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The Butterfly Effect of History: Chaos, Causality, and Historical Contingency in Kate Atkinson's *Life After Life* and Ahmed Saadawi's *Frankenstein in Baghdad*

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Abstract

The current research provides a comparative discussion of contingency in Kate Atkinson's *Life After Life* and Ahmed Saadawi's *Frankenstein in Baghdad*. The research aims to question in what ways the two books discussing war experience in the twentieth and twenty-first centuries define the issues of causality in relation to historicity as contingency, recursion, fragmentation, violence, and retrospection. In particular, the current research employs the tools of chaos and complexity theory (rather than as a scientific concept), close reading, and historical comparative narratology in order to show that both Atkinson's and Saadawi's books show contingency not as opposed to determined history, but as a force of action. In Atkinson's repeated biography of Ursula Todd, for example, the same conditions produce different outcomes since the slightest bodily and affective incidents change everything. At the same time, through repetitions, the novel shows structural attractors and thereby limits the effects of the possible alternative's patriarchy, fascism, war, domestic violence, and class structure. While the latter is evident in Atkinson's novel, Saadawi in his *Frankenstein in Baghdad* describes the city biopolitics of Baghdad and the creation of the monster, called Whatsitsname, through the decomposition of bodies and their stories. Through the application of the concept of grotesque ontology, it will be shown how the narrative depicts the feedback loop between occupation, representation, and retaliation. Overall, both novels allow stating that in the context of history, people have an opportunity to use their agency regardless of whether it is supported or undermined by various systems.

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1. Introduction

The butterfly effect metaphor represents the problem of scale in which the initially small effect becomes large in the context of nonlinear dynamics. However, from literary representations of history, this metaphor is used precisely because human events are governed neither by the laws of physics nor by the opposition to the idea of correspondence between the importance of the event and its cause. Historiography repeatedly points out that the description of events as a sequence of steps leading to a foreseeable conclusion is linear. Ideas of historical contingency and chaos theory highlight the fact that causation can be consistent with unpredictability, path dependence, and the likelihood of a different impact of various minor events on the chain (Ferguson, 1999; Danos, 1991) ^[9, 7].

Contemporary works of historical fiction are especially well equipped to discuss the issue thanks to the peculiar position in the hierarchy of evidentiary history and fictional literature. As is shown by a recent work devoted to Atkinson's *Life After Life*, this novel can serve as an example of the work that unites a commitment to history and its recognition of limitations within post-modernist tradition (Parey, 2022) ^[16]. The unusual structure of the book is radical and precise. The character named Ursula Todd goes through the process of birth, death, and reincarnation in various lives in different realities: British, German, and wartime. Ursula's reincarnation is not free from limits, as her worlds remain limited by the existing structures of violence, nationalism, wars, and oppression.

In the novel by Saadawi titled *Frankenstein in Baghdad*, there has been a specific method chosen to deal with the problem of historical instability. Setting the action in Baghdad against the background of the chaos that took place following the invasion of Iraq, the novel consists of a variety of episodes that do not make up any single narrative. It tells about how Hadi al-Attag creates a creature called "the What-sits-name" out of corpses of bombing victims, and about how, having come to life, the creature takes part in the process of its own interpretation by various parties. Recent analyses of the novel provide a variety of approaches to the interpretation of the novel: sovereignty, homo sacer, biomedical salvation, posthumanism and decomposition (Murphy, 2018; Abdalkafor, 2018; Webster, 2018; Davies, 2021) ^[15, 1, 23, 8]. This monster catalyzes the process and is not simply the source of violence. Violence creates conditions for the existence of the monster, which in turn shuffles causal explanations of violence.

Although there is a difference between Saadawi and Atkinson in terms of linguistic, national, and historical background, there is something that connects them, and that is the question of how one should write about the history, whose outcome cannot be inevitable while considering the factors which favored specific events over others. Atkinson solves the problem with his approach based on recursion and counterfactual history. In the case of Saadawi, this is done with the aid of the monster, composed of pieces, ruined city, and contradictory accounts. Both authors create the picture of history being evident in the capacity of the nonlinear complex system.

This study claims that novels of Saadawi and Atkinson represent literary examples of contingent causality. The histories in question are said to be causal due to the existence of such influences as violence, institutions, ideologies, and choices. These influences make histories contingent as the outcome does not have to be inevitable. For Atkinson, this is the recurrence of lives and the uncertainty of each next one. In the case of Saadawi, it is the reconstruction of the body, rumors, or narratives, which create the unpredictable environment. Thus, this comparison shifts the focus from the question of whether these novels are chaotic and brings attention to the literary form of chaos.

Three major contributions are provided by this article. First, the contribution is made into Atkinson's historical-fictional studies, as these books are put into dialogue with post-colonial and post-humanistic studies of Saadawi. Second, the contribution is made by the specification of chaos, which incorporates five different yet connected elements: non-linearity, sensitivity to initial conditions, feedback, emergence, and attractors, without making scientific statements. Finally, it introduces a contribution of an ethical dimension of contingency. Novels do not take advantage of the uncertainty as an excuse for perpetrators or political irresponsibility. On the contrary.

1.1. Research Problem

The main research problem pertains to the restricted comparative lexicon to study the causal nature of two war novels that differ in form. The traditional approach to literary criticism has often treated both texts in isolation. *Life After Life* has been understood about non-linear time, the historical novel, feminist memory, alternate stories, and repetition on behalf of the reader. Monstrosity, occupation, biopolitics,

trauma, the political body, and the posthuman aspect characterize the analysis of *Frankenstein in Baghdad*. This research attempts to answer the following questions:

1. In what way can these novels illustrate non-linear causation through repetition, divergence, fragmentation, and reflection in the process of narration?
2. How can seemingly insignificant accidents and other things that happen to people in their bodily world make history meaningful in life?
3. What is the role of contingency as it appears in the process of literature, and what effect does it have on our morality?

1.2. Methodology

The qualitative methodology in this study is literary comparison and involves textual analyses of the novels through their English translations, with supplementary use of historical narratology and a recognition of constraints caused by the very process of translating. Instead of simply stating the existence of thematic parallels, the use of chaos and complexity theories is involved in studying the formal operations in terms of recurrence, branching, fragmentation and feedback on the five levels of temporal form, causal scale, materiality, narrative knowledge and ethics. The non-quantitative nature of the methodology implies that no fictitious work be considered a primary source of historical facts per se.

2. Literature Review

2.1. Historical Fiction, Contingency, and Atkinson

Research into the relationship of *Life After Life* with the historical novel of the twenty-first century focuses on the interplay between its realism and the postmodern self-awareness of this novel's author (Parey, 2022) ^[16]. The latter will also play a critical role in the argument presented here: for the contingency that this historical novel brings about is the means through which the reality of historical events is revised – that is, *Life After Life* is not a story about a different world that is no longer burdened with war but a series of stories about alternative historical lives set against political and material conditions very close to those that define our own.

As such, the gender dimensions of *Life After Life* are especially important here. Specifically, Parey observes that Atkinson's novel tells a history of war from its margins, from the viewpoint of women whose experience is normally ignored in conventional military history (Parey, 2022) ^[16]. Thus, from this point, the scales of history shift: the historical event no longer has anything to do with war declarations, troops movements, or political decisions made by men; it has to do with domestic issues, bodily harm, sexual assault, caregiving, bureaucracies of work, trauma – a long list of seemingly small things that are nevertheless historical, when history is told by ordinary people.

Similarly, research into narrative time shows *Life After Life*'s complex nonlinearity and use of alternative temporal paths. Recent research on multilinear and disnarrative structures identifies *Life After Life* as a good case study in feminist unnatural narratology because the recurrent episodes in Atkinson's novel not only illustrate different outcomes but reveal what is suppressed, omitted, or left undeveloped in other narratives (Richardson, 2025) ^[20]. This is relevant for the current argument because the repetitive nature of Atkinson's narrative makes her readers learn to see history behind minor events.

2.2. War, Monstrosity, and Saadawi

Frankenstein in Baghdad Critiques exist regarding Frankenstein in Baghdad that follow many paths of inquiry. Murphy provides criticism of the novel, relating its themes to the conditions of the human condition; namely, the ways in which war and scientific/technological imaginaries break down the distinctions between humans and other creatures (Murphy, 2018)^[15]. Abdalkafor considers the work from the perspective of post-colonial theories on sovereignty, violence, and homo sacer, noting how the monster emerges within the political system in which some lives become deathly vulnerable (Abdalkafor, 2018)^[11]. Webster discusses biomedical salvation and emphasizes the involvement of the novel in medicine and the quest for the body appropriate to the dead (Webster, 2018)^[23].

These criticisms are supplemented by Davies, who brings the discussion of body politics together with urban infrastructure and narration. His concept of "decomposing fictions" involves the simultaneous process of destruction and re-creation of the city, body, and narration (Davies, 2021)^[8]. Thus, this approach is highly productive for the interpretation that focuses on chaos since it considers the monster not as an isolated symbol but rather as a result of the interaction of different processes of material and rhetorical kind. It should be mentioned that the city's damaged infrastructure, fallen bodies, the narrative of the occupation, and the evolving body of the monster are formed by each other reciprocally.

Other interpretations of the novel consider its theme as connected with Gothic politics and rhetoric of haunting and monstrosity (Alkhayat, 2022)^[3]. These discussions prove that supernatural elements of the novel do not offer a means of escape from history but rather allow one to experience the effects of violent events via such means. The monster's body accumulates all scattered effects of the war while the indeterminate identity of the monster exposes the political will to identify the culprit responsible for these horrors.

2.3. From Separate Literary Systems to Comparative Complexity

The literature survey above yields powerful readings of each novel, but leaves room for an additional, comparative approach. On one hand, Atkinson's multi-linear story and Saadawi's composite creature may be thought of as opposites in terms of form: the proliferation of life over time through repeated cycles vs. the creation of a body through the gathering of its parts, respectively. But in both novels, linear causality is questioned. In the case of Atkinson, the reader questions what little modification could have made way for the next life. In Saadawi's work, the question becomes who is responsible for the violence, already endemic, that has been perpetuated through bodies/narratives/institutions. (Austin, 2020)

The idea of complexity allows these questions to be framed in a way that connects them without diminishing their specificities. Complexity here refers to interactions among disparate parts resulting in effects that were not foreseeable from just one part alone. The concept is in keeping with historiographical arguments that allow chaos theory to contain causality along with contingency (see Ferguson, 1999; Danos, 1991)^[9, 7]. Additionally, the notion parallels the concept of contingent and accidental narratology in literature – a mode of reading in which the reader is charged with

discovering causality within the contingencies of events (Pesce, 2019)^[17]. The current research contributes to this conversation within the context of comparative war fiction.

3. Discussion

3.1. Ursula Todd and The Narrative Laboratory of Small Causes

In *Life After Life*, the human life is seen as a succession of experimental lives while being a living entity experiencing its own subjectivity. It is a life filled with experiences: childbirth is dangerous, sickness provides meaning, sexual abuse has its structural conditions, and death is the factor that changes memories and the course of the lives afterwards. Recurrent lives form a literary laboratory where various circumstances change life and its result.

Among these factors, there is the small alteration: a desire to make an intervention, hesitation at some crucial moment, change of the place where one is staying, relations with members of the family, political danger, and others. It is a literary equivalent of the butterfly effect in a story. The importance of an alteration consists not only in the decision or an action but in the chain reaction which happens afterwards. Therefore, the narrative shifts attention from an event to the time which goes between an event and its results. (Austin, 2020)^[5]

Also, Atkinson's architecture opens another conception of agency since Ursula shows herself as a woman who can learn a lot from her previous lives, yet she knows only partially, and her knowledge remains incomprehensible for many (Gallagher, 2022)^[10]. Her desires for changing the world are limited by the gendered institutions of the period and historical violence. She is not able to change something in a preferred way, and her agency exists thanks to the significance of choices yet is still limited because they exist within a particular framework. (Sexton, 2021)^[22]

The mentioned duality is seen through the depiction of fascism and war in the novel, where Ursula's recurrent lives constantly try to show how history could be altered if some dangerous forces were confronted earlier. Nevertheless, the text refuses the utopia of a single enlightened man who will save the twentieth century because there exist several political attractors: fascist ideology, patriarchy, militarized nationalism, domestic violence, normalizing class hierarchy. Individual actions tend to go into these structures, and even if Ursula finds another way, the structures will remain and provide the creation of danger. (Sexton, 2021)^[22]

Therefore, the realism of the history in the text relies on this tension since it implies that there exist structural things which persist and which continue existing even if personal changes happen. Thus, the idea of the forking-path of Parey about the novel becomes crucial here since the novel shows alternative options and preserves the immersion in history at the same time (Parey, 2022)^[16]. This formal experiment does not reject history; it makes visible the results of historical necessity after they occurred. (Gallagher, 2022)^[10]

The household scale plays a great role in the novel. Usually, historians consider such people as political figures, generals, politicians, and governmental institutions as agents of history. Atkinson transfers the pressure of history to the homes, places of work, hospitals, streets, and bodies. It means that women's jobs, family expectations, and violence of a man in the family turn out to be the parts of the historical field. It

does not mean that the political turns into psychological; it means only that in order to become active, political systems should become intimate.

Atkinson's repetitions produce an ethical attention to the novel's events. In a case when a story presents only variations of events, the detail which usually passes unnoticed starts to look like the potential one. In the case of a linear narrative, deaths are just a part of a story; nevertheless, in the case of variations of lives, the deaths appear as comparative elements. The attention shifts to asking questions about what happened if somebody else had heard the warning, if there was refusal in relationships, or if some ideology was recognized earlier. (Parey, A. 2022) ^[16]

3.2. Baghdad as A Complex System of Bodies, Infrastructures, and Stories

In *Frankenstein in Baghdad*, the order of causality is neither one of alternate lives nor of alternate universes but rather of fragments. Hadi collects body parts of people who are killed by violence and composes a monster. On the one hand, this activity is an attempt at mourning and an attempt at finishing people. But, more interestingly, this act intervenes accidentally in the ontology of politics of the city. (Mousavi & Salimi, 2021) ^[14]

The Whatsitsname becomes an emergent entity: there is no piece that explains everything about him, and there is no maker that controls what happens with him (Austin, 2020; Caracciolo, 2021) ^[5, 6]. The character's identity changes every time a new piece is added to him, when a new formulation of justice appears, and when various groups try to explain him or use him in some way. This identity is emergent in the sense that it is a mobile boundary between singular and multiple, human and non-human, victims and perpetrators. (Mousavi & Salimi, 2021) ^[14]

According to Davies's tripartite description of city, body and narration, it becomes clear why this emergence of entity is political (Davies, 2021) ^[8]. There is no mere scenery of a damaged infrastructure in the story. Roads, checkpoints, buildings, electricity, security zones, and sites where bombs fall become important factors limiting and shaping movements of bodies and narratives within the city. The process of recomposition of the city occurs due to the emergence of technologies and informal networks, and the occupation and violence decompose it. This monster participates in that process: his body is created by the material circuits of the city. (Mousavi & Salimi, 2021; Westphal, 2023) ^[14, 24]

Narratives within the novel work as a feedback loop: there is an act of violence; it creates a story; the story creates fear; the fear legitimizes some security measures or actions of revenge; it causes another act of violence; and they prove that it was not a false rumor in the beginning. Thus, in this scheme, representation of the world is not just secondary to reality. The story influences behavior; the change of behavior leads to change of material reality, which gives birth to the new story.

This dynamic provides the satirically written novel with its analytical seriousness. The search for the identity of the monster is an attempt to look for the controllable cause. When it is possible to identify him as a source of the violence, all other factors like occupation, sectarian politics, failures of the government, and international organization of wars will disappear. But, unfortunately, this novel is not so simple. Because the Whatsitsname is undoubtedly a violent creature,

but the violence is connected directly to the act of its creation. Consequently, the metaphor of a monster as a nation turns problematic. This national body can be understood in a composite way: there are various inharmonious identities of Iraqis collected in this body, but there are no unifying myths that unite this identity into a nation.

And such instability of the creature becomes important: its body does not represent any peaceful synthesis but a memory of the inharmonious claims, missing pieces of history, and demand for justice. Thus, this composite nature protects the conflict rather than resolves it. This posthumanism is based on the material instability of the creature.

The Whatsitsname's humanity does not derive from origin, rationality, and legal status, but it is negotiated through the needs of his body, memory, language, violence, and the response of others. Does a human person exist when it is constructed from bodies which do not have the political status of a protected individual?

3.3. Two Formal Models of the Butterfly Effect

Historical sensibilities put forward by Atkinson and Saadawi are quite different from one another. While Atkinson believes that sensibility is characterized by its temporal and biographical elements, affecting interrelations, individuals' chances for survival, politics, and the reader's interest in history. On the contrary, Saadawi states that sensitivity is based on materiality and structure, claiming that even the smallest element of the body, piece of gossip, or act of recognition might affect an already stretched network of the city (Garritty, 2023; Westphal, 2023) ^[11, 24]. There is also a difference between the two narratives concerning closure: while in the story by Atkinson it is possible to sense that there is a story of improvement involved, still it is the improvement based on repetition and loss: the knowledge that Ursula knows makes it possible for something to happen in the future, which means that the history of that knowledge is not forgotten and erased. In Saadawi's novel, identity proves to be a highly instable thing: there is always a possibility of the monster's narrative working as a paradigm, and then being destabilized again. So in Atkinson's work it is the contingency described through alternative, in Saadawi's work – through impossibility of embodiment or causality. (Garritty, 2023) ^[11]

This should not mean that both authors advocate pure openness in their stories, meaning that all events become equally likely. Past does not belong to pure openness, as there are certain restrictions that determine the outcomes, which makes those narratives more similar to complexity theory than to randomness.

3.4. Attractors: Recurrence Without Inevitability

The attractor explains why the novels describe structures that direct events in ways that reappear but do not lead to a specific outcome. In the case of Atkinson, patriarchal force creates conditions such that women live under conditions of dependency, sexual threat, labor control, and asymmetrical power distribution. The attractor can be observed through the different ways the alternative lives are shown since the structure is there, but the course changes, revealing itself. (Sexton, 2021) ^[22]

The same occurs in the case of fascism in the novel. Instead of being treated as a mistake in politics, the structure is portrayed in the form of language, social anger, masculinity, spectacle, and administration.

In Saadawi, the attractors are occupation, militarized security, sectarian conflict, and inequality-producing administration. Although the monster acts in unpredictable ways, there seems to always be an expected reaction on the side of the authorities, community, and media. The monster is hunted as an object which the social field seeks to define in its simplest forms. It is the way of transforming the complexity into a simple chain of sensationalist explanations for the purpose of simplifying the situation. (Al-Hajaj, 2020) [2].

Thus, there lies a very important ethical aspect in the notion of attractors. As structures limit the possibilities for people to act, no one can hold responsibility for their own actions alone since it is always influenced by different structures of which people are parts. And yet the presence of dispersed causality should not make people think about the innocence of everyone. On the contrary, there is a need for complex responsibility.

3.5. Retrospective Explanation and The Politics of Narrative Order

Both novels are characterized by attempts to impose an element of order following disaster. In the case of *Life After Life*, repetition of lives provides readers with the ability to compare outcomes in order to determine causality. Yet, no matter how many comparisons one makes, omniscient knowledge will not be revealed in the process (Gallagher, 2022) [10]. Sometimes there is something the reader knows more about than Ursula, but there can be no determinable map of her fate.

The explicitly political aspect of retrospective explanation characterizes *Frankenstein* in Baghdad. In this novel, writers, journalists, politicians, neighbors, and even the monster themselves take turns telling a story of violence while trying to fit their narrative into specific concerns and needs. Neither chapters that deal with issues of narration nor those dealing with criminality provide final answers to who tells the story or who is guilty. Authoritative narrative exists in the context of an unstable order.

It is the difference between explanation and resolution that becomes important here. Both books involve readers in finding explanations to events presented in them, but neither allows explanation to become closure. One can speak about contributing causes of an event without determining what that single cause was. This is especially important in war literature, which typically explains violence as inevitable and exceptional.

3.6. Historical Contingency and Ethical Agency

Historical contingency can be accused of blurring political responsibility in cases when the event in question could unfold in another manner. But the opposite is true here. Both novels show the ways of other possible scenarios and distribute the causes that make the responsibility clearer.

First, Atkinson's novel proves that taking into consideration the alternatives makes it possible to mourn in a better way. In the case under discussion, the dead man does not lose his importance just because someone else had the opportunity to save him. On the contrary, each variant reveals the value of the life that was lost and some unnecessary suffering. Thus, the use of alternative history in Atkinson's novel provides grounds for the ethics of prevention. (Garrity, 2023) [11]

Secondly, Saadawi's novel pushes the reader towards thinking about collective and institutional accountability. The

corporeality of the monster cannot be separated from the bodies that were created during the war process because if there is something wrong with the creature, it also belongs to history as a historical result of some previous acts (Caracciolo, 2021) [6]. Saadawi's novel doesn't justify the acts that the monster performed; it refuses to give excuses for those acts. Thus, the act and its conditions must be considered in the framework of judgment at once.

Finally, the comparison opens the notion of agency and makes it broader. Agency not only means the intention, but also the ability of some bodies, infrastructures, narratives and institutions to affect the process. But this fact does not mean that the nonhuman entities receive the status of people or that human agency loses its weight because their actions take place within some material context. The woman's body, house, office, the checkpoints in Baghdad, and the monster's body are all agents.

4. Conclusion

Life After Life and *Frankenstein* in Baghdad are some of the most impressive examples of the current understanding of history as an area of study beyond linear time and ethics. Through Atkinson, history gets prolonged and illustrated as a complex interrelation between events and structures. Through Saadawi, the past becomes the story of how bodies and cities get constructed by violence.

Chaos allows looking at history from the perspective of its sensitivity, recursivity, emergence, and path-dependence. History is not random, but it is sensitive to small causes which become meaningful because they appear in a context already shaped by power. History is sustained and perpetuated by structures that reproduce themselves through everyday practices. History has causality even though it cannot be seen as one-dimensional or having one point of origin.

The following three statements could summarize the comparison. History in the sense of the narrative's nonlinear structure becomes the way of knowing about what was left outside the narrative of necessity. Bodies become a medium of history as archives: the past which official stories try to erase. The combination of contingency and structuralist approach can be ethically productive. There is no need to deny any responsibility for something that happened if one says that it could have turned out differently.

This way, the Butterfly Effect is not simply the idea of insignificance. Here it reveals the connection of the minor with the historical, the local with the general, the particular event with the larger processes such as war, politics, infrastructure and memory. Literature gives this process its form, which determinative historiography and individual anecdotes cannot give.

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