

# **Metaeugenics and Metaresistance: From Manufacturing the ‘Includeable Body’ to Walking Away from the Broom Closet**

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## **Abstract**

*The governance of rights is a complex project of exercising ethical discretion in a systemically unethical society. This paper investigates the efficacy of rights as governable by exposing tensions within and between the Convention on the Rights of the Child and the Convention on the Rights of Persons with Disabilities. Grounded in a critical disability studies perspective, I question the possibility of respecting disability as a natural part of human diversity while simultaneously proposing that disabled children have a right to intervention. Who governs the definition of “health,” of “development,” of “access,” or of “best interests”? I question the function of rights-based discourses in a global culture that has yet to fully abandon the project of eugenics. I present disturbing relations between researcher and subject in examples of technologies for autism intervention as a challenging site of analysis for the ethics of these interventions. I call us to question who truly benefits when we engage in the production of ‘includeable bodies’ rather than the deconstruction of exclusionary environments.*

*Keywords:* children’s rights, critical disability studies, cyborg theory, disability rights, eugenics

## Introduction

On August 2, 2018, NBC News' Health website published an article praising Google Glass and researchers at Stanford University for the creation of a wearable app that may improve eye contact for children with autism (Scher, 2018).

*In preschool, [he] struggled socially with other kids. One hit him in the face with a rubber mallet and another in the shoulder with a metal shovel.*

*"He didn't see it coming," [she] told NBC News. "When you don't look kids in the face, you can't see their reactions or know what to expect."*

*When he was 5, he was diagnosed with autism.*

*[N]ow 9, [he] started working one on one with a therapist using applied behavioral analysis, a technique to improve social behavior, but [his mother] saw little progress.*

*"Nothing really changed," she said. "Until Google Glass."*

The rest of the article goes on to describe the project, dubbed "Superpower Glass," which provided families with a Google Glass device to take home so that their child could practice built-in games for facial expression recognition. However, this opening story does not tell the tale of a boy who fails to make friends because he cannot interpret others' emotions. This story is about a very small child who, when repeatedly assaulted by his classmates, was sent to therapy as though something were wrong with *him*. The assaults are presented as a natural and inevitable consequence of his autistic inattention to faces. The headline reads "Google Glass offers hope to kids with autism" — but hope for what? Hope to appease others so that they might avoid being assaulted? And really, *cui bono*? Who truly benefits when autistic children "show improvement in making eye contact"?

In this essay, I attempt to disentangle the web of power that undergirds scientific inquiry into assistive technology for autism intervention. Caught in this web is the autistic person, whose status as 'user' is foreclosed by the production of devices designed for consumption by parents, caregivers, therapists, and teachers. These technologies are not "assistive," and nor do they produce "access" — they are normative prostheses that command conformity in order to, supposedly, access "the world,"

The paper begins with an exploration of the multiple connections and conflicts within and between the Convention on the Rights of the Child (CRC) (UN General Assembly, 1989) and the Convention on the Rights of Persons with Disabilities (CRPD) (UN General Assembly, 2007). Through a critical disability studies lens, one that foregrounds disabled embodiment as a valid and valuable site of knowledge, it is possible to identify statements in the CRC and CRPD that are both self-contradictory and intra-contradictory, particularly when considering the disabled or debilitated child (Puar, 2017). A particularly nuanced point of conflict manifests between the right of persons with disabilities to assistive technology and the right of the child to “healthy” development. I then describe the discursive fields of curative (Kim, 2017) and normative (McGuire, 2016) violence that are derived from a (meta)eugenic vision of a future without disability. Next, I demonstrate how these forms of violence are reproduced when assistive technology is deployed as an intervention for autism, reflecting on how the dominant areas of research inquiry interact with recent findings about the source and nature of autistic suicidality. I present three examples from assistive/interventional technology for autism. These examples demonstrate why we need to cultivate a practice of attention to participant resistance as a defense against violence in research. Finally, I explore the dialectic between cyborg becoming and cyborgification, drawing on the recent work of Hamraie & Fritsch (2019) and Nelson, Shew, & Stevens (2019) on Crip Technoscience to build an understanding of how assistive technology can and has been used to surveil, control, shape, and warp disabled bodies at the same time it has been embraced by disabled people with the means to choose their augmented embodiments.

### **The Right to Futurity**

In Article 3 of the CRC, adults are commanded to consider the “best interests of the child” in matters of budgetary, legal, and policy decisions (p.2). Article 4 declares governmental responsibility for ensuring that the rights of children are “respected, protected, and fulfilled” (p. 2). In Article 6, children are guaranteed the right to “develop healthily” (p. 3). But how are the “best interests” decided? Who ensures that rights implementation (or “fulfillment”) is not in conflict with the intention of the right itself? How does Article 6 sufficiently separate the child’s right not to be debilitated through environmental violence and war, from the disabled child’s right to autonomously resist (often painful and violent) normalization? Who defines “healthy development”? Who ensures that racial, ethnic, gender, sexual, and disabled differences are not

implicitly coded as “unhealthy”? Who ensures that children are protected from compulsory assimilation?

Article 3 of the CRPD declares the principle to respect and accept the difference of disabled people as a natural part of a diverse humanity (p. 5). In Article 7, children with disabilities are assured that adult decision makers will take the “best interests” of disabled children into account (p. 7). Article 15 is intended to protect disabled people from medical and scientific experimentation without their free and informed consent (p. 10). However, children's consent to experimentation is controlled by their parents and caregivers, who have been granted the power to determine the “best interests” of the child. It should be noted that many experiments are done on disabled children that are refused by disabled adults. In Article 26, disabled people are guaranteed the right to (re)habilitation, including intervention that supports future employment, as early as possible (p. 15-16). How do we guarantee the right to work when such work may be in conflict with Article 17's respect for the physical and mental integrity of the disabled person (p. 13)? Does this integrity mean a person's naturally occurring embodiment? Or is it meant to declare a right to normalization?

These questions emerge from the gaps between the various articles of the CRC and the CRPD, where there is no footnote, no foothold, to give us purchase in this landscape of “semiotic stalemate[s]” (Roscigno, 2019). When it comes to children, disabled people, and especially disabled children, there is no policy in place for grappling with the structural and institutional power differentials at play in determining “best interests,” “healthy development,” and “fulfillment.” Disabled children are defined by an ableist society as already unhealthy, or off track — this disruption in their “healthy development” is seen to threaten their future “fulfillment.” Therefore, it is in their “best interests” to be (re)habilitated at all costs, regardless of protestation, complaint, advocacy, or testimony to the contrary.

How do we protect and uphold disabled people as natural manifestations of human diversity while simultaneously enforcing their right to integration into systems of capitalist production that may be inherently at odds with their bodily and mental integrity? Many disabled people neither can nor desire to overcome the structural and systemic barriers that preclude them from participation in capitalist forms of labor and value-making. Their lives have inherent worth and validity, nonetheless. How do we ensure that we respect the disabled person's right to life while also refusing to naturalize the debilitating conditions of environmental racism and war that

disproportionately produce disability intra- and transnationally? Disabled children have as much a right to life as children in colonized nations have a right to not become disabled through colonial violence (Puar, 2017). How do we promote disabled children's "best interests" in the absence of an understanding of disability as culture and culturally mediated (Acevedo, 2018; Kasnitz & Shuttleworth, 2001)? How do we imagine disability as culture without colonizing transnational contexts with Western figurations of disability pride and overcoming? I ask many questions here, and not all will be answered below. I ask these troubling questions, which are in no way meant to be rhetorical, because I hope they will be taken up by others as we strive to protect each other from the harms our interconnected societies have naturalized.

Alison Kafer discusses how the political centrality of the Child— always white, cisheteronormative, and able-bodied — serves to seed a pattern of "endless deferral," in which attention and accountability to the here and now are sacrificed at the altar of better, smarter, stronger, more resilient, healthier, able-body-minded futures (2013, p. 29). This 'futurity' drives prenatal screening, selective abortion, sterilization, institutionalization, detection, early intervention, cure, surgical normalization, behavior modification, and so on. Futurity makes it easy to imagine the "best interests" of the disabled child as the right to intervention, (re)habilitation, assimilation, and normalization. It is in the context of this futurity that the discourses of metaeugenics take hold.

### **Metaeugenics: the drive toward curative and normative violence**

In Ursula K. Le Guin's *The Ones Who Walk Away from Omelas*, Omelas is a society of utopic happiness and contentment. This contentment is built upon the suffering of a single child, captive in a broom closet. Everyone knows that this is the condition of their happiness. Some find this unbearable and leave. Our society's postmodern happiness is built upon the preclusion of certain bodies from citizenship — children in the broom closet (refer to: Le Guin, 1973; Povinelli, 2011). Hospitalization, institutionalization, incarceration, migrant concentration, segregated education — we have many broom closets for many, many diverse bodies.

Transinstitutionalization was once described simply as the act of displacing subjects from one institution into another (Morrissey & Goldman, 1986). The social, cultural, and rhetorical constructions of disability can be perceived as an ubiquitous interlocking set of 'open air' institutions: systems that warp bodies to fit incomplete and incongruent definitions; structures that suspend and dangle and threaten an unresolvable precarity (access also: Haley, 2017). The

institution is always 'in transit' as it follows the stigmatized body wherever it goes.

Transinstitutionalization is what happens when we think that tearing down walls, busting down gates, opening doors, and opening borders is all that is required to do justice. You can take the child out of the broom closet, but you can't take the broom closet out of the child. Not if you can't admit it's there.

In 1921, the American Museum of Natural History in New York hosted the Second International Congress on Eugenics. Among the 'scientific' papers presented were such titles as "Harmonic and Disharmonic Racecrossings," "Hybridization and Behavior," "The Morality of Foreign Race Stocks," "The Present Status of Eugenical Sterilization in the United States," "The Morphologic Characteristics of Psychoneurosis," "Educability and Inheritance," and so on. As can be seen from the titles alone, racism and ableism have always been dependent upon and entangled with one another. One entry, "Eugenic Problems of the Slavic Race," attempts to build a case for the cost-benefit trade-off a moral superiority may have on other traits that were typically targeted as signs of 'healthy stock.'

*And to keep awake this high human instinct is the greatest and hardest task of eugenics, a task which cannot be realized without the painstaking expenditure of physical and psychophysical powers. ... Physiology and psychology showed us long ago that moral self-preservation demands an expenditure of physical energies, and even more than any hard physical or manual work. ... How much energy is needed for care of the national, racial or humanity consciousness! We might, therefore, say with full right, that a higher moral self-preservation of a nation involves a higher and bigger expenditure of physical energy. The study of such a preservation is only in an embryonic scientific stage and might be called metaeugenics. (Eugenics in Race and State: Volume II, 1923, p. 165)*

It is beyond the scope of this paper to analyze the full breadth and depth of white supremacist terror conjured by this volume. However, no doubt the excerpt above constitutes a discursive move, shifting the eugenical goalpost past optimized physical prowess, and even beyond psychological fitness, and into the realm of moral purity, and thus divinity. I have included this excerpt because, in attempting to present a progression of eugenical goals, it may actually present, as the author himself claims, a metalogic. Racial and disability eugenics are undergirded by a network of culturally mediated 'morals,' or more accurately, a conflation of

white supremacy with divine right and entitlement to define what constitutes ethics in the culling and shaping of humanity.

I thus define 'metaeugenics' as the undercurrent of cultural norms, ideals, values, and demands that warp and twist deviant bodies into conformity via a desperate drive for survival and future. Metaeugenics are deployed in the justification of curative, normalizing therapies for sexual, gender, and behavioral 'deviance.' Once overt eugenics have failed, or have been deemed unpalatable, metaeugenics take over to ensure the purity and propriety of the hegemony. Racialized, queer, disabled, or otherwise unsightly, unruly, uncanny bodies are cataloged, captured, quarantined, incarcerated, sanitized, and rehabilitated (or not). Bodies that escape sequestration and cure do so by internalizing metaeugenic demands for conformity, respectability, and exceptionalism. An institution of one. Metaeugenics are why we build broom closets.

More than the brute eugenic technologies of selective breeding and euthanasia, metaeugenics deploy covert forms of violence in support of the aim of a normate utopia. Eunjung Kim describes "curative violence" as "the exercise of force to erase differences for the putative betterment of the Other" (2017, p. 14). Kim goes on to identify that illness, disability, and deviance are politically and culturally mediated, as are what actions are deemed justifiable under the aims of cure, normalization, and purification. Anne McGuire expands upon Judith Butler's "normative violence," reckoning with how violence is codified in autism discourse as endemic, natural, inevitable, and ultimately necessary (2016, p. 10). Essentially, McGuire argues, autistic (and otherwise disabled, raced, and gendered) bodies are presumed to possess a latent or inherent violence, if not in physicality then in the implicit threat to normative entelechies. Such a threat may 'naturally' require violence to extinguish. And if that extinguishing violence also snuffs out the life of the deviant body, well, that's a tragedy, but a comprehensible and acceptable one. If this statement seems hyperbolic, I recommend perusing the list of disabled children and adults murdered by parents and caregivers, whom we remember annually on the Disability Day of Mourning (DDOM, 2019).

In illness, disability, and race rhetoric, the discourse of war naturalizes surveillance, control, containment, and attack by positioning any outcome other than normalization and assimilation as a kind of non-life, living death, or imminent death. The prospect of peace, of armistice, of ceasefire, of live and let live, is never offered. That it might be possible for people

with autism to flap our hands without endangering our future foreclosing our futurity is forever more preposterous than the necessity of our restraint. Metaeugenics govern the classification of deviance and the urgency of cure, recovery, conversion, reformation — and bind them to hegemonical fantasies of a future without disability, race, and queerness. In the following section, I explore ways to ‘read between the lines’ of autism research to find participant metaresistance against the metaeugenic discourses that drive these research aims. This metaresistance enables us to reimagine a future where disability exists without shame, regret, grief, or fear.

### **Metaeugenics and the Wearable Governance of Normative Childhood**

Returning to the excerpt from the NBC News story on ‘Superpower Glass’ offering “hope to kids with autism” (Scher, 2018), it is possible to read the metaeugenic forces of normative and curative violence at play in the narrative. A deviant (autistic) child is assaulted. This assault is naturalized and excused as the expected and normal reaction to his deviance. He is then subjected to a form of normalizing discipline — behavioral therapy. He is meant to be shaped into the sort of person who will not be assaulted anymore. When his relations with his peers do not improve, Superpower Glass appears, a knight in glass and chrome armor. Normalization is ‘gamified’ — cure is fun now. We do not know whether his relations with his peers have improved, but we do know that his mother perceives his gaze behavior, approximating new levels of normative, as a sign of hope and positive change. Surely now he is worthy of not being assaulted. The mother feels better, and so it is assumed the child’s future has consequently crystalized in the possibility of indistinguishability. My intention here is not to admonish the mother for her acceptance of normal gaze patterns as a positive sign for a ‘normal’ future for her child. It is, however, impossible to see this change as a hopeful one outside the larger metaeugenic discourses that shape our collective perceptions of what makes such a future possible and desired.

Metaeugenics appear endemic to the research aims of assistive technology for autism intervention. For example, in prior work, I investigated the research aims of wearable technologies for autism intervention, such as the application for Google Glass described in the NBC news excerpt above. In this survey of the wearable technology literature, I found that despite considerable interest in wearable technologies for autism, the domain of inquiry in such studies is predominantly socially normative intervention (Williams & Gilbert, 2019). Thirty



percent of the studies reviewed applied wearable technologies to existing behavioral intervention. These Augmented Behavioral Interventions leveraged wearable computing as tools for patient redirection, behavior classification, prediction, and automated discipline, examples of which are provided in the section below. Some of these studies report “participatory design” but the researchers do not consult with the children themselves. I would argue that the user of these technologies is the researcher, therapist, or teacher — not the autistic wearer. A combined 50% of the studies used wearable technologies as a platform to deliver social skill instruction and monitor and even sometimes direct gaze behavior, prosody, and conversational proximity. In this context, the autistic child is wearing the technology, but the device is in control. They are not the user, they are being used. Codified in the software are the metaeugenics of normalization: *quiet hands, look me in the eye, let me hear your voice but not like that*. Electronic marionettes pervasively and persistently nudged the research subjects toward the performative normative mean.

Metaeugenic machinations are more than just theoretical, ideological, discursive. Rhetoric is more than mere ink on paper, semiotics, aural pressure waves. Rhetoric and discourse are the flow of power through the body (Dolmage, 2014). This flow has material, physical, physiological, psychic, and mortal consequences. Researchers have long regarded the disproportionately high suicide rate of autistic people to be an inherent, innate, natural consequence of being autistic (as in Kamio, Inada, & Koyama, 2013). Relatedly, meta-analyses that investigate the outcomes of therapeutic and technological intervention classify “positive outcomes” almost exclusively as a reduction in “aberrant” behavior (as in Eikeseth, Smith, Jahr, & Eldevik, 2007) or challenging behavior (as in Muharib, Alrasheed, Ninci, Walker, & Voggt, 2019), without exploring the emotional wellness of former research participants. Reduction in “aberrant” or challenging behaviors does not necessitate the reduction of emotional or sensory distress that may have motivated those behaviors. Furthermore, the definition of what constitutes “aberrant” and “challenging” lies entirely within the power of researchers and clinicians. Autistic people have no say in which behaviors are classified as deviant and marked for correction.

In a recent study, Cassidy et al. (2018) showed that autistic adults have a 72% rate of suicidal thoughts and behaviors compared to the general population's 33%. In this study, social conformity, or “camouflaging to fit in in social situations,” as well as a number of “unmet support needs,” were found to explain this variance. Similarly, Botha and Frost (2018) applied

the minority stress model to autistic suicidality and found that experiences of discrimination and social stigma contribute to mental unwellness in the autistic population, as they do in other marginalized communities. What's more, the very concept of autism as a social deficit has been challenged in recent years by scholars, as in the work of Milton, who proposes the "Double Empathy Problem" (2012), and Sasson, who demonstrates a neurotypical predilection for rejecting autistic social partners based on snap judgements (Sasson et al., 2017; Sasson & Morrison, 2017). Given these findings, we should be worried about the role social prostheses, passing, masking, and curing 'social deficit' via normative training may play in manifesting eugenic consequences, such as the emotional despair and suicidality of autistic and otherwise 'deviant' people.

### **Reading Resistance Between the Lines**

And so, what is to be done? In other work, I argue for the necessity of community-led research and development for the ethical progress of scientific inquiry into interventions and supports for autistic people (Williams & Gilbert, 2019). Here, I argue simply for attention. In the following examples, I present descriptions of existing technologies for autism intervention, including quotes and excerpts from prior studies. I use the authors' own descriptions of participant actions to demonstrate how a participant voice has the power to puncture researcher containment via acts of microresistance. Reported by the researchers themselves, with an ironic lack of analysis as to their potential commentary on the work, these implicit defiances manifest the spirit of non-compliance that sustains disabled activism. It is my hope that researchers may come to recognize such acts as disruptive signals that demand attention, reflection, and change.

#### ***Example 1: Pervasive Admonishment and Precocious Resistance***

In 1995, an affective computing pioneer from the MIT Media Lab, Rosalind Picard, published the first edition of her book *Affective Computing*. In this book, she compares standard non-affective programs to autistic people, writing "...they will be like autistics who are also good at memorizing patterns and lists, but not good at understanding emotional significance, or at responding suitably" (p. 79). Picard then describes the potential for wearable affective devices to provide pervasive assistance to autistic people — namely, "provid[ing] repetitive reinforcement," noting the benefits of such technology over one-on-one with therapists, who are "prone to lose patience with the tedious repetition of endless situations" (p. 90).

Following this proposed design, Zakaria et al. provide a “proof-of-concept that uses smartwatch notifications to help children control their behavior without intervention from caregivers” (2016, p. 196). This is achieved via a ‘Wizard-of-Oz’ system in which haptic and visual prompts are delivered by the teacher to a smartwatch worn by the autistic student. In a fully realized system, the teacher would no longer need to intervene in self-stimulatory or repetitive behaviors, as the watch would prompt the student to self-suppress.

During testing of the prototype, the authors note several small moments of system failure. For example: “Upon hearing the notifications, he paused briefly to look for his teacher. When he realized the distance, he ignored the command and continued flapping his hands. He did not stop flapping his hands until the teacher personally intervened” (Zakaria et al., 2016, p. 203). Possibly unintended by the study authors, and apparently unnoticed, this example illustrates not merely a moment of system failure, but a moment of a resistant autistic voice. Participant C5 rejects the authority of the technology to control and constrain his bodily autonomy. Future researchers may find that, by attending to these moments of tension and recognizing them as opportunities for their subjects to become co-researchers, their design and research aims may be transformed in ways more supportive of participant self-determination.

***Example 2: Unexpected Places of Confinement***

In addition to wearable technologies, Robot Assisted Therapy (RAT) has also been a popular domain of study for technological intervention in autism research. Socially Assistive Robots (SAR) are expected to produce more consistent therapeutic interventions in social and non-verbal behavior, acting as predictable and reliable assistants to therapists, rather than as replacements (Cabibihan, Javed, Ang, & Aljunied, 2013).

In one such design of a therapeutic robot, Feil-Seifer and Mataric (2011) attempt to automate SAR interaction by classifying child reactions as either positive or negative. A large, dark gray humanoid robot with large red rubber lips, muscular arms, and clamp-like hands is mounted to a wheeled platform and programmed to orient toward and approach a child if they move more than one metre away. The authors note, “negative reactions ranged from avoiding the robot, to backing up against the walls of the (rather cramped) experiment space, to staying close to the parent without interacting with the robot” (p. 326).

Imagine for a moment that you could put yourself in the shoes of one of these children. You enter a small room with your parent and find a large human-like agent waiting for you. The

experiment begins, and this agent comes to life with the cacophonous whine and whir of servos and motors. You move toward your parent, but the robot turns and comes closer. You shout at the robot, but it has been programmed to “blow bubbles and turn in place” (p. 325) when you vocalize toward it. Startled, you drop your parent's hand and move away until your back hits the wall. But the robot is programmed to make a whining sound and come closer to you because you have left the one-metre field. You move away further, until you are forced into the corner. There is nowhere to go. You shout again. The robot blows more bubbles and spins.

This scenario is fully possible, and even probable, using only the data and design descriptions provided by the authors themselves. What is not provided by the authors is an explanation of how long a child was left expressing “negative reactions” before the experiment was stopped. Although it is noted that all participants who expressed negative reactions asked to end the experiment early (p. 326), we do not know how long they were in distress before they were able to make this request. What we do know is that approximately 100 minutes of interaction were recorded, with eight participants, for an average of 12.5 minutes each. The scenario I describe above would only take one.

Here, resistance is present in the embodied enactment of fear. The possibility of a future robot design that is more capable of producing consistently positive interactions is given priority over the present reality of a design that is causing distress to multiple participants. The future of this robot is upheld as more important than a child's momentary distress, and in fact, this distress is considered a resource to be extracted for data analysis and integration into a future system. This future system is expected to return this investment by normalizing future autistic children's social interactions through some yet-to-be-designed robotically assisted therapeutic protocol. I find myself wondering why the robot is permitted to execute such poor social skills if it is intended to deliver “social skill training ... to children with ASD” (p. 323).

***Example 3: Augmented Reality as Obfuscation of Coercion***

In this final example, it is necessary to compare the scenarios that occur in the clinic both before and after the introduction of technology. Participant resistance occurs in the before-technology scenario and is then squelched by the addition of a technological mediator. The scenarios below are unedited excerpts from the original publication.

***Scenario 1: I grabbed the fork because fuck you, Bella***

*Teachers at Pasitos use the combined blocking procedure to teach students how to discriminate between different objects. This method involves having students conduct trials in which they repeat a particular task. Each trial involves discriminating between two or more objects. Consider the following example scenario with a Pasitos teacher, Bella, and a five-year-old low-functioning student, Marley. Bella is trying to teach Marley how to identify a glass.*

*Bella starts by placing a glass and fork on the table in front of Marley. Then, Bella starts the first of 10 trials, asking Marley to grab the glass. Marley shakes his hands and moves his head from side to side, looking around the classroom instead of at the objects. During this time, Marley is off task. Bella physically redirects Marley's attention, turning his head toward the objects, pointing to the glass, and saying, "Marley! Grab the glass!" Marley grabs the fork instead. Bella grabs Marley's hand and places it on the glass, saying, "Marley! Grab the glass!" Marley grabs the glass and gives it to Bella. Bella rewards him by giving him a piece of cookie and saying, "Good job, Marley!" Then, Bella takes notes on the first trial, drawing a sad face to mark the trial as incomplete, because Marley needed many prompts. When Marley sees the sad face in his notebook, he gets angry and screams at Bella. (Escobedo, Tentori, Quintana, Favela, & Garcia-Rosas, 2014, p. 39)*

***Scenario 2: I comply with the device because it doesn't scare me like you do***

*Bella selects from the therapy manager an audio message and a circle as prompts to help Marley identify the glass. Then, Bella selects a brief video clip of Mario Bros. as a reward and activates the first of 10 trials. Bella hands Marley the smartphone ... and asks him to grab the glass. When Marley grabs the smartphone, it emits a sound and vibrates, showing the image of the glass on the top-right of the screen to remind Marley of the object he needs to grab. Marley grabs a fork augmented with accelerometers and Mobis makes a sound and superimposes a circle on top of the glass saying: "Marley! Grab the glass!" Marley sees the prompts and grabs the glass. As a reward, Mobis shows Marley a short video of Mario Bros dancing. Marley laughs. (p. 43)*

One reading of these scenarios would posit that the technology ameliorated previously distressing aspects of the therapeutic intervention. But that interpretation misses the question — why was the therapy distressing in the first place? And is the goal of that therapy still valid just because a technological mediator has reduced the student's screams?

Future researchers will benefit from learning a literacy of resistance. In actively searching for participant resistance and attending to its causes, researchers can learn to hold themselves accountable to the deployment of metaeugenics in their work. May we instead cultivate a rhetoric of metaresistance that can operate in defiance of curative violence, in solidarity with marginalized communities, and with respect for participant agency and spirit.

### **Conclusion: Rejecting Electronic Marionettes, Walking Away from the Broom Closet**

Metaeugenics are the discourses of normative purity, reinforced by cultural biases, bigotry, and fear, that drive curative and normative violence in service of a futurity without disability, race, and queerness. Metaeugenics catch deviant bodies that have not been eradicated by breeding or euthanasia in a web of hegemonical power relations that demand classification, collection, containment, coercion, and cure.

Technologies for autism are dominated by metaeugenics via the logics of the *interventional* — these normalizing technologies seek to correct aberrant behaviors, shape normative social responses, and remediate deficits and delays. This approach seems natural and necessary from the perspective of the helping professions, guided by a conviction that their role is to deliver health and wellness — a restoration or purification via the “equation of the norm with health” (Edelman, 1974, p. 306). The logic behind such interventions is that access is conditional upon whether the body is ‘includeable’ or not (Titchkosky, 2011). The interventional approach is so naturalized that to *not intervene* is regarded as synonymous with *causing harm*. Put another way, an uninhibited autistic existence is considered to be always already in a state of self-harm (Roscigno, 2019). From this perspective, the construction of technologies that function as electronic marionette strings, or the digital “broom closet” of Le Guin's Omelas, is not just in service of the greater population's happiness, but necessary for the happiness of the child contained within that broom closet.

The burgeoning tradition and scholarship of Crip Technoscience (Hamraie & Fritsch, 2019) may give us the guidance we need to imagine otherwise, and walk away from these normalizing lines of inquiry. Crip Technoscience imagines disabled people as sites of “possibility, adaptation, and creative reflection” (Nelson et al., 2019, p. 1) and refuses “to treat access as an issue of technical compliance or rehabilitation” (Hamraie & Fritsch, p. 22). Crip Technoscience implores us to resist fantasies of a future in which “our minds can be downloaded into more convenient bodies” (Nelson et al., p. 4) and so too reject the idea that our disordered minds can be overwritten by a firmware update or software patch.

As researchers, attending to the embodied rhetorics of metaresistance in our participants can signal to us opportunities to shift from the goal of ‘overcoming’ disability through technology, and embrace the possibility that our ‘subjects’ are actually always already engaged in acts of co-design. “My cripborg body sings when things are true to it,” writes Ashley Shew (Nelson et al., 2019, p. 13). What songs are our research participants trying to sing to us? May we resonate with the resistances and productive tensions afforded by our co-researchers — cut these marionette strings, walk away from the broom closet, and take everyone away from Omelas together.

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