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Reconceiving Paul Auster's *Invisible* Through the Lens of Chaos Theory

Abstract: Paul Auster's novel *Invisible* showcases the complexity of narrative and the uncertainty of its meaning. However, interpreting it as a complex chaotic system enables readers to clarify the text's context and gain insight into the author's intentions. As a representation of a chaotic system, the narrative plot exemplifies the "butterfly effect," highlighting the disorder and unpredictability of the characters' fates. Meanwhile, the narrative structure of "strange attractors" elucidates underlying order within chaos and the dynamic nature of character relationships. Through in-depth analysis, it becomes evident that the metaphor of the phallus functions as a "strange attractor." By tracing its trajectory, the subject feels both seduced and ensnared by the phallus, while also being gazed upon and repelled. This analysis further clarifies the meaning of the title "Invisible" which not only signifies the invisible infiltration of power and capital but also symbolizes the invisible existence and resistance of minority groups. These two opposing forces contribute to the formation of this chaotic system.

Key Words: *Invisible*; Chaos; butterfly effect; strange attractors; Phallus

Introduction

Paul Auster (1947-2024) was widely recognized for his innovative narrative structures and postmodern storytelling techniques. However, his literary contributions extend beyond experimental writing styles; they serve as an important medium for expressing profound ideas. Following the turn of the millennium, Auster's works increasingly focused on historical events and political themes, reflecting his deep concern for the collective destiny of humanity. In 2005, his novel *The Brooklyn Follies* received considerable acclaim, characterized by a linear narrative style firmly rooted in the tradition of realism. His subsequent work, *Invisible* (2009), marked a return to the intricate narrative techniques for which he is well-known. This novel not only showcased the author's literary prowess but also explored the interplay between narrative technique and thematic content. As Auster noted in an interview, *Invisible* features one of the most complex narrative structures among his works; however, he aspired for the language to remain transparent, thereby allowing readers to overlook the medium of language itself as a means of communication (Linderman, 2009, p.201).

Auster has consistently identified himself as "a self-conscious postmodern writer" (Martin, 2008, p.ix). A prominent aspect of his literary corpus is the incorporation of chance and randomness, which serves to reflect the unpredictability inherent in contemporary existence. Jones and Else (2011) contend that "few contemporary writers can explore the themes of chaos, complexity, and randomness with such depth and breadth as American novelist Paul Auster" (p. 627). Furthermore, James M. Hutchisson (2013) asserts that "[a] major theme throughout his work is the interplay of chance and coincidence—how reality is often more bizarre than we want to give it credit for, hence the surrealistic or magical realism element in his works" (p. xvi). Consequently, a thorough examination of the relationship between form and content in Auster's writings necessitates an emphasis on the most recurrent characteristics across his works—namely, complexity and randomness. Auster's novels frequently delve into themes of chance, coincidence, and the unpredictable nature of life, which are central to the principles of chaos theory. Auster (1992) describes art as an expression of hunger, where certainty gives way to chaos (p. 18-19). His notable works, including *The New York Trilogy* (1990), *Moon Palace* (1989), and *The Music of Chance* (1991), exemplify chaos theory and an exploration of uncertainty and its ramifications. A strange attractor signifies the behavior of a chaotic system (Paker 2007, p. 11). More specifically, strange attractors define chaotic systems and represent order within disorder. Although the system's state is unpredictable,

it is not random; it is constrained to evolve within the intricate geometry of the attractor: a deep order governs the system's seemingly disorderly behavior. This concept is exemplified in Paul Auster's *Invisible*. The novel presents a nonlinear narrative unfolding over four decades, conveyed through the perspectives of three distinct narrators, all converging on a single character. Auster effectively illustrates the principles of chaos theory through both the form and content of his narrative.^①

The academic research on *Invisible* focuses on its postmodern aspects, including narrative techniques, intertextuality with classic works, and its subversive nature, as well as discussions on ontology. Péter Csató (2022) and María Laura (2023) conducted an in-depth analysis of the novel's metanarrative techniques. Both of them examine the novel through the lens of metafiction, particularly focusing on the use of metalepsis as a key narrative device. Csató posits that the novel transcends traditional postmodern textual experimentation by employing a nuanced metaleptic structure that raises significant ethical and existential questions and argues that this subtle narrative technique leads to ontological destabilization, ultimately undermining the truth-telling aspect of confession and leaving the ethical aims of atonement and absolution unachieved. Both Kathleen Waller (2011) and Moein Moradi (2021) employ a psychoanalytic framework to analyze the fragmented subjectivity of the character Adam. Waller compared *Invisible* with "Antigone," proposing a reinterpretation of humanity's desire for immortality and incest. Moradi drew on Deleuze and Guattari's rhizome theory, highlighting that the transformation of the protagonist in *Invisible* reflects a deformation of behavior. He argues that the protagonist undergoes a Deleuzian "becoming," ultimately transforming into the antagonist, who embodies a radical "body without organs." The psychoanalytical framework has the potential to clarify the fragmented nature of subjectivity. Additionally, contemporary studies primarily concentrate on Adam, neglecting the interactions with Born. To address these gaps, this paper will examine the novel through the lens of chaos theory, emphasizing the themes of chance and coincidence in Auster's works, while also exploring the root cause of the deterministic chaos from a psychoanalytic perspective to reveal the underlying order within chaos.

Here represents the structure of the paper. The first section, titled "Chaos Theory and the Theoretical Framework," serves as an introduction to the theoretical underpinnings of this paper. It begins with a historical overview of chaos theory, which enhances comprehension of its historical applications in literature and lays the groundwork for linking chaos theory to postmodern literary criticism. Subsequently, it identifies prominent authors who integrate chaos theory into their literary works, highlighting their distinctive characteristics and emphasizing the unique and critical elements of chaos. The second part titled "Demonstrating chaos: The 'Butterfly Effect' and Indeterminate Destiny", provides a concise summary of the novel's plot, emphasizing the role of chance within the storyline. "Butterfly effects" serve as manifestations of chaos that influence the lives of characters in unpredictable manners. Auster contests determinism, positing that life is intrinsically chaotic and lacks absolute significance. This narrative reflects the intricacies of human relationships and the unpredictability of fate; however, Auster underscores the importance of chance in shaping individual destinies. The third section, entitled "Exploring Chaos: The Role of the 'Strange Attractor,'" examines the narrative structure of *Invisible*, underscoring the intricate interaction among multiple narrators that collectively create a fragmented and chaotic storyline. This section highlights Auster's use of diverse narrative strategies that obscure the truth, thereby prompting the reader to identify causal relationships within the seeming disorder. The concept of the "strange attractor" is presented as a metaphor of the character Rudolf Born, whose actions more or less directly influence the paths of other characters. The fourth section, titled "Navigating with the 'Strange Attractor': Attracting and Repelling by the Phallus," begins by examining how Adam's letters reveal the trauma of his past and his

psychological chaos. The “strange attractor” Born serves as a manipulative force influencing Adam’s life. The narrative intertwines themes of unpredictability and uncertainty, with Born’s character offering a profound critique of societal structures from the perspective of psychoanalysis, as an underlying order operates.

Chaos Theory and the Theoretical Framework

On October 5, 2021, the Nobel Prize in Physics was awarded to Syukuro Manabe, Klaus Hasselmann, and Giorgio Parisi in recognition of their significant contributions to the understanding of complex physical systems. These systems are fundamental to chaos theory, a leading area of inquiry in modern science. Notably, this is not the first time advancements in chaos theory have received Nobel recognition; in 1977, Belgian physical chemist Ilya Prigogine was awarded the Nobel Prize in Chemistry for his formulation of “dissipative structures” within chaotic systems. A historical perspective reveals that research into chaos began in the late 19th century, with Russian mathematician Sofia Kovalevskaya introducing the concept of quantifying the average growth rate of small deviations in 1889, and Henri Poincaré examining the “three-body problem” in astronomy in 1890. Both of these contributions laid foundational elements for early chaos theory. The formal establishment of chaos theory was marked in the 1960s by American meteorologist Edward Lorenz’s introduction of the “butterfly effect” model. During that period, chaos was undergoing a significant reevaluation, revealing its complex meanings shaped by centuries of commentary. Prominent literary figures such as Henry Adams and Edgar Allan Poe have explored the interplay between chaos and order, which has likely influenced the modern fascination with chaos theory. Literary theorists appreciate chaos for its opposition to traditional order, while chaos theorists view it as a catalyst for achieving a more intricate order. Creative writing, such as Italo Calvino’s *Cosmicomics* (1968), often engages with both ancient myths and modern scientific ideas. This interplay between new concepts and traditional frameworks is crucial to understanding the current epistemic shift, which is characterized by a turbulent flow of ideas rather than a uniform transition, as seen in the nonlinear narrative that weaves together scientific models, critical theory, and literary texts, ultimately contributing to the phenomenon of postmodernism.

Chaos theory, characterized by its emphasis on nonlinear dynamics, unpredictability, and the emergence of order from apparent disorder, has significantly impacted upon postmodern literature by challenging conventional understandings of structure, causality, and meaning. A prominent aspect of this influence is the deconstruction of linear narratives. Postmodern literature frequently eschews linear storytelling in favor of fragmented, recursive, or nonsequential forms. The chaos theory principle of sensitivity to initial conditions, often exemplified by the so-called “butterfly effect,” resonates with this narrative fragmentation, wherein minor textual elements can lead to substantial thematic transformations. Another critical aspect is the portrayal of fragmented subjectivity and identity as dynamic systems. Postmodern literary criticism, especially as expressed through psychoanalytic-relational theories, resonates with chaos theory by conceptualizing identity as dynamic and contingent. In a manner akin to chaotic systems that evade static equilibrium, characters within postmodern narratives often exhibit fluid and unstable identities. A significant body of postmodern literature intertwines psychoanalytic concepts with chaotic cognitive processes, illustrating how narratives can explore the breakdown of meaning and the fragmentation of coherent subjectivity. Furthermore, chaos theory posits that order can arise from disorder, an idea that is reflected in the juxtaposition of randomness and pattern within postmodern literature. For example, texts may incorporate multiple voices or perspectives, thereby illustrating this interplay. Additionally, the narrative employs the “butterfly effect,” illustrating how a seemingly minor event can trigger significant and unpredictable tragedies or sensational outcomes. Therefore, chaos theory offers a valuable

framework for postmodern literature to investigate themes of fragmentation, indeterminacy, and the limitations of human comprehension. By embracing nonlinear structures, destabilized identities, and critiques of totalizing systems, postmodern works encapsulate the chaotic interplay of order and disorder that is intrinsic to both natural and cultural phenomena. This relationship highlights literature's ability to reflect the complexities of contemporary existence, where meaning is emergent in flux.

Theorist Katherine Hayles (1984) delineates fundamental characteristics of chaos theory: complexity, nonlinearity, and randomness, all of which emerge from stochastic processes (p. 10). It stands in contrast to stochastic analysis, which typically explains unpredictability by linking irregular movements to identifiable influences.² Chaos theory underscores the significant disparities between initial conditions and their subsequent effects, positing that chaotic systems exhibit a more random and indeterminate nature at their origins when compared to orderly systems. Specifically, chaos theory examines the behavior of systems characterized by nonlinear dynamics and has transcended traditional scientific boundaries, emerging as a framework for understanding both the natural world and human existence, serving as a novel paradigm in thought and culture.

Richard Walsh and Susan Stepney, a narratologist and a complexity scientist respectively, initiate an interdisciplinary dialogue in their edited volume *Narrating Complexity* (2018). They engage in an insightful conversation about narrative and complex systems. They propose that the essence of narrative lies in linearization—it simplifies the world and creates meaning by arranging events into causal and logic chains. In contrast, the essence of complex systems is non-linearity, characterized by interaction, feedback, emergence, disorganization that cannot be reduced to a single linear chain. Because we rely on narrative to understand the world, yet the structure of narrative itself cannot fully capture or represent the true workings of complex systems and may even lead to misinterpretation and distortion, these two fields recognize the need to learn from each other (p. 3-6). Narratology must explore how to “complexify” narrative forms, while complexity science needs to develop new ways to narrate” complexity. They do not merge narratology and complexity science into a unified theory; rather, they allow new insights to emerge from their interaction—a process that itself resembles another “complex system.” They also suggest that traditional cultural forms such as literature and film, with their inherent reflexiveness, are manifestations of systemic complexity (p. 23).

Narrative Complexity: Cognition, Embodiment, Evolution (2019), edited by Marina Grishakova and Maria Poulaki, presents a comprehensive framework for rethinking narrative complexity by integrating insights from complex systems theory, embodied cognition, and narratology. The volume aims to move beyond traditional dichotomies by exploring the behavior of homo cogitans (thinking humans) and homo narrans (storytelling humans) as guided by intention and grounded within their contexts (p. 2). They view narrative itself “as an interface of complex adaptive systems...from a broader perspective, as the emergent product of multiple interconnections of the embodied mind with a lived physical, social, and technological environment”(p. 16).

Among the authors, who most notably explored complexity and unpredictability, Thomas Pynchon stands out. Novels, such as *The Crying of Lot 49* (1966) and *Gravity's Rainbow* (1973) delve into ideas of entropy, paranoia, and interconnected systems, mirroring chaos theory's emphasis on unpredictability and sensitivity to initial conditions. Pynchon's narratives frequently abandon linearity, resulting in fragmented structures that exemplify chaotic systems. Don DeLillo, in works, such as *White Noise* (1985) and *Underworld* (1997), scrutinize the chaos inherent in media-saturated societies and environmental degradation. His portrayal of information overload and systemic instability aligns with chaos theory's focus on dynamic, non-equilibrium systems. The themes of “loss of the real” and dependence on simulations in DeLillo's narratives correspond with

postmodern critiques of reality, particularly in the context of hyperreality and simulacra. Italo Calvino's *If on a winter's night a traveler* (1981) exemplifies postmodern playfulness and recursive structures, and many of his works intersect with chaos theory through their focus on iterative patterns and self-referential systems.

Invisible is undoubtedly marked by narrative uncertainty and unpredictability; however, its most prominent aspect is the characters' engagement with epistemological dilemmas as they strive to discern truths within a complex and layered reality. Auster's narratives offer a critical exploration of the concept of stable identities, as the fragmented narratives of the characters can be elucidated through Jacques Lacan's theory of subjectivity. Analyzing *Invisible* through a psychoanalytical lens entwines the views on psychoanalysis with chaotic mental processes, illustrating how narratives can explore the failure of meaning and the fragmentation of coherent subjectivity. Auster adeptly incorporates principles from chaos theory into his narrative techniques. He strategically guides readers through ambiguous and elusive references, such as Born's true identity, the relationship between Adam and his sister, and whether Jim is an unreliable narrator, among others. These elements foster a reciprocal relationship between the novel's external structure and its internal themes. As a result, the novel emerges as a chaotic system, prompting readers to consider how it self-reflexively comments on the processes that ostensibly contribute to its creation. This exploration raises several pertinent questions: Is life solely dictated by chaos and randomness? What might lie hidden beneath the surface of seemingly random events amidst a series of coincidences? In this framework, the paper delineates a sequence of chance occurrences, tracing narrative clues and delving into Auster's perspective on the underlying order within chaos.

Demonstrating chaos: The “Butterfly Effect” and Indeterminate Destiny

For the scientists who pioneered the revolution, the “butterfly effect” marks the inception of chaos theory. A well-known illustration of this concept, proposed by Edward Lorenz, suggests that the flapping of a butterfly's wings in Brazil could initiate minor perturbations that are subsequently amplified, potentially resulting in tornadoes and other catastrophic events in Texas. The concept of sensitive dependence on initial conditions implies that similar phenomena or systems will never be completely identical, and that minor variations in initial conditions can lead to drastically different outcomes. Such unpredictable initial conditions may give rise to phenomena like the butterfly effect, where a seemingly trivial and distant action can trigger significant disruptions. Lorenz formulated his theory through mathematical methodologies, demonstrating that the butterfly effect is not merely a characteristic of specific events but is intrinsic to the very fabric of existence.

Auster's *Invisible* illustrates the ubiquitous nature of the butterfly effect within chaotic systems, depicting a convoluted past where seemingly trivial coincidence—such as a chance meeting, a phone call, or an evening stroll—generate ripples in life, ultimately plunging the subject into chaos. The butterfly effect “is the catalyst of all of Auster's narratives” (Jones and Ells, 2011, p. 629). Auster's novels are replete with numerous coincidental events. In an interview with Larry McCaffery, Auster articulated that coincidence is an inherent aspect of reality; we are perpetually influenced by the forces of chance, and the unexpected frequently manifests in our lives, often leading to a sense of numbness (Auster, 1988, p. 268). Titled *Invisible* unfolds across four chapters, presented through the perspectives of three different narrators. The first chapter, titled “Spring,” is presented as a letter from Adam Walker to his college friend, James Freeman. Set in the spring of 1967, this chapter recounts a past event involving Adam and Rudolf Born, a visiting professor from France. Born offers Adam the position of editor for a literary magazine that he intends to fund. One evening, Adam and Born encounter a Black boy who intends to rob them. In a brutal turn of events, Born mercilessly stabs the boy, killing him.

Chapter Two, titled “Summer,” explores the relationship between Adam and his sister Gwyn during their summer vacation. They live together in the same apartment, and their complex emotional bond stems from the accidental death of their younger brother. Jim presents the narrative from a second-person perspective, depicting the incestuous relationship between Adam and Gwyn through dialogues between himself and Adam. First, Adam may be an unreliable narrator, as Gwyn later denies that the relationship ever occurred, claiming it was a dying fantasy of Adam’s. Another possibility is that Jim himself is the unreliable narrator. Initially, Jim states that his knowledge of Gwyn is limited to her being Adam’s beautiful sister. However, in the chapter titled “Autumn,” his attitude shifts, revealing that he was once madly in love with Gwyn. As readers analyze the intricate relationship between Adam and Gwyn, they are simultaneously engaged in the process of interpretation. Although this section appears to diverge from the main storyline, it ultimately reflects the complexity inherent in a chaotic system.

After the summer vacation, Adam travels to Paris, where by chance he encounters Born, who is preparing to marry Hélène. In an attempt to prevent the marriage, Adam becomes involved with Hélène’s daughter, Cécile. Adam was falsely accused by Born and was subsequently deported back to America, where he dedicates the next twenty-seven years to legal aid work. The final chapter, titled “Winter” reveals Jim’s quest to ascertain the veracity of Adam’s accounts. His investigation leads him to Cécile. Cécile also shares her excerpts from her diary, which detail her visit with Rudolf Born in 2002. “Winter” operates almost imperceptibly, continuously piecing up the previous three sections. This exchange serves as the concluding segment of the narrative, encapsulating the overarching themes of memory, trauma, and the complexities of human relationships.

The butterfly effect in Adam’s life begins with an unexpected encounter with Born at a bar, where Born presents him with an enticing job opportunity. As Adam feels he is on the verge of achieving financial independence and fulfilling his writing dreams, he becomes entangled in a immoral love triangle involving Born’s girlfriend Margot, and an unpredictable murder. This unexpected encounter significantly alters the life paths of Adam and the others, drawing them into a vortex of chaos. Through this chance, Auster reinforces the metaphor inherent in chaos theory, suggesting that the randomness and chance events in life often play a crucial role in shaping personal destinies. The New York News Daily evaluates Paul Auster’s novels are “beautiful designed artifacts, intellectual puzzles dedicated to the proposition that life is a mystery ruled by chaos and chance. In counterpoint to their message, they are propelled by the most fluid and graceful of prose styles” (Shi, 2018, p. 688). Chance is a predominant element in Auster’s oeuvre, which is structured around chance occurrences and creates a complex textual environment. Auster infuses the butterfly effect into the narrative, illustrating the indeterminate and unpredictability of life. More importantly, it expresses the author’s critique of determinism. Determinism is a philosophical concept that claims every event, including human actions, is ultimately influenced by factors outside of individual control. The core idea is that every event is necessitated by prior events and conditions, along with natural laws, suggesting that, given the past and these laws, only one future is possible. A significant form of determinism is scientific determinism, which includes classical physics and quantum mechanics³.

Paul Auster connects this to the actions of his characters. In his portrayal of Born—a character associated with the consequences of determinism. During their first meeting, Adam associates Born’s name with the twelfth-century Provençal poet Bertran de Born, describing him as “a dead man shuffling through the final verses of the twenty-eighth canto of the Inferno” (Auster, 2009, p. 3). Throughout his life, Born is portrayed as a man who clings to his design and endeavors to execute meticulously formulated plans. In New York, he warmly

invites Adam to start a new magazine and orchestrates the affair between Adam and his girlfriend Margot, using this as an excuse to break up with Margot and pursue an engagement with Hélène. In Paris, Born attempts to reconcile with Adam and facilitate a romantic connection between Adam and Cécile. Born's story, while involving a significant degree of determinism and detailing the consequences of his design, highlights that his intentions—or more accurately, his determinations—cannot be realized. A stroll unexpectedly interrupts his magazine dealings with Adam; despite his efforts, he is unable to marry Hélène. Although he wields significant influence in France, he ultimately spends the remainder of his life in the West Indies. Auster employs this narrative to illustrate that determination can be disrupted, in the face of recurring destabilizing perturbations. Seemingly small causes lead to the unpredictable trajectories.

It can be argued that Auster believed life is full of uncertainty and randomness, making it difficult to discern the meaning of coincidental events when they occur. In his memoir, he points out that the bravest stance for humanity is to accept meaninglessness (uncertainty and randomness) as a foundational principle. Upon contemplation or observation of an object or experience, an individual becomes aware of the responsibilities inherent to humanity. As constituents of the universe, our existence confers significance upon it, transcending mere survival and constructing an imagined reality, despite the recognition of its potential lack of objective validity (Auster, 1988, p. 148). Therefore, Auster categorizes chance into two distinct types: one representing meaningless randomness, and the other serving as an entry point into the eternal existence of a mysterious realm. Auster contends that writers bear the responsibility to reflect the essence and function of the latter type of chance (Alford, 2008, p. 64). The in-depth analysis of the butterfly effect occurring in Adam in *Invisible* will demonstrate that the significance of chance in the author's writing functions as a mechanism for exploring the underlying order amidst the randomness.

Exploring Chaos: The Role of the “Strange Attractor”

The novel comprises Adam's first-person account, Jim's first-person narrative, a brief letter from Cécile addressed to Jim, and excerpts from Cécile's diary, which describes her encounter with Rudolf Born in 2002. These narrative strands intricately interweave to fill in narrative gaps. Instead of a drawing on a roving trajectory of focalization, Auster focalizes the overall narrative through various narrators in turn, and each narrator contributes to the emerging pattern of Born's story. This narrative design creates a complex system, and the presence of multiple narrators and viewpoints introduces paradoxes that obscure the truth. Only in the shadows can one approach the truth. Auster expresses his ideas through “figures who search through apparent chaos for clues to its underlying order” (Jones and Ells, 2011, p. 633).

Auster's chaotic narratives are governed by certain rules; they link various texts through narrative techniques such as *mise en abyme*, creating a self-reflective maze. The image of maze, which serves as a central theme, inspired from Borges' “The Garden of Forking Paths,” where he depicts a variety of enigmatic features, including infinite branching routes and complex narratives, as a “maze.” Hillis Miller (1976) offers a more dynamic perspective on the maze: “thread and labyrinth, thread intricately crinkled to and fro as the retracing of the labyrinth which defeats the labyrinth but makes another intricate web at the same time—pattern is here superimposed on pattern” (p. 58). The imagery of “seasons” and “maze” serves as a metaphorical counterpart, both representing concepts of eternity and recurring patterns, which ultimately contribute to a deconstruction of truth and chronological narrative. The diverse narrative viewpoints create a chaotic framework that results in a narrative that is “rich in information” (Hayles, 1990, p. 6). In *Invisible*, Jim's narrative functions as the structural

backbone, with the progression and rationale of the story dependent on the reliability of Adam's autobiographical account. The authenticity of the narrative also hinges on the evidence presented in Cécile's diary. The four chapters, each named after a season, operate in a chronologically interconnected manner, thereby establishing a series of interrelated narrative frameworks in which origin, and truth exist in a state of flux, frequently disrupted by alternative states. Although the narrators present the skeletal around which their various versions of Born, they also call attention to a lack of clear cause and effect, as well as the origins of those facts. This undermines their own explanatory function. Essentially, these events are not anchored in a coherent plot. The text implicitly leave it to the reader to discern the causal patterns. Chaos theory posits that the world exemplifies "deterministic chaos." Deterministic chaos refers to a phenomenon wherein a deterministic system demonstrates behavior that is markedly sensitive to its initial conditions. This sensitivity results in the long-term behavior of the system appearing unpredictable, despite being governed by deterministic principles (Hayles, 1991, p. 120). As noted by Slethaug (2000), "behind every infraction is a rule and that underlying uncertainty is certainty"(p. xiii).

As Parker (2007) observes, "with a chaotic dynamical system there are too many variables for which we cannot account, no matter how precise our instruments are" (p. 9). The concept of strange attractor serves to elucidate the inherent order within chaos systems, which is a fundamental term, denoting the trajectories that emerge around an attractor point within a chaotic system. In a chaotic system, an attractor point (or multiple points) remains localized within a defined area and exhibits unstable motion; the region characterized by this motion is referred to as a strange attractor. In contrast to the stable endpoint of a pendulum that ultimately comes to rest, attractor points in chaotic systems are inherently unstable, rendering their future trajectories unpredictable. Therefore, strange attractors are used to represent the motion of matter within nonlinear dynamic systems. Edward Lorenz, in his pioneering work on atmospheric convection, visualized these trajectories in phase space and identified such a remarkable structure. By using computer graphics to create a two-dimensional representation, he revealed what later became known as the first recognized strange attractor (see Figure 1).

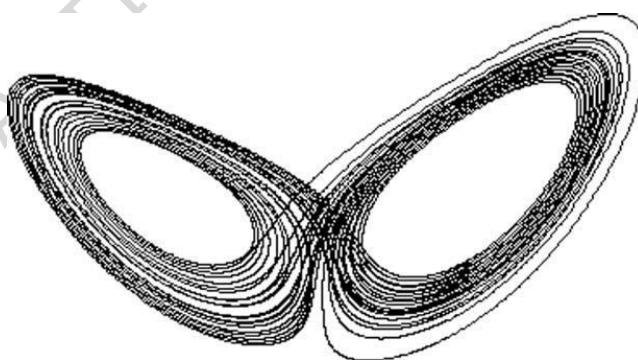


Figure 1 A Lorenz or butterfly strange attractor

The concept of the strange attractor is pertinent to discussions of narrative. The narrative technique of the strange attractor reveals that the chaos within the text is not purely random; rather, it suggests a underlying order beneath the surface chaos (Waldrop, 1992, p. 34). Harriet Hawkins (1995) expresses the idea in her book *Strange Attractors: Literature, Culture, and Chaos Theory*, that "chaos in nature (as in art) likewise may be seen to serve a higher order as a creative force that may produce beauty, freedom, and growth as well as catastrophe"(4). The story begins with the encounter between Adam and Born, which serves as the initial condition. Beginning from this initial condition, different narratives trace trajectories through the text. Their stories are reiterated from

different perspectives, with these narrative trajectories converging on the key character of the novel, Born. Born functions as a strange attractor across various times and spaces, influencing, attracting, and repelling the trajectories of other characters. Initially, Adam is drawn into Born's orbit, while Margot is expelled from his life. Born's killing of a black teenager places immense psychological pressure on Adam, completely altering the trajectory of his life. Determined to take revenge on Born, Hélène and Cécile are consequently pulled into the vortex of their complicated relationship. However, Cécile and her mother do not trust Adam, and he is expelled by Born again.

The interpersonal dynamics among the characters in *Invisible* are marked by instability and unpredictability, because at each new retelling the accounts not only incorporate previously mentioned information but also replace earlier details with new revelations. Each retelling enriches the narrative with additional complexities, diverging from prior content and ensuring that the storyline does not follow the same trajectory. For instance, Adam characterizes Born as a murderer, a manipulator, and a war enthusiast; conversely, in the chapter titled "Autumn," the young Cécile perceives Born as a kind, considerate, and reliable gentleman. When faced with Adam's accusation against Born, Cécile, despite her deep affection for Adam, chooses to trust Born. However, many years later, in her diary, Cécile expresses her uncertainties regarding Born's identity, speculating that he may be a Soviet spy and possibly the one responsible for her father's death.

Auster constructs the narrative as a chaotic system, utilizing a multi-perspective approach that allows the reader to perceive the character Born from various dimensions. Within the text, information proliferates without limit, akin to multiple non-intersecting trajectories in phase space, which invites readers to reflect on the infinite possibilities surrounding Born's identity and history. Born, as an impenetrable enigmatic figure, acts as the focal point of the strange attractor within this chaotic system, attracting and repelling the life trajectories of numerous characters. This convergence establishes a boundary within the randomness characteristic of the chaotic system. Therefore, a more in-depth examination of Born as a strange attractor can explore the underlying order that exists beneath the surface of apparent chaos.

Chaos theory serves to bridge the divide between form and content, establishing a relationship between textual structure and its theme. Parker further posits that chaos theory functions as a lens through which truth can possess infinite significance within a constrained framework, noting that multi-perspective narratives either indicate certain fixed truths regarding events or lean towards a relativistic interpretation of all truths (Parker, 2007, p. 27). The concept of strange attractor invites a reconsideration of the narrative content in *Invisible* prompting an analysis of the underlying iterative sequence within the text to uncover its ideological implications.

Navigating with the "Strange Attractor": Attracting and Repelling by the Phallus

The analysis presented in the preceding sections indicate that Adam's life has descended into a state of chaos characterized by uncertainty, largely as a result of his interaction with Born. In the letters Adam writes to Jim, his language further reinforces the chaotic nature of his mental state. Adam documents his recollections as he confronts the impending reality of his cancer diagnosis. In the chapter titled "Spring," he reflects on the psychological burden resulting from the death of Williams. The subsequent chapter, "Summer," reveals that Adam's brother passed away at a tender age, leaving a lasting emotional scar that has significantly impacted his psyche. He attempts to repress this trauma, stating: "You don't want to think about it. You have run away now, and you don't have the heart to return to that house of screams and silences" (Auster, 2009, p. 109). In her analysis, Kathleen Waller (2011) explores Adam's engagement with his past experiences, particularly those related to

writing and sexuality. She argues that as Adam delves deeper into his memories, he begins to perceive them as less rigidly tied to specific events, which allows for a more nuanced understanding of his history. Waller highlights Adam's initial sexual relationship with Margot, whose name closely resembles that of his mother, Marjorie, thereby suggesting the presence of Oedipal themes and potential incestuous implications. Additionally, Adam's tumultuous reflections and troubling memory involving his sister, reveal his internal struggle concerning familial relationships and the emotional burden of these recollections (p. 3). Waller's analysis indicates that Adam's letters serve as a record of his disordered mental processes, reflecting the unstable and contradictory nature of psychic life. The unexpected death of the younger brother becomes an unconscious re-enactment of painful experiences, positioning Adam as a survivor of trauma. However, a question arises: why does Auster incorporate Adam's family tragedy into his narrative? The answer still lies in that violent incident: Williams' death triggers a compulsive repetition of trauma for Adam, which is undoubtedly caused by Born.

The novel revolves around a series of events that trace Adam's journey through New York, Paris, and other cities as he grapples with his dreams, failures in revenge, and the quest for self-redemption, striking between order and disorder. As Adam's experiences unfold, his dreams and reality, the individual and society, and the subject and the other are intricately connected to Born. It is impossible to identify Born's initial state; when Adam asks Margot whether Born was born in Guatemala, she responds, "He was pulling your leg," "Rudolf has never been anywhere near the place," and "He enjoys making up stories about himself. Fooling people....." (Auster, 2009, p. 207). Born's identity remains a mystery; he initially presents himself as a university professor with a substantial inheritance, yet behind which lies a complex and extensive network connected "with the police, with the military, with the government" (Auster, 2009, p. 205). As the plot develops, the initial information about him is constantly replaced by new information, much like a strange attractor. It is impossible to identify a fixed origin that explains who he truly is.

Born is a disruptive force that causes instability in Adam's life and contributes to social disorder, propelling the plot in unpredictable directions. Auster emphasizes, "I think, in a sense, that's how the whole book functions. We hear things, but we can't always see them, or, even if we do see them, we're not sure that we're seeing correctly. Hence: Invisible" (Obourn 2010, p. 211). It becomes evident that Born, lacking origin, can be more appropriately characterized as a strange attractor—a metaphorical symbol of the Phallus.

Metaphors serve a fundamental function in human language and cognition, enabling the understanding and expression of complex ideas by connecting them to more familiar concepts. A prominent framework for examining this phenomenon is the concept of conceptual metaphor, as articulated by George Lakoff and Mark Johnson in their work *Metaphors We Live By* (2003). They argue that metaphor is not just a linguistic device but a core element of human cognition, stating that "metaphor means metaphorical concept" (p. 6). Because metaphors do not exist in isolation. They are organized into a coherent system that systematically maps one conceptual domain onto another. Since our conceptual system is metaphorical, it not only shapes the way people perceive, think, and act but also defines what we consider to be real. This paper explores the parallels between the strange attractor and the phallus, both of which are abstract concepts. The strange attractor symbolizes the inherent unpredictability of postmodern existence and the underlying order within chaos, which resonates with the function of the phallus, operating within the symbolic order characterized by gaps, contradictions, and inconsistencies.

Lacan re-evaluates the Freudian Oedipus complex by integrating linguistics, using the phallus as a signifier to perform its function. The resolution of the Oedipus complex is "the precondition for the subject's active entry

into the symbolic order through symbolic identification with the father and the internalisation of the law" (Watson, 2019, p. 77). Distinguishing between penis and phallus, Lacan situates phallus within the structure of language in his fourth seminar, conceptualizing it as a symbolic signifier. The symbolic order is the realm of language, law, culture, and social structures that preexist the individual. It is governed by rules such as grammar, norms, and prohibitions, which mediate our experience of reality. The symbolic father functions as a representation of law and authority. The subject identifies with and internalizes the symbolic father's role as the embodiment of societal rules, which prohibit desires that conflict with social norms. This identification is symbolic because it operates through language and signifiers. Internalization means the subject accepts this law as their own, structuring their desires and actions accordingly. This process enables the subject to navigate social norms without constant external enforcement. "For the phallus is a signifier, a signifier whose function, in the intrasubjective economy of analysis, may lift the veil from the function it served in the mysteries. For it is the signifier that is destined to designate meaning effect as a whole, insofar as the signifier conditions them by its presence as signifier." (Lacan, 2002, p. 579) As a signifier, the phallus possesses its own logical rules and position in language, which are essential for interpreting the layered, labyrinthine metaphors in *Invisible*. Adam's actions to achieve his American dream are, in fact, a process of the subject gaining a position in the symbolic order, and upon encountering a person like Born, Adam is immediately attracted and drawn in.

From one hand, Born's proposal to Adam and their interaction profoundly illustrate the functioning of the symbolic order. At the core of the symbolic order is language. Language is not merely a tool for communication but also a carrier of meaning and power. Born holds a symbolic identity as a professor, his words are filled with symbolic allure: Born inherits wealth from his father and decides to hire Adam to start a magazine. His proposal is not merely an economic opportunity but also a symbolic commitment—by entering the cultural production field of the magazine, Adam acquires a symbolic identity as an editor. Born believes his magazine will stir people up and cause controversy, implying that as a symbolic Other, it draws Adam into the power game of the symbolic order by generating symbolic conflicts and disputes. As Lacan argues that the symbolic father constructs the subject's desire through the dual functions of prohibition and temptation. Therefore, from the other hand, Adam is also gazed upon and castrated by the gaze from phallus. Born's proposal imposes a prohibition by requiring Adam to submit to his cultural vision. The question, "What do you think of that, Mr. Walker?" (Auster, 2009, p. 18) places Adam in a position of symbolic interpellation.

The preceding analysis reveals that the title "Invisible" encompasses two distinct yet interrelated meanings: firstly, cognitive vagueness, and secondly, an ontological uncertainty that signifies a structural presence at the foundational level. This presence, though unseen, exerts a potent constructive influence. These dual forms of "invisibility" are not mutually exclusive; rather, they illuminate different operational dynamics within the symbolic order. The initial form of invisibility serves as the source of uncertainty. In the novel's first half, particularly in relation to the enigmatic figure of Rudolf Born, invisibility primarily manifests as cognitive limitations and the fluidity of identity. Born appears ghost-like—his background, motives, and true identity remain obscured. He professes to be a professor, an heir to an inheritance, and possibly affiliated with governmental or military institutions, yet he consistently undermines these claims through contradictory narratives. This form of invisibility implies the absence of a fixed signifier anchoring his existence; instead, he functions as a symbol that continuously shifts along the chain of signifiers, generating cognitive disorientation for both Adam and the reader.

More fundamentally, however, there exists a deeper invisibility: the imperceptible mechanism of the

symbolic order itself. Although invisible, this mechanism is remarkably robust and influential, silently shaping our world and subjectivity. It exerts an invisible but pervasive dominion, regulating individuals who remain largely unaware of its presence yet are perpetually subject to its governance. These two manifestations of invisibility are complementary, revealing distinct strata of the symbolic order's functioning. The apparent uncertainty embodied by Born's ambiguity and indistinctness (the first form of invisibility) is rooted in a structural certainty: his profound comprehension and adept manipulation of the symbolic realm's rules (the second form of invisibility). His enigmatic nature, mutability, and capacity to traverse various boundaries epitomize the immutable law of the symbolic domain—that signifiers are fluid and identity is constituted through differential relations.

In "Autumn," when Adam is framed for drug possession and faces the crisis of imprisonment, Born mediates as a key government figure and sends Adam back to the United States. The word "invisible" is first used in the novel to describe Born's face, with Walker stating: "a generic face, somehow, a face that would become invisible in any crowd" (Auster, 2009, p. 5). This highlights that behind Born's powerful gaze lies an invisible power structure that regulates social life, playing the role of the symbolic order of the Other. This order is "inconsistent, self-contradictory, thwarted, traversed by antagonisms, without any guarantee ('there is no Other of Other') , with no ultimate norm or rule totalizing it—in short, the big Other is not some kind of substantial Master who secretly pulls the strings but a stumbling malfunctioning machinery" (Žižek, 2014, p. 14).

And the driving force behind this stumbling machine is the death drive. The concept of the death drive, first articulated by Sigmund Freud in his 1920 publication, *Beyond the Pleasure Principle*, serves as a psychoanalytic framework that denotes an unconscious and inherent inclination towards destruction and a state of lifelessness. Freud introduced the death drive to elucidate behaviors that contravene the pleasure principle, including the compulsive repetition of traumatic experiences, aggression, and feelings of guilt. This notion has significantly influenced philosophical discourse and literary critical theory, often representing humanity's contradictory fascination with annihilation or a state of stasis. The death drive remains a provocative yet contentious construct, suggesting that beneath the conscious aspirations for survival and pleasure exists an unconscious tendency towards cessation, destruction, and the negation of life itself. Lacan places his understanding of the death drive within the framework of linguistic signifiers, asserting that the death drive serves as "the mask of the symbolic order" (Nobus, 2019, p. 135). He contends that the presence of the death drive not only signifies the existence of the symbolic order but also transcends the limitations of the field of signifiers within the symbolic order, through the mechanism of repetition compulsion. Žižek (2014) elucidates this concept, stating, "[t]he paradox of the Freudian 'death drive' is therefore that it is Freud's name for its very opposite, for the way immortality appears within psychoanalysis, for an uncanny excess of life, for an 'undead' urge which persists beyond the (biological) cycle of life and death, of generation and corruption" (p. 62). Essentially, the death drive represents a fundamental desire that propels the subject toward self-destruction, with external aggression also emanating from this drive. The outward expressions of the death drive manifest as aggression, violence, or a desire for domination over others.

In the case of Born, these symptoms manifest as a fervent inclination toward violence. He is described as charming, intelligent, and humorous, yet he asserts that war is the purest and most vivid expression of the human soul. The central theme of his life, which appears to be his sole source of genuine fascination, is war—an experience in which he finds ecstasy. He claims that Hitler's admiration of the United States inspired him to use American history as a model for his conquest of Europe. Furthermore, he equates the extermination of Native

Americans with the extermination of the Jews; westward expansion to exploit natural resources is paralleled by eastward expansion for the same purpose. Margot states that he tortured prisoners in Algeria. Adam, a victim of Born's aggression, endures relentless physical and psychological pain. As a Jewish descendant with a strong will to live, Adam strives to find his position in the symbolic order. However, persistent pain and shame continually torment his psychological state. The cycle of violence inflicts wounds that are not easily healed. Born's killing of the black teenager Williams, along with his various expressions of admiration for and belief in war, trap Adam in a lifelong quest for revenge, driven by a traumatic compulsion to revisit the past.

Auster's genius is evident not only in his exploration of violence through the character of Adam but also through African and other ethnic groups. This approach reveals the survival struggles of islanders like Williams, who are engulfed by violence, much like prisoners. Auster discusses the significant concept of invisibility, stating that "in America, particularly poor black people as being invisible" (Auster, 2009, p. 211). This idea is echoed when Jim, on a flight back to New York from California at night, remarks, "An invisible America lay silent in the darkness beneath me" (Auster, 2009, p. 250). When Williams' body is discovered in Riverside Park, it bears over twelve severe stab wounds to his chest and abdomen. The night before, Born had used a small spring folding knife to stab Williams in the chest during their altercation, suggesting that Williams suffered additional violence even after his death.

The text concludes with Cécile's perspective, depicting Born's final residence—Quilia Island in the West Indies, which was previously inhabited by the Chiboni Indians before Columbus's arrival. Following the onset of colonial movements in the sixteenth century, the island became a coveted prize for the Dutch, French, and British, resulting in persistent conflicts among European powers and between Europeans and Indigenous peoples. The arrival of enslaved Africans further exacerbated the violence and warfare on the island. Under the blazing sun, Cécile observes fifty or sixty Indigenous and Black descendants laboring on this desolate land, holding hammers and chisels like prisoners, mechanically striking stones to sustain their livelihoods. She reflects, "[t]he music of the stones was ornate and impossible, a music of fifty or sixty clinking hammers, each one moving at its own speed, each one locked in its own cadence, and together they formed a fractious, stately harmony, a sound that worked itself into my body." She continues, "I can still hear the clinking of those hammers in my head. That sound will always be with me. For the rest of my life, no matter where I am, no matter what I am doing, it will always be with me" (Auster, 2009, p. 307-308). Through Cécile's narrative, the hammers—transgress the boundaries of time and space in the wilderness—symbolize the silent cries and accusations of indigenous and black descendants, who endure various forms of oppression: cultural, political, and economic—on this isolated island. This imagery suggests that cultural, political, and economic structures have conspired with violence to inflict harm upon individuals. In that moment, Cécile feels the tragic fate of Williams and empathizes with Adam's indignation and helplessness when he was falsely accused and expelled. While this passage may seem static in terms of plot progression, Auster employs the emotionless, mechanical sounds of hammering to emphasize the despair and powerlessness of marginalized groups under the shadow of violence, serving as a counter-gaze against Phallus.

The phallus itself emerges from violence, depending on a secret and invisible power to eradicate differences and contradictions in language, thereby enabling inter-subjective communicating. While the logic of the phallus and the death drive is clearly presented, the intervention of power and capital in shaping the subjects gradually becomes evident. Born serves as the strange attractor in Adam's process of subjectivity. As Adam moves toward the strange attractor, the trajectories of his life are drawn toward it within the chaotic system. Due to the

unpredictability of the strange attractor, his life journey becomes increasingly complex and chaotic. Tracing Adam's life reveals that his movement trajectories, influenced by the strange attractor, sometimes converge, sometimes diverge significantly, sometimes approach the strange attractor, and at other times deviate from it. These movements represent both a process of being seduced, observed, controlled, and enveloped by the phallus, as well as a struggle to break free from and transcend the strange attractor. The antagonistic force, concealed within the narrative, forms the model of the strange attractor. It also enriches the novel's exploration of the theme of violence, intricately linking structure and theme while illustrating the ongoing transformation of the chaotic system between order and disorder.

As a distinguished writer, Auster acknowledges that the world is a complex, dynamic system in which "there are many variables, all entangled in a web of complex parameters, affecting every moment of life" (Boon, 1997, p. 18), with violence being one of the most significant variables. Each unexpected event fosters new interpersonal relationships, suggesting a generative function within a chaotic system. Although the experiences of different narrators are unique, readers who follow them along the trajectories shaped by the strange attractor cross the time and space within the text. Each trajectory becomes a fragment of an ever-evolving whole, continuously generating new judgments and insights about Born, the past, and the text as a whole, thereby forming a narrative of strange attractors.

Through *Invisible*, Auster explores the intricate relationships formed by violence, power, capital, and culture, illustrating how violence hides, lingers, and lurks in everyday life. Further analysis reveals that while the three sections examine the harm that violence inflicts on the social fabric, the fourth section, in which Born loses his ability to wield immense clout in places like Paris and spends the rest of his life on a deserted island, deconstructs the binary opposition between perpetrator and victim. As Auster stated in an interview, "The violence of imperial wars erodes the fabric of the society waging the war" (Obourn, 2010, p. 206). In conclusion, Auster effectively employs the imagery of the seasonal cycle, particularly through Born, to reflect how a world caught in the cycle of violence is pervaded with randomness and uncertainty about the future.

However, the ending of *Invisible* reveals the author's relatively optimistic outlook on the future. Although he portrays the dozens of Black men and women wielding hammers and chisels in a mournful tone, he also describes the inhabitants of this island as a strange African hybrid and "A laboratory of human possibilities," which "perhaps even destroys the concept of race itself" (Auster, 2009, p. 280). Many classic works of American literature address the antagonistic relationship and conflict between races, and these issues urgently require solutions. Auster often cleverly references such issues in his texts and proposes resolutions: addressing racial conflicts through familial bonds. In the latter half of Adam's life, he encounters a Black woman who named Williams by chance, and they spend a joyful life together.

Conclusion

This paper examines the narrative techniques and thematic elements of Paul Auster's novel *Invisible* through the lens of chaos theory. The narrative exemplifies the butterfly effect, emphasizing the unpredictability and sensitivity to initial conditions inherent in postmodern existence. Furthermore, the narrative structure, characterized as a strange attractor, reveals an underlying order amidst chaos. The novel unfolds a story of ambiguous and indistinct past events through three narrative layers (Adam, Jim, and Cecile) that focalize on the character Born, who serves as a metaphorical strange attractor, influencing the trajectories of others in both attracting and repelling manners. This strange attractor parallels the function of the phallus, operating within a

symbolic order marked by gaps, contradictions, and inconsistencies. These dynamics manifest as aggression and violence from Born, which incite Adam's chaotic mental processes.

Invisible emerges as a work from the turn of the millennium, during which Auster increasingly engages with historical events and political themes. In contrast to his earlier writings, Auster explicitly links the roles of chance and coincidence to power, capitalism, and violence. He demonstrates a keen awareness of living in a world rife with violence, where war manifests in various forms—emerging, receding, and re-emerging. This awareness significantly shapes the development of the character Born, who encapsulates Auster's own ambivalent sentiments regarding war. Consequently, *Invisible* exemplifies Auster's innovative artistic techniques and profound humanistic insights as a prominent figure in postmodern literature, elucidating how, within the cycle of violence, chance and coincidence constitutes the enduring reality of the experiential world. Moreover, *Invisible* empowers readers, acting as an invisible force that collectively influences the narrative, akin to observers and recorders within a chaotic system, thereby guiding readers to engage with each character in the novel.

Notes

- ① Auster's most recent work, *4 3 2 1* (2017), serves as a notable example of a fractal narrative, exploring four distinct lives for the protagonist, Ferguson, through a structural organization reminiscent of a musical quartet. While *Invisible* (2009), exemplifies a strange attractor narrative.
- ② In short, the “chaos” in chaotic systems is “apparent chaos”—a surface-level complexity and disorder generated by deterministic rules. At its core lies sensitive dependence. In contrast, the “chaos” observed in stochastic systems is genuine chaos, characterized by inherent and fundamental randomness.
- ③ A significant form of determinism is scientific determinism, which includes classical physics and quantum mechanics. Classical physics, illustrated by Laplace, implies that if all current conditions are known, the universe can be predicted. In contrast, quantum mechanics introduces elements of unpredictability, although some interpretations still support determinism. The evolution of scientific determinism has significantly impacted philosophical determinism. Hard determinism denies the existence of free will and opposes Libertarianism, viewing actions as the inevitable outcomes of prior causes. Compatibilism argues that free will can exist alongside determinism, redefining freedom as the ability to act without external constraints.

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