The Fears, The Hopes, The Oscillations: A Critical Analysis of Tech Startups Targeting Autism

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Abstract

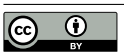
Technological innovations are often recognized for improving accessibility, but are also critiqued for perpetuating exclusionary practices in disability research. In the context of neurodivergence, these tensions are intensified by its diverse and heterogeneous nature, alongside the continuously evolving understanding and awareness surrounding it. As tech startups act as catalysts for innovation, offering technological "solutions" that directly engage with the lived experiences of disabled individuals, a critical question arises: How do the discursive strategies used by these companies reflect and construct broader societal narratives surrounding neurodivergence? This study employs thematic and discourse analysis to examine the websites of 38 startups that claim to enhance the well-being of autistic people. Our analysis identifies three key thematic patterns in the corpus: fears, where startups emphasize urgency and evoke cultural anxieties; hopes, where they pin aspirations for empowerment and inclusion on technological innovation; and oscillations, where portrayals shift between different models of disability, allowing companies to address multiple audiences. These strategies not only influence how autism and care are publicly understood but also shape the design priorities, market logic, and ethical direction of disability-focused technologies. We call for greater attention to how language in disability tech participates in constructing the conditions of care and legitimacy in accessibility studies.

CCS Concepts

• **Human-centered computing** → **Empirical studies in collaborative and social computing**.

Keywords

autism technology; marketing discourse; disability representation; critical disability studies



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1 Introduction

Accessibility research has increasingly explored designing technologies for and with autistic individuals (see [44] for a review), but the real-world benefits of these innovations remain limited and contested. Despite promising results of technological interventions observed in controlled or clinical settings, their ability to support skill transfer to everyday contexts has been critiqued as limited [16, 39, 44–46, 48, 54]. Many such interventions depend on infrastructure, funding, and support systems that vary widely across different regions and institutions, limiting their reach, practical adoption, and generalizability [46, 63]. Beyond these logistical concerns, scholars from critical disability studies urge that evaluating technology requires more than measuring outcomes [31, 53]. This evaluation must also consider the underlying ideologies and power dynamics because technology can reinforce societal biases and power imbalances, perpetuating marginalization rather than empowerment [53]. Prior works have been criticized for being led predominantly by neurotypical researchers [83], perpetuating "epistemic violence" [98], and for prioritizing cure-oriented, externally imposed goals over the lived experiences and agency of neurodivergent users [84]. This duality between empowerment and marginalization highlights a central tension in accessibility studies involving disabled populations. That is, while technological advancements hold the potential to foster greater independence and inclusion, they can also reinforce deficit-based narratives by framing disability as a problem to be solved [11]. This tension calls for a closer examination of how autism is framed in real-world technology development. In this paper, we shift attention from the observed usability or accessibility challenges to the discursive dimensions of technological design and promotion.

In the last decade, the autism tech landscape has been rapidly reshaped by market forces, which significantly influence how autism is represented, addressed, and commodified. In 2023, the autism treatment industry reached a market size of $34.1 billion [2], and it is projected to grow by an additional $3.43 billion between 2024 and 2029 [1]. This estimate may not even include adjacent sectors such as education, entertainment, and assistive technologies, which further expand the industry's influence. A new type of entrepreneur is rising in these niche markets. Startups, with their flexibility in experimenting with innovative business models [68], have the ability to quickly respond to growing awareness regarding neurodiversity and the growing demand for specialized products catering to this demographic [47]. This adaptability positions them as potential trendsetters [18, 68], influencing how autism-related technologies are designed and marketed. Despite their growing influence, there remains limited research into how these companies construct and promote narratives about autism through public-facing media.

Startups' websites offer rich and revealing materials for such research. Often acting as the central node of their brand identity, these sites strategically project a desired image by targeting specific audiences [17]. As such, the marketing materials of autism tech startups, especially their websites, are not just promotional tools. They are discursive sites where their presence embodies discourses about the audience (who are important decision-makers in autistic people's lives), the desired outcome of the autism technology (what the audience needs or wants), and perceived challenges in the lives of autistic individuals and stakeholders (how the company conceptualizes autism). The expansion of autism tech entrepreneurship illustrates how commercial interests actively participate in constructing dominant narratives about autism, shaping expectations for both users and society at large.

This paper investigates how autism tech startups construct problems, users, and technological legitimacy through the language on their websites. We argue that these narratives can reveal deeper societal logic and power structures. Using a combination of thematic [59, 93] and critical discourse analysis [29], we analyzed the websites of 38 autism tech startups. We ask:

- How do companies construct the "pain points" of autistic individuals and stakeholders on their websites?
- What discursive strategies do they employ?
- How do companies legitimize their technologies for autism?

Our findings identify three interrelated rhetorical themes: *The Fears*, *The Hopes*, and *The Oscillations*. *Fears* reveals how startups invoke urgency by drawing on parental guilt, clinician burnout, and cultural anxiety. *Hopes* shows how technical discourse frames care as efficient, data-driven, and emotionally reassuring, casting technology as both solution and safeguard. Finally, *Oscillations* captures how companies strategically toggle between medical, social, and affirmative disability models to appeal to multiple audiences, smoothing contradictions through strategic ambiguity. These rhetorical strategies do more than promote products. They shape how autism is publicly understood, how care is morally assigned, and how agency is distributed. Our findings call attention to the rhetorical force of technical discourse, showing how legitimacy, moral authority, and user roles are discursively produced. We urge accessibility researchers to more deeply interrogate how language shapes the ethical stakes of technology, particularly in domains where care, intervention, and lived experience intersect.

2 Related Work

2.1 Critical Disability Studies, Models of Disability, and Autism

The concepts of disability, neurodivergence, and autism have been sites of tension in research, policy, and public narratives in the past decades. One powerful articulation of this complexity comes from autistic activist Sinclair, who in *Don't Mourn for Us* [81] challenges the dominant narrative of autism as loss:

> *"You didn't lose a child to autism. You lost a child because the child you waited for never came into existence[...] Grieve if you must, for your own lost dreams. But don't mourn for us."*

Sinclair's words outline a deep emotional and ideological conflict. On one side is the impulse to grieve a perceived absence. On the other is the call to recognize a different way of being. This conflict is not only personal. It is shaped by broader cultural forces and societal narratives.

Therefore, for this research, we adopt a theoretical framework rooted in critical disability studies. Critical disability studies emerged in response to dominant narratives that frame disability as a personal deficit or medical problem [25, 50, 65]. A central tenet of critical disability studies is that disability is a socially constructed concept, shaped by norms that define certain attributes as impairments and by social conditions that concentrate these stigmatized attributes [65, 73]. In other words, a range of ideologies, epistemologies, lived experiences, and forms of knowledge influence how disability is conceptualized and represented [33, 89, 90]. Within this framework, the conventional accessibility design inquiry—*How do we design technology for disabled people?*—extends beyond the functional affordances of technology to critically engage with the broader social construction and conception of disability. In the following, we provide background on three significant models that inform our discourse analysis: the *medical model*, the *social model*, and the *affirmative model*.

The *medical model*, the traditional dominant narrative, frames disability as a condition to be prevented, treated, or cured [55], often focusing on individual functional limitations. The medical model situates autism within a biomedical and psychological paradigm, categorizing it as a neurodevelopmental disorder [6], a deviation [6, 41] from neuronormative standards of socio-psychological behavior. Predominantly adopted in clinical contexts, this model helps healthcare personnel, researchers, and designers identify actionable challenges and measurable outcomes [53]. While this model has facilitated scientific inquiry into autism's biological underpinnings, research and interventions informed by this view may reinforce neurotypical standards by promoting behaviors that align with these norms. Activists and scholars in the disability rights movement criticize its deficit-based approach [90], advocating for the acceptance of autism as part of human diversity. Shakespeare and Watson argue that the efforts to eliminate autism are an outdated and unnecessary endeavor [76] as some, such as Applied Behavior

Analysis (ABA) treatment, aim to suppress autistic behaviors, including coping mechanisms like stimming, which are essential for autistic individuals' self-regulation and communication [58].

In contrast, the *social model* attributes disability to systemic failures—whether physical, cultural, or institutional [55, 76]. This perspective asserts that many difficulties faced by autistic individuals arise not from their neurological differences but from a lack of accommodation and inclusion within social, educational, and occupational environments [6]. Advocates of this model push for structural changes that promote accessibility and challenge normative expectations of communication and behavior. Despite its strengths, the *social model* is not without limitations. By centering solely on societal factors, it risks invalidating the lived experiences of impairment and overlooking the legitimate medical needs some autistic individuals may have [6, 55]. Additionally, both the *medical model* (treating disability as a defect to be fixed) and *social model* (though focused on removing societal barriers, overlooking disability as a valid and meaningful way of being) often assume that the goal is to eliminate disabled experiences [87]. In doing so, both models reinforce norms of able-bodiedness and ignore the potential value of disabled lives [87].

In response to the limitations of both the *medical* and *social models*, the *affirmative model* offers a contrasting perspective by acknowledging disabled individuals' lived experiences and emphasizing their abilities rather than limitations [3, 87]. This model celebrates disability as a positive identity, highlighting the joys, hopes, and unique perspectives that come with disabled lives [85]. It also challenges normativity by recognizing disabled communities as cultural subgroups with distinct values, languages, and social structures [67]. They argue that autism represents a natural variation within human neurological diversity [81]. Critique of the *affirmative model* centers on its potential to downplay impairment-related struggles, overlook structural barriers, and create tension within the *social model* by emphasizing disability pride over systemic change [87], but this model remains influential in shifting narratives away from deficit-based frameworks and toward a more inclusive understanding of autism as a valued identity within human diversity.

2.2 Autism Narratives in Accessibility Research

Since the early 2000s and continuing into the present, a significant body of accessibility literature has focused on digital interventions (e.g., social training [10, 64]) or functional support (e.g., real-time facial expression recognition [52]). They have disproportionately centered on children [77, 84], reinforcing a narrative that equates autism with immaturity [70] or lack of agency [83]. Much of this research adopts a design-interventionist (i.e., solving a predefined problem) [100] and techno-solutionist (i.e., technology as the primary solution) perspective [27, 54, 77, 78]. These approaches often position autism as a condition to be fixed rather than an identity to be respected [62, 70, 83].

These dominant approaches have been increasingly challenged by autistic and otherwise neurodivergent researchers [13, 43, 83, 94, 98]. Mankoff et al. [53] advocate for an examination of the purpose of our research by reflecting on the conceptualization of disability (i.e., how we define disability in Accessibility research). Drawing on Donna Haraway's critique of traditional assessments of objectivity, Williams and Boyd [95] highlight how dominant epistemes in Accessibility marginalize autistic perspectives by privileging certain knowledge systems as "objective" while excluding others, leading to an "evacuation of agency". Similarly, Ymous and Good [98] point out that the development of technology for disabled individuals is often led by non-disabled researchers, leading to "epistemic violence" where the disabled researchers' own experiences and values were denied merit due to the spearheading of the rhetoric by non-disabled researchers. As an alternative, Williams and Boyd call for "Prefigurative Politics [95]," an approach that seeks to embody the social changes researchers wish to see in their work, rather than merely advocating for them in theory.

Indeed, in the recent decade, a paradigm shift has been occurring in the accessibility domain, moving toward centering autistic self-determination, participation, and lived experiences in technology design. This transformation embraces approaches informed by neurodiversity and social justice [13, 96]. One manifestation of this shift is the increasing adoption of participatory and co-design methods [38, 61, 62, 97] that prioritize autistic perspectives. These approaches ensure that technologies align with autistic individuals' actual needs and preferences rather than imposing neurotypical norms [83]. Another key area where this transformation is taking place is accessibility research. Studies increasingly adopt a *social model* approach, focusing on addressing systemic barriers rather than individual impairments. For instance, research on digital accessibility for autistic individuals highlights the importance of inclusive design in social VR [7], Twitch streaming [61], and auto-captioning technologies on platforms like TikTok [79], ensuring that autistic users can navigate digital spaces without encountering unnecessary obstacles. Digital platforms such as TikTok [92], Twitter [39], and Minecraft [69] have become significant spaces where autistic individuals engage in epistemic resistance and construct identity on their own terms. These platforms illustrate how digital spaces can support autistic agency, reinforcing the importance of designing technologies that respect and amplify neurodivergent voices.

2.3 Marketing Technology to the Autism Community

Marketing is more than selling products; it is about shaping how people see a company and what it stands for. In areas like health and education, where ethical accountability and public scrutiny are especially intense, companies often present themselves as caring, inclusive, and socially responsible [14, 22]. They do this by highlighting values like accessibility, safety, and empathy in their messaging to build trust [42], especially with communities that have faced stigma or exclusion. To project these values, companies rely on discursive strategies [28, 74], which are intentional communicative choices that frame the company's products, missions, and identities in line with broader cultural and economic ideals [9, 34, 57]. These strategies may include storytelling, framing, and selective emphasis, designed to shape how audiences interpret corporate identity and intent [49].

Marketing practices play a powerful role in shaping, reinforcing, and reproducing societal power dynamics, especially in how disability is portrayed. Mitchell and Snyder [60] argue that disability often serves as a "narrative prosthesis" that supports the structure of a story by driving plotlines or enriching character development. Although effective for storytelling, this approach can reinforce stereotypes (e.g., dependency [8]) and sensationalism [36, 99]. Yet the ubiquity of such narrative strategies has led to their widespread adoption and internalization [15, 24, 40, 56]. Reports reveal how disability communities often find themselves caught within the very logic that marginalizes them, from the commercialization of supplements that claim to "fix" infertility [9] to the aspirational messaging of Silicon Valley health startups that ultimately fail to deliver on promises [34, 57].

Within the autism service space, these marketing strategies have also raised significant concerns, intersecting with what Alicia A. Broderick and Robin Roscigno [4] call the Autism Industrial Complex. This complex applies a market logic that produces autism as a commodity and establishes a normative cultural narrative that necessitates intervention. This logic is often communicated through a standardized cultural narrative: autism is portrayed as a threat; intervention is framed as both necessary and urgent; and certain technologies or therapies are positioned as more legitimate than others.

2.4 Critical Discourse Analysis of Marketing Accessibility

Scholars in disability and accessibility studies have long emphasized that language and imagery are not neutral tools [75]. They are central to how disability is defined, regulated, and experienced [75]. Within this tradition, discourse is understood as a form of social action, where concepts like accessibility, autonomy, and inclusion are not merely described but constructed. This orientation has guided accessibility researchers to examine not only technological artifacts but also the narratives and values embedded in their promotion and use [73, 95].

Critical discourse analysis offers a methodological approach for unpacking these dynamics. In disability studies, researchers have used this method to study how disability is framed in institutional and media texts [35, 85], and how such framings reflect and reproduce power relations. In the accessibility domain, researchers have used critical discourse analysis to examine the promotional discourse of technologies related to reproductive health [82], aging and independence [23], and assistive technologies for vision loss [32]. These studies demonstrate how concepts like "empowerment" and "independence" can carry ambivalent meanings, often aligned with institutional or commercial interests rather than users' lived experiences. Within autism-related contexts, Waltz [91] examined charity advertisements to reveal how autistic individuals are positioned through metaphors of tragedy and burden. Demo [26] compared contrasting framings in two autism apps, highlighting tensions between therapeutic and inclusive discourses. Branton et al. [12] analyzed how "neurodiversity" is strategically framed by workforce intermediaries to align with corporate diversity logics. Most recently, Roderick [71] critiqued how autism and robot therapy are co-branded in university promotional materials, noting how institutional discourse obscures agency and ethics.

While these studies provide valuable groundwork, many focus on a single type of technology, such as mobile apps or robots, thereby overlooking broader discursive patterns and cross-cutting logic that shape how autism is constructed across the tech sector. Our work builds on this foundation by examining the websites of 38 autism tech startups founded in the past decade, encompassing a diverse array of technologies. Although prior accessibility research has considered how autism technologies mediate power relations in design and use [5, 100], still, little attention has been given to how marketing discourse itself shapes power dynamics within the autism community and among other stakeholders. Therefore, for this study, we will use critical discourse analysis to address that gap by analyzing the discourse and rhetorical strategies used in the marketing and public communication of autism technologies, as presented on company websites.

3 Method

This study employs a hybrid qualitative approach integrating thematic analysis and critical discourse analysis to examine how technology startups construct and communicate care for autism through digital media. All stages of the research, from corpus development to interpretive synthesis, were documented and collaboratively managed in a structured Google Sheet to facilitate shared access, iterative annotation, and transparent traceability of analytic decisions [59].

3.1 Corpus Selection

Following Steup et al.'s [86] method, we began with a search through Crunchbase[1]. Our goal was to identify startup companies that:

- contain the keyword "autism". We searched using the "Descriptive Keywords" input field, which scans companies' full descriptions, industries, and industry groups to identify companies associated with this term.
- are headquartered in the United States (to align with our research scope).
- are established after 2012[2].

Following the initial sorting round, our corpus was narrowed to 386 companies, which underwent a preliminary review. In the subsequent phase, we conducted an initial review of their websites, focusing on retaining startup companies that:

- mention autistic individuals as one of their target groups.
- aim to directly or indirectly (e.g., through improving the autism treatment system) improve the well-being of the autistic population through their product(s).
- provide technology solution(s) to the issues they seek to address.

However, in this paper, we excluded companies that fall outside the current scope of HCI's focus on autism (see **Section 2.2** for a detailed review), which:

[1]A widely recognized database of startups and entrepreneurial ventures. Details refer to: https://www.crunchbase.com/

[2]The post-2012 threshold was selected based on observed shifts in accessibility and HCI discourses around autism and technology, which gained substantial momentum during this period [83].

- focus on biotechnology, such as genetic engineering.
- provide invasive solution(s), such as brain-computer interfaces.
- have expired websites when we conducted data collection.

We applied the inclusion and exclusion criteria described above, narrowing the dataset to 38 companies (see **Appendix A**).

3.2 Structured Data Collection

The first author reviewed all websites selected and developed a dedicated worksheet containing 12 predefined, detailed questions derived from the research questions (see **Appendix B**). These questions addressed key aspects such as the target audiences of the companies' websites, the intended users of their products, the primary issues highlighted, and the products or services offered. We present an overview of the corpus in **Section 4**. The worksheet served as a structured tool for systematically collecting data across various formats, ensuring consistency and facilitating subsequent analysis and traceability. For the data collection, we gathered textual materials, including headings, video captions, and blog content (see **Section 7** for rationale on excluding visual materials). All collected text was either copied and pasted or manually transcribed (if embedded in images and uncopyable) into a shared Google Sheet for further analysis. The shared Google Sheet also served as a reflexive space where researchers recorded analytic memos, emergent questions, and raised concerns [93].

3.3 Data Analysis

Following Song et al.'s method [82], our analytic strategy combined thematic analysis [59, 93] with critical discourse analysis [29], drawing on their complementary affordances. Thematic analysis enabled the identification of recurrent patterns, while critical discourse analysis elucidated how these patterns functioned ideologically within socio-technical discourse [29]. By integrating these two analytical techniques, we can uncover not only the themes but also the intricacies in how themes are constructed. Following established qualitative protocols [59, 93], our analysis proceeded through four iterative stages:

(1) **Data Familiarization and Preparation.** The first author independently read the full corpus multiple times to establish fluency with the data. A shared coding spreadsheet was set up to support blind, parallel annotation, enhancing interpretive breadth in early stages.
(2) **Initial Coding.** Within each of the 12 structured analytic dimensions (see **Section 3.2**), two coders applied inductive, descriptive codes to textual excerpts. While the worksheet provided a top-down organizational frame, the coding process remained grounded in the language, tone, and framing used by the companies. We followed Dijk's socio-cognitive model [29], analyzing semantic macrostructures to identify dominant narratives, ideological positioning to examine which user identities, values, and norms were privileged, and rhetorical strategies such as appeals to objectivity to understand how epistemic authority was constructed. For example, in the dimension *Issue Focused*, we identified temporal crisis metaphors such as *"the cliff"* and *"missed opportunity"*, used to evoke urgency and risk. We also tracked discursive features including metapragmatic signals (e.g., *"we believe"*, *"data shows"*), user positioning (e.g., parents as responsible agents), and intertextual references to medical, psychological, or educational authority. This phase resulted in 333 initial codes.
(3) **Theme Development.** Two coders discussed and synthesized initial codes into thematic clusters through a consensus-based process. For instance, there were merged codes related to "parental burden", "guilt appeals", and "scientific legitimacy" into a broader theme of "Parental Fear", reflecting how emotional and moral accountability were discursively constructed. Where disagreements arose, such as whether a statement represented an affirmative or social model of disability, we revisited the context and rhetorical framing to reach shared interpretations grounded in both textual evidence and theoretical sensitivity.
(4) **Thematic Refinement and Validation.** The first author met weekly with the last author, a senior researcher with over ten years of experience in critical disability studies, to iteratively review and refine the preliminary thematic structure during the data analysis. These sessions involved linking themes to exemplar quotes, comparing cases, and clarifying conceptual boundaries between emerging themes. We evaluated candidate themes for internal coherence, distinctiveness, and analytic relevance, drawing on constant comparison techniques [59]. Throughout, the coding framework remained open to reconfiguration, allowing for the revision of boundaries and renaming of clusters to more accurately reflect their rhetorical and ideological functions. This process ensured that the thematic schema captured not only semantic content but also the nuanced discursive operations through which meanings were produced and legitimized.

4 Corpus Overview

We analyzed and categorized these companies across three dimensions: (1) the types of services provided, (2) the target audiences and users, and (3) the disability models portrayed. Together, these dimensions help us map out how technological business ideas reflect and shape emerging ideas about autism care, responsibility, and design.

4.0.1 Services provided. We first classified companies based on the primary service each offers. While many companies span multiple domains, we categorized each by their core offering for simplicity (see Table 1). For instance, although Happy Ladders enables family community building, its primary function is digital therapy; thus, it is classified under *digital therapy and educational technology* rather than *community and media*, because the former is the main service provided by the company. The startups in our corpus can be roughly classified into five categories:

- **Digital Therapy and Educational Technology:** digitize and/or gamify some therapy processes or educational materials for parents to use at home or for practitioners to do therapy or training with autistic people (mostly children) during sections.

- **Data Tracking:** provide data collection (e.g., using sensors embedded in mobile devices or wearable, and/or through user input), analysis, and management services. For example, session management for practitioners, network performance tracking for insurance companies, children's daily activity and health tracking for parents, and live neuro-behavioral data tracking for researchers.
- **Assistive Technology:** provide tools that can help autistic individuals live and function with minimal effort required for training or treatment (e.g., productivity tools). We also included tools designed to enable autistic individuals to act independently without the presence of parents, while allowing parents to provide timely assistance to ensure safety. For example, tools that can alert parents when autistic children are alone at school and encounter bullying.
- **Diagnostic Computational Tool:** utilize technologies either to conduct automated diagnosis or to facilitate remote diagnosis by human professionals.
- **Community and Media:** provide a virtual platform and medium for families of autistic individuals to access and share platform-created or user-generated knowledge and information.

Table 1: Categories of Tech Product

Services	N
Digital Therapy and Educational Technology	18 (47.37%)
Data Tracking	10 (26.32%)
Assistive Technology	6 (15.79%)
Diagnostic Computational Tool	2 (5.26%)
Community and Media	2 (5.26%)
Total	38

Across these services, companies utilize diverse technological infrastructures (see Table 2), including *Mobile Applications and Digital Platforms*, *EEG Measurement and Sensor Technology*, *Artificial Intelligence*, *Wearable Technology*, *Game*, *Specialized Hardware*, and *Extended Reality*. Because of the recurring presence, we intentionally distinguished the category of *Game* from *Mobile Application and Digital Platforms*. Many (n=16) utilize multiple types of technology, aiming to enhance service delivery across various contexts through the integration of different technological approaches. For example, BeMe.ai uses wearable sensors for passive data capture and a web portal for family-clinician coordination.

Table 2: Types of Technology

Types of Technology	N
Mobile Applications and Digital Platforms	34
EEG Measurement and Sensor Technology	8
Artificial Intelligence	7
Wearable Technology	6
Game	6
Specialized Hardware	3
Extended Reality	2

4.0.2 Target audiences and users. We next analyzed whom the companies are speaking to—and whom the technologies are for (see Table 3). This distinction between audiences (those addressed on the website) and users (those expected to use the technology) reveals important dynamics in power and visibility. Our analysis shows a notable asymmetry. While autistic children are the most common users, they are rarely the audiences being addressed. Instead, companies overwhelmingly direct their messaging to parents[3], positioning them as decision-makers and responsible agents. Other stakeholders, such as clinicians, educators, and insurers, are also recognized but far less frequently.

Table 3: Targeted Audiences of the Websites and Targeted Users of the Products

Stakeholder	Audience	User
Autistic Children	2	22
Autistic Adult	4	4
Parents	29	18
Researcher	1	1
Therapist and Clinician	9	13
Insurance Company	2	3
Service Provider	4	2
Educator	6	4
School Director	2	1

To further unpack these dynamics, we cross-referenced the services provided with their intended users (see Table 4). Most *Digital Therapy/EduTech* tools are designed for autistic children (n=14), with fewer aimed at parents or educators. *Assistive Techs* mainly target autistic adults and children, suggesting a focus on supporting independent living. *Data Tracking* tools reach the widest audience, including clinicians, insurance companies, researchers, and parents. These overlaps reveal how data-driven technologies operate at the crossroads of care, surveillance, and education.

4.0.3 Representation of Disability Models. Most company websites in our corpus (n=30) reflect a medical model of disability, some (n=15) adopt a social model, and only 5 companies' websites involve an affirmative model. Table 5 presents representative quotes for each model. Websites adopting the medical model (top row of Table 5) often define autism as a cognitive impairment marked by challenges in communication, social interaction, and behavior. Companies referencing the social model (middle row) shift focus from individual deficits to environmental and societal barriers. They highlight safety concerns (e.g., bullying and discrimination), health-related challenges (e.g., sensitivity to ambient light affecting sleep), and access issues (e.g., multimedia tools that are not autism-friendly). Finally, a few companies adopt elements of the affirmative model (bottom row), celebrating autism as a different but valuable way of being. These websites emphasize neurodivergent strengths, self-expression, and acceptance. However, none of these companies center the affirmative model as their primary framing.

[3]In this paper, we use the term parents for simplicity to refer broadly to informal, unpaid family caregivers of autistic children.

Table 4: Targeted Users and Services Provided

	Digital Therapy and Educational Technology (N=18)	**Assistive Technology** (N=6)	**Diagnostic Computational Tool** (N=2)	**Data Tracking** (N=10)	**Community and Media** (N=2)	**Total** (N=38)
Autistic Children	14	5	1	2		22
Autistic Adult		4				4
Parents	9	2	1	4	2	18
Researcher				1		1
Therapist and Clinician	4		1	8		13
Insurance Company				3		3
Service Provider				1	1	2
Educator	3			1		4
School Director	1					1

Table 5: Representation of Disability Models

Disability Model	**Number of Companies**	**Common Framing Strategies**	**Example Quotes**
Medical	30	Focus on symptoms, deficits, treatment, and normalization	*"ABA therapy offers the opportunity to modify maladaptive behaviors and improve communication and language skills."* (aba|tools)
Social	15	Emphasis on environmental barriers, inclusion, and accessibility	*"Inclusion practices are education models which enable children with autism to continue with their education among children without autism."* (Otsimo)
Affirmative	5	Highlighting strengths, identity, and neurodiversity pride	*"We accept autism just the way it is, let us help nurture your child's strengths."*(GoManda)

5 Findings

We unpack the discourse through three identified themes: *the fears* raised by portraying autistic characters as problematic to add pressure on parents and practitioners, creating a sense of crisis, *the hopes* of unlocking optimized potentials through technological innovation, and *the oscillations* between different accounts of disability conveyed by the used language and provided products.

5.1 The Fears

Across our corpus, autism tech companies construct a cultural atmosphere of crisis and risk. These fears are not grounded solely in the characteristics of autism itself but in the potential consequences of inaction, delay, or inadequate intervention.

5.1.1 Parental Fear: The Moral Weight of Inadequacy. Among all stakeholder groups, parents (who dominate as the primary audience (n=29), see **Section 4**) are the most emotionally targeted, with companies constructing a high-stakes moral universe that both praises their central role in a child's development and burdens them with the fear of becoming the point of failure. Consistent with previous work [26], our analysis shows that these companies place significant emphasis on the parental role, often using rhetorical strategies that simultaneously affirm parents' importance and amplify their sense of moral obligation and psychological burden. For instance, Happy Ladders positions parents as indispensable agents in their child's development by declaring that parents are *"a child's best assets"*. Although this statement appears supportive, it uses epideictic rhetoric to praise parents while subtly transferring responsibility onto them. The implication is that a child's success or failure depends on the parent's actions or inaction, thus reinforcing a moral imperative that compels parental vigilance and engagement. To legitimize this stance, Happy Ladders appeals to scientific authority, stating that *"Data shows that parental involvement is a critical success factor for improving outcomes in Autism therapy."* This use of logos adds credibility but also creates a rhetorical double-bind. It reassures parents with evidence while pressuring them to meet a "scientifically proven" standard of involvement. In contrast, Juniper Behavioral Health invokes pathos to convey empathy and solidarity, highlighting the economic and logistical challenges that many families face. The website describes how the high cost of autism therapy and unpredictable billing can add stress to already complex financial planning. This narrative recognizes parents' constrained resources (e.g., time, money, energy) yet frames them within a discourse of sacrifice, which can intensify feelings of isolation and overwhelm. Wolf+Friends taps into the emotional toll of caregiving by stating that, *"Parenting a child with a delay or disability can feel lonely."* This empathetic rhetoric not only validates parents' emotional experiences but also builds brand intimacy. The platform follows this with an indignant, motivational tone, asserting that *"We Believe The Fun Side Of Parenting Is For You Too!"* Here, the use of inclusive language and exclamatory emphasis aims to uplift parents, appealing to their desire for normalcy and joy while implying that the company's products have the ability to restore a sense of balance and emotional well-being in family life. This language positions the company not merely as a service provider, but in a "savior" role that promises emotional renewal and everyday delight (a notion we further unpack in **Section 5.2**).

The parental fear that autism startups evoke is multi-layered: it encompasses fear of doing too little, doing the wrong thing, and being unable emotionally or financially to meet expectations. Even messages of empathy for parents' challenges often reinforce a logic of accountability. Ultimately, these rhetorical strategies produce a deep fear, not just of neglect or failure, but of moral and emotional insufficiency. Even when framed with care, the core message often circles back to accountability, pushing parents to be ever more vigilant, engaged, and resilient, even when resources and support are limited.

5.1.2 Professional Fear: System Overload and Individual Breakdown. Unlike parental fear, professional fear is collectivized and procedural, often operating through logistical and systemic rhetoric. Companies use the language of crisis management to portray autism care professionals as overwhelmed by a collapsing infrastructure, strained by rising diagnostic rates, limited resources, and outdated administrative systems. A recurring theme in this rhetoric is the administrative burden faced by professionals, which distracts them from their primary role as caregivers. Companies depict therapists as navigating fragmented infrastructures, overwhelmed by paperwork, and lacking standardized metrics and treatment plans. SIDIS Health bullet-points a list of industry challenges on their homepage:

- *"SOFTWARE SYSTEM INTEGRATIONS"*
- *"EXCESSIVE NON-BILLIBLE EXPENSES"*
- *"LACK OF STANDARDIZED CURRICULUM"*
- *"LACK OF INTEGRATED COMPLIANCE RULES"*

(SIDIS Health)

This form of communication is direct, condensed, and deliberately technical. The rhetorical strategy here is largely an appeal to logos, targeting professionals and decision-makers with what appears to be objective, rational problem-identification. Other companies echo this framing. Swellby highlights *"time-consuming paperwork challenges"* that prevent therapists from seeing more clients, while aba|tools notes that practitioners are *"bogged down by sourcing, maintaining, and organizing physical materials."* These statements reinforce a shared image of the professional as competent but constrained, a figure doing their best in an untenable system. It paints a future of inevitable burnout, compromised care, and professional obsolescence. Technology is thus positioned not only as a solution but as a professional safeguard, a necessity for survival in an overburdened system.

5.1.3 Cultural Fear: The Irrecoverable Past, the Overwhelmed Present, the Uncertain Future. Beneath both parental and professional appeals runs a deeper, time-inflected cultural fear. The fear that spans missed opportunities, overwhelmed present-day realities, and a precarious future. Autism tech platforms activate this anxiety by situating the user at the intersection of three temporal crises. First is the irrecoverable past, evoked through metrics of lost potential. Companies like EarliTec Diagnostics capitalize on this anxiety by quantifying past losses *"over ten thousand momentary opportunities"* for social learning missed in just a two-hour interaction, invoking not only scale but irreversibility by saying *"miss out"*. Similarly, Cognoa warns that *"most children with developmental conditions aren't even diagnosed until after 4 years old. Many underserved children are missed altogether."* These messages frame the past as a site of irreversible loss, subtly directing blame not at healthcare systems but at parents, positioning them as the ones who must act quickly to avoid further regret, as described in **Section 5.1.1**. Next is the overwhelmed present. Happy Ladders warns that *"1 in 4 children in the United States are now diagnosed with a developmental need, straining resources and limiting access to services,"* while Echo Software claims, *"providers are stretched thin and face resource constraints"*. These appeals rely on logos, using data and objective language to frame the situation as unsustainable without technological intervention. The message is clear; the scale of need exceeds human capacity alone. Platforms highlight that parents face emotional burnout and economic instability (see **Section 5.1.1**), while practitioners struggle under administrative chaos and workforce shortages (see **Section 5.1.2**). This present is not one of action, but of entrapment, creating an atmosphere where the only way out is forward—through technology. Finally, the uncertain future looms as a site of existential risk. Infiniteach refers to the transition from education to adult services as *"the cliff"*, evoking a sudden and dramatic drop in support. Innov8 highlights the lengthy wait times in traditional diagnostic pathways, warning that parents may *"miss critical time waiting up to 48 months to get access to a provider."* The underlying message is that waiting may lead to lost opportunities for effective treatment. These messages coalesce into a cohesive narrative arc of loss, overwhelm, and uncertainty, presenting a forked path: one of timely intervention and inclusion, the other of being the *"the exception"* (Learn Autism). While these fears are often expressed through different rhetorical strategies (pathos, logos, or ethos), they converge into a temporal logic of accountability and crisis, where action is always too late, never enough, and yet urgently needed.

5.2 The Hopes

In contrast to the above fears of failure and loss (the present and future without their technologies), autism startups also construct and communicate a hopeful vision of technologically enabled care. These companies market not only products but ideologies—what it means for autistic people to live well, and who benefits from intervention. Through the use of aspirational rhetoric such as *"life-changing"*, *"radical change"*, *"radically different"*, *"revolutionizing"*, *"breakthrough"*, these companies frame themselves not just as service providers, but as agents of social change. For example, Cognoa claims to make *"life-changing early diagnosis and interventions possible,"* with innovations that *"optimize resources"* and *"positively impact the lives of children and families."* Yet beneath this hopeful veneer lies a constellation of assumptions about what constitutes progress, care, and human potential.

5.2.1 Reframing Care Through Technological Rationality. In our corpus, care is frequently reframed through technical rationality, with companies promoting benefits such as accessibility, engagement, efficiency, insight, and transparency. Although presented as progressive, these framings often narrow the meaning of care and are sometimes even twisted. Accessibility, for instance, is frequently reduced to the ease of accessing services rather than addressing structural barriers. For example, AnswersNow promotes *"virtual autism support accessible to families everywhere,"* which materializes as remote delivery of behaviorist therapy. Engagement is similarly

recast. Rather than fostering joy or intrinsic motivation, it is used as a strategy to make interventions appear harmless. For example, Happy Ladders claims that *"most skills are targeted through fun games and activities and therefore, will not cause harm."* Here, the term *"fun"* can be read as functioning defensively, anticipating critiques and shifting attention away from the goals of the therapy and toward its mode of presentation. Similarly, Tennessee Neurofeedback echoes this framing, stating it uses *"positive stimuli [...] to 'shape' the respective brainwaves,"* presenting interventions as gentle and agreeable rather than disciplinary.

Beyond how services are delivered, these technologies also reshape how outcomes are framed and evaluated. Across the corpus, companies present technology as a means of generating insight through data analytics, redefining care as timely, objective, and standardized. This framing positions data not just as supportive, but as central to defining what care is and how success should be measured For instance, EarliTec Diagnostics emphasizes objectivity in its diagnostic process:

> *"Each data point is then compared to thousands of discrete measurements within a clinically validated database, so that parents, caregivers and providers, have timely, objective and accurate information concerning potential developmental vulnerabilities."* (EarliTec Diagnostics)

Here, the autistic individual is dehumanized as a *"data point"*, suggesting that reliable care emerges from algorithmic comparison rather than interpersonal understanding. Other companies extend this logic to institutional and systemic scales. Cognoa, for example, claims that their system is *"objective, representative, equitable"*, claiming to incorporate demographic variation in its AI models to improve diagnostic fairness. SpectrumAi frames its product Patterns as a tool to support policy-level decision-making:

> *"Patterns takes ABA out of the dark ages with objective data and analytics that deliver meaningful insight to payors to optimize coverage and quality for commercial, Medicaid and TRICARE members."* (SpectrumAi)

Across these narratives, "insight" is equated with large-scale data collection and comparison, reinforcing a model of care that prioritizes quantifiability over subjectivity or lived experience. While Many companies (n=11) provide progress, data, and information tracking services, this information is typically directed toward caregivers, clinicians, or insurers, not autistic individuals themselves. Rather than enabling autonomy, transparency becomes a mechanism for external oversight, reinforcing a view of autism as something to monitor and manage. Scientific credibility further reinforces this data-centric approach. Companies frequently cite medical research (n=12) or clinical experience (n=5) to build credibility. This framing reinforces the belief that science-based technologies deliver *"the greatest benefit"* (Brain Power). However, these "benefits" often reflect neurotypical standards. A testimonial on Happy Ladders, where a parent shares,

> *"My son learned how to greet his teacher by her name when entering the classroom by me prompting him every day and then giving him positive reinforcement immediately after by giving him a little packet of gummy bears."* (Happy Ladders)

This quote illustrates how neurotypical behaviors and social norms are positioned as desirable outcomes and markers of effectiveness in autism services. These narratives do more than just describe their services. They redefine care as measurable outcomes, center non-autistic authority, and value conformity over neurodivergent ways of being.

5.2.2 Mobilizing Parental Aspirations and Societal Good. Autism technology companies often promote their products by highlighting how they can help autistic individuals *"unlock"* their *"fullest potential"* (Happy Ladder). This appeals to both parental hopes and broader ideas of contributing to society. Cymatrax even speaks directly to autistic individuals, claiming its tools can *"give you a better life"*. However, the *"brighter future"*, *"better life"*, and *"fullest potential"* are often constructed around ideals of independence, emotional regulation, and productivity. For instance, Brain Power says it helps autistic students build social-emotional skills to achieve *"happy self-sufficiency."* By linking happiness to self-sufficiency, Brain Power implies that those who lack certain skills are less happy, placing responsibility on autistic people for their emotional well-being. Such messages present social integration as the main benefit of therapy. JelikaLite, for instance, asserts that *"children will be able to better integrate into society and have more fulfilling lives."* This framing reveals a contradiction. Independence implies less reliance on others, while integration assumes fitting into shared, often neurotypical, norms. Taken together, these ideals risk presenting a narrow and exclusionary model of what it means to live well.

5.2.3 Reframing the "Problem" Through Familial and Societal Lenses. Some companies (n=3) go beyond promoting benefits for autistic individuals. Instead, they justify therapy by focusing on its advantages for parents or society, using a cost-benefit logic that centers adult needs. Motor Planit offers a clear example of this reframing, emphasizing the gains for parents rather than the child,

> *"When children demonstrate increased success with self-help and play skills at home, you have more time to focus on what you need to accomplish!"* (Motor Planit)

The rhetorical structure of this sentence links child improvement directly to adult convenience, using a cause-and-effect logic to frame therapy outcomes in terms of time savings for parents. Similarly, Happy Ladders emphasizes the time-intensive demands of therapy on working parents, positioning the challenge of balancing employment and caregiving as a key problem to solve. In doing so, it frames parental career stability as one of the desired collateral outcomes of effective autism care. This positions the child as a secondary concern and defines care in terms of adult labor needs. JelikaLite takes this logic further by explicitly tying therapy to reduced *"symptoms of autism"* and improved *"quality of life of their families."* The company also makes an economic case:

> *"Their caregivers can lead less stressful lives and both insurance companies and the government will be able to spend less money on effective intervention, special education and lifelong residential care."* (Jelikalite)

Here, care is promoted as a cost-saving strategy, aligning therapeutic outcomes with productivity and institutional efficiency. This

framing constructs a binary between caregiving and personal fulfillment. Ultimately, this reframing reflects a dual logic. It seeks to support parents' own agency beyond their caregiving roles while also reinforcing norms of productivity and efficiency. In doing so, it risks sidelining the autonomy and lived experiences of autistic individuals themselves.

5.3 The Oscillations

In analyzing how companies present disability, we have observed nuanced and oscillating linguistic choices. When the medical model dominates product development, some companies often sidestep overt references to the medical model. For instance, PigPug underscores neurological optimization through the language of neuroplasticity, a concept rooted in neuroscience and often associated with clinical intervention [66]. They claim:

> *"We can get rid of all the anxiety, stress, sleeping issues and pains if we simply allow the brain to learn how to perform in a new, balanced way."* (PigPug)

However, in the same space, they reject the medical framing explicitly, saying that *"It's not meant to diagnose or treat any illnesses, but it is designed to make you feel better."* This rhetorical strategy allows companies to draw on the legitimacy and authority of scientific discourse, especially neuroscience, while evading regulatory constraints or ethical concerns tied to medicalizing autism.

More than a quarter of the companies in our dataset (n=10) engage in similar oscillations between disability models (see Table 6). While the predominant influence remains the medical model, occasional descriptions on their websites suggest an awareness of other disability perspectives. Some use strategic code-switching between models to appeal to both caregivers' desire for therapeutic improvement and broader cultural calls for inclusion. For example, Brain Power promotes social-emotional training as an empowering tool for autistic children, asserting that such learning will *"enable them in life"*. Simultaneously, they claim their company's core value is *"diversity"*, stating: *"We believe in surrounding ourselves with people who think differently in order to get the most perspectives."* This dual messaging reflects a rhetorical fusion. That is, medical discourse grants credibility, while diversity and empowerment language offer alignment with progressive social values. In attempting to speak to varied constituencies, including parents, professionals, and inclusion advocates, these companies appear to want to talk back to multiple, and sometimes conflicting, expectations. However, this very strategy can produce mixed messaging, revealing tensions between therapeutic promises and social acceptance. We return to the strategic purpose of this ambiguity in **Section 6.3**.

Table 6: Joint emergence of multiple disability models

The Oscillations	N
Medical Model and Social Model	5
Medical Model and Affirmative Model	2
Social Model and Affirmative Model	1
Medical Model, Social Model and Affirmative Model	2

One company adopts a temporal strategy, framing their current work in one model while gesturing toward future validation through another. Cymatrax begins with the social model, presenting their product as an environmental adaptation (filtering digital audio for cognitive accessibility). However, they also forecast eventual medical recognition:

> *"We also are putting together research in the medical field, where two highly acclaimed neurosurgeons believe and have asked to oversee our technology in clinical trials to be used in daily therapy for autism."* (Cymatrax)

Here, the rhetorical move suggests a progressive trajectory. That is, beginning with inclusive tech but aiming for clinical legitimacy, thus reconciling divergent expectations.

Otsimo similarly blends models through rhetorical layering. They emphasize medical training for communication skills but also invoke educational justice:

> *"We believe that education is a basic human right and are determined to improve our work until proper special education is available and accessible to each and every household in need."* (Otsimo)

In marketing their Augmentative and Alternative Communication (AAC) tool, they adopt an affirmative tone: *"Customize your AAC and express yourself just the way you want!"* This rhetorical strategy broadens the appeal, affirming the right to expression while continuing to position their product within therapeutic and developmental logic.

6 Discussion

Through a critical analysis of marketing discourse on the websites of 38 autism tech startups established in the past decade, we examine how companies describe and promote technological innovations related to autism. These narratives not only reveal the societal logics, economic priorities, and normative assumptions embedded in autism technologies but also show how companies strategically frame their products as relevant, legitimate, and promising within those broader structures. In what follows, we unpack how these discourses frame autism in ways that foreground urgency, crisis, and deficit while offering solutions grounded in data-driven intervention and parental control. We then explore the implications of these findings for disability research and the future of inclusive design in HCI.

6.1 Framing Urgency and Narratives of Deficit and Loss

Critical disability studies urge us to move beyond deficit-oriented understandings of disability and to attend instead to the relational, political, and socio-material conditions that shape lived experience [25, 50, 65]. However, our analysis finds that many autism tech startups not only developed their product based on the medical model but their marketing strategies rely on urgency-centered narratives that cast autism not as a lived identity but as a condition that must be addressed before critical developmental "windows" close. As shown in **Section 5.1.3**, time is often framed as a threat. Developmental timelines, quantified missed developmental "windows", and metaphors like "the cliff" frame autism as a race against irreversible loss. Many frame differences through crisis-oriented narratives, which risks overshadowing more nuanced or affirming

understandings. These framings may resonate with parental anxiety, but they also risk positioning autistic children as sources of emotional labor, logistical difficulty for families (see **Section 5.1.1**) and institutional strain (see **Section 5.1.2**). The problem is rendered not structural but deeply personal. And so is the solution. What is being marketed is more than just a tool. It conveys a promise of relief, control, and transformation (see **Section 5.2**). This rhetorical move exemplifies what Bonnie Tucker [11] calls "technocapitalist disability rhetoric", which is the recasting of lived disability into marketable suffering, and the solution is purchasable. Rather than addressing structural exclusions (such as inadequate implementation of inclusive education policies [20, 37] or the lack of systemic support that exacerbates caregiver stress and burnout [19, 30]), startups localize the problem within the autistic body and the nuclear family. Urgency displaces complexity, and care becomes a transaction of technologies.

6.2 Reconfiguring Autism Agency Through Technological Care

Our findings show that autism tech companies overwhelmingly position parents, rather than autistic individuals, as the central figures in the care process (see **Section 4**). This framing reinforces a paternalistic model of care, where parents are portrayed as decision-makers and emotional anchors while autistic individuals are cast as passive recipients. Companies appeal to parental fears (see **Section 5.1**) and hopes (see **Section 5.2**) through emotionally charged narratives. They present their products as tools that can unlock potential, promise improvement, or ensure a better future. Although this paternalistic model may offer practical benefits, such as helping parents navigate systems marked by long waitlists, high costs, and limited support, this gesture toward empowerment often comes at the cost of obscuring the autonomy of autistic individuals. As noted by Levina's [49] and Waltz [91] critiques of disability tech marketing notes, we see here how empowerment becomes a "narrative aesthetic" [60]. In our corpus, this narrative structure helps companies manage parental anxiety (see **Section 5.2.2**), promote a sense of technological control (see **Section 5.2.1**), and reconcile the competing interests of families, institutions, and autistic individuals (see **Section 5.2.3**). The technologies marketed by autism startups reflect a specific logic of care. They emphasize efficiency, optimization, and external control, as detailed in **Section 5.2.1**). Many promise "objective", "data-driven", "scientifically validated", or "standardized" interventions to identify and correct perceived autism traits. Rarely do they acknowledge the role of environmental barriers or the self-determination of autistic individuals. This framing departs sharply from the broader goals of the disability rights movement, which emphasize environmental, attitudinal, and cultural transformation [53]. Our findings echo what Fuchigami et al. noted, assistive technologies, even when celebrated as empowering, are frequently deployed within contexts of deep infrastructural neglect and inaccessible environments. What stands out across our corpus is how care, described through terms like accessibility, efficiency, and insight, is redefined through a a medical and managerial lens (see **Section 5.2.1**). This framing simplifies the diverse realities of autistic life and reduces individuals to quantifiable parameters. We are concerned that this reductionist framing risks detaching care from its relational and ethical context. When technologies prioritize managerial logic over relational care instead of flexibility, they shift agency away from autistic individuals and place it with institutions and families, reducing the chance for support grounded in respect, choice, and mutual recognition.

6.3 Oscillations Across Disability Models as Strategic Contradictions

The observed oscillations between medical, social, and affirmative models of disability (see **Section 5.3**) reflect more than just representational inconsistency, but strategic contradictions that allow companies to expand their appeal across multiple audiences with divergent values and expectations [72]. Far from signaling a nuanced or pluralistic understanding of autism, these oscillations reveal how affirmative framings are instrumentalized to make behaviorist or deficit-based approaches more publicly acceptable. This designed ambiguity aligns with what Demo [26] describes as "hacking agency" where users are symbolically empowered, yet real control remains with systems, caregivers, or institutional infrastructures. This rhetorical ambivalence is particularly visible in the use of empowerment language. As Waltz [91] and Levina [49] argue, the language of empowerment often masks deeper logic of normalization and control. Our findings suggest that this is particularly evident in autism tech marketing, where affirmation of inclusion is reframed as personalization, serving as a rhetorical gateway to systems centered on behavioral monitoring, compliance, and corrective intervention. This strategic contradiction also functions through the transformation of affect. Roderick [71] critiques how autism advocacy is repackaged for institutional branding, particularly by channeling parental anxiety into polished narratives of hope and improvement. Many of the companies we examined mobilize similar affective economies. They validate caregiver concerns while positioning their products as the solution (see **Section 5.2.3**). The result is a discourse that appears empathetic, but ultimately reinforces existing power dynamics, where care becomes a means of ensuring conformity, and independence is contingent on compliance (see **Section 5.2.1**).

The co-optation of inclusive language by autism tech companies raises questions about authenticity and intent. When empowerment is invoked without changing who has control, what kind of agency is actually being offered? What appears at first glance as rhetorical flexibility may in fact obscure political distinctions between care and cure, support and correction, difference and deficit. These contradictions do not only shape how products are marketed, they shape how autism is conceptualized and governed in everyday technological interactions. Ultimately, these rhetorical strategies reveal the limits of inclusive language when not matched by inclusive design. If intervention remains the endpoint, then empowerment, as it appears in much of this discourse, risks becoming not a shift in power, but only a shift in tone.

6.4 Reflecting on Autism Tech Marketing in Relation to Accessibility Research

Marketing materials do more than promote products. They reveal how companies define problems, propose solutions, and position

themselves in relation to families, institutions, and autistic individuals. Marketing discourse can reflect and shape expectations, influence adoption, and signal which futures are considered worth pursuing. As such, they hold value not just as objects of analysis but as reflective surfaces that reveal how disability and neurodivergence are framed in broader sociotechnical ecosystems. Many of the themes we observe in the marketing materials mirror longstanding trends in accessibility research, where technologies are often developed with predefined problems and techno-solutionist assumptions [77, 78, 100], and where autism is framed as something to be "fixed" rather than an identity to be respected [70, 83]. What marketing discourse adds is a complementary perspective, which reveals how these framings are operationalized and communicated to the public, especially in spaces where accessibility research may not be directly visible or influential. Our findings extend this critique in three ways. First, marketing exposes how scholarly ideals, such as accessibility or transparency (see **Section 5.2.1**), are reinterpreted to align with investor or caregiver interests. Second, it engages affective economies [91], such as fear, hope, or even guilt, that rarely surface in accessibility and HCI publications. Third, it underscores the political economy of disability tech. That is the pressure to promise measurable outcomes, align with medical models, and deliver "solutions" to markets that prefer certainty and control (see **Section 5.2.1**).

As shown in **Section 5.3**, companies navigate these tensions through strategic rhetorical blending, using neurodiversity language to attract progressive audiences while delivering medical-model, aligned products to behaviorist or institutional buyers. While not reducible to mere commercial cynicism [88], these oscillations reflect market pressures that shape how disability is represented and responded to. The medical model of disability, despite critiques of its individualizing logic (see **Section 2.1**), has the advantage of offering clear design goals and measurable "pain points" [53] that align with dominant UX practices. Such narratives often appeal to neurotypical caregivers and institutional buyers who prioritize certainty, objectivity, and actionable outcomes. In contrast, products rooted in community-building or affirmative models may struggle to define marketable "solutions", whose goals often center on relational support, open-ended exploration, or social transformation. These approaches can seem less measurable or too subjective for current market logic. These tensions prompt key questions: How can we design technologies that reflect the complexity of lived experiences while still demonstrating value? Can alternative models of disability become legible within today's product ecosystems, or must the market itself evolve to embrace broader visions of care?

This discussion is not meant to indict technology companies or those who develop and promote autism-related products. Nor is it a call to narrow discourse, but to broaden it. As emerging scholars, designers, and developers in accessibility and HCI, we see ourselves as participants in a shared effort to rethink how technology, care, and advocacy intersect. Marketing materials are not neutral. They are designed artifacts that shape the narratives surrounding autism technologies. Moving forward, we can explore how companies' discourses align with or contradict autistic individuals' and stakeholders' perspectives or regulatory bodies', we can track how their discourses translate into deeds, and we can delve into opportunities for bridging multiple stakeholders' perspectives. Critically analyzing these materials is essential because they influence neurodiversity advocacy, inclusive design, and the future of accessibility research on technology, care, and representation. At the same time, we recognize that our own analysis is not outside discourse [21]. This paper, too, reflects particular framings and values, and is shaped by the institutional and rhetorical conditions of accessibility research and computing for people with disabilities (see **Section 2.2**). Rather than claiming a neutral position, we offer this work as part of an ongoing conversation that welcomes further interpretation, disagreement, and reimagining.

7 Limitations

We acknowledge the limitations of our study. First, our study is limited to U.S.-based startups, reflecting context-specific cultural and market dynamics. This highlights the need for cross-cultural research on how autism, care, and technology are framed in different settings. Second, while many websites in our corpus featured visual and multimedia elements, including promotional images, interface screenshots, and embedded videos, this study focuses exclusively on textual content. We made this methodological choice for both pragmatic and analytical reasons. From an analytical standpoint, our research questions center on the discursive construction of care, legitimacy, and user identity, which are most directly articulated through linguistic forms such as mission statements, product descriptions, and explanatory narratives. Textual data thus offered the clearest access to the normative logics, epistemic claims, and rhetorical strategies companies use to frame autism and technological intervention. From a pragmatic standpoint, although multimodal discourse analysis (e.g., of images or design layouts) is a valuable approach [51], such analysis requires a distinct set of frameworks and interpretive commitments beyond the scope of this study. We recognize that future work could extend our findings by incorporating a more multimodal or visual discourse lens. Finally, we focus on the formal, one-directional messaging of websites to examine the authoritative marketing narratives and broader ideological functions of public representation. Future work may extend this by exploring more dialogic spaces, such as social media, or conducting interviews to investigate how these narratives are produced and interpreted.

8 Conclusion and Future Work

This paper analyzed how autism tech startups frame autism, care, and technological value through their public-facing discourse. Using critical discourse analysis and thematic analysis, we analyzed 38 company websites and identified three key rhetorical patterns: *fears*, *hopes*, and *oscillations*. These patterns construct autism as a condition to be managed through urgency, optimization, and parental responsibility. Companies often invoke anxiety and promise empowerment through technology, framing care as something that can be measured, managed, and delivered. Although some reference inclusion or empowerment, these framings often mask behaviorist or medicalized agendas and overlook deeper structural barriers.

Our analysis contributes to accessibility and disability studies by showing how language shapes not just how technologies are designed, but how care is morally and politically framed. We call on researchers to consider how autism tech is marketed, not just how it

functions. These technologies circulate within broader cultural narratives that define what care means, who it is for, and which futures matter. Future work could examine how autistic users themselves engage with these narratives or how company discourse evolves over time. Ultimately, we advocate for more critical, inclusive approaches that center autistic agency, relational care, and collective well-being.

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A Selected Corpus of Autism Tech Startup Websites

Table 7: Overview of the selected corpus: 38 autism tech startups, including company name, URL, and year of establishment, categorized by service type

Company Name	URL	Year	Category
Echo Software	echosys.com	2021	Data Tracking
Happy Ladders	www.happyladders.com	2021	Digital Therapy and Educational Technology
BlinkLab	www.blinklab.org	2021	Data Tracking
SpectrumAi	www.spectrumai.com/	2021	Data Tracking
Cymatrax	cymatrax.com/	2020	Assistive Technology
BehaveWare	www.behaveware.org/	2020	Assistive Technology
BeMe.ai	BeMe.ai	2020	Data Tracking
Innov8	innov8.care	2020	Diagnostic Computational Tool
Motor Planit	www.motorplanit.com	2020	Digital Therapy and Educational Technology
Juniper Behavioral Health	www.juniperplatform.com/	2020	Data Tracking
SIDIS Health	www.sidishealth.com/	2019	Data Tracking
EarliTec Diagnostics	www.earlitecdx.com/	2019	Diagnostic Computational Tool
Learn Autism	www.learnautism.com	2019	Community and Media
Jelikalite	jelikalite.com/	2019	Digital Therapy and Educational Technology
aba|tools	www.abatools.com/	2019	Digital Therapy and Educational Technology
PigPug	pigpug.co	2018	Digital Therapy and Educational Technology
Tennessee Neurofeedback	tnnfb.com	2017	Digital Therapy and Educational Technology
Swellby, Inc	www.swellby.com	2016	Data Tracking
GoManda	www.gomanda.com/	2016	Digital Therapy and Educational Technology
Wolf+Friends	www.wolfandfriends.com	2016	Community and Media
AnswersNow	getanswersnow.com	2016	Digital Therapy and Educational Technology
Otsimo	otsimo.com/	2016	Digital Therapy and Educational Technology
Floreo	www.floreovr.com	2016	Digital Therapy and Educational Technology
Thread Learning	threadlearning.com	2016	Data Tracking
Cubby Beds	cubbybeds.com/	2015	Assistive Technology
Goally	getgoally.com	2015	Digital Therapy and Educational Technology
ViTAL	www.vital.education/	2015	Digital Therapy and Educational Technology
BioStream Technologies	www.biostreamtech.com/	2015	Digital Therapy and Educational Technology
Cognitopia	www.cognitopia.com	2014	Assistive Technology
AngelSense	www.angelsense.com	2014	Assistive Technology
Teaching It Right	www.teachingitright.com	2014	Digital Therapy and Educational Technology
Puzzle Piece	www.getpuzzlepiece.com/	2014	Assistive Technology
Infiniteach	infiniteach.com/	2013	Digital Therapy and Educational Technology
SPEAK MODalities	www.speakmod.com/	2013	Digital Therapy and Educational Technology
Brain Power	brain-power.com/	2013	Digital Therapy and Educational Technology
Guiding Technologies	guidingtechnologies.com	2013	Data Tracking
TotalABA	totalaba.com	2013	Data Tracking
Cognoa	www.cognoa.com/	2013	Digital Therapy and Educational Technology

B Structured Data Collection Worksheet

- **Issue Focused.** What specific problem or improvement is this company focusing on?
- **Motivation.** What are their motivations for providing this product or service?
- **Information Source.** Where does this company gather the information and insights that motivate their product development?
- **Goal.** What is the ultimate goal that this company aims to achieve with their product?
- **Service Provided.** What range of services does this company's product provide?
- **Tech Product.** What digital solutions are offered by this company to tackle the identified issues?
- **Features.** What features are emphasized by the company?
- **Role of Tech.** What role does the technology provided by this company play in addressing the identified issues?
- **Empowered Entities.** Who are the individuals or entities that ultimately benefit from this product's capabilities?
- **Access to Information.** Is the information regarding the technology readily available and accessible to both caregivers and autistic individuals, or is there an information imbalance?
- **Design and Customization.** Whose considerations and needs hold more weight in the design and customization of the technology?
- **Feedback Loops.** Whose feedback is actively collected and emphasized?
- **Monitoring and Surveillance.** Is there a delicate balance between ensuring the autistic people's safety and respecting their privacy and autonomy?
- **Decision-Making Authority.** Who holds the primary authority in making decisions about the selection and utilization of technology?
- **Ethical Considerations.** Does the technology promote a neurotypical standard as the norm, or does it support and empower neurodivergent individuals without trying to change their innate characteristics?
- **Audiences.** Who is the primary target audience for this company's website?
- **Users.** Who constitutes the target users of their product?