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The Impact of the Butterfly Effect Concept on Jorie Graham's Selected Poems

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Abstract

The butterfly effect states that the flapping of a butterfly's wings in Brazil causes a hurricane in Texas. It is the main concept of chaos theory that is developed by the American meteorologist Edward Lorenz. Besides, it is a term used to explain the high sensitivity of nonlinear dynamical systems to their initial conditions. The study applies the concept of the butterfly effect to the poems of the American poet Jorie Graham. It analyses two collections of her poems, *Erosion* and *The End of Beauty*, where the main purpose is to prove that every minor change in a chaotic poem, whether in the external form or in the content, leads the reader to order in one way or another. In other words, from the middle of the chaotic poem emerges a small part that restores order to the whole poem. The poet's

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seemingly disordered techniques employed in her poems are strategically used to create the sense of order in the middle of chaos.

Keywords: butterfly effect, The End of Beauty, Erosion

إثر مفهوم تأثير الفراشة في قصائد جوري جراهام المختارة

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المستخلص

يشير تأثير الفراشة إلى أن رفرفة أجنحة الفراشة في البرازيل يسبب إعصارًا في تكساس. إنه المفهوم الرئيسي لنظرية الفوضى الذي طوره عالم الأرصاد الجوية الأمريكي إدوارد لورنز. إلى جانب ذلك ، فهو مصطلح يستخدم لشرح الحساسية العالية للأنظمة الديناميكية غير الخطية لظروفها الأولية. وتطبق الدراسة مفهوم تأثير الفراشة على قصائد الشاعرة الأمريكية جوري جراهام. تحلل مجموعتين من قصائدها ، التآكل ونهاية الجمال ، حيث يكون الغرض الأساسي هو إثبات أن كل تغيير طفيف في القصيدة الفوضوية ، سواء في الشكل الخارجي أو في المحتوى ، يقود القارئ إلى الترتيب بطريقة أو بأخرى. بمعنى آخر ، من منتصف القصيدة الفوضوية يظهر جزء صغير يعيد النظام إلى القصيدة بأكملها. تُستخدم أساليب الشاعرة التي تبدو مضطربة في قصائدها بشكل استراتيجي لخلق شعور بالنظام وسط الفوضى.

الكلمات الدالة: تأثير الفراشة، نهاية الجمال، التآكل .

Introduction

Butterfly Effect

Chaos theory has mostly expressed itself in the form of butterfly theory, which has transcended the boundaries of science and has extended far into non-scientific domains. The authors go on to suggest that the degree of dispersion has resulted in the central notion of the theory being oversimplified. Several writers have said that the theory can be used in management and education because it is multidisciplinary and can fill the gaps between different fields like philosophy, sociology, and education. This new paradigm is called "united science." However, it is claimed that this level of spread distorts the theory's central concept. The theory has been used in management and education by a lot of writers. It could bridge the gaps between diverse fields (Erçetin & Potas, 2019).

It is both scientific truth and a popular metaphor in Western literature and culture. The term "Butterfly Effect" is used to describe how nonlinear dynamical systems are extremely sensitive to their initial conditions. The Butterfly Effect is a metaphor for a form of cause and effect that may occur over great distances; for example, the flapping of a butterfly's wings in Brazil can result in a storm in Texas (Dooly, 2009).

Lorenz recognized a form like two butterfly wings when he graphed the motion in three-dimensional phase space, created by the orbits as they carefully followed the cyclic motion. The orbits never crossed or lined up with each other, which shows that the system never did the same thing exactly twice. However, they did stay inside a certain volume, which gave the shape a pattern that was easy to recognize (Hayles, 1990). Due to the wandering nature of the orbits, knowing the system's initial position during a given run did

not help in predicting its final location. Orbits can end up close together or far apart depending on their initial positions. Indeed, it is hardly surprising that this attractor was seen as peculiar. It was strange because it was both predictable and random, and it was both easy to use and very complicated (Hayles, 1990).

People's belief that the butterfly effect can explain daily events, however, suggests more than an obsessive desire to justify ideas through science. Everything occurs for a purpose, and that individuals can identify all of those reasons, regardless of how small they may be, speaks to the expectation that the universe is predictable. Nature, on the other hand, challenges this assumption. Scientists use cause and effect to learn about many things, from the most basic particles to storms (Dizikes, 2008).

"Semantic attractor" is an appropriate term for the Butterfly Effect metaphor, which shares many of its features. Because of this, the metaphor's semantic structure is stable and a little uncontrolled cause has a big, negative influence at a distance. Reliable repetition may be seen in this way because the semantic structure functions as a converging force. Nevertheless, within that framework, the speaker may choose the exact cause, effect, and distance of the statement. Consider how a little shift in the value of the Japanese yen may force Brazilian factories to shut down, while a tiny creature in rural China could spark a worldwide pandemic, according to a health care professional. The Butterfly Effect metaphor has a part that moves forward, which lets it explore more of the semantic field (Dooley, 2009).

However, for Lawrence randomness serves as both a means of release and a source of poetic genius. Poems that use randomization break readers' mental models and

encourage them to explore unfamiliar territory both within and outside of themselves, whether they depart from rhyme, metre, constant rhythm, or appropriate grammar. They have so far created a binary that contrasts chaos and order. Readers have explored how rhyme, metre, stanza, and other patterns define a poem's structure and order, while free verse and randomness reflect the organic creativeness of a poem. It is possible to detect these polarities apart from one another, but it is not acceptable to claim that the existence of one polarity implies the lack of the other. Even in the midst of chaos, order may and does exist, and chaos can be found on the edges of order (Henderson, 2017).

Although a poem may appear to be following a certain pattern or code, upon closer inspection, the reader may find that it has been compromised in places by free association or illogical thought. Though at first glance, a poem may appear chaotic or fragmented, readers are often pleasantly surprised to discover orderliness and cohesiveness under the surface. Understanding the order and chaos of a poem requires more work than just analysing its rhyme and metre. (Henderson,2017)

Reading literature, therefore, requires a sensitive dependence on initial conditions. In Munro's "Day of the Butterfly," originally titled "Good-by Myra," which is an example of an initial condition in a short story. The difference is dramatic in terms of setting the stage and establishing expectations. The title "Good-by Myra" suggests a clear narrative about loss and death. For this reason, "Day of the Butterfly" is more difficult to comprehend. (Leblond, 2015)

One needs to hypothesize and extend the search in some different prospecting directions. The collocations Day of Judgment, Day of Doom, and Day of Wrath all imply

a particular day, such as a birthday or the end of the world. Having familiarity with the world and butterflies causes everyone to associate the word "butterfly" with ideas of change and timelessness. For those who love poetry, it may remind them of Robert Frost's "Blue-Butterfly Day." (Leblond, 2015)

The butterfly is a common symbol for the afterlife, transformation, and rebirth, as well as the soul and the Other World. Though clear links with the author's aim cannot be established, the number of echoes and connections is complicated and dynamic, if not chaotic. In this regard, the term refers to the "Butterfly Effect," the idea that one seemingly small event can have far-reaching effects. The reading covenant is defined as an interpretive journey where initial complexity leads to defamiliarization, which in turn leads to a profusion of meanings. Since humans are at the textual boundary of the paratext, this puts one in a special connection with the author. That title has significance, and it is the reader's job to allow it to resonate. (Leblond, 2015)

Literature Review

The current study has selected poems that have been investigated for the first time in the scope of chaos theory and have been analyzed in ways that are entirely different from the previous studies. Although some have studied chaos theory and applied it to literature, it needs to prove that there is order in the midst of chaos. Besides, answering the question raised by Lorenz, "Does the flap of a butterfly's wings in Brazil set off a tornado in Texas?" In other words, to prove that minor changes in a regular or irregular poem have a large impact on the entire poem.

According to Costello, Graham's latter works are postmodern, whereas Erosion is modernist. Anne Shifrer (1995), in her article "Iconoclasm in the Poetry of Jorie Graham," argues that "Erosion" contains the seeds, if not the fruits, of postmodern notions regarding artwork, even though Graham's later poems do progressively focus on destroying their own surfaces. Shifrer uses Costello's conclusion, her evaluation of Graham's "Two Paintings by Gustav Klimt," as an ending point for her own argument.

A careful reading of the poem leads Costello to the conclusion that Graham, despite her initial concerns about Klimt's art, nonetheless seems to sympathise with the artist's handling of surface since the pleasure it provides draws people into the mysterious and unspeakable. While Shifrer agrees with most of what Costello says about the poem, she is against the opinion that Graham concludes the poem with an ironic comment on the paintings' seeming innocence. Graham, no matter how hard she tries to appreciate artworks, never believes their apparent peace.

In addition, Laurel Taylor (2000) examines three poems from Graham's collection in his article titled *Comparison as a Gesture Between Them: John Burnside and Jorie Graham*. He compares the poetry of Jorie Graham to that of John Burnside. When readers read these two pairs of poems together, they can see how each poet tries to deal with the ambiguity of change, the consequences of identification, and the meaning of a real story. Moreover, Willard Spiegelman's (1998) article *Jorie Graham's New Way of Looking* goes into the author's shifting experiments in looking and explaining in her earlier works, including *The End of Beauty*.

Besides, Alghamdi's (2018) "I Think I Feel My Thinking-Self and How It Stands: Self and Cognitive Identity in the Poetry of Jorie Graham" uses neurologist Antonio Damasio's notion of the cognitive structuring of self to re-evaluate people's understanding of identity in Graham's poetry. Gender, racism, psychoanalysis, post-structuralism, and post-colonialism have all been utilised in theorising about identity for a long time. This study considers how Damasio's findings on the nature of consciousness can alter people's comprehension of Graham's use of the pronoun "I" in her poems.

Analysis

Disorder in *Erosion* and *The End of Beauty*

While reading the title of Graham's poem, "Reading Plato", readers may assume that she is going to tell a story about Plato, but actually she is not. Then, they realize that she is talking about fly-makers and their hoppy art in general, and this puts them in confusion. The poem is chaotic since it doesn't follow a set rhyme scheme or meter, as it is seen in the following stanza:

This is the story
of a beautiful
lie, what slips
through my fingers,
your fingers. It's winter,
it's far. (Graham,1983,6)

Graham mentions her friend who is a lure maker in her "Reading Plato" poem. Because it is built on the depiction of a good concept of forms separated from the

environment by erosion, this activity is a beautiful lie. Graham rejects ideal, logical forms in favour of what is experienced in the body. Yet she appreciates these allures, setting the stage for a division she will return to often: between the beautiful art forms that may exceed reason in their value to everybody and the genuine, which eludes the forms of reason. The lures have a connecting effect despite being built from what we perceive to be fragmented pieces of nature. As they are thrown into the water, their physical and spiritual selves are brought back together (Costello, 1992).

However, in her other disordered poem, which is titled "Scirocco", Graham uses dashes and enjambment between stanzas: "from the beautiful to the true....." (Graham, 1983, 9), and in another line, "See what her hands know_____" (1983, 10). It is a fragmented, unrhymed poem. These small spaces that appear to be for missing words have the overall effect of giving the poem a chaotic form, much like the butterfly effect in chaos theory. It has been said that a single butterfly's flapping wings may cause an explosion with far-reaching consequences. The spaces and irregularities in metre and rhyme affect the entire poem and give it an unorganised and chaotic shape; it can be seen in this quotation, "Graham revises the epigram: in her work, the invisible, like the wind in Scirocco, not only has visible consequences but it also testifies to the flickering presence in our lives of otherworldly, angelic messenger" (Spiegelman, 1998, 269), in which the invisible wind causes big results.

By turning what could otherwise be the subject of a typical tourist poem into a religious investigation of how looking at reflects back to us, Graham creates a work of art. The wind from the title sweeps over Keats' flat in the Piazza di Spagna, yet it eludes description and instead passes through people (Spiegelman, 1998).

The spirit-wind appears to find meaning in the reactions of those around it. Graham, however, is always sceptical; therefore, she never makes any definitive claims regarding such phenomenological notions. Her transformation of the wind-as-spirit into a dry desert plague is a clear reference to a traditional trope, and it also helps to demonstrate how he avoids associating the beautiful with the truth, as Keats did. The carefully framed writings of Keats that he kept inside glass in his rooms encourage people to have a look at them. They want to be healed by the spiritual world the wind represents, but Graham wonders if the wind itself needs healing from human efforts to enter it. Although she maintains her caution, Graham's later poems often avoid creating such optimistic endings. Any time readers engage in a transaction with the world by viewing it, the world gives it back by similarly viewing them (Spiegelman, 1998).

Beside the un-rhyming form and lacking meter, Graham uses paradoxical words in her poem, "I Watched a Snake". These words include "disappearing," "reappears," "visible," "vanishing," "appears," and "invisible," as well as "going back under, coming back up" (Graham, 1983, 34). She employs spaces between words to draw her readers' attention, and this makes it an irregular poem, as in: "for small things—flies, words—going/ because one's body" (Graham, 1983, 35). In addition, she punctuates certain lines with a dot, like in "that has just landed on a pod....." (Graham, 1983, 35)

"Erosion" is another poem written by Graham. It is like her other poems; it has a disorganised form that lacks rhyme and meter. She writes in long lines with lots of commas, as in "We are, ourselves, a mannerism now," (1983, 56) and very short lines with only two words as a complement to the brevity, as in "of evolution" (Graham, 1983, 56). Readers can find that one sentence may take more than one line with various lengths and end with

a full stop, and then start with another, and this adds a sort of disorder to the structure of the poem.

Graham's poems are filled with observations about the world around her and her attempts to examine it, which frequently backfire and cause her to stop functioning and direct her attention inward. "Erosion" opens with the speaker resisting what is presented as an improvement. Despite the hesitance ("I think") in this statement, it is this hesitation, this ability to stop and think, that is being praised as better than a type of awareness that leaves it out (Leubner, 2009).

It is indeed normal to assume that incorrect words would cause linguistic erosion, or the gradual loss of meaning and justification. There are processes of erosion and sedimentation, of error and stability, that allow every word, correct or incorrect, to reach its target or have any destination at all. Consequently, erosion is not a danger to any given ground but rather a necessary part of it. There is some truth to the claim that conceptual erosion might impede efforts toward clarity and comprehension, but it also provides some space for their viability. The fact that matters and issues can be broken down or do break down assures their intelligibility, even if it excludes them from being fully understood (Leubner, 2009).

In addition, Graham's other poem, 'Self-Portrait as Hurry and Delay', is inspired by Homer's *The Odyssey* tale of Penelope, Odysseus's wife. Penelope is under pressure to remarry one of the suitors since she is expected to become a widow if Odysseus does not come back from the Trojan Wars. She expresses a desire to postpone marriage to complete her weaving project and receives approval to do so. She takes out what she has woven each

night to get a move on things. This works out well for Odysseus in Homer's tale; he and Penelope are reunited once he returns, and the suitors are banished. Despite Graham's reuse of the same tale, the poem's "plot" rarely repeats itself, emphasizing the flexibility and freedom that comes from improvising on a predetermined outline (Taylor, 2000).

In this poem too, the disorganised form is evident from the first glance at the poem. As in the previous poem, there are irregular stanzas in length and number of lines. Just as there is a fragmentation of the external form of the poem, there is a fragmentation of the content of the poem. Penelope, the poem's heroine, enweaves the carpet she weaves every time, as shown in the following lines:

So that every night above them in her chambers she unweaves it.

Every night by torchlight under the flitting shadows the postponement,

working her fingers into the secret place, the place of what is coming

undone, (Graham,1987,48)

By doing so, she tries to delay the suitors and wait for her lover to return. At this point, readers can see the mess because whenever she reaches the end of the weaving, she returns it to its previous position.

Moreover, her poem "Pollock and Canvas" begins with a section that exhibits a firmly resistant poetic surface. This section's quick changes in poetic register and tone indicate a series of slippages between the mind and body, the past and the present, the real world, and the poet's imagination that the poem will ultimately explore. The spaces, breaks, and gaps between these lines are both real and imagined, and they happen in both physical

and emotional places. They are produced in a poetic style that allows one text to flow into the next (Selby, 2012).

Graham's struggle with the issue of method and description in both painting and poetry is best captured in the poem "Pollock and Canvas," which is composed of the painter's hypotheses, observations, and pronouncements as well as God to Moses quotations and an envoi from a Renaissance lyric. Her approach is both aggregative and fragmentary, and her topic is once again completeness and emptiness, fulfillment and separation (Spiegelman, 1998).

As portrayed by Graham, Pollock is both the western hero of American myth and a leader who opens up the land so that he can consider it home, as well as the Fisher King of grail myth, whose significance has blighted the land and whose myth can be viewed as basic to twentieth-century American poetry because of its impact on T.S. Eliot's *The Waste Land*. Therefore, Pollock is a character in Graham's poem that blurs the lines between the actual and the poetic, the bodily and the mythological, an individual whose desire for artistic discovery mirrors the Western frontier expansion of America. As a result of his illness, the Fisher King is unable to lie down or stand up straight, so he bends over his canvas to look at the ground as he paints. And behind such gestures and myths is a feeling of the body's great connectivity to the land, for it was the soil of their newly gained land that would provide them with food and shelter (Selby, 2012).

Readers see a poetic rearrangement of the artistic gap between Pollock and his canvas in the transition between Parts I and II of Graham's poem. The poem itself fills the hole; it almost moves into the daylight. It fulfills its own aesthetic procedures by numbering

each distinct poetic line in a manner similar to how Pollock's technique of pouring paint opened up the creative practices of post-war America. This process is represented as throwing a poetic or fishing line into the flow of experience. The poem no longer functions as a finished aesthetic item but rather as a process, a graph of the act of creation (Selby, 2012). The poem's form and content are both characterized by chaos. An illustration of chaos may be seen in the spaces between the lines and between Pollock's canvas and himself.

Once again, another of Graham's poems, entitled "Vertigo", can be applied to chaos theory from the reader's immediate observation of the poem's external form, which seems scattered and fragmented. Graham has added spaces, open sentences, punctuation marks such as the question mark, and an abundance of commas to arouse curiosity and suspicion in the reader. It is known that Graham lives in a time full of fragmentation, scattering, and imbalance. She lives in an unstable and contradictory world, which strongly impacts the shape of her poetry and the irregular way she portrays its inhabitants. This can be seen in these poetic lines: "The two elements touched—rock, air." and "She saw—could they be men?—the plot. She leaned. How does one enter/ a story?" (Graham, 1987, 66-67)

The End of Beauty's "Vertigo," which depicts a young couple standing on the edge of a cliff, staring at the new life that awaits them, serves as the foundation for her recent work as a break from modernist tendencies and a foreshadowing of her upcoming poetic efforts. The use of dashes to expand the lyric line and commas to avoid stops are two examples of how the poem departs from the norm (Alghamdi, 2018).

In the poem, two unnamed lovers prepare to move into the future, leaving the past behind, and make what seems to be a new beginning. The poem does not narrate events but rather portrays the lovers at a turning point between their old and new lives. Graham keeps a close eye on the relationship and relays what the girl is thinking. It seems to be clear to everyone reading *Vertigo* that Graham imagines herself in the role of the heroine, a young lady who is hesitant to take it on (Alghamdi, 2018).

Likewise, the title of the poem suggests the mess that occurs inside the mind of the young woman when she sees the reality of the new world and the transition to a new life away from the past. Through the words of the poem, the reader can understand her hesitant thoughts about leaving the old world and heading for a new one. This hesitation reminds the readers of Hamlet's hesitation in making his decisions, which made his mind crack, and this represents the inner chaos of the speaker. It is at this point that the reader experiences the butterfly effect, realising how one apparently minor thought can lead the mind to a state of loss and overthinking.

Reordering the Disorder in *Erosion* and *The End of Beauty*

Of course, dawn follows dark nights; after a storm, there are sunny, calm days; similarly, order emerges in some way after reading a chaotic poem. In Graham's poem, "Reading Plato", which consists of 11 stanzas and one line, it can be noticed that each stanza contains six lines, which gives the poem a sense of stability.

Graham uses Plato to get her readers to think about how Plato describes art as "a beautiful lie." Art is erroneous in Plato's view because it does not exist in the world of ideal forms or thoughts. By the same token, since the fly-maker's method involves changing

what can be seen, Graham considers it to be a sort of deception (Karagueuzian, 2005). Despite the fact that Plato is only mentioned in the title, one can realise after reading the whole poem that the poem is about his point of view on art.

"Reading Plato", challenges some of Plato's ideas regarding mimesis. According to Graham, a friend's excellent idea, or what causes the "silly days," is making fishing flies. Another brilliant concept that connects the days together is poetry, a trap set to catch "what slips / through my fingers, / your finger." The gods have the genuine, natural knocks it off, and poets construct their imitation counterfeits, but Plato had the terrible idea of viewing art as a lie, a copy of a copy. Graham, however, patterns her attempt to "pass / for the natural world" after the fisherman she portrays, and her poem is the narrative of a beautiful lie with the pun on "line" (fishing line, line of poetry) intentional (Chiasson, 2015).

Moreover, in Graham's poem "Scirocco" the manuscripts of Keats are carefully framed and displayed behind glass in his apartment, encouraging viewers to examine them. In readers' interactions with the spiritual world represented by the wind, they desire to be healed by what they enter, but Graham questions if it too desires to be mended by them. Graham's later poetry generally drifts away from the optimistic conclusions she reaches here, while she maintains her vigilance. People's interactions with the world and how they see it are always met with how the world sees and thinks of them (Spiegelman, 1998). Using description and personification in the poem, Graham keeps the events related and leads her readers to understand what she intends. Sometimes she intentionally repeats the same words in order to make her readers focus on the idea she wants to convey, and this gives a sort of order to the poem.

Outside his window
you can hear the scirocco
working
the invisible.
Every dry leaf of ivy
is fingered, (Graham, 1983, 8)

The title of the poem makes the reader think that she is talking about weather, but when they start reading, they will think that she is talking about Keats's spirit after his death. Reading more and more of the poem, they may start to get the impression that the poet is talking about the world. Despite the irregular structure, her use of perplexing words and descriptions causes her reader to return to the safe side of order.

The butterfly effect is clearly seen in Graham's poem "Erosion". There is a clear connection between the title of the poem and the content, and this demonstrates the deep dependence on the initial condition. Further, the author uses the term "erosion" many times to emphasise her point and tie together related events, like in: "I am trying to feel the erosion" and in "the erosion/ of the right word"(Graham, 1983, 56). Though it is one little word, it restores organisation to the fragmented poem. While reading the poem, readers have a sense of balance.

Thorough reading of the poem renders the reader to immediately recognise the steadiness. For example, in this line, "it is our slowness, I love, growing slower,"(Graham, 1983, 65), she emphasizes her idea and provides sense of order by using these words "slowness" and "slower". Furthermore, in another line, she says, "the plants coming forth

as planned out my window, row after row" (Graham, 1983, 65), and this description reveals organization.

Graham's personal interest in semantic erosion appears throughout her poetry, and it motivates her usually drastic stylistic shifts. This is because language is always making new and unreasonable demands, despite repeated, fairly successful attempts to manage it. The new, impossible needs of language are reflected in and met by her poet's new, difficult expectations. Jarman, one of Graham's critics, depicts the image of the snake in "I Watched a Snake," as a symbol of linear succession in her recent poetry that represents an admirable quality. He thinks that "she associates the snake's hunting with work, and work, like the making of art, is related to desire and passion. Graham has always shown a gift for moving facilely among large abstractions, defining them in almost believable ways or in ways we might wish to believe". (Jarman, 1990, 253)

The present study confirms Jarman's interpretation of this quotation, since in her poem "I Watched a Snake", Graham is talking about the speaker, who seems to be Graham herself. She is watching a snake move through the grass, and she starts thinking about the work of humans and creatures' desires as a whole. She is comparing people's efforts to the snake in front of her, as in "Hard at work in the dry grass/ behind the house catching flies" and "today it seemed/ to have to do with work" (Graham, 1983, 34). This link between the title and the content of the poem, as well as between human work and desire and the snake, gives the poem a sense of order and cohesion. Readers can easily understand the theme she wants to convey. They let themselves sink into the poem, taking an inward journey through her words.

In particular, a similar 'Gesture,' "Hurry and Delay" consists of twenty-three sections that are numbered and organized in the same way. Penelope's skill at shaping the narratives of her life after Odysseus's departure and the tapestry she unweaves are both examined. Once again, Graham alters the story from within, rewriting Penelope's narrative within the framework of the classic tale from the point of view of another unclear third-person narrator who enables the reader access to Penelope's mind (Taylor, 2000).

Despite the chaotic description of the poem, the order is found in this line: "the threads running forwards yet backwards over her stilled fingers." The use of the word "thread" throughout the poem serves to unite its many parts and provide them with a sense of solidity. What this does is tie everything together. The argument that "threads" is the term that unifies and organizes the entire poem is supported by another line like "the threads carrying the quickness in on their backs." (Graham, 1987, 50) and "It is his wanting in the threads she has to keep alive for him" (Graham, 1987, 51). The entire appearance of the shattered poem is transformed by the simple repetition of one phrase. More than that, it is a reflection of the butterfly effect, which says that something as little as a butterfly flapping its wings may cause a cosmic storm. This seemingly little word brings coherence to an otherwise chaotic poem.

Another poem that shows how the butterfly effect is applied is "Pollock and Canvas". Again, the title of the poem reveals the meaning of the whole poem. Also, a little change in the second part of the poem, in which Graham uses consequence numbers between lines, gives a sort of order to the fragmented poem. '1/Here is the lake, the open, he calls it his day; fishing/ 2/ The lake, the middle movement, woman's flesh, maya" (Graham, 1987, 82-83). As stated by Lorenz's concept of chaos, certain situations never

happen again, and this is what makes it chaotic and unpredictable. So, if there is a repetition, then there will absolutely be no chaos but order, and this will restore stability to the whole situation. Lorenz argues that:

"The atmosphere is so complex that it never repeats itself, so it would be impossible to find a day in history when conditions were precisely the same. And, as he discovered, even small differences in the initial conditions can lead to vastly different outcomes." (Deaton, 2020)

This is precisely where readers can find order in Graham's poem "Vertigo," which contains multiple repetitions; for example, she mentions the word "cliff" three times in the poem to confirm the idea that the lovers are standing on the edge of making the decision to start a new life, as in: "Then they came to the very edge of the cliff and looked down," "Where the cliff and air pressed the end of each other," and in "the mind crawling out to the edge of the cliff" (Graham, 1987, 66–67). That once again leads to the butterfly effect, in which small repetitions change a chaotic poem and bring order to it as a whole.

The young woman wonders about the natural world underneath, but she knows that if she attempts to get there, she will die because of the physical principles of fly and fall. She cannot escape the increasing pastures of the vertical that a bird is currently raising, or the increasing notes of the violin. The thought of how close the two worlds may go had her thinking is actually the journey from one world to another is death? Nevertheless, she leans forward to get a better view at the forest, fields, and streams, all of which seem like different types of falls from her viewpoint. As the title indicates, dizziness or vertigo sets in when visions of the real world below rush through her mind (Alghamdi, 2018). Also,

there is a link between the title and the rest of the poem. This exemplifies a key feature of the butterfly effect which is its sensitivity to initial conditions.

While reading Graham's poems, from their structure to their subject matter, one can find that they are full of disorder. She writes as though she had a puzzle to solve and she wants to show her readers that order can be formed out of chaos. Everything about this collection is a mess, from the title to the picture of a half-naked woman on the front cover. So the reader is not sure if she means external forms of beauty or the inner content. The critic Jarman attempts to solve this perplex view by asserting that:

"beauty is not an instrument of utility or an aim, because the end or ends to which beauty might be employed are not given. The title must be read as it first announces itself: this book will show the destruction of beauty and, by analogy, hint at the end of the world. The reason for this reading, and the one ambiguity we can entertain, is that in Graham's lexicon end and beauty are synonymous." (Jarman, 1990, 254)

While reading Graham, readers frequently come across language that is opaque, ambiguous, and syntactically confusing, and regardless of how the syntactical difficulty is resolved, the reader is left without any certain argument for meaning. Graham's poetry does not deliver the type of revelation one typically receives from Romantic poets or many narrative poets of the twentieth century, and the reader immediately learns not to anticipate this. This shows how hard it is to live in a universe that is not fair and where there are no ultimate truths (Lussier, 2022). She is such a great poet who is able to disperse her readers to attract their attention, and then she brings them back to the safe side of order. She neither

let them go far in confusion nor let them stick to order. She has complete control over her readers. She speaks to experts rather than the general public.

In subsequent collections, Graham expands and complicates the formal limitations imposed by her poetry. Some critics have considered these poems "difficult," although Graham defends them by saying they are "imagistically clear," with the difficulty coming from the poems' structure, or throughway. Graham is famed for her many draughts, saying that she literally cannot think without a pen in her hand. However, if readers look at her later poems, they will find that these draughts push the boundaries of composition rather than try to confine it(Casper:2001).

In his article Lorenz states that "If the flap of a butterfly's wings can be instrumental in generating a tornado, it can equally well be instrumental in preventing a tornado" (1993, 181). As a consequence, the butterfly effect may be employed for both disorder and the restoration of order. Graham, for instance, employs this technique to throw off the reader and push them to think about the poem. However, she can employ this idea to bring everything back into order by making subtle alterations to the form, such as those that result in a new order for the entire poem.

Conclusion

Small acts have big consequences, and this is the essence of the concept of the butterfly effect. Although Graham's poems are chaotic, a small effect such as the repetition of a particular word or the relevance of the title to the content restores order to the whole poem. In *Erosion*, the reader can notice that chaos lies in the form and sometimes in the content, yet Graham always rearranges this chaos in a smart way to keep the reader's focus.

As for *The End of Beauty*, chaos is often very noticeable, and the reader can feel distracted from the first moment of reading the poem because her poems in this collection are characterised by fragmentation and irregularity. The form of the poem is more chaotic than the content, but as mentioned, Graham is a master in that she distracts her readers' attention then refocuses it easily without their even realising it. This proves the concept of "the butterfly effect," in which a specific line, word, or perhaps a small idea affects the arrangement of the poem, which is fully fragmented, and brings the reader back from distraction to the middle of order and focus.

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