

Human Being Ecology in Richard Powers' *Generosity*

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Abstract

Richard Powers is one of American famous contemporary writers, a rising star of American postmodernist fiction, and one of leading representatives of the Generation Xers as well. He explores the impacts of some factors such as ecological environment, social culture, and family ethics on our modern society by use of his abundant knowledge about gene engineer, neurology, family ethics, etc. He explores the relationships between human and nature, human and society, human and human. *Generosity*, fusing science with literature perfectly, is one of prominent information fictions by Richard Powers, which narrate a fascinating thoughtful story about the secret of happiness. From the perspective of ecological philosophy, this article explores human being ecology embodied in this fiction, which thinks that the earth is an ecosphere, also a largest ecosystem in which human being, just a part of it, is a small ecosystem and runs according to natural law. Ecological human being had his own ecology including physical property, social property and understanding and attitudes towards nature. Excessive human activity, especially the abuse of science and technology will result in destructive impact on human being ecology, bring about serious effect on normal running and harmonious evolvement of ecosystem containing human being and nature, and it must be faced squarely and solved urgently.

Key words: Richard Powers; *Generosity*; Ecological philosophy; Human being ecology

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INTRODUCTION

It is universally known that the earth is a huge ecosphere formed by living things and their surrounding environment. The natural environment provides living things with the shelter and habitat. As a special organism, human beings are also the most advanced species in the ecosphere and an important part of this ecosphere. Barry Commoner, one of prominent ecologists, clearly describes the close relationship between human beings and natural environment. He points out that "Biologically, human beings participate in the environmental system as subsidiary parts of the whole." (Commoner, 1971, p.25) In Marxist ecological philosophy, there are also some profound descriptions of human beings, such as "Natural existence", "living natural existence" and "active natural existence". (Marx, 2002, p.324) points out that "When the real the physical man who stands upon the solid, round earth exhales and breathes into all the forces of nature", "is directly a natural being". Therefore, human being is an ecological existence in the earth's ecosystem, with its own ecology. But what is the ecology of human being? What are its features? What are its functions? Nowadays, with the ecological imbalance and the deteriorating relationship between man and nature, these are all problems worth our deep thinking and exploration. People all living in the nature and engaging in the activities of life experience unique to humans, affect the cycle and evolution of the earth's ecosphere. Such activities of life experience may

also cause a variety of changes in the earth's ecosystem. Therefore, it is of great importance to explore man's ecology, correctly understand man's position and role in the earth's ecosystem, solve various contradictions and problems between man and nature, and maintain the balance and stability of the whole ecosystem. In his *Generosity*, Richard Powers, one of famous American postmodernist writers, with its unique perspective and exquisite style of writing, explores human being ecology, lashes the bad behaviors breaking natural ecology, calls for human consciousness to undertake the social responsibility of maintaining harmonious ecology, also reveals the ultimate concern for human destiny.

Richard Powers is a new postmodern American writer and an important representative of Generation X writers. He is known as the master of contemporary literature. Critics often compare him with Thomas Pynchon, an outstanding American postmodern literature master, and call him the "first major voice of the post-Pynchon era" (Dewey, 2002, p.4). His works cover topics such as culture, science and technology, ethics, and ecological protection, trying to explore the relationship between science and human beings. Today, with the rapid development of science and technology and the highly developed human civilization, he pays close attention to the relationship between man and nature, and makes philosophical reflections on the problems between man and nature. He believes that the environmental crisis and ecological disaster caused by the contradictions between human being and nature are ultimately the problems of man. He explores human being ecology from the perspective of a litterateur to find a way out to solve ecological problems and express his own ecological thoughts.

Generosity is Richard Powers' fifth book, completed in 2009. Once the book was published, it received wide attention and praise. He has been rewarded with Notable/Best Books of Chicago *Tribune*, *Kansas City Star*, *San Francisco Examiner*, *Oprah Book Club*, *King County Library System (WA)*, *Booklist*, *New York Times*, *Washington Post Book World*, *Pittsburgh Post-Gazette*, *American Library Association*. With typical features of informational fiction, this novel is humorous in language and vivid in description. It mainly tells a story about genes and happiness, explores the combination of science and literature and art, as well as the connotation of human being ecology. The hero of the story named Thassadit Amzwar from Algeria, is studying in a university of Chicago. She herself is the Algerian refugees and experiences national civil war, unrest. In order to survive, she has to with her mother flee to France, Canada and other countries, and finally the United States. Thassadit undergoes lots of hardships and strikes: her father was shot and killed due to adhering to his beliefs, mother also died, the younger brother suffered at home. But she

always seems extremely happy, interested in everything, full of expectation. Russell Stone, a melancholy magazine editor who has had trouble with both his career and his love life, teaches a writing course as a part time job at Thassadit's school. The writing teacher was deeply attracted by Thassadit's extraordinary happiness, which was in sharp contrast with that of other students. He was also very puzzled by how a girl who had suffered a great shock in her life could appear so happy. Pain and sadness seems to have no connection with her and she has natural immunity. He worried that the girl had a hyperthymia, and decided to understand, care and protect her. Thomas Kurton, an American genetic engineer, has long been interested in studying the genes involved in mood, which he calls the "happiness gene". Through a number of studies, he has found some associations, but no direct evidence that human being have a "happiness gene". In the case of an attempted rape by one of her classmates, the kind-hearted Thassadit persuaded him to give up his violation and maintained an optimistic and happy style in her daily life. So, Thassadit was called "a happy victim" that attracted the great attention of Thomas Kurton, who realized that Thassadit was probably the most convincing example of the happiness gene he had discovered in humans. He managed to get in touch with Thassa And persuade her to come to his research centre for a genetic test, which confirmed his earlier findings that modern people are not unhappy, just do not have the happiness gene, and that by strengthening the gene, everyone can be happy every day. The secret of Thassadit 's happiness gene was leaked out, the media and the Internet were buzzing with stories about her, and fanatical people were searching for her just to meet, to talk about her secret, to ask for her help, and even to pay a lot of money for her eggs in order to change their genes and become happy perpetually. Unable to continue to settle down to finish her studies due to the pressure from the media, the Internet and fanatical people, she became no longer happy and had to flee. During the escape, she is overwhelmed and on the verge of collapse, she secretly took hypnotics to commit suicide, but fortunately Russell Stone found out in time, called the police to help, only to survive.

In *Generosity*, Richard Powers urges people to think about the present and future of human beings and explores the nature and attributes of human beings from his own unique perspective. Scholars at home and abroad have conducted in-depth research on this work and achieved some results. Duan Junxia (2012, pp.88-90.) studied the theme of the novel from the perspective of genetic ethics, and believed that the unlimited development and abuse of genetic science would cause a lot of social and ethical problems, and that scientific research should be controlled without destroying human nature and natural laws, so that science could truly benefit human beings. Her Another article also casts doubt on the idea that

happiness comes from genes, and reminds people to pay more attention to the use of technology (Duan, 2012, pp.19-20). Dan Cryer (2009) argues that the author raises the thesis of “what makes a man human?”. If genetic engineering can make us happier, should we be allowed to do so? He also believed that science not only created human miracles and promoted progress, but also opened Pandora’s box and made human beings fall into a moral and ethical dilemma. Tony Miksanek (2010, pp.31-32) thinks the novel explores the possibilities and limitations of science. He points out that science is a double-edged sword, which may bring disaster as well as convenience to human beings. John DLantos (2010, pp.22-25) compared *Generosity* with *The Immortal Life of Henrietta Lacks*, a book by Rebecca Skloot, another famous American science writer, and argued that Richard Powers offered questions of human nature and desire and how to balance individuality and commonness. Kyndra Turner (2015) argues that the author calls for a re-examination of human interrelationships with other species, with particular attention to the low predictability, high variability and usual extremes of ecosystems, and that humans should not attempt to control and consume biological substances that can alter human and non-human beings with drugs and genes, but as part of the physical form. Through this work, Powell believes that happiness is not only in the brain or genes, but also requires continuous communication and interaction between the brain, body, cultural background and environment.

1. HUMAN BEING’S PHYSICAL ECOLOGY

In the process of long evolution, as a member of the earth’s ecosphere, human beings, like other organisms, have the attributes of physical ecology as living organisms, reflecting the natural attributes of human beings. Human being includes physical factors such as human body structure, skin, hair, blood and genes and so on, providing a carrier for human being to carry out rich and colorful life experience activities. Without the strong support provided by human body, genes and other physical factors, human life experience becomes a castle in the air, a water without source, without the end of origin, and human being will be unable to appreciate the magnificent and beautiful nature, and unable to create the glorious history and splendid civilization of human beings. The physical attributes of human are also reflected in the naturalness and biology of human as an organism. Zhou Guangxun (2015, p.25.) believes that the naturalness of human is the natural attributes of human, which usually means the biological attributes of human, that is, the body tissues and organ composition acquired by human through biological inheritance, which are the basic attributes of human in biological and physiological significance. Biologically speaking, human being is also a kind of

animal, which has evolved from the ape and has the general characteristics of animals, such as bones, flesh, limbs, hair and other biological natural characteristics. Man comes from nature, and he is closely connected with nature. Nature provides human evolution and development with environment and nutrient, Engels (2009, p.161) points out the physical properties of human being and he says that “we together with our flesh and blood and mind are belongs to the nature and exists in nature.” As human beings belong to living organisms, their physical components are also not static and independent, which constitute the ecosystem supporting the human experience of life activity, also have its own ecology. They are also a “living ecosystem with internal relationships, a complex network of dynamic, non-linear, never-ending interactions between life factors”. (Sun, 2012, pp.221-222). Each component part of the human body ecosystem is developing and dynamic with its own laws. It maintains a state of balance in the process of natural development. Any forced change will break this state of balance and break its ecology, which will bring great harm to human beings. Man will no longer be man in the true sense of the word.

In *Generosity*, Richard Powers creates a series of impressive characters: Russell Stone, a melancholic magazine editor and part-time literary writing teacher; Thassadit Azwar, is ebullient and cheerful, called The “generous girl”; Tonia Schiff, “Least fetishized by science,” a righteous science presenter; Thomas Kurton, the most authoritative, the most outstanding master of genetics, genetic engineer, entrepreneur; Oona, a talk show host, known as “the most powerful woman in the world”; Candice Weld, a sensitive single mother and college psychologist; In an addition to Thassadit’s other classmates with different costumes and styles in Russell’s writing class etc. They have the physical attributes of human beings as biological organisms and are engaged in rich and colorful life experience activities. At the same time, they also have the personality characteristics, emotional expression and spiritual needs of human beings as a special advanced species in the earth’s ecosphere. Human being’s joys and sorrows constitute an important part of human’s physical ecological attributes and are also distinct from other living organisms. Only in the process of continuous development and evolution, human beings can interact with the environment continuously and improve themselves. Human being should not use the science and technology at his disposal to arbitrarily alter his peculiar nature. Represented by geneticist Thomas Kurton, the science supremacists believe that science and technology can be omnipotent. They deny the laws of nature, ignore the physical and ecological attributes of human beings, and despise evolution. Under the guise of human happiness, they try to make human beings happy through the so-called gene enhancement

technology they study. Instead of treating humans as the only sentient, intelligent, and sentient beings in the earth's ecosystem, they are assembled at will, just like other parts of animals, plants, and even non-living experiences. As a result, human beings will be objectified. They will not be human beings, but so-called robots, intelligent people and mutated people. Power mercilessly lampooned this behavior with humor:

"On the tiny screen, a brown infant girl in a lime jumper takes three speedy all-fours strides, then hoists herself vertical on the leg of coffee table. She swells with her dazzling triumph over gravity. She squeals in ecstasy and cuts loose, releasing the table leg to tear across the open frontier of carpet. Two steps in, she slams into nothing, comes to a splendidly unplanned stop, and drops seat-first to earth. She sits, stunned by the setback, on the threshold of howling. Instead She breaks out into gales of untouchable laughter. Her head swivels around the room, already planning her next bone-jarring, breaks into unknown regions." (Powers, 2009, p.293)

Happiness is a unique human emotional experience and shows the spiritual enlightenment and satisfaction. It gives people a feeling of comfort, is also a happy state of human beings. Happiness, as a unique human emotional experience, is the embodiment of human physical ecological attributes, but the content of human emotional experience is not innate, from genes, but from human acquired life experience activities. As Human beings live in this world, due to the differences in birth environment, life experience and so on, their life circumstances may be different and they may experience both prosperity and adversity. Difficulties and frustrations may make people vulnerable and lead to negative feelings of depression, disappointment and even despair. But with the right attitude towards them and proper handling, they can also have a positive impact on one's success and happiness. The scholars Tedeschi and Calhoun (2004, pp.1-18) argue that Trauma will shock or destroy the important goals and world outlook of human being and the individual will be faced with great challenges. He needs to establish and form higher goals and beliefs, generate new life narratives, and regulate and relieve his own painful emotions. Thassadit Azwar, the protagonist of the novel, suffered from frequent civil strife in the country. Her father was shot and her mother died of cancer. She fled to her aunt's house in Canada and then went to the United States to study. After going through all kinds of difficulties, she cherishes the peaceful living and learning environment very much. She is very lucky that she can still live in this world, while her relatives, clansmen and compatriots are still living in great suffering. Many people also lost their lives innocently. As a result, she has low demands on life itself and is easily satisfied with everything around her. She cherishes every detail of her life and always carries a camera with her when she goes out. She went deep into the community, carefully observed every little detail of life, with the camera recorded the life that moved her one

after another, such as middle-aged people waiting for the train, young people in leather jackets in front of the bungalow. Even when she escaped from the public tending to buy her eggs or consulting the secret of happiness to live in the house of her classmates, she did not forget to find the beauty in life and make her life full and happy. She stayed in her apartment all day, afraid to go out. It was hot and sweaty, but she was happy and brought back her first memories. This state of optimism and happiness is vividly described in the novel:

"For hours, she points her camera out Adam's fifth-story window, toward Eighteenth Street, filming the Mexican shoppers passing in front of the once Bohemian and Polish neo-baroque buildings. Then she loads her clips into the editing software on her notebook, using her graphics tablet to paint over and animate them. As imprisonments go, this one is omnipotent. Sometimes she uses Adam's Internet connection to go online and see what the world is saying about her. She finds the website that says she would be killed. She begins to see why some people might want that." (Powers, 2009, p.253)

Even while driving away with Stone to Canada, she still "holds her camera on her lap, often lifting and pointing it over the dash or through the passage window. If she's really filming, all she's getting is desolate Midwest motion blur." Powers, 2009, p.275). Thassadit Azwar was always curious and hopeful about everything in life. She could find beauty and joy in ordinary things, such as the evening on the seashore, the distant mountains outside the window, the square in the center of the city, etc., and regarded them as a gift from god. She believed that all existence is a gift from God. How could someone with such an attitude not be happy? Chen Changkai (2010) thinks that people usually re-examine the meaning of life after experiencing disasters. Although catastrophic events themselves are unlikely to trigger happiness, they may enable individuals to reconstruct the concept of happiness from three aspects, namely cognition, need and emotion, and thus change the conditions that promote happiness. Life is not always smooth and there are storms. But as long as we treat it correctly and persevere, we will experience a different life on the way forward. Thassadit Azwar went through the national war and family misfortunes and he cherished the chance to survive and study in the United States. She was diligent and progressive, taking courses in culture, history, race, ecology, etc. In class, she was full of vitality, actively spoke, and created a warm classroom atmosphere, which made a sharp contrast with other students. In the dorm, she was friendly and willing to communicate with anyone, even new acquaintances, who quickly became good friends.

In the novel, Thassadit Azwar is believed to have the happiness gene, to be happy by nature and to be free from negative emotions such as pain, worry, unhappiness and despair. Is this really the case? As a member of the earth's ecosphere, in the process of long-term evolution, human

beings have formed their own ecological system, with its own ecological nature. The positive and negative emotions such as happiness, anger, sorrow and joy of human beings constitute the unique physical ecological attributes of human beings. Thassadit Azwar is no exception. Although she seems to show people her happiness and joy, without pain and unhappiness. In fact, this is not exactly the case in a careful analysis of the text. In addition to her impressive joy and happiness, she also had negative feelings of tension, insecurity, pain, annoyance, depression, and even despair, just like ordinary people. She was troubled by the constant visits to the press and the public to know the secret of her happiness. During her first interview on an American talk show by Oona, one of popular hosts in America, she “stumbles from the wings, squinting in the Klieg lights’ blaze.”, and she seems to be nervous. (Powers, 2009, p.219) She was furious at the media hype and pursuit. She was speechless, helpless and frustrated by the frenzy over her egg donation in pursuit of the happiness gene, and her eggs “skyrocketed to \$32,000. She thinks that it is ridiculous because she herself doesn’t believe in the “happiness gene”. She had said that they make her like a biological factory for Hermes. Everyone can get happiness they want, but it is certainly not innate doomed. She also thinks that there’s nothing special in her blood. Like most of us, Thassa did not lose her sense of sadness. In a post titled “Not Crying is Not a Woman,” a netizen named Queen Eliza The Beast thinks that if Jane is not sad, she must have lost something deeper, more mysterious, and more fundamental about being human. Finally when she asked Russell Stone to driving with her to escape from the United States, she still makes up, “She’s wearing sunglasses, a dun-colored scarf, and drab olive sweats designed to be invisible”. Even her hair was changed, “her hair has been cut harshly and dyed reddish brown.” During driving on the way to Canada, “she doesn’t need to stop to stretch or relieve herself. She needs nothing to eat or drink. She wants only to keep driving. When they do stop for gas outside Sandusky, she won’t take more than three steps away from the car.” (ibid, p.274) Like most of us, she gets nervous in certain emergency situations. Desperate when she was denied entry to Canada because of visa problems, she secretly took Russell Stone’s sleeping pills and committed suicide. How ironic that an enviable person who is supposed to have the happiness gene should be nervous, depressed, desperate and even suicidal!

2. THE ECOLOGICAL NATURE OF HUMAN ETHICS

From the perspective of genetic research, human beings are evolved from earth organisms and come from the earth nature. They are all part of the nature, just like other organisms in the ecosystem. In the process of natural

evolution, human beings interact with nature. Human beings exert influences on nature through practical activities. He not only changes the form of the things in nature, but also realizes his purpose in the things in nature. He uses the attributes of various natural objects to enrich his life activities and promote his ability to live in the earth. In practical activities, human beings have realized the division of labor between their hands and feet, formed language and improved thinking. In the process of personal, collective and social relations, human beings have gradually formed their own ethics, morals and codes of conduct. However, these ethics and morals are not static and unchangeable, but develop and change with the development of nature and society, as well as the improvement of people’s tool use ability and cognition level, and maintain a dynamic balance. In a long period of human history, inbreeding has been regarded as a normal behavior. However, with the development of society and human progress, people gradually realize that this behavior violates ethics and will lead to genetic defects of offspring and other risks. The development of modern genetic engineering science, if not carefully considered, and strengthened management, may exacerbate this risk. Through this work, the author expresses his deep concern about this issue. Some scientists are keen on the research of human cloning, and it has become a reality in some countries, which has also caused some insightful people’s doubts and objections. They believe that this is a lack of respect for human life and dignity, and that the biological defects of human cloning may endanger human survival. This scientific research is like Pandora’s box. Once it is opened, the consequences would be unpredictable.

The United States is the world’s most advanced country for genetic engineering research, and Thomas Kurton, a genetic scientist in the novel, proudly declares that a single cup of coffee can be used to obtain a genetic map of a person, which can identify his or her ancestors and descendants, predict his or her state of health and personal development, and even grasp his way of life and natural death. The IVF technology in the United States has been very mature, and the laws and policies of the United States also allow its citizens to have IVF babies, which is sought after by many people. The United States was the first country to establish a sperm bank in 1964 and has the largest number of sperm Banks in the world. In the novel, people pay high prices for the eggs of Thassa in order to obtain what they call the “happiness gene”, which reflects the booming sperm banking and sperm industry in the United States, which is closely related to gene technology. It is reported that the U.S. economy is the most active growth sperm industry, and the industry every year for the American value created is as high as \$100 million. The sperm industry not only meets the needs of some people and brings benefits to the national economy, but also brings profound ethical concerns to mankind.

Sperm donors may carry recessive genetic diseases, inbreeding, same-sex or single-parent reproduction and other issues, which will have a destructive impact on human ethics and ecology, as well as endanger human reproduction and survival. The hidden troubles of the American reproductive industry have also received media attention. According to the Washington Post, a girl named Gloria Macapagal Arroyo has joined a club of sperm donors' offspring in search of her siblings. After a strenuous effort, she threw a party for the sperm donors' descendants, attracting 45 people but not all. The 45 brothers and sisters live in eight US states and in countries including Australia, New Zealand and Canada. Because of privacy concerns, sperm donors do not leave their true information, and American law supports this practice, so the next generation of sperm donors is likely to be closely related, which will cause their offspring to be born with defects. Richard Powers warns people to pay attention to human ethics and ecology, maintain a cautious attitude towards genetic technology, and pay more attention to human ecology.

In the evolution history of human civilization, human, society and nature are interrelated and interacted with each other, forming a complex ecosystem of human-society-nature. In order to ensure the order of the whole society, complete ethical and moral concepts have been gradually formed. These ethical and moral concepts have promoted the harmony among people and between human and society, which is of great significance for improving the relationship between human and nature and achieving a balance. Kindness, friendliness and helpfulness are important manifestations of ethics and morals, which are also endorsed and strongly advocated by Richard Powers. The hero of the novel, the owner of the "happiness gene", Thassa, is optimistic, kind and compassionate. She always thinks of helping others and hopes everyone can live a good life. Despite all the ups and downs, she still maintain a positive attitude toward life. Russell Stone, her writing teacher, was frustrated in career and love and pessimistic about life. She always comforted and encouraged him. She did this not only to those people she knew, but also to those people she did not know, as described in the novel: "She just wants him to be well. Same as she wants from any stranger she passes on the street. She just needs him to delight in the world's obvious inconsequence. It's all she's ever needed from anyone, in any country." (Powers, 2009, p.83) One night, while out with Stone, Candice and their children, she was caught in the snow and ice and had a bad fall, but she "crawls up on knees, giggling in pain and begging the others to take care." (ibid, p.168) She comforted every terrified neighbor when suddenly a transformer exploded and sparks flew and a terrified Indian woman next to her shouted. She "skates to her side, helping her up and calm her down." (ibid, p.168) She "helps the Indian woman way from the

sparkling transformer, soothing her." (ibid, p.168) She went to comfort Candace, who had been frightened by the incident, and joked with Candace's little boy in Arabic, singing songs to ease the child's fear. When Thassa was invited by geneticist Kurton to Boston for a genetic test, she wandered around the streets, and "she gives all her money to street people. She listens to the buskers in the subway, staying for three full songs and applauding, solo, after each." (ibid, p.149) Another character in the novel, Tonia Schiff, is the host of a science program called "Beyond limits." She is objective and fair, and she knows the bottom line. She is called "America's most irreverent science television journalist". During the production of a program about Thassa's "Happy Gene", she objected to the fact that the interview was edited arbitrarily for the sake of the program's effect. At the risk of offending colleagues and superiors, he would resign and lose his job rather than compromise, maintaining the bottom line and professional ethics of a journalist. This is also the moral character that Richard Powers supports and promotes.

3. Human being's natural ecological identity

Human being's recognition of natural ecology is an important embodiment of man's ecology and an important guarantee for the harmonious and stable existence of the whole nature. As an "ecological" person, he should deeply realize that nature itself is a huge ecosystem composed of living and non-living things, and its operation is not subject to the subjective will of human beings. In terms of the relationship between man and nature, man is a part of nature. From a biological point of view, Commoner also proposed that human beings participate in the environmental system as subsidiary parts of the whole (Commoner, 1971, p.25) The earth, the largest ecosphere, provides shelter and living environment for human beings. Although human beings are the most advanced species in nature, they still have no power over nature. Human beings should have a heartfelt recognition and respect for natural ecology, rather than just blindly snatching and trampling on nature. Mankind should respect the laws of natural ecology, take good care of nature and protect the natural ecological environment, so as to create a stable, appropriate and sustainable living environment for mankind and realize balanced development and harmonious coexistence between man and nature.

In primitive society, due to the underground productive forces, nature has a mysterious power for human beings. Human beings think they are the attachment part of nature, so they are in awe of nature. However, with the improvement of human understanding and the use of more and more advanced tools, the scope of human action on nature is more and more extensive, deeper and stronger. Man has gradually lost his reverence for nature, and his destruction of nature has become more and more serious. This disruption has been exacerbated by the use of new technologies, especially since the Industrial Revolution.

Every coin has two sides. Although new technology brings a lot of convenience to human beings, it also aggravates the contradiction between environment and economy. Commoner points out that “The new technology is an economic success—but only because it is an ecological failure.” (Commoner, 1971, p.194) What is the reason why economic success leads to ecological failure? He thinks that “if the ecological failure of modern technology is due to its success in accomplishing what it sets out to do, then the fault lies in its aims.” (Commoner, 1971, p.236) This has to cause us to think about this issue deeply.

Jonathan Bate, a famous British ecologist, has described in detail the profound danger that the growing ecological crisis brings to nature and human beings in *Song of the Earth*, his masterpiece of ecological criticism:

“As the BEGNNING of the third millennium of the Christian era, the state of nature is parlous. The litany of present and impending catastrophes is all too familiar. Carbon dioxide produced by the burning of fossil fuels is trapping the heat of the sun, causing the planet to become warmer. Glaciers and permafrost are melting, sea levels rising, rainfall patterns changing, winds growing stronger. Meanwhile, the oceans are overfished, deserts are spreading, forests shrinking, fresh water becoming scarcer. The diversity of species upon the planet is diminishing. We live in a world of toxic waste, acid rain and endocrine disrupters - chemicals which interfere with the functioning of sex hormones, causing male fish and birds to change sex. The urban air carries a cocktail of pollutants: nitrogen dioxide, sulphur dioxide, benzene, carbon monoxide and more. In intensively farmed economies, the topsoil is so eroded that the growth of cereal crops is entirely dependent on artificial fertilizers. The feeding of dead poultry to living cattle has bequeathed us bovine spongiform encephalopathy (‘mad cow disease’), which causes the collapse of the central nervous system and is transmissible to humans.” (Bate, 2000, p.24.)

From above what Bate describes, we can see that our planet is being flooded with all kinds of hazardous waste, acid rain, pollutants and so on. The natural ecology of the earth has been seriously damaged, and the emergence of these ecological crises is the result of human activities ignoring the natural ecology, violating the laws of nature and interfering in the operation of nature, which is rooted in the deep-rooted anthropocentrism and the dualism of separation between man and nature. In order to solve this problem and abandon anthropocentrism and dualism, we must adhere to the holistic world view, surpass our own interests, take the interests of the whole earth’s ecosystem as the code of conduct, and take effective measures to protect the ecological environment. Only in this way can we rebuild the ecological balance and restore the harmonious relationship between man and nature. Human beings’ true recognition of natural ecology lies in their thinking of the overall interests of the earth’s ecology. Only when we correctly recognize our position and role in nature, can we truly protect natural ecology.

In won a nomination of national book award and the Pulitzer’s “the echo maker,” Richard Power’s internal

Nebraska rivers, trees and forest, the natural scenery such as cranes, vivid, nuanced, expressed his love of nature, they are a harmonious ecological system, and the external environment for human survival.

In *Echo Maker*, a Winner of the US National Book Award and a Pulitzer Prize nominee, Richard Powers vividly and nuancedly portrays the beautiful natural scenery in Nebraska such as rivers, trees, forests, sandhill cranes and so on. He expresses his deep love of nature as a harmonious ecosystem and an external environment for human existence. But in his book *Generosity*, although there are few direct description and praise of natural ecology, Richard Power express its ecological thought in negative way, by telling the negative impact of human activities on the nature and human’s survival environment. He also expresses his concern about the deterioration of the relationship between man and nature, and hopes that human being should not only focus on himself, but also extend his concern to all communities in the nature.

Generosity is divided into five parts and it is instructive that Richard Powers entitles the first part “Of Strange Lands and People”. He calls on people to think deeply about the relationship between man and nature and puts forward a philosophical proposition about where human being should go. Marxist ecological philosophy holds that man and nature are a dialectical relationship between the part and the whole. They depend on each other, interact with each other and evolve together, but human being is absolutely dependent on the natural environment Marx thinks that man lives by nature and nature is the human body with which it must be in a continuous process of interaction in order not to die. Human being’s physical and mental life is connected with nature, and human being is a part of nature. However, with the evolution of human society, the level of human intelligence has also been greatly improved. There are more and more ways for human to act on nature and exert more and more influence on nature. People’s worship of nature is gradually transformed into a proud look down on nature, and the intimate relationship between human and nature has also become “strange”. The urbanization of which mankind is proud is increasingly revealing a worrying crisis. In the opening paragraph, Richard Powers gives this description of the city in which the hero lives:

“A man rides backward in a packed subway car. This must be almost fall, the season of revision. I picture him in the thick of bequest, tunneling, beneath the I Will City, The world’s twenty-fifth biggest urban sprawl, one wedged in the population charts between Tianjing and Lima. He hums some calming mantra to himself, a song with the name Chicago in it, but the train downs out the tune.” (Powers, 2009, p.3)

It can be seen that the description of the whole paragraph gives people a sense of chaos, crowding, disorder and depression. Without embellishment and rendering of natural scenery such as flowers, birds, insects, trees and forests, human environment seems to be

less lively, flexible, peaceful and quiet, which also forms the general tone of the whole novel. In this environment, the protagonist Russell Stone, although only 32 years old, seems to be much older and give us a deep dark and dusty frustration: he wore dull jeans, a maroon work shirt, and a blue windbreaker with a broken zipper. He was as pale as anyone on the subway, with hair that could not be parted, waiting to be scolded. His eyes were somewhere between hazel and brown, and his face looked as if it were six hundred years old. He had the air of a Franciscan novice in a mysterious scene in a medieval monastery.

The further description of the city where the hero lives shows the rapid development of the city and the noise of the environment, and the contradiction between human and nature is increasingly intensified:

“Early evening, four dozen feet below the City on the Make: every minute, the train tunnels underneath more humans than would fit in a fundamentalist’s heaven. Aboveground, it must be rainy and already dark. The train stops and more homebound workers press in, trickling September drizzle. This is the fifth year since the number of people living in the cities outstripped those who don’t.” (Powers, 2009, p.4)

The continuous emergence of cities, high-rise buildings, booming industries, the rapid establishment of all kinds of factories, as well as subways and other convenient means of transportation to demonstrate human intelligence and scientific civilization, a large increase in the population, and so on, all these things show the human intelligence and wisdom and its production and management activities of the huge influence. The idea that man can conquer and dominate nature, exerted a very negative influence on the correct understanding of the relationship between man and nature. In discussing his scientific positivism, Auguste Comte, declares that the progress of human civilization is determined by the development of human mind, such development and in other words, the continuous strengthening of human ability to control nature. (Comte, 1911, p.144). Also another scholar, Emmanuel G. Methene, praises the technological prowess of man. He states that as man’s confidence and strength have been restored, nature is increasingly under his control and human beings are living in an age where for the first time it is possible to get rid of the repression that has plagued the human race since its emergence. (Methene, 1967, p.492) He believes that humans had been liberated from the bondage of natural control and should no longer be submissive to nature.

Power thinks that the emergence and development of cities shows the impact of human activities imposed on nature, also represents human’s endless desires and wanton, ignoring the regularity of natural ecology, and the natural relations have also become more and more alienated. In a way, the city has become synonymous with hunger and greed. He shows this environment through the eyes of Stone, Candice and Gable:

“They stand at the glass wall, elbow, watching crowds flow through the gorges below them. The city turns into a technopera, a glorious nanotechnological enterprise beyond the power of any coordinated forces to engineer. They find their neighborhoods, the college, six universities, a dozen museums and monuments, the dead stockyards and living stadiums, churches and commodities exchanges, the river-reversing channel, the four-mile-wide-particle accelerator off in the distance. The city is a staging ground too huge and hungry to dope out, lying like a scale maquette at their feet.” (Richard Powers, 2009, p.95)

Powers calls for respecting life and nature, maintaining the recognition of natural ecology, regulating human activities and behaviors in accordance with the laws of natural operation, and realizing the coordinated development between human and nature. He writes in his novel:

“There is grandeur in this view of life, with its several powers, having been originally breathed the Creator into a few forms or into one; and that, whilst his planet has gone by cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved.” (ibid, p.42)

The planet we inhabit is the largest ecosphere. Humans and other living organisms and non-living matter are interdependent and interlinked, forming a beautiful global village together. As the highest form of life in the ecosphere, human beings have no privilege to transcend the ecosphere. Human being only stays awake for their role in the ecosystem, awe to nature, to keep the natural ecology, and take positive actions to protect and preserve of our natural environment. The flower of life on our planet can bloom brilliantly and beautifully.

CONCLUSION

As an important information novel of Powers, *Generosity* realizes the dialogue between science and literature, and also contains profound ecological propositions. Facing the increasingly serious ecological crisis, it urges people to reflect on the root of the problem and find the way to solve it. Especially in the relationship between man and nature, how man views nature and the planet he lives on should be the key to the problem. However, due to the hubris, arrogance and endless desire, human beings often treat nature badly, which causes a series of environmental problems and endangers the survival of human beings. The earth is part of our ‘body’ and we must learn to respect it as much as we respect ourselves; As much as we love ourselves, we must love all life on this planet. As a part of the earth’s ecosphere, human beings are also a small ecological system, which operates according to the laws of nature and has an ecological nature. It is closely connected with human beings, society and nature. The

deterioration of the relationship between human beings and nature and the emergence of environmental problems are, in essence, serious problems with human ecology. As *Generosity* reveals: Even if human technology were advanced enough to transfer one person's so-called "happiness" gene to another person, and that person would not have real, natural happiness, and instead, there would be other serious problems. Therefore, human beings must maintain their own ecology, respect nature and protect nature, so as to realize the harmony, stability and beauty of life community.

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