<u> Homepage : http://ijlls.org/index.php/ijlls</u>



An Eco-critical Perspective on Elizabeth Gaskell's North and South

Hung-Chih Chen

Department of English, National Changhua University of Education

hung_chih@hotmail.com

DOI: http://doi.org/ 10.36892/ijlls.v6i2.1708

APA Citation: Chen, H. (2024). An Eco-critical Perspective on Elizabeth Gaskell's North and South. International Journal of Language and Literary Studies. 6(2).483-492. <u>http://doi.org/10.36892/ijlls.v6i2.1708</u>

Received:	Abstract
14/04/2024	In Elizabeth Gaskell's novel, North and South, Margaret Hale moves from the south of
Accepted: 10/06/2024	England to a manufacturing town in the north, Milton. On the one hand, she learns how the manufacturer, John Thornton, manages the cotton industry which the townspeople rely on; on the other hand, she notices how the townspeople suffer from the consequences caused by the industry. Life in Milton gradually shapes her
Keywords:	understanding of the world and leads her to develop into an independent individual.
Elizabeth	This paper starts with an exploration of the textile town, Milton, from an eco-critical
Gaskell,	perspective. While machines continue to overtake human hands, men find it difficult to
North and	keep their positions. The incompatibility between machines and human hands, and
South, eco-	among human hands, along with the deterioration of the environment, eventually results
critical,	in dysfunction and a collapse in the ecosystem. It is argued that, despite Margaret's
ecosystem,	efforts in establishing mutual understanding and symbiotic relationships, her future and
symbiotic	the prospect of Milton remain uncertain. The paper concludes with the evolution of
relationships.	Thornton and Margaret, whose transformation facilitates their adaptability and
-	repositions their significance within the ecosystem

1. INTRODUCTION

Born in the era of the Industrial Revolution, Elizabeth Gaskell witnessed how significant innovation of industrialization greatly transforms society. Her novels are grounded on her observations and experiences of social changes which are driven by technological progress. Her reflections and concerns over the overwhelming impacts of these social changes are also embedded in her novels. Gaskell closely conflates the living conditions of people in the real world with the suffering of the fictitious characters in her novels (D'Albertis, 2007). The female roles in her novels, for example, often present the oppressed status of women in the nineteenth century and illustrate their struggle and aspirations for changes in the male-dominated society. Gaskell also captures how people of the working class, who are afraid of losing their jobs, react to social oppression and strive to survive during the turbulent time. "Not only could it memorialize the past," as Matus (2007) comments on Gaskell's work, "it could interpret the reasons for and effects of change and initiate further change by drawing attention to social problems and enlisting sympathy for those whose lives lay beyond the experience of most readers" (p. 8).

Gaskell not only deals with socio-political issues but also expresses her concerns over environmental degradation due to industrialization. Critics have analyzed nineteenth-century writing, explored how humans interact with the environment, and discovered the environmental awareness of

the writers through their texts (Mazzeno & Morrison, 2017). As Goodbody (2018) suggests, industrialization is "simultaneously wonderful and cruel, awesome and destructive" (p. 55). This ambivalent feeling towards industrialization can also be found in Gask ell's novel, *North and South*, which is set in an industrial town, Milton. For manufacturers like John Thornton in *North and South*, machines, compared to human hands, accelerate production and increase revenues and profits. For the pastoral lover, Margaret Hale, on the other hand, this process of industrial development has caused unexpected consequences for the value of human beings and the equilibrium of the environment. Kennedy (2017) has identified a sense of eco-consciousness developed in the writing of Gaskell, who "uncovers urban pollution in plain sight, going beyond smell to expose the causes of toxicity" (p. 509). Along with the power of industrialization, Gaskell raises awareness of environmental issues through the effects of concrete plants and factories on the health and lives of the townspeople in Milton.

This paper will look into Gaskell's *North and South* from an eco-critical perspective. It begins with the ecosystem of the textile town, Milton, where machines, imagined by Ure (1835) as automatic organs, are implanted for mass production. While machines continue to overtake human hands, men find it difficult to maintain their working rights and living space. Situations become even more complicated after Thornton's introduction of foreign hands, which poses a further threat to the survival of inhabitants in Milton. How the incompatibility between machines and human hands, and among human hands, gradually leads to dysfunction and a collapse in the ecosystem will be discussed and explored in the second section. The third focus of this paper will be placed on the subsequent disease and death in town as a result of the deteriorating environment in Milton. This paper will conclude with a critical emphasis on the evolution of Thornton and Margaret, whose transformation facilitates their adaptability and repositions their significance within the ecosystem.

2. THE ECOSYSTEM IN MILTON

According to Crafts and Wolf (2014), the cotton industry in Britain held the dominant position over the world spindles in the nineteenth century. Large-scale machines developed during the Industrial Revolution were widely used to accelerate mass production. Ure (1835) conducted research in 1834 across some manufacturing establishments to explain the great progress of the British industrial system. He imagined that a mill, with its "two-foldheart," made its maximum (machines) and minimum (human hands) efforts to maintain its stable operation. It is based on the two-fold heart, the core of the mill, where shafts, wheel-steering, straps, and belts, like the grand nerves and arteries, "transmit vitality and volition" to respective automatic organs (p. 2). Ure further explained how this automatic mechanism functions in a perfect and coordinated way:

the perfection of the automatic industry is to be seen; it is there that the elemental powers have been made to animate millions of complex organs, infusing into forms of wood, iron, and brass an intelligent agency. (p. 2)

Ure described how different machines interacted directly and indirectly with each other in a cotton mill. This interaction not only creates powerful energy but also forms an automatic system linked through the fusion of natural resources such as wood, water, and iron. It is a well-functioning machine, with "every improvement of machinery" "in its highest perfection" (p. 2), which makes the mills in coordination.

In Gaskell's *North and South* (1854/1995) Milton is such a town which "has risen to eminence in the country, from the character and progress of its peculiar business" (p. 98). Relying on "the power of the machinery of Milton" and "the power of men of Milton," the town grows and has reached its success (p. 98). The principal street in Milton has expanded "from a lane into a great thoroughfare" (p. 61). Soil poverty for agricultural use, climate humidity, and the supply of water, coals, machinery and labour all promote the spatial concentration and agglomeration of the manufacturing industry (Crafts & Wolf, 2014). Families residing in Milton are all engaged in the manufacture of some kind except the newcomer, the Hales family. Life of people in Milton, connected by the manufacturing industry, is joined together and developed into, what Bharucha (2013) calls, a "web of life," which the townspeople rely on (p. 55).

"Life on Earth," as defined by Wells and Varel (2011), "is complex and interactive, with organisms forming populations, which in turn form communities, or ecosystems, both locally and globally" (p. 186). Within the ecosystem, both living and non-living elements are essential components (Bharucha, 2013). While living elements include biotic components, such as various plants and animals, non-living ones refer to the a-biotic features such as air, water, climate, and soil. These components interact with and are dependent on each other, producing several biogeochemical cycles and energy transfer mechanisms for their continuing existence. For Bharucha (2013):

Plants, herbivores and carnivores can be seen to form food chains. All these chains are joined together to form a 'web of life' on which man depends. Each of these uses energy that comes from the sun and powers the ecosystem. (p. 55)

In Milton, the development, agglomeration, and interdependence of the manufacturing industry have formed a specific ecosystem. Factories, with their two-fold hearts, are major organisms. Water and coals are the essential components used to produce energy for the maintenance of the manufacturing mechanism. This mechanism is a combination of a super machine and an organic body, with dynamic and interdependent coordination, where circulation and communication are performed steadily and delicately with speed (Ketabgian, 2013; Ure, 1835).

Sekercioglu (2010) maintains that the proper functioning of natural ecosystems, which "purify the air and water, generate oxygen, and stabilize our climate," helps to sustain the existence of each component within the system, including the survival of human beings (p. 55). Plants can function as both consumers and producers, converting "sunlight into organic matter for their growth" (Bharucha, 2013, p. 57). Their production sustains the subsistence of other organisms. Animals, including human beings, also convert environmental materials into essential nutrients for their existence. In Milton, machines convert water and coals into energy flow to transform raw materials of cotton into woven textiles. The consumption of water and coals provides efficient services for the advanced manufacture and the subsequent production sustains the living of the townspeople. The townspeople, as the consumers and the producers, also participate in sustaining the operation of machines or in providing other relevant services to uphold the manufacturing system. It is believed that by "proportioning the sizes, regulating the connections, and adjusting the movements of the system" the manufacturing mechanism can function properly and steadily (Ure, 1835, p. 32).

Nevertheless, Ure's manufacturing system fails to consider that the proper function of an ecosystem is to ensure the coexistence and symbiosis of all within the system, based on its self-sustaining circulation. Machines, intentionally introduced by manufacturers to replace human hands, become the greatest threat to human survival. In the next section, how the manufacturer becomes the top predator by controlling both machines and human hands will be explored.

3. The Predator in Milton

Ure's illustration of a manufacturing system, built upon well-coordinated and regulated organisms, has been criticized by Ketabgian (2013) as "a superhuman industrial ideal" (p. 16). This ideal system is likely to collapse due to the desire of human beings, who are eager to control and dominate the system for personal profits (Wells & Varel, 2011). Interactions between organisms in the natural ecosystem tend to be competitive or beneficial, predatory or symbiotic, naturally selecting the most adaptable to survive. Nevertheless, in Milton, manufacturers like Thornton appear to be the

ultimate predator at the top of the food chain, controlling the two-fold heart, both machines and human hands, and selecting the most profitable for their own benefits.

Thornton believes that scientific inventions of machines, from "the imagination of power" to "the practical realizations of a gigantic thought," can achieve higher marvels on each wonder (Gaskell, 1854/1995, p. 81). By investing a great deal of money in machines, Thornton demonstrates how manufacturers use scientific inventions of machines as their advantages and weapons to secure their top position in the manufacturing system. According to Thornton,

The whole machinery—I don't mean the wood and iron machinery now—of the cotton trade is so new that it is no wonder if it does not work well in every part all at once. Seventy years ago what was it? And now what is it into? Raw, crude materials came together; men of the same level, as regarded education and station, took suddenly the different positions of masters and men, owing to the motherwit, as regarded opportunities and probabilities, which distinguished some, and made them far-seeing as to what great future lay concealed in that rude model of Sir Richard Arkwright's. (p. 83)

Thornton deeply believes that whoever controls the technology of machines can have the key to success and the future. His eagerness for the top position prioritizes the significance of machines over human hands to achieve mass production and market control, which not only destroys Ure's ideal image of the two-fold heart but also depreciates the value of human beings.

Ketabgian (2013) describes the manufacturing system as "an efficiency that threatened to efface human workers, with the possible exception of heroic mill owners and engineers" (p. 16). He argues that:

Through this prosthetic fusion of human and mechanical parts, the factory served as a site of simultaneous extension and depletion, with workers amplified by machinery yet also fragmented and superseded by it. (p. 15-16)

The application of machines in factories, as prostheses to the missing part of the human body, was originally intended to facilitate the efficacy of the workforce, yet it overtakes the significance of human hands in the end. Thus Ketabgian argues that human beings are not treated as "discrete actors and workers but rather as the inseparable organic—and mechanical—links of a greater system" (p. 16). Regarded as an attachment to the machine, human hands are degraded into some mechanical devices, which need to be fixed or even replaced when problems occur.

Gaskell portrays how Thornton is ready to replace human hands on strike with alternative ones he recruits from Ireland to maintain the operation of his factory:

as a general rule, it was very true what Mr Thomton said, that as the strike, if prolonged, must end in the master's bringing hands from a distance (if, indeed, the final result were not, as it had often been before, the invention of some machine which would diminish the need of hands at all). (Gaskell, 1854/1995, p. 157)

When one part of the organism fails to work, the entire system tumbles. The increasing emphasis on machines has thrown the system off balance and caused half of its two-fold heart to strike. With no assurance to local hands, Thornton introduces Irish workers into Milton, which he claims to be a "natural punishment" of the strike (p. 227). As Williamson (1986) suggests, the Irish, with their lower wages, could threaten the job opportunities of the more skilled native-born during the Industrial Revolution. Local hands, like Mr. Higgins, whose working space is gradually occupied by machines and the Irish, have to leave and look for new habitats "where food is cheap and wages good, and all the

folk, rich and poor, master and man, friendly like" (Gaskell, 1854/1995, p. 299). For Thornton, however, the introduction of Irish hands also causes problems he has not expected:

The strike had thrown him terribly behindhand, as to the completion of these orders. Even with his own accustomed and skilled workpeople, he would have had some difficulty in fulfilling his engagements; as it was, the incompetence of the Irish hands, who had to be trained to their work, at a time requiring unusual activity, was a daily annoyance. (p. 311)

Being non-native, Irish workers have difficulty adjusting themselves to the unfamiliar living conditions and working requirements. The loss of skilful hands interrupts Thornton's production line. In the end, the arbitrary replacement of human hands results in cascading effects not only on workers but also on the manufacturer and the entire system.

Along with the collapse of the manufacturing system, the environment in Milton is also at risk. Machines, driven by steam power, demand a large amount of water and coals. The consumption of these limited resources generates smoke, noise, and fluff in the air. The living conditions in Milton become more and more unbearable. The consequences of environmental degradation gradually strike the life and well-being of everyone in Milton, which will be discussed in the following section.

4. SMOKE, NOISE, AND FLUFF

The cotton factories in Milton have serious consequences for the environment and human lives. No one can escape unharmed from the smoke, the noise, and the fluff in the air. As soon as the Hale family approaches Milton, a "deep lead-coloured cloud hanging over the horizon" can be easily seen (p. 60). The closer they get, the more intense they feel the attack of the smoke:

Nearer to the town, the air had a faint taste and smell of smoke; perhaps, after all, more a loss of the fragrance of grass and herbage than any positive taste or smell. Quick they were whirled over long, straight, hopeless streets of regularly-built houses, all small and of brick. Here and there a great oblong many-windowed factory stood up, like a hen among her chickens, puffing out black 'unparliamentary' smoke, and sufficiently accounting for the cloud which Margaret had taken to foretell rain. (Gaskell, 1854/1995, p. 60)

The migration of the Hale family, from the countryside in the south of England to the smoky, dirty Milton in the north, implies their lost connection with nature and the forthcoming constraint in the cell-like brick town. The massive amount of 'unparliamentary' smoke, overcastting the sky like a thick, dark cloud, is obviously against parliamentary rules, yet it continues to be blenched from the factory chimneys.

For manufacturers like John Thornton and his mother, Mrs. Thornton, smoke represents what Gatlin (2013) calls, the "manufacturing might" and its subsequent "economic triumph" (p. 202). The manufacturing industry has transformed the Thornton family from the poor to the successful. Living close to the mills, seeing the release of smoke, and hearing the clanking sounds of machines remind them of the possession of wealth and power. They take pride in their cotton manufacture and accept everything it brings- even the smoke and dirtiness. "I'm afraid I must give up its cleanliness," as John Thornton claims, in order to achieve success (Gaskell, 1854/1995, p. 82). For the townspeople in Milton, the continual release of smoke implies their steady state of employment. The halt of machines, on the other hand, suggests a sense of emptiness: "no steam engine at work with beat and pant," "no click of machinery, or mingling and clashing of many sharp voices" (p. 171). This emptiness not only manifests in the air but also the workers' pockets. As for the Hale family, as soon as they settle in Milton, they realize that they have to put up with "the continual clank of machinery and the long groaning roar of the steam engine," just like other residents here (p. 111).

Unfortunately, disease and death are the price the townspeople in Milton have to pay for the cotton industry. Inside the house of the Hale family "the heavy smoky air hung about her bedroom" foreshadows the hopeless future of Mrs. Hale (p. 67). Her constant complaints about the smoky, sunless, and unhealthy place are accompanied by her decaying health and eventual death. Likewise, Mr Hale fails to take his breathing problems seriously, which leads to his sudden death later on. People working inside the cotton factories are exposed to dangers more directly:

Fluff...Little bit, as fly off fro' the cotton, when they're carding it, and fill the air till it looks all fine white dust. They say it winds round the lungs, and tightens them up. Anyhow, there's many a one as works in a carding –room, that falls into a waste, coughing an spitting blood, because they're just poisoned by the fluff. (p. 102)

Despite the awareness of these terrible working and environmental conditions, workers and townspeople keep silent. They feel vulnerable and hopeless in striving for their lives.

And I think, if this should be th' end of all, and if all I've been born for is just to work my heart and my life away, and to sicken i' this dree place, wi' them mill-noises in my ears forever, until I could scream out for them to stop, and let me have a little piece o' quiet—and wi' the fluff filling my lungs until I thirst to death for one long deep breath o' the clear air yo' speak on. (Gaskell, 1854/1995, p. 101-102)

Gatlin (2013) argues that pollution should not be conceived "as a source of awe or a sign of wealth, nor as simply a nuisance or an annoyance, but rather as a lethal hazard to everyone (p. 203). People's compromise over environmental problems can only have inevitable repercussions on the health and lives of themselves and their significant ones.

In the next section, discussions will be on the evolution of John Thomton and Margaret Hale. The course of their development will direct them to be better adaptive individuals in society.

5. THE EVOLUTION OF JOHN THORNTON AND MARGARET HALE

Both John Thornton and Margaret Hale grow more adaptive to challenges in society over time. Having lived in Milton all his life, John Thomton focuses on establishing himself in the manufacturing industry. His transformation begins after his regular contact with the Hale family. The transformation of Margaret Hale, on the other hand, develops along with her settlement in London, Helstone, and Milton. The process of emigration helps her to frame and reframe their understanding of the world.

John Thornton's transformation involves his development in three stages: intellectual exploration, emotional development, and humanitarian concern. Among the manufacturers and the townspeople in Milton, John Thornton regards himself and is regarded as "a man of great force of character" and "of power in many ways" (Gaskell, 1854/1995, p. 161). Nevertheless, when he visits Margaret's father and takes reading classes with him, his advantage seems to disappear. As Margaret observes:

When he had come to their house, there had been always something, either of over-eagerness or that kind of vexed annoyance which seemed ready to presuppose that he was unjustly judged, and yet felt too proud to try and make himself better understood. (p. 161)

Thornton, unable to finish school, is aware of his ignorance and decides to make up for what he has missed during childhood, which launches the first stage of his evolution—intellectual exploration. His motivation for learning and his pursuit of knowledge distinguishes him from Milton's men, who "have their thoughts and powers absorbed in the work of today" (p. 113). During the reading sessions with Mr. Hale, he learns to appreciate classical literature and extends friendships to people unrelated to the manufacturing industry.

Volume 6, Issue 2, 2024

John Thornton's affection towards Margaret Hale leads to the second stage of his evolution emotional development. "Mr. Thornton had no general benevolence,— no universal philanthropy; few even would have given him credit for strong affections" (p.211). It is not his nature to show his affection even when he feels it, which appears to be nurtured in the Thornton family. The mother-son relationship in his family is reserved and their topics are mostly "facts, not opinions, far less feelings" (Gaskell, 1854/1995, p. 208). The way he talks to his sister is as authoritative as how a master gives orders. Likewise, his demonstration of love towards Margaret tends to be in a masculine and dominant manner. "I am a man. I claim the right of expressing my feelings" (p. 193). Being refused by Margaret makes Thornton feel defeated and unworthy for the first time: "No one loves me,— no one cares for me" (p. 207). Nevertheless, without retreating, he continues to show kindness towards the Hale family and maintains a positive friendship with Mr. Hale. Thornton's growing compassion for others implies that behind the mask of pride, "he had tenderness in his heart—a soft place" (p.317), which slowly but positively changes Margaret's opinions about him.

The third stage of John Thornton's evolution is the development of his humanitarian concern. For John Thornton, everything tends to be measured "by the standard of wealth" (p. 88). Under "the glut of wealth," "his sense of justice, and his simplicity, were often utterly smothered" and it is inevitable for manufacturers to exercise tyranny over their workpeople (p. 84). His discussion with Margaret on strike shows his unyielding and autocratic attitude:

'Do you give your servants reasons for your expenditure, or your economy in the use of your own money? We, the owners of capital, have a right to choose what we will do with it.'

'A human right,' said Margaret, very low.

'I beg your pardon, I did not hear what you said.'

'I would rather not repeat it,' said she; 'it related to a feeling which I do not think you would share.' (p. 117-118)

Under the influence of Margaret, John Thornton not only speaks to his work people, though not without confrontations but also listens to them. The more he gets acquainted with his work people, the more he realizes that they are "a race of people strange, shrewd, ignorant; but above all, full of character and strong human feeling." Once he talks to them, face to face, man to man, he understands that "we have all of us one human heart" (p. 409). This realization may not prevent "all future clash of opinion and action" for their different positions, but it enables him to judge "with more charity and sympathy" and to cope "with more patiently and kindly" (p. 410). Even when his cotton trade turns bad, he insists that no men, not his creditors nor his workmen, will suffer by him. Thornton's "changed position, with a sense of inherent dignity and manly strength," eventually leaves an affectionate impression on Margaret (p. 413).

Having moved from the metropolitan city, of London, to the countryside in Helstone, and the manufacturing town in Milton, Margaret Hale has developed different ideas about the world around her. Her life in London, staying with her aunt's family, makes her more like a parasite, "quite silent and passive" (p. 11). Although physically settled in London, she feels alienated from the whirling and overwhelming pattern of city life and unconscious of its implicit social rules that "a regular London girl would understand" (Gaskell, 1854/1995, p. 28). She is more attached to the nature surrounding her home in Helstone: "She took a pride in her forest. Its people were her people" (p. 19). Life in Helstone appears to be peaceful but dynamic, full of natural elements and quality time with her family:

Margaret used to tramp along by her father's side, crushing down the fern with a cruel glee, as she felt it yield under her light foot, and send up the fragrance peculiar to it, — out on the broad

commons into the warm scented light, seeing multitudes of wild, free, living creatures, revelling in the sunshine, and the herbs and flowers it called forth. This life—at least these walks—realized all Margaret's anticipations. (p. 18-19)

Margaret's absorption in nature suggests her simple and pure personality, which is massively challenged after the family's move to Milton. The bright light and fresh air are replaced by the dark cloud and smoke. Forests and fields are no longer seen; only chimneys and warehouses are inspected. From the visible landscape to the invisible air, Margaret gets far and far away from nature until Helstone becomes only a dream: "She saw it in dreams more vivid than life, and as she fell away to slumber at nights her memory wandered in all its pleasant places" (p. 100). Being confined to the town life in Milton, Margaret feels stressed and depressed:

their nerves are quickened by the haste and bustle and speed of everything around them, to say nothing of the confinement in these pent-up houses, which of itself is enough to induce depression and worry of spirits. Now in the country, people live so much more out of doors, even children, and even in the winter. (p. 295)

Despite the difficult living conditions, life in Milton does make Margaret more independent. In London and Helstone, "Margaret, inexperienced as she was in all the necessary matter-of-fact business to be got through," was under the shelter of her aunt and her parents (p. 50). After her father decides to move to Milton, Margaret is consigned to inform her mother. She then becomes the main support and decision-maker of the family, looking after her depressed parents and dealing with the resettlement.

She felt that it was a great weight suddenly thrown upon her shoulders. Four months ago, all the decisions she needed to make were what dress she would wear for dinner...Nor was the household in which she lived one that called for much decision...Now...every day brought some questions, momentous to her, and o those whom she loved, to be settled. (p. 51)

Life in Milton also makes Margaret more socially conscious though ideologically confused. Her connection with the Higgins family leads her to acknowledge how workpeople suffer and reflect on what she owns: "How am I to dress up in my finery, and go off and away to smart parties, after the sorrow I have seen today?" (p. 156). Physically involved and getting hurt in the strike, Margaret experiences the struggle where workpeople fight for their rights. The discussion with John Thomton, on the other hand, helps Margaret gain more understanding of the gap between masters and men, who should be in a symbiotic relationship:

I see two classes dependent on each other in every possible way, yet each evidently regarding the interests of other as opposed to their own. I never lived in a place before where there were two sets of people always running each other down. (Gaskell, 1854/1995, p. 18)

Margaret, keeping her faith in the mutually dependent relationships of human beings, constantly negotiates between John Thornton and Higgins, who eventually reach a compromise and build a friendship between them.

Margaret, from a naïve girl in London and Helstone, grows into an independent woman and learns that "she herself must one day answer for her own life" (p. 406). After her parents' death, there has been "a strange unsatisfied vacuum in Margaret's heart and mode of life, " which can neither be fulfilled by the bustling city life of London nor be comforted by the peaceful nature of Helstone (p. 364). She realizes what she longs for is to take her life "into her own hands" (p. 406). The large inheritance of wealth from her godfather entitles her to an economically advantaged position, which supports her decision for the future. By the lands and tenements she inherits, Margaret reconnects with Milton and John Thornton with a new title, his creditor and landlord. Margaret's new position, however,

Volume 6, Issue 2, 2024

reveals a controversial role she plays and her undefined future at the end of the novel. Her involvement in Thornton's manufacturing industry suggests that a symbiotic relationship between the employer and working men should likely be achieved, yet it also leads Margaret, a pastoral lover, to be an upholder of the manufacturing industry. The dead rose from Helstone, which Thornton presents to her, reminds her of the peaceful countryside of Helstone, but it also implies the elapse of time, the fragility of life, and the impermanence of nature.

6. CONCLUSION

The innovation of technology is the force that directs the evolution of human life, yet it can also lead to ecological destruction. Gaskell illustrates how manufacturers like John Thornton, by the power of machines, accumulate wealth and use their workmen as replaceable devices of machines. In order to make a living, the townspeople have to put up with the consequences that come along with machines and factories, the smoke, the noise, and the fluff, until their lives cannot endure any longer. Margaret Hale turns out to be the one, who not only questions the deteriorating environment but also negotiates the conflicts between John Thornton and his workmen. What she aspires to is the tranquillity both in nature and among human beings. Her efforts manifest the process of her transformation, from passive existence into active living, and her influence on promoting better understanding and relationships between Thornton and his workmen.

The novel seems to reach a romantic ending between Thornton and Margaret, yet the dead rose casts unclear shadows on their future. The dead rose Thornton brings from Helstone suggests the elapsed time of the past and an undetermined future for Margaret. Those dreamlike days she spends with her parents in the countryside of Helstone have elapsed. Her future with Thornton in the manufacturing town, Milton, will be distant from nature, shrouded in pollution, and probably withered to death. Conscious of the consequences that the townspeople suffer from, how Margaret builds a future for herself and others will be a difficult challenge for her.

REFERENCES

Bharucha, E. (2013). Textbook of environmental studies for undergraduate courses. Orient Blackswan.

- Crafts, N., & Wolf, N. (2014). The location of the UK cotton textiles industry in 1838: A quantitative analysis. *The Journal of Economic History*, 74(4), 1103-1139.https://doi.org/10.1017/S0022050714000874
- D' Albertis, D. (2007). The life and letters of E. C. Gaskell. In J. L. Matus (Ed.), *The Cambridge companion to Elizabeth Gaskell* (pp. 10-26). Cambridge University Press. <u>https://doi.org/10.1017/CCOL0521846765</u>
- Gasket, E. (1995). North and south. Penguin. (Original work published 1854)
- Gatlin, J. (2013). Disturbing aesthetics: Industrial pollution, moral discourse, and narrative form in Rebecca Harding Davis's life in the iron mills. *Nineteenth-Century Literature*, 68(2), 201-233. https://doi.org/10.1525/ncl.2013.68.2.201
- Goodbody, A. (2018). Climate change and the Industrial Revolution: Informing policies through history, memory, and literature. *RCC Perspectives*, 3, 53-58. <u>https://doi.org/10.5282/rcc/8486</u>
- Kennedy, M.S. (2017). A breath of fresh air: Eco-consciousness in *Mary Barton* and *Jane Eyre*. *Victorian Literature and Culture*, 45, 509-526. <u>https://doi:10.1017/S1060150317000031</u>
- Ketabgian, T. (2013). Orrell's cotton factory. *Victorian Review*, 39(1), 13-17. <u>https://doi.org/10.1353/vcr.2013.0030</u>

- Matus, J. L. (Ed.). (2007). *The Cambridge companion to Elizabeth Gaskell*. Cambridge University Press. <u>https://doi.org/10.1017/CCOL0521846765</u>
- Mazzeno, L.W., & Morrison, R.D. (Eds.). (2017). Victorian writers and the environment: Ecocritical perspectives. Routledge. https://doi.org/10.4324/9781315548234
- Sekercioglu, C.H. (2010). Ecosystem functions and services. In N.S. Sodhi, & P. R. Ehrlich (Eds.), *Conservation biology for all* (pp. 45-72). Oxford University Press. <u>https://doi.org/10.1093/acprof:oso/9780199554232.001.0001</u>
- Ure, A. (1835). The philosophy of manufactures. Charles Knight.
- Wells, L., & Varel, V. (2011). Symbiosis of plants, animals, and microbes. In W.G. Pond, F. W. Bazer,
 & B. E. Rolling (Eds.), *Animal welfare in animal agriculture: Husbandry, stewardship and* sustainability in animal production (pp. 185-203). CRC Press. <u>https://doi.org/10.1201/b11679</u>
- Williamson, J. G. (1986). The impact of the Irish on British labor markets during the Industrial Revolution. *The Journal of Economic History*, 46(3), 693-720. <u>https://doi.org/10.1017/S0022050700046830</u>

AUTHOR'S BIO

Hung-Chih Chen is a PhD student in the Department of English at, the National Changhua University of Education in Taiwan.