Quest Journals
Journal of Research in Humanities and Social Science
Volume 13 ~ Issue 12 (December 2025) pp: 01-05
ISSN(Online):2321-9467
www.questjournals.org

Research Paper

Autism in the Digital Age: Rethinking Neurodevelopment in a Screen-Driven Childhood

Zeba Munib
Jamia Millia Islamia

Abstract
This paper examines how contemporary digital environments are reshaping childhood neurodevelopment and contributing to the rise of autism-like behavioural patterns in young children. Drawing on interdisciplinary frameworks, the study explores the convergence of neurobiology, digital culture, parental emotional ecology, and literary representation. Clinical observations increasingly show that children with excessive screen exposure exhibit traits such as reduced eye contact, speech delay, emotional dysregulation, and repetitive digital behaviours, even when they do not meet diagnostic criteria for autism spectrum disorder (ASD). Using Ian Hacking's concept of the looping effect, the paper analyses how evolving diagnostic categories interact with parental responses and societal expectations. Dr. Avishek Parui's theory of digicorporeality further illuminates how digital interfaces reshape cognition, sensory processing, and emotional rhythms, producing developmental patterns that mirror or intensify autistic traits. Literary works by Mark Haddon, Temple Grandin, Gail Honeyman, Elizabeth Moon, and Naoki Higashida are examined as narrative lenses through which neurodivergent perception can be understood in relation to digitally mediated cognition. The paper argues that autism in the digital age must be understood not solely as a biomedical condition but as a multidimensional phenomenon emerging from digital overstimulation, parental burnout, nuclear family structures, and algorithmic environments. It calls for re-establishing childhood ecologies grounded in human interaction, emotional atonement, and sensory richness to support healthy neurodevelopment.
Key Words: *Autism Spectrum Disorder, digital neurodevelopment, looping effect, digicorporeality, neurodivergence, screen exposure*

Received 05 Dec., 2025; Revised 10 Dec., 2025; Accepted 13 Dec., 2025
Published with open access at ***www.questjournas.org***

I. Introduction

In an age shaped by screens and speed, our children's emotional worlds are changing in ways we often overlook. This work look at the causes, early signs, and lifestyle factors linked to these conditions, along with the vital roles of parents, schools, and society. Drawing inspiration from philosopher Ian Hacking, the article explores how our understanding of autism evolves through language, empathy, and awareness.

Autism Spectrum Disorder (ASD) has long been understood as a congenital neurodevelopmental condition characterized by differences in communication, sensory processing, and behaviour. The modern childhood environment, characterized by digital screens, algorithmic entertainment, diminished human interaction, and excessive stimulation, has profoundly transformed the developmental ecology in which children are raised. Growing data indicates that young children, particularly those under six years old, are very susceptible to digital overstimulation and screen-related brain disruption during pivotal phases of synapse development (Kosteniuk, 2019; Yoo et al., 2022).

Across clinical settings, paediatricians report a rise in autism-like behaviours among children heavily exposed to digital media—speech delay, sensory rigidity, emotional dysregulation, poor eye contact, social withdrawal, and repetitive digital engagement—even when these children do not meet diagnostic criteria for ASD. This emerging pattern raises urgent questions regarding the relationship between digital environments and neurodevelopment: Are new behavioural phenotypes emerging in early childhood as a result of algorithmic and screen-saturated environments?

This article uses an interdisciplinary lens to understand autism in the digital age. Ian Hacking's (1995, 2002) theory of the looping effect illuminates how diagnostic categories evolve in response to cultural behaviour. Dr. Avishek Parui's (2025) notion of digicorporealityelucidates the integration of digital media with corporeal experience and emotional existence.

In addition, literary worksby authors such as Mark Haddon, Gail Honeyman, Temple Grandin, Elizabeth Moon, and John Green provide narrative windows into neurodivergent perception, sensory overload, anxiety, and behavioural patterns.

The article argues that autism in the digital age must be understood as a complex interplay between neurobiology, digital culture, emotional ecology, maternal wellbeing, and the rapidly shifting conditions of contemporary childhood.

Autism as a Neurodevelopmental Condition

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition that affects how a child communicates, interacts, and experiences the world.It usually appears in early childhood, often before the age of three.Autism Spectrum Disorder is associated with distinct patterns of sensory perception, social communication, cognitive style, and behavioural regulation as their brain is differently wired. Some of the possible causes of autism are genetic, brain chemistry, premature birth, and environmental stress.Children on the autism spectrum may show certain early signs that are important to recognise. They might make limited or no eye contact, even when their name is called, and often experience delays in speech or use language in unusual ways, such as repeating words or phrases. Many prefer playing alone and avoid group or peer interaction, showing little interest in sharing joy, toys, or experiences with others. Repetitive behaviours like lining up toys, hand-flapping, or rocking are also common, along with a strong attachment to routines that can cause distress when disrupted. Some children may be sensitive to sounds, lights, or textures, while others display remarkable strengths such as an exceptional memory or strong focus on details(Frith, 2003).

Digital Exposure and Autism-like Behaviours

Clinicians increasingly describe children with excessive screen exposure who display autism-like traits: delayed speech, reduced eye contact, social withdrawal, emotional dysregulation, and repetitive digital behaviours such as tapping, scrolling, or watching the same video loops. These behavioural similarities arise because digital environments disrupt neural pruning,interfere with the maturation of attention networks, and recalibrate dopamine-driven reward systems that are crucial for early cognitive development(Yoo et al., 2022).Real-life social interaction, by contrast, is slower, multi-sensory, and emotionally complex. It requires patience, eye contact, and reciprocal responses — cognitive skills that screen-dependent children rarely practice. Therefore, when placed in natural settings such as a classroom, playground, or family gathering, these children often struggle with frustration, unpredictability, and emotionally intense situations. What might be labelled as autistic symptoms can sometimes be understood as behavioural consequences of sensory deprivation in the social realm and sensory overload in the digital realm.

When young children's senses are shaped by bright colours, fast-paced transitions, and algorithmic predictability, their neural pathways adapt to digital rhythms rather than to natural social and sensory environments. This sensory hyperstimulation closely mirrors the perceptual fragmentation described in literary neurodivergent characters such as Eleanor Oliphant or Christopher Boone, whose internal experiences resonate with the overstimulation faced by digitally saturated children.In the digital age, many children are beginning to experience the world in precisely these fragmented, highly stimulating, emotionally challenging ways. While these children are not autistic in the clinical sense, their behavioural and sensory profiles are being shaped by technologies that mirror and intensify autistic-like cognitive patterns. Thus, the rise of autism-like behaviours in young children must be interpreted not only as a neurological issue but as a cultural andecological phenomenon emerging from the digitized conditions of early development.

Literary Representations of Neurodivergence

Literary fiction provides powerful insight into the internal landscapes of neurodivergent minds, offering nuanced portrayals that illuminate the psychological and sensory experiences associated with autism. Literary texts have helped the public understand these features not as deficits, but as alternate ways of experiencing and interpreting the world.

In The Curious Incident of the Dog in the Night-Time, Mark Haddon portrays Christopher Boone's sensory sensitivity and logical, detail-oriented thinking in a way that mirrors autistic cognition. At one point, Christopher explains: "I see everything. That is why I don't like new places" (Haddon, 2003, p. 140). This statement captures the sensory intensity and environmental overwhelm that define many autistic experiences. His difficulty navigating noisy or unpredictable environments mirrors the sensory challenges many autistic children face—and which digital overstimulation may intensify.Haddon's simple, precise prose mirrors Christopher's cognitive style, turning everyday events into complex emotional landscapes. While the novel is not intended as a clinical depiction of autism, it powerfully demonstrates how neurodivergent perception reshapes reality, narrative structure, and meaning-making. Importantly, the text highlights the tension between

external judgments and internal logic, reminding readers that autistic individuals possess rich inner lives often misunderstood by others.

Temple Grandin's memoir Thinking in Pictures (1995) offers an invaluable first-person account of autistic perception. Grandin explains, "Words are like a second language to me. I translate both spoken and written words into full-colour movies" (p. 26). Grandin's autobiographical account explains visual thinking and sensory hypersensitivity from within the autistic mind. Her explanation that she "translates words into movies" (Grandin, 1995, p. 26) captures cognitive patterns that resonate with the visually saturated digital childhoods of today.Her account bridges neuroscience and lived experience, emphasizing visual thinking and sensory hypersensitivity—two features central to understanding autism.

In Gail Honeyman's Eleanor Oliphant is Completely Fine, Eleanor's rigid routines, social discomfort, and sensory defensiveness reflect traits associated with autism or neurodivergence. Her narrative illustrates how early emotional deprivation shapes adulthood—echoing the argument about maternal wellbeing and childhood emotional climates.Elizabeth Moon'sThe Speed of Dark**,** the protagonist, Lou Arrendale, navigates sensory overload, routine dependency, and ethical debates around "curing" autism. His sensitivity to noise and unpredictability parallels the distress many autistic individuals experience in overstimulating environments.

These literary works reveal autism not simply as a clinical label but as a deeply embodied cognitive and sensory orientation. This becomes especially relevant as digital-age environments begin to mimic, intensify, or distort sensory and cognitive patterns associated with autism.

The Sociocultural Ecology: Families, Mothers, and Emotional Climate

Autism-like behaviours in children today cannot be understood without examining the sociocultural conditions of modern family life. The transition from extended joint families to nuclear households has reduced children's exposure to varied conversation, emotional support, and communal activities. With fewer social interactions, children receive less linguistic and emotional stimulation.Mothers today juggle multiple responsibilities — work, home, and caregiving — often with little emotional support. To manage stress or exhaustion, they sometimes hand over gadgets to children for peace or rest not out of neglect, but necessity. The pressure to be a 'perfect mother' adds guilt and anxiety, leading to emotional burnout. Modern parenting often replaces shared storytelling, meals, and play with digital distractions. Mothers need support systems family involvement, community spaces, and empathy not judgement.A mother's well-being directly shapes her child's emotional and mental growth.

Corporate pressures on working mothers further complicate this ecology. Long work hours, late-night virtual meetings, and constant digital demands produce emotional and physical exhaustion. In such circumstances, screens often become necessary tools for childcare and household management. This is not parental failure but a structural consequence of contemporary labour expectations.

Developmental psychology shows that infants internalize the emotional states of their caregivers (Tronick, 1978). Emotional atonement forms the bedrock of early development. In Eleanor Oliphant Is Completely Fine, Gail Honeyman illustrates how childhood emotional deprivation shapes lifelong cognitive and social struggles. Eleanor reflects, "When you've lived a life of solitude, at some point you'll be able to tell the difference between being lonely and being alone" (Honeyman, 2017, p. 86). Her emotional history mirrors the consequences of disrupted attachment—an increasingly relevant theme in digital-age parenting.

Autism and the Looping Effect – Ian Hacking's Perspective

Philosopher Ian Hacking explained that autism is a "moving target kind," meaning its understanding changes as society changes. When a child is given a label like "autistic," the child and the family begin to respond to that label and their responses slowly reshape what the label means for everyone else. Hacking called this the "looping effect," where classifications affect people, and people, in turn, change the classification itself. As autistic individuals began writing about their own lives and advocating for themselves, the idea of autism shifted from a medical problem to a form of identity and self-understanding. This movement inspired the idea of neurodiversity, which views autism as a different way of being human rather than a defect. Hacking's work reminds us that the words we use and the empathy we show can truly transform how autistic children are understood and supported. Hacking celebrates the neurodiversity movement, which reframes autism as a difference, not a deficit.

He analyses how autistic autobiographies, like Temple Grandin's or Donna Williams' allowed individuals to narrate their own experiences rather than being spoken about by psychiatrists. He calls this a "new kind of selfhood," where the autistic self becomes both a scientific and moral subject.

Naoki Higashida's The Reason I Jump, written when he was only thirteen and non-verbal, is one of the most intimate and transformative accounts of autistic experience. Presented in a question-and-answer format, the book gives direct access to the emotional, sensory, and cognitive landscape of a non-speaking autistic mind. Higashida explains repetitive behaviours, communication struggles, sensory overwhelm, and the deep longing

for connection — all from the inside. His reflections align with Ian Hacking's concept of the looping effect: once autistic individuals share their lived experiences, society's understanding of autism evolves, becoming more compassionate and accurate. Higashida's writing challenges the assumption that silence equals absence, revealing instead a rich inner world full of empathy, memory, and imagination. Through his voice, autism shifts from a "disorder" to a different mode of being human, reinforcing the neurodiversity movement's emphasis on dignity, identity, and acceptance.

Hacking links the study of autism to questions of **identity, narrative, and human rights**. He argues that medicine, psychology, and society co-create what it means to be "autistic."

Children Mirror Parents: Digital Habits as Inherited Patterns

The way we talk to our children becomes their inner voice.

— Peggy O' Mara

Children learn not from instructions but from imitation. Their earliest models for communication, emotional and mentalequilibrium, and attention are the people they observe most — usually parents, especially mothers in early childhood. When caregivers scroll during meals, respond to stress by checking notifications, fall asleep to glowing screens, or multitask across devices, children internalize these behaviours as normal rhythms of living.This has profound developmental implications. Instead of learning sustained attention, turn-taking, curiosity about the physical world, and emotional atonement, children are increasingly absorbing the digital reflexes of their caregivers — swiping, tapping, binge-watching, and scrolling for stimulation. When a parent uses a phone to self-soothe during stress, a child learns subconsciously that comfort is found in a screen, not in human connection.This behaviour transmission can be explained through Ian Hacking's (1995) looping effect:A new behavioural category emerges — the "screen-addicted child."Adults interpret children's struggles (speech delay, boredom, tantrums) through this category.Parents change their own behaviour accordingly (more screens to pacify).Children further adapt to the category and reinforce it.

Thus, the label changes the behaviour it describes. Screens become both a symptom and a solution within family culture, a cycle that deepens itself.

Furthermore, parental phone use leads to **"**technoference**"** — interruptions in parent-child bonding caused by digital distraction. Research in developmental psychology shows that when caregivers look away from children during play or mealtime, even briefly, infants exhibitincreased distress, loss of eye contact, reduced vocalization, andinhibited emotional expression.

These are the same early warning signs associated with autism-like communication differences. Which means — the more children experience fragmented interaction, the more they adopt communication styles shaped by avoidance, silence, and self-directed attention.

In this sense, digital behaviour becomes an inherited pattern, not genetically but culturally transmitted. Children grow up believing, silence is normal,screens are companions, and emotional regulation happens through devices, not people.They begin to mirror the anxiety, divided attention, and digital dependency of adults around them.

Thus, autism-like developmental pathways in the digital age must be understood within family ecosystems where the habits of the caregiver become the habits of the child, and where digital media silently replaces the deep relational structures once essential for cognitive and emotional growth.

Digicorporeality: Bodies, Screens, Memory, and Anxiety

Drawing on Dr. Avishek Parui's (2025) concept of digicorporeality, this paper highlights a defining reality of contemporary life: the human body no longer exists apart from digital interfaces but increasingly merges with them, reshaping cognition, memory, and emotional experience in profound ways. Children today do not merely use screens — they develop through screens. Their sensory experiences, reward systems, and learning patterns are increasingly organized around digital stimuli rather than real-world interaction.

Digital environments engineer responsiveness. Notifications, auto-play, instant visual rewards, and infinite scrolling create attentional cycles that are fast, fragmented, and externally controlled. These rhythms condition the nervous system to expect constant novelty and gratification — a state that mirrors the repetitive fixations, sensory rigidity, and transition difficulties often observed in autistic sensory profiles. What appears as "short attention span" may in fact be a hyper-attention to digital cues and a devaluation of slower, human environments.

Moreover, digicorporeality alters memory. Digital systems record what the body once had to remember: phone numbers, birthdays, directions, and even emotional moments (reels, selfies, status archives). Memory shifts from internal neural encoding to external algorithmic storage, changing how the child relates to personal history. Parui argues that this forms anxiety-producing feedback loops — where the desire for validation ("likes," "views," "shares") becomes inseparable from memory-making itself. Every captured moment becomes a performance awaiting external approval.

This anxiety loop finds a striking parallel in literature. In Turtles All the Way Down, Aza's thoughts spiral inward with increasing intensity:

"You thought you were the author of your own story, but you're not. You're the narrator — not the creator"(Green, 2017, p. 112)

Her mind struggles against repetitive cognitive entrapment much like digital users caught in algorithmic loops that emphasize anticipation without closure. In both cases, internal experience is shaped by external systems of control the individual cannot fully escape.

Digicorporeality also transforms children's emotional regulation. Screens offer quick relief from boredom or distress — a dopamine shortcut that bypasses interpersonal soothing and self-regulation. Children become viscerally attuned to devices: heart rates spike with game rewards, anxiety rises when a device is removed, and emotional equilibrium becomes dependent on digital presence. The body itself becomes wired into the machine a biomechanical co-regulation.Thus, digicorporeality produces a new kind of developmental subject, emotionally fused with digital devices, memory outsourced to algorithms, attention conditioned by rapid stimuli, and anxiety driven by anticipation and validation.In such a world, the sharp boundaries between neurotypical behaviour, autism-like patterns, and digital dependency blur. Children are increasingly shaped by algorithmic environments that produce sensory and cognitive architectures resembling those formerly understood as strictly neurological conditions.

Parui's theory challenges us to rethink autism not only as a brain-based difference but as a cultural condition, materially influenced by the digital infrastructures in which early childhood now unfolds.

II. Conclusion

Autism in the digital age must be understood through an interdisciplinary lens encompassing neurodevelopment, digital culture, parental emotional ecology, and literary representation. Hacking's looping effect highlights how diagnostic categories respond to cultural changes. Parui's digicorporeality reveals how digital environments produce new sensory and emotional patterns. Literary depictions of neurodivergence humanize these experiences and offer insight into sensory overload, emotional difficulty, and cognitive loops.

The rise of autism-like behaviours in children today reflects multiple forces: digital overstimulation, maternal exhaustion, nuclear family structures, emotional detachment, and algorithmic conditioning. Supporting children requires supporting caregivers—especially mothers—and re-establishing childhood environments rich in human interaction, sensory diversity, outdoor play, and emotional atonement. Only then can healthy neurodevelopment flourish in the face of the digital age's unprecedented demands.

References:

[1]. Frith, U. (2003). Autism: Explaining the enigma (2nd ed.). Blackwell Publishing.
[2]. Grandin, T. (1995). Thinking in pictures: My life with autism. Vintage Books.
[3]. Green, J. (2017). Turtles all the way down. Dutton Books.
[4]. Haddon, M. (2003). The curious incident of the dog in the night-time. Jonathan Cape.
[5]. Honeyman, G. (2017). Eleanor Oliphant is completely fine. HarperCollins.
[6]. Moon, E. (2003). The speed of dark. Ballantine Books.
[7]. Hacking, I. (1995). The looping effects of human kinds. In D. Sperber, D. Premack, & A. J.
[8]. Hacking, I. (2002). Historical ontology. Harvard University Press.
[9]. Premack (Eds.), Causal cognition (pp. 351–383). Oxford University Press.
[10]. Parui, A. (2025, November 15). The anxious us: Digicorporeality in contemporary cultures of health. The Hindu. https://www.thehindu.com.
[11]. Kosteniuk, B. (2019). Children's vulnerability to screen exposure and early development. Journal of Pediatric Health, 14(2), 29–40.
[12]. Tronick, E. (1978). The still-face paradigm. Child Development, 49(1), 1–6.
[13]. Yoo, J. H., Lee, S., & Park, J. (2022). Early screen exposure and neurodevelopment: Emerging risks in young children. Pediatric Neurology, 134, 402–412. https://doi.org/10.1016/j.pediatrneurol.2022.02.012

[14]. **Bio- Note:** Zeba Munib is a PhD (Centre for Dalit and Minorities Studies, Jamia Millia Islamia, New Delhi) is associated with Dr. M.A. Ansari Health Centre, Jamia Millia Islamia.Her work explores the intersections of medical humanities, trauma studies, and gender studies, with a particular focus on illness narratives and social inequities.