Expanding Norms, Negotiating Bodies: How Artists with Disabilities Perceive and Use Creative Tools

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Abstract

This paper explores how and why artists with disabilities use, do not use, or modify tools in their creative practice. To inform the design of future creativity support tools (CSTs), we learned from 12 artists with a wide range of disabilities and mediums, including photography, theater, and drawing. Through their stories, we show instances of crip technoscience happening in the wild. We discuss how our findings may lead to expanded definitions of CSTs to include networks of interdependence and how artists with disabilities negotiate and foreground bodily boundaries in their practice. While our participants rejected the notion of adapting their tools, they did misuse existing tools when making art about their disabled experiences. Finally, we offer suggestions for CST designers to re-examine implicit norms around their tools' goals, input modalities, and if a new accessible tool is even needed in the first place.

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1 Introduction

The design of creative technology for marginalized users has long been a concern for technologists [11]. Early work in assistive technology approached accessibility as an engineering challenge to be solved by creating specialized tools [73, 79]. For example, creative tools for people with disabilities focused on adaptive equipment such as custom grips to hold brushes [14]. In a similar vein, researchers working on creativity support tools (CSTs) for accessibility often build new tools to overcome functional limitations, or user frustrations in the creative process [20, 68].

This perspective is captured by what Hamraie and Fritsch call "disability technoscience" [23]: technology provides opportunities to design *for* people with disabilities instead of *with* or *by*, a perspective also captured by technoableism [67]. Artists with disabilities, however, are already making, hacking, and driving technological change [2, 4]. This paper adopts a "crip technoscience" viewpoint, which highlights how disabled artists are themselves innovating at the margins [23]. Artists with disabilities have been creating and modifying technologies not only to gain access to their art worlds [38], but also to subvert norms and cultural expectations of what counts as artistic expression [44]. We join the tradition of HCI scholars who have drawn from critical disabilities studies to reorient "crip bodies as productive sites of difference" [33], to call for applying the interdependence lens on the design and use of technology [3], and to shift from ableist assumptions towards centering the artistic experiences of people with disabilities [19].

Thus, given this lens, we believe that studying and understanding the current technological practices of disabled artists may reframe how CST researchers think about their approach to designing creative tools. This paper purposefully adopts McCullough's expansive definition of a tool as "a moving entity whose use is initiated and actively guided by a human being, for whom it acts as an extension, toward a specific purpose" [54]. Through a lens of power [26, 46], artists with disabilities who center their own practices as normal are shifting power towards a crip perspective and process. By adopting the agenda of crip technoscience, we do not suggest institutional ableism can be "hacked"away. Rather, we hypothesize that we may shift our understanding of CSTs when we center the ways disabled artists are currently engaging with or frustrated by tool usage. Artists with disabilities already engage in unrecognized or uncredited forms of creative production because of their lived experiences that require daily, mundane creative solutions. This paper terms these kinds of activities as creative "misuse" [44]: a use of technology outside of cultural norms; a user-driven repurposing of technology often seen as a source of empowerment. A user's personal identity and lived experiences, more so than the technological design of a tool, may exert a greater influence on creative tool use [44]. By exploring how people with "extreme" life experiences create art, we may learn how to generalize their experiences to help reorient ourselves on how to create tools for both disabled and non-disabled artists [5, 63, 77].

This paper asks three research questions:

- **RQ1**: How and why do artists with disabilities modify their existing tools for making art?
- **RQ2**: How does disability influence artistic processes and motivations?
- **RQ3**: In what ways do tools support or prevent artistic access?

To answer these questions, we conducted interviews with 12 disabled artists. Artists ranged from experienced activists with a long

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historical involvement in the disability community to newly graduated students who were beginning to define their artistic practices. Artists' had a range of disabilities: some had mobility disabilities, others were blind or deaf, and others were neurodiverse. Artists' mediums were just as diverse: we interviewed photographers, theater directors, musicians, glass workers, painters, and multi-media artists. Among the diversity of ages, disabilities, and mediums, we found that several consistent themes emerged around access, tool usage, and intersecting artistic and disability communities.

Through analyzing our participants' anecdotes through a reflexive thematic analysis [6], we offer specific examples of crip technoscience happening in the wild and use this as evidence to suggest ways we may rethink approaches to the design of CSTs. For example, our findings expand the definition of what a CST can be in an art practice to include mobility aids such as wheelchairs or camera straps, rather than just pieces of technology designed to directly help to make final artifacts. Disabled artists modified their tools not because of an access gap, but to create art that conveys disability-forward messages. Disability influences art creation by emphasizing the body and the physical process of and spatial access to art making. We found frustration over the lack of access to creative spaces more so than the lack of creative control over making artifacts. Lastly, rather than focusing solely on technical improvements—what Liz Jackson calls "disability dongles" [37], or "well-intended, elegant" solutions to problems "we never knew we had"—CST researchers might instead prioritize recognizing and shifting the norms of what counts as a creative tool. This could include designing modes of making that reduce fatigue or providing financial support through institutional power.

Our thematic analysis and design takeaways from the knowledge of disabled artists expand how we can conceptualize "creativity support tools." This paper contributes in-depth accounts of how artists with disabilities use, do not use, or modify their current artistic tools. Informed by these artists' accounts, we also provide perspectives that rethink tool design and suggest how CSTs may support crip technoscience and crip making.

2 Related Work

We present related history around disability studies, with an emphasis on the making and tinkering ethos. We then review related literature in bringing the voices of disabled artists into the design space, and power dynamics between the artists and their tools.

2.1 Background: Disability studies

While participatory design and co-design practices [56] have brought disabled people into the design process, they often remain positioned as "users" or informants, rather than as expert designers whose methods, values, and insights can reshape what design is. In summarizing and categorizing literature in accessibility research, Mack et al. [49] note both the uneven application of participatory methods and emerging resistances—some intentional—against dominant assistive technology paradigms. Brilmyer and Lee [8] introduce the idea of *crip legibility* which they define as "how disabled people flexibly respond to, contort, or collectively organize themselves to fit within (or be understood by) existing information systems while building new systems of resistance and care" and highlight the potential harm in this being the accepted norm in how information systems are designed. Relatedly, Mack et al. [50] surface ways in which even human-centered research methods do not allow the disabled population to meaningfully show up due to barriers at each stage of the research, and highlight the need for researchers to proactively anticipate and remove these barriers. These critiques call for accessibility research that centers disabled knowledge production, creative resistance, and design on the disabled person's terms.

This idea of centering the disabled voice and their existing practices is highlighted the Crip Technoscience Manifesto [23]. It emphasizes the everyday practices of hacking, modifying, and creatively reusing tools and systems that many disabled people engage in to survive and thrive in inaccessible environments. These acts are not just reactive, but also deeply creative and generative—showcasing soft skills, adaptation, and artistry as technical proficiencies in their own right. Artists in particular demonstrate how flexibility and ingenuity can become essential tools.

Disability studies offers a critical foundation for reimagining design, tools, and technology beyond normative assumptions. Kafer [39]'s work builds on Haraway [24, 25]'s concept of the cyborg to disrupt fixed notions of embodiment, agency, and technology. These works open space for imagining futures that are non-normative, queer, and rooted in the lived experiences of disabled people. These papers also offer room for critique when it comes to bodies and their relationships to labor politics. Another lens, interdependence as framed by Bennett et al. [3], shifts our understanding of dependence from deficit to asset. Instead of centering independence as an ideal, interdependence emphasizes relationships, mutual care, and collaborative survival as vital contexts for innovation. Interdependence re-frames collective access-making as a site of technical and social creativity. Influenced by this knowledge and perspective, this work applies these lenses to analyze and understanding the every day practices of disabled artists.

2.2 Disabled artist perspectives

Many researchers have been working towards making artistic tools more accessible [43]. However, inspired by the history of crip maker practices [23, 39, 47], we are interested in further understanding ways in which disabled artists not only engage with art, but also innovate the tools they use, adapting and repurposing them to align with their needs and visions. In particular, numerous disabled artists, like Carmen Papalia [60], Sandie Yi [80, 81], Sky Cubacub [64], Liam Pearce [52], and many others, have used these types of innovation in their art to serves as a form of resistance, challenging both artistic norms and societal expectations about disability. Thus, researchers have explored this intersection of art, disability, and technology, centering disabled artists as contributing a core role in reshaping both their artistic practices and the tools that facilitate creation.

Many research frameworks exist through which to consider tools designed for disabled artists [2, 33, 40]. Hsueh [33] presents the need for adaptation of tools in this space to extend from individual tools to creating inclusive spaces for expression. It aims to shift from a perspective of inclusionism—adapting for and accommodating disability—to one of alternative "representational traditions" [55]—actively shaping systems of inclusion that allow for a diversity of

voices and expressions. Through a focus on art and wheelchair use for mobility, Barbareschi and Inakage [2] provide a lens for rethinking assistive technologies as creative tools in their own right and understanding the structural inequalities embedded.

Others focus on understanding existing practices of disabled artists to offer insights that can inform the design of creative tools [4, 13, 14, 32, 72]. Bennett et al. [4] focus on the impact of AI on accessible creativity, further highlighting the potential for artistic technologies to function as both creative tools and assistive devices. We build on this body of literature through interviews with disabled artists with varied artistic domains and disabilities. Our interviews similarly focus on understanding their artistic practices and the tools that support their art, with a lens of identifying examples of crip technoscience in their practices. By removing focus on specific types of art or disability, we are interested in exploring cross-cutting patterns that emerge across our participants.

2.3 Power in art tools: Do we own tools, or do tools own us?

An ongoing theme across many creative and adaptive practices is the question of power: specifically, the power that tools can exert over their users [25, 46]. In artistic and creative domains, this dynamic raises critical questions about ownership, authorship, and agency. Who controls the creative process—the artist, or the tool? And how do different tools enable or limit that control?

With the increasing presence of artificial intelligence and other automation technologies in the arts, concerns around creative ownership and agency have only become more urgent. Tools are never neutral—they carry assumptions, constraints, and priorities that shape how they can be used [78]. But they also offer opportunities for resistance, transformation, and co-creation.

One powerful response to these tensions around ownership comes from artists who modify, hack, or make their own tools. This is especially true in disability and crip maker communities, where adaptation is not just a necessity but a source of creativity and autonomy. As Li et al. [45] note, tool adaptation becomes a form of artistry in itself—often taking shape through collaborations between artists and developers that foreground user-driven design. This shift is perhaps best captured in Loomer [47]'s reflection: *"I made it. So I know how to fix it… I may have failed as often as I succeeded, but I have equipment that fits me."* Here, the act of making or modifying a tool is framed not only as functional, but also as empowering. "Misusing" [44] creative tools may also be empowering, but misuse sits in opposition to established norms, in contrast to the less socially stigmatized activities of adaptation or appropriation [17]. Jackson highlights the importance of the user feeling power over the tool through the ethics of repair and maintenance [70]. This relationship reflects an intimate relationship between maker and material—one rooted in lived experience, iteration, and care.

User-initiated design, as discussed by Hendren and Lynch [27], similarly challenges traditional hierarchies of expertise. Rather than relying on top-down solutions, these approaches center people designing for themselves and each other, often within communities of shared knowledge and support. Open source tools especially embody this ethos. For instance, Thingiverse remixes result in "accidental assistive technology" [9]. Additionally, the artistic practice of live coding holds many of the same ethos of the open source community. The TOPLAP Manifesto [74] invites users to break, rebuild, and reimagine,offering a flexible, adaptable infrastructure that evolves alongside artists' changing needs. Unlike closed, proprietary systems, open source frameworks foster ongoing experimentation and customization. This adaptability becomes crucial in creative work, where no one-size-fits-all solution can fully account for the nuances of practice [46].

Ultimately, rather than resisting the power tools hold over them, artists have tried to cultivate reciprocal relationships with their tools, making them legible, modifiable, and trustworthy through ongoing interaction. Adaptation is a form of authorship, where failure and repair are not signs of brokenness, but markers of care, persistence, and creative agency. Tools should fit disabled artists, not the other way around.

In seeking to avoid techno-solutionist tendencies, we acknowledge that technological solutions should not be outright rejected, as there are indeed situations where disabled creatives themselves express a desire for new technological interventions [22]. A tool may address accessibility needs artists express [22] or fill gaps left by commercial technologies [61]. For example, our blind and low vision participants and participants with motor impairments desired improved voice interfaces, and wheelchair users emphasized the need for better electric wheelchair technology. When evaluating if a novel tool is appropriate, as we argue and as other HCI researchers have expressed, it is essential to situate tool development within the lived context of the community [15, 22, 42, 61, 62, 71]. Additionally, when assessing the need for and success of a tool, researchers have emphasized the importance of analyzing online communities to uncover practices of sharing, social connection, and mutual support [22, 42, 71]. We believe our findings emphasize that technological solutions should be paired with an awareness of, rather than abstraction away from, systemic issues. While our discussion cautions against defaulting to technological "solutions," we recognize that tools developed with a shared understanding of creative goals, barriers, and community values may address needs within creative communities.

3 Methodology

Toward answering our research questions around tooling, we conducted semi-structured interviews with 12 disabled artists. We sought to gain insights from participants with any disability and working in any artistic medium, as long as they felt that their disability had a significant influence on their art practice.

3.1 Participant recruitment

We recruited 12 self-identified disabled artists, aged 18-77, for our remote interview study about their artistic practices (Table 1). Participants were eligible for the study if they self-reported that their disability impacted their artistic practice in a screening survey. The survey additionally asked about accommodations that would be necessary for the interview.

Participant	Age	Gender	Art Practice	Years of Experience	Self-Reported Disability	Self-Reported Disability Aid(s)
Anthony Tusler	77	Man	Photography	65	Spinal Cord Injury (SCI), Wheelchair User	Large trackball, power wheelchair, mirrorless digital camera (lighter than DSLR)
Ali Shahrouzi	60	Man	Fine Art Photography	40	Cerebral Palsy	Wheelchair
Olivia Ting	52	Woman	Visual/Haptics/Sound Multimedia Projection Installation, Videos	15+	Deaf, Profound Hard of Hearing	None reported
Regan Linton	43	Woman	Theater, Film, Writing	20	Chest-Down Permanent Paralysis (Full-Time Manual Wheelchair)	Manual wheelchair, adaptive bathroom equipment, adaptive vehicle (hand controls and rampvan)
Kurt Weston	67	Man	Photography	40	Legally Blind	ZoomText Magnifier and Reader
F	57	Man	Visual Arts	26	Vision Impairment (Optic Nerve Atrophy), Hearing Loss	White cane (mobility), whiteboard for communicating when out without a laptop
Lisa Sniderman	52	Woman	Playwright, Singer-Songwriter, Artist-Musical Theater	12–18	Progressive Muscle Weakness, Primary Immuno-Deficiency	None reported
H	21	Non-binary	Prose and Poetry, Acrylic, Watercolor, Mixed Media Painting	12	Autism, Anxiety	None reported
I	24	Woman	Actor, Theater-Maker	15+	Neurodevelopmental	None reported
J	18	Woman	Music Performance, Composition, Technology	13	Blind	None reported
Alexandra Friedman	22	Woman	Glass, Trash, Mediums Impacted by Heat	9	Autism, Attention-deficit/hyperactivity disorder (ADHD), Chronic Pain	None reported
Riley Cerabona	22	Non-binary	Theater (Directing, Writing, Performing)	12	Rare Progressive Disease, Paralysis, Diabetes	None reported

Table 1: Participant demographics. All participants were based in the US; six lived in CA, four in NYC, one in CO, and one in Washington DC. Eight participants are white, two Asian, one Black, and one unknown race.

We employed two recruitment methods: cold-emailing artists from the California Arts and Disability Resource Center artist directory [1], and convenience sampling from our personal networks. These methods allowed us to connect with artists who diversified the overall experiences of our sample; however, we note that our sample is not representative of all artists with disabilities [59]; for instance, the majority of our participants are white or Asian and based in either California or New York.

Participants were given the option to remain anonymous, or to have their real names used in this paper. All participants reviewed their quotes, a draft of the manuscript, and any images included in Figure 1 before consenting to deanonymize. Additionally, Table 3 in the Appendix includes personal and professional websites shared by participants who consented to their inclusion. We chose this approach to directly credit participants for their contributions. Recognizing that artists often depend on self-promotion, we sought to serve as a creative community that provides an outlet for promotion and visibility.

3.2 Interview structure

Interviews were conducted via Zoom or email (Ali, Kurt, and Participant F) based on accommodation requests from our screener. The interview was IRB approved, all participants gave informed consent (disclosing their type of disability was optional), and participants were compensated at $20USD/hr. The study took on average 90 minutes with a range from one to three hours. One or both of the first two authors were present for all interviews.

We structured the interview into three parts:

(1) **Background & process.** We collected information about participants' artistic practices, including their chosen mediums, motivations for creating, personal histories that inform their work, and the interdependent art worlds they navigate. We elicited stories [51] about participants' art routines, including their set up and clean up processes.
(2) **Tools & use.** We asked questions to get insight into participants' personal perceptions of their tools. We inquired why they use specific tools, why they do not use certain tools or features, and what is frustrating about their tools. We asked if they had modified their tools or used a tool for a purpose beyond its initial purpose. We inquired into the intent behind the modifications. In addition, we asked how and what they would like to see change in their tools.
(3) **Social norms & community perceptions.** We asked participants about their perceptions of the current state of accessibility for disabled artists. We inquired about the role tools play in accessibility and what artists consider important for access and artistic expression beyond the use of tools.

3.3 Data analysis

We conducted a reflexive, inductive thematic analysis [7] on the anonymized transcripts and written interview responses. First, all authors familiarized themselves with the data to develop an initial code book. After a discussion of these initial codes and patterns, the first author then went back to code all participant interviews. All authors met across a month to iterate on and refine our final six themes. Our three research questions and the lens of crip technoscience guided the analysis.

3.4 Positionality statement

The research team includes researchers with disabilities, researchers who maintain art practices, and researchers who are artists with disabilities. The first author is an artist interested in accessibility because personal experience has taught her the importance of putting accessibility at the foreground of designing technologies, while the second author is a disabled artist with direct personal experience related to the themes explored in this study. Our artistic perspectives and lived identities inform how we approached participant interviews and shaped our interpretation of the data. At the same time, the research team consists of individuals with privileged backgrounds (US-based academics who are white or Asian), which influences our interpretations of the results.

4 Findings

We found that artists with disabilities considered tools that fulfilled their basic needs as integral to their art practice, moreso than modifying existing tools (RQ1). Disability influences artistic processes by highlighting the constraints and opportunities of the body, and artists were motivated to create art about their disabilities in a way that was accessible to and in solidarity with disabled audiences (RQ2). Lastly, considering an expansive definition of creative tools as detailed in Section 4.1, artists navigated several sites of frustration yet opportunity in their interdependent network of tools (funding, space, and representation) (RQ3).

4.1 Tools as interdependent relations

CST research has historically been concerned with creating tools that technically innovate novel ways of creating artifacts [20]. However, in learning from artists with disabilities, we adopt an expansive definition of what a creative tool can be.

4.1.1 Tools for basic needs. When thinking about how to make art accessible to artists with disabilities, researchers and designers often think increasing digital access through technological innovations [49], such as creating a universal design [36] for an online tool or a grip on a paintbrush [14]. All participants described using tools not typically labeled as art tools but directly connected to their artistic practice. These tools fulfilled daily needs that enabled access to their creative work or formed part of their artistic process. We identified three categories of tools that supported participants in meeting basic needs essential for their artistic practice.

Constraints of physical spaces. Regan Linton is a theater director and wheelchair user. She described working with a group of university students to design a personalized shower chair. She explained that the shower chair "seems like an ancillary thing to creating the art" but it is important because "if I can't be at the place where I'm needing to do the art and have a way to shower and use the bathroom then I can't be there. So it's actually a very important tool for me." The shower chair is a tool specifically designed to help with a daily task, which in turn supports performing tasks related to her art.

Alexandra "Alex" Friedman is an artist that works with glass, plastic, and ceramics to create objects who is autistic, has ADHD, and faces chronic pain. Due to their disability and medication, they are extremely sensitive to heat. Before entering the glass-making studio, known as the "hot shop," they must prepare their body. Their routine includes using a prescribed cooling spray, stretching and eating a lot before they enter the studio, and bringing Tylenol and Advil for use as needed. This body preparation routine functions as a tool that makes working in the glass studio accessible and sustainable for Alex.

Mobility aids. Anthony Tusler is a photographer and wheelchair user. Anthony emphasized that his power wheelchair is a tool for him to accomplish his daily tasks and be able to do his photography. Before a power wheelchair, he wore out his shoulders using a manual wheelchair because, as he stated, "shoulders were not designed to push wheelchairs." His wheelchair supports his art practice by holding photography supplies and allowing him to navigate photography locations. He stated, "I just love the fact that since I use a power wheelchair, I can just carry all kinds of stuff [...] flashlight and screwdrivers and pliers and all kinds of stuff." Additionally, Anthony highlighted an ergonomic camera strap as an important tool in his art practice, as it enabled him to comfortably wear the camera on his body.

Riley Cerabona is a theater director who emphasized the importance of addressing their physical movement constraints in their art practice. Their work requires movement as they practice "hands-on" directing, but their body is easily taxed due to their disability. They cited a music stand as a crucial tool to hold their script during the taxing and non-stop movement of directing.

Flexibility in work modality. Lisa Sniderman, who is "an artist, playwright, a co-composer, a producer, and a disabled artist advocate," works from home due to health risks associated with her compromised immune system. Because of fatigue she experiences, she takes short naps or breaks during work. She viewed these breaks as a tool that allows her to get through a day working as an artist.

Regan explained that one of the most important tools she uses is an "intangible one [...], interpersonal in terms of like building into the ethos that you're setting for a process and saying we want to make sure there's some flexibility here, so that if somebody has something health-wise come up, or if somebody has a need that they express, we have the flexibility to adjust and try to meet that need." This is in contrast to the classical, rigorous approach in film and theater where people who did not show up could not be part of the production. Regan described that flexibility is a tool that ensures that disabled artists can meet their personal needs so that they can show up for their work.

Overall, participants described tools designed to support access to daily tasks, physical spaces, or specific disability-related needs as directly connected to their work as artists. Artists with disabilities

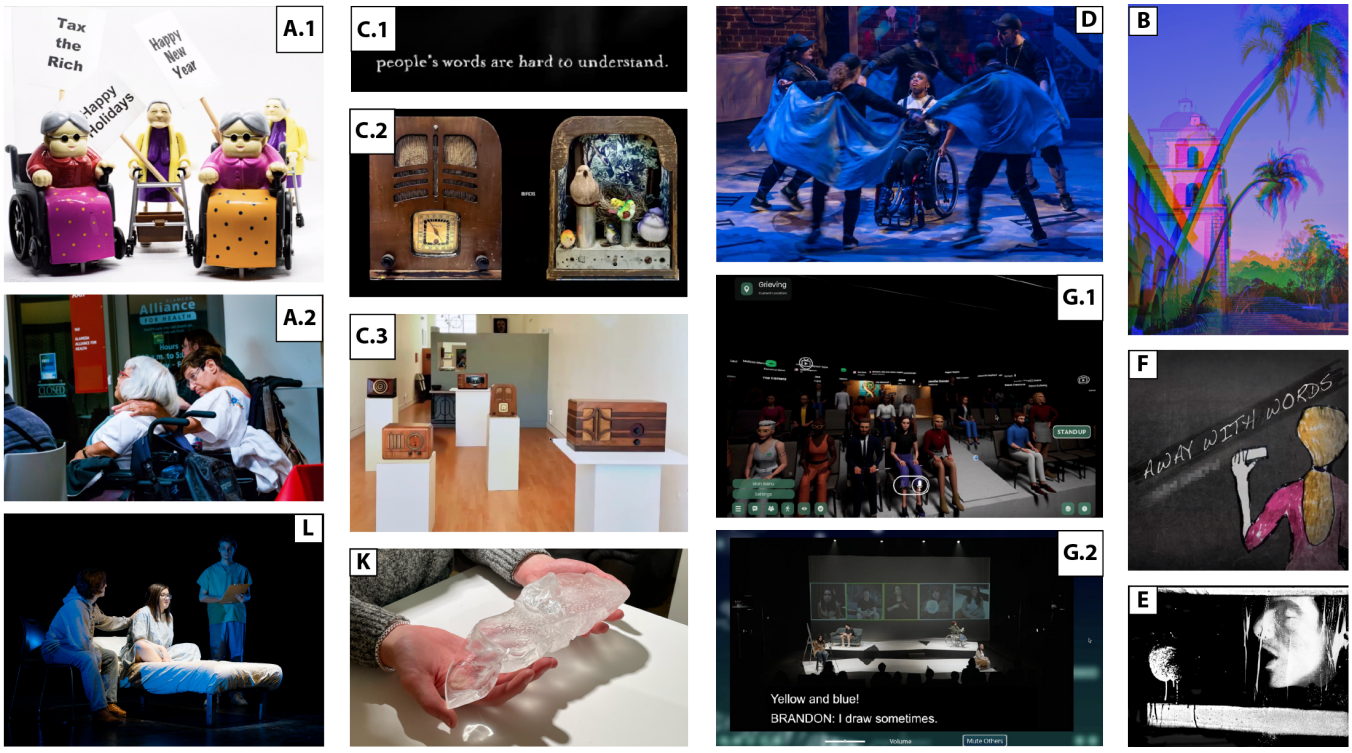

Figure 1: Artwork created by some of our participants. A.1-2 by Anthony Tusler, B by Ali Shahrouzi, C.1-3 by Olivia Ting, D by Regan Linton, E by Kurt Weston, F by Participant F, G.1-2 by Lisa Sniderman, K by Alex Friedman, and L by Riley Cerabona. All artwork used with permission.

teach us that the scope of what is considered a tool should encompass mundane encounters and interdependent networks that make art-making possible.

4.1.2 Artistic tools beyond artifact production. Participants mentioned tools that sometimes defied the norms of what are usually considered "creative tools," as they did not directly deal with artifact production. For instance, Regan described Google Forms as an important creativity support tool to survey cast and crew members about their accessibility needs.

Ali Shahrouzi is a fine art photographer with cerebral palsy. Ali described working with a human assistant in his photography practice (Fig 1B). He instructs an assistant to set up his tripod, light meter, and camera. He then guides the assistant on when to trigger the shutter and how to use photo editing software. In line with crip perspectives on interdependence [3], Ali expressed viewing his assistant as a crucial part of their creative practice.

When asked about the main tool in their practice, Alex stated, "Other people. [...] I think community and other people are my greatest tools because in a community one can ask for help and bounce ideas off people." They also said community helps them follow through with their project ideas because telling someone else, "Oh, what if you do this or this or this?" means they are "more likely to actually finish."

These accounts expand traditional definitions of artistic tools by highlighting the importance of interpersonal resources in creative practice. For disabled artists, accessibility to creating material artifacts involves more than technological innovations. Their practice depends on the systems, relationships, and values that make creative processes inclusive and sustainable.

4.2 Modifications of tools

We define modifying a tool as subtracting from or adding to an existing tool, combining tools together, or using a tool other than its intended purpose—*misusing* [44] a tool. We inquired into how participants' disabilities inform their modification of tools.

4.2.1 Rejecting the notion of "adapting" tools. Often, modifying tools in a "disability technoscience" lens means adaptive or assistive technology that supports a person doing a task in the way the tool was originally designed for—assuming if a tool is not adapted, the disabled person would be limited by the tool [14]. Bringing this assumption into art, one might wonder how disabled artists adapt their art tools to enable their art practices. Almost all participants reported they do not "adapt" any art tools because of their disability.

Ali stated, "I don't make any alterations to any equipment. I use whatever other photographers, and printers use." Riley mentioned "I don't know if I've built or altered anything in terms of my art practice. I've built and adapted things for accessibility in other areas of my life, but my art mostly comes from me, from inside me. There's less of a need to alter external things."

Lisa, who is writing a musical, collaborates with a team to create accessible theater experiences for individuals who cannot attend traditional live, in-person, theater experiences. While her work

reflects an adaptation of the theater experience itself, she noted that she does not use any "adapted art tools" to create her work.

While participants did not report that they *adapted* tools, we observed examples of creative modifications that can be better understood as *tinkering* [75] or *hacking* [23] within their art practices, rooted in crip maker traditions.

For example, Sam Smith is a musician and visual artist with visual impairment due to Optic Nerve Atrophy and hearing loss. Sam learned to read and write using a closed-circuit television system (CCTV). He described that he now utilizes this tool for drawing, as it helps him achieve precision and color accuracy in his outlines. Although color CCTVs have been available for over a decade, Sam prefers the traditional white-on-black display, stating, "It's always been easier to see."

Participant J is blind and practices musical performance, composition, and the use of music technology. They reported modifying their synthesizer by swapping out knobs depending on the musical context. For instance, they change the size, shape, or texture of the knobs to provide distinct tactile feedback suited to different genres or compositional goals. These adjustments optimize the tactile interface, enabling precise and intuitive non-visual navigation of the instrument. We frame these actions as forms of *tinkering* or *hacking* to respect participants' own perspectives and avoid recharacterizing their experiences as "adaptation."

4.2.2 Misusing tools for artistic intent. Despite stating they do not adapt tools for their own practices, participants reported modifying and *misusing* tools beyond their intended purpose to better suit their artistic vision—a process in line with those of fine artists [45]. Kurt Weston is a legally blind photographer. Kurt described that he used a scanner to create a series of self-portraits that "represents the physical, emotional, and psychological weight of sight loss. They present the viewer a glimpse into what I see with my impaired vision" (Fig 1E). Kurt chose a scanner instead of a camera due to its limited depth of field, emulating his own vision.

Olivia Ting is a hard of hearing multi-media artist. Olivia described distorting captions on a video project (Fig 1C.1) to play around with the idea that "when you put on your glasses, everything becomes crystal clear, but that is not the case with a hearing aid." Participant H is a poet and painter who is autistic and has anxiety. Participant H said, "I have a couple of paintbrushes that have broken, but I use them for a different tool." Influenced by both their anxiety and racial identity, Participant H misused these paint brushes by salvaging them for their other functional affordances, such as using the handles to pry open paint lids.

Participants misused tools not due to an access limitation, but because intentional misuse enabled them to express a particular perspective or message related to their disabilities, in line with themes of crip technoscience.

4.3 Emphasis on the body

Participants framed disability as an embodied epistemology and creative constraint that redefined how they made, sensed, and understood art.

4.3.1 Embodied perspective. Participants described how their physical orientation in the world shaped not only their access to artistic tools and spaces, but also their aesthetic perspective. Participants also emphasized bodily *awareness* as a part of their art *practice*—a methodological orientation grounded in the social model of disability [76]. For instance, Anthony, Lisa, Alex, and Participants H and I described attunement to fatigue, pain, and movement as sometimes interruptions to creativity, but also as enabling their life experiences which were inseparable from their creative practices. They reflected on how their bodies affect their work through the cultivation of attentiveness to sensory, perceptual, and affective experiences.

For Anthony, his seated vantage point became a distinctive visual signature. Rather than seeing this perspective as a constraint, he emphasized its affordances—a grounded, horizontal gaze allowed for new ways of composing images and framing spatial relationships. This visual language challenged dominant notions of the "correct" or "neutral" eye-levels, revealing how normative design assumptions invisibly center able-bodied standpoints. His work repositions disability not as an obstacle, but as an aesthetic and epistemological lens that he takes pride in.

This theme ties back to broader conversations around disabled identity and pride. Anthony described how his embodied gaze became a formal strategy and a recognizable mark of authorship—something to be celebrated rather than minimized or corrected. This celebration of bodily specificity recurred throughout the interviews with Riley, Alex, Participant J, and Participant I, disrupting the myth of a universal or disembodied artistic perspective.

This kind of body awareness suggests alternative ways of making that resist extractive, productivity-centered models of art production. For example, Olivia described how she is "interested in the fact that algorithms of assistive hearing devices [hearing aid and cochlear implant] are [her] sound 'realities.' " She described how her hearing aid allowed high frequencies like speech but filtered low ones like the bass line in music, showing how "it places the importance of perception of how one perceives the range of sound. It goes into the multi-sensory and spatial manifestations of sound because it is very directional because you really use your environment."

Regan also described how her creative process was shaped by an expanded awareness of her embodied experience after acquiring a spinal cord injury. "I feel like my own life and experience was expanded by acquiring a disability and having to think outside of the box," she said. "And so maybe I don't have to do drugs. I just have a spinal cord injury and that helps me expand my artistry."

When asked about motivation for working with their specific sculptural medium, Alex said, "I want to touch all the layers of paint [in a Van Gogh painting]. I want to feel the ridges of the stars and the buildings because that tells me way more about the artist's practice than just looking at it. There's so much hidden in touch. So much of glass is about how it feels and sounds. But because of the Western gallery, museum, and institutional gaze—which prioritizes sight above all else—we've lost something. We need to reclaim that." Alex is a sensory seeker and is excited for others to learn through touch. She said that her shift towards sculpture as a medium was a response to understanding this sensory seeking behavior: "I think a lot of glass artists pay no attention to the way glass feels. Their core concern is clarity and transparency, and while I appreciate the visual aspects of glass, I think what's more interesting is all the different textures it can take on. Definitely an autism thing.

[...] Let's make it touchable. Let's make it engaging. Let's make it understandable for people who can't see."

Artists' reflections signal that a deliberate recognition of embodied difference—through shifts in movement, sensation, and perception—provides a ground for artistic exploration rather than artistic constraint.

4.3.2 The body as a creative constraint. Several participants described how their bodies played an active, directive role in their creative process: not as a passive site of limitation, but as a creative constraint. This draws on understandings that constraint is not a restriction, but a generative force that shapes creative possibilities. Rooted in medical [76] and embodied perspectives on disability, participants framed their bodies—especially disabled bodies—as active agents that influence the conditions, timing, and form of their artistic work. In these accounts, the body serves as a collaborator, guiding the creative process through its rhythms, needs, and limitations.

For Riley, disability was integral to the narrative content of their work. They described themselves as the sole source material for their scripts, explaining that the unreliability of their body shaped their reliance on the mind as a tool. They said, "My body is important because my body is disabled, and disability is a big part of my identity. But at the same time, my brain is the thing that really matters." This reflection echoes long-standing tensions in Western thought—particularly Cartesian dualism [30]—yet participants often moved beyond this binary. They neither fully separated nor fused body and mind, but described a dynamic relationship in which bodily unpredictability shaped not just when art could be made, but what was made and how.

Riley described their processing of writing, saying it was "a lot of 2 AM sessions in my dorm room where I'd think, 'Well, it's time to write.' I don't know why, but past midnight my filter disappears, so I have to wait until then to write the real stuff. It was a lot of late nights writing, which is complicated when one of your arms doesn't work and the other is weak."

Riley and Participant H both pointed to a theme of the importance of the disabled embodied perspective, such as how Participant H described how they chose which paintbrush to use, saying, "I have a lot of wrist instability, and I broke my arm a couple of years ago. That means I get tired after using a specific paintbrush for too long. If I'm using a small brush for a long time, it might be easier to switch to a different one. It's about ease or practicality."

Alex spoke about how her body "decides" when it can enter into artistic labor. Glass-making, with its demands for strength, heat endurance, and prolonged precision, requires advance preparation and bodily readiness. Rather than seeing this as a limitation, Alex spoke about cultivating a sense of attunement—learning to listen closely to the signals her body sends and allowing those signals to guide her schedule and pace. "If I feel unwell, I cannot do glass. If I become more disabled than I am—which I will, which everyone will at some point—I lose access. I can no longer practice. The older you get, the more you practice, the more physically disfigured you become. So it's really like: Do you choose your body remaining upright, or do you make beautiful, cold-worked glass pieces while your spine turns into a 90-degree angle?"

4.4 Artistic motivations

How does disability impact the motivations and intent behind art practices? Participants revealed that their personal experiences shaped their motivation to create, inspiring them to share perspectives on their disabled experience with the public and make art more accessible.

4.4.1 Disability motivating accessibility in live and spatial experiences. Artists who worked in creating live and spatial experiences for audiences described that their disabilities have given them insight on how experiencing art (as an audience member) can be inaccessible, and thus influenced them to make their work accessible. Lisa has had to stay home because of her disability. This motivated her to work on a project to create immersive virtual and live theater experiences for those who cannot attend in person. "I've been home and want to bring theater to other people who also can't attend live theater," she said. Including and beyond the virtual theater project (Fig 1G.1 & G.2), Lisa said it was essential to bring the perspective of disability and center it from the beginning of a project.

Regan's shows featured disabled cast members and stories about or relating to disability (Fig 1D). Because of her own experience not being able to access stages lacking ramps, she makes sure that in her productions, actors and audience members are able to access the stage. Regan put accessibility at the forefront of her art and viewed solving accessibility problems *as* a form of creativity. For example, she identified captioning as a challenge when directing improv shows, due to the absence of a predefined script. She explored creating a "script structure" that outlines an improv show's themes in advance, allowing captions to convey overarching elements, or having a live caption writer transcribe the dialogue in real time. Regan noted that, as a disabled artist, she recognizes providing accommodations to access an art piece might not fully capture the work of art—just adding captions would not convey the full theater experience to hard of hearing audience members. Therefore, she wishes to continue to explore how to make the show experience not just accessible, but also vibrant.

When reminiscing on having doubts with their past show, Riley said, "I realized that's not really a productive way to think because I won't know who needs to see it until they do. Sometimes I'm drawn to making specific art because it feels right, and then people interact with it in their own way." For Riley, making art is about someone else viewing their art as a form of representation.

Because of their experiences with disability, disabled artists are motivated to prioritize accessibility from the very beginning of their work, rather than treating it as an afterthought. By foregrounding accessibility, they publicly emphasize its importance and challenge themselves to go beyond traditional methods, discovering innovative ways for disabled team and audience members to fully access and engage with their art.

4.4.2 Sharing perspectives from the disabled experience. All participants except Ali reported that disability informed and impacted the intent behind their art. Artists were motivated to share their experience and perspectives on their disabilities with the public, providing audiences with insight into the experience of that disability.

Kurt said, "I also want my art to inform the public about what it is like to engage with a disability." Olivia described her project called "Touching Sound" (Fig 1C). She took old radios, removed the original parts, and replaced them with transducers. Thus, the radios only vibrated instead of producing auditory noise. Additionally, she removed the radio's back panel and replaced it with a tableau that thematically matched the track the radio vibrated. For example, one featured bird recordings from her neighborhood. The back of the radio was adorned with bird figures, and it played the vibrations of birdsong. (Fig 1C.2). To interact with the five total radios (Fig 1C.3), gallery visitors put their hands on the boxes to feel the sound. Olivia described that feeling sound waves is a way for those with hearing disabilities to experience sound. The "Touching Sound" project was influenced by the artist's disability to help her audience think about interacting with sound differently.

Anthony described that, as a disabled person, he is motivated to take photos that capture disabled experiences. He takes these photos to share with both disabled and non-disabled audiences, saying about Fig 1A.2, "The photo shows one disabled person comforting another. This is at a disability memorial. Rarely do you see a disabled person comforting another disabled person." In addition to sharing the disabled experience, Anthony made art to push for increased accessibility and support for disabled individuals. Anthony's photography often captured activism relating to disability, such as his photo that combined action figures, two in wheelchairs and two using a rollator, wooden dowels, and miniature protest posters (Fig 1A.1). Photography has historically been a medium for documentation and citizen journalism, which aligns well with Kurt and Anthony's representational goals.

Music offered Participant J an alternative framework for creation rooted in refusing traditional norms and celebrating disabled ones. They said, "I noticed that the classical [music] traditions I was part of since early childhood were a lot about conformity. They punished a lot of people like me, who are disabled and nonconforming, and made us overcompensate for perceived inabilities as judged by the power structures of classical music. I burnt out from that and couldn't really do it anymore. Around that time, I discovered electronic music and noticed that a lot of the electronic musicians whose sounds I really liked used the possibility of making any sound with any equipment to express their nonconformity and marginalization. That's something I want to do as well." Participant J saw their artistic practice as a response to or in dialogue with their disability.

Just as any artist may create art to influence their audience's perspectives and comment on culture, artists with disabilities create art to bring disabled experiences into conversation for both disabled and non-disabled audiences. We observed their motivations align with the crip technoscience orientation of innovating at the margins.

4.5 Frustrations

When asked about frustrations with their tools to understand how these might prevent access, participants instead described access barriers as relational and systemic.

4.5.1 Structural support and funding. Participants' accounts highlight structural factors that determine who can participate in creative work. Financial support emerged as a particularly crucial form of access—often making the difference between being able to create or not at all. Participants expressed frustration that this form of access is often limited or difficult to obtain, particularly for disabled artists.

All participants pushed back against assumptions that access is simply about accommodation. Instead, they emphasized that meaningful participation often hinges on financial support. In HCI and adjacent tech-art fields, the expectation of salaried stability or institutional resourcing contrasts sharply with the economic realities facing many disabled artists.

Lisa emphasized the importance of receiving a grant for her recent project, explaining that with financial support, she was able to "explore and try different things without being tied to a performance." She explained that grant funding secured through her primary collaborator was especially significant, as it signaled that institutions are beginning to place greater value on disabled artists.

Regan noted that working as a disabled artist came with significant financial costs. Her disability required covering medical expenses and paying for essential technologies, such as her own wheelchair. Traveling for theater work also added financial strain, especially when inaccessible public transit forced her to rely on more expensive options like taxis.

Disabled artists' accounts display how "showing up" incurs invisible costs—transportation, personal care, physical exertion, or the ongoing emotional labor of advocating for access. Funding was described as a vital enabler of creative engagement. Specifically, access to grants enables and empowers disabled artists, and disabled artists teams, to create their work.

4.5.2 Inaccessible artistic spaces. Artists expressed collective frustration with accessing artistic spaces (as discussed in Section 4.1.1). Participants repeatedly framed access as the ability to "show up"—to galleries, rehearsals, performances, and informal community spaces—the very contexts where art is made, shared, and sustained. However, showing up was often hindered by fatigue, inaccessible transportation, the physical demands of navigating building environments, and structural exclusion of different neurotypes or mobility devices (e.g., wheelchairs physically not being able to enter venues).

For example, Participant I, an actor and "theater-maker" with a developmental disability, shared frustrations around social expectations during breaks on set: "I was in a short film recently, and the way community is built in acting spaces is through breaks—like 15-minute breaks or lunch breaks. During those times, everyone socializes, and that's how they bond. But I'm usually so exhausted from working that I want to spend my break alone, maybe on my phone. The issue is that I've been told I come across as aloof or like I don't want to be there... I wish I had a better way of communicating that I do want to be there, I'm grateful, but I genuinely need downtime. Socializing during breaks isn't a break—it's more work."

For Participant I, presence meant being allowed to step back as much as to step in—a reminder that access must also account for boundaries, rest, pacing, and fatigue. This perspective was echoed

by Anthony, who said his frustration with tools was not the tools themselves but "my lack of energy more than anything else."

Importantly, this critique was not siloed by disability type. Physically disabled participants noted that many "accessible" venues still lacked accommodations for sensory or cognitive needs. Meanwhile, neurodivergent artists expressed frustration that physically accessible spaces often remained hostile to their modes of processing and interaction. This mutual recognition gestures toward a politics of cross-disability solidarity, where access is understood as a shared and evolving responsibility rather than a fixed checklist [65].

Furthermore, Participant J, a blind electronic musician, vented frustration about closed-source software spaces, saying, "[The future of accessibility will] probably come from open-source projects. I don't see companies doing anything meaningful. Change will come from researchers, disabled creators, and small-scale initiatives. But it'll be slow."

These reflections on presence, representation, and support point toward a relational model of access—one grounded in interdependence, mutual accountability, and the political demand not merely to be included, but to belong.

4.5.3 Representation & politics. For some participants, presence also held a representational and political charge. Riley emphasized, "I do think my art is political because disabled people being on stage is inherently political. A lot of people treat disabled people as invisible, and putting them on a stage directly counters that. My art is also political because it talks about dying, and death is political—especially when it results from a lack of research or medical tools. Government funding decisions about research and treatments are political. My work is political, but not because I'm trying to make a statement. It's political because these people existing is political." In a cultural context where disabled bodies are either erased or cast as tropes, occupying space visibly as a disabled artist disrupts dominant narratives and asserts both existence and authority.

This reframing of representation aligns with scholarship about media in disability studies [23, 67], which critiques not only the underrepresentation of disabled people, but also the constrained ways they are permitted to appear. As Riley pointed out, being visible on one's own terms—as both disabled and as an artist—is both symbolic and strategic. It asserts the legitimacy of disabled perspectives within aesthetic, institutional, and cultural discourse.

Anthony echoed this stance, saying, "What I would like to see is more recognition from both the disability communities, but also from the mainstream galleries and other ways that art is promoted for disability related art. I would like to see—what any artist wants—is more support, more money, and more venues showing our work."

While disability identity brought comfort, joy, and empowerment, it also surfaced points of tension and contention. Anthony, Olivia, Regan, Kurt, Sam, Lisa, Riley, and Participant J all shared a desire to carve out space for future disabled artists—by producing art that reflects disability experiences and actively resisting ableist narratives. These aforementioned participants voiced discomfort with being seen as "inspirational" in ways that spotlighted the structural barriers they face, a phenomenon commonly referred to as "inspiration porn" [82]. For instance, Participant J described, "[my disability] has made me more resistant to being a public face. There are blind people who dedicate themselves to blindness advocacy, disability rights law, or activism. I now know I don't want that for myself. I just want to be a blind person who makes art and exists."

5 Discussion

In our findings, we observed that artists with disabilities have the advantage of having non-normative perspectives on the world due to their disabilities: for instance, through photographing in a wheelchair, or interpreting sound through a cochlear implant. One way fine artists shift power to themselves is through getting audiences to adopt their non-normative perspectives [46]. Both the experience of producing art and the experience of disability are about *seeing differently* to open up knowledge both defined by, and in countenance to, existing norms.

By focusing on the perspective of artists with disabilities and their use of tools, we surface ways in which norms are imposed through common CST research practices. In our discussion, we present ways in which researchers can expand the norms through considering a broader definition of tools that relate to art practices, embracing body in its entirety as part of our engagement with art, and expanding from the tools-centric focus of CST contributions.

5.1 An expansive definition of tools

Our interviews revealed that participants prioritized tools that meet their basic disability-related needs over "art tools" with added ADA (Americans with Disabilities Act) features or assistive art tool technologies tailored for them. We see similar threads in the works of Hsueh [33], Barbareschi and Inakage [2], and Kafer [40], blurring the lines between artistic, assistive, and everyday tools: each describe ways in which everyday tools and assistive technology can contribute to new forms of agency and expressiveness for artistic production. Additionally, aligning with the interdependence framing [3], disabled artists emphasized the value of interpersonal resources in their creative practices, noting that collaboration and support play a crucial role in helping them ideate and or execute their work.

Participants' expansive definitions of what counted as "art tools" challenge the focus in HCI research on creating universally designed CSTs as the key to making tools accessible to disabled artists [20, 66]. Instead, this definition highlights the need to support disabled artists by addressing their fundamental requirements. Artists pushed back against "adapting" existing tools for their practice, which also pushes against the idea that disability inherently limits their ability to use creative tools without accessibility features. This could be seen as resistance to the social model of disability [33, 53, 58]. While this model acknowledges society's role in contributing to accessible barriers, it takes on a lens of helping people "fit in" to the norms of society. Instead, we propose CST researchers to consider the perspective of expanding and challenging assumed norms.

A potential step toward this vision might be for tool designers to be more explicit about the goals of the tool, and through these goals better articulate embedded norms. In Table 2, we take inspiration from Shneiderman [68]'s design principles for CSTs and consider how they can be reframed with this more expansive definition of creative tools to embody a broader set of norms. For instance, we may critique the first principle of "support exploratory search" to

expand the search to include these broader definitions of creative tools.

As many participants mentioned, core to expanding norms would be understanding the impact of tools for basic needs on artistic practices and considering them in this search. Additionally, such a search would not assume tools to be technocentric, but might consider other dimensions of a creative environment: physical location and space, mobility within the space, and what makes users feel grounded in the space. Drawing on Jones et al. [38]'s perspectives of "art worlds" as opposed to isolated artists, who are the people and what types of voices are contributing to the art? We encourage CST researchers to re-examine norms embedded in what is considered a creative tool and through this perspective, expand the types of tools (or non-tools) they can design to support artists.

5.2 Supporting making with the lived body

A unifying thread in our interviews is that the body is not just the executor of creative ideas but also an active source of insight, constraint, and inspiration. We use these observations to push back against CST design methods that emphasize symbolic, language-oriented, and predominantly visual interactions. Some of our participants rejected mind-body dualism [29] and showed that their crip bodies were sites for embodied knowledge "grounded in every day, mundane experience" [18]. By treating the body as a creative constraint, artists with disabilities were already practicing somaesthetics [31, 69], centering their lived, unique bodily experiences to counteract technosolutionism in an inherently political act [48].

What does this perspective mean for how researchers design creative tools? The emphasis artists with disabilities had on their lived, mundane bodily experiences showed that it was inseparable from their artwork. While past research has emphasized how thinking arises from doing [41], or how materials talk back in the creative process [34, 35], we saw instances of treating the body as a *material*. In addition to receiving and understanding material talk back, the body also talks back—such as the creative practices of our participants who were chronically ill and let their body dictate when they were ready to make. We encourage CST researchers to design for lived bodies rather than abstract users [28]. For instance, a CST that takes bodies seriously might include built in encouragement for breaks, adapt to users' energy levels, or reflect on users' bodily feedback (like tension or posture). It would not take input devices for granted—instead of assuming visual-manual interactions through tablets or screens positioned at arm's length, it could invite multi-sensory exploration. We also saw this in our participants' artistic practices, with many of them engaging in multiple media across their forms of art. Inputs where lived bodies are abstracted in favor of hands and minds that solely process all interface information [10] are a disservice to the rich and unique artistic processes of artists with disabilities. We encourage CST researchers to alter and re-examine their input norms to not just accommodate but to find joy and playfulness in practices that highlight the constraints and insights of individual crip bodies.

5.3 What is and isn't the role of a CST researcher in making accessible tools?

All participants expressed that being an artist requires financial support. A career in art already often meant limited financial support, but disability imposed challenges that might incur greater financial needs. In addition, disability status may impose bureaucratic barriers in raising financial support for art, such as not able to accept payments in order to keep disability insurance. This takes a stance against technosolutionism. New art tools that solve access issues are not at the forefront of what artists need. Access issues, such as overcoming financial barriers imposed by being a disabled artist, are fundamentally tied to art making. In addition, our findings revealed focusing in on removing barriers for disabled artists is essential to disability communities and the general public. As many disabled artists focus their work on creating accessible art experiences for disabled people, supporting these artists to execute their projects often results in the creation of accessible experiences and directly supports awareness and discussions around accessibility.

In the spirit of bringing more perspectives into the conversation around design of art tools, we encourage CST researchers to consider the pathways as well as potential roadblocks to enabling disabled artists to participate. As mentioned by Mack et al. [50], this includes researchers proactively anticipating needs and accommodating unforeseen barriers to entry at every stage of the human-centered research process. Researchers should think through and plan how they can ensure that participants can "show up" physically, emotionally, logistically, and financially to engage with the research activities. Though not specific to disabled artists, Devendorf et al. [16] also present ideas around creating an environment of mutual benefit in cross-disciplinary collaboration. In particular, they explore balancing the needs of artists and researchers in artist residencies.

Our own participants requested accommodations such as email, instead of oral interviews and emphasized the importance of financial compensation for their time. It is important for researchers to consider how to ensure that participants are compensated for their time in a way that best supports them. For instance, CST researchers can use their institutional privilege to offer participants payment options in the form of providing gift cards, gifting new technology, or even purchasing their art when direct payment is not a viable option due to government bureaucracy. Following Mack et al. [50], we call for CST researchers to reconsider and reinvent the norms embedded in common research practices. Through these practices, we encourage CST researchers to avoid technosolutionist tendencies and instead consider at each stage if designing a "tool" is the appropriate solution in a situation. Do we need another tool, or do we need political support, such as bringing the power of our institutions behind artists with disabilities?

6 Limitations

Despite the diversity of disabilities, ages, and genders of our participants, our study is limited by sampling bias. As we cold-emailed every individual on the California Arts and Disability Resource Center artist directory [1], the self-selected participants who responded (Anthony, Ali, Olivia, Regan, Kurt, Lisa, and Participant F) were more likely to want to reach out if they wanted to talk about their

CST design principle	Sample research questions
Support exploratory search	• How might we expand searches for related work to include these broader definitions of creative tools? • What additional artist perspectives aren't traditionally considered in needfinding and design processes that could inspire ideas? • Outside of immediate creative workflows, what socio-technical factors influence artistic practices? • How can we avoid functional fixedness [21] in design tools or inspiration and learn to see other possibilities of use based on existing affordances?
Enable collaboration	• Do communication channels enable all participants to engage and contribute? How can they "show up?" • What other roles and forms of collaborations could be considered (i.e., through a lens of interdependence)? • Is the community and environment safe for voicing diverse perspectives to enable tighter/interdependent forms of collaboration? • Are basic needs considered in tools for facilitating collaboration? • What artist perspectives are missing from the collaboration?
Provide rich history-keeping	• What modalities of history-keeping allow more participants to engage? • Can embodiment practices, such as a "mind palace", play a role in tracking the history of an artistic process for pluralistic practices?
Design with low thresholds, high ceilings, and wide walls	• When considering thresholds, ceilings, and walls to creativity, are requirements around basic needs considered? • What does a low threshold mean for a disabled artist's practice? A high ceiling? A wide wall?

Table 2: Taking inspiration from Shneiderman [68]'s design principles for CSTs, we map his proposed design principles to potential research questions raised by insights from participants in our study.

disabilities and had some history of being involved with disability advocacy. The list itself was biased toward Californian (though not all artists resided in California), white, and older artists. The other participants recruited through convenience sampling (H-J, Alex, Riley) skewed younger in age and were also predominately white. As all participants were based in, or near, major US metropolises, they might have had the material means and social support systems in place to engage in crip technoscience in the first place.

Our openness to recruiting any participant with any disability working in any medium, while still generating converging themes, also meant we could not treat any single medium with singular attention. Our methodology of conducting semi-structured interviews remotely was also limited. We could have gleaned more insights through contextual inquiries that involved going into artists' studios or observation of their artistic practice. Finally, our findings would also be strengthened through the perspectives of disability and arts-based community organizations like the NIAD Art Center [57] or the Creative Growth Art Center [12]. We acknowledge building community partnerships often takes more time and trust than individual relationships for compensated interviews.

7 Conclusion

This paper centers the experiences of artists with disabilities to inform creativity support tool design. Toward tool usage and misusage, we learned how artists with disabilities have an expansive interdependent network of tools (and people) crucial to their art making; our participants did not solely identify tools that result in new artifacts. We learned that while artists with disabilities do not perceive themselves as adapting their tools to overcome functional limitations, they did misuse tools when it matched with their artistic intent. Toward how their disabilities impacted their art, we learned that artists with disabilities continually negotiate bodily boundaries. They are motivated to create art about disabled experiences accessible to and in solidarity with other people with disabilities. Toward supporting the practices of artists with disabilities, we learned about several sites of frustration surrounding access, and that rather than a new tool, artists would rather see political and financial support. From their ingenuity, we offer suggestions for CST researchers on how to build not necessarily more "accessible" tools, but tools that support the "practices of critique, alteration, and reinvention" of crip technoscience.

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A Appendix

Participant	Website(s)
Anthony Tusler	https://aboutdisability.com/
Ali Shahrouzi	https://www.alifineartphoto.com/
Olivia Ting	https://www.olivetinge.com/, https://beethovensbox.cargo.site/, https://www.instagram.com/oting1,
Regan Linton	https://www.reganlinton.com
Kurt Weston	https://www.kurtweston.com/
Sam Smith	https://www.facebook.com/SAMSMITHSPERFECTMESS
Lisa Sniderman	https://thegrievingproject.com/musical, https://www.instagram.com/grievingproject, https://www.instagram.com/vitanovamusical
Alexandra Fried	https://alexandrafayefriedman.com/
Riley Cerabona	https://www.rileycerabona.com/

Table 3: De-anonymized participants' portfolio websites.