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The Intersection between quantum physics and trauma in Yusef Komunyakaa's "You and I Are Disappearing"

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Abstract

This paper discusses the intersection of quantum physics and war trauma in Yusef Komunyakaa's (1988) "You and I Are Disappearing," investigating the experience of war trauma through the fragmented temporal perspective as presented in quantum mechanics. Quantum physics hypothesizes that time is inconstant and nonlinear. Likewise, Trauma theory postulates that trauma disrupts and blurs the temporal lines between events. Key concepts in quantum physics—superposition, entanglement, observer effect, and uncertainty—are applied to the fragmented experience of trauma. Applying these terms to trauma theory and examining how the poem's traditional narrative and temporal order are disrupted reveals the quantum instability of the traumatized psyche. The paper attempts to find answers to the following questions: How do trauma and quantum physics stand at a crossroads in terms of nonlinearity? What is the outcome of this intersection? Where are the terms of quantum physics, superposition, entanglement, observer effect, and uncertainty shown in the poem? How does this intersection prove the effect of war on individuals? Furthermore, the paper examines the poetic techniques in "You and I Are Disappearing" and investigates how they are used to emphasize the poet's sense of trauma.

Keywords: Komunyakaa, "You and I Are Disappearing," quantum physics, trauma, war poetry

1. Introduction

1.1. Author's background

Born in Louisiana in 1947 as James William Brown, Yusef Komunyakaa changed his name after his grandfather from the West Indies. He is known for his works that deal with topics such as African-American identity and the Vietnam War. His experience as a war correspondent deeply affects his work, especially in collections like *Dien Cai Dau*. Most of his works are influenced by jazz and blues music, as evidence of his adherence to his identity and race. In addition to being a poet, he has been a university professor since 2006. He got a Bronze Star for his service in the Vietnam War as a war correspondent. He also won several prizes, such as the Kingsley Tufts Poetry Award and the Pulitzer Prize.

1.2. Research problem

As a war correspondent in Vietnam, Komunyakaa witnessed atrocities committed by his nation and documented the suffering of the Vietnamese people without intervening. In my interpretation, this silence positions him as a morally implicated witness to the war he could not prevent. This experience left a deep mark on him, causing a trauma that time has failed to erase. Consequently, he wrote "You and I Are Disappearing," in which he depicts a horrific scene of a girl being burned by napalm. Despite the passage of years, these horrific scenes remain etched in his mind. Komunyakaa successfully describes his trauma through fragmented images, disconnected linguistic structures, and the state of separation and fragmentation experienced by a traumatized person. His guilt is reinforced by his inability to save this girl. This poem expresses the profound psychological effects of war clearly and painfully, emphasizing that not only the victims but also those who, though not active participants in violence, may feel complicit in it.

2. Theoretical framework

2.1. Trauma

Although trauma theory—particularly as developed by Cathy Caruth in *Unclaimed Experience: Trauma, Narrative, and History* and by Judith Herman in *Trauma and recovery: The aftermath of violence—from domestic abuse to political terror*—has provided effective explanations for the impact of traumatic events on memory, language, and identity, recent studies have opened new avenues for a broader understanding of trauma. According to Caruth and Herman, trauma disrupts memory, causing the experience to return belatedly and incompletely. It also distorts language, as survivors struggle to articulate what they endured. Trauma also fragments identity, dividing the person between the one who experiences and the one who remembers.

Trauma, as a concept, sits at the intersection of medicine, psychology, and literary studies. Trauma theory seeks to understand and explain the psychological, emotional, and physical effects of traumatic events on individuals. It also examines how traumatic events and situations affect an individual's thoughts, feelings, and performance. Trauma theory states that traumatic experiences may extend their effects to affect an individual's mental well-being and vary from one person to another. As Breuer and Freud (1895/1955) believed that:

In the great majority of instances we find that a first trauma has left no symptom behind, while a later trauma of the same kind produces a symptom, and yet that the latter could not have come into existence without the co-operation of the earlier provoking cause; nor can it be cleared up without taking all the provoking causes into account. (p. 173)

Most of the time, the initial trauma leaves no symptoms; however, the second trauma of the same type does. Freud defined trauma as an event or experience that is so powerful that a person finds it hard to overcome or cope with. He also noted that unresolved trauma resulted in repressed sentiments and hidden conflicts, which caused anxiety, phobias, and other psychological disorders.

Psychological trauma held a significant place among Freudian concepts from a temporal perspective. In his book *Studies on Hysteria*, he argued that trauma is one of the most common causes of hysteria. In the narratives of persons who have experienced trauma, we see a type of self-division, and some say they felt as if they were observing the scenario from outside their

bodies. Hysteria was discovered in the case of Anna O, a pseudonym given to one of Breuer's patients, Bertha Oppenheim. Freud never met Oppenheim; instead, Breuer, who collaborated with Freud on various cases, including the one involving Anna O, diagnosed the young lady with hysteria and subsequently discussed her case with him. Freud's theory of hysteria, which began with a detached experience of actual traumatic experiences (seduction, incest), evolved into one of repressed libidinally charged concepts or urges.

The term "hysteria" was used in Breuer and Freud's (1895/1955) Studies on Hysteria, where they regarded the return of memory as necessary for processing a harsh experience and the manifestation of hysteria.

In cases of 'traumatic' hysteria what provokes the symptoms is the accident. The causal connection is equally evident in hysterical attacks when it is possible to gather from the patient's utterances that in each attack he is hallucinating the same event which provoked the first one. (p. 4)

They continue to remark on the paradoxical relationship between the duration of trauma and its relationship to an isolated event:

The disproportion between the many years' duration of the hysterical symptom and the single occurrence which provoked it is what we are accustomed invariably to find in traumatic neuroses. Quite frequently it is some event in childhood that sets up a more or less severe symptom which persists during the years that follow. (Breuer & Freud, 1895/1955, p. 4)

As a result, childhood serves as a repository of both positive and negative memories that every human being experiences. The type of trauma, the individual's personal history, gender, coping strategies, and the support systems available to them are key factors influencing the clinical diagnosis of post-trauma.

Holocaust studies have played a pivotal role in the development of trauma theory in both literary and psychological contexts. These studies have exposed the limitations of traditional models of memory and narrative, leading researchers to redefine trauma as a delayed, fragmented, and often ineffable experience. Drawing on survivor testimonies, Shoshana Felman and Dori Laub have emphasized trauma as a testimonial crisis that challenges individual and collective understanding. Felman and Laub (1992) state that survivors "needed to tell their story in order to survive" (p. 78). Testimony turns from being just a form of expression to a vital part of healing and survival. They believe that "the traumatic event, although real, took place outside the parameters of 'normal' reality, such as causality, sequence, place, and time" (Felman & Laub, 1992, p. 69). This aligns with Caruth's interpretation of trauma as a voice that insists on being heard, a voice that emerges paradoxically through the wound. According to her, trauma is an overwhelming experience that cannot be fully integrated. She states that:

If traumatic experience, as Freud indicates suggestively, is an experience that is not fully assimilated as it occurs, then these texts, each in its turn, asks what it means to transmit and to theorize around a crisis that is marked, not by a simple knowledge, but by the ways it simultaneously defies and demands our witness. Such a question, I will argue, whether it occurs within a strictly literary text or in a more deliberately theoretical one, can never be asked in a straightforward way, but must, indeed, also be spoken in a language that is always somehow literary: a language that defies, even as it claims, our understanding. (Caruth,1996, p. 5)

Caruth believes that both testimony and literature are essential media for conveying trauma through presenting its fragmentation, belatedness, and ethical demand to be witnessed.

Likewise, Herman (1992) argues that trauma fragments memory, leaving individuals with

fragmented and disjointed experiences. She believes that writing combines these fragments and makes them into a cohesive narrative. This process enables survivors to revisit their terrible experiences and release themselves by giving voice to their wounds. Herman (1992) states that recovery requires "patient and therapist [to] slowly reassemble an organized, detailed, verbal account, oriented in time and historical context" (p. 177). According to Herman, the process of writing helps the survivors remember their horrible experiences, express them, and then get control over their story, which helps them recover from trauma.

2.2. Conceptual lens: Quantum physics

The complex nature of trauma, with its fragmentation, delayed memories, belatedness effects, and difficulty in fully understanding it, can be compared to the untraditional concepts in quantum physics. Just as trauma theory questions traditional ways of telling stories in psychology and literature, quantum physics changes how we think about certainty, identity, and time in science. One such avenue is quantum physics, which is used here not only as an exact science but as a set of terms that could reshape our understanding of trauma and clarify its deeper meaning. Quantum physics—the branch of physics concerned with studying the behavior of tiny particles—is used metaphorically, as its quantum terms are applied metaphorically. For example, some of the most prominent terms in quantum physics are "superposition, entanglement, and uncertainty." Superposition is the existence of one thing in more than one state at the same time. Entanglement is a phenomenon in which two particles are linked in a way that the state of one particle immediately affects the state of the other, no matter how far apart they are. For example, if one entangled particle is measured and found to have a certain spin on Earth, the other particle will instantly have the opposite spin, even if it's on the Moon or another planet. Uncertainty is the inability to precisely determine the state of a particle. Applying these terms to the traumatic experience suggests that the traumatized psyches are unstable, meaning they experience more than one state at a time. These terms are also linked to the traumatized experience, as they may feel ashamed for having survived while others died, and that they should have died with them. They are also unable to fully understand themselves due to confusion and fragmented memory following the traumatic experience.

In contrast to classical physics, with its deterministic laws and fixed outcomes, quantum physics relies on uncertain probabilities, superposition, and entanglement. This is the common ground between quantum physics and trauma studies, in which the trauma of war, which plunges the survivor of the horrific experience into a state of instability, allows the bitter past to perpetually and unpredictably creep into the present, rendering them unable to live in a stable state forever. The burning girl in Komunyakaa's poem is a wave and a particle at the same time: she is both a burning body and a memory stuck in Komunyakaa's mind, reappearing in several images. These images reflect the instability of memory under the influence of trauma, as if Komunyakaa sees the girl burning at every moment of his life.

3. Research objectives

This paper examines Komunyakaa's war trauma from a quantum perspective to provide a deeper understanding of the psychological chaos of the poet. It also aims to highlight the importance of using quantum physics in analyzing poetry, highlighting that Komunyakaa, torn apart by war, does not live in a Newtonian world of certainty, but rather in a quantum world of

trauma, where uncertainty and fluctuating existence prevail.

4. Review of literature

There are some studies that have examined the relationship between literature and quantum mechanics. Albright (1997) examines the incorporation of scientific paradigms, particularly quantum physics, into modernist poetry. He discusses how poets such as Yeats, Pound, and Eliot sought to identify the basic elements of poetry. In his *A Vision*, Yeats explores poetic force through his belief in the purity of symbols, while Pound focuses on the precision of language and its ability to accurately describe and express emotion. On the other hand, Eliot engages in what Albright refers to as a "wave-theory of poetry," a stylistic approach in which the poet and the reader share telepathic intimacy. This book demonstrates the efforts of modernist poets to redefine poetry in an age of scientific progress.

Letellier (2019) offers a comparison between poetry and quantum physics in Adonis's poetry and Basarab Nicolescu's theoretical physics. Her argument centers on her assertion that both poetry and quantum theory seek to grasp a veiled reality—one that is not immediately accessible but constantly manifests in forms that blur the boundaries between the metaphorical and the literal. Letellier (2019) claims that "poetry translates the Hidden Third into poems" (p. 107), which positions poetic metaphor as a symbolic bridge that unites different levels of reality. She suggests that metaphorical and symbolic language is a cognitive and existential tool that enables human consciousness to access a reality that resists empirical measurement.

Ponder (2021) argues that Yusef Komunyakaa's poems blur the boundaries of time and identity, as past moments are recalled and transition directly to the future, bypassing the present moment, in a clear integration of history and its impact on the individual and society. She applies quantum concepts to the poem "Facing It" and finds that the speaker's memories of the past, then his return to the present, and his reflection on the future create a quantum flow within the poem. Throughout the poem, the speaker looks at the memorial and reads the names of the veterans who died, recalling his memories of the war. Thus, the speaker appears in two periods: past and present. Komunyakaa also highlights the influence of racial identity in the poem through his mention of the white warrior, but instead of focusing on the differences between the two identities, he decides to focus on the similarities in their shared trauma. Ponder (2021) acknowledges the influence of science on literature, which is clear in Komunyakaa's works, allowing the reader to travel through time and witness the speaker in more than one time period while reading the poem.

Catanzano (2022) considers poetry as the mathematical formulation of quantum systems, capturing what can be achieved through observation, beyond the scope of normative language. She also believes that poetry can be treated as a dynamic complex system that becomes increasingly complex with the increase in its interacting components. Poetry in quantum superposition is directionless, moving in a quantum leap, undermining the law of deterministic causality and inherent in all time and space. Poetry, like light, is both a wave and a particle before its wave function collapses when written and read. Poetry is not only entangled with the inner and outer limits of its elemental parts, being able to communicate with other quantum states instantaneously across distances, but it is also entangled with the conditions of its beginning and end. *Poiesis* in spacetime is an activity in which beginning and ending meet,

then release, then meet again.

In contrast to the dearth of studies examining the relationship between quantum physics and Komunyakaa's poetry, several studies have examined Komunyakaa's poetry from a trauma perspective, such as Turner and College (2006) explore Komunyakaa's experiences in the Vietnam War and the American South. They highlight how his work offers a distinct view of the enduring emotional and psychological impact of war and racism. Through themes like violence, memory, and healing, Komunyakaa's poems create what the researchers call a "poetics of trauma," giving readers a way to engage with the lingering scars left on individuals and communities.

Binghadeer (2022) examines the works of Yusuf Komunyakaa and Sinan Antoon, both of whom have discussed war and terrorism in their work. Komunyakaa frequently draws on his own experiences in the Vietnam War to explore the trauma and its impact on individuals and society. His poems often explore the psychological and physical effects of war on its survivors through the use of vivid images of war. Likewise, Antoon explores the devastating effects of the Iraq War, which he personally experienced. Antoon paints a vivid picture of the horrors of war and its effects on the individual and society. Each uses vivid language to express war, its horrors, and its impact on individuals and societies, highlighting the deep, complex emotions associated with war trauma.

Kisiel (2023) investigates trauma and its impact on individuals and their societies in Komunyakaa's "Facing It". The poem is about the speaker's visit to the Vietnam Veterans Memorial, where he confronts the memories and emotions associated with his experiences as a correspondent in the Vietnam War. The poem emphasizes the profound impact of trauma by portraying the speaker's struggle to confront his own reflection in the memorial's black granite walls. Throughout the poem, Komunyakaa explores the ways in which trauma shapes and isolates individuals from the community around them.

Although there have been previous studies on the relationship between quantum physics and poetry, this study concentrates mainly on Komunyakaa's war poem "You and I Are Disappearing." It presents an analytical and in-depth application of quantum thoughts to poetry. The study also examines the points of convergence between quantum physics and trauma, offering deep insights into both disciplines.

5. Methodology

This paper examines Yusef Komunyakaa's poem "You and I Are Disappearing," applying trauma theory and concepts from quantum physics. The poem is analyzed in light of trauma's effect on memory and perception, with quantum concepts such as superposition, entanglement, observer effect, and uncertainty.

6. Discussion

6.1. Superposition

In quantum physics, particles exist in more than one state at the same time, "superposition," a phenomenon like that experienced by traumatized people, who relive past events as if they are occurring in the present. The experience of trauma survivors like Komunyakaa, in which time

is disrupted, and the self is fragmented, is a manifestation of quantum concepts. Komunyakaa is haunted by the image of the girl he saw burning in Vietnam. The girl is not depicted in one state; she is depicted in many states as he says, "She burns like a piece of paper. / She burns like foxfire / in a high-shaped valley" (Komunyakaa, 1988, p. 17). In his representation of the girl as a piece of paper, he refers to the great devastation and destruction of the war on the Vietnamese girl and himself, but also to the entangled racial and political dynamics between them. Both characters, Komunyakaa, the African American war correspondent, and a Vietnamese girl, are victims of American forces. Komunyakaa's trauma is intensified by his inability to protect the girl, possibly constrained by the authority of his white commanders, which gives rise to questions about moral courage and complicity. Now, Komunyakaa became no longer just an observer of war; he became the observed, haunted by the girl's lingering presence, a ghostly reminder of his unresolved guilt and their shared fate. Komunyakaa also highlights his continuous battle with trauma and the impossibility of recovery. Komunyakaa also describes the girl as foxfire in a valley, a natural phosphorescent light. The girl becomes an otherworldly presence, glowing faintly but constantly in his memory. This glow suggests a ghostly or spectral transformation, positioning her as an apparition that haunts him. The girl's image blurs the line between the natural and supernatural, life and death, memory and haunting. Although Komunyakaa was a war correspondent, a witness rather than a warrior, the valley evokes a sense of beauty and vitality as it reminded him of peace. Yet this vision is shattered by the recurring image of the girl burning, which violently disrupts the landscape and reminds him that even beauty cannot escape the horrors of war.

He also depicts the burning girl as dancing, which contradicts her horrible status, as he writes, "A skirt of flames / dances around her / at dusk" (Komunyakaa, 1988, p. 17). In this image, Komunyakaa expresses the mixed emotions of the American soldiers' happiness at achieving their goals and the torture of the burning girl, revealing the terrifying face of war. He also describes her as "She burns / like a sack of dry ice" (Komunyakaa, 1988, p. 17), evoking a paradoxical image of cold and smokeless burning. He also uses rhetorical devices to convey emotion, relying on similes because they clearly convey emotions. This unnatural metaphor suggests an unnatural, emotionless form of destruction, like a trauma that consumes the person without any signs of fire or heat. Unlike fire, dry ice sublimates, changing directly from a solid to a gas, bypassing the liquid state. The metaphor of the girl burning like dry ice suggests more than a physical transformation; it reflects the psychological process of sublimation, which Freud (1914/1957) defines as "a way out, a way by which those demands can be met without involving repression" (p. 95). This process defies the typical states of matter, just as the girl's destruction seems to defy the natural order, transforming her into something ghostlike. The absence of water may imply a sense of emotional detachment in Komunyakaa's psyche; he watches her burn, silently, without trying to put out the fire; only the memory returns later, bringing with it feelings of guilt and regret. The dry ice metaphor thus reflects both her death and Komunyakaa's trauma, capturing how war renders human suffering not only unbearable but chemically surreal, stripping it of warmth, substance, and even natural laws. The use of the present tense also indicates that the memory is still fresh in his mind.

In his line, "She burns like oil on water" (Komunyakaa, 1988, p. 17), Komunyakaa presents an image of contradiction rather than a chemical mixture. Since oil and water do not mix, oil

continues to burn while floating on water, surrounded by an element that is supposed to extinguish it. This paradox mirrors Komunyakaa's emotional conflict: guilt that persists despite physical detachment or helplessness. It captures the essence of survivor's guilt, as Komunyakaa uses the properties of nature, repulsion, separation, and combustion, to rationalize his inability to save her. Instead of burning properly, the girl was burning like a flame dipped in gasoline, getting hotter, as he maintains, "She burns like a cattail torch / dipped in gasoline" (Komunyakaa, 1988, p. 17). In reference to the explosive nature of pain brought on by this intentional damage, gasoline intensifies the flame's ferocity.

Komunyakaa tries to drown his sorrows by drinking vodka, but to no avail, he asserts, "She burns like a shot glass of vodka" (Komunyakaa, 1988, p. 17). Heavy drinking and smoking opium are symptoms of PTSD patients who want to lose track of time. The use of the simile in "She burns like a field of poppies / at the edge of a rain forest" (Komunyakaa, 1988, p. 17) is an attempt to compare the girl's burning to poppy flowers, as a sign that exposes his desire to escape from the harsh reality and evokes an association with opium. The occurrence of the burning on the edge of a rainforest, a symbol of life, contrasts with the destruction caused by the fire, highlighting Komunyakaa's inner conflict.

In the final lines of the poem, Komunyakaa describes the girl as "She burns like a burning bush / driven by a godawful wind" (1988, p. 17). As the "godawful wind" conjures a sense of dread that Komunyakaa experiences and from which he is unable to escape, these concluding lines paint a compelling picture of the chaos and destruction brought on by trauma.

There is not just one image of the girl, but rather eight. This is consistent with the principle of quantum superposition, which states that a particle exists in more than one state until it is observed. According to Catanzano (2022), "poetry in quantum superposition is without direction, moving by quantum jump" (p. 140). This is evident in Komunyakaa's use of the similes of the burning girl, as he dedicates most of the poem in a form of similes of the burning girl. The opening of the poem reflects Komunyakaa's profound sorrow for the girl as if he is opening the door of his mind, where the girl persists in multiple forms. Catanzano (2022) asserts, "a poem is an expanding universe that is a poem that is a portal, quickening travel among the distances it grows" (p. 140). The multiple images of the girl indicate that he is trapped in his trauma, as Mitrea (2024) confirms, "the repetition of the verb suggests the inability of the poet to come up with the right simile, acting like a crescendo that calls for a climax, which, however, never arrives" (p. 100). Komunyakaa's inability to find the right simile is because his mind struggled to process overwhelming experiences, a compulsion to repeat rather than narrate. In this context, quantum superposition becomes an apt vehicle, capturing the emotional states Komunyakaa simultaneously feels but cannot resolve.

According to Freud (1920/1961), "we describe as 'traumatic' any excitations from outside which are powerful enough to break through the protective shield" (p. 23). The experience was so horrible that it destroyed his sense of time, blurring the lines between past and present, making it hard to forget, and it continued to live within him, causing him ongoing suffering. In a TV series *Poetry in America*, in the episode titled "You and I Are Disappearing," hosted by Elisa New, Komunyakaa remarked, "when I wrote the poem, I wrote it was just in a single sitting. It was almost as if I had written it in my psyche," which resonates with Albright (1997),

who observes:

A poem's strongest meanings reside in its smallest elements— *symbol, image, vortex* exist before the text begins, perhaps before the poet was born, and endow the finished poem with an electric charge of signification. The poem (*according to this model*) is a conscious deployment of autonomous meaning-units discovered, not invented, by the poet. (p. 5)

In Komunyakaa's case, the traumatic experience of watching the burning girl was so profound that she remained embedded in his memory. When the memory found an opportunity to resurface, it poured out all at once—this sudden release reflects Freud's concept of "repression," where traumatic memories are pushed out of conscious awareness, only to later erupt when triggered. The act of writing the poem in a single burst becomes an act of sublimation, transforming repressed pain into creative expression. Through writing, traumatized individuals reconstruct the story behind their traumas, which plays a great role in trauma recovery. Herman confirms that trauma causes memory fragmentation, leaving people with disjointed and fractured experiences. These fragments come together through writing, which turns them into a cohesive story. By giving voice to their suffering, survivors can relive their traumatic experiences and find self-liberation, as Herman (1992) asserts:

The next step is to reconstruct the traumatic event as a recitation of fact. Out of the fragmented components of frozen imagery and sensation, patient and therapist slowly reassemble an organized, detailed, verbal account, oriented in time and historical context. (p. 177)

Herman claims that writing is a powerful method in the healing process from trauma because it allows survivors to recall their traumatic experiences, confront them, communicate their suppressed feelings, and reclaim control over their narrative. Likewise, quantum superposition defies classical determinism; this multiplicity of imagery rejects narrative conclusion. Thus, trauma is limitless, uncontained, and incalculable since the poet uses metaphor to preserve ambiguity and avoid measuring the girl into a single symbolic state.

6.2. Entanglement

Entanglement in quantum physics refers to a phenomenon where two particles become interconnected such that any change in the state of one instantly affects the state of the other, no matter how far apart they are. Likewise, Komunyakaa and the girl are entangled as any change that happens to one of them will instantly affect the other, as it is expressed in the title of the poem "You and I Are Disappearing," as Esfeld (2004) remarks:

The cases of quantum entanglement are cases of non-separability in that there is only a joint state determining certain correlations that obtain among the systems in question without it being possible to attribute significant states (or state-dependent properties for that matter) to each of the systems in question, and be it relative to the other systems. (p. 609)

Each particle or quantum system cannot be considered to have an independent state in quantum entanglement; rather, they exist in a single, shared state that determines their mutual properties. Similarly, Komunyakaa and the burning girl are physically entangled through the shared experience of war. While their roles differ, he as a witness, she as a victim, both are deeply marked by the same traumatic event. The war trauma binds them, dissolving clear boundaries of identity, as Komunyakaa absorbs her suffering into his own psyche. Like the way the entangled particles stay connected no matter how far apart they are, the effects of war are inextricably linked to Komunyakaa, long after hostilities have stopped. Like a shared, indivisible quantum state, the poem reveals the ongoing trauma by uniting the self and the other

in a common condition of pain. This is clear in the opening lines of the poem "The cry I bring down from the hills / belongs to a girl still burning / inside my head" (Komunyakaa, 1988, p. 17). The use of the first-person pronoun "I" in the poem immediately establishes a confessional, introspective tone. This "introspective I" is not a fixed, unified self, but rather a fluid, subjective consciousness. Komunyakaa does not simply observe but internalizes trauma; the "girl still burning" exists not in the external world but "inside my head." This blurs the boundary between perception and memory, outer world and inner psyche. The "I" becomes a conduit for both witnessing and absorbing suffering, aligning with the confessional mode where personal testimony merges with collective pain. Moreover, the presence of this "I" suggests a metafictional awareness; Komunyakaa's cry "The cry I bring down" emerges not from the physical world but from psychological terrain, the hills become a symbol, echoing the poetic tradition of drawing inspiration from solitude and reflection. In contrast, the pronoun "she," referring to the "girl still burning," takes on mythic qualities. She is not only a figure of trauma but a haunting archetype, perhaps representing all victims of violence. Her recurrence and burning presence position her as more than an individual; she becomes a symbol of suffering. Catanzano (2022) adds:

Poetry is not only entangled with the inner and outer limits of its elemental parts, where it is capable of communicating with other quantum states instantaneously across distances, it is also entangled with the conditions of its own inception and cessation. (p. 140)

The word "cry" –with which Komunyakaa opens the poem—describes the girl's suffering, which later reflects Komunyakaa's internal suffering. This resonates deeply with Caruth's interpretation of trauma as a voice that insists on being heard, a voice that emerges paradoxically through the wound. Caruth draws on the story of Tancred and Clorinda, first introduced by Freud and retold by Tasso, in which the warrior unknowingly strikes a tree that cries out in Clorinda's voice, his beloved whom he had already killed. This moment symbolizes trauma's haunting repetition and survival through re-enactment, as Caruth (1996) states:

Tancred's story thus represents traumatic experience not only as the enigma of a human agent's repeated and unknowing acts but also as the enigma of the otherness of a human voice that cries out from the wound, a voice that witnesses a truth that Tancred himself cannot fully know. (p. 3)

Similarly, in Komunyakaa's poem, the "cry I bring down from the hills" originates not only from a "girl still burning" but from Komunyakaa's own inner landscape, where her pain has been internalized and transformed into a poem. The repetition of the trauma, the girl still burning even after the war, evokes Clorinda's reappearance as a tree, embodying how trauma returns unbidden and unresolved. The "cry" is not simply a voice of grief; it is an echo of a past injury that refuses closure, demanding articulation through poetry. At the end, when the war is over, Komunyakaa sees no justification for burning an innocent girl whose only fault is being in a war-torn country. The image of "a girl still burning" powerfully captures the ongoing and all-consuming nature of trauma. As Binghadeer (2022) stated, "the notion of time is dismantled within the repeated flashbacks, disappears between the event and the shock, dissolves between truth and illusion, the world and ego" (p. 7). Repetition of flashbacks destabilizes time, upending the traditional linear sequence of past, now, and future, as Komunyakaa contends, "a girl still burning / inside my head" (1988, p. 17). Consequently, traumatic experience further warps perception by blurring the distinction between internal experience and external reality.

6.3. Observer effect

According to quantum physics, the state of a particle changes each time it is observed or measured. However, the particle is in a superposition state; it collapses into a specific state once it is measured. This is observed in the double-slit experiment, where the electron behaves like a wave when not observed, but acts as a particle when measured. Heisenberg (1958) believes that "what we observe is not nature in itself but nature exposed to our method of questioning" (p. 58). Applying this idea to the burning girl, who does not exist externally as a physical presence but rather is just a mental image, the observer, Komunyakaa, keeps the fire burning simply by thinking of her. This observer effect also reflects the survivor's guilt, which makes Komunyakaa unable to transcend the traumatic incident. Herman (1992) confirms that:

Feelings of guilt are especially severe when the survivor has been a witness to the suffering or death of other people. To be spared oneself, in the knowledge that others have met a worse fate, creates a severe burden of conscience. Survivors of disaster and war are haunted by images of the dying whom they could not rescue. They feel guilty for not risking their lives to save others, or for failing to fulfill the request of a dying person. (p. 54)

Komunyakaa returns to his homeland, still remembering the burning girl inside his head, causing him ongoing trauma. The scene is horrific, and what makes it even worse is that he and his comrades "stand with our hands / hanging at our sides" (Komunyakaa, 1988, p. 17). His confession that he stands without trying to help or rescue that innocent girl assures his sense of guilt, as Carroll (2020) says:

Our act of perception, feeling, and emotion affects the environment. When scientists tried to track the electron to predict where it would go, they found that wherever the observer wanted it to end up, it was where it would show up. The consequences of this are equally enormous; our hopes, thoughts, and beliefs shape the subatomic world around us! (p. 85)

Carroll believes that our perception of things affects them. That is, we do not see things from the outside, but rather from within; our perception is influenced by our personal perspective. He refers to the double-slit experiment, which demonstrates that the electron can be both a wave and a particle (wave-particle duality¹), depending on whether there is an observer or not. Every time we change our method of observation, we change quantum reality. In other words, the world is shaped by our hopes, ideas, and beliefs. This aligns with Komunyakaa's trauma and how it is reflected in the poem through his depiction of the burning girl who continued to live within his memory even after he left Vietnam, as Caruth (1996) wrote:

Trauma is not locatable in the simple violent or original event in an individual's past, but rather in the way that its very unassimilated nature—the way it was precisely not known in the first instance—returns to haunt the survivor later on. (p. 4)

Caruth asserts that trauma is not found in the fundamental violent or singular event in an individual's past, but rather in the way that trauma's extremely unassimilated nature recurs to haunt the survivor in the future. This thought resonates with the idea of the observer effect, as Komunyakaa, though not responsible for his trauma he experienced, continues to be affected by it. The image of the burning girl remains alive in his mind, not by choice, but because trauma imprints itself deeply and involuntarily. His role as an observer, the one who witnessed her

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¹ It is a concept in quantum physics in which a particle like an electron can behave both as a particle and as a wave, this depends on how it is observed. This concept challenges the classical physics in which the particle must be either one or another.

suffering, traps him in a loop of reliving, where memory itself becomes a site of ongoing trauma.

6.4. Uncertainty principle

Heisenberg (1958) states that there is no exact measurement of objects in quantum physics. In 1927, he introduced "the uncertainty principle," which raises profound philosophical questions about the nature of reality, asking whether we can truly know anything about the universe, or whether there are limits to what we know, and whether certainty is merely a possibility. Heisenberg's uncertainty principle states that there are two properties (such as position and momentum) of a quantum object (such as an electron) that cannot be measured at a given moment without some degree of uncertainty about one or both properties. If the position of an electron at a given moment is known, it will be impossible to know its momentum precisely, because an electron moving at a given moment in time (during a short time that borders on zero) will appear to be stationary. Thus, there is something unknowable that we cannot be certain of. According to Carroll (2020), "Heisenberg Theory of Uncertainty,' it was argued that the more precisely the electron's position is determined, the less precisely its speed can be known and vice versa" (p. 47). It is hard to know the exact speed or position of an electron because of its tiny size and wave-particle duality.

Likewise, poetry where reality is questionable presents poetic images with multiple meanings at the same time and differs according to the reader or the reading perspective. In poetry, memories, identities, and feelings are uncertain and nonlinear, giving the reader a chance to participate in their meaning. In poetry, time fades away, as the past, present, and future meet, capturing the poet within them so that he cannot escape, as he remains imprisoned in his experience forever. According to De Francesco (2022), "poetry is by definition problematic and unresolved. The poetic practice is full of uncertainty, full of risk, full of unsolved issues, full of chaos (in the epistemological sense), because it's full of life" (p. 148). De Francesco believes that poetry gives rise to issues and problems that cannot be solved. To get a full understanding of a poem, there are many issues that must be taken into account, such as the reader, their age, mood, and cultural and social background. Because of the diversity and differences of these issues from one person to another, poetry loses its certainty.

In "You and I Are Disappearing," Komunyakaa does not provide certain information about the girl or her age—whether she is a child or an adult, whether she is a real girl or an imaginative girl, and whether she was burned literally or metaphorically. Like the electron, whose "position and momentum" cannot be measured exactly, the girl's state cannot be figured out exactly. Komunyakaa begins the poem talking about the cry that he can hear in his head and no one else could hear, which gives rise to a question: Is this cry a real cry of a Vietnamese girl, or is it just his sense of guilt that led him to imagine this cry?

The fragmented images of the burning girl and the disconnected linguistic structures, such as enjambment, express the profound impact of trauma on his psyche. For example, enjambment is used throughout the poem as in "At daybreak / she burns like a piece of paper" (Komunyakaa, 1988, p. 17), creating a sense of continuous, unstoppable mental intrusion. Such techniques mimic how trauma distorts perception and disrupts coherent thought, making Komunyakaa's inner experience fragmented and uncontrollable. His uncertainty about getting the exact

description of the girl reflects his trauma, as Herman (1992) argues that:

Witnesses as well as victims are subject to the dialectic of trauma. It is difficult for an observer to remain clearheaded and calm, to see more than a few fragments of the picture at one time, to retain all the pieces, and to fit them together. (p. 2)

As a correspondent whose job is to watch and take photos, it was horrible for Komunyakaa to see an innocent girl burning without intervening to rescue her. Because of the survivor guilt, he attempted to find an apt description for the girl so he could know her and recover from this trauma. The experience was great, so the girl lived and spread all over his memory—just like the electron that is in a superposition state, and when it is decided to be measured, it stands in a particular place. Even after measuring, it is impossible to tell either position or momentum precisely. That is why, when he found a simile for the girl, he changed it to another simile, especially since he admitted that he wrote this whole poem in one sitting. Till the end of the poem, Komunyakaa did not provide an exact simile for the burning girl, as if he let each reader be the observer who would have their own effect and decide which of these similes is the girl, just like the electron that acts as a particle if it is observed and a wave if it is not.

7. Conclusion

The study examines the intersection between quantum physics and trauma as it is reflected in Komunyakaa's "You and I Are Disappearing," a war poem. The poem is a quantum emotional experience in which Komunyakaa—a traumatized person—is trapped in the past, surrounded by the images of the burning girl, immersed in possibilities where nothing is certain. The act of burning transforms from an external event to an internal state, from a girl to an idea, from presence to absence—and all of this happens simultaneously, as a wave and a particle, in Komunyakaa's mind.

The paper also shows that literature, despite its symbolic nature, is capable of engaging with modern scientific concepts. "You and I Are Disappearing" does not only discuss a binary relationship, but of a cosmic structure in which the self intersects with the other, sound with silence, and existence with nothingness, in a poetic equation that mimics the precise laws of the universe.

Moreover, it presents a new critical approach based on employing scientific concepts in the analysis of literary texts. It opens the door to interaction between the humanities and sciences, enhancing cognitive pluralism in literary studies. It rethinks the functions of poetic language, not only as a tool of expression but also as a tool for universal perception.

For further studies, this scientific perspective might apply to other poems that explore broad, universal themes. It could also explore how the relationship between quantum physics and trauma appears in other literary genres, like fiction or drama. Expanding the research to include works from various nations and cultures may offer deeper insights into the shared dimensions of human experience.

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