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The Emergence of Electronic Literature: Threshold, Tools, Types and Trenches in its Transcontinental World

Mumtaz Mazumdar
M. C. Das College, Assam.

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Abstract:

The evolution of digital literature has transformed the conventional way of storytelling by integrating text, audio, images, video and interactive content which can engross a person completely in it. This article explores the dynamic shift from print changes to hyperlinks and multimedia integration. The emergence of augmented (enhanced) reality and virtual (not in physical or concrete form) reality amplifies this evolution, blurring the boundaries between fiction and reality. As technology continues to advance it also challenges the conventional notions of authorship and reader participation, fostering a dynamic and ever-changing literary landscape.

Keywords: Electronic literature; Authoring Languages; Interactive; Algorithm; Meghadutam.

Introduction

The history of literature is extensive, dating back centuries, with a legacy rooted in classical poetry and storytelling. The present electronic to digital literature introduces a paradigm shift, challenging traditional forms and opening new avenues for creative expression. The transition from oral traditions to written works has now evolved into the digital realm. This transition from palm leaf manuscripts to the illuminated manuscripts of the medieval era, then the printed word of the Renaissance and now to digital or electronic platforms represents a continuum of literary evolution. It encompasses the intersection of traditional literary heritage, linguistic diversity, the role of digital platforms, challenges and opportunities, and potential future trends. The transition from parchment to pixels signifies not just a change in medium but a redefinition of how people create, share, and consume literature. The literary critic N. Katherine Hayles (Hayles, 8) defined electronic literature as “‘digital born’ and usually meant to be read on computer.” She has been witnessed making it clear that this will not include digitised print literature and e-books because these have no interaction or participative space by the user.

This emergence of this space in electronic literature made a significant change from hypertext fiction to interactive narratives, augmented reality literature and transmedia storytelling and changed the way of storytelling from one-sided author friendly output to both-sided user-friendly input. Algorithms and artificial intelligence further shaped narrative structures. Digital literature continues to evolve, reflecting the dynamic relationship between technology, creativity and narrative expression in the 21st century.

Threshold of Electronic Literature

The genesis of electronic literature (e-lit) traces back to the convergence of literature and digital technology. The development of e-lit is marked by several key milestones and movements that have shaped its evolution over the years.

One of the earliest sprites of e-lit can be drawn back to the use of videogames or computer games in the 1950s which generated visual feedback from a display device or video format and the user could interact. The roots of e-lit can be traced back to early experiments with hypertext and hypermedia. Pioneering works such as Ted Nelson's "Project Xanadu" and Vannevar Bush's concept of the "Memex" laid the conceptual groundwork for non-linear, interconnected information structures. In 1987: Michael Joyce's "Afternoon, a story" and Stuart Moulthrop's "Victory Garden" are often thought to be some of the first evidence of hypertext fiction. These works involved navigation through a non-linear narrative, creating a newer branch of literature. In the late 1970s-1980s there also emerged interactive often text-based fiction games, like, Infocom's "Zork" (1977) where players can actively participate and choose in the narrative. The advent of personal computers enhanced multimedia capabilities of electronic literature by incorporating visual and auditory elements. CD-ROMs became a platform for experimental works that combined text, images, and sound. In the 1990s-2000s, addition of online communities and platforms enhanced e-lit. Soon, the Electronic Literature Organisation (ELO) got founded in 1999 which became a primary hub for scholars, writers, and artists for exploring the intersection of literature and technology. The 21st century saw the rise of new literature, where algorithms framed texts. Examples are Nick Montfort's "Taroko Gorge" and Mez Breeze's "mezangelle" fused programming and literary creativity explored language through code-based art. Twitterature and Microblogging in the 2000s-2010s gave birth to microfiction and e-poetry. 2010s onwards, web-based platforms like online publications, journals, and magazines began more professionally which allows readers engage with the story through choices, hyperlinks, and multimedia elements. The ongoing E-lit



festivals, conferences, and awards have also become integral to the recognition and dissemination of electronic literature to push the boundaries of traditional literary forms.

Tools and Tributaries used in the making of Electronic Literature

The Electronic Literature Studio employs multimedia elements on the *hardware* aspects like, personal computer or smartphones or tablets, mouse, VR headset, keyboard, gamepads, touchscreen, flat-panel display, speakers, microphones, webcams, and a sound network system or internet. The *genre* may be installation, appropriated, generative, retro, collaborative, participatory, hypertext, augmented reality, poetry, visual poetry, narrative, combinational, netprov, literary game, procedural narrative, literary game, virtual environment, database, documentary, networked, NanNoGenMo, non-interactive, machine learning, serious game, conceptual, wordtoy, kinetic, virtual reality, bot, essay, ambient, text movie, performance, collage, audio collage, interactive fiction, codework, locative, webcomic, netart, animated, codework, live coding, etc. The *platform* may be website, physical installation, iOS, ebook, pc, switch, storytrek, github, itch.io, vimeo, android, apple app store, book, YouTube, print, PC, web-based, PDF, etc. The metadata of these literature consists of *authoring languages* like, JavaScript, html, DHTML, Ruby, variables, conditional logic, CSS, css3, HTML5, p5.js, php, unity, Vuforia, processing, final cut pro, objective-c, ink, Porpentine, python, phaser, twine, flash, adobe flash, Spark VR, perl, bitsy, SVG, rita, Atari ROM, C++, C#, lua, air, panoply, webgl, gpt-2, touchdesigner, PHP, mysql, apache, mad pascal, lingo, mandelbulb, adobe director, adobe audition, adobe after effects, adobe dreamweaver, adobe illustrator, adobe photoshop, adobe premiere pro, logic pro x, aria, brackets, ableton live, haskell, tidal cycles, hydra, cinecerO, protools, sonicpi, etc. The *format* is text, 3D, augmented reality, physical artefact, audio, text, image/picture, video, video game, database, 360 video,

The *contents* of these e-lit are a huge range from the topics related to archives, environment, colonialism, urban sprawl, lost narratives, trajectories, history, place, immigrant experience, alchemy, digital overload, social, humanism, family, woman, historical palimpsest, confessional, poetry, feminist, female protagonist, black feminism, hauntings, seasons, Shakespeare, adaptation, exploration, adventure, utopia, dystopia, alternate history, alternative universe, political, capitalism, socialism, inequality, immigration, transportation, children, fear, journey, Mediterranean, identity, inclusion, illegibility, automation, authorship, climate change, beauty, pandemic, zoom, hyperobjects, isolation, AI, experimental, hybridity, body, family, mental health, relationships, colonialism, indigenous, experimentation, hope,

hopelessness, property, storytelling, the arabian nights, casualty, progression, metaphor, minimal, overload, outcasts, western, subjectivity, theoretical poetics, covid-19, masks, social commentary, privacy, readers, emojis, dialogues, biography, historical, condensation, game poems, Lake Michigan, history of great lakes, enstrangement, language, writing, life, Britney spears, Instagram, racial ambiguity, lovers, broken heart, loss of grasp, gestures, figures, UFO sightings, ee cummings, voice, particle, sound, typography, zine, cartoon, satire, disability, self, surveillance, trauma, meta-data, media, technology, media theory, crime, adventure, black lives matter, ethnicity, bullying, mistreatment of avatar, nature, growth, branching, mourning, women creators, mom and daughter, local texts, public space, official messages, control, psychological horror, walkthrough, xenophobia, Invasive species, alienation, name, meditation, lettercarpets, romantic genius, computer assistant, irony, statistics, time, postdigital, abstract, failure, colourful, human-centered design, art tool, memory, sky, night, mashup, sound symbolism, immersive theatre, time loop, sensing, nonhuman agency, ecology, Anthropocene, waveforms, sensors, and others.

The *identities* are African, Arabic, Diaspora, Black Diaspora, Mixed Cultures, Race, Woman, Latin American, immigrant, South Asian, Mixed Race, marginalised age, student, political minority, etc. The *work language* may be English, Portuguese, Spanish, Arabic, German, Indian, French, Polish, Hungarian, Russian, Chinese, Simplified Chinese, Austrian, Turkish, Swedish, Indonesian, Korean, Japanese, Dutch, Greek, Mezangelle, and others. The *geographical origin of works* are Egypt, India, Zimbabwe, USA, UK, Portugal, Spain, Norway, Argentina, Mexico, Peru, Italy, Canada, Australia, France, Switzerland, Ireland, Colombia, Japan, South Africa, and others.

The role of *Algorithm* is to create a series of real-world effects for the user with the help of chain of instructions. These instructions may instruct to call up a web page, instruct a 3D printer or analyse facial patterns of the characters in the work. These results to a variety of phenomena like, creating digital images, websites, CGI in films, etc.

Social Media Apps like, Vine, Instagram, Snapchat, GIPHY, Tumblr, Twitter, Facebook, etc, provide massive images to be utilised as literary graffiti. At the same time, these apps also help reach million views of the created e-lit.

The following subtext of this article elaborates the different types of created e-lit with the aid of the tools, which has been evolving from time to time.



Types of Electronic Literature

Electronic literature (e-lit) encompasses a diverse range of creative works that leverage digital technologies to explore new forms of narrative, poetry, and artistic expression. Here are several types of electronic literature. *Hypertext fiction* helps readers navigate through interconnected nodes of text, choosing different paths and creating a non-linear narrative experience. Michael Joyce's "Afternoon, a story" is its example. *Interactive fiction* makes readers actively participate in the narrative and arrive at their respective multiple possible outcomes. "Zork" by Infocom is one such e classic. *Digital poetry* utilizes visual design, sound, and interactivity and creates poetic experience. Jason Nelson's "This is How You Will Die" is one such poem. *Kinetic poetry* is another type of e-lit which involves animated or moving text, often with a focus on the visual presentation of words. "Reagan Library" by David Jhave Johnston is a kinetic poem of motion and colour. *Generative literature's* "Taroko Gorge" by Nick Montfort's is another type of e-lit which uses algorithms and computer programming. *Twitterature* or *Twitter fiction*, involves storytelling within the strict rule of Twitter's character limit. "Small Places" by Nick Belardes is a series of tweets which designs a novel. "The Silent History" is an AR novel that unfolds based on the reader's physical location highlights AR Technology in *AR Literature*. *Interactive Web-Based Stories* creates stories on websites where readers engage with multimedia elements, make choices, or follow links to progress through the narrative. "The Outcast" by digital fiction platform Sub-Q Magazine is an interactive web-based story. *Cinematic E-lit* incorporates visual and auditory elements to create a more filmic experience. It often includes video, audio, and interactive components. "The Silent History" uses a smartphone app to deliver the story in instalments based on the reader's location. *Total Chance Literature* is another type of e-lit which involves randomness and unpredictability play in shaping the narrative. *Video Poetry* accompanies a video with the poem in recording or graphics. Example is "We Keep Searching" available in YouTube. *Escape Rooms* are immersive adventure games in which players or users solve a series of puzzles and riddles using clues, hints and strategy to complete the objectives at hand. *Email Novels*, *Netprov*, *Flarf*, *Codework*, *Network Critique*, etc are other types of e-lit.

Electronic Literature in the Transcontinental world

Western World Literature imbibed the new Electronic Literature which showed its first spark in that region. The evolution of electronic literature in Europe is intricately connected to global technological advancements. European writers, influenced by diverse cultural and

linguistic backgrounds, have embraced electronic mediums to experiment with narrative forms, pushing the boundaries of traditional storytelling. Cyber-visionaries like Paul Otlet, Vannevar Bush and Ted Nelson foresee this imbibing as robust tool to broaden literature. The para following the Introduction in this article, consists of a more detailed list of the works accomplished as e-lit produced by the West.

Amira Hanafi, Youssef Faltas, Reham Hosny, are some of the recognised e-lit authors from Egypt. *The Water Woman* and *Rooms and Mirrors* are some examples of such fusion. Some Arab Universities included it in their literary syllabus changing the dynamics of Arabic classrooms. The Arabs reflected a dynamic intersection of tradition and modernity, to preserve its rich literary heritage. The emergence of blogs, websites, and digital platforms has provided Arab writers with alternative spaces to disseminate their works. In India, e lit reached a bit late but soon caught up with the global speed with a huge range of flash poetry, frame narratives, generative poetry, etc.

India lately joined the first wave of electronic literature's revolution and started in the 1950s. It joined it with an SMS novel *Cloak Room* in the early 2000s. Although, it is considered that the art of creating literature, particularly, the oral tradition has been present from ancient times as found in many ancient civilisations, the modern Electronic Literature became a tool for preserving and promoting regional voices and cultures in India. Writers from various states use digital platforms to showcase narratives that highlight the unique cultural nuances and traditions of their regions. This decentralized approach contributes to a more inclusive representation of Indian literature. These digital platforms offer accessible and interactive learning materials, encouraging a new generation of readers and writers. Shanmugapriya T, Nirmala Menon, Souvik Mukherjee, Deborah Sutton, Justy Joseph, and Samya Brata Ray have been considered some of the early initiators of e-lit in India. *Combining All*, *The Wait and Muse on the Train*, *Peach Fruit*, etc, are some of e-literary works in India. Menon and Shanmugapriya (2019) created *Gita Govinda*, and others and historicised the e-lit tradition. Meg Jayanth's e-lit novel *80 Days*, Jazer Chand's *Blackout Poetry Tool*, and Priti Pandurangan's *Meghadutam*, are some of the Indian e-lit which could enter in prestigious OELN list.

Trenches while using Electronic Literature

While electronic literature offers innovative and engaging experiences for many countries, there are also potential trenches associated with its use and development. It's



important to be aware of these concerns to address them responsibly. Some potential dangers of e-lit include, *Access Barrier*, where not all individuals have equal access to electronic technologies, leading to potential exclusion of certain demographics. So, the concern is, E-lit that relies heavily on electronic platforms may contribute to a *Technology Gap*, limiting access for those with economic constraints or limited technological literacy. Another challenge is *Preservation Challenge*, where the dynamic nature of electronic technologies poses challenges in preserving e-lit works for future generations. So, the fissure created is that without robust archiving strategies, there remains a risk of losing significant works as technologies evolve, hindering the historical record of electronic literature. *Intellectual Property and Copyright Challenges* often involves remixing and repurposing existing content, raising questions about intellectual property and copyright. There may arise legal complexities may arise, leading to disputes over ownership, fair use, and the distribution of e-lit works. *Under-representation* is another lacuna where numerous voices and perspectives remain absent which leads to significant biases and absence of diversity. So, the concern is that E-lit that does not prioritize inclusivity and may reinforce dominant cultural narratives. *Technological Dependence or Overemphasis on Technology* raises issues of digital addiction, screen time, and striking negative effects on mental health and the worry also is, works that prioritize technology over content may sacrifice storytelling and artistic merit, leading to a potential loss of literary value. *Privacy Challenge* is another gap. Interactive and personalized e-lit involves raising privacy concerns. So, follows an inadequate protection of user privacy which might lead to data breaches, surveillance, and misuse of personal information. *Educational Gap* also leads to gaps in exposure and understanding. Limited educational resources and opportunities hinder students' digital literacy and appreciation for this form of literature. *Fragmentation and Compatibility Issues* within peers make technology inaccessible for readers and scholars. *Commercialization Constraints* also influence the creation of e-lit, leading to a focus on marketability over artistic expression. This compromises the creative integrity and experimentation inherent in electronic literature. Then, while *Breakthrough Technologies* like augmented reality, virtual reality, and artificial intelligence offer amazing, new possibilities, there is a gap in the widespread integration of these technologies into electronic literature. Apart from these trenches, there are *Pioneer Fallacy* (Fisher) which shows that all e-lit might not be quality works. Or the *Viral Fallacy* (Fisher) means that if a work is very popular, it may not always be good. And the *Hipster Fallacy* (Fisher) states that if an e-work is made from scratch, it doesn't mean that it would be polished. Another fallibility is the *longevity* of the e-works which may become *unplayable* after a decade or so due to the ever-growing electronic

innovation. In such case, we have to resort back to print whose rich history took centuries to ripen.

Addressing these trenches and fissures, involves a collective effort from creators, scholars, policymakers, and the broader community to ensure that electronic literature evolves, enabling accessibility, inclusivity, and ethical considerations.

Conclusion

It may be concluded that E-lit offers that innovative landscape being “postdigital” (Alexenberg) which is concerned with human-technology relationship than being just digital. This digitisation of literature which extends the branch of education, enhances the present pedagogical practices. Preserving and archiving which has been one of the core objectives of these ISBN-less electronic literature complement the cultural understandings of human history. Despite this intellectual merit, popped-up trench which needs thoughtful solutions, is the ever-increasing obsession with digital systems. The current, extensive and exhaustive Electronic Literature Collection-Volume 4’s list, unending production of e-lit in potential social apps, numerous less-quality e-lit surfacing everywhere, etc, all of which have been bolstered by the rhizomic structure of network culture, proves this obsession. This radical digital citizenship needs to be stalked very sharply and judiciously utilised for educational activity and future benefit.

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