



**RESEARCH PAPER**

**The Study of Non-Linear Dynamic System: A Postmodern Analysis  
of *I Am Thinking of Ending Things* by Ian Reid**

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**ABSTRACT**

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This is a postmodern non-linear analysis of Ian Reid's novel '*I Am Thinking of Ending Things*'. A non-linear dynamic system denies the proportions of input and output by exhibiting chaos, unpredictability, and privileging determinism and a disproportion between cause and effect. Postmodernism stresses randomness on one hand and exact predictability on the other hand, emphasizing fragmentation, turbulence, disunity, and non-linearity. This research investigates chaos and non-linearity that undercuts the apparently cohesive and proportioned lives of human beings. The objectives of this research are to locate non-linear capacity of human mind where order and disorder cohabit, and to observe fragmented and disunited beings tied in chaotic relationships. This paper explores the pluralism of a being by pursuing disordered, unfamiliar, unpredictable, fleeting and blurred fractals, tangled in forms of memories, thoughts, and feelings in the apparently concrete, unified and, ordered life. Chaos theory, particularly in the dimension of non-linear dynamic effect has provides the theoretical framework to this research. This research shows that apparently normal human lives are marred by internal non-linear dynamic systems that are characterized by fragmentation and chaos.

**Introduction**

World War II scarred the human mind with immense uncertainty and toppled all concepts of certainty, center, fixity, and order by replacing them with the epiphanies of uncertainty, decenteredness, flux, and disorder. New theories of quantum mechanics, relativity, and finally, entropy information triggered a new

paradigm of uncertainty. This scenario was suitable to the production and interpretation of literary works in new dimensions that can encompass the agony that humanity shares as the collective memory of two horrible wars. This undermining of their being triggers artists and writers towards fragmentation, non-linear turbulent, disunited, fractured, and disordered experimentation in art, literature, and architect alike.

Eventually, this new era was not in harmony with the fixities and rigidities of practical criticism, formalism, and structuralism as available theoretical frameworks to interpret and analyze literary texts. Somehow these age-old theories were not in proportion with the vigorous dimensions of postmodern literature, which has a diversity of meanings and even celebrates its meaninglessness. Postmodern literature that is highly marked with the disproportion of cause and effect, equally receptionist for fractured concepts mended to draw new meanings, allows a cohabitation of order and disorder alike. This leads towards literary discussions on chaos theory that most emphasize on a mutual relationship between the human mind and with what it is surrounded; whether other human beings or texts, real or fictional. In spite of its scientific background, Chaos theory can encompass the fractured, disordered experience of postmodern literature by providing it with a theoretical framework.

In this context, this research paper focuses on the novel *I'm Thinking of Ending Things* by Ian Reid as a primary work to analyze it by using chaos theory as a theoretical framework. The novel tells the story of an unnamed narrator who was thinking of ending her relationship with his boyfriend, Jack. Before ending her relation, she visited his parents on a farm with him, and then the driving back from the farm. On their way back they stopped first at a Dairy Queen and then at a school in a snowstorm to get rid of the cups of lemonade. Throughout the journey towards the farm, we lurk in the narrator's thoughts and the physical situation of the trip. The narrator, who likes Jack and is impressed by his charming personality and intellectual talks, yet continuously emphasizes the idea of ending things with him. They talk about various topics: the importance of relationships, memory, faith, and many more that intellect can enjoy talking about. These intellectual and existential talks were continuously interrupted throughout the journey by an unknown caller, although each time the narrator refused to attend. To the reader's utter surprise, the narrator was receiving calls from her own number.

When they arrived at the farm, the story excels. There was something that was unusual, uncanny, and mysterious. Jack was entirely different, his dialogue now mostly filled with metaphor accompanied with strange circumstances, including the personalities of his parents. The narrator visited an odd attic after dinner, where she found puzzling paintings. Eventually, they started their journey back from the farm to the city. But on their way, they made an unplanned stop on a Dairy Queen in the middle of a snowstorm, and this detour finally ends the story in a way that the reader is hanging and yearning to know something more about the situation. Still, nothing

happens like that of something ending.

This research explores determinism and randomness cohabiting in the universe, in the life and minds of human beings' side by side. I would argue that there is always chaos and non-linear behavior that undermines the apparently proportioned and cohesive patterns of human lives.

### **Literature Review**

Chaos theory which can be defined as a deterministic non-linear dynamic is originally related to sciences, particularly from mathematics, and physics has a good deal to do with literature. Basically, it is a study of non-linear dynamics, highly sensitive to initial conditions, deterministic, and random at the same time. Chaos has the features of turbulence, complexity and a discontinuous process, inclines toward disunity, non-linearity, and fragmentation, besides it is constrained with randomness, engaged with predictability and unpredictability alike, a sheer instance of the co-existence of randomness and determinism. Human life is characterized by all these features, where a human mind epitomizes this non-linear behavior in its working. The mind itself is a chaos but displays order within disorder.

McCarthy quotes Nietzsche, who posits in *The Gay Science* that human consciousness is the last and least development of the organic, "human beings are all like volcanoes: we will experience our eruptions someday" (McCarthy, 2006, p.3). So human consciousness has kinetic energy with a non-linear movement in it. A meta-unity is supposed to be at work in the form of metathinking, which is non-linear, multidimensional, nonbinary, and paradoxical, as three different levels of perceptions cohabit in the mind; emotion, reason and instinct.

In the renaissance era, the history of science witnessed the first modern fundamental revolution. It offered a Copernican view of the universe that emphasizes a heliocentric system, with the spectator revolves and celestial-bodies remain at rest. That was the era that promotes the notion of exact motion without any capacity of nonlinear fluctuation in any dynamic system. Then the second revolution began with the theories of relativity, thermodynamics, and quantum physics, in nineteenth century and continued in the twentieth century, with the notions of co-motion and unpredictability. With these immense changes in science, human sciences also had cracks in the facades of order and fixities. There was a total new mapping of humankind with the works of Nietzsche, Freud, Jung, and more, who held the radical views of instability, split, and flux by rejecting utter determinism, persistence, and order. There was a shift from the physical to social and mental with the works of Hermann Hesse, Robert Musil, and Gunter Grass. It was a shift from matter to mind, from Newtonian physics to Quantum physics, classicism to modernism, macro-world to micro-world, singular to plural, and from mega narrative to micro-narrative. Henry Poincare is considered the father of deterministic chaos, who describes first

what today is known as a non-linear deterministic system. He posits further that determinism and chance are interwoven in long-term predictability, with its sensitive dependence on its initial conditions, which later becomes a distinctive feature of chaos theory. McCarthy (2006) further quotes Ian Stewart who defines chaos as, "lawless behavior governed entirely by law. sensitive to initial conditions, existence of itineraries, common occurrence of random itineraries, and cake-mix periodicity/aperiodicity" (p.7).

Non-linear dynamic systems have a capacity for self-organization; at a macro-level, if this cosmic is operating on this law order from disorder, human beings manifest this phenomenon at a micro-level. The human mind itself is an example of non-linear dynamic system that can operate in both ways; deterministic for instance, in collaboration of daily routine life of a human being, making judgments and decisions by concretizing and materializing abstracts of thoughts; and erratically as well, able to move in all times; past, present, future, tangled thoughts, interior monologues, stream of consciousness, inclined towards abnormality sometimes, although always with a possibility to make coherence from all these incoherent features.

Polvinen (2008) discusses Stoppard's play *Arcadia* in which two characters had a hot debate on an age-old argument that either science or literature can be meaningful? Bernard reprimand science for providing only factual details, as he could never understand the speed of light. Valentine, whereas was excited about the information offered by scientific knowledge. A balance in the play is achieved with the idea that human imagination can be engaged both with the non-human physical world and poetry. Unlike the expectations of literary critics, who think that Stoppard must present meaninglessness and absurdity in his play if dealing with chaos theory, he unexpectedly created a play in which human beings not only gain knowledge rather can decipher it in their particular human context. This extraction of order from disorder is very significant in the postmodern era, which is inclined to celebrate this disorder and developed a capacity to extract order from it as well. In this scenario, when academia is accepting this fragmentation and a non-linear relationship between cause and effect, literary studies also welcomed this chaotic approach to interpret and give meanings to literature, that is ultimately a product of the minds more appropriate to a chaotic approach, although originated itself from scientific studies.

The influence of Neo-Darwinist on defining human beings, and all poststructuralist theories encompassing texts, influenced the human mind and its perception of the universe at large around. Chaos theory, related initially to sciences, created a resonance with humanities with its significant potential to give space to randomness and unpredictability. Stewart (1997) who writes in *Does God Play Dice*, is quoted here by the writer as "a farmer, it is said, hired a team of scientists to advise him on improving his dairy production... after six months' work, they prepared their report. The farmer begins to read, only to encounter the opening sentence: "Consider

a spherical cow". (p.6). Stoppard in his *Arcadia*, also gives contrast to traditional symmetry and goes with complex forms proposed by chaos theory.

Wolfreys (2015) includes an essay of Stuart Sim in his book, *Introducing Criticism At the 21<sup>st</sup> Century*, who points out the paradoxical situation by discussing the experiments of Schrodinger in quantum mechanics. He imprisoned a cat in a box that was filled with cyanide gas. A radioactive source and a Geiger counter were also there in the box. It activates a hammer to break the flask on the decay of a nucleus. There was a probability of a superposition; only one half of decay happened, and the other half did not. The whole system was a quantum mechanics and including cat, in a superposition of two states, dead and alive. "In other words, the cat is apparently hung up in a hybrid state of unreality in which it is somehow both dead and alive". (p.91).

This experiment of half-life and half-death from physics can be related to literature. In Arabian literature, Tawfiq al- Hakim, an Egyptian writer, produced the play, *The People of the cave*, a story that is based on the narration of Ashab-Kahf from the holy book of Quran, who slept in a cave for an unknown long period and woke up in a completely different era without knowing it. Like the cat of that quantum system, who was in a superposition of two states, the people of the cave were neither dead nor alive, experiencing a principle of uncertainty.

Warren discusses Nobel prized winner chemist Ilya Prigogine in his essay, who pointed out the possibility of the existence of a broad class of systems, which are, according to him, dissipative system with a tendency to lose energy over time. He proposed that every system that tends to lose energy reached at a thermodynamic equilibrium, which means death in the case of living beings.

Repetition, a more celebrated phenomenon of postmodern literature, lies at the heart of the chaos theory, or deterministic non-linear dynamic. In its scientific term, it is known as iteration or fractals. Not only human lives, but our minds display this very fundamental feature of iteration and repetition. These fractals are everywhere; from a cosmic order to individual human life, we find fractals or repetition and the same in literature. The human body itself biologically gives evidence of fractals; for instance, our nervous system, circulatory system, working of heart, and above all working of the mind. In the postmodern era, originality is sacrificed to repetition; it can be well explained in the background of chaos theory why great works of art are repeated repeatedly. It shows how highly complex works generated new results; emulations, for instance, Michael Crichton's *Jurassic Park* is a less complicated emulation of Milton's *Paradise Lost*.

Eco, discusses iteration and repetition as a significant trend of postmodern literature, as a serial, series, retake and remake equally celebrated by the postmodern audience. This iteration is a hallmark of the human mind and its recalling, revisiting,

remembering the events, with fractals of thought pattern. Biswas(2018) , sets fractals as "he patterns of chaos"(p.126). He maintains that researchers located almost only in the last thirty years of the twentieth century that chaotic systems are common in nature. One can trace chaotic behavior in the solar system, meteorology, brain, and heart of living organisms.

He extends his arguments by discussing chaos theory as a literary theory with an immense capacity to interpret many intricacies and complexities found in the literature. Many core principals of chaos theory can be located in Shakespeare's Hamlet. Hamlet, who himself seems aware of the chaotic nature of human nature surrounded by an equally chaotic world, throughout the play ponders over the paradoxes of determinism and randomness. Othello, on the other hand, displays the butterfly effect, the sensitivity of a system to its initial conditions. A very trivial matter of dropping of handkerchief and an incapacity to tolerate alcohol to Othello himself brought disastrous results and total chaos.

The novel has been reviewed as a psychological thriller, but researcher wants to interpret the novel in the framework of chaos theory, as an example of deterministic non-linear dynamic.

### **Theoretical Framework**

This research will use Chaos theory as a theoretical framework to interpret textual data using qualitative research approaches and strategies in the framework of the above-said theory. There would be a collection of descriptive data from different sources, for instance, libraries and the internet, by keeping in mind the validity, credibility, and authenticity of these sources. Eventually, the nature of research would lead towards sorting, assembling, and arranging the material. The researcher would try to give broad interpretations of the primary text in a specific framework of selected literary theory.

McCarthy (2006) posits chaos as a disorder, formless and utter confusion, and this anarchy brings in mind the boundless vacancy and horror of blanks at the beginning of time. Paradoxically, from this nothingness, two offspring emerged; Night and Erebus, where death abides but gave birth to the desire for love, order, light, and purposefulness, "thus, chaos is ultimately, and ironically, the mother of all distinct forms. It is the endless potential for infinite realizations of matter and energy". (p.20).

The origin of the word chaos is "Khaos", a Greek word that means 'gaping void'. It gives rise to the concept of small differences that can bring big changes in a non-linear dynamic system, undermining real randomness or total unpredictability on the one hand, and exact predictability or deterministic behavior on the other hand. It is a "lawless behavior governed entirely by law, sensitivity to initial conditions, existence of random itineraries, a common occurrence of unexpected itineraries and

cake-mix periodicity/aperiodicity". (Stewart,1997, p,124).

Edward Lorenz(2000) introduced Chaos theory to the modern world in 1972 by conceptualizing the 'Butterfly Effect'. Lorenz, who was a meteorologist, developed a mathematical model of the movement of air in the atmosphere and discovered the rule of sensitive independence on initial conditions, a key component of chaos theory. In the 1970's a multidisciplinary interest was being observed in chaos, complexity, and self-organization system with the inventions of computers. Thus, the Chaotic system, which is named as a non-linear deterministic system, lacks periodic behavior, with a sensitivity to initial conditions, undermining total predictability with a motion that looks random and non-linear. A chaotic system is marked with a tendency toward self-organization and self-similarity, which is called iteration or fractals. Iteration is not a mere repetition; instead, it uses previous forms in a dynamic state. It's a basic foundation in science and an inherent part of producing literature. Postmodern art is in harmony with the essence of chaos theory, for instance, rococo art, in which irregular shapes make the principle of order. He further extends his argument by giving the example of rhetorical discourse and modes of articulation that renders 'postmodern art self-distorting, ironic, and replicative mirroring of traditional forms and characterizations' (ibid).

With this background, chaos theory was hailed by literary critics to interpret literary texts and found an enthusiastic reception in humanities. Hayles (2018) argues that in a postmodern context, the concept of the order has 'undergone a radical reevaluation in recent decades, textuality is conceived in new ways within critical theory and literature and new kinds of phenomenon are coming...with an emerging field known as the science of Chaos' (p.1). This new paradigm of orderly disorder, in fact, brings revolutionary changes in the interpretation and understanding of the not only postmodern text, rather all past literature from the perspective of chaos. She also attempts to establish a parallel between chaos and new poststructuralist theories that look at linear arrangements of signifiers and their meanings. She was anticipating rather; "the chaos soon be on a par with evolution, relativity, and quantum mechanics in its impact on the culture" (p.4). Interpretative powers of Chaos theory are becoming more and more relevant, specifically in the postmodern context; as Demastes(2005) put forward, "chaos theory can help in comprehending several paths that the theatre has followed since the inception of postmodernism" (p.242).

Chaos theory is strife to fill that void left with the disappearance of a metaphysics destiny. This parody of metaphysics of the future can be traced in Postmodern literature, which is highly marked by initial conditions, and as there is no vision for the final states, chaos theory is very appropriate to analyze and interpret postmodern literature. All these non-linear dynamics, including civilizations and species, can be located at the edge of chaos. If this universe is such a system, continually in the process of self-organization, human consciousness, as a part of this universe, is in the same process, subject to the same laws, addressing burning

questions of control or lack of control, predictability and unpredictability with an eye of suspicion on the status of free-will.

The analysis and interpretation of selected primary work for this research, the novel *I'm Thinking of Ending Things* by Ian Reid, will deal with these questions in the framework of chaos theory in this research paper.

### **Analysis**

The story proceeds with a remarkable display of ordered and determined decision of the narrator to end the things with her boyfriend, then a journey towards the farmhouse, where Jack's parents dwelled, and then from the farmhouse to city, but an expected detour ultimately leads them towards nowhere. It was a movement from the butterfly effect to the strange attractor and finally towards entropy.

The first movement in the story can be elaborated as the sensitive dependence of the deterministic non-linear system on initial conditions, the butterfly effect, which can be defined as the insignificant causes that can have significant effects. The novel proceeds with the lines, "I'm thinking of ending things. Once this thought arrives, it stays. It sticks. It lingers. It dominates" (Ried,2020, p.1). An unnamed narrator has been decided to end things with her lover, Jack. She did not disclose yet, but made up her mind and stuck to it. Apparently, it was so simple to think about ending a relationship, but as the story proceeds, it enters into perplexed and complicated zones. Lyotard made a point when he posits, "it is not true that uncertainty decreases as accuracy goes up; it goes up as well" (p.59). It anticipates a chaotic experience of more control equals less control. However, the narrator was determined to end things with Jack; the uncertainty, the randomness increase as they move on. That physical journey joins hand with the mental journey of the narrator, dominated with a desire to end up the things. Still, it sticks and lingers on like a surrealistic experience, difficult to describe and differentiate from an authentic experience.

The novel's very beginning is chaotic, representing cohabiting of deterministic and random behavior, order, and disorder in non-linear dynamic systems that display their relationship and the mind of the narrator. Hofstadter, an American scholar of physics and comparative literature, articulates this complex relationship of order and disorder and says, "it turns out that an eerie type of chaos can lurk just behind a façade of order...and yet, deep inside the chaos lurks an even eerier type of order".

The novel begins with an idea, a thought of ending a relationship, not even very mature. But as this relationship is a non-linear system, it shows its high sensitivity for initial conditions; as Brady defines a butterfly effect, "a disproportion between cause and effect and the butterfly attractor, random movement between set boundaries"(p.9). A mere thought of ending things with Jack becomes a reason of such a catastrophic end that the narrator shatters and lost her real entity in a

surrealistic world of uncertainty, epitomizes the butterfly effect of a chaotic system, as Jack comments, “sometimes a thought is closer to truth, to reality, than an action. You can say anything, you can do anything, but you can’t fake a thought” (Ried,2020. p.1). Then there are strange attractors at work, a random movement within set boundaries, as throughout the story, there is baffled strife to separate different identities, characters from each other, even vague ideas that either the site where the action is taking place is the only mind of the unnamed narrator, or there are physical, concrete incidents happening in their life. During her journey with Jack towards the farm, she repeatedly received a call on her cellular phone, strangely from her number, creating an impression that the narrator is receiving alarms from her mind may be, and at once the fractals of tangled memories of a man, that saw in her childhood was mingled and intertwined with the incidents of the present when she was in a car with Jack. At once, there is a disproportion and blurred boundaries between mind and real-world happenings, past and present, the oneness of a being and its fissuring and multiplicity in the form of phantom inside the mind. And the relationship between the narrator and Jack “has its own valence”, and the narrator comments, “if that’s true, then relationships can change from one afternoon to evening, from hour to hour” (Ried,2020, p.19), once again indicating non-linearity and randomness.

Throughout the journey towards the farm, the conversation between the narrator and Jack was composed, ordered, encompassing space, relationships, human beings, reality, and many more intellectual, philosophical topics, indication order, and determinism, but rolling towards irrationality, disorder, randomness, and surrealism gradually as they move on, and finally a total disintegration and deterioration, shattered experience when they were on their way back from the farm to city. The mysteries and unpredictability of the cosmic at large are in alliance with the human mind, as the former is a macrocosm and the latter is a microcosm. Jack, while commenting on space during their journey, says, “in space, everything has its relative position. Space is an entity... But also, limitless...there is no definitive border between the start and the end... dark matter...still a mystery”. And then he extends this interpretation to humans, “its not always about knowing. I appreciate not knowing. Not knowing is human. That’s how it should be like space. Its unresolvable, and it’s dark” (Ried,2020, p.24). This is how our normal understanding of the system runs counter with its undeterminable, unpredictable, and multiple identities, paradoxically. Presence of strange attractors, a black hole with a capacity to suck all matter, a singularity where all laws of physics can suspend, further leads towards the hypothesis that the universe itself is a black hole and then human mind with all its mysteries lurking in the individual and collective unconscious of human beings. Jack says in the car to the narrator, ‘how are we supposed to achieve a feeling of significance and purpose without feeling a link to something bigger than our own lives? (Ried,2020, p.44), indicating a quest of human beings to seek order and meaning in the chaotic disorder, meaninglessness, and horrors of boundless vacancy and blank patches of unmeasurable time.

This mystery, order and disorder, determinism and randomness, predictability, and unpredictability equally observable as a universal phenomenon at the macro level and in the human mind at the micro level. The narrator, who proceeded with a single, trivial idea of ending things with his boyfriend, positioned herself at a superposition of Schrodinger's cat, who was half alive half dead, not able to reach at any beginning or any end, rather on edge, indeterminate, unreal state of being, oscillating first between two extremes and then ossifies in between.

The second stage was a movement from the butterfly effect to the strange attractor, a black hole, apparently the farmhouse, but desolate, mysterious corners of the narrator's mind as well. When the narrator and Jack reached the farm, things changed from realistic and straightforward to complicated and surrealistic. With its interior and its attic full of distorted pictures inside, the farmhouse is leading the story towards complication. Fractals or iteration, another essential element of chaos theory, is abundant in the story. Fractals are everywhere, in the essence of the universe and in the function of the human mind. From the beginning, we have a sensation of fractal formations in the narrator's minds when she recalls, revisits her past through her childhood stories and connects it to the present situation. Further, there are personality fractals when to the utter surprise of the reader, the narrator locates herself in the picture, which she noticed in Jack's room. The narrator maintains it as, "the child has long hair and is glaring at the camera...it doesn't look like Jack. Not at all. It looks like a little girl. More precise: it looks like me" (Ried,202, p.60). This diffusion of personalities begins right from the moment when they reached at the farm, and till the end, it baffled the reader, as sometimes it looks like that all characters are only fragments of a single character, sweeping fleeting from a center, displaying chaos of a single mind.

Jack, who was talkative throughout the journey, mysteriously kept himself on mute after reaching the farmhouse. When he started talking, the narrator felt, his voice "is meant to be my voice. it is slightly higher pitched than his own... he is not mocking me; he is mimicking me...this is not a gag impersonation...he is becoming me in front of me" (Ried,202, p.67). Fractals are outside or inside, like phantasm and fragments of a mind, it remains a mystery till the end, but this replacement of characters highly featured a non-linear dynamic system. In the beginning, if the relationship of Jack and the narrator was representing disproportion and chaos, now the farmhouse is that system where everything is unpredictable and unusual, which perplexed and confused the narrator, who was feeling now claustrophobia and wanted to go back to her home.

The third phase of their journey was from the farm to the city. On their way back to the city, amidst a snow storm, Jack suggested something very wired, to stop on a Dairy Queen for lemonades. That's the point, when the things apparently in the control of the narrator, a simple decision of a breakup, gradually entered in a bizarre situation. She wanted to resist the idea of stopping for lemonades on a deserted road while the night is cold with a snowstorm but couldn't stop. Jack was further occupied

with another wild idea to dispose these lemonade cups in nearby high school dustbins. Apparently controlled, deterministic, and ordered situation has been entered into an uncontrolled, random, disordered situation when Jack left her in the car and went inside the high school. The narrator, in a helpless situation, says, "I close the door. I have no idea where I am. I don't think I could point out my location on a map" (Reid,2020, p 87). She further elaborates that she is at 'nowhere. This is nowhere. This is not city or town. This is fields, trees, snow, wind, sky, but it isn't anything' (ibid). From the butterfly effect, she entered in the zone of strange attractors, and now towards entropy, where there is no room of further energy exchange, no control on the situation, no capacity to take any decision, a total lack of order, gradual decline into disorder. This journey from specific to general, from known to unknown, is chaotic. They are in a cosmic void, without any orientation, very much similar to the dark corners of the unconscious, mysterious, unexplored, mere fractals and repetitions, labyrinthine of a mind or the cosmic both with snares and traps. She says, "it feels empty here. Void" (Reid,2020. p.89). On that deserted road, the narrator found herself in chaos if there is a real being or entity of her, otherwise, it's a journey in someone's mind, with fractals of memories, perceptions, experiences, all diffused and frustrated, all characters one, the only phantasm of mind.

She went inside the school to search Jack, repenting on her decision to come here with him; a void might be without any gravitational force that can hold someone's entity on the ground, a void that can suck all faculties of thinking and deciding; "I should have ended things long ago. How did I end up here? (ibid). Non-linear dynamic system is at its peak to display randomness and chaos. Once again, the iteration of thought, 'thinking of ending things. Its crazy, we're in the fucking middle of fucking nowhere' ... it's all just a big maze. A trap" (ibid). the narrator is trapped in the school, the labyrinthine was offering no exit

Interestingly, the narrator finds there a little shirt of a child, "it's light blue with white polka dots...there is a tiny paint stain. I recognize it. I had the same one. This was my shirt...when I was a kid" (Ried,2020.p199). It again gives a clue of the jerky travel from matter to mind and from mind to matter. During her search for Jack, in the halls and rooms of high school, the narrator finds, "all of us are in there. Distorted. Blurry. Fragmented' ...She, He, We, Me... he stands at the door. It creaks open. We're together. Him. Me. Us" (ibid). That was temporary order in disorder, all fragments fused in a self, an unknown combined self. And then the brutal ending of the narrator of fissured, and fragmented characters, the end of action, an entropy in their deterministic non-linear system. It echoes Nietzsche who believes that like volcanos, human beings will have their eruption one day.

McCarthy(2006) discusses Buttlar who gives posits that metathinking is a meta-unity of the apparent contraries of human mind, that is nonlinear, nonbinary, paradoxical and multidimensional, where three different level of perception can coordinate; instinct, emotion and reason (p.39).

To conclude the discussion, these are the new mappings of humankind, forecasted by Friedrich Nietzsche, C. J. Jung, George Simmel, Herman Hesse, who with their works raises questions on the positioning of human being in a universe which is itself chaotic, had been proved by new scientific theories of relativity and evolution. How can the life of a human being be either deterministic or random in this scenario? This new era needs new approaches to literature and theory as well. Chaos theory has an immense potential to elaborate the complex phenomenon of the human mind and the cosmic around equally, which at once undermines exact predictability at one hand and total unpredictability on the other. It is simply a way, more scientific even, to describe the problems without solutions in human lives. It wrestles with the age-old issues of randomness and determinism and interprets literature with far more capacity than the earlier theories. The unnamed narrator of the novel, started a journey with her boyfriend with a thought in her mind that at the end of this trip, she is going to end to her relationship. It was such a simple thought, as pre-decided, just ready to be implemented at the end of that trip. But as she moves ahead, it seems that things are not as simple as she thought of about the whole situation. The narrator started losing control over circumstances; besides the trip was not as simple as she was expecting. Apparently, it was on the road, but many times in the story reader finds himself in the jerky land of the narrator's mind. The world of reality was emerged and blurred in a surrealistic world, where there is no gravity, no center, no prediction, gradually moves ahead towards total chaos, shattered, fragmented experience without any particular solid ending.

Eventually, the complex plot of the novel has the butterfly effect, strange attractors, iteration or fractals, superposition of beings, and finally entropy or chaos, as the non-linear dynamic system has a capacity either to create an order from disorder or a total chaotic pattern, a complete end of further energy exchange. All these features have been traced here in the novel, I'm thinking of ending things, when things ended themselves, although it was a trivial plan to end an immature relation, yet it grows more and more complex as the plot develops and ends with the ending of everything, cohabiting, order, and disorder, determinism and randomness seeping into each other, with a struggle of overcoming one binary on the other. But disorder prevails.

## References

- Al-Hakim, T. (1989). *The People of The Cave*. Trans. Mahmoud Al-Lozy. Cairo: Elias Modern Publishing House & Co.
- Brady, P. (1990). Chaos theory, control theory, and literary theory or: A story of three butterflies. *Modern Language Studies*, 65-79.
- Biswas, H. R., Hasan, M. M., & Bala, S. K. (2018). Chaos Theory And Its Applications In Our Real Life, *Barishal University Journal Part 1*, 5(1&2): 123-140
- Camplin, T. E. (2004). *Evolutionary aesthetics: The evolution of complex systems, the appreciation of beauty, and the creation of art and literature*. The University of Texas at Dallas.
- Demastes, William W. (2007) *Theatre of chaos: beyond absurdism, into orderly disorder*. Cambridge University Press
- Eco, U. (1985). Innovation and repetition: Between modern and post-modern aesthetics. *Daedalus*, 161-184.
- Farsi, Roghayeh. (2017). *Chaos/Complexity Theory and Postmodern Poetry: A Case Study of Jorie Graham's "Fuse"*. SAGE Open 7.3
- Hayles, N. K. (2018). *Chaos bound*. Cornell University Press.
- Khamees Ragab Aman, Y. (2007). Chaos theory and literature from an existentialist perspective. *CLCWeb: Comparative Literature and Culture*, 9(3), 5.
- Kelly, K. E. (Ed.). (2001). *The Cambridge Companion to Tom Stoppard*. Cambridge University Press.
- Lorenz, E. (2000). The butterfly effect. *World Scientific Series on Nonlinear Science Series A*, 39, 91-94.
- McCarthy, J. A. (2006). The Tin Drum—Myth and Reality, or The Eternal Return. In *Remapping Reality* (pp. 265-322). Brill.
- Polvinen, M. (2008). *Reading the texture of reality: Chaos theory, literature and the humanist perspective*. Helsinki University
- Ralph, A., & Yoshisuke, U. (2001). *Chaos Avant-garde, The: memoirs of the early days of chaos theory*. World Scientific Publishing Company.
- Stewart, I. (1997). *Does God play dice? The new mathematics of chaos*. Penguin UK.

Warren, K., Franklin, C., & Streeter, C. L. (1998). New directions in systems theory: Chaos and complexity. *Social Work, 43*(4), 357-372.

Wolfreys, J. (2015). *Introducing Criticism in the 21st Century*. Edinburgh University Press.