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The Literariness of the Digital Text: From Interactivity to Artificial Intelligence

Emerging Poetic Representations in the Contemporary Algerian Novel

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Abstract

This study examines the fundamental transformation currently reshaping contemporary Algerian novelistics as it transitions from the conventional paradigm of interactive digital storytelling into the burgeoning era of generative artificial intelligence (AI) models. Grounded in the theoretical frameworks of digital criticism, media semiotics, and cybertextual poetics, the paper investigates the "new poetic representations" that these computational technologies have introduced into novelistic architectures. It traces the philosophical rearticulation of Roman Jakobson's concept of "literariness" (literaturnost), mapping its shift from static, human-bound verbal rhetoric to dynamic algorithmic architectures and probabilistic combinatorial operations. This transmedial evolution has deconstructed classical chronological linearities and given rise to polyphonic, overlapping narrative subjectivities. Furthermore, the paper interrogates the dilemmas surrounding the "interactive author," the agency of the "wreader" (reader-user) in automated algorithmic composition, and the broader existential implications for postcolonial Algerian cultural identity and digital memory. Through an analytical examination of landmark hyperfictional experiments—most notably Hamza Guerira's pioneering digital interactive hypernovel *Cell No. 06* (Al-Zinzānah Raqm 06)—the study concludes that artificial intelligence does not constitute an ontological threat to the Algerian novel. Rather, it offers a fertile horizon for redefining its aesthetic and critical boundaries, provided that robust, indigenous theoretical



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methodologies are cultivated to safeguard cultural memory against neo-colonial homogenization within globalized computational models.

Keywords: Literariness, Digital Literature, Cybertext, Artificial Intelligence, Computational Poetics, Algerian Novel, Hypertext Fiction, Media Semiotics.

1. Introduction

The accelerated trajectory of global technological development has increasingly expanded into the realm of the written word, giving rise to the "digital text" (*le texte numérique*) as an inescapable epistemic and aesthetic phenomenon. Far from being a mere instrumental medium for typographical storage, the digital text constitutes a revolutionary mode of cultural production that recalibrates literary consciousness, dissolves the conventional boundaries demarcating reading from authorship, and revitalizes contemporary Arabic cultural production within high-technology environments.

Human intellectual history has advanced across epochal communicative paradigm shifts: from primary orality to scribal manuscript culture, onward through the Gutenberg print revolution, and culminating in the telecommunications and micro-computational transformations of the late twentieth century. In the wake of the information revolution, cultural creation has integrated multidisciplinary computational paradigms into what is now recognized as "digital literature" (electronic literature). Rather than conceiving creative composition as an exclusively monological linguistic act, digital writers leverage audio-visual modalities, dynamic kinetic movement, acoustic rhythms, and visual iconography. Through the introduction of hypertextual architectures—pioneered conceptually by Vannevar Bush and Theodor Holm Nelson—electronic literature has inaugurated a radical ontological departure, crystalizing as interactive digital fiction.

2. The Digital Shift and the Future of Literature

Since its inception as a modern literary genre engaged with anti-colonial resistance, post-independence nation-building, socio-economic fissures, and identity crises, the Algerian novel has consistently served as an open ontological laboratory for testing narrative forms. For decades, Algerian novelists grappled with the tensions of cultural and linguistic duality (Arabic and French), mediating between oral vernacular heritage and Western modernisms, yielding an aesthetically complex "hybrid literature" (*littérature hybride*).

With the maturation of the digital revolution and the rise of generative artificial intelligence (AI) models in the twenty-first century, Algerian narrative discourse faces an existential threshold. The critical imperative has shifted beyond structuralist and narratological queries of "how we write" (formalist poetics) to profound ontological interrogations: *Who writes? And what is the ontological status of the author, the text, and the reader in an age governed by automated machine learning, algorithmic probability, and neural computation?*

The contemporary Algerian novel is no longer merely a passive mirror reflecting external

political or sociological crises; it has evolved into a dynamic interface where human consciousness intersects with machine intelligence. In this hybrid ecosystem, human interiority converges with computational generation, fragmenting classical unilinear causality into multidirectional, branching fabulas. This shift marks the epistemological transition from the early "interactive hypertext" (where the human user selects predetermined branching pathways) to the autonomous "generative text" driven by large-scale artificial intelligence models, where algorithms dynamically synthesize, mutate, and generate discourse in real time.

3. Conceptualizing Digital Literature

The conceptual parameters of digital literature have generated diverse critical definitions across contemporary Arabic and Western scholarship. Moroccan literary theorist Jamil Hamdaoui defines digital literature as:

"That narrative, poetic, or dramatic literature that utilizes informatics in composition and creative production; that is, it actively engages computers or computational apparatuses to formulate a creative text, thereby transforming literary art into computational, algorithmic, and digital operations."

In a related formulation, Saudi scholar Fatima Al-Buraiki posits that electronic literature is:

"That literature presented digitally across the computer screen, inherently relying on binary numeric code (0/1) in processing textual structures of every genre."

Moroccan critic Zohour Karam elaborates on the cultural and epistemological dimensions of the genre in her foundational treatise *Digital Literature: Cultural Inquiries and Conceptual Reflections*, observing that:

"Digital, hypertextual, or interactive literature, which operates in an organic functional liaison with modern technology, undoubtedly projects novel visions in apprehending the cosmos. What transpires within the digital imaginary is not an absolute ontological rupture with traditional literature; rather, it is a structural transformation of the foundational literary question traversing the author, the book, and the reader."

In his seminal work *Hypertext and the Future of Arabic Culture: Toward a Digital Arabic Writing*, Moroccan narratologist Said Yaktine terms this paradigm the "New Literature," declaring that:

"Digital literature cannot be realized, either in production or reception, except via the computer as an epistemic byproduct of novel information and telecommunication architectures... It is a new literature carving out its own trajectory and forging an unprecedented aesthetic praxis that is actively configuring its distinctive history."

While theoretical nomenclature diverges across critical authorities—Jamil Hamdaoui preferring digital literature (*adab raqmī*), Fatima Al-Buraiki advocating interactive literature (*adab tafā'ulī*), and Said Yaktine adopting hypertext (*naṣṣ mutarābiṭ*)—a rigorous consensus emerges: digital literature is born within the matrix of computational technology and cannot be fully

experienced, decoded, or transposed onto a two-dimensional paper medium without stripping away its core semiotic properties.

4. Digital Literature in Algeria: Contexts and Structural Constraints

The contemporary Algerian cultural sphere has experienced an intellectual awakening aimed at engaging global digital poetics. However, this movement has remained largely confined to academic theorization and abstract critical debate rather than widespread creative production. This institutional lag can be attributed to several systemic factors:

- **Infrastructural and Connectivity Differentials:** The delayed democratization of high-speed digital networks across the Arab world, and Algeria specifically, impeded early vernacular experimentation with creative coding.
- **Technological Intimidation among Traditional Writers:** Algerian writers and critics frequently face difficulties navigating computational apparatuses, preferring conventional paper-based distribution.
- **Intellectual Property and Ontological Anxieties:** Arab and Algerian writers often express concerns over the loss of copyright, authorial sovereignty, and legal protection in decentralized web environments.

Nonetheless, institutional academia in Algeria has served as a primary incubator for this emergent field. Universities—notably the University of Kasdi Merbah in Ouargla and the University of Algiers—have generated master's theses and doctoral dissertations exploring electronic narratology. Within this academic context, Dr. Hamza Guerira, Professor of Contemporary Arabic Narratology at Ouargla University, observes that interactive literature transforms the recipient from a passive consumer into an active co-creator. He materialized this theoretical perspective in his landmark 2021 hypernovel *Cell No. 06 (Al-Zinzānah Raqm 06)*, an early model of Algerian interactive digital fiction.

5. The Interactive Novel: Genre, Heritage, and Cybernetic Foundations

If the classical novel emerged alongside European modernity and Enlightenment individualism, its inherent formal elasticity has enabled it to absorb postmodern and cybernetic conditions. By incorporating software engineering, computational algorithms, and networked hyperlinks, the novel has produced a dynamic offshoot: the interactive digital novel.

The canonical genealogy of the hypernovel traces back to the mid-1980s with Michael Joyce's pioneering work *Afternoon, a story* (1987), developed in collaboration with Jay David Bolter using the Storyspace hypertext authoring software at Yale University's artificial intelligence and humanities research clusters. Hypertext fiction uses nodal branching to disrupt the physical tyranny of the bound book, linking textual nodes (lexias), dynamic graphic visuals, kinetic animations, and spatial acoustic textures into an interconnected network.

6. The Algerian Novel: From Linear Unidirectionality to Rhizomatic Networks

The classical Algerian novel was predominantly governed by a rigorous chronological and socio-historical determinism, reflecting historical trauma, colonial expropriation, and structural struggle. With the advent of cybernetic environments, this narrative geometry has begun to fracture.

Although indigenous Algerian digital experiments remain nascent, hybrid creative experiments have emerged. Writers utilize digital social platforms to publish serialized narrative fragments, allowing reader commentary to redirect narrative trajectories. This phenomenon represents an operationalized realization of Mikhail Bakhtin's theory of *polyphony* (multivocality) and *heteroglossia*, instantiated within social media ecosystems.

The digital interactive novel deconstructs the passive reading process. Behind the surface iconography of the graphical user interface (GUI) lies a hidden apparatus of computational operations, executable scripts, and algorithmic conditions. The text displayed on screen is no longer a static semiotic monument; it is a transient, calculated output assembled dynamically in response to the user's active navigation.

7. Machine Poetics: Artificial Intelligence and Algorithmic "Defamiliarization"

Does artificial intelligence possess an authentic poetics of its own? Theoretical inquiry suggests that it does, though one that departs fundamentally from human phenomenological interiority. Human poetics arises from lived existential suffering, mortal finitude, and authentic emotional interiority. Algorithmic poetics, by contrast, operates on mathematical probability, statistical distributions, neural weightings, and combinatorial operations across massive training corpora.

Aesthetic Parameter	Humanist / Classical Poetics	Algorithmic / Machine Poetics
Source of "Literariness"	Subjective emotional depth, existential friction, intentional rhetorical defamiliarization.	Probabilistic text generation, neural pattern recognition, combinatorial database cross-referencing.
Structural Temporality	Linear, retrospective, or consciously fractured through interior monologue.	A-linear, modular, multidirectional, and dynamically generated in real time.

Aesthetic Parameter	Humanist / Classical Poetics	Algorithmic / Machine Poetics
Authorial Agency	Unified, sovereign subject (The Romantic/Modernist Author).	Decentered collective network: programmer, training corpus, algorithm, and user-prompter.
Reception Experience	Hermeneutic interpretation of fixed printed inscriptions.	Ergodic navigation, interactive participation, and dynamic semiotic co-construction.

Within the Algerian novel, algorithmic machine poetics offers radical possibilities for Viktor Shklovsky's concept of *ostranenie* (defamiliarization). Because the computational algorithm exists outside of direct Algerian cultural and postcolonial neuroses, its textual generation can cast an alien, defamiliarizing gaze upon Algerian sociopolitical reality. This statistical estrangement can uncover overlooked nuances within collective social realities, paralleling how global cyber-narratives deploy video game mechanics and branching virtual simulations to deconstruct entrenched ideological dogmas.

8. Case Study: Hamza Guerira's Hypernovel *Cell No. 06*

Dr. Hamza Guerira's *Cell No. 06* (*Al-Zinzānah Raqm 06*), launched digitally on the *Interactive Art and Literature Blog* before receiving a hybrid print codex iteration in 2021, represents a foundational milestone in Algerian digital literature. The work blends textual prose with cinematic visuals, audio tracks, and interactive hyperlinks, establishing a multimodal reading experience.

Narrative Fabula and Ideological Core

The novel follows Mourad, an ambitious young law graduate seeking to escape economic precarity by launching a private enterprise. He connects over Facebook with his expatriate cousin, Zaki, who promises financial assistance from abroad. In an unexpected development, Mourad discovers that Zaki belongs to a clandestine extremist network and is under international surveillance. State counter-intelligence services monitor their online communications, leading to Mourad's arrest on charges of international terrorism and espionage.

Mourad is plunged into the psychological darkness of a subterranean holding cell—a facility built so that detainees can hear the exterior clamor of a neighboring public marketplace

without being heard in return. While imprisoned, Mourad uncovers hidden graffiti scratched into the masonry: biting, sarcastic indictments inscribed by an investigative journalist previously incarcerated for possessing compromising dossiers on corrupt political elites. The discovery of these hidden documents expands the narrative from Mourad's psychological trauma into a systemic critique of socio-economic stagnation, educational decline, and postcolonial dependency.

Multimodal Architecture and Interactive Modalities

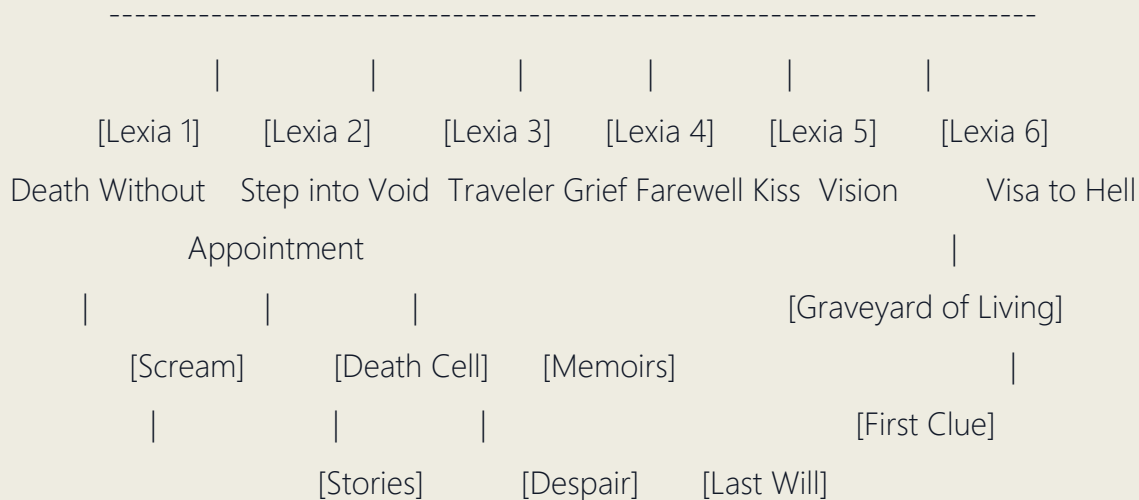
The architectural mechanics of *Cell No. 06* integrate three distinct sensory registers: textual links that govern narrative paths, visual iconography representing the cell and urban alienation, and diegetic sound design featuring mournful musical motifs. Reading the text becomes an immersive performance, requiring digital literacy to synthesize text, sound, and image simultaneously.

Hypertextual Architecture: The Combinatorial Matrix

Drawing on Dr. Labiba Khomar's typologies of cybertext, *Cell No. 06* exemplifies a "combinatorial hypertext" (*texte hypertextuel combinatoire*). The narrative dispenses with sequential pagination, organizing itself into six primary narrative nodes (lexias) linked across a network of branch points:

Structural Topology of Hypertextual Branching in Cell No. 06

[Home Page: Title & Entry Gateway]



When the reader enters the opening node, "Death Without Appointment," the interface unfolds along a horizontal narrative plane. At the terminus of the lexia, an active red hyperlink

reads: "O people! O folks! I am here..." Clicking this phrase opens the secondary node "Scream," expanding into two divergent narrative possibilities:

- **Sub-Node "Stories":** Gathers ambient conversations from merchants and passersby overheard through the ventilation shaft.
- **Sub-Node "Step into the Void":** Follows Mourad's interior monologue as he maps his surroundings, accompanied by a mournful acoustic score in "Death Cell" and existential reflections in "Despair."

The reader is not required to traverse these lexias uniformly. They retain autonomy to jump directly between central nodes or follow subordinate associative pathways. The reading experience exemplifies Umberto Eco's concept of the *open work* (*opera aperta*), where the narrative trajectory is shaped by the user's active choices.

Aesthetic and Sociological Implications

The central metaphor of the "prison cell" functions on multiple symbolic levels: bodily confinement, intellectual censorship, and collective socio-political impasse. Through its hypertextual fragmentation, the narrative challenges conventional literary form while mirroring the broader fractures of the postcolonial public sphere.

9. Conclusion

The evolution of the Algerian novel—from initial print-based experimentation through hypermedia interactivity and toward generative artificial intelligence—signals a profound shift in narrative consciousness. Contemporary literature has expanded from the fixed printed lexicon into algorithmic processing, from passive consumption into ergodic participation, and from singular authorial authority into distributed creative networks.

This technological shift requires a corresponding evolution in literary criticism. Jakobson's classic formulation of "literariness" can no longer be restricted to human linguistic rhetoric; it must expand to address the aesthetics of code, the semiotics of the interface, and the generative capacities of computational algorithms. Algerian novelists and scholars face a historical challenge: to move beyond passive adoption and actively engage computational tools, shaping artificial intelligence to preserve local cultural memory and narrative traditions in an increasingly homogenized digital landscape.

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