation of man and nature This
inevitable relationship is reflected in the real world in the reconciliation of man with nature and man with man.

2.1. The Natural Relationship between Man and Nature: The Dialectical Unity of Man and Nature

Marx believed that man and nature are mutual objects, and that man’s existence depends on nature’s existence, and nature’s existence is confirmed by man’s existence.

First of all, nature is the basis for the survival and development of human society. First, nature is the inorganic body of man, and man lives by nature. As a natural being, man follows the laws of survival and development of man himself while also following the ecological laws of man himself. The material materials on which man depends for survival and development come from nature, which is the rich source of social wealth and the place where man survives. Second, the physical organization of the individual and the resulting relationship of the individual to other nature is the premise and foundation of human society. The first historical action taken by man as a living individual is to produce his own means of living in nature and to exchange material goods with nature in order to meet the needs of human survival and development. In this process, human beings obtain the use value of natural objects by resourceizing them, making natural resources not only a rich source for agricultural production but also a rich source for modern industrial production.

Secondly, man is an object being, set by nature, and is the unity of the energetic and the passive. According to Marx, “man, as a natural, corporeal, sensual, and object being, is, like plants and animals, a passive, conditioned, and restricted being” [1]. On the one hand, human being is a passive, passive being of nature. In the case of man as a being of nature, man must ensure the proper functioning of the organism in the biological sense through the exchange of matter with nature. In the sense of the natural properties of man, man, like animals, follows the natural laws of his own life existence. In the sense that man is an object being of nature, man is a natural being who lives by nature and is set by nature. In the sense of the ecological properties of man, man is an indispensable intermediate link in the flow of matter and energy in nature, and man dwells in the whole natural ecosystem and makes a closer union with nature through practice. On the other hand, man is an active being in nature and the founder of humanized nature. The subjectivity of man determines the exercise of his subjective initiative in the process of transforming nature.

Finally, labor or social practice is the mediator of the dialectical unity of the relationship between man and nature. Marx believed that the defect of the old materialism was that it neglected the subject and understood objects, reality and the sensible world only in terms of objects and intuitive forms. He introduced practice into materialism, dissolved the traditional subject-object dichotomy of existence from practice, and recast the subject-object round relation in deconstructing Hegel’s individual subjectivity and Feuerbach’s transformation of the religious and secular worlds, transforming the traditional intuitive relation of subject-object opposition into a monistic practical relation. This practical relationship is not a mere reflection of the "original image" and "mirror image" between two static entities, but an inner connection between the subject and the object that is constructed by constantly penetrating into each other. On the question of the relationship between man and nature, Marx criticized Hegel’s abstraction of nature as an external form of individual subjectivity, and Feuerbach’s humanistic philosophy of looking at nature passively and intuitively, and broke the barrier of abstract nature. It is through labor or social practice that human beings gradually break away from their dependence on nature and realize the true unity of humanization of nature and naturalization of human beings. On the one hand, Marx believed that nature is a socio-historical nature. Labor is not only a process of material exchange between man and nature, but also a process of formation of social relations. Nature enters into the process of social history due to man’s labor
practice, and only the nature formed in the practice of human labor is the nature of man’s reality. On the other hand, Marx believed that history is the history of nature, and from the long history of human development, even the practical activities after the emergence of human beings have never left nature.

2.2. The Real Relationship between Man and Nature: The Ecological Crisis

The ecological crisis is the inevitable result of the breakage of the metabolic chain between human beings and nature caused by the production method dominated by the logic of capital, and is the real manifestation of the real relationship between human beings and nature in the real world. The dramatic increase in the level of productivity has enhanced the sense of human subjectivity and weakened the degree of human dependence on nature. The capitalist mode of production has contributed to the accentuation of the contradiction between man and nature, induced ecological disasters, and eventually led to the ecological crisis ravaging the world.

According to Marx, the relationship between man and nature under capitalism is alienated from an object relationship to a mutually hostile relationship. From the institutional dimension, capitalist private ownership is the socio-historical root of the alienation of the relationship between man and nature, which exacerbates the alienation of labor and further exacerbates the alienation of nature. It not only makes labor subordinate and serve the rule of capital, but also turns nature into the object of capital’s plunder.

First of all, the private property system has caused the alienation of labor. The mode of production under the capitalist private property system refers mainly to the modern industrial mode of production, and the practice adopted is the alienated labor mode. Under the present industrial mode of production, the great industrial revolution has increased labor productivity and social productivity and expanded the scale of production. Capitalist production is the value appreciation of capital, the way to maximize the realization of capital’s interests. Production under the capitalist system of private property is not to satisfy people’s material needs, but to satisfy the need for capital appreciation. The goods produced by capitalists lure people’s desire to consume through false propaganda and excessive packaging, so that people indulge in them for spiritual comfort, which will stimulate the expansion and reproduction of capitalism and further induce workers’ desire to consume under the capitalist market mechanism, prompting them to constantly pursue high consumption to achieve the purpose of profit maximization. Under this mode of production, people’s labor is alienated by capital; labor is no longer the worker’s own labor, but becomes the labor of others; the more products the worker produces in labor, the less products he or she possesses, and the result of labor is controlled by the alienated capital, becoming an alienated existence.

Second, Marx believed that labor alienation exacerbates natural alienation, leading to sharp contradictions between man and nature, which in turn leads to ecological crisis. Marx pointed out that alienated labor alienates man’s body, nature and even nature outside of man from man. Man is initially a part of nature, but under the catalyst of alienated labor, the external world and sensual nature possessed by the worker through alienated labor do not become the object of his labor and the means of life of labor, but the object of plunder of capital. The essence of capital is to add value, and in order to obtain more surplus value, capital will inevitably exploit nature without limits, resulting in sharp contradictions between human beings and nature and triggering a worldwide ecological crisis. On the one hand, the alienation of nature is reflected in the alienation of human existence in nature, that is, in the relationship between human beings and products. Man is a part of nature, and nature is the embodiment of man's class nature. In the objectivity of the relationship between the product of labor and labor, the product of labor is the objectification of labor, but alienated labor causes the loss of the object of labor, and the product of labor produced by the worker through labor in nature becomes an alienating and oppressive force, "so that the more objects the worker produces, the more he is able to possess..."
The more objects the worker produces, the less objects he can possess, and the more he becomes subject to the domination of his own product, i.e., capital."[1] In this condition, man is separated from nature, and the nature that the worker possesses through his labor is lost. The more man tries to get closer to the essential nature, the more easily he loses it in his productive life, and thus in his ecological environment.

This in turn leads to. In the condition of labor alienation man is separated from nature, and the nature that the worker possesses through labor, is lost and distanced. The more man tries to get closer to the nature, the more easily he loses the ecological environment in his productive life, and causes ecological crisis. On the other hand, it is reflected in the alienation of man’s natural existence. The alienation of labor takes away man’s object existence in nature and makes him a kind of non-object being, leading to the alienation of man’s natural essence into man’s alienated essence, which becomes a means to maintain personal existence only. The more the laborer tries to possess nature through labor practices, the more his productive life is distanced from nature, and even loses nature, and further intensifies the alienation of nature, thus falling into a vicious circle, which eventually leads to the outbreak of ecological crisis.

2.3. The Inevitable Relationship between Man and Nature: The Realization of a Communist Society

Marx believed that only in a communist society can reconciliation between man and man and man and nature be realized, and the relationship between man and nature will finally reach a high state of harmony. In his Economic Manuscripts 1857-1858, Marx gave a detailed description of the development of human social forms the relationship between man and nature, arguing that human social forms are mainly divided into three social forms namely, the initial social form (pre-capitalist society), the second major social form (capitalist society), and the third social form (communist society), and pointing out that social development is closely related to the liberation of man and The emancipation of nature is closely related.

The first is the initial social form, i.e. at the stage of pre-capitalist society. The relationship between man and nature was only a one-way relationship of dependence and obedience, and man's dependence on nature led to man's dependence on man. Even in the period of agrarian civilization, man's cognition of nature has further improved and his dependence on nature has weakened to a certain extent, but it is still very limited, and man's agricultural production is still restricted to nature.

Next is the second major social form, namely the capitalist social stage. At this time, influenced by the industrial revolution, productivity was rapidly enhanced and man’s knowledge of nature increased dramatically. The progress of science and technology led people to use large machines to develop and utilize nature indiscriminately, and people regarded nature as an external object to be transformed, dominated and conquered. At this stage, under the influence of such concepts as "I think, therefore I am", "man legislates for nature" and "knowledge is power", man's subjectivity was further exalted and nature was completely reduced to a tool for man to make profit. Only under the capitalist system is nature a real object of man, a real useful thing"[2]. The ecological crisis is triggered, and the relationship between human beings is also in a state of alienation.

Finally, there is the third social form, the communist society stage. This is an advanced stage in the development of man and nature, when man and man, and man and nature achieve a final reconciliation, and "the united producers will rationally regulate the material transformation between them and nature, bringing it under their common control, without letting it rule themselves as a blind force"[3]. Nature can meet the needs of human survival and development on the basis of quality and quantity, and people can achieve a real return to the true way of man, a leap from the kingdom of necessity to the kingdom of freedom, and a high state of harmony in the relationship between man and nature. This high harmony is, in Marx's view, the
unification of the natural essence of humanism and the humanitarianism of naturalism in a communist society. But this harmony is not the abandonment of the use and transformation of nature, but the adoption of a way to deal with the relationship between man and nature in accordance with the laws of natural development, to achieve the true "red" of communist society, that is, the harmony between man and man, and the true "green" of ecology, that is In the end, a high degree of harmony among man, nature and society will be achieved, and a harmonious and unified ecosystem of man, nature and society will be established. The reconciliation of man and nature is also the reconciliation of man and man.

3. The Direct Source: The Frankfurt School's Ecological Crisis Theory

The Frankfurt School is a combination of Marxism and some Western schools of thought, which criticizes the Western developed capitalist countries from social and cultural aspects. The main theme of its theory is to explore the relationship between human beings and nature, and to criticize technological alienation and consumer alienation from an ecological perspective. Based on the Marxist theory of the relationship between human beings and nature, this school of thought raises the reflection on technological and consumer alienation in capitalist society to the level of reflecting on the entire human enlightenment culture. Linking scientific and technological alienation and consumer alienation to the ecological crisis and the capitalist system, he proposes that the ecological crisis is the crisis of the capitalist system and is the inevitable result of capital's control over nature through scientific and technological alienation and consumer alienation.

3.1. Scientific and Technological Alienation is the Root Cause of the Ecological Crisis

The Frankfurt School's concern about science and technology and ecological crisis began with Horkheimer and Adorno, and has been improved by Marcuse and Rice, revealing that the ecological crisis is the inevitable result of capitalism's double control over human beings and nature through science and technology.

First, technological alienation has intensified the alienation of man and nature. Although Horkheimer and Adorno do not directly address the role of science and technology in the ecological crisis, they place science and technology in the context of the negation of human Enlightenment and culture, arguing that the Enlightenment and Enlightenment culture, which were intended to transcend human beings from the myth of superstition, have lost the qualities of subjectivity and criticality and alienated into a myth of blind worship of rational thinking and science and technology. The delusional pursuit of a form of knowledge that enables man to rule nature has alienated science and technology into an instrument of domination, and the relationship between man, nature, and society has regressed to its peak stage in human history. They placed the relationship between man and man on the basis of the relationship between man and nature, arguing that although the rationalism of the Enlightenment increased the power of man to rule nature and expanded the space for free activity, it intensified the domination of man over nature and the alienation of man from man and man from nature, degrading man to a new state of barbarism. "Nature is visible only in its alienated form. ...... The decline of nature lies in the fact that nature is subject to domination, and without it, the spirit cannot exist" [4]. Horkheimer and Adorno do not treat the relationship between man and nature in abstraction from the capitalist system, but deeply recognize that the capitalist use of science and technology is the root cause of the ecological crisis, and point out that the alienation of technology not only triggers the alienation of man from man, but also induces the alienation of the relationship between man and nature. Marcuse inherited the critical theory of technology from Horkheimer and Adorno, i.e., he explored the relationship between man and nature through the mediation of science and technology, and opened a critique of capitalist society.
from the perspective of the capitalist system. He places the ecological crisis in the capitalist system, arguing that science and technology bring about the ecological crisis is not a purely natural problem, but is closely related to the capitalist relations of production and the capitalist system. In his view, science and technology have improved man's ability to conquer nature, and the bourgeoisie has exercised effective control over nature through science and technology, accelerating man's conquest and possession of nature, expanding man's subjectivity and promoting man's subjective consciousness, and causing sharp contradictions between man and nature. But Marcuse differs from the techno-pessimism of Horkheimer and Adorno in that he believes that the bourgeois use of science and technology is the cause of the negative effects of science and technology, but also provides the material conditions for the complete emancipation of mankind, and proposes the possibility of science and technology in eliminating alienation and providing for the emancipation of man himself. "mechanized and standardized technological processes can release the energy of the individual into an unknown kingdom of freedom beyond necessity" [5], and that the further development of science and technology will transcend the limits of capitalism and science and technology itself, thus eliminating universal alienation in capitalist society and providing the material conditions for the complete emancipation of humanity.

Secondly, scientific and technological alienation creates a double control of capital over man and nature. According to Horkheimer and Adorno, "although the rationalism of the spirit of the Enlightenment increased the power of man to dominate nature, along with this division of labor as a source of evil was the alienation of man from nature" [4]. Rice raises the root cause of the ecological crisis to the realm of ideology, arguing that technology is alienated as an ideological tool for man to control nature, and thus in controlling nature, he is also controlling man himself. Thus, it is necessary to break out of the theoretical mold of technological determinism and to consider science and technology as a means for people to improve their living standards. In his view, the ideology of nature control appropriates and utilizes nature as a material for satisfying human desires, producing goods far beyond people's normal needs and inducing people to consume them in various forms, so that people are "caught between the cracks" of alienated production and alienated consumption. Man's freedom is destroyed by coercive and blind social behavior, and man's efforts to liberate himself from the coercive force of external nature are negated by the harsh control of nature and man, which eventually leads to the self-destruction of man and the ideology that controls nature.

3.2. **Consumer Alienation is the Key to Ecological Crisis**

From the perspective of the capitalist system, the Frankfurt School criticized capitalist society along the main line of science and technology, and further extended its criticism of the alienation of consumption as the key to the ecological crisis. In their view, the current consumption of the proletariat has deviated from what Marx considered to be the means to sustain human survival and satisfy human happiness, but has alienated itself into high consumption beyond what is necessary for its own survival and development, causing people to lose their self-worth and fall into the values of altruism and money supremacy from which they cannot extricate themselves. Under the influence of such values, man's greed for nature becomes more and more unbridled, and the conflict between man and nature becomes more acute, thus further aggravating the ecological crisis.

Marcuse, Fromm, Rice, Ager and others in the Frankfurt School constructed the theory of alienated consumption of capitalism with reference to Marx's theory of alienated labor. In his ecological critique of capitalism, Marcuse mentions that under the domination of the commercialized view of nature, commercial expansion has intensified and commercial advertising is ubiquitous to cut off the balance between human and nature. In order to maximize profits, capitalists use commercial advertising to stimulate people's desire to buy,
resulting in excessive and alienated consumption, thus intensifying the conflict between human beings and nature and causing an ecological crisis. According to Fromm, "the alienated attitude towards consumption is not only expressed in our search for and consumption of goods, but goes far beyond that, determining our leisure arrangements" [6], the arrangements of daily activities that people consume such as, newspapers, ball games, etc. are taken in an alienated and abstract way like the consumption of goods. According to Les and Ager, the bourgeoisie maximizes profits by controlling science and technology to make the proletariat serve and subordinate to the production of luxury goods, and the capitalists guide the proletariat to pursue luxury goods fervently through advertising and media stimulation, and people’s consumption at this time is not just to maintain the needs of survival, but to satisfy the sick and alienated desire of consumption. In this process, the bourgeoisie gained control over production and consumption, but at the same time, it was also controlled by consumption, and the whole capitalist society was alienated by consumer goods, with the consequence that the ecosystem was destroyed and ecological environment problems occurred frequently.

4. Indirect Sources: Theoretical Results of Ecology, Systems Theory and Futurology

The theoretical achievements of ecology and futurology are the indirect sources of ecological Marxism. Among them, ecology "is a science that studies the living conditions of organisms and the interrelationship between organisms and their living environment" [7], the development of ecology can be roughly divided into three stages, the first stage can be divided into the formative period, the concept of ecology was first proposed by the German zoologist E. Haeckel with "General Biomorphology". "We understand ecology as the knowledge related to the economy of nature, i.e., the science that studies the entire relationship between animals and plants and their inorganic and organic environment" [8]. It was later developed into an independent discipline under the influence of Darwinian evolutionary theory. In the second stage of development, ecology was defined as a cross-cutting and comprehensive discipline that addresses the environment beyond the scope of biology, as people paid more attention to ecology and the environment. People combined ecology with agriculture, oceanography, ethics, aesthetics and other disciplines, and a series of marginal and interdisciplinary disciplines were derived, which Donald Wurster called the Age of Ecology. The third stage is the refinement period, on which Aaron Ness proposed the concept of deep ecology, which was later refined in content by De Vere, Fox and others, so that ecology expanded to a comprehensive ecological religious and philosophical worldview and became a new environmental philosophy, turning to the study of the deeper issues of ecology and exploring the roots of ecological crisis in terms of institutions and culture. From the study of nature, ecology has gradually matured through formation, refinement and development, providing a new approach and perspective for Western Marxists to study ecological issues, and laying the theoretical foundation for the study of ecological Marxism.

Systems theory "is an emerging science that studies the patterns, properties, behavior and laws of systems" [7], which began with the idea of systems theory proposed by Ludwig Bertalanffy, an Origenian theoretical biologist and philosopher, and has since been developed to establish the unique status of the discipline of systems theory. Systems theory is not a mechanical combination or simple addition of parts but consists of a number of interconnected basic elements, and its core view is to treat the object under study and the object of treatment as a system, "analyze its structure and function, study the interrelationship between the system, the elements, and the environment and their laws of change, so that the system can be optimized "[7], making it not only a scientific theory reflecting objective laws, but also having the meaning of scientific methodology. Tansley further developed this theory by combining ecology with
systems theory to propose the concept of ecosystem and explore the relationship between biological organisms and their environment. In later developments, the principle of systems theory gradually became the new political science principle guiding the ecological movement, and its view of man as part of the natural ecosystem was taken as the basic principle of ecocentrism, laying the foundation for ecological Marxist thinking about the relationship between man and nature and the ecological crisis.

Futurology is a science of the future, which began with O. K. Flechtheim, who believed that "futurology is a science of the future, which is closely related to history and can be seen as an extension of history to a new time horizon, which must be illustrated, generalized and speculated at a higher level using different research methods" [9]. In the later development, along with the aggravation of the ecological crisis worldwide, the research focus of futurology gradually shifted from socio-economic issues to ecological issues, and was roughly divided into three major schools, namely, the pessimists, realists, and optimists, which jointly explored the future development of human beings and ways to alleviate the plight of the ecological crisis. This has not only provided new perspectives and methods for human beings to construct an ideal future social model, but also provided important references for the development of ecological Marxism.

To sum up, ecological Marxism is an important theoretical achievement based on profound thinking about the dilemma of human existence and development. Based on Marxist positions, perspectives and methods, this theoretical school criticizes the ecological crisis of capitalism, explores ways and means to solve the ecological crisis, and enriches and develops Marxist ecological thought. Retracing the ideological sources of ecological Marxism is conducive to our correct understanding of the development of contemporary capitalist society. However, ecological Marxism has belittled the basic contradictions of capitalism, confused the important positions of economic crisis and ecological crisis, and conceived of eco-socialism with certain romanticism. Therefore, we should neither copy nor reject all the new achievements of Western Marxist research, but return to the theoretical perspective of historical materialism, take Marxist theory as the base, and dialectically analyze and view its theoretical value and practical significance.

**References**