Music, Disability, and Embodiment in Contemporary Performance

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Abstract

Music, Disability, and Embodiment in Contemporary Performance

Building on research in musicology, disability studies, Deaf studies, and sound studies, this dissertation analyzes the creative endeavours of contemporary disabled musicians and listeners in relation to three idealized pillars of musical experience: listening, looking, and performing. In Chapter 2, I approach listening through the musical experiences of deaf people, revealing multi-sensory ways of listening beyond hearing while detailing the precarious social, physical, and musical contours of "normal" hearing. Chapter 3 examines performances by musicians with "visible" disabilities to interrogate the presumed visual dynamics of stigma in existing disability theory: I argue that genre, sound, and identity politics shape the spectator's perception of the performer's disability. Finally, in Chapter 4, I show how amputee musicians intervene in prevailing conceptions of musical ability through their use of prosthetic technologies, unsettling the customary physical terms of musical expression. Ultimately the dissertation pushes beyond naturalized conceptions of music, handed-down sensory hierarchies, and conventional understandings of musical expertise to offer a plural understanding of music and disability alike.

Abrégé

Musique, incapacité et encorporation dans la performance contemporaine

S'appuyant sur la recherche en musicologie, en études sur les personnes ayant des incapacités, en études sur la surdité, ainsi qu'en études du son, cette thèse analyse les déploiements créatifs chez les musiciens et les auditeurs contemporains ayant des incapacités en fonction de trois piliers idéalisés de l'expérience musicale: l'écoute, l'observation, et l'exécution. Dans le deuxième chapitre, j'aborde l'écoute musicale à partir de l'expérience des personnes sourdes, révélant ainsi

des modes d'écoute multi-sensoriels allant au-delà de l'ouïe, en plus de détailler la précarité des contours sociaux, physiques, et musicaux de l'audition dite « normale ». Le troisième chapitre examine les œuvres de musiciens ayant des incapacités « visibles » afin de remettre en question les hypothèses avancées dans la littérature existante sur la dynamique visuelle de la stigmatisation chez les personnes ayant des incapacités. Je suggère que la perception du spectateur du déficit de l'interprète est façonnée conjointement par le genre, le son, et le champ identitaire. Finalement, dans le quatrième chapitre, je démontre comment les musiciens amputés interviennent dans les conceptions dominantes de la capacité musicale grâce à leur utilisation de technologies prothétiques, perturbant ainsi les conditions physiques habituelles de l'expression musicale. En ce sens, cette thèse propose d'aller au-delà des conceptions naturalisées de la musique, des hiérarchies sensorielles transmises, ainsi que des compréhensions normatives de l'expertise musicale pour offrir une approche plurielle à la musique et à l'incapacité.

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Acknowledgements

Doing a PhD is as much about personal growth as it is about professional growth, and the dissertation is always a culmination of that joint development. My dissertation is a creative labour that saw me availing myself of all possible resources at McGill. My time at McGill has been a blessing. I have benefitted immeasurably from the university's many brilliant minds, its commitment to interdisciplinarity, and its prestige in the international academic community. I am exceptionally grateful to have been a recipient of the Vanier Canada Graduate Scholarship from 2012-2015, and to have also benefited from numerous McGill graduate student travel grants, and several enriching teaching appointments, including The Art of Listening. The academic staff and administrators in Department of Music Research have played a key role in my development as a scholar. I owe a great debt to Eleanor Stubley, our late Associate Dean of Graduate Studies at the Schulich School of Music, who was a constant source of strength and encouragement for me during the PhD. As a scholar and musician, Eleanor thought deeply and wrote evocatively about the relationship between music and the body; she shaped a great deal of my early thinking around music and disability as I crafted the proposal for my Vanier application, which formed the basis of my dissertation proposal. I am also deeply indebted to Hélène Drouin, Administrative & Student Affairs Coordinator, for her diligence, care, timeliness, and extraordinary problem-solving skills. Without her, I would be at a loss. And I am incredibly thankful for our dynamic music librarians, Cynthia Leive and Cathy Martin.

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We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.
Through the unknown, unremembered gate
When the last of the earth left to discover
Is that which was the beginning;
At the source of the longest river
The voice of the hidden waterfall
And the children in the apple-tree . . .

And all shall be well, and
All manner of thing shall be well[1]

[1] T.S. Eliot, *Little Gidding*, in *Four Quartets* (London: Faber and Faber, 1943), 47.

Chapter 1: Introduction

How can present-day musical performances shape and sound out what dis/ability is – its precarious material contours, socio-cultural articulations, and conflicting representations? How do disabled musicians reflect on the very limits of musical practice and existing theory, forging new subjectivities and forms of expression? By contrast, how do disabled performers conform to existing musical conventions and aspire to normative musical ideals? How do performers negotiate disability alongside other positions of marginality? How do they reconcile their aesthetic priorities with the politics of representation? How might music performance re-inscribe the prejudice and stereotypes associated with disability? Alternatively, how might audiences come to understand disability anew through music performance?

These questions take center stage in my dissertation where I offer a sustained analysis of music and disability in contemporary musical performance, contributing to the newly established body of scholarship on music and disability. My dissertation uses a combination of reception study, close analytical readings of performances, discourse analysis, and ethnographic interviews, and draws from theoretical insights in musicology, disability studies, Deaf Studies, queer theory, media studies, and neuroscience. I also rely on various public online venues, including the well-known Alldeaf discussion forum, celebrated d/Deaf blogs such as *Deaf World as Eye See It* and *TERPATRON 9000*, online publications like *Pitchfork*, *NOISEY*, and *The Huffington Post*, and mainstream video sharing and social media platforms such as YouTube and Twitter.

I adopt a deliberately broad conception of physical and sensory disability that encompasses "visible" instances of disability such as blindness; "invisible" accounts of disability like deafness; and other more ambiguous sites of impairment like speech impediments. (My

coverage does not extend to intellectual disability, what is known in the disability community as neurodivergence, a form of neurodiversity, since this is an area of study that deals with a unique set of variables, requiring extended exposition.) Suzanne Cusick reminds us that music is "an art which self-evidently does not exist until bodies make it and/or receive it."[2] Her statement is reflective of the priorities of the "new musicology" movement of the 1990s as scholars sought to think beyond the discipline's longstanding formalism by examining the role of subjectivity and the body, and by extension gender, sexuality, and race, in musical experience. Although disability was not part of these earlier considerations, its recent incorporation into music discourse draws new attention to the relationship between music and the body, and the tensions between musicology and difference. In particular, my focus on physical and sensory disability exposes the physical biases implicit in traditional instrument design, the unexamined sensory hierarchies underpinning existing conceptions of listening and musical engagement, and the oft-overlooked material contours of musical experience.

I situate disabled performers and their musical endeavours at the centre of my study. These performers are active in a multitude of genres including classical, pop, popera, indie rock, electronic, performance art, and sound art. This cross-genre perspective affords a multi-faceted account of music and embodiment, and sheds light on the under-appreciated role of genre in the construction, performance, and reception of disability. By investigating disability within conventional musical contexts such as the recital hall alongside unorthodox musical scenarios such as the silent opera of a deaf performance artist, I highlight the arbitrary dynamics of disability, as well as the naturalized dimensions of musical expertise.

[2] Suzanne Cusick, "Feminist Theory, Music Theory, and the Mind/Body Problem," *Perspectives of New Music* 32/1 (Winter 1994): 16.

The historical scope of my project encompasses the time between 1990 to the present day as I track different episodes in the careers of the performers whose work I investigate. The last twenty or so years have witnessed gradual shifts in attitude toward disability from a social, legal, medical, and technological standpoint that make this a compelling yet challenging period for the scholar. In 1990, the United States Congress passed and implemented the Americans with Disabilities Act (ADA), a law protecting against disability-based segregation and discrimination in several sectors including but not limited to the workplace, transportation, healthcare, commercial facilities, and telecommunications. The Act marked a turning point in the history of US civil rights as it was the first legal acknowledgment that the historical isolation and oppression of disabled people was a "serious and pervasive social problem" that warranted government intervention.[3] Similar steps were taken in the UK with the Disability Discrimination Act of 1995.[4] Although Canada lacks its own comprehensive federal social policy on disability, the Canadian Human Rights Act of 1977 protects against discriminatory practices based on disability, race, sexuality, etc., and the 1985 edition of the Canadian Charter of Rights and Freedoms explicitly guarantees people with disabilities "equality before and under law and equal protection and benefit of law" (Section 15, on "equality rights").[5] As an extension of certain positive policy developments in the West, the universal design movement is flourishing across Europe and North America, with upgrades to city infrastructure such as curb cuts, beeping

[3] "Introduction to the ADA," Americans with Disabilities Act: United States Department of Justice Civil Rights Division, http://www.ada.gov/ada_intro.htm. "Sec. 12101: Findings and Purpose," United States Public Health and Welfare Code, Title 42, Chapter 126, in *Americans with Disabilities Act* (ADA), 1990.
[4] *Disability Discrimination Act 1995*, accessed July 8, 2016, http://www.legislation.gov.uk/ukpga/1995/50/contents.
[5] See *Canadian Charter of Rights and Freedoms*, accessed July 9, 2016, http://publications.gc.ca/collections/Collection/CH37-4-3-2002E.pdf; *Canadian Human Rights Act*, accessed July 9, 2016, http://laws-lois.justice.gc.ca/PDF/H-6.pdf; and "Human Rights," *Council of Canadians with Disabilities*, accessed July 9, 2016, http://www.ccdonline.ca/en/humanrights/.
Individual Canadian provinces have since implemented their own disability and accessibility policies, such as the Ontarians with Disabilities Act of 2002 and the 2013 Accessibility for Manitobans Act.

crosswalk lights, ramp access to buildings, elevators, automatic sliding doors, and accessible transit for disabled commuters, necessary accommodations that often go unnoticed. And in a city like Montreal, which has regrettably fallen behind on the accessibility front with respect to its infrastructure, disability activists are taking legal action against the municipal transportation ministry on the basis of provincial and federal human rights violations.[6] Accessibility is starting to make its way into the classroom as educational institutions implement strategies for better anticipating and catering to the different learning styles of their students. Technological advancements in recent decades have enabled the amelioration of assistive use technologies like hearing aids, cochlear implants, speech generating devices, wheelchairs, prosthetics, etc., and numerous different apps offer an unprecedented range of custom assistance for disabled people (e.g. text to speech for the d/Deaf).[7] Music, however, has fallen short of addressing accessibility, both conceptually and practically; this dissertation showcases some new cutting-edge technologies that are responding to this very real need.

Increasingly, disability activism is garnering new visibility thanks to social media platforms like Twitter and Facebook that make networking, mobilization, and outreach faster and more efficient than ever before. As disability studies scholar Beth Haller argues, the Internet provides disabled people with new platforms of self-representation as users take to blogs,

[6] In June 2016, 20,000 plaintiffs led by Le Regroupement des activistes pour l'inclusion au Québec (RAPLIQ) filed a class action lawsuit against the STM, the AMT, the City of Montreal, and the Quebec Ministry of Transport on the grounds that only eight of the city's sixty-eight metro stations are wheelchair accessible, drastically limiting the mobility and autonomy of persons with disabilities and thereby in violation of both The Quebec Charter of Human Rights and Freedoms (1975) and the Canadian Charter of Rights and Freedoms (1982). Plaintiffs are seeking $75,000 per person, totaling $1.5 billion in damages. See Stephen Smith and Melissa Fundira, "Montreal's Inaccessible Public Transit a Charter Violation, Lawyers Claim," CBC News, June 7, 2016, accessed July 8, 2016, http://www.cbc.ca/news/canada/montreal/montreal-metro-class-action-suit-hearings-1.3619763.

[7] In keeping with the rhetorical strategies of Deaf studies, I use an uppercase "D" to signal a subject's or group's identification with and membership in Deaf culture, a global community united by its use of sign languages, and I use a lowercase "d" to refer to deaf and hard-of-hearing persons who do not identify with Deaf culture. The people-centered compound "d/Deaf" is intended to signal the full spectrum of auditory and socio-cultural constructions of deafness.

discussion boards, and social media to share their unique perspectives in their own words and on their own terms, supplanting dominant narratives and ultimately reshaping the public discourse on disability. Social media has been particularly useful for those activists with limited mobility and people without access to normative communication, such as those in the d/Deaf and neurodiversity communities.[8] Disability activists have orchestrated social media campaigns and created catchy hashtags such as the recently coined #InspoPornResolution which is used to discredit the characteristic appropriation of disability as an inspiring image or symbol for able-bodied consumption and gratification, that is, disability as "inspiration porn."[9] In 2016, a major Hollywood film, *Me Before You*, suffered major public backlash for its essentialist portrayals of disability, a disability activist-driven campaign that received unprecedented exposure on mainstream media outlets because of its online traction.[10] Again in 2016, the established disability rights and physician-assisted suicide resistance group Not Dead Yet received widespread media attention for their opposition to the recent legalization of physician assisted

[8] Beth Haller, *Representing Disability in an Ableist World: Essays on Mass Media* (Louisville: The Avocado Press, 2010). Haller also cautions against viewing cyberspace as a "barrier-free utopia" for people with disabilities (20). Paul T. Jaeger writes further that "the Internet is inherently unfriendly to many different kinds of disabilities. These barriers to access and usage vary by type and extent of disability": Paul Jaeger, *Disability and the Internet: Confronting a Digital Divide* (Boulder: Lynne Rienner Publishers, 2012), 2. For instance, many online platforms and web-based technologies that might empower d/Deaf people and wheelchair users remain inaccessible for those who are neurodivergent or visually impaired.

[9] InspirationPornResolution, "The Inspiration Porn Resolution," *Disability Stories* (blog), January 3, 2016, accessed July 9, 2016, https://medium.com/disability-stories/the-inspiration-porn-resolution-a30baf972499#.pi3dk6e73. The late Australian disability activist Stella Young first coined the term "inspiration porn" in a series of blog posts and most notably in a TedTalk. See Stella Young, "We're Not Here for Your Inspiration," *Ramp Up* (blog), July 2, 2012, accessed July 9, 2016, http://www.abc.net.au/rampup/articles/2012/07/02/3537035.htm; and Young, transcript for, "I'm Not Your Inspiration, Thank You Very Much," TedTalk Conferences LLC, June 2014, accessed July 9, 2016, https://www.ted.com/talks/stella_young_i_m_not_your_inspiration_thank_you_very_much/transcript?language=en.

[10] See for instance, Ryan Gilbey, " 'I'm Not a Thing to be Pitied': The Disability Backlash Against Me Before You," *The Guardian*, Thursday June 2, 2016; Ben Mattlin, "Commentary: 'Me Before You' Perpetuates Idea that the Disabled Should Consider Suicide," *Chicago Tribune*, May 31, 2016, accessed July 8, 2016, http://www.chicagotribune.com/news/opinion/commentary/ct-suicide-disability-me-before-you-perspec-0601-md-20160531-story.html; and Lily Pucket for *Teen Vogue*, "What 'Me Before You' Gets Wrong About Disability," *The Huffington Post*, June 9, 2016, accessed July 8, 2016, http://www.huffingtonpost.com/teen-vogue/what-me-before-you-gets-w_b_10376168.html. These are but a few of the countless op-eds and commentaries featured in mainstream outlets. Activists rallied against the film by hijacking its official hashtag #LiveBoldly, using Twitter to reshape and instrumentalize the film's online public discourse.

suicide in Canada as parliamentarians tabled Bill C-14.[11] (This was a marked change from previous years in other countries like the US that saw mainstream coverage portraying the issue as one sharply dividing along the lines of human rights and religious opposition.[12]) Activists are thus beginning to vocally shape the popular discourse on disability as they publicly advocate for their rights with respect to policy, laws, and representation; and this is a major step forward.

Even with robust social policy and lively public activism, however, there remain staggering social shortfalls for disabled people. In countries without universal healthcare, access to proper medical support is sporadic and precarious. Indeed, legal protection for disabled people is never a guarantee, as was evinced by the May 4, 2017 decision of the US House of Congress under the Trump administration to repeal and replace the Affordable Care Act established during Obama's presidency. If finally approved, the new act will permit health insurance companies to charge premiums for care to those with "pre-existing" medical conditions, which effects many people with disabilities.[13] Further, the current cultural fascination with technological enhancement can verge on a fetishism that sees technology eradicating disability and eliminating the need for infrastructural reform and healthcare, overshadowing the real needs of actual

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[11] See "Suicide Talking Points," Not Dead Yet: The Resistance, accessed May 2, 2017, http://www.notdeadyet.org/assisted-suicide-talking-points. For the original supreme court ruling see, Supreme Court of Canada 2015 Ruling on Physician-Assisted Suicide: Carter v. Canada (Attorney General), 2015 SCC 5, [2015] 1 S.C.R. 331: https://scc-csc.lexum.com/scc-csc/scc-csc/en/14637/1/document.do.
As Canadian parliamentarians and Senators carefully weighed Bill C-14's social outcomes in the spring of 2016, the most contentious aspect was its eligibility, and how it would impact Canadian society's most marginalized communities: one Senator's recommendation that the Liberal government expand the scope of eligibility to include anyone with "a grievous and irremediable medical condition" – an inclusion that could extend to medical definitions of "disability" – was struck down by the Senate. In a historic statement, the Canadian Minister of Justice, Liberal MP Jody Wilson-Raybould explained that expanding the scope of eligibility would put society's most vulnerable people at risk, including those with "any serious medical condition, whether it be a soldier with PTSD, a young person with a spinal cord injury, or a survivor whose memory is haunted with memories of sexual abuse." See Catherine Tunney, "Liberals' Assisted-Dying Bill is Now Law After Clearing Final Hurdles," CBC News, June 17, 2016, accessed June 27, 2016, http://www.cbc.ca/news/politics/assisted-dying-bill-senate-approval-1.3640195.

[12] See Beth A. Haller, "Not Worth Keeping Alive? *New York Times* Narratives About Assisted Suicide," in *Representing Disability in an Ableist World* (Louisville: The Avocado Press, 2010), 67-86.

[13] Thomas Kaplan, "House Passes Measure to Repeal and Replace the Affordable Care Act," *The New York Times*, May 4, 2017, accessed May 5, 2017, https://www.nytimes.com/2017/05/04/us/politics/health-care-bill-vote.html?_r=0.

disabled people. Claims activist and wheelchair user Patty Berne, "I really don't understand the desire for enhancement technology when we don't even have basic health care…. Talk about misplaced priorities."[14] Old prejudices and stigmas endure, and ultimately social policy hardly reflects on precise institutional values. In academia, scholars have thoroughly addressed how language use reflects racial and gendered biases, and have reformed their rhetorical strategies accordingly. And yet, while we scholars are willing to accept that disability discrimination is a pervasive social problem and a historically under-theorized area of study, there remains little concern beyond disability studies over how pejorative terms like "lame" or the habitual use of deafness and blindness as metaphors for ignorance are reflective of enduring underlying prejudices. (This was evinced by the arguably ableist language deployed throughout the notorious February 2016 AMS *Musicology Now* blog debate on race and micro-aggression in musicology.[15]) In short, 1990 to the present day is a period of progressive social change for disability as much as it is a time of stagnation and regression. The careers of my case studies run concurrent with this period, which has no doubt shaped their individual corporeal outlooks and continues to define their relationships to disability.

Music is not immune to the social. Rather, music is "imminently social," as musicologist Georgian Born asserts.[16] Music mirrors and perpetuates existing social attitudes to disability.

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[14] Patty Berne in *FIXED: The Science/Fiction of Human Enhancement*, directed by Regan Brashear (US: Making Change Media, 2013).

[15] The comments critiquing a recent controversial blog post feature accusations that the author's analysis are "tone deaf" and "blind to" racial prejudices. See Pierpaolo Polzonetti, "Don Giovanni Goes to Prison: Teaching Opera Behind Bars," *Musicology Now* (blog), the American Musicological Society, February 22, 2016, accessed July 8, 2016, http://musicologynow.ams-net.org/2016/02/don-giovanni-goes-to-prison-teaching_16.html; and the discussion thread on brownamsavenger, "#AMSSOWHITE," *LiveJournal* (blog), February 2, 2016, accessed July 8, 2016.

[16] Georgina Born, "For a Relational Musicology: Music and Interdisciplinarity, Beyond the Practice Turn," *Journal of the Royal Music Association* 135/2 (2010): 233.
Born's "relational" musicology seeks to bridge the gap between historicist music research that analyzes the musical text as an autonomous object and more contemporary research (e.g. ethnomusicological and popular music) that investigates music as a socially mediated process. She argues that such an approach reveals the limits of aesthetic autonomy, value judgments, and the canon and sheds light on previously overlooked sites of knowledge. She argues

Joseph Straus writes that music at once "reflects and constructs disability," both in the ways it represents bodies and in its associated cultural practices.[17] Music can also be a site of artistic transformation and political emancipation as disabled artists take to the stage, breaking generic boundaries and supplanting stereotypes with narratives of empowerment and forging new forms of musical expression. But I want to also make the case that music performed by disabled musicians is not automatically engaged with disability as a minority identity or political stance, or engaged with disability at all. Nor are audiences necessarily engaged with a performer's disability, whether as a matter of difference or as a necessary part of their musical experiences.

At the heart of my dissertation is a symbiotic exchange between music research and disability studies. Over the last ten years, musicology, music theory, and ethnomusicology have seen a flourishing of scholarly work on disability: a disability studies approach sharpens one's musical understanding of human embodiment, intersectionality, aesthetic conventions, technological mediation, and representation in music. Disability studies can highlight the limiting narratives through which disability has customarily been understood in relationship to music. The centrality and complexity of embodiment in disability studies unsettles abstract notions of the musical work and idealized notions of disembodied musicality that have long pervaded music research. Ultimately, disability studies' insistence on activism, inclusive language, and accessibility grounds musicology in the social, wedding theory to praxis.

At the same time, my study exposes and responds to the limits of existing disability theory. For instance, I put pressure on the visual construction of disability; the assumed primacy of stigma; disability studies' "recourse to a monolithic disability identity," as described by

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that such an approach can productively challenge deeply ingrained beliefs about what "counts as music to be studied" and "how it should be studied," a view that resonates with this dissertation project (230).

[17] Joseph Straus, *Extraordinary Measures: Disability and Music* (New York: Oxford University Press, 2011), 14.

Lennard J. Davis; as well as the contention that disability is necessarily inferior relative to other positions of marginality.[18] Rather than simply problematizing music's able-bodied norms as forms of exclusion, I show how disabled musicians harness the built-in physical constraints of instruments and the limiting corporeal preconditions and representational ideals of music performance as valid points of creative departure. Furthermore, many disabled musicians strive to conform to able-bodied ideals; some adopt what otherwise come across as ableist representational strategies; and others have little interest in the political dynamics that disability potentially entails.

Finally, I push the boundaries of what musicology can and should be, both methodologically and theoretically. Sometimes I yield to first-person testimonial over normalizing theoretical frameworks and abstracted notions of musical understanding. And I often replace conventional ethnographic fieldwork with accounts found on personal blogs and digital media. As music proliferates online and musicology is increasingly engaged with online source material, this dissertation draws new critical attention to the value of digital media in disabled communities, demonstrating how we might use insights gleaned from these sources, typically obscured from mainstream view, to augment critical understandings of music and the body. If music is inherently social, the lived experiences of listeners and musicians need inform our theory as much as the notes on the page, and that includes listeners online. And where disability is concerned, attention to lived experience is even more vital given that disabled people have been historically marginalized. I thus endeavor to uphold the unofficial slogan of contemporary disability activism "nothing about us without us." I maintain that disabled listeners and musicians are musical experts just as much as scholars are experts. I thus build on the work of

[18] Lennard J. Davis, *The End of Normal: Identity in a Biocultural Era* (Ann Arbor: University of Michigan Press, 2013), 18.

my colleagues in musicology who seek to bridge disability studies with music research, not simply by importing disability theory into music scholarship and making music research accessible to non-experts, but by using disability to question the very notion of musical expertise.

It is through witnessing different family members contend with the precarious physical and social dynamics of disability that I first came to understand my able-bodied privilege, what has since become a defining aspect of my positionality as a scholar. For instance, witnessing my late paternal grandfather navigate the progressive effects of post-polio syndrome as his mobility decreased with age, I discovered that while the built environment is not made for people on wheels, I could move through the world with ease and without fear of stigma. And I have long observed the invisible labours that my profoundly deaf uncle, a life-long hearing aid wearer and expert lip-reader, undertakes as he strives for discretion in his social interactions, often passing for hearing. By contrast, I have the capacity to listen, speak, and write in normative terms, knowing all the while that I will be perceived as more-or-less "normal," even especially competent and articulate in certain contexts because of my education. My musicological work thus requires that I be critical of the privileges that able-bodiedness affords and its attendant biases. This has been particularly relevant in my interactions with sound artist Christine Sun Kim, a major figure in Chapter 2. Kim is a self-identifying member of American Deaf culture. From a Deaf cultural standpoint, musicians and music scholars represent the pinnacle of the hearing world; we have the ultimate hearing privilege, what Kim sees as an "ownership" over sound.[19] We claim to know and understand sound better than most, and we have long relegated d/Deaf people to the margins of musical experience. Checking my privilege means challenging

[19] "Reclaiming Ownership of Sound: Christine Sun Kim's New TED Talk," The Lavin Agency, January 18, 2016, accessed May 2, 2017, http://www.thelavinagency.com/news/reclaiming-ownership-of-sound-christine-sun-kim-rsquo-s-new-ted-talk.

misconceptions about music and deafness, but crucially *without* essentializing about deaf musical experiences for theoretical gain. As an outsider to Deaf culture mindful of my own privileges, I work across sharp divisions like dis/ability and hearing/deaf, but I am not an advocate for the Deaf and disabled communities in that I do not presume to speak on behalf of the people whose work I represent. Rather, I am an ally: I use my musicological work to challenge the larger systemic oppression of disabled people, just as I use disabled musical testimony to pluralize existing conceptions of musical understanding. To that end, I am encouraged by Lennard J. Davis' reflections on how his own relationship to disability informs his work:

> As an outsider of sorts to almost all the projects in which I have engaged…I've had to both watch my manners and also somewhat paradoxically point out the kind of things that visitors can see and residents often cannot. That combination can sometimes make me an unpleasant guest at the dinner table. I see my central work as being perhaps a form of rethinking the truisms of a field.[20]

This introductory chapter presents the theoretical groundwork for what follows. I first prime my reader in disability studies scholarship by surveying some of the central themes in the literature with which this dissertation engages, namely intersectionality, representation, and stigma. I then review key developments in the newly established body of music-oriented research on disability, and reflect on areas in need of further exploration. The remainder of the dissertation unfolds as three larger chapters centering on three idealized, overlapping pillars of musical experience – listening, looking, and performing. Each chapter features a series of case-studies. In Chapter 2, "Listening Beyond Hearing," I explore how d/Deaf musicians and audiences at once disrupt and enrich conventional listening paradigms as I interrogate essentialist constructions of deaf musical perception in both musicology and popular culture, offering a plural account of music and deafness. The Interlude between builds on the musical pluralism

[20] Davis, *The End of Normal*, ix.

established in Chapter 2 through an in-depth analysis of Christine Sun Kim's silent opera, *Face Opera II*. Chapter 3, "Looking Beyond Staring," puts the assumed visual primacy of stigma to the test by investigating a range of "visibly" disabled musicians as they negotiate stigma alongside their individual musical priorities. And in Chapter 4, "Performing Beyond Ability," I explore how prosthetic-wearing musicians undermine existing conceptions of inborn musical talent and expression through their musical engagements.

A Primer on Disability Studies

Since the mid-eighties, researchers in the arts and humanities have studied the socio-cultural underpinnings of disability as a way of unlocking knowledge about marginalized positions, identity formation, political ideologies, economic institutions, environmental biases, stereotypes and forms of discrimination, and the embodied terms of power and privilege. Crucially, disability theory holds that disability is a socially and environmentally bound form of difference (i.e. the social model) to counter the biological determinism of medical discourse on disability (i.e. the medical model). Whereas socio-cultural institutions and built environments *disable* bodies, "impairment" denotes the precarious physiological basis on which these socially debilitating dynamics are customarily built. Ultimately, the interdisciplinary field of disability studies aims to foster a critical view of disability that corresponds more readily than existing clinical definitions to the lived experience of disability and the complexities of human embodiment. And as an extension of the emancipatory values of disability activism, the scholarship strives for the inclusion and empowerment of disabled people.

The social constructionist basis of disability theory makes for enriching points of overlap with theoretical writings on gender, sexuality, and race. Indeed, disability studies scholars

contend that the social dynamics of disability are ultimately performative. Carrie Sandahl and Philip Auslander explain, "in daily life, disabled people can be considered performers, and passersby, the audience….disability becomes one of the most radical forms of performance art, 'invisible theater' at its extremes."[21] However, whereas scholars like Judith Butler claim that the performance of gender is typically unconscious and iterative, disability studies scholars argue that for disabled people, the performance of disability is often intensely self-conscious. "The notion that disability is a kind of performance is to people with disabilities not a theoretical abstraction, but lived experience," argue Sandahl and Auslander.[22]

The emergence of disability studies as a field sparked critical reflection in adjacent theoretical discourses. Susan Wendell's landmark 1989 book called for the incorporation of disability into feminist theory, challenging feminist scholarship's then longstanding able-bodied bias.[23] More recently, Robert McRuer has argued that compulsory able-bodiedness and compulsory heterosexuality work in tandem, constructing disability and queerness as analogous non-normative identities.[24] McRuer and Anna Mollow have suggested furthermore that there "exists a polarization in the cultural imagination, between sex and disability"[25] that both demonizes disabled sexuality and precludes disabled bodies from sexual experiences. Ultimately, the systemic oppression of disability is compounded by other interlocking positions of marginality, sites of oppression, and categories of identity such as gender, race, and sexuality.

[21] Carrie Sandahl and Philip Auslander, "Introduction: Disability Studies in Commotion with Performance Studies," in *Bodies in Commotion: Disability and Performance*, eds. Sandahl and Auslander (Ann Arbor: University of Michigan Press, 2005), 2.
[22] Ibid.
[23] Susan Wendell, *The Rejected Body: Feminist Philosophical Reflections on Disability* (New York: Routledge, 1996).
[24] Robert McRuer, *Crip Theory: Cultural Signs of Queerness and Disability* (New York: NYU Press, 2006).
[25] Robert McRuer and Anna Mollow, eds., *Sex and Disability* (Durham, NC: Duke University Press, 2012).

At the same time, scholars maintain that disability is "hypermarginalized" relative to other positions of marginality, to borrow Lennard J. Davis' word. That is, the inferiority and abnormality historically associated with gender, sexuality, and race has been explained through symbolic association with disability.[26] As a result, many civil rights movements in the West sought to define themselves in opposition to disability as a way of legitimizing their claims to human rights.[27] To that end, Siebers claims that disability is "the master trope of human disqualification, not because disability theory is superior to race, class, or sex/gender theory, but because all oppressive systems function by reducing human variation to deviancy and inferiority defined on the mental and physical plane."[28] Sharon Snyder and David Mitchell argue that this same inadvertent disavowal of disability pervades early critical theory: "as feminist, race, and sexuality studies sought to unmoor their identities from debilitating physical and cognitive associations, they inevitably positioned disability as the 'real' limitation from which they must escape."[29] (The rhetorical disavowal of disability endures within contemporary claims to Deaf cultural identity, a stance on which I elaborate in Chapter 2.[30]) Davis argues that even within contemporary discourse on diversity, there is not simply a default to an able-bodied perspective, but a preference for able-bodiedness.[31] Davis writes of disability's hypermarginalized status within the neoliberal conceit of diversity:

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[26] Lennard J. Davis, *Bending Over Backwards: Disability, Dismodernism, and Other Difficult Positions* (Ann Arbor: University of Michigan Press, 2002), 14.
[27] See Douglas Baynton, "Disability and the Justification of Inequality in American History," in *The New History: American Perspectives*, eds., P. Longmore and L. Umanksy, (New York: NYU Press, 2001), 33-57; and Tobin Siebers, *Disability Theory* (Ann Arbor: University of Michigan Press, 2008), 5-6.
[28] Tobin Siebers, *Disability Aesthetics* (Ann Arbor: University of Michigan Press, 2010), 27.
[29] David T. Mitchell and Sharon L. Snyder, *Narrative Prosthesis: Disability and the Dependencies of Discourse* (Ann Arbor: University of Michigan Press, 2000), 2.
[30] See Harlan Lane, "Do Deaf People Have a Disability?" in *Open Your Eyes: Deaf Studies Talking*, ed. H-Dirksen L. Bauman (Minneapolis: University of Minnesota Press, 2008), 277-292; Douglas Baynton, "Beyond Culture: Deaf Studies and the Deaf Body," in Bauman, *Open Your Eyes*, 293- 313; and Susan Burch and Allison Kafer, eds. *Deaf and Disability Studies: Interdisciplinary Perspectives*, (Washington, D.C.: Gallaudet University Press, 2010).
[31] Lennard J. Davis, *The End of Normal: Identity in a Biocultural Era* (Ann Arbor: University of Michigan Press, 2013), 6-7.

> We may want diversity in all things, but not insofar as medicalized bodies are concerned. It is in this realm that the "normal" still applies with force….The fact that normality exists for disability, but not for the rest of neoliberal diversity, suggests that disability is the state of exception that undergirds our very idea of diversity.[32]

From this standpoint, intersectionality as a critical framework is at once a necessary though uniquely fraught endeavour. Ideally, scholars seek to examine "disability as itself, while attending to its value for intersecting identities," as Siebers notes.[33] As I will show, however, disability's presumed inferiority among marginalized identity categories is not always guaranteed: the visual dynamics of disability are variable when there is more than one form of potential difference at play, and the optics of genre, and the dual aural/visual focus on music performance often influences how we understand the relationship between interlocking sites of oppression. Ultimately, thinking about positions of marginality hierarchically is not always productive or tenable.

Poststructuralist discourse has long warned of the perils associated with identity-centered politics, namely that a cohesive identity formation is essentialist, selective, and even disciplinary; a common identity is ontologically untenable when individual differences outweigh common group characteristics.[34] Most disability studies scholars maintain, however, that identity politics are relevant and useful so long as ableism exists and disabled people have political gains to make. Rosemarie Garland-Thomson argues that in light of the inferiority of disability compared with other identity categories, "a disability politics cannot… afford to banish the category of disability according to the post-structuralist critique of identity."[35] Indeed, scholars posit

[32] Ibid, 7, 8.
[33] Siebers, *Disability Theory*, 6.
[34] See William Connolly, *Identity/Difference: Democratic Negotiations of Political Paradox* (Minneapolis: University of Minnesota Press, 2002).
[35] Rosemarie Garland-Thomson, *Extraordinary Bodies: Figuring Physical Disability in American Culture in Literature* (New York: Columbia University Press, 1997), 23.

disability as a minority identity and enriching form of cultural diversity to counter the stigma customarily associated with disability, to reclaim and redefine the disabled experience, and to establish solidarity in a common experiences of disability.[36] Unequivocally, the ongoing triumphs in disability policy and activism are due in large part to identity politics: activists leverage a collective disability identity to broaden political relevance and impact. For scholars like Siebers, Garland-Thomson, and Wendell, identity politics are thus a moral imperative for disability studies.[37] Paul Longmore and Lauri Umansky clarify that, "disability has never been a monolithic grouping" in the first place, but rather encompasses "people with a variety of conditions, despite considerable differences in etiology, [who] confront a common set of stigmatizing social values and debilitating socially constructed hazards."[38] Where others hold fast to disability identity formation, however, Lennard J. Davis, in a provocative and highly controversial turn, rejects disability studies' "recourse to a monolithic disability identity," suggesting that disability can instead serve to challenge post-modernism's reliance on notions of whole and complete bodies – what he calls *dismodernism*: "disability presents us with a malleable view of the human body and identity." [39] The musical performances that this dissertation surveys present a wide range of approaches to disability identity, in line with what Longmore & Umansky and Davis respectively describe.

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[36] Ibid, 4.
[37] Siebers, "Disability in Theory: From Social Constructionism to the New Realism of the Body," *American Literary History* 13/4 (Winter 2001): 737-54; Siebers, *Disability Theory*, 75; and Wendell, *The Rejected Body*, 44-45.
[38] Paul Longmore and Lauri Umansky, eds., *The New Disability History: American Perspectives* (New York: New York University Press, 2001) 4, 12.
[39] Davis, *Bending Over Backwards*, 25. For more on Davis' provocation and its reception in disability studies, see Davis, *The End of Normal*; Tom Shakespeare, "Disability, Identity, and Difference," in *Exploring the Divide*, ed. Colin Barles, and Geof Mercer (Leeds: The Disability Press, 1996), 94-113; Anna Mollow, "Identity Politics and Disability Studies: A Critique of Recent Theory," *Michigan Quarterly Review* 43/2 (Spring 2004): http://quod.lib.umich.edu/cgi/t/text/text-idx?cc=mqr;c=mqr;c=mqrarchive;idno=act2080.0043.218;view=text;rgn=main;xc=1;g=mqrg.

The representation of disability and the relationship between disability and stigma are focal points of disability theory. Although representations of disability abound in film, literature, art, and music, seldom do these portrayals correspond to the lived experiences of disability, according to scholars. Rather, the cultural objectification of disability typically recapitulates a set of prescriptive narratives rooted in passive, insidious stereotypes whereby the disabled object typically arouses pity, awe, humour, fear, disgust, inspiration, etc., in the viewer/reader/spectator. Of course, there is artistic merit in celebrating the presumed unsightly qualities of the disabled body, whether this is a celebration initiated by a disabled artist/performer or a stance a non-disabled creator adopts in his/her portrayal of disability. In *Disability Aesthetics*, Siebers argues that just as modernist art can play on the stigma and revulsion that a disabled body evokes, it celebrates disability as an aesthetic value in its own right.[40] Petra Kuppers makes similar claims about the status of disability in contemporary performance, wherein disabled artists set out to defy the physical spaces and cultural scripts that otherwise hamper their movement and expression, transforming aesthetic conventions in the process. She writes:

> Disabled performers are often aware of the knowledges that have been erected around them….In the laboratory of the performance situation, these knowledges can be re-examined, and questioned again and again….the disabled performer in contemporary art signals a historical moment where a culture is examining its bodies, sorts and counts its difference, allocates new quarters, and reinvents itself. Performance is a place where cultural uncertainties can find expression – the unknown is framed by the conventions of the stage or the gazing scenario.[41]

Ultimately this dissertation shares in disability studies and disability activism's desire to supplant essentialist narratives with a more plural, human conception of disability rooted in cultural diversity. By situating disabled performers at the centre of my study, I enact a mediation between the cultural objectification of disability and the lived musical experiences of disability. I

[40] Siebers, *Disability Aesthetics*.
[41] Petra Kuppers, *Disability and Contemporary Performance: Bodies on Edge* (New York: Routledge, 2003), 3.

thus investigate how the cultural objectification of disability pervades musical accounts of disability in popular culture, music discourse, and the reception of disabled artists. And I also consider how disabled musicians confront and challenge these stereotypes in their creative endeavours, transforming musical understanding in the process. At the same time, the dissertation explores the possibility of non-engagement with disability, both from the standpoint of the audience and performer: I contend that even the most visible instances of disability do not automatically elicit stigma on the part of the audience, in this sense going against a core presupposition in disability theory.

Music and Disability Studies: Hermeneutics and Socio-cultural Analyses

Historically, musicology and music theory have been slow to engage with neighbouring humanities disciplines. The 1990s saw a flourishing of work in music and embodiment theory, feminism, queer theory, and critical race studies as scholars sought to free music research from its formalist and idealist precepts, a discursive turn that musicologists labeled "new musicology." In her acclaimed 1991 book, *Feminine Endings*, Susan McClary aptly remarked that, "a very strong tradition of Western musical thought has been devoted to defining music as the sound itself, to erasing the physicality involved in both the making and the reception of music."[42] Suzanne Cusick echoed these sentiments when she commented on the longstanding positivism of music theory and musicology:

> Music, an art which self-evidently does not exist until bodies make it and/or receive it, is thought about as if it were a mind-mind game….We end by ignoring the fact that these practices of the mind are nonpractices without the bodily practices they call for – about which it has become unthinkable to think.[43]

[42] Susan McClary, *Feminine Endings: Music, Gender, and Sexuality*, (Minneapolis: University of Minnesota Press, 1991), 136.
[43] Suzanne Cusick, "Feminist Theory, Music Theory, and the Mind/Body Problem," *Perspectives of New Music* 26/1 (Winter, 1994): 16.

McClary, Cusick, and their feminist colleagues initially viewed musicology and music theory's customary lack of attention to the body as a rejection of the symbolically feminine. New approaches, however, recognize that the body can be studied without re-inscribing this essentializing gendered discourse.

Scholarship on music and disability comes as a belated and necessary outgrowth of new musicology's interest in music and the body and subaltern perspectives. That disability studies was not among the original theoretical approaches included in the initial wave of new musicology is due both to disability studies' then marginal status relative to other humanities fields, as well as to musicology's isolation. Straus also suggests that this longstanding dearth of music scholarship on disability centres on music's non-representational nature compared with visual and literary traditions.[44] Nevertheless, great strides have been made in the last decade, and the scholarship on music and disability is growing rapidly.

Straus' groundbreaking 2006 article "Normalizing the Abnormal: Disability in Music and Music Theory" in the *Journal of the American Musicological Society* marked the first major attempt to bridge disability studies with music research, drawing attention to the musical construction of disability in late eighteenth and early nineteenth-century Western art music, particularly in the works of Beethoven and Schubert.[45] Also in 2006, Straus and Neil Lerner co-edited *Sounding Off: Theorizing Disability in Music*, the first collected volume of scholarly essays on music and disability, with the principal aim of initiating dialogue at the intersections of disability and music.[46] By pinpointing different instances of disability across a vast expanse of

[44] Straus, *Extraordinary Measures*, 11.
[45] Joseph Straus, "Normalizing the Abnormal: Disability in Music and Music Theory," *Journal of the American Musicological Society* 59/1 (2006): 113-184.
[46] Neil Lerner and Joseph Straus, eds., *Sounding Off: Theorizing Disability in Music* (New York: Routledge, 2006).

historical periods and musical repertoires, the book provided new impetus for musicologists and theorists to consider disability as a legitimate category of musical analysis, resulting in a number of subsequent projects. In his monograph study, *Extraordinary Measures: Disability in Music* (2011), Straus argues that the syntactical structuring of Western art music "constructs and reflects disability" through the strategic juxtapositioning of normal and abnormal tonal "events."[47] Alex Lubet's seminal text *Music, Disability and Society* (2011) probes how the constantly fluctuating category of disability identity shapes the way disabled musicians operate within different professional and performative contexts. In particular, Lubet offers a powerful and personally informed critique of the institutional prejudices inherent in Western art music in relationship to his own disability.[48] George McKay explores disability's many expressions and representations within American and British pop and rock from roughly the 1950s to the 1970s in his 2013 monograph *Shakin' All Over: Popular Music and Disability*. 2015 saw the highly-anticipated publication of *The Oxford Handbook of Music and Disability Studies*, an expansive co-edited volume that includes research on all musical periods and styles by scholars in musicology, ethnomusicology, and music theory. Finally, in 2016, the *Journal of the American Musicological Society* published a colloquy "On the Disability Aesthetics of Music," featuring work by Straus, Jennifer Iverson, Michael Bakan, Andrew Dell'Antonio and Elizabeth Grace, and myself. [49]

[47] Straus, *Extraordinary Measures.*
[48] Alex Lubet, *Music, Disability, and Society* (Philadelphia: Temple University Press, 2011).
[49] George McKay, *Shakin' All Over: Popular Music and Disability* (Ann Arbor: The University of Michigan Press, 2013); Blake Howe, Stephanie Jensen-Moulton, Neil Lerner, and Joseph Straus, eds., *The Oxford Handbook of Music and Disability Studies* (New York: Oxford University Press, 2015); and Blake Howe, Stephanie Jensen-Moulton, Joseph Straus, Jennifer Iverson, Jessica A. Holmes, Michael Bakan, Andrew Dell'Antonio, and Elizabeth J. Grace, "Colloquy: On the Disability Aesthetics of Music," *Journal of the American Musicological Society* 69/2 (Summer 2016): 525-563.

A now burgeoning corner of music research, music and disability studies encompasses two distinct, though by no means mutually exclusive approaches. The first attends to Straus' contention that formalist musical parameters can symbolically stand in for a body, manifesting disability through persistent structural incoherence, and harmonic or melodic deviation. For instance, Straus argues that Beethoven's dramatic exorcising (in its final measures) of the rogue Eb that had pervaded and disrupted the harmonic fabric of the *Eroica* Symphony symbolizes the composer's struggle with and desire to ultimately overcome his deafness.[50] According to Straus, nineteenth-century composers routinely evoked a narrative of "disability overcome" through the introduction and subsequent normalization of an abnormal melodic or harmonic event, a compositional device that he argues reflects continuity with contemporaneous social developments around disability such as the newly emerging institutionalization of disabled people.[51] (From the standpoint of disability studies, the "overcoming narrative" is problematic on the grounds that it implies that disability is undesirable and ought to be overcome, transferring the burden of stigma from society to the individual.[52]) As successive generations of composers pushed towards the limits of tonality, the twentieth-century saw the culmination of a distinctly disabled musical aesthetics in modernist music, supplanting the overcoming narrative with a celebration of disability through pervasive structural transgression. Claims Straus:

> With its fractured forms and fragmented textures, modernist music claims deformity and disfigurement….With its static harmonies, [it] claims mobility impairment….In its splitting of consciousness and especially its hearing of voices, [it] claims madness.….In its extreme simplification, [it] claims idiocy….In its aloneness and sameness, its contextuality and nondevelopmental repetition, [it] claims autism.[53]

[50] See Straus, "Musical Narratives of Disability Overcome: Beethoven," in *Extraordinary Measures*, 45-62.
[51] Straus, "Musical Narratives of Disability Overcome: Beethoven," 45-46.
[52] Ibid, 46, 132.
[53] Joseph Straus, "Modernist Music and the Representation of Disability," in "On the Disability Aesthetics of Music," *Journal of the American Musicological Society* 69/2 (Summer 2016): 533, 534, 535, and 536.

Straus argues furthermore that this musical embrace of disability corresponds to a historical shift in the visual dynamics of the modern urban landscape as soldiers returned home from war, often as amputees or disfigured from their wounds on the battlefield. Modernist music thus "composes new ways for responding to non-normative bodies and offers a sonic model for progressive behavior within a larger sociocultural framework."[54]

Straus thus uses his analyses to support and animate a larger socio-cultural investigation of disability; in so doing, he continues a longstanding hermeneutical tradition in musicology and music theory. In fact, his analyses recall both the tone and larger disciplinary function of McClary's gendered musical analyses from the 1990s. Indeed, just as McClary's contributions were vital to the inception of feminist musicology, there is considerable value in Straus' pioneering scholarship in having brought disability studies to bear on music research, and laying the groundwork for subsequent scholars of music and disability.

The second branch of music research on disability is attuned to how disability figures in the social fabric of music-making through a focus on disabled performers, disabled listeners, aesthetic conventions, and institutional values. More than hermeneutical analyses of compositions, studying disability in conjunction with music's social parameters lays bare music's implicit corporeal biases and exclusionary practices. Accounts such as Blake Howe's study of Paul Wittgenstein's prolific career as a left-handed pianist as well as Elizabeth Wood's study of composer/conductor Dame Ethel Smyth's deafness reveal how Western art music, as an institution and an industry, has historically excluded disabled bodies.[55] Indeed, classical music

[54] Ibid, 536.
[55] See Blake Howe, "Paul Wittgenstein and the Performance of Disability," *The Journal of Musicology* 27/2 (Spring 2010): 135-180; Howe, "The Allure of Dissolution: Bodies, Force, and Cyclicity in Schubert's Final Mayrhofer Settings," *Journal of the American Musicological Society* 62/2 (Summer 2009): 135-180; and Elizabeth Wood, "On Deafness and Musical Creativity: The Case of Ethel Smyth," *The Musical Quarterly* 92/1-2 (2009): 33-69.

performance demands a virtuosic aptitude on the part of the musician, one sustained through a meticulous degree of control over the body, executed through a range of exaggerated, subtle, and precarious movements; such demands are difficult for many able-bodied people let alone people with physical, sensory, or intellectual disabilities.[56] Often when disabled musicians have devised creative ways of circumventing these limits – such as Wittgenstein's now celebrated left-handed transcriptions of canonical piano repertoire – the visual dimensions of live music performance intensify stigmatized bodily difference.[57] Stephanie Jensen-Moulton's investigation into the reception of Blind Tom Wiggins' touring career as a virtuoso pianist sheds light on the overlapping roles of intellectual disability, blindness, and race in the construction of Wiggins' genius, a unique appeal his slave master readily exploited. Jensen-Moulton's work provides one of the most compelling intersectional analyses of music and disability undertaken to date.[58]

Scholars contend that music performance perpetuates the stigma customarily associated with disability with reception typically succumbing to an all-too familiar set of scripts, such as the Heroic Overcomer, Saintly Sage, Mad Genius, etc. "For musical performers with visible (or audible) disabilities, the affinity between a performance and a freak show may become even more pronounced," writes Straus.[59] According to this logic, audiences are primed to indulge in the "freakish" spectacle that disabled music performance affords, dwelling on the incongruities between an able-bodied sound and a visible disability, "in the simultaneously disquieting and reassuring contemplation of a human embodiment so like and yet so unlike their own."[60] Straus claims that the "dual task" of the musician is thus "to perform music and to perform disability."[61]

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[56] Ibid.
[57] Straus, 132.
[58] Stephanie Jensen-Moulton, " 'Specimens' and 'Peculiar Indiosyncrasies': Songs of 'Blind Tom' Wiggins," *American Music Review* 40/2 (Spring 2011). Online.
[59] Straus, *Extraordinary Measures*, 126.
[60] Ibid, 125. See also Howe, "Paul Wittgenstein and the Performance of Disability," 143.
[61] Straus, 126.

Howe elaborates, "the cultural scripts associated with both performances shape each other, so that it becomes difficult or even impossible to disentangle them: culturally marked, disability informs the music performance, while music performance in turn informs the disability."[62] Musicians can deploy the same strategies identified by disability studies scholars to actively negotiate and neutralize this alleged visual stigmatization: certain performers aggressively confront audiences with their bodily difference to rectify the power discrepancy inherent in the visual exchange, while others may opt to pass as able-bodied by disavowing difference.[63] Because the visual bias of much disability studies scholarship on stigma does not account for the sonic dimensions of musical experience, Howe has offered sonic analogues to the visible/invisible disability dialectic: in music performance, some disabilities are "audible," whereas others are "silent," and indeed music performance might make audible a disability that is otherwise silent and vice versa.[64] This particular branch of disability studies scholarship is a focal point of chapter 3, "Looking beyond Staring."

Other scholars supply valuable critical accounts of historically invisible and or emerging musical communities. McKay is among the first scholars to explore the ways music itself can be a *disabling* culture. He persuasively argues that pop music perpetuates a "destructive economy" whether in its glorification of certain self-injurious, but no less "authentic" lifestyles such as substance abuse, mental illness, and suicide among the industry's youngest members, or in its penchant for ear-splitting volumes, an industry standard that he notes accounts for the ubiquity of music-induced hearing loss among the industry's musicians, listeners, and workers. (I discuss this further in Chapter 2, "Listening beyond Hearing.") Anabel Maler and Jeannette Jones

[62] Howe, "Disabled Music Performance," in *The Oxford Handbook of Music and Disability Studies*, 191.
[63] Ibid, 129. See also Siebers, *Disability Theory*; and Garland-Thomson, "Dares to Stare: Disabled Women Performance Artists and the Dynamics of Staring," in *Bodies in Commotion,* 30-42.
[64] See Howe, "Disabled Music Performance."

explore music from the perspective of Deaf culture, demonstrating how people with hearing loss listen through non-aural means, and harness specific cultural-linguistic tools in their musical expression. Maler and Jones have been instrumental in unsettling the misconception that deafness precludes musical engagement, and in validating non-normative listening practices. Similarly, Michael Bakan, and Andrew Dell'Antonio and Elizabeth Grace propose a view of music and Autism that embraces a plurality of perspectives on music, and dispels the assumption that Autistic musical understanding is unemotional or that all Autistics are musical savants. These scholars seek to honour the familiar "nothing about us without us" adage of disability activism by grounding their work in ethnography; they engage with participants using chat forums and private messages on social media platforms as well as through musical collaboration; they also deliberately opt for direct quotes over paraphrasing in their writing in an effort to acknowledge the expertise of their informants.[65] Finally, William Cheng's award winning 2016 book, *Just Vibrations: The Purpose of Sounding Good*, builds on this commitment to marrying the emancipatory values of disability studies with musicology by proposing a care-oriented musicology – what he calls *reparative* musicology, borrowing Eve Kosofsky Sedgwick's term – imploring scholars to practice compassion and attentiveness towards one another. In particular he contends that scholars in positions of power should anticipate the emotional and physical well-being of those scholars who are marginalized, vulnerable, or less privileged such as graduate students, contingent faculty, scholars of colour, disabled scholars, etc.[66]

[65] See Michael Bakan, "Music, Autism, and Disability Aesthetics," in "On the Disability Aesthetics of Music," *Journal of the American Musicological Society* 69/2 (Summer 2016): 548-553; and Andrew Dell'Antonio and Elizabeth "Ibby" Grace, "No Musicking about Us without Us!" in ibid, 553-559.
[66] See William Cheng, *Just Vibrations: The Purpose of Sounding Good* (Ann Arbor: University of Michigan Press, 2016).

Ultimately, music scholarship on disability aims to recuperate historically marginalized perspectives by celebrating the ways disabled musicians enrich normative music-making strategies, and by exposing the many musical discourses and ideologies that have systematically devalued and excluded disability and limited the scope of its representation. This is a continuity that links the priorities of hermeneutic readings with sociological analyses. Narrative study and attention to the cultural objectification of disability have figured centrally in all parts of the music scholarship on disability, a preoccupation that directly corresponds to the pre-eminence of narrative study in disability studies and disability activism. For instance, Blake Howe's 2013 *Musicology Now* blog post "Music & Disability Studies: An Introduction" – a widely-cited primer on music and disability – features a section on "Disability Narrative," just as the AMS-SMT joint Music and Disability Study group website showcases its "Musical Representations of Disability Database," which is regularly updated with user contributions.[67] The database identifies portrayals and images of disability ranging from a one-eyed cyclops in Jean Baptiste Lully's opera *Acis et Galatée* (1686), to a wheelchair-using character in Stephen Schwartz's hit musical *Wicked* (2003).[68]

Yet as the scholarship is still in its infancy, there are contributions to be made. In particular, the current scholarship takes for granted that when disability is visible or known about, it automatically begets stigma, and that reception is necessarily oriented towards otherness. For example, in their introduction to the *Oxford Handbook of Music and Disability*

[67] See Blake Howe, "Music & Disability Studies: An Introduction," *Musicology Now*(blog), February 10, 2014, accessed June 27, 2016, http://musicologynow.ams-net.org/2014/02/music-disability-studies-introduction.html; "Musical Representations of Disability Database," Louisiana State University, last updated, March 11, 2016, accessed June 27, 2016, http://www.lsu.edu/faculty/bhowe/disability-representation.html. This database has over 250 entries.
[68] Ibid.

Studies (2016), the co-editors contend that disabled performers' and composers' work is customarily both "marred and enabled by disability." They elaborate:

> In their reception these [disabled] composers and performers are (to return to the terminology of Garland-Thomson 1997, cited earlier) "engulfed by a single stigmatic trait." Although Disability Studies argues for the cultural significance of disability, the process of "engulfment" results in its overdetermination: because of its marked status, disability is often treated as the most important (and perhaps only) governing feature of a person's life and career… Against the norms of music composition and performance, "disabled music" composed by or for "disabled musicians" is almost always branded as such.[69]

This formulation makes few allowances for the agency of the viewer/listener or the possibility of more varied and complex orientations toward disability among audience members. Further, it takes for granted that disabled musicians necessarily understand disability as a dramaturgical identity construction, or that negotiating an otherwise essentialist reception alongside their music through a "dual performance" is necessarily a priority. In this way, the scholarship on music and disability adheres to disability studies' oft-criticized monolithic identity formation, and presumes that disability, in its "overdetermination," takes precedence over other identity categories of marginality or aesthetic concerns. I appreciate, however, that this limitation is less a reflection on the music scholarship than on the dogma of disability studies.

Privileging a dramaturgical construction of disability identity has the inadvertent effect of sometimes overstating disability's significance, or imposing too homogeneous a conception of "disabled" musical experiences than is warranted. It risks overlooking the just as common, banal, or less politically charged experiences of music and disability. This dissertation shows that for some disabled musicians, disability is less significant than the existing scholarship allows:

[69] Howe, Jensen-Moulton, Lerner, and Straus, "Introduction: Disability Studies in Music, Music in Disability Studies," in *The Oxford Handbook of Music and Disability Studies,* 4.

disability is neither relevant to their aesthetic practice nor to their social experience, and it inspires little interest in political emancipation or creative breakthrough, stances that I elaborate on in all three chapters.

Chapter Breakdown

Each of the dissertation's chapters uses a different category of disability to examine a different facet of musical experience: listening, looking, and performing respectively. **Chapter 2: Listening beyond Hearing** investigates the conceptual limits of customary listening paradigms through the experiences of deaf listeners, replacing the many stereotypical impressions of deaf perception with a plural understanding of music and deafness. By surveying musical accounts from members of Deaf culture, hearing aid wearers and cochlear implant recipients, and listeners with music-induced hearing loss, I argue that deafness belongs in musicology as a diverse set of experiences within the full spectrum of listening. Listening is far from a singular aural experience; rather, it is a highly variable multi-sensory endeavour encompassing individual deliberate strategies and unconscious skills that uniquely combine vision, touch, movement, and hearing. The Interlude, **"Singing beyond Hearing,"** uses Christine Sun Kim's silent opera, *Face Opera II*, to offer a conception of singing beyond the precondition of sound in music and vocalized production, one that is premised on the expressive dimensions of silent facial gesture from the American Sign Language lexicon.

Chapter 3: Looking beyond Staring explores how music performance unsettles the predominantly visual construction of disability in existing disability theory through showcasing different musicians engaged in performance traditions as disparate as classical art song, indie rock, and krip-hop. By questioning the presumption of stigma, I reveal the myriad ways

disability is performed and read through a musician's public image, aesthetic priorities, and identity politics, imagining new intertextual and multisensory engagements with disability for performers and audiences alike. More specifically, the constant slippage between the visual and aural spheres in live music performance shapes disability's meaning in significant ways. For instance, the prestige of aurality in music relative to the other senses along with the transcendent power ascribed to music can liberate disability from engagements otherwise rooted in visual objectification. I show that in many cases, disability in music evades straightforward sensory recognition.

Chapter 4: Performing beyond Ability charts how disability and technology together intervene in prevailing conceptions of musical ability and expression. The chapter features accounts from amputee prosthesis-wearing musicians; musical prosthetics used in multi-media performance; and musical digital interfaces for musicians with limited mobility. If prosthetic aids and enhancements seemingly disrupt the precondition of physical naturalness in musical expressive ideals, I argue that they are in fact part of a longstanding, albeit inconspicuous tradition of technological intervention in music. I argue that the musician's body and its abilities already encompass the organic skills of the player and her physical engagement with objects, environments, and a host of other variables.

By attending to disability in contemporary performance, I show that music, disability, and embodiment are necessarily expansive categories. Disabled performers reveal that embodiment is necessarily plural, subject to a number of musical and non-musical variables, and in a constant state of flux, upending straightforward conceptions of bodily normalcy. They likewise reveal that music exceeds the acoustical parameters of sound, encompassing a host of media, gestures, and environmental constraints, and that music defies any straightforward

hierarchy of sensory experience. Ultimately, by attending to disability in performance, I seek to expand musicology's conceptual and political horizons. Disability transforms our understanding of what music is – its aesthetic, relational, and ontological contours.

Chapter 2: Listening beyond Hearing: Music and Deafness[1]

Introduction

In February 2003 internationally renowned Scottish percussionist Dame Evelyn Glennie gave a landmark TED Talk. Using live musical demonstration, she described her signature technique of "touching the sound," a nuanced form of vibrational listening that engages the whole body as a "resonating chamber" by which to sense, distribute, and digest the sounds while simultaneously integrating visual cues, movement, and imagination. Swiftly moving barefoot about her percussion kit, Glennie detailed for her live audience how and where she felt the different pitches and sounds resonating in her body—the chest, the stomach, the tip of the pinkie finger. At one point she invited audience members to explore their physical connection to sound by using their hands to create the sounds and sensations associated with different meteorological phenomena. "Now, I don't mean just the sound; I mean really listen to that thunder within yourselves. And please try to create that through your clapping," she instructed. Glennie's TED appeal was a striking one: sound is more than meets the ear; it is a multisensory experience.[2]

Through her performances and public outreach Glennie has established herself as an expert listener in the popular consciousness. "My aim, really, is to teach the world to listen. That's my only real aim in life" and "my role on this planet is to bring the power of sound," she

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[1] Material from this chapter was recently published in a peer-reviewed article in the *Journal of the American Musicological Society* and is used here with permission from the University of California Press. See Jessica A. Holmes, "Expert Listening beyond the Limits of Hearing: Music and Deafness," *Journal of the American Musicological Society* 70/1 (Spring 2017): 171-220.

[2] A video recording of Glennie's TED Talk is available on the TED website with subtitles and transcripts in thirty-two different languages and with built-in sharing mechanisms for social media platforms: Evelyn Glennie, "How to Truly Listen," TED video, 32:09, accessed April 14, 2016, https://www.ted.com/talks/evelyn_glennie_shows_how_to_listen?language=en. To date the video has had nearly three and a half million views on Ted.com alone, while a version of the talk posted to the TED Talks YouTube channel has had just over one million hits: Evelyn Glennie, "How to Truly Listen," YouTube video (TED Talks channel), 34:06, posted May 14, 2007, accessed April 14, 2016, https://www.youtube.com/watch?v=IU3V6zNER4g.

earnestly proclaims.[3] Perhaps unexpectedly, Glennie is also profoundly deaf, in the sense that she cannot "hear" sound below ninety-one decibels. She thus challenges the "common misconception that deaf people live in a world of silence" by virtue of her renown as a professional musician.[4] She has, however, long resisted self-identifying as "deaf" or "disabled," in an effort to dissociate from the politics of deaf identity and the stereotypes disability begets, and ultimately to highlight the critical merit of her musical achievements over the seeming novelty of her deafness.[5] Indeed, her reception typically espouses a romantic view of deaf perception with headlines such as "How Do We Listen When We're Unable to Hear?" and "Evelyn Glennie Feels the Sound of Silence," as online viewers marvel at the "deaf lady who can hear more than you."[6] Too often the universalizing tone of her reception—one echoed in her TED Talk's definitive title "How to Truly Listen"—belies the intricacies of her labors and the uniqueness of her circumstances. The result is an overgeneralized view of music and deafness that resonates neither with the percussionist's claims nor with the experiences of other deaf listeners.

Evelyn Glennie is but one of countless expert listeners whom musicology has yet to fully reckon with. Until recently, musicologists had little knowledge of the musical experiences of d/Deaf people. Indeed, deafness has long served as the universally accepted disqualifying

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[3] Glennie, "How to Truly Listen" (TED video), and Glennie in Thomas Reidelsheimer, dir. *Touch the Sound: A Sound Journey with Evelyn Glennie* (Munich: Filmquadrat, 2004, DVD). In 2015 the percussionist announced her plans to open a listening center in order to realize her mission "to teach the world to listen": "Evelyn Glennie Biography," Evelyn Glennie website, last modified March 2015, accessed August 13, 2016, https://www.evelyn.co.uk/biography/.

[4] Evelyn Glennie, "Hearing Essay," Evelyn Glennie website, last modified January 1, 2015, accessed May 24, 2016, https://www.evelyn.co.uk/hearing-essay/.

[5] Ibid.

[6] "How Do We Listen When We're Unable to Hear?," NPR website (*TED Radio Hour*), June 5, 2015, accessed April 15, 2016, http://www.npr.org/2015/06/05/411730683/how-do-we-listen-when-we-re-unable-to-hear ; "Evelyn Glennie Feels the Sound of Silence," audioBoom, accessed October 9, 2016, https://audioboom.com/boos/1524778-evelyn-glennie-feels-the-sound-of-silence; Zarkoff45, comment on Glennie, "How to Truly Listen" (YouTube video).

impediment to musical engagement and apprehension. Deafness is believed to be the menace that plagued our beloved Beethoven, and it endures as the ultimate symbol of his transcendent musical genius.[7] But the notion that deafness precludes musical understanding is fundamentally a misconception, as music scholars Maler, Jones, and Straus have recently argued, one that relies on an exclusively aural conception of sound and a disproportionately extreme impression of hearing loss.[8] This groundbreaking scholarship reminds us that deaf people have long engaged with music through tactile, visual, and kinesthetic stimuli as an alternative to normal hearing. More recently, as narratives about the potential for inborn sensory acuities among the deaf proliferate in the cultural imaginary, there has been a tendency to reduce deaf listening to tactility and vibration; increasingly, deafness symbolizes a set of sensory polarities that stand up neither to the findings of empirical neuroscience research nor to the lived experiences of deafness. This chapter thus pushes beyond naturalized conceptions of sound, extreme constructions of hearing loss, and sensory ideals, drawing on first-person musical accounts from members of the culturally Deaf community, hearing aid wearers and cochlear implant recipients, and musicians and concertgoers with music-induced hearing loss. Their testimony amounts to a diverse record of musical experiences that fall squarely within the full spectrum of listening. Music research presumes normal intact hearing to be the bare minimum requirement for cultivating listening expertise, yet d/Deaf listeners challenge the primacy of aurality relative to other senses, and

[7] See Straus, "Musical Narratives of Disability Overcome: Beethoven" in *Extraordinary Measures*, 45-62. In his forthcoming book *Beethoven Composing Deafly: A History and Memoir* musicologist Robin Wallace aims to demystify the Romantic construction of Beethoven's deafness by drawing critical attention to the many listening compensations the composer devised as his hearing deteriorated.

[8] See Straus's discussion of "deaf hearing" in *Extraordinary Measures*, 167–70; see also Elizabeth Wood, "On Deafness and Musical Creativity: The Case of Ethel Smyth," *The Musical Quarterly* 92 (2009): 33-69; Anabel Maler, "Songs for Hands: Analyzing Interactions of Sign Language and Music," *Music Theory Online* 19/1 (March 2013); Maler, "Musical Expression among Deaf and Hearing Sogn Signers," in *The Oxford Handbook of Music and Disability Studies*, ed. Blake Howe, Stephanie Jensen Moulton, Neil Lerner, and Joseph N. Straus (New York: Oxford University Press, 2016), 73-91; Jeannette Jones, "Imagined Hearing" in ibid, 54-72; and Michele Friedner and Stefan Helmreich, "Sound Studies Meets Deaf Studies," *The Senses & Society* 7 (2012): 72-86.

ultimately reveal that hearing need not be a prerequisite for or the basis of listening expertise. In fact, musicology stands to gain from deafness.

Experiences of deafness vary in relation to a set of shifting audiological and cultural-linguistic parameters. Accordingly, throughout the chapter I adopt the practice of using an uppercase "D" to refer to those Deaf people who identify with the linguistic customs and minority standpoint of Deaf culture, a global community united by its use of sign languages.[9] By contrast, I use a lowercase "d" to refer to those who are non-culturally deaf or hard of hearing; these people typically communicate using phonetic language, often with the support of a hearing aid or cochlear implant. The people-centered compound "d/Deaf" is intended to signal the full spectrum of auditory and socio-cultural constructions of deafness. These myriad conceptions and experiences of deafness shape d/Deaf attitudes toward music and musical experience.

Scholars in Deaf studies have recently coined the term "Deaf Gain" to counter the negative connotations of the term "hearing loss"—that is, to supplant a construction of deafness rooted in biological deficit with one rooted in biocultural diversity, and ultimately to draw attention to the unique cultural, sensory, and creative gains that deafness and Deaf culture afford. Deaf Gain, write H-Dirksen L. Bauman and Joseph J. Murray, is an "ethical advance" bestowing "a greater appreciation of the deep value of human diversity rather than human monoculture. Freeing ourselves from the shackles of normalcy, we are now more able to see how Deaf Gain can change the ways in which we appreciate the gifts of all humans."[10] This paradigmatic shift in thinking about deafness as gain is of vital importance to musicology: d/Deaf listeners resist

[9] Deaf studies scholar Rebecca Edwards writes of the motivations for capitalizing "Deaf" under the cultural model of deafness: "For hearing people, the term 'deaf' speaks of the body and its failings; it does not invoke a vibrant, subaltern culture with a language, community, and history of its own": Rebecca Edwards, *Words Made Flesh: Nineteenth-Century Deaf Education and the Growth of Deaf Culture* (New York: New York University Press, 2012), 1.

[10] H-Dirksen L. Bauman and Joseph J. Murray, eds., *Deaf Gain: Raising the Stakes for Human Diversity* (Minneapolis: University of Minnesota Press, 2014), xxxii.

straightforward sensory hierarchies, reject normalizing listening paradigms, enrich our understanding of music's ontological contours, and transform prevailing notions of musical expertise.

A Primer on Deafness and Disability

Before returning to Glennie and embarking on a full account of d/Deaf musical experiences, an introduction to key concepts in Deaf studies is needed in order to contextualize this new area of musicological research. There is no typical experience of deafness, and deaf people do not form a single, homogeneous social group. Rather, d/Deaf people relate to "deafness" in vastly different ways: deafness entails a combination of individual audiological characteristics, linguistic preferences, identity politics, and in some cases technological constraints—what amount to an idiosyncratic set of variables that shape musical experiences in profound ways.

The sensory contours of deafness vary considerably both within and between d/Deaf individuals. "Hearing loss" exists on an audiological spectrum ranging from mild to profound; its type/cause, configuration, magnitude (degree), and age of onset varies from person to person.[11] Hearing loss magnitude is expressed in decibels (dB)—the absolute unit for describing the intensity of sound (loudness)—relative to average hearing sensitivity thresholds ("normal hearing"), which range from zero to twenty decibels, depending on the sound frequency (pitch) measured in hertz (Hz). "Profound deafness" is thus the standard term for denoting a hearing loss threshold of ninety-one decibels and above; profoundly deaf people generally cannot hear sounds

[11] See "Type, Degree, and Configuration of Hearing Loss," American Speech-Language-Hearing Association website, Audiology Information Series, accessed April 12, 2016, http://www.asha.org/uploadedFiles/AIS-Hearing-Loss-Types-Degree-Configuration.pdf.

below this volume. Profound deafness is considered the most extreme form of hearing loss and is contrasted with "mild" hearing loss, the threshold for which ranges from twenty-six to forty decibels.[12] At any degree, hearing loss can differ between right and left ears, and hearing thresholds vary according to frequency: some people have greater sensitivity at low frequencies, others at high frequencies. Thus, d/Deaf people seldom live in a world of absolute aural silence. Many d/Deaf people, including those who are profoundly deaf, have residual hearing, which amounts to measurable, natural hearing enabling them to hear a certain degree of auditory stimuli. The significance and function of residual hearing is, however, necessarily individual. Vision, touch, and kinesthetic stimuli figure prominently in d/Deaf sensory experiences, and are informed by a host of materially and socially bound parameters including specific linguistic preferences, identity politics, technological constraints, and environmental dynamics. And d/Deaf people harness their sensory abilities in both conscious and intuitive ways that often defy straightforward explanation.

In North America historical tensions between oralist and manualist deaf pedagogies fostered two sharply divided approaches to deaf language use and identity, a pedagogical "war" that began in the mid- to late nineteenth century and persisted until the late twentieth century.[13] Manualism is the practice of educating the deaf using sign language; it was integral to the genesis of Deaf culture in the West and has been central to its survival. Oralism, by contrast, is a method that teaches the exclusive use of speech and lip reading, an ideology that rose to

[12] See Michael Valente, Elizabeth Fernandez, and Heather Monroe, *Audiology Answers for Otolaryngologists* (New York: Thieme, 2011), 21. See also "The Audiogram," American Speech-Language-Hearing Association website, accessed August 29, 2016, http://www.asha.org/public/hearing/Audiogram/.

[13] See Edwards, *Words Made Flesh*, 2; Harry G. Lang, "Perspectives on the History of Deaf Education" in *The Oxford Handbook of Deaf Studies, Language, and Education*, ed. Marc Marschark and Patricia Spencer (New York: Oxford University Press, 2003), 9-20; Douglas Baynton, *Forbidden Signs: American Culture and the Campaign Against Sign Language* (Chicago: University of Chicago Press, 1996); and Lane, *When the Mind Hears: A History of the Deaf* (New York: Random House, 1984). Debates surrounding oralism and manualism were similar across the United States and Canada.

prominence in America in the 1860s, coinciding with the height of the eugenics movement and all but superseding manualism.[14] Proponents of oralism, most notably Alexander Graham Bell, sought to eradicate a then emerging subaltern deaf culture by suppressing sign language use with the aim of assimilating the deaf into hearing culture.[15] As American Deaf historian Rebecca Edwards explains, oralist pedagogy dominated until the 1970s because of its social appeal: "the power of speech would free deaf people from the supposedly narrow constraints of the Deaf community."[16] In order to promote the exclusive use of the spoken vernacular, oralist educators punished unruly deaf students who signed, often resorting to violent tactics. Deaf signers understandably saw the oralist mission as nothing less than "an assault on their way of life."[17] (In Britain the history of deaf pedagogy has been even more strongly oriented toward oralism than in the United States since the inception of British oralist schools in the eighteenth century.)[18]

In light of these fraught historical circumstances, contemporary Deaf cultural movements in the West center first and foremost on a rejection of oralism: members of Deaf culture

[14] Oralist and manualist pedagogies originated in late eighteenth-century Germany and France respectively, and "the fate of these methods in the 19th century reflected the ongoing battles between these two European powers": Leila Monaghan, "A World's Eye View: Deaf Cultures in Global Perspectives," in *Many Ways to be Deaf: International Variation in Deaf Communities*, ed. Leila Monaghan, Constanze Schmaling, Karen Nakamura, and Graham Turner (Washington D.C.: Gallaudet University Press, 2003), 1.

[15] Bell believed that oralism would thwart the proliferation of sign language and deaf-deaf marriage, a stance that culminated in his eugenicist manifesto; see Alexnder Graham Bell, *Memoir Upon the Formation of a Deaf Variety of the Human Race* [Washington, D.C.]: National Academy of Sciences, [1884].

[16] Edwards, *Words Made Flesh*, 2. For most of the twentieth century, sign languages were widely regarded by linguists and anthropologists as primitive and pantomimic. It was not until the belated validation of American Sign Language as a fully formed natural human language in 1960 and subsequent scientific discoveries relating to the similar acquisition and cognitive processing of signed and spoken languages in the 1970s that attitudes toward manualism began to improve. See Cindee Calton, "What We Learned from Sign Languages When We Stopped Having to Defend Them," in *Deaf Gain*, 112-129.

[17] Edwards, *Words Made Flesh*, 2.

[18] See Lane, *When the Mind Hears*, 100. By comparison, manualism enjoyed relative prominence in France, where high-ranking clerics and public officials argued for the value of a distinctly French deaf community and sign language as an extension of French national identity. Even as oralism gained institutional support in the nineteenth century, efforts to restore the "French method" (i.e., manualism) were ultimately successful. See Freeman G. Henry, introduction to *Forging Deaf Education in Nineteenth-Century France: Biographical Sketches of Bébia, Sicard, Massieu, and Clerc*, by Ferdinand Berthier, translated by Freeman G. Henry (Wasington D.C.: Galladet University Press, 2009), xv–xxxvii; and Monaghan, "World's Eye View," 1–9.

communicate primarily in sign language and subscribe to a unique set of identity politics.[19] American Sign Language (ASL) is used throughout the United States and in anglophone Canada. Because the establishment of manualism in America is owed to French influence, ASL evolved through "language contact": it combines the parent French Sign Language ("Langue des signes française," or LSF) with preexisting local American signing systems.[20] Quebec Sign Language, known in French as "Langue des signes québécoise" (LSQ), is used in francophone communities across Quebec, Ontario, and New Brunswick, and originated from the contact of ASL and LSF in French-speaking Canada throughout the nineteenth century.[21] (That ASL and British Sign Language (BSL) differ considerably underscores how little correspondence there is between sign language and the spoken vernacular—in this case, English; sign languages have grammatical structures that are distinct from phonetic languages.)[22] From the standpoint of Deaf culture, deafness is not a disability; rather, to be "Deaf" is to belong to a cultural-linguistic minority, a "visual variety of the human race."[23] By contrast, non-culturally deaf people usually communicate using oral speech and lip reading, often with the support of a hearing aid or cochlear implant.

In contrast to their Deaf counterparts, non-culturally deaf people may seek to "pass" as hearing by adapting to the norms of the hearing world; this often requires that they compensate

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[19] See Bauman, "Introduction: Listening to Deaf Studies," in *Open Your Eyes*, 1.
[20] See David F. Armstrong, *Show of Hands: A Natural History of Sign Language* (Washington D.C.: Gallaudet University Press, 2011), 34–35.
[21] See Parisot et al., "Quebec Sign Language," in *Sign Languages of the* World: *A Comparative Handbook*, ed. Julie Bakken Jepsen, Goedele De Clerck, Sam Lutalo-Kiingi, and William B. McGregor (Boston: Walter de Gruyter, Inc., 2015), 702–3.
[22] See David M. Perlmutter, "What Is Sign Language?," Linguistic Society of America website, accessed August 21, 2016, http://www.linguisticsociety.org/sites/default/files/Sign_Language.pdf.
[23] Benjamin Bahan, "Upon the Formation of a Visual Variety of the Human Race," in *Open Your Eyes*, 83. Bahan's assertion plays on the title of Alexander Graham Bell's abovementioned manifesto, *Memoir upon the Formation of a Deaf Variety of the Human Race*. For a list of terms pertaining to d/Deaf identity, language, and education, see Ladd, *Understanding Deaf Culture: In Search of Deafhood* (Buffalo: Mutilingual Matters, 2003), xvii–xxii; and "The Hearing Loss Lexicon," Canadian Hard of Hearing Association website, accessed April 12, 2016, http://www.chha.ca/chha/publications-lexicon.php.

for the limits of their assistive technologies by undertaking an intricate set of invisible labors—maintaining clear sight lines for lip reading, eye contact, body language, and so on—as they strive for discretion in their social interactions. (As hearing aid and cochlear implant design becomes increasingly inconspicuous, social discretion becomes even more viable for deaf users.)[24] An emerging group of deaf cochlear implant recipients see themselves as cyborgs at the vanguard of post-humanism, a movement that media theorist Mara Mills dubs "deaf futurism."[25] People with mild to moderate hearing loss often prefer the neutral designation "hard of hearing" to the more pathologizing term "hearing-impaired" as a way of distinguishing themselves from those who are profoundly deaf and of dissociating from Deaf culture. Yet d/Deaf identification does not readily correspond to degree of hearing loss, but is rather reflective of sociocultural outlook.[26] Just as contemporary Deaf culture encompasses all types and degrees of hearing loss, there is no consensus on the precise audiological parameters for the designations "deaf," "hard of hearing," and "hearing-impaired," and they are often used interchangeably.[27] Moreover, the formerly hard and fast correspondence between deaf language use and identity is beginning to evolve: an increasing number of deaf people sign *and* speak, opting for cultural-linguistic fluidity over the antagonism of generations past.[28] But for many in the Deaf community language use

[24] Inconspicuous design is achieved both through the persistent miniaturization of hearing aid and cochlear implant technologies and through the integration of fashion into medical engineering, rendering them more like music earbuds, mobile earpieces, and headphones. See Graham Pullin, *Design Meets Disability* (Cambridge, MA: MIT Press, 2009), 23–28.

[25] Mara Mills, "Do Signals Have Politics? Inscribing Abilities in Cochlear Implants," in *The Oxford Handbook of Sound Studies*, eds. T.J. Pinch and Karin Bijsterveld (New York: Oxford University Press, 2012), 320–46.

[26] For a sociocultural discussion of the category "hard of hearing," see Stenross, *Missed Connections*, and "Deaf or Hard of Hearing," DO-IT (University of Washington) website, last modified 2016, accessed April 12, 2016, http://www.washington.edu/doit/deaf-or-hard-hearing.

[27] Membership in Deaf culture also extends to sign language interpreters and to the children of Deaf adults, who often use the acronym "CODA." "Very often this acceptance [in Deaf culture] is strongly linked to competence in a signed language": "Deaf Culture," World Federation of the Deaf website, accessed July 27, 2016, https://wfdeaf.org/our-work/focus-areas/deaf-culture. See also Bernice Woll and Paddy Ladd, "Deaf Communities" in *The Oxford Handbook of Deaf Studies, Language, and Education*, 151-163.

[28] The last fifty years have witnessed an increase in "sign bilingualism" in deaf schools in the West, where students are taught sign linguistics alongside the spoken vernacular. This has led to new conceptions of d/Deaf identity and

remains inextricably bound to identity, where "voicing" is an act that affirms oralist ideals, thereby violating the core values of Deaf culture.[29]

To complicate matters, Deaf culture has a complex relationship with disability identity. The pathologizing construction of deafness that Deaf culture opposes is reflective of the biological determinism in medical discourse on disability more generally (i.e., the medical model of disability) that disability studies has long sought to counter. Accordingly, the cultural model of deafness is not unlike the social model of disability advanced by disability studies: disability is not a biologically inherent defect but rather a form of difference determined through social and environmental mechanisms, and indeed scholars and activists affirmatively claim disability as a valuable minority identity.[30] However, in its persistent and explicit rhetorical disavowal of disability—i.e., deafness is *not* a disability—the cultural model of deafness reinscribes the stigma associated with disability and its inferiority relative to other positions of marginality.[31] At the same time, many Deaf people depend on the legal protection conferred through such institutions as the Americans with Disabilities Act (and its international counterparts) for workplace accommodation, communications supports, and medical services, despite their

orientations toward Deaf culture. See Marschark, ed. *Bilingualism and Bilingual Deaf Education* (New York: Oxford University Press, 2014).

[29] In Deaf culture, "voicing" risks perpetuating the legacy of oralism and reinscribing the metaphysical associations between voice and subjecthood; see Carol Padden and Tom Humphries, *Deaf in America: Voices from a Culture* (Cambridge, MA: Harvard University Press, 1998); Brenda Brueggemann, *Lend Me Your Ear: Rhetorical Construtions of Deafness* (Washington, D.C.: Gallaudet University Press, 1999); and Jonathan Rée, *I See a Voice: Deafness, Language, and the Senses – A Philosophical History* (New York: Metropolitan Books, 1999).

[30] See Siebers, *Disability Theory*, 4. See also Anna Mollow, "Identity Politics and Disability Studies: A Critique of Recent Theory," *Michigan Quarterly Review* 43/2 (2004).

[31] Douglas C. Baynton explains that the Deaf rejection of disability is "mainly intended as a refutation of the demeaning focus on deafness as defect": Douglas C. Baynton, "Beyond Culture: Deaf Studies and the Deaf Body," in *Open Your Eyes*, 307. Lennard J. Davis states that "Many Deaf people have said, 'I'm not disabled like a crippled person or a mentally retarded person.' But the problem with that refutation is that it uses ableist concepts. It implies that each Deaf person would be diminished if they considered themselves disabled": Davis, "Postdeafness," in *Open Your Eyes*, 323. For a critical discussion of the relationship between deafness and disability, see Lane, "Do Deaf People Have a Disability," in *Open Your Eyes*, 277–92; Baynton, "Beyond Culture," in *Open Your Eyes*, 293–313; and Susan Burch and Allison Kafer, *Deaf and Disability Studies: Interdisciplinary Perspectives* (Washinton, D.C.: Gallaudet University Press, 2010). For a discussion on the status of disability in relationship to other positions of marginality and categories of identity, see the introduction of this dissertation.

insistence that the Deaf experience does not correspond to disability. Inconsistencies exist on both sides of the Deaf/disability divide, however. Although the social model of disability embraces a non-pathologizing view of deafness, the "disability rights movements and disability studies have been slow to recognize the ways in which hearing and speaking confer privilege" and the role of spoken languages in disability oppression more generally, as Susan Burch and Alison Kafer explain.[32]

Music, more than any other art form, reifies the intersections between deafness and disability by virtue of the aural: the inescapably sonic foundation of music in conjunction with the enduring misconception that deafness entails total aural loss positions deafness as music's ultimate disability. But it is not that the acoustical properties of music are intrinsically prohibitive for d/Deaf listeners. Rather, it is the value ascribed to aurality and its primacy in music discourse relative to the other senses that obscures and invalidates d/Deaf musical experiences. Aurality is but a naturalized mainstay of music; it by no means accounts for all musical experiences.

Yet as popular culture begins to entertain the prospect of deaf musicality, there is a tendency to overstate the sensory extremes of deafness. For instance, popular science reporting frequently reduces d/Deaf listening to vibration alone, succumbing to an overgeneralized, polarizing construction of deaf perception. Countless sensationalist headlines make inflated claims about the extent and ubiquity of inborn sensory adaptations among the deaf, often relying on oversimplified aural analogues: "Super Powers for the Blind and Deaf," "Deaf People Hear Touch?," "Brains of Deaf People Rewire to 'Hear' Music," "Feel the Music: Deaf People Use 'Mind's Ear' to Process Vibrations," "Deaf People 'Develop Super-Vision to Compensate,'" and

[32] Burch and Kafer, *Deaf and Disability Studies*, xvii.

"Deaf People 'Feel Touch' with Hearing Part of Brain."[33] Similarly, the many multisensory intricacies of Glennie's practice receive limited attention in the mainstream portrayals of her listening in which vibration/touch enjoys pride of place, as evinced by seductive headlines such as "Evelyn Glennie Feels the Sound of Silence"[34] and by the titles of her autobiography *Good Vibrations* (1990) and the critically acclaimed documentary *Touch the Sound: A Sound Journey with Evelyn Glennie* (2004). Increasingly, deafness symbolizes an alluring set of material polarities: the expectation is that deaf people experience music as total aural silence *and* pure tactile sensation. As the material limits of deafness assume new symbolic currency, "structures of power are funneled into sound ideals," to borrow Nina Eidsheim's words.[35]

In actuality, "cross-modal plasticity," the neural phenomenon to which the headlines above most often refer, has been found to be consistently evident only in instances of prelingual

[33] Mary Bates, "Super Powers for the Blind and Deaf," *Scientific American*, September 18, 2012, accessed April 16, 2016, http://www.scientificamerican.com/article/superpowers-for-the-blind-and-deaf/; "Deaf People Hear Touch?," YouTube video (SourceFed channel), 2:12, posted July 12, 2012, accessed October 3, 2016, https://www.youtube.com/watch?v=Q6sXPuvIJeA; Walter Neary, "Brains of Deaf People Rewire to 'Hear' Music," *UWToday*, University of Washington website, November 27, 2001, accessed April 16, 2016, http://www.washington.edu/news/2001/11/27/brains-of-deaf-people-rewire-to-hear-music/; Erica Klarreich, "Feel the Music: Deaf People Use 'Mind's Ear' to Process Vibrations," *Nature*, November 27, 2001, accessed April 16, 2016, http://www.nature.com/news/2001/011127/full/news011129-10.html; "Deaf People 'Develop Super-Vision to Compensate,'" *Mail Online*, October 11, 2010, accessed April 16, 2016, http://www.dailymail.co.uk/health/article-1319480/Deaf-people-develop-super-vision-compensate.html; Jeanna Bryner, "Deaf People 'Feel Touch' with Hearing Part of Brain," Live Science, July 10, 2012, accessed April 16, 2016, http://www.livescience.com/21509-deaf-people-brain-touch.html. Headlines are usually written by headline writers rather than authors or reporters, and are often deliberately made more sensational than the body of the report in order to generate immediate interest. They nevertheless have a notable cultural impact. Moreover, the brain and music are two topics that scientists recognize as being of especially intense public interest and are thus susceptible to this sensationalism. See "The Mythical Brain," Editorial in *Nature Neuroscience* 17 (2014): 1137. Doi:10.103/nm.3802.; Anna North, "The Dangers of 'Brain'-Speak," *New York Times*, June 5, 2014, accessed May 21, 2016, http://op-talk.blogs.nytimes.com/2014/06/05/the-dangers-of-brain-speak/?_r=0; Samuel A. Mehr, "Miscommunication of Science: Music Cognition Research in the Popular Press," *Frontiers in Psychology* 6 (2015): 988. doi:10.3389/fpsyg.2015.00988.; Andrew Moore, "Bad Science in the Headlines: Who Takes Responsibiity When Science Is Distorted in the Mass Media?" *EMBO Reports* 7 (2006): 1193-96. doi:10.1038/sj.embor.7400862.; David F. Ransohoff and Richard M. Ransohoff, "Sensationalism in the Media: When Scientitists and Journalists May be Complicit Collaborators," *Effective Clinical Practice* 4 (July/August 2001): 185-88; and Peter Broks, *Understanding Popular Science* (New York: Open University Press, 2006).

[34] See note above.

[35] Nina Eidsheim, *Sensing Sound: Singing & Listening as Vibrational Practice* (Durham, NC: Duke University Press, 2015), 144.

deafness—that is, deafness present before infant language acquisition. In these cases the auditory cortex assumes sensory processing tasks associated with other modalities, leading to "supranormal" performance of discrete visual and tactile functions. Thus, rather than cross-modal plasticity resulting in a "generalized overall improvement" to the intact sensory modalities, as popular science would have it, "only specific features of the replacement modality are affected."[36] The suggestion that deaf people compensate for hearing loss through extraordinary sensory "super powers" epitomizes the related "overcoming [disability] narrative" and the "supercrip" trope: it perpetuates the idea that deafness can and *should* be overcome through personal triumph and remarkable compensation in another area, transferring the burden of stigma from society to the disabled individual, as described in this dissertation's introduction.[37] In particular, the deaf supercrip masquerades as a more charitable conception of deafness by shifting the focus from sensory deficit and stigma to sensory gain and inborn talent, undermining the real social obstacles that d/Deaf people face.[38] Neuroscientist Christina Karns has observed that the frequent portrayal of cross-modal plasticity as a "superhuman" ability "makes supergood fiction, but it would never work in real life."[39]

Deaf people have long known that they perceive the world in unique ways, experiences that arguably elude scientific explanation. For instance, that deafness bestows heightened visual

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[36] M. Alex Meredith et al., "Crossmodal Reorganization in the Early Deaf Switches Sensory, but not Behavioral Roles of Auditory Cortex," *Proceedings of the National Academy of Sciences of the United States of America* 108 (2011): 8856. Scientists make clear that, as in the case of visual acuity, "enhanced tactile sensitivity in the deaf probably reflects both neural plasticity and increased attention directed to the stimuli": Sari Levänen and Doroteha Hamdorf, "Feeling Vibrations: Enhanced Tactile Sensitivity in Congenitally Deaf Humans," *Neuroscience Letters* 301 (2001): 75.

[37] As argued, for example, in Simi Linton, "Reassigning Meaning," in *The Disability Studies Reader,* 2nd edition, ed. Lennard J. Davis (New York: Routledge, 2006): "The idea that someone can *overcome* a disability has not been generated within the community; it is a wish fulfillment generated from the outside," (165).

[38] For a discussion of the "supercrip" trope, see John S. Clogston, "Disability Coverage in American Newspapers," in *The Disabled, the Media, and the Information Age*, ed. Jack A. Nelson (Westport, CT: Greenwood, 1994), 45–48.

[39] Quoted in Tanya Lewis, "Do Deaf People Really Have Superhuman Vision?," Live Science website, November 26, 2013, accessed April 16, 2016, http://www.livescience.com/41521-deaf-people-superhuman-senses.html.

and tactile acuities is a notion central to the premise of Deaf Gain; but these acuities are, above all, nurtured through cultural practice.[40] As Carol Padden and Tom Humphries write, "Deaf people's practices of 'seeing' are not necessarily natural or logical, in the sense that they have a heightened visual sense, but their ways of 'seeing' follow from a long history of interacting with the world in certain ways—in cultural ways."[41] And the same is true of touch, as Deaf studies scholar Donna Jo Napoli suggests in a recent essay.[42] It is interesting to note that conceptions of "touch" in Deaf culture surpass straightforward attention to vibration. Sign language engages the whole of the somatosensory system, and Deaf social interactions are unique for their emphasis on touch: shoulder tapping is commonly used to get another person's attention and to initiate a face-to-face interaction; signers establish physical proximity with one another and use mutual touch to maintain connection while conversing; and touching is used to signal one's intention to take a turn in a signed conversation.[43] In both popular science and music research the perpetual association of deafness with disability—as the physical condition of total aural loss and a set of sensory superpowers made possible by that loss—eclipses what are otherwise manifold physical, linguistic, and cultural expressions of deafness. In its recourse to these oversimplified sensory hierarchies, Evelyn Glennie's reception arguably furthers these conceptual barriers.

[40] See Bahan, "Upon the Formation of a Visual Variety of the Human Race," 83-99.
[41] Padden and Humphries, *Inside Deaf Culture* (Cambridge, MA: Harvard University Press, 2005) 2.
[42] Donna Jo. Napoli, "A Magic Touch: Deaf Gain and the Benefits of Tactile Sensation," in *Deaf Gain*, 211-232.
[43] In Deaf culture, "touching is a way of 'being in touch,'" notes Blaine Goss; "It is expected that you will touch and be touched": Blaine Goss, "Hearing from Deaf Culture," *Intercultural Communicaiton Studies* 12/2 (2003): 11.

"The Deaf Percussionist Who Listens with Her Whole Body"[44]

Glennie is above all a skilled professional musician with an impressive career spanning several decades. She has performed with numerous symphony orchestras, commissioned hundreds of new works for solo percussion, and received several accolades, including three Grammys and two appointments to the Order of the British Empire, as Officer (OBE, 1993) and as Dame Commander (DBE, 2007).[45] Her recordings span classical and contemporary genres, and her love of improvisation has led to several memorable musical collaborations, most notably with Icelandic electronic vocalist Björk in 1996–97 and with experimental guitarist Fred Frith in 2007.[46]

Glennie has long maintained that her deafness is irrelevant to her performance—"something that bothers other people far more than it bothers me"—and that its appeal detracts from her musical achievements.[47] Straus claims that particularly when a musician's disability is visible or public, as in Glennie's case, the performance of music and the performance of disability are intertwined, as I noted in the introduction: disability, as a stigmatized form of bodily difference, "engulfs" the musician's performance and reception.[48] Furthermore, Howe asserts that "the cultural scripts associated with both performances shape each other, so that it becomes difficult or even impossible to disentangle them: culturally marked, disability informs

[44] Robert Everett-Green, "Dame Evelyn Glennie, the Deaf Percussionist Who Listens with Her Whole Body," *Globe and Mail*, March 1, 2011, accessed April 14, 2016, http://www.theglobeandmail.com/arts/music/dame-evelyn-glennie-the-deaf-percussionist-who-listens-with-her-whole-body/article568725/.
[45] "Evelyn Glennie Biography."
[46] See Björk and Glennie's "My Spine," from Björk, *Telegram*, Mother Records MUMCD9605, 1996, compact disc; Björk and Glennie's "Oxygen," from Evelyn Glennie, *Her Greatest Hits*, RCA Victor Red Seal US, RCA Victor 74321-47629-2, 1997, compact disc; and Glennie and Frith's *Sugar Factory*, Tzadik Records US, TZ 7623, 2007, compact disc.
[47] Glennie, "Hearing Essay."
[48] As a result, Straus argues, the "dual task" of the disabled musician is "to perform music and to perform disability": Straus, *Extraordinary Measures*, 126. Disability studies scholar Rosemarie Garland-Thomson writes that, in stereotypical representations of disability, characters are "engulfed by a single stigmatic trait": Garland-Thomson, *Extraordinary Bodies*, 11

the music performance, while music performance in turn informs the disability."[49] In music, deafness is particularly susceptible to this treatment, since it otherwise symbolizes music's veritable absence. In this sense Glennie is the seeming embodiment of the platitude that music is a universal language, and indeed her example has been instrumentalized in this very way.[50] Our "propensity to music," argues the late neurologist Oliver Sacks in his wildly popular *Musicophilia: Tales of Music and the Brain* (2007), is an innate sensibility encoded in the human genome.[51] As evidence of music's genetic pre-eminence Sacks highlights instances of ostensibly surprising musical competence in the face of disability, disease, and neurological injury, establishing continuity with his previous representations of disability. In his earlier *An Anthropologist on Mars* (1989) he writes, "Defects, disorders, diseases . . . can play a paradoxical role, by bringing out latent powers, developments, evolutions, forms of life, that might never be seen, or even be imaginable, in their absence."[52] According to this dubious logic, deafness uniquely reflects the extremes of music's genetic primacy. Sacks hypothesizes, "Even profoundly deaf people may have innate musicality. Deaf people often love music and are very responsive to rhythm, which they feel as vibration, not as sound. The acclaimed percussionist Evelyn Glennie has been profoundly deaf since the age of twelve."[53] Similarly, in their book on the psychology of music Andreas Lehmann, John Sloboda, and Robert Woody speculate, "If music is a universal capacity of the human brain, it is important to ask whether anything could

[49] Howe, "Disabling Music Performance," in *The Oxford Handbook of Music and Disability Studies*, 191.
[50] There exist countless books celebrating the universality of music. The accounts by Oliver Sacks and Daniel Levitin are among the most popular attempts to demystify the common neuroscience and psychology of music, while Katherine Marie Higgins's wide-ranging philosophical investigation into the plausibility of music as a "universal language" is equally widely read; see Oliver Sacks, *Musicophilia: Tales of Music and the Brain* (New York: Alfred A. Knopf, 2007); Daniel J. Levitin, *This Is Your Brain on Music: The Science of a Human Obsession* (New York: Dutton, 2006); and Kathleen Marie Higgins, *The Music between Us: Is Music a Universal Language* (Chicago: The University of Chicago Press, 2012).
[51] Sacks, *Musicophilia*, x.
[52] Oliver Sacks, *An Anthropologist on Mars: Seven Paradoxical Tales* (London: Picador, 1995), xii.
[53] Sacks, *Musicophilia*, 95n3.

ever go wrong with a brain to render it incapable of dealing with music. We know from some astonishing life histories (e.g., the percussionist Evelyn Glennie) that even profound deafness does not automatically exclude high levels of musical achievement."[54]

This discourse reinforces the usual antithetical terms of music and deafness to further the universality of its hypothesis: "*even* profoundly deaf people," "*even* profound deafness." That these writers infer exclusively from Glennie's example with an emphasis on "acclaim" and "high levels of musical achievement" is telling: the percussionist has involuntarily set a daunting precedent. She here serves as a nonpareil symbol of music's universality in a manner akin to the more general appropriation of disabled narratives and images for inspirational fodder in popular culture, or what disability activists call "inspiration porn."[55] Ultimately, Glennie's reception and portrayals of deafness in popular science are bound by a common narrative thread: the expectation that deaf people compensate for hearing loss in extraordinary ways. This expectation reveals more about the stigma associated with disability, perennial fantasies about music's universality, and the mythical status of the brain and the senses than it does about the percussionist's musicianship.

Not surprisingly, the universalizing tone of Glennie's popular reception engenders mistrust in the minds of certain audience members. In particular, some d/Deaf people find Glennie's assertions about listening through touch unrealistic, if not alienating. One user on the

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[54] Andreas C. Lehmann, John A. Sloboda, and Robert H. Woody, *Psychology for Musicians: Understanding and Acquiring the Skills* (New York: Oxford University Press, 2007), 30.

[55] For a discussion of inspiration porn, see page 16 of this dissertation's Introduction. As the culmination of Glennie's public outreach, her TED Talk and its reception arguably perpetuate this same inspirational rhetoric, as TED Talks are known to do, something Young addressed ironically in her own 2014 TED Talk. Cultural critic Martin Robbins notes that TED's signature presentation formula is "designed to make people feel good about themselves; to flatter them and make them feel clever and knowledgeable; to give them the impression that they're part of an elite group making the world a better place": Martin Robbins, "The Trouble with TED Talks," *NewStatesman*, September 10, 2012, accessed August 2, 2016, http://www.newstatesman.com/martin-robbins/2012/09/trouble-ted-talks.

popular Alldeaf online discussion forum sums up his impressions: "not exactly a simple declaration re the DEAF and music. Not every DEAF person can 'feel' music like a select few eg Evelyn Glennie."[56] He continues, "I have tested the theory of being able to 'feel music by putting my hand on a loud speaker playing music'—vibrations only! I don't identify as music."[57] Some in the Deaf community even question whether Glennie is deaf, citing her improbable professional musical success and lack of communication supports (e.g., auditory assistive technology, live interpreter) as evidence. In a review of Glennie's performance with the Liverpool Philharmonic Orchestra for the disability arts festival DaDaFest in 2012, one British Sign Language (BSL) user and member of the UK Deaf community clarified for his Deaf viewers, "There are those in the Deaf Community in the UK querying if Evelyn is really Deaf because she plays music. Perhaps they have never met her, but I saw in my own eyes that she needed communication support to fully understand the questions asked by the members of the audience."[58]

Regrettably, the fact that Glennie often passes as hearing is a source of controversy among certain hearing listeners who mistakenly evaluate her spoken voice as a reflection of her degree of hearing loss. Just as journalists marvel at her impeccable speech and flawless lip reading skills, the comments sections of some of her YouTube videos feature accusations that "she seems to overcompensate with her enunciation," or alternatively that "she articulates too well for a deaf person" and even "plays up her hearing disability for publicity."[59] Responding to

[56] Drphil, May 13, 2012, comment on "What Role Does Music Play in Your Life?," Alldeaf forum, May 11, 2012, accessed April 14, 2016, http://www.alldeaf.com/threads/what-role-does-music-play-in-your-life.100971/.
[57] Ibid.
[58] "Evelyn Glennie Review," YouTube video (DaDaFest channel), 10:06, posted August 22, 2012, accessed May 24, 2016, https://www.youtube.com/watch?v=50XVdx9rMfg.
[59] Respectively, Jay Flippen, Carbon Ghetto Queen, and Cryer24597, comments on Glennie, "How to Truly Listen" (YouTube video). Journalist Victoria Mary Clarke similarly reflects on her interview with Glennie: "as we sit down to speak, I notice that there is nothing noticeably unusual about the way we are communicating. I am not speaking loudly, there is not an interpreter. She doesn't have any speech impediment. WE are having a perfectly normal

an online thread inquiring whether the combination of "deafness and perfect speech" such as Glennie's is truly possible, audiologist Jeffrey Sirianni clarifies that, while the percussionist is definitely not a fraud (as some on the thread had suggested), deaf people in the spotlight "tend to be the exception rather than the rule." He continues, "I have a problem with the public display of such exceptional cases. IMHO [in my humble opinion], they give parents of hearing-impaired children a false hope."[60] These reactions relate to a paradoxical set of anxieties concerning disability, stigma, and passing more generally: while visibly disabled people are denigrated for their failure to conform to the inconstant physical terms of "normalcy," invisibly disabled people are often regarded with an air of suspicion for their failure to manifest their disabilities in clear physical terms.[61] Indeed, the policing of Glennie's voice in relation to her hearing loss is fundamentally misguided. Even in this new era of deaf education, deaf voices are subject to ongoing scrutiny: speech language pathology favors oral communication (over sign language) and seeks to equip deaf patients with fluid, articulate speech.[62] And although there are certain characteristic, highly stigmatized markers of "deaf speech," such as poorly modulated speech

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conversation": Victoria Mary Clarke, "Dame Evelyn Glennie Interview," *Victoria Mary Clarke—Journalism* (blog), July 27, 2012, accessed April 14, 2016, https://vmcjournalism.wordpress.com/2012/07/27/dame-evelyn-glennie-interview/.

[60] Jeffrey Sirianni audioman at HCTC.NET, "Audiologists—Is Deafness and Perfect Speech Possible? (Evelyn Glennie on 60 mins.)," Indiana University Bio-Archive, BIOSCI/Bionet News forum, November 26, 1996, accessed April 14, 2016, http://www.bio.net/mm/audiology/1996-November/002317.html.

[61] In an attempt to legitimize their struggle/identity in the eyes of their able-bodied skeptics, invisibly disabled people will sometimes "masquerade" their disabilities through physical exaggeration. Disability studies scholar Tobin Siebers writes of the consequences: "whence the desire that people with disabilities sometimes experience to overcome their invisibility and its attendant violence by exhibiting their impairments, and the paradoxical consequence that they become even more invisible and vulnerable as a result": Siebers, *Disability Theory*, 103. See also Jeffrey A. Brune and Daniel J. Wilson, *Disability and Passing: Blurring the Lines of Identity* (Philadelphia: Temple University Press, 2013).

[62] A recent signed video with English subtitles made by students at Gallaudet University (an all-deaf university in the United States) addresses the evolving relationship between speech language pathologists (SLPs) and the Deaf community as tensions begin to ease: Damien Spillane, "Misconceptions: Speech-Language Pathology," YouTube video, 11:35, posted October 29, 2013, accessed August 3, 2016, https://www.youtube.com/watch?v=HRdzrr2oKwo.

and volume control, these are ultimately unreliable markers of deafness.[63] In fact, inasmuch as it affords discretion, mastery of oral speech can provoke further scrutiny, despite the expectation that deaf people should aspire to this able-bodied ideal. This suspicion is notably acute in the absence of a hearing aid or cochlear implant or a set of characteristic physical markers, as Glennie's reception evinces.[64]

The percussionist's relationship to deafness is ultimately more complex than her reception allows. In particular, her renown as a deaf musician surpasses her interests in deafness and d/Deaf people. While she embraces a non-pathologizing view of hearing loss, she does not self-identify as "deaf," preferring the term "deafened." She has on occasion espoused an unsympathetic, even antagonistic view of Deaf culture, one that is arguably reflective of the predominance of oralism in her native Great Britain and its influence on prevailing conceptions of deafness.[65] She frequently describes her relationship to deafness through a narrative of resilience and overcoming: "When I lost my hearing I chose to adapt and integrate myself into a mainstream school. From my perspective the choice was either to be pigeonholed as disabled or to find a way [to] open up a new career as the world's first full time solo percussionist."[66] In the

[63] For a discussion of the stigma and stereotypes surrounding deaf speech, see Charlie Swinbourne, "Deaf Voices Are Natural, So Why Are They Still Mocked?," *The Guardian*, November 11, 2012.
[64] Self-identifying deaf scholar Alexa Schriempf writes, "I am not believed when I self-identify as deaf, perhaps because I am articulate. . . . what about those (inarticulate) bodies that have articulate voices, like mine? How are we heard when we claim to have or be something that is inconsistent with the kinds of bodies that are traditionally taken to be articulate? How can I continue to be a deaf subject in the face of a material voice that belies my truth?": Alexa Schriempf, "Hearing Deafness: Subjectness, Articulateness and Communicability," in *Embodied Selves*, ed. Stella Gonzalez-Arnal, Gill Jagger, and Kathleen Lennon, 170 (New York: Palgrave MacMilan, 2012).
[65] In her undated "Disability Essay," written prior to 2007, Glennie writes of "the great danger" of "'impaired communities'": "Teaching a deaf child to communicate only through sign language not only gives them the ability to communicate but it also re-enforces the difference between themselves and the vast majority of 'normal' people who don't sign. Essentially it's replacing an unusual physical handicap with an extremely common mental handicap." This essay was previously available on the percussionist's website (https://www.evelyn.co.uk, accessed November 2013), but has since been removed, while her more neutral "Hearing Essay" remains. Straus has quoted the former essay at length in his monograph on disability and music: Straus, *Extraordinary Measures*, 145–49.
[66] Glennie, "What Makes Us Human?," Evelyn Glennie website, last modified January 1, 2015, accessed April 18, 2016, https://www.evelyn.co.uk/what-makes-us-human/

face of increasing media attention, her oft-quoted "Hearing Essay" (1993) intervenes in her public narrative "to set the record straight and allow people to enjoy the experience of being entertained by an ever evolving musician rather than some freak or miracle of nature."[67] She elaborates on her misgivings: "I don't know very much about deafness. What's more, I'm not particularly interested. . . . In this essay I have tried to explain something which I find very difficult to explain. Even so, no one really understands how I do what I do. Please enjoy the music and forget the rest."[68] Glennie has long warned that those inspired by her achievements might have false hope. In an interview of 1994 she described having abandoned previous musical outreach with deaf children because parents often "expected miracles . . . they felt that if I could play an instrument, all deaf people should be able to play an instrument, and this is a fact. And of course, it can't happen."[69] In *Parade* magazine she clarified her self-concept: "I don't see myself as a deaf person. . . . Rather, I'm a hearing person who happened to lose her hearing. It occurred gradually, so I was able to adjust to each level. I couldn't make myself into a deaf person and say, 'Oh, I can't do this' and 'I can't do that.'"[70] Her insinuation that identifying as "deaf" signals a defeatist mentality is bound to anger some, though in recent years her attitude toward Deaf culture has softened as she has begun to learn sign language. In 2008 she noted, "I've only now thought about what sign language really means, what it is, and what I feel it can bring to my particular situation."[71] This news was applauded by the UK Deaf Community, as spokesperson for the Scottish Council on Deafness Nicola Noon explained: "People felt she had shunned the

[67] Glennie, "Hearing Essay."
[68] Ibid.
[69] Quoted in Bruce Duffie, "Percussionist Evelyn Glennie: A Conversation with Bruce Duffie," interview originally recorded for WNIB, February 21, 1994, transcript posted to the Bruce Duffie website September 2008, accessed April 15, 2016, http://www.bruceduffie.com/glennie.html.
[70] Quoted in Gail Buchalter, "I Hear the Notes in My Head," *Parade Magazine*, February 13, 1994, 8.
[71] Quoted in Mark MacAskill, "Evelyn Glennie's Positive Sign to the Deaf Community," *Sunday Times*, July 13, 2008, 3.

deaf community, but she will be congratulated for this."[72] Nevertheless, her most recent press materials omit mention of "deafness," "deaf," and "disability," focusing instead on her status as a pioneering percussionist: she is neither a willing nor an altogether welcome ambassador for the d/Deaf. But she ultimately offers a complex picture of deaf identity, one that exposes the tensions between audiological and cultural constructions of deafness, and the uneasy partnership of deafness and disability.

Moreover, the universalizing aspirations of her mainstream reception belie what is in actuality a distinctive set of listening techniques. Glennie had an exceptional musical education by comparison with most d/Deaf children. Because she was already an accomplished young musician with perfect pitch when her hearing began to diminish at age eight, she had a strong musical frame of reference on which she could draw. She switched from piano to percussion in an effort to retain her existing musical skills, since the instruments' low registral qualities and notably tactile dimensions offered considerable opportunities for cultivating new sensory awareness. Under the tutelage of her percussion instructor, Ron Forbes, Glennie began experimenting: playing barefoot and removing her then newly acquired hearing aids allowed her to more readily sense the vibrations in different parts of her body, forgoing dependence on her ears.[73]

To be sure, touch is chief among the senses in Glennie's listening paradigm. She famously writes that

> Hearing is basically a specialized form of touch. Sound is simply vibrating air which the ear picks up and converts to electrical signals, which are then interpreted by the brain. The sense of hearing is not the only sense that can do

[72] Ibid.
[73] With respect to her decision to abandon her hearing aids she writes, "to my delight, not only was I no longer distracted by unidentifiable noise, I began to understand how to compensate for being deaf," a comment that aligns with her overarching self-concept as a nondisabled person: Evelyn Glennie, *Good Vibrations: My Autobiography* (London: Hutchison, 1990), 44.

> this, touch can do this too. If you are standing by the road and a large truck goes by, do you hear or feel the vibration? The answer is both. With very low frequency vibration the ear starts becoming inefficient and the rest of the body's sense of touch starts to take over. For some reason we tend to make a distinction between hearing a sound and feeling a vibration, in reality they are the same thing. . . . Deafness does not mean that you can't hear, only that there is something wrong with the ears. Even someone who is totally deaf can still hear/feel sounds.[74]

But for Glennie touch is feasible because of its contextual dependence on the other senses. For instance, she initially had difficulty in tuning the timpani, but eventually came to associate incremental changes in the tautness of the drumhead with individual pitches, and also used her perfect pitch to ascertain the desired note. She explains, "the fact that I can hear the precise pitch of a note in my head and place it exactly in relation to other notes has been a tremendous advantage."[75] Vision also figures prominently in Glennie's listening process: "We can also see items move and vibrate. If I see a drum head or cymbal vibrate or even see the leaves of a tree moving in the wind then subconsciously my brain creates a corresponding sound."[76] Through the synchronization of visual cues with corresponding imagined sounds, the image and its movement thus serve as an index of sorts; the visual cue automatically triggers the "sound." Finally, even as a profoundly deaf person Glennie still has a certain degree of residual hearing that, she explains, contributes to her perception of sound, a fact that is seldom acknowledged in public accounts of her deafness.[77]

Thus in Glennie's model "touch" also encompasses vision, movement, imagination, and sometimes even hearing, a multisensory endeavor that Straus dubs "deaf hearing": "hearing as seeing, hearing as feeling, hearing as movement, hearing as silent, out-of-time contemplation—

[74] Glennie, "Hearing Essay."
[75] Glennie, *Good Vibrations*, 45.
[76] Glennie, "Hearing Essay."
[77] Ibid.

deaf hearing provides an alternative to normal hearing."[78] In fact, musicians and scholars have long sought to interrogate the primacy of the aural, drawing critical attention to the inescapable materiality of sound and the dynamic role of the senses therein in ways that resonate with Glennie's approach. For instance, sound studies scholar Steven Connor argues that in general "the senses communicate with each other in cooperations and conjugations that are complex, irregular, and multilateral," what he terms "intersensoriality."[79] Like Glennie, he furthermore contends that hearing *is* touching: the skin—the primary mechanism of touch—envelops hearing and the other senses. And touch lingers in music: physical postures are imprinted in instruments, and sounds impress upon us as we imagine the physical coactivation of body and instrument: "we take [music] into us, hear it in the mode of producing it, in an instrumental coenesthesia."[80] Similarly, the late experimental composer Pauline Oliveros implores listeners to tune into their somatic experiences of sound as part of a larger exercise in cultivating mindfulness through listening, a meditative practice she calls "Deep Listening." In one of her *Sonic Meditations* she instructs the performer to "Take a walk at night. Walk so silently that the bottoms of your feet become ears," instructions that recall Glennie's frequent remarks about the body's capacity to be a resonating chamber.[81] And in an effort to break with "music's naturalized cornerstones" and *a*

[78] Straus, *Extraordinary Measures*, 170. For Straus's full discussion of "deaf hearing," see ibid., 167–70. "Deaf hearing" figures as one of several modes belonging to Straus's larger category of "disablist hearing," which he explains encompasses "the ways that people whose bodily, psychological, or cognitive abilities are different from the prevailing norm might make sense of music": ibid., 150.
[79] Steven Connor, "Edison's Teeth: Touching Hearing," in *Hearing Cultures: Essays on Sound, Listening, and Modernity*, ed. Veit Erlmann (Oxford: Berg, 2004), 156.
[80] Ibid., 161.
[81] Oliveros, *Sonic Meditations* (no. 5, "Native"); "Our Mission Statement," Evelyn Glennie website, accessed August 3, 2016, https://www.evelyn.co.uk/mission-statement/. See also Martha Mockus, *Sounding Out: Pauline Oliveros and Lesbian Musicality* (New York: Routledge, 2008); Frances Dyson, *Sounding New Media: Immersion and Embodiment in the Arts and Culture* (Berkeley: University of California Press, 2009); Shelley Trower, *Senses of Vibration: a History of the Pleasure and Pain of Sound* (New York: Continuum, 2012); Anthony Enns and Shelley Trower, eds. *Vibratory Modernism* (New York: Palgrave MacMillan, 2013); Steph Ceraso, "(Re)Educating the Senses: Multimodal Listening, Bodily Learning, and the Composition of Sonic Experiences," *College English* 77 (2014): 102-23; and Eidsheim, *Sensing Sound*.

priori definitions, particularly "the *figure of sound*" and the tendency to reduce "the thick event of music to a singular sensory mode, aurality," Eidsheim posits listening (and singing) as "vibrational practice."[82] But for Eidsheim, as for Oliveros and Glennie, sensing sound is not limited to vibration: vibration is rather a conceptual vehicle for understanding music as the transfer of energy across time, space, and bodies, and for the relational and affective dynamics of musical experience. Lest the allure of vibration impose a set of normalizing theoretical constraints, Michele Friedner and Stefan Helmreich caution against idealizing vibration as a common sensory experience, explaining that "vibration is rather always already itself a kind of mediation. It may produce shared experience, but it does not therefore produce identical experience; even within 'one' individual, sense ratios and relations may shift and mix synesthetically. Phenomenologies of vibration are not singular."[83]

Finally, much like Oliveros's Deep Listening philosophy, Glennie's paradigm is rooted in a conception of "listening" that surpasses sensory perception: its conceptual utility extends to social interactions and affective encounters, facilitating what Glennie calls "social cohesion." As she claims to "teach the world to listen," the percussionist stresses that "listening is about more than just hearing; it is about engaging, empowering, inspiring and creating bonds. True listening is a holistic act."[84] Should her altruism strike one as patronizing, let me point out that her emphasis is not on conforming to a set of normalizing material sensibilities, but rather on cultivating an openness to alternatives.

Ultimately, Glennie's discourse is as polarizing as it is instructive. It encapsulates the conceptual challenges that arise when deafness enters the realm of music: deep-seated

[82] Eidsheim, *Sensing Sound*, 8, 2, 4.
[83] Friedner and Helmreich, "Sound Studies," 77.
[84] "Our Mission Statement."

misconceptions regarding its sensory extremes in relation to the prestige of aurality on the one hand and the increasing romance associated with vibration on the other, as well as a set of universalizing narratives that threaten to constrain its expression. By pushing beyond the romance of her mainstream appeal we begin to understand that Glennie's musicianship is by no means universal: she harnesses a set of idiosyncratic multisensory listening techniques that she has consciously developed over the course of several decades. "Touch" engages a network of coordinated sensory labors, and "listening" is not simply a physical act but an affective endeavor. Glennie's expertise combines existing sensory acuities such as perfect pitch, automatic compensations such as inferring sounds based on an object's visible movement, and deliberate adaptations such as sensing pitch through differentiated touch. After many years of dedicated practice these categories give way to intuition, forming a process that is "very difficult to explain," as Glennie herself affirms.

Listening beyond Sensory Ideals

My investigation extends to three groups of listeners: members of Deaf culture, non-culturally deaf listeners (particularly users of auditory assistive technologies), and an emerging group of musicians and concertgoers with music-induced hearing loss. At first blush these listeners could not be more different, both in terms of how they identify with deafness and disability and in the ways they understand and experience music. Their experiences present certain striking commonalities, however, which often correspond to existing albeit customarily undervalued dimensions of music itself (rather than to some typical experience of deafness). In particular, vision assumes new musical power in these accounts as it relates to the sense of touch; as a naturalized listening strategy inherent in the practice of score reading; or in the way visual-spatial cues and notated symbols figure as musical expression in the absence of aural and tactile

stimuli. These three groups of listeners also highlight that musical experience is necessarily physically mediated, whether through technologies or across human bodies. Above all they provide further insight into what it means (and what it will mean) to truly listen beyond the limits of hearing, as "normal hearing" becomes an increasingly unstable audiological and social category.

There are a variety of attitudes toward music in Deaf culture, due in part to the lack of consensus among Deaf people as to how music relates to Deaf identity. Anabel Maler's work reveals that music figured prominently in nineteenth-century American deaf pedagogy, both in the United States and in parts of Canada. Initially, oralist educators used music as a tool for assimilating deaf students into hearing culture, but toward the second half of the century they became increasingly suspicious that deaf music making was mechanical and morally corrupt, prompting educators to turn toward technologies that could facilitate more "normal" ways of musical engagement among their students.[85] Indeed, Jonathan Sterne and Mara Mills have detailed the troubling if pivotal role played by deaf people in the development of modern sound reproduction technologies.[86] Music was equally contentious among manualist educators, who wanted to use it to nurture nonaural means of listening among deaf students but were understandably anxious about the cultural links between music making and passing.[87]

Despite the fraught legacy of music in American d/Deaf history, there is a long-standing tradition of music making within the American Deaf community (and in other Deaf communities

[85] Maler, "Music and the Deaf Experience in Nineteenth-Century America," Paper presented at the annual meetng of the American Musicological Society, Louisville, KY, November 12-15, 2015.
[86] Jonathan Sterne, *The Audible Past: Cultural Origins of Sound Reproduction* (Durham, NC: Duke University Press, 2003); Mara Mills, "Do Signals Have Politics? Inscribing Abilities in Cochlear Implants," in *The Oxford Handbook of Sound Studies*, eds. T.J. Pinch and Karin Bijsterveld, 320-46 (New York: Oxford University Press, 2012); Mara Mills, "Hearing Aids and the History of Electronics Miniaturization," *IEEE Annals of the History of Computing* 33/2 (2011): 24–45.
[87] See Maler, "Music and the Deaf Experience."

throughout the West) centered on the practice of song signing. In American Deaf culture, song signing is a form of musico-poetic expression that originates in the community's storytelling traditions; in Deaf storytelling and poetry, storytellers arrange signs aesthetically to follow a sort of "rhythmical cadence."[88] By extension, in signed renditions of musical songs the signer will supply ASL (or another sign language) alongside a recorded or live musical performance to communicate lyrics and musical features such as tempo, rhythm, and register, as Maler demonstrates in her analyses.[89] The recent proliferation of signed performances of popular songs on YouTube by both d/Deaf and hearing signers has contributed to the genre's popularity within the international Deaf community. Televised singing competitions such as the 2015 Eurovision finals have featured live song signing, thrusting what was once an obscure cultural practice into the international limelight.[90] In the hands of native signers, in particular, song signing performances exceed mere translation where the visual-spatial contours of ASL shed new light on the musical and poetic dimensions of the song, transgressing the conventional structural demarcation of verse and chorus.[91] Sign language rappers such as Sean Forbes and Signmark, all-deaf bands such as Beethoven's Nightmare, and other musicians belonging to D-PAN (Deaf Professional Arts Network) also enjoy widespread popularity within the Deaf community.

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[88] Bahan, "Face-to-Face Tradition in the American Deaf Community: Dynamics of the Teller, the Tale, and the Audience," in *Signing the Body Poetic: Essays on American Sign Language Literature*, ed. H-Dirksen L. Bauman, Jennifer L. Nelson, and Heidi M. Rose (Berkeley: University of California Press, 2006), 21. Bahan describes Deaf storytelling in musical terms: "The teller deploys linguistic units by controlling various paralinguistic elements, including the rhythm, tempo, and pause mechanisms of the story," what amounts to "the aesthetic use of language" (27).

[89] Maler, "Songs for Hands" and "Musical Expression Among Deaf and Hearing Song Signers."

[90] See David Crouch, "Sweden Falls in Love with the Man who Signs for Eurovision Heats," *Guardian*, March 16, 2015, accessed April 15, 2016, http://www.theguardian.com/tv-and-radio/2015/mar/16/sweden-falls-in-love-with-the-man-who-signs-for-eurovision-heats; Bethany Bell, "Eurovision Song Contest Will Be Signed for the First Time," BBC News, May 20, 2015, accessed April 15, 2016, http://www.bbc.com/news/entertainment-arts-32812385; and Geraldine Cooper, "Eurovision Sign Language Interpreter's Fantastic Electro Velvet Dance Routine," *Telegraph*, May 25, 2015, accessed May 20, 2016, http://www.telegraph.co.uk/culture/tvandradio/eurovision/11628136/Eurovision-sign-language-interpreters-fantastic-Electro-Velvet-dance-routine.html.

[91] See Maler, "Songs for Hands."

Jeannette Jones shows that these musicians imbue their performances with Deaf activism through the artful integration of sign language and music, promoting a distinct culturally Deaf mode of listening in which vibration, visual cues, and imagined hearing coalesce—what Jones terms "hearing Deafly."[92] She explains further that ASL distinguishes between hearing and visual modes of listening by placing the same Bent-3 handshape alongside the ears and eyes respectively (see Figure 2.1).[93] Indeed, rapper Sean Forbes writes, "When I sign rap music, I try to follow the beat with my body. . . . I try to paint a picture with my hands. You really have to see me to get me."[94]

Figure 2.1 Jeannette Jones makes the Bent-3 handshape, then uses it to sign LISTEN-EARS, then to sign LISTEN-EYES. Photographs by Jeannette Jones. Used by permission.

Song signing and visual cues are an important musical device at Deaf raves, clubbing events organized by and for Deaf people at which music is played at notoriously high volumes.[95] Musical tracks are typically selected for the prominence of their bass lines, while lighting is designed to showcase onstage performances by song signers, comics, and dancers, and also to ensure that dancers can communicate on the dance floor in sign language. Deaf clubber Ashton

[92] Jones, "Imagined Hearing," 54.
[93] Ibid, 67.
[94] Quoted in Alex Stone, "Deaf Rapper Sean Forbes Makes Himself Joyfully Heard on the Hip-hop Scene," *Washington Post*, January 25, 2015, accessed April 15, 2016, https://www.washingtonpost.com/entertainment/music/deaf-rapper-sean-forbes-makes-himself-joyfully-heard-on-the-hip-hop-scene/2015/01/25/15943fdc-a0f4-11e4-9f89-561284a573f8_story.html.
[95] The Deaf rave scene began as a series of charity events hosted at several prominent venues in the London club district in the early 2000s and has since flourished into an international cultural movement, with events featuring Deaf DJs, song signers, and dancers; see Deaf Rave website, accessed April 29, 2016, http://www.deafrave.com.

Phillip explains furthermore that "it would be hard for deaf people to have a good time without lighting."[96] Deaf DJ Troi "Chinaman" Lee echoes these sentiments: "We express visually and we love feeling the vibrations and vibes of the people."[97] Similarly, the psychedelic jam band the Grateful Dead has a long tradition of accommodating the unique listening preferences of their devoted d/Deaf fans—a special class of Deadheads called "Deafheads"—through live song signing in the famous live concert space known as the Deaf Zone. This is an area several meters from the stage where balloons, cups, streamers, and other handheld props are connected to speakers with strings so that Deafheads can engage with vibrational feedback. "Clear sight lines" are also established to highlight live song signing and sign language interpretation, to present close-up footage of the band to facilitate proper lip reading of song lyrics, and to allow for signing between listeners.[98]

Even in non-Deaf musical settings where song signing is not part of the performance tradition, sign language offers Deaf concertgoers a communicative advantage over their hearing counterparts. For instance, the long-standing tendency in metal and electronic subcultures toward "deafening volumes" at live shows in combination with a notable shift toward infrasound—that is, low frequency sounds below the threshold of human hearing perceived largely through vibration—has attracted an emerging class of self-identifying "Deaf" metalheads.[99] Just as

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[96] Quoted in "What Does a Deaf Rave Sound Like?," BBC News, April 13, 2004, accessed April 20, 2016, http://news.bbc.co.uk/2/hi/uk_news/magazine/3621529.stm. See also Elizabeth Renzetti, "At This Rave, Deaf Is Def," *Globe and Mail*, January 6, 2007, last modified March 13, 2009, accessed April 20, 2016, http://www.theglobeandmail.com/arts/at-this-rave-deaf-is-def/article17989037/.

[97] Quoted in "Deaf Rave Held for Liverpool International Music Festival," BBC News, August 23, 2013, accessed April 20, 2016, http://www.bbc.com/news/uk-england-merseyside-23815103.

[98] See John Jurgensen, "Signing Off: 'Deafheads' Marked Their Own Milestone at Dead Shows," *Wall Street Journal*, July 10, 2015, D9.

[99] See HessianHunter, "'Who's Handicapped Now, Mother****ers!?'—Meet Shawn Vriezen, Deaf Metalhead," *The Toilet OV Hell* (blog), December 3, 2014, accessed August 4, 2016, http://www.toiletovhell.com/whos-handicapped-now-motherfckers/. See also John Wray, "Heady Metal," *New York Times Magazine*, May 28, 2006, accessed August 4, 2016, http://www.nytimes.com/2006/05/28/magazine/28artmetal.html?pagewanted=all&_r=0. George McKay has written more generally about the persistent romanticization of hearing loss in heavy metal and rock cultures in his recent monograph on popular music and disability: McKay, *Shakin' All Over,* 137–49.

vibrotactile, "heady" listening is a defining element of these live performances, and indeed part of the subculture's ritual, it can make spoken communication ineffective, and near impossible. Deaf metalhead Sean Vriezen elaborates:

> I have to admit that I enjoy being able to speak freely during a show in such a way that I don't interrupt what I'm listening to. If someone were to talk with me with their voice during a show I would be annoyed that they were trying to talk over the music. Using sign language to communicate allows me to take in everything at the same time; I am able to talk about the music or the band without taking away from the show…signing is great at distances, with loud background noise, concerts, clubs, through windows, underwater…When the ambient noise is as loud as it is, the inability to communicate aurally renders us all "deaf" anyhow.[100]

Vriezen highlights the potential for music to be disabling among hearing listeners, particularly in those frequent and prolonged moments when it effectively drowns out phonetic speech: hearing loss, in that sense, is a relative condition, just as disability is socially and environmentally bound. Under these circumstances visual cues and Deaf linguistic codes transcend the sensory limitations that immersive sound otherwise imposes. At "earsplitting" volumes, Deaf listeners are at a considerable advantage.

In choreographed dancing, vision is typically a more reliable and consistent modality than touch: vibrational feedback is variable and inconsistent when there is significant movement involved. Directors of the legendary Dance Company at the all-deaf Gallaudet University note that even with a state-of-the-art heavy bass sound system, movement and acoustical properties naturally obstruct the perception of musical vibrations: "Many people have the misconception that deaf people 'hear' by feeling vibrations through the floor. How is this possible, especially if a person is moving and jumping so that they do not keep in continuous contact with the floor?

[100] Quoted in HessianHunter, "'Who's Handicapped Now, Mother****ers!?'"

What if the floor is not wood, but solid concrete?"[101] Gallaudet Company dancers rely primarily on sign counts in order to ascertain rhythmic patterns and master individual dance steps, using residual hearing and underfoot vibrations to a lesser degree.[102] Deaf *Dancing with the Stars* sensation Nyle DiMarco notes that when it comes to dancing he experiences music by watching his dance partner Peta Murgatroyd: "I'm actually very visual. . . . Peta brings out the performance. She's a performer. I feel like I can see the music and can see how the character of the music actually flows. For me, that's music to my eyes."[103] For DiMarco, like the Gallaudet Company dancers, vibration is a less practical and potentially unsettling option: "One time Peta tried to turn the music up loud enough for me to feel it, but when I felt it and we tried to dance to it, it threw the whole routine off. . . . I'm used to not being able to hear, so for me it was contradictory to my world."[104] More generally, Deaf sound artist Christine Sun Kim explains that amplified vibrational feedback, while a seemingly useful device for d/Deaf listeners, can be physically and emotionally disorienting. Her visual art piece *Feedback Aftermath* (2012) was inspired by what she suspects was the post-traumatic stress disorder she incurred after prolonged exposure to loud audio feedback in the studio, a "disconcerting" experience, causing her extreme stress and unease. "Most hearing people don't experience that. You have warning signals. If your

[101] "Dance Techniques for Deaf and Hard of Hearing Dancers," Gallaudet University website, accessed April 16, 2016, http://www.gallaudet.edu/act/gallaudet-dance-company/techniques.html.
[102] See Ibid.
[103] Quoted in Melissa Locker, "Nyle DiMarco Is a Frontrunner on *Dancing with the Stars—Even Though He Can't Hear the Music*," *Time*, April 25, 2016.
[104] Ibid. For some d/Deaf people, dancing is not necessarily about listening to music. The Gallaudet Dance Company Directors write, "it is important to note that the Gallaudet Dance Company remains 'in time' with or without the music": "Dance Techniques." Similarly, a dance teacher at Northern Secondary School in Toronto notes that deafness challenges "automatic entry points into dance" when students are motivated primarily by a passion for dance and not necessarily by an interest in music: Tiffany Caprarella quoted in Nick Westoll, "Toronto School Breaking Down Barriers to Dance," *Toronto Star*, January 25, 2015.

ears hurt, you leave the room, you stop, you step away," she explains. "I don't have those signals, so I went past all warnings and experienced feedback to the full degree."[105]

As Glennie teaches the world to listen, Kim is deliberately "unlearning sound etiquette"—the seldom acknowledged social conventions governing our human production of and interaction with sound, hearing norms Kim painstakingly learned and internalized over time. She elaborates: "I know exactly how to behave in certain situations, such as being super quiet when someone's asleep in the house, or how you're expected to laugh aloud at stand-up comedy shows. . . . I'm trying to unlearn what I've been taught by others and trying to find my own definition of both sound and silence."[106] As Kim unlearns sound etiquette she reveals that listening is always a multisensory endeavor, though sound is not a prerequisite for music. Music can be an exclusively visual-spatial experience. For instance, her *Face Opera II* (2013) features a chorus of Deaf performers who "sing" using a series of coordinated silent ASL facial expressions. Kim observes that, in the absence of sonic cues, facial expressions play a defining musical role in operatic singing, a fact that an exclusive focus on music as sound overlooks, as I describe at length in the interlude following this chapter.

As an extension of her interest in the visual aspects of music making, Kim's artworks interrogate the primacy of the score, creatively exploring the discrepancies between the material dimensions of music and the visual terms of its representation, as in a recent series of whimsical one-page hand-drawn scores. Her score *Muffled Club Music* (2016) is unbounded by the absence of context: without staves and clef for specifying precise register and pitch, and without time

[105] Quoted in Karen Eng, "Playing with Sound in Silence: Fellows Friday with Christine Sun Kim," *TEDBlog*, March 29, 2013, accessed May 21, 2016, http://blog.ted.com/playing-with-sound-in-silence-fellows-friday-with-christine-sun-kim/.
[106] Quoted in Vida Weisblum, "How We Listen Determines What We Hear: Christine Sun Kim on Her Recent Sound Works, Working with Blood Orange," *ARTnews*, September 28, 2015, accessed October 9, 2016, http://www.artnews.com/2015/09/28/how-we-listen-determines-what-we-hear-christine-kim-on-her-recent-sound-works-teaming-with-blood-orange/.

signature or meter, the quarter notes appear to float in space (see Figure 2.2). At the same time, the successive slurred groups of quarter notes suggest a horizontal trajectory corresponding to a temporal unfolding of events, while the vertical motion of the quarter notes approximates a registral orientation. If the blank space above the musical line signifies the space typically occupied by higher pitches, the relative depth of the quarter notes suggests that it could be a bass line, a likely possibility given the programmatic cue "club music." Indeed, the percussive quality of Kim's score, its steady pulse, and the rise and fall of the would-be bass line are reflective of the rhythmic quality of electronic dance music or the thick bass line of other kinds of music one might hear at a club.

The programmatic cue "muffled" is evocative for several reasons. Taken as a decrease in volume such that sounds are quieter or less distinct, "muffled" arguably gestures to the negative space of the score, the apparent muting of some of its usual contextual features, or even the muffled quality of all notation as a visual system of representation relative to the inescapable materiality of music. It also refers to the negative sonic space that deaf people are thought to inhabit, and stereotypical impressions of hearing loss—the idea that for deaf people sound is at best muffled, muted, stifled, and so forth. The word also connotes forcible restraint and concealment, gesturing towards the long-term silencing of the Deaf community through the suppression of sign language under oralism. Kim also tweeted that the score reminds her of the way closed-captioned descriptions of music in films are oftentimes lazily executed on account of some of these misconceptions: as a viable nondescript television caption, "[muffled club music]"

either assumes that so-called "hearing-impaired" viewers have little conception of music, or takes for granted that they have a general sense of what muffled club music might sound like.[107]

The cue "muffled" also positions the listener at a distance from the music's origin, a spatial orientation that the notation alone cannot possibly convey – the resonant thump-thump-thump of the pounding bass as we wait in line outside the club or walk by on the street, or as we listen involuntarily to the neighbour's subwoofer as it penetrates the floorboards, the ceiling, or the shared wall. The slurs sort of get at this, by connecting, dampening, or "muffling" an otherwise detached succession of beats, but without the written cue, they cannot provide the full context. Thus, Kim explains that, as a set of visual symbols, musical notation ultimately belies the sonic and spatial contours of music, and that written language poses a similar problem when it comes to relaying the visual-spatial dimensions of sign language: "It's impossible to entirely capture a [musical] note on paper, which is very much like ASL. [Music and ASL] both have much more in common than you might think," she observes.[108] Ultimately, "Muffled Club Music," as a musical score, short-circuits traditional notions of music notation by calling attention to its abstracted dimensions, situating the listener's body and the immersive materiality of sound at the center of musical experience.

[107] Along with a photograph of the original score, Kim tweeted, "am thinking about how lazy captioners can be when it comes to describing music in movies": Christine Sun Kim (@chrisunkim), Twitter post, July 1, 2016 (1:45 p.m.), accessed May 2, 2017, https://twitter.com/chrisunkim/status/748980993978163201.
[108] Quoted in Alice Hughes, "Unlearning Sound: Christine Sun Kim," *Rooms Magazine*, August 14, 2014, accessed August 13, 2016, http://www.carrollfletcher.com/usr/library/documents/christine-sun-kim-press/alice-hughes-unlearning-sound-christine-sun-kim-rooms-magazine-14-august-2014.pdf.

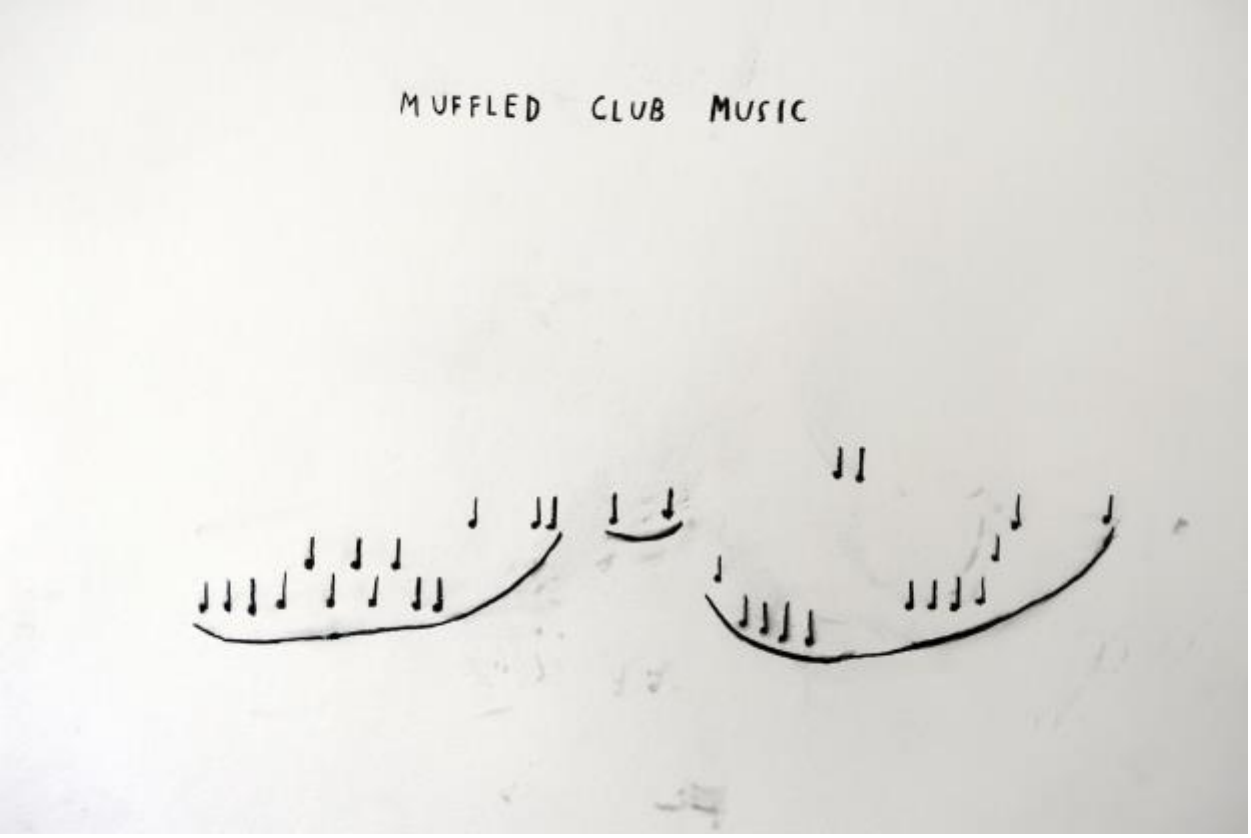

Figure 2.2 Christine Sun Kim, *Muffled Club Music* (2016). Photograph by Christine Sun Kim. Used by permission.

In her hand-drawn piece *How to Measure Loudness* (2014) Kim harnesses the inherent limits of dynamic markings to turn "hearing loss" on its head (see Figure 2.3). The transcript reads as a personalized decibel chart with accompanying example sounds, but to signal degrees of loudness Kim substitutes the usual unit of measurement (dBs) with a recognizable musical symbol, "*f*." Among the many written cues are "*fffffffff* hot sweaty concert," "*fff* subway announcement," "*f* silence into speech," and "*mf* sleep," a comical take on the vague example sounds supplied in more conventional decibel charts. If "dB" is the sign for an absolute unit used to measure the intensity of sound in objective terms, "*f*" is merely a general visual musical cue denoting loudness; it does not correspond to an objective measure. Dynamics and incremental changes in dynamics—for example, the transition from *mf* to *f*—are relative, arbitrary, and

known primarily through subjective frames of reference: in music, dynamics are specific to the player, her instrument, and the dynamic trajectory of a given score. By extension, Kim signals that we gauge loudness through intimate physical sensations and states, social interactions, and the sounds of technologies and environments.[109] Ultimately her examples reverse the usual terms of hearing loss from deficit to gain. That "95 decibels and above"—the transcript's only decibel reference—corresponds to eleven "*f*'s, an absurdly loud dynamic marking, is of vital importance given that profoundly deaf people are believed not to hear anything below ninety decibels. By equating the lower threshold of her hearing with the upper limits of loudness measured in "*f*'s, Kim signals just how *profound* her conception of sound truly is. Finally, the prominence of the voice (i.e., "voice box") in the transcript calls attention to the status of voice in Deaf culture. The apogee of the transcript reads, "voice lost in oblivion," alluding perhaps to the literal silencing effects of loud sound as the spoken voice is rendered inaudible, echoing Vriezen's observations. But the example also signals the preeminence of the spoken voice in symbolic constructions of subjecthood and audist ideology, an overwhelming clamor that threatens to drown out and silence those who do not speak in normative terms.[110] Kim's message is powerfully amplified through the transcript's overt conical shape, an unmistakable visual reference to certain cultural tokens of aural power: the contours of a gramophone horn, a loudspeaker, the shape of the human ear.

[109] See Christine Sun Kim, "Upside Down Noon," Christine Sun Kim website, accessed December 15, 2016, http://www.christinesunkim.com; "Christine Sun Kim: Works," MoMA website, Artists, last modified 2013, accessed August 13, 2016, http://www.moma.org/interactives/exhibitions/2013/soundings/artists/5/works/.
[110] Audism is the hearing equivalent of ableism. It is a term used in the Deaf community to refer to "the hearing way of dominating, restructuring, and exercising authority over the deaf community": Lane, *Mask of Benevolence: Disabling the Deaf Community* (New York: Alfred A. Knopf, 1992), 43.

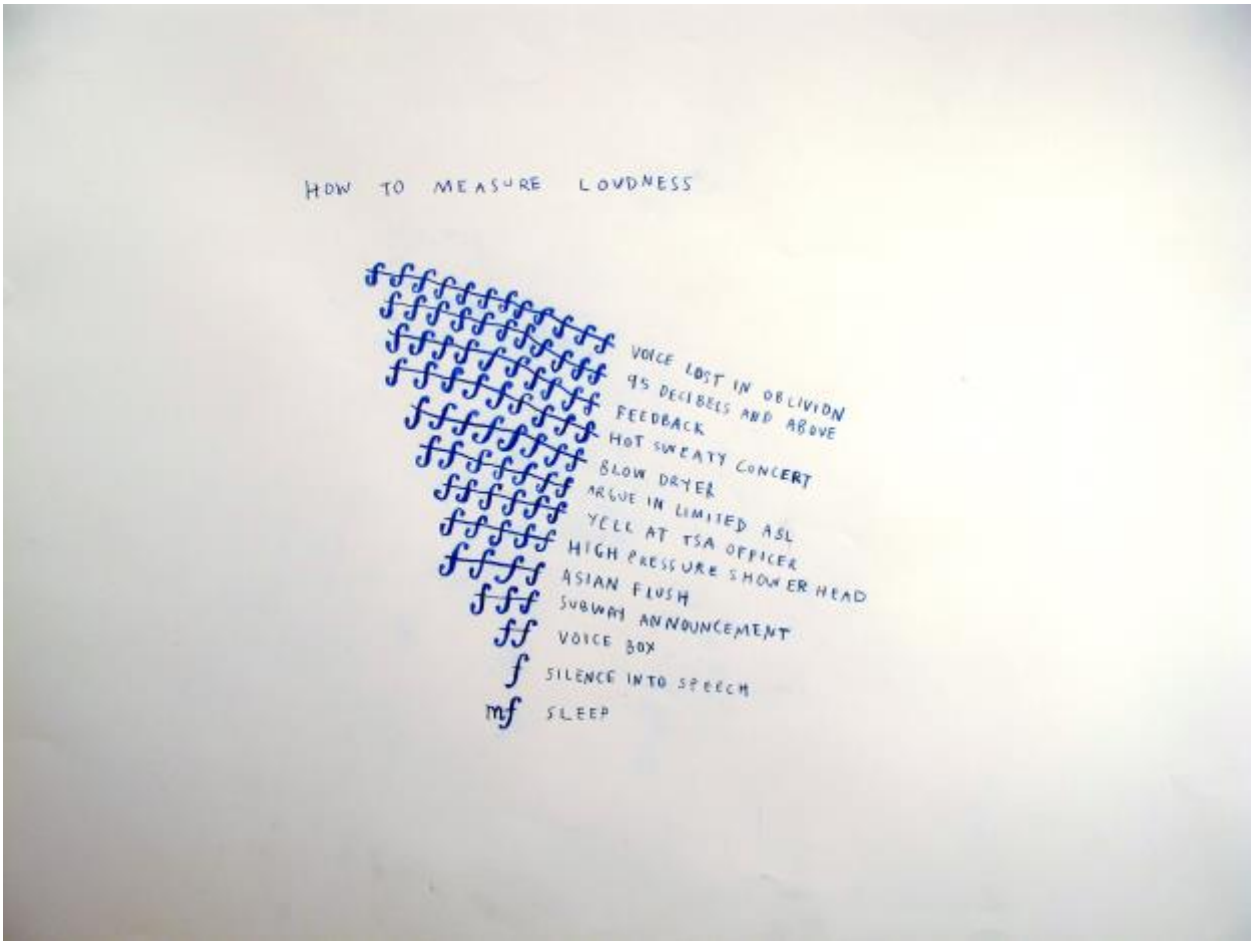

Figure 2.3 Christine Sun Kim, *How to Measure Loudness* (2014). Photograph by Christine Sun Kim. Used by permission.

Whether through song signing, live performances, choreographed dancing, or contemporary art, members of Deaf culture deepen our awareness of music's ontological contours. And from these varied musical accounts stem several larger points. First, touch often depends on vision to round out musical experience. Whereas visual cues are adaptable and relatively constant, vibration is bound by the material constraints of objects, environments, and amplification technologies, and viable only insofar as the precise musical context allows. At concerts and dance events with onstage song signing, the visual-spatial dynamics of ASL and other nonlinguistic visual cues are significant for practical reasons: they tie vibrational listening to a poetic gloss, endowing otherwise variable sensations with concrete meaning. In this way,

song signing models the contextual interdependence of vision and touch in musical experience. In certain musical contexts, visual cues assume considerable authority, whether as the focal point of song signing, as the guiding rhythmic and coordinating strategy in choreographed dance, or as the core of musical expression and experience (as in performance art). Where the musical score is concerned, however, visual cues are a limited representational strategy: notation fails to fully capture the acoustical and spatial parameters of music. At the same time, the relative value of dynamic markings perhaps more readily corresponds to the subjective experience of sound's "loudness" than to objective measurements in decibels. Kim's musical output thus brings new meaning to composition and the practice of score analysis.

Despite these rich musical experiences among Deaf listeners, there are some in the Deaf community who feel ambivalent about music, particularly if it interferes with their cultural values. Members of the Alldeaf forum have debated the merits of music and song signing at length. Some express apprehension over the proliferation of unskilled hearing song signers on YouTube, who, they feel, are appropriating tokens of Deaf culture in order to harness its novel appeal.[111] The viral attention given to sign language interpretation in televised singing competitions such as Eurovision in the hearing world has likewise proved controversial among

[111] See Maler, "Songs for Hands"; "??????? what the****," Alldeaf forum, November 1, 2009, accessed April 16, 2016, http://www.alldeaf.com/threads/what-the.71423/#post-1445143; "Do You Care for Music Signed in ASL?," Alldeaf forum, July 3, 2010, accessed April 16, 2016, http://www.alldeaf.com/threads/do-you-care-for-music-signed-in-asl.79506/page-3#post-1622682; and "Translating a Song from English to TRUE Asl," Alldeaf forum, November 28, 2012, accessed April 16, 2016, http://www.alldeaf.com/threads/translating-a-song-from-english-to-true-asl.108510/page-2. The performances of formerly popular hearing song signer Stephen Torrence drew widespread criticism from some in the Deaf community, who felt he was an unskilled "hobby" signer capitalizing on the exotic appeal of ASL through monetization of his YouTube account on the crowdfunding platform Patreon. In the wake of this controversy Torrence decided to retire his song signing account, citing his newly discovered "hearing privilege" and formerly naive conception of Deaf culture as motivation: Stephen Torrence, "On the Ethics of 'My' Art," *Torrentsofthought* (blog), September 20, 2014, accessed April 16, 2016, http://www.torrentsofthought.com/on-the-ethics-of-my-art/; Amy Cohen Efron, "Interview with Stephen Torrence (CaptainValor)," *Deaf World as Eye See It* (blog), October 3, 2014, accessed April 16, 2016, http://www.deafeyeseeit.com/2014/10/03/interview-with-stephen-torrence-captainvalor/. For a discussion of the cultural insider/outsider status of Deaf performances more generally, see Jessica Berson, "Performing Deaf Identity: Toward a Continuum of Deaf Performance," in *Bodies in Commotion*, 42-55.

members of the Deaf community, including a number of sign language interpreters. Some worry that the preoccupation with the spectacle of sign language as choreography in addition to the celebrity of certain hearing interpreters eclipses linguistic meaning and the artistic output of native signers.[112]

Finally, for some Deaf people, music is fundamentally at odds with the primacy of vision in Deaf culture. The famous 1910 proclamation of George Veditz, pioneering leader of the National Association of the Deaf (NAD), that deaf people are "first, last and all the time the people of the eye" remains a cornerstone of contemporary Deaf identity.[113] The comments of Deaf blogger J. Parrish Lewis speak to some of these complexities:

> It almost seems dangerous to say that I love music, because not everyone will understand and I will be judged. While the majority of the Deaf Community will say they don't enjoy music at all, there are plenty of us that do love music. Even when we cannot hear it. . . .
> In the Deaf Community, we usually don't talk about it. Usually it's got to be paired with an ASL video signing the song before most will express an appreciation for it, and it's usually for the ASL. This is not wrong, and I don't at all have a problem with anyone appreciating only the ASL half of the song. Everyone's got their likes and dislikes.[114]

In this sense, music is a somewhat unique conceptual battleground for contemporary Deaf identity politics. Willing listeners explore new orientations toward Deaf culture as they harness the listening techniques and expressive strategies afforded by their cultural minority standpoint. As song signing enters popular culture, however, certain members of the Deaf community are understandably apprehensive: song signing must be practiced by and for the Deaf and not co-opted for hearing entertainment. For others, the deeply ingrained associations between music and

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[112] See, for example, Matt Brown, "The Spectacle of Sign Language Interpreting," *Terpatron 9000* (blog), February 24, 2015, accessed April 15, 2016, http://terpatron9000.com/the-spectacle-of-sign-language-interpreting/.
[113] George Veditz, "The President's Message," in *Proceedings of the Ninth Convention of the National Association of the Deaf and the Third World's Congress of the Deaf, 1910* (Philadelphia: Philocophus Press, 2012), 30. See also Bahan, "Upon the Formation."
[114] J. Parrish Lewis, "Why I Love Music Even Though I'm Deaf," *MunkyMind* (blog), December 5, 2015, accessed April 15, 2016, http://www.munkymind.com/blog/2015/12/05/why-i-love-music-even-though-im-deaf/.

aurality are automatically prohibitive on account of Deaf cultural mores. Finally, Deaf listeners such as Vriezen also highlight the relative terms of hearing loss and its associated disabilities: amplified sound can disable hearing listeners, while Deaf listeners are equipped to communicate effectively above and beyond "deafening" volumes. But for other Deaf listeners, musical interest and enjoyment is not necessarily a reflection of Deaf identity. As Deaf blogger Benjamin Simpson explains, "Like all pleasures in life, some are enjoyed more by some individuals than others. Not all hearing individuals love music and the same applies in the Deaf community."[115]

Among the second group of listeners, non-culturally deaf listeners, musical experiences are equally diverse. Like their Deaf counterparts, non-culturally deaf listeners often harness visual cues in compelling ways. Barbara Stenross, author of *Missed Connections: Hard of Hearing in a Hearing World*, shares the story of her self-identifying hard-of-hearing friend, Karen, who admits that while she finds music difficult to appreciate, closed-captioning for televised vocal performances and even the mouthing of song lyrics make for a more meaningful musical experience. Stenross quotes from a conversation with Karen, who describes the intimacies of mouthing: "In high school, I had a girlfriend that did a lot of singing to me. What I mean by that is, she didn't actually sing, she would mouth the words on the radio to me in the car. I'd ride along and she'd mouth the songs for me."[116] For some late-deafened musicians who are literate in musical notation, score reading can trigger memories of timbre, pitch, and the physical sensations associated with playing different instruments. Profoundly deaf musician and hearing aid wearer Paul Whittaker explains that "music means nothing at all to me unless I see a

[115] Benjamin Simpson, "Music for People of the Eye," ASL University (Lifeprint.com), July 12, 2013, accessed April 15, 2016, http://www.lifeprint.com/asl101/topics/music-and-the-deaf-3.htm.
[116] Barbara Stenross, *Missed Connections: Hard of Hearing in a Hearing World* (Philadelphia: Temple University Press, 1999), 89–90.

score: I then read that and know in my head exactly what that music 'sounds' like."[117] Whereas Whittaker describes this process as one of unconscious adaptation, fellow deaf musician Nigel Osborne explains that score reading for memory retrieval is a technique he painstakingly taught himself: "It took me quite a long time to train myself to do that. What I'm doing is I'm drawing on my memories and knowledge of the sounds and colours of instruments and their different ranges, as well as what the pitches sound like and what durations, how long they last, and I'm putting that all together in my head."[118]

Score reading is bound to be a type of "listening" with which many musicologists can identify. The score has long enjoyed aesthetic prominence in our discipline; at its most basic, it is a set of visual codes and instructions for physically realizing an organized set of sounds. To a trained musician, the score can silently convey specific sounds and material sensations. In his elaboration on Edward T. Cone's discussion of score reading Fred Everett Maus writes, "experienced score-readers do not just look at visual symbols; we use them as a starting point for remembering and imagining sound. . . . [A] performer has the task of bringing musical events into being, and a score-reader does this too, at least in imagination."[119] Whittaker and Osborne thus draw new attention to what is otherwise a naturalized component of our listening expertise.

For certain non-culturally deaf people, listening is often technologically mediated through auditory assistive technologies—in effect, prostheses. Indeed, hearing aid wearers and

[117] Whittaker et al., "The Role of Art in Coping with Sensory Impairment," Introduction by Michael Trimble. Panel presented at the annual conference of The Musical Brain Charity, "The Beethoven Question: Can Art Make Life Worth Living?" Southbank Centre, London, UK, October 27-28, 2012, 3.
[118] Ibid, 13.
[119] Fred Everett Maus, "The Disciplined Subject of Musical Analysis," in *Beond Structural Listening?: Postmodern Modes of Hearing*, ed. Andrew Dell'Antonio (Berkeley: University of California Press, 2004), 27. More generally Maus discusses the imaginative aspects of internal listening (apart from the score) as the presence of "an inner musical voice" or "musical stream," whose "activity can vary widely, ranging from aimless sonic doodling, to full-fledged inner performance of familiar music, to vivid inner improvisation; it can fluctuate from periphery to focus of one's awareness" (24).

cochlear implant recipients contend with a unique set of variables when engaging with music. Hearing aid type (analogue vs. digital), make, model, and programming can dramatically influence musical perception and enjoyment. Hearing aids and cochlear implants are designed chiefly to facilitate the perception of speech and verbal communication. Since the inception of digital hearing aid technology in the 1990s, new hearing aids typically use a compression technique (called Wide Dynamic Range Compression, WDRC) to boost speech sounds, adjusting the speech signal input range by automatically applying more gain for quieter sounds and less gain for louder sounds. Because music has a significantly larger dynamic and frequency range than speech, digital hearing aids are often ill equipped to process musical input, sometimes causing pitch distortion, noise cancellation, and unpleasant frequency feedback for the wearer.[120] These effects are likely particularly acute when wearers of digital hearing aids participate in situations of interactive music making such as rehearsals, where different musical frequencies mix sporadically with speech. By contrast, pre-1990 analogue-style hearing aids have a wider frequency range and use linear amplification (instead of compression), which many longtime hearing aid wearers believe respond more effectively to the unique acoustical properties of musical signals than the newer digital-style hearing aids.[121] Whittaker notes that transitioning from his twenty-year-old analogue aids to a newer digital model was a physically and socially disorienting experience, since the compression on the new device rendered musical sounds tinny.

[120] See Robert Fulford, Jane Ginsborg, and Alinka Greasley, "Hearing Aids and Music: The Experiences of d/Deaf Musicians," paper presented at the ninth triennial meeting of the European Society for the Cognitive Sciences of Music, Manchester, UK, August 17-22, 2013. See also Fulford, Ginsborg, and Juliet Goldbart, "Learning Not to Listen: The Experiences of Musicians with Hearing Impairments," *Music Education Research* 13 (2011): 447-64. Naomi B.H. Croghan, Kathryn H. Arehart, and James M. Kates, "Music Preferences with Hearing Aids: Effects of Signal Properties, Compression Settings, and Listener Charactertistics," *Ear and Hearing* 35 (2014): 170-84; Marshall Chasin and Neil S. Hockley, "Some Characteristics of Amplified Music through Hearing Aids," *Hearing Research* 308 (February 2014): 2-12; and Marshall Chasin, "Why Are Audiologists Afraid of Musicians? Part 1," *Hear the Music* (blog), Hearing Health & Technology Matters, August 20, 2014, accessed April 16, 2016, http://hearinghealthmatters.org/hearthemusic/2013/why-are-audiologists-afraid-of-musicians-part-1/.

[121] See Fulford, Ginsborg, and Greasley, "Hearing Aids and Music."

He explains, "playing the piano and organ was so unpleasant, aurally, whilst I was simply unable to hear my choir properly and had to rely on them telling me if they were right or not."[122] In many cases, the technological and physiological challenges of managing the sensory experience of music prove cumbersome and overwhelming for the hearing aid wearer. Audiologists Robert Fulford, Jane Ginsborg, and Alinka Greasley write that, in the future, "the challenge for manufacturers and digital signal processing engineers will be to develop technologies that improve music listening experiences whilst retaining and prioritising the amplification of human speech."[123]

Audiologists are likewise engaged in studies to help improve the perception of music for cochlear implant recipients.[124] Engineer Les Atlas explains that because "there is no easy way to encode pitch as an electrical stimulation pattern," current cochlear implant models are poorly equipped to process music.[125] One of Stenross's hard-of-hearing informants notes that she was musically active "before going deaf" but that her cochlear implant had drastically altered her perception of music: "even though I have a CI [cochlear implant] and can communicate beautifully, music is still garbage to me."[126] As Mara Mills suggests, cochlear implants

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[122] Quoted in Robert Fulford, "Dr Paul Whittaker OBE—'My Hearing Aids and Music,'" Hearing Aids for Music website, December 2, 2015, accessed April 16, 2016, http://musicandhearingaids.org/dr-paul-whittaker-obe-my-hearing-aids-and-music.

[123] Fulford, Ginsborg, and Greasley, "Hearing Aids and Music."

[124] For a summary of the existing scientific literature, see Kate Gfeller, "Music Enjoyment and Cochlear Implant Recipients: Overcoming Obstacles and Harnessing Capabilities," Alexander Graham Bell Association for the Deaf and Hard of Hearing website, accessed April 16, 2016, http://www.agbell.org/MusicEnjoymentandCochlearImplants/.

[125] Quoted in John Hamilton, "Deaf Jam: Experiencing Music through a Cochlear Implant," NPR website (*Morning Edition*), May 18, 2015, accessed April 16, 2016, http://www.npr.org/sections/health-shots/2015/05/18/406838781/deaf-jam-experiencing-music-through-a-cochlear-implant. See also Michelle Ma, "New Strategy Lets Cochlear Implant Users Hear Music," *UWToday*, University of Washington website, October 9, 2013, accessed April 16, 2016, http://www.washington.edu/news/2013/10/09/new-strategy-lets-cochlear-implant-users-hear-music/.

[126] Stenross, *Missing Connections*, 91. On closed-captioning and accessibility strategies for deaf and hard-of-hearing listeners/viewers, see Anna Matamala and Pilar Orero, eds., *Listening to Subtitles: Subtitles for the Deaf and Hard of Hearing* (New York: Peter Lang, 2010); Karen Peltz Strauss, *A New Civil Right: Telecommunications Equality for Deaf and Hard of Hearing Americans* (Washington, D.C.: Gallaudet University Press, 2006); and Elizabeth

necessarily *inscribe* the audiological abilities of deaf listeners, a characterization that extends to musical enjoyment to a certain degree.[127] Cochlear implant recipient Michael Chorost has written extensively about his own musical experiences in relation to improvements to cochlear implant hardware/software design over the last two decades. He explains that ultimately the "variations between user experiences present real perplexities for researchers who want to develop better software. The experience of music is inevitably subjective."[128] For non-culturally deaf people who use auditory technologies, then, not only is "hearing" technologically mediated, but musical experiences rooted in hearing depend on the capacities and limits of the prosthetic device, the compatibility between device and user, and the unique musical preferences of the user. "Hearing" music through hearing aids or a cochlear implant remains a precarious endeavor.

This chapter's final group of listeners approaches deafness in rather unique terms relative to other d/Deaf listeners: they encounter hearing loss as formerly "hearing" people whose hearing loss is a result of their voluntary musical activities. Late-deafened musicians and listeners face considerable physical and social obstacles as they come to terms with the everyday experiences of hearing loss *as a disability* in a culture—music—in which the aural reigns supreme. Ultimately, professional musicians and regular concertgoers of all stripes are at high risk for developing different types of hearing impairment, including tinnitus, hyperacusis (an acoustic shock injury that results in an extreme sensitivity to sounds), and diplacusis

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Ellcessor, "Captions On, Off, on TV, Online: Accessibility and Search Engine Optimiation in Online Closed Captionining," *Television & New Media* 13 (2012): 329-52.

[127] Mills, "Do Signals Have Politics?"

[128] Michael Chorost, "Helping the Deaf Hear Music," *MIT Technology Review*, February 26, 2008, accessed April 16, 2016, https://www.technologyreview.com/s/409666/helping-the-deaf-hear-music/. See also Michael Chorost, "My Bionic Quest for Boléro," *Wired*, November 1, 2005, accessed April 16, 2016, http://www.wired.com/2005/11/bolero/; and Chorost, *Rebuilt: How Becoming Part Computer Made Me More Human* (New York: Houghton Mifflin, 2005). Responses to a 2015 query on the Alldeaf forum about cochlear implant recipients' impressions of music range drastically, though discussion centers primarily on the advantages and drawbacks of different models and makes; see "CIs and Music," Alldeaf forum, October 26, 2015, accessed April 16, 2016, http://www.alldeaf.com/threads/cis-and-music.125816/#post-2447301.

(experiencing different pitches/timings in each ear).[129] Sterne characterizes music-induced hearing damage as an extension of what he calls "audile scarification"—that is, "the participation in the everyday urban life of advanced capitalism." He elaborates:

> [Audile scarification] is both a form of inscription on the body, and a mode of compliance. To participate in a loud music performance, to subject oneself to the roar of an airplane engine or bathroom air dryer, to attend a sporting event. All of these practices ask something of their attendees' bodies; they mark them. To submit oneself to an event like this is to consent to a certain potential for audile scarification.[130]

More specifically, McKay has written about the prevalence of noise-induced hearing loss among heavy metal and heavy rock musicians and concertgoers, as well as among regular earbud users, which he frames as "situations in which popular music can function as a *disabling* culture."[131] He argues that because sustained volumes of over 120 decibels (in live rock shows) have long been industry standard, hearing loss is inevitable. Further, hearing loss is consistently understood as part of the wear and tear and hypermasculine grit of heavy rock and heavy metal subcultures. Bands such as the Who, Slade, and Kiss framed physical tolerance for their deafening volumes as part of their music's joint pleasure/pain imperative; physical intolerance, by comparison, was assumed to reflect primarily on old age and a general lack of hipness.[132] Like Sterne, McKay asserts that this listening is often voluntary, and that it is likewise physically demanding. Perhaps as an outgrowth of this long-standing romanticization, there is increasing fascination in electronic music subcultures with the sensory extremes of hearing loss as it concerns the

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[129] See Robert Fulford, "Hearing Impairment and the Enjoyment and Performance of Music," Hearing Aids for Music website, August 10, 2015, accessed April 16, 2016, http://musicandhearingaids.org/hearing-impairment-and-the-enjoyment-and-performance-of-music-a-conference-by-the-institute-of-acoustics-kingston-university-9-july-2015/.

[130] Jonathan Sterne, "Audile Scarification: Notes on the Normalization of Hearing Damage," (keynote lecture presented at Princeton University, Princeton, NJ, June 21, 2016), 2–3. Cited with the author's permission.

[131] McKay, *Shakin' All Over*, 138.

[132] The cover of British glam rock band Slade's 1981 album *Till Deaf Do Us Part* features a drawing of an ear pierced by a crooked nail; see ibid., 144.

phenomenon of high volumes. For instance, following a recent music festival performance in Toronto, Stephen O'Malley, frontman of the notoriously loud drone metal band Sunn O))), tweeted to followers, "Deaf becomes you," not necessarily as an expression of solidarity with potential deaf fans, but as a provocation: deafness is a material condition that hearing listeners can embody through the band's music, both temporarily, at live shows, and permanently, as the long-term progressive effects set in.[133]

Personal musical narratives on hearing loss can contradict the fantasies of musical subcultures, however. For instance, in 1999 Princeton musicologist Peter Jeffery made headlines when he sued members of the alternative rock band the Smashing Pumpkins, earplug manufacturers North Protects, the city of Connecticut, and the New Haven Coliseum when he developed what he alleges was chronic tinnitus after attending one of the band's live shows with his twelve-year-old son in 1997.[134] Willing listeners, by contrast, might repeatedly subject their ears to deafening volumes for the sake of personal enjoyment and/or to achieve a sense of communal belonging, but privately suffer the consequences, framing their hearing loss in less romantic terms than those supplied by the prevailing generic discourse. In the EDM (electronic dance music) scene, it is becoming increasingly socially acceptable among concertgoers to wear earplugs at live shows as a way of safeguarding against hearing loss/damage. For instance, in a recent article in *Magnetic Magazine* promoting special concertgoing ear filters, one writer and

[133] Stephen F. O'Malley (@IdeologicOrgan), Twitter post, June 11, 2016 (3:21 p.m.), accessed August 13, 2013, https://twitter.com/ideologicorgan/status/741757322750484481.

[134] By his own admission Jeffery had never been to a rock concert before. He also sued the earplug vendor Virgin Records and the opening bands the Fountains of Wayne and the Frogs. His suit was ultimately unsuccessful. See Bernard D. Sherman, "Losing Your Ears to Music: The Hearing Loss Epidemic and Musicians," Bernard D. Sherman website, reprinted from *Early Music America* (Spring 2000), accessed August 21, 2016, http://www.bsherman.net/hearingloss.htm; and Frederic J. Frommer, "Music Professor Sues Band for Hearing Loss," *Princeton Alumni Weekly*, April 21, 1999.

EDM enthusiast expressed a desire to protect his/her hearing without compromising musical enjoyment or the scene's penchant for loud volumes:

> I expect live music, and DJ shows to be loud, but it's gotten to a point that the ear ringing has become fairly intense after these concerts. I like my hearing as I'm sure you do, and continued exposure to these types of high decibels has a bad ending for all of us who don't protect ourselves; we lose our hearing slowly but surely. It's easy to get caught up in the music and just say to yourself, "next time I'll wear earplugs, this one show won't hurt me . . ." The question is, how many times have you done that? Noise-induced hearing damage is very real and something you need to pay attention to, especially in EDM culture.[135]

Music-induced hearing loss is also ubiquitous in the world of classical music. In contrast to the hard-core mentality of rock and heavy metal subcultures, there is little romance associated with hearing loss in classical music aside from Beethoven's case. (Sterne notes furthermore that this "high/low culture binary often works in reverse when it comes to hearing protection.")[136] In April 2016 the well-known British violist Chris Goldscheider went public with his lawsuit against the Royal Opera House. The violist claims that by seating him directly ahead of the brass section in a 2012 staging of Wagner's *Die Walküre* the orchestra caused "his hearing [to be] irreversibly damaged." Goldscheider explains that sound frequently reached 137 decibels, what the court documents characterize as "an immediate and permanent traumatic threshold shift."[137] Janet Horvath, a former professional cellist with hyperacusis, explains that as rehearsals and performances suddenly became physically intolerable her "own sense of identity crumbled. It was excruciating that what I loved so much could bring me so much pain."[138] Similarly, longtime

[135] "Are You Losing Your Hearing at EDM Shows?," *Magnetic Magazine*, November 16, 2015, accessed May 24, 2016, http://www.magneticmag.com/2015/11/are-you-losing-your-hearing-at-edm-shows/.
[136] Sterne, "Audile Scarification," 6.
[137] See Clive Coleman, "Musician Sues Royal Opera House over Ruined Hearing," BBC News, April 1, 2016, accessed May 21, 2016, http://www.bbc.com/news/entertainment-arts-35938704.
[138] Janet Horvath, "A Musician Afraid of Sound," *The Atlantic*, October 20, 2015.

composer Michael Berkeley writes about coming to terms with what he hoped would be temporary hearing loss:

> I cling to the view that my condition will improve. There has been an increase in volume, particularly with speech, but not so much in the hearing of music—which continues to sound ugly and disparate. Catching a piano piece on the radio the other day I asked: "What on earth is this? It sounds like Ligeti crossed with Nancarrow." It turned out to be Schumann. Were I to be facing a lifetime of this, I would be in despair.[139]

The enduring stigma associated with hearing aids regrettably outweighs their audiological benefits for some professional musicians, for whom discretion is as much of a priority as sound amplification: "You don't want to turn up to work and find 80 or so musicians, your colleagues in the pit and you turn up with one of these great old NHS [National Health Service] things—you know, there is a stigma attached to that."[140] In this sense, the fiercely competitive dynamics of classical music can arguably perpetuate a culture of shame surrounding hearing loss, making the visible physical disclosure that comes with wearing hearing aids seem disadvantageous. And the cost of smaller, more discreet models can often be prohibitive, particularly in instances where health insurance coverage for hearing aids and cochlear implants is already limited and eligibility conditional.

Resources on music-induced hearing loss and hearing damage for unionized professional musicians and music industry employees, whether in a popular or classical milieu, vary from union to union. The Musicians' Union (MU) in the United Kingdom actively promotes awareness of hearing loss among its members, and has a robust set of online resources including strategies for safeguarding against hearing damage; literature on hearing self-surveillance, types of hearing loss, and claims to deafness; and comprehensive information on employee rights in

[139] Michael Berkeley, "My Beethoven Moment," *The Guardian*, September 7, 2010.
[140] "Anthony" quoted in Fulford, Ginsborg, and Greasley, "Hearing Aids and Music." For a critical discussion of the history of hearing aid miniaturization and the stigma associated with hearing aids, see Mills, "Hearing Aids."

relation to noise regulations.[141] Crucially, it also holds employers accountable to Sound Advice, a set of music-industry-specific noise compliance guidelines written by a working group that includes members of the BBC Symphony Orchestra and the Royal Opera House.[142] Employer compliance measures include assessing risks from noise; taking action to reduce noise exposure that exceeds legal limit values; supplying employees with adequate training; and equipping players with musicians' earplugs when noise levels exceed specific limit values and action categories. The BBC's "Musicians' Guide to Noise and Hearing" (2011), a guide that "aims to facilitate dialogue and empower all musicians and managers" in relation to noise regulations, recommends that employers provide musicians and stage managers with acoustic screens and treatments when necessary, and allow sufficient acoustical rest periods.[143] By contrast, the American Federation of Musicians (AFM) of the United States and Canada—a union primarily made up of classical musicians with a large Symphonic Department—offers minimal online resources on hearing loss.[144] In the cases of both the MU and the AFM, however, official union policy on hearing loss does not necessarily correspond to local institutional values, as Goldscheider's lawsuit against the Royal Opera House attests. Player status, seniority, and

[141] See "Protect Your Hearing," Musicians' Union website, last modified 2016, accessed May 22, 2016, http://www.musiciansunion.org.uk/Home/Advice/Your-Career/Health-and-Safety/Protecting-Your-Hearing-(Including-Noise-Hearing-P.

[142] See "Sound Advice Note 2," Sound Advice, last modified 2007, accessed May 22, 2016, http://www.soundadvice.info/thewholestory/san2.htm. Sound Advice has adapted the guidelines of the UK "Control of Noise at Work Regulations of 2005" for different music industry venues, genres, and performance scenarios.

[143] "Musicians' Guide to Noise and Hearing. Part II: Toolkit for Managers," BBC website, 2012, accessed April 16, 2016, http://downloads.bbc.co.uk/safety/documents/safety-guides/audio-and-music/Safety-Musician_noise_guide_Part_II.pdf.

[144] The "Health and Therapy" section of the Federation's website includes links to a homemade web page on "Musicians' Health" with tips on musician "self-care" and information on performance anxiety, stage fright, and techniques for preventing and treating different types of repetitive strain injuries such as tendonitis and carpal tunnel syndrome. Prevention against and treatment of hearing loss is nowhere to be found. See "Health and Therapy," American Federation of Musicians website, accessed May 22, 2016, http://www.afm.org/resources/health-and-therapy; and "Muscular and Skeletal Problems," Musicianshealth.com, accessed May 22, 2016, http://www.musicianshealth.com/musculoskeletaldisorders.htm.

contract type would likewise influence the ways players choose to manage and disclose their hearing loss.

This emerging discourse on music-induced hearing loss uniquely models the tensions between injury and disability in the context of music performance. Whereas there is a long-established discourse within classical music on the prevention and treatment of repetitive strain injury, literature on music-induced hearing loss remains conspicuously absent. For instance, with the exception of tinnitus, music-induced hearing loss is not among the conditions customarily addressed by the Alexander Technique, perhaps the best-known therapeutic method for musicians.[145] This discrepancy corresponds to the association between repetitive strain injury and recovery relative to the assumption that hearing loss is permanent and progressive. (In actuality repetitive strain injuries are typically chronic and debilitating.) And yet hearing loss does not mean the end of music, as attested by the motto of the Association of Adult Musicians with Hearing Loss: "proving the loss of hearing does not mean the loss of music."[146] More generally, Sterne's "audile scarification" draws a connection between hearing loss incurred through the sonic mechanisms of capitalism and trauma: sonic experiences leave a lasting imprint on the body's physical (and psychological) contours. But this physical imprint also inscribes new possibility, as the accounts of d/Deaf listeners demonstrate. As hearing loss becomes increasingly common among musicians and concertgoers we would do well to accommodate it as *a hearing difference* and adjust our cultural norms accordingly, as Sterne suggests, rather than treating it as a permanent and irrevocable disability. Above all, listeners with music-induced

[145] See "Musicians and the Alexander Technique," The Complete Guide to the Alexander Technique website, accessed May 22, 2016, http://www.alexandertechnique.com/musicians.htm ; and Judith Kleinman and Peter Buckoke, *The Alexander Technique for Musicians* (London: Methuen Drama, 2013).
[146] Association of Adult Musicians with Hearing Loss website, last modified 2016, accessed May 22, 2016, http://www.musicianswithhearingloss.org/wp/about-our-association/.

hearing loss demonstrate that "normal hearing" is a precarious condition in more ways than one. Normal hearing is physically temperamental, in that our ears are tender, sensitive organs. They are at the mercy of our sonic environments, our recreational activities, our physical well-being, and our age. In these ways we are always susceptible to audile scarification: "normal" hearing is thus an unstable audiological as well as social category.

Conclusion: Musicology Gains from Deafness

Current popular discourse on deafness reinforces a long tradition of making assumptions about deaf people: deaf people experience the world as total aural silence *and* pure visual-tactile sensation; deaf people automatically aspire to hearing norms; and, through their inborn sensory acuities, deaf people compensate for hearing loss in extraordinary ways. Glennie involuntarily serves as an icon onto which these fantasies are projected. This is a symbolism that cheapens her musical achievements, obscures the complexities of her own relationship to deafness, and subjects her to ongoing scrutiny and mistrust. The universalizing tone of her mission "to teach the world to listen" attaches to her deafness in ways that exceed her own commitments to deafness, making her unique experiences susceptible to generalization. But venerating Glennie as the paragon of deaf musicality is problematic, because such a paragon was never viable in the first place.

Glennie and other d/Deaf listeners reveal first and foremost that sensory perception is more complex and less extreme than popular conceptions allow. The senses intermingle and vary within individual sensory experiences and d/Deaf people conceptualize these experiences in myriad ways, rendering straightforward sensory hierarchies futile. In particular, there is a discrepancy between the allure of vibration and the realities of vibrational listening. The

feasibility of touch/vibration as a listening strategy depends on a host of logistical variables, such as the material properties of a given acoustical space, instrumental register, the degree and method of amplification, and music's precise expressive function. For instance, vibration does not readily serve the unique demands of choreographed dancing, since it facilitates neither a consistent perception of musical pulse nor an internalization of rhythmic patterns when movement is involved, whereas in recreational settings such as Deaf raves or heavy metal shows vibration is central to the vibe of the club. But listeners also have different physical and psychological vibrational thresholds: prolonged exposure to amplified music, frequency feedback, or even being positioned directly in front of the brass section in an orchestra can trigger unease and physical disorientation in some listeners. In the end, vibration on its own is an inconstant sensation. It requires consistent mediation in order to be perceptible, being best transmitted through physical objects such as subwoofer speakers (a rather conventional technology) or through creative handheld props such as those used by Deafheads. Finally, d/Deaf people rarely privilege vibration over other sensory modalities, while, for some, vibration on its own does not qualify as music.

Vision is a highly versatile listening strategy. Visual cues can contextualize and augment tactile sensations, giving them concrete meaning as in Glennie's paradigm. For culturally Deaf listeners, the visual-spatial parameters of ASL in particular provide an unstable physical sensation (vibration) with linguistic frames of reference. Deaf visual listening practices also exquisitely model a process of embodied mediation, lending new significance to musical collaboration: song signers use their bodies to add an enriching linguistic and cultural gloss that registers in the minds and bodies of Deaf insider audience members. And the visual aspect of sign language transcends the deafening magnitude of loud music, as Deaf concertgoers continue

to communicate above and beyond the threshold. For some d/Deaf people, vision is altogether a more reliable listening technique than vibration: strategies such as mouthing and lip-reading song lyrics, closed-captioning, and even the practice of song signing itself can exist independently of vibrational (or aural) feedback. In fact, when visual cues are involved, vibrational feedback is sometimes incidental.

The importance of bringing these historically marginalized perspectives to light notwithstanding, hearing is integral to many deaf peoples' experiences of music: for some, hearing remains the most efficient and familiar way to engage with music, even as hearing loss becomes ever more common and renders the category of "normal" hearing unstable. Late-deafened musicians understandably strive for continuity with previous musical experiences centered chiefly on hearing. For many professional musicians, hearing loss and hearing damage can prove physically and socially disabling, significantly detracting from musical enjoyment and often cutting to the core of their identities. Under these circumstances, adaptation of any kind, whether through the use of assistive technologies or conscious sensory compensation, seems a daunting task, especially when resources and professional incentives are limited. Cochlear implant recipients and hearing aid wearers likewise aspire to hearing norms in their perception of music; the built-in constraints of existing technologies delimit this experience. If current digital hearing aid models remain by and large ill equipped to amplify the unique acoustical properties of musical signals alongside speech, there is widespread demand for devices that facilitate more robust musical hearing. Finally, the fact that some culturally Deaf people reject music on the grounds of its fundamental conflict with the visual premise of Deaf identity reflects on the deep-seated cultural linkage of music with aurality. Crucially, hearing is not itself hegemonic; it is rather the cultural values ascribed to hearing—in this case the assumed interdependence of music

and hearing—that overlook and devalue listeners who do not have access to normative frameworks.

Deaf culture does not espouse a single view of music. In the Deaf community, music can provide meaningful creative expression, sensory pleasure, and cultural fulfillment. But it can also threaten the semantic value of sign language and potentially threaten the visual orientation of Deaf culture, a valid stance that no amount of "touching the sound" can undo. Indeed, inasmuch as this chapter champions a more pluralistic understanding of music and deafness, I also stress that music need not be universally appealing. Deaf accounts of music as unglamorous, banal, and in particular unpleasant undermine such romantic aspirations. Ultimately, music's appeal is automatically contingent neither on hearing ability nor on the availability of listening paradigms.

Musicology gains from deafness in fundamental ways. Deaf listeners reveal that the senses operate in myriad ways, that deafness is not reducible to a single listening paradigm, and that music is more than sound. And as d/Deaf listeners resist theoretical abstraction, they get to the ontological heart of music. Scholars have long problematized music scholarship's recourse to aesthetic autonomy. In his landmark work on the meanings of performing and listening, Christopher Small argues that "neither the idea that musical meaning resides uniquely in musical objects nor any of its corollaries bears much relation to music as it is actually practiced throughout the human race."[147] Music is an *activity* grounded in the social. "Musicking" is a "human encounter,"[148] or, as Georgina Born explains, music is "immanently social," and as such, musicology must be relational:

> the conceptual gains of the "impossible totality" project outweigh the risks of hegemonic intellection; unless we cast our nets wide and speak our analytic minds, as it were, there is no chance for others (and Others) to answer back. . . .

[147] Christopher Small, *Musicking: The Meanings of Performing and Listening* (Hanover: University Press of New England, 1998), 7.
[148] Ibid, 10.

> . . . the development of a relational musicology depends upon a break with dominant conceptions not only of what counts as music to be studied, but how it should be studied.[149]

Deafness only deepens musicology's sense of what music is—its social, relational, and material contours. Music does not simply exceed the limits of aurality; it exceeds the acoustical parameters of sound itself. "Sound" can be a primarily visual-spatial experience as we watch objects and bodies vibrate and move as music passes through them. And deafness also gets at what is already there—the inherent musicality of sign language, the significance of the visual in establishing sight lines at concert venues, and the analytic primacy of the score, an inescapably visual medium. Deafness tells us that the score can serve as a useful index: listeners read and subsequently imagine previously internalized pitches and timbres, a familiar process for musicians and scholars of music. But the score's symbolic dimensions are also limited, for better or worse. Whereas notation cannot fully account for the materiality of music, or specify a physical orientation between listener and musical source, Kim highlights that the arbitrary nature of dynamic markings better reflects our subjective perceptions of loudness than the absolute measures of a decibel chart.

More generally, deafness highlights the contextual interdependence of the senses as they govern musical experiences: vision, touch, and hearing are merely idealized types; rarely do they operate in isolation. The senses are enmeshed in a material constellation of synchronized and successive activations. Ultimately, deafness demonstrates that listening encompasses a full spectrum of sensory experiences, musical contexts, individual preferences, cultural practices, and social experiences—what amounts to an ever evolving set of listening states.

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[149] Georgina Born, "For a Relational Musicology: Music and Interdisciplinarity, Beyond the Practice Turn: The 2007 Dent Medal Address," *Journal of the Royal Musical Association* 132 (2010): 220, 224, 230.

Most importantly, d/Deaf listeners reveal that the value and prestige associated with naturalized understandings of musical skill and expertise are maintained through arbitrary authority, particularly with respect to listening. Even as postmodernist musicians, composers, and scholars interrogate the aesthetic autonomy of music and its corollaries, critical, disciplined listening is a mainstay of musicology. It is what sets music scholars apart. Music scholars continue to distinguish between *passive* listening, and *active* listening modes, the former an unconscious, uncritical recreational form of listening, the latter a conscious, critical, and thereby more meaningful mode that music scholars cultivate through years of training. Indeed, in 2004 Andrew Dell'Antonio wrote that structural listening—a term first proposed by Rose Subotnik to critique the formalism that undergirds disciplinary listening practices—endures as "a disciplinary commonplace in the academic study of Western art music, and a pedagogical staple of undergraduate education in music history and theory."[150] Structural listening privileges aesthetic autonomy: listeners yield to the abstract power of the music, making objective judgments about its formal parameters and internal logic with moralizing effect. Structural listening is also rooted in the aural. But structural listening is a mastery worth dismantling, as Dell'Antonio and his colleagues made clear. Similarly, in 2011 Joseph Straus asserted that music theory enforces "prodigious hearing": "for the most part, implicit listeners in traditional music theory are prodigious figures, with extensive training and vast knowledge of the musical literature. . . . The implied listeners in traditional music theory inhabit prodigiously capable bodies."[151] (By contrast, Straus's "disablist hearing" encompasses "the ways that people whose bodily, psychological, or cognitive abilities are different from the prevailing norm might make sense of

[150] Andrew Dell'Antonio, "Introduction," in *Beyond Structural Listening*, 1.
[151] Straus, *Extraordinary Measures*, 151–52.

music.")[152] Whether as structural listening, prodigious hearing, or what Maus called "the disciplined subject of musical analysis,"[153] these are the conventional terms of our listening expertise.

In Small's formulation, musicking resists the ascribing of greater value to active than to passive listening modes by rendering the distinctions irrelevant; all music involves action, therefore all listening is active.[154] While wholeheartedly agreeing with Small, I would stress that d/Deaf listeners have always been active listeners in the original sense: not on account of music's involving action or because deafness somehow automatically bestows heightened sensory acuities, but as a consequence of their inferior social status in a predominantly hearing world. They have always listened more carefully in order to master the social terms of the hearing world, though they rarely defer to its authority. Their propensity for *active* listening extends to their musical experiences.

I return to my initial assertion that musicology has yet to fully reckon with d/Deaf listeners, who can be expert listeners in the truest sense. They describe listening to music as a process involving conscious, painstaking labor, ongoing physical and technological adaptations, unconscious inborn sensory acuities, and intuitive strategies nurtured through cultural practice. And these approaches are not mutually exclusive. Furthermore, there is constant slippage between unconscious skill and conscious practice as listening habits are mastered and naturalized over time. Is this process really so different from the way we cultivate disciplined listening as musicologists? The fundamental difference lies in the value we ascribe to our listening strategies relative to those of other listeners, d/Deaf or otherwise. I am not suggesting that deafness reveals

[152] Ibid, 150.
[153] Maus refers specifically to the modes of listening and analysis described by Allen Forte (specifically Forte's characterization of Heinrich Schenker) and Edward T. Cone: Maus, "Disciplined Subject."
[154] Small, *Musicking*, 9.

that musical “expertise” is relative or subjective. More precisely, it is that deafness calls us to a pluralistic understanding of what listening expertise entails. Deaf people have a stake in musicology. Not because they tell us what we want to hear, affirm deeply cherished ideals, or share a universal love of music; but because they challenge us to listen anew, beyond symbolic constructions, universalizing discourses, naturalized sounds, and handed-down sensory hierarchies

Interlude: Singing beyond Hearing in Christine Sun Kim's Face Opera II

This interlude analyzes Kim's *Face Opera II* (2013), a multi-act performance art piece written for nine pre-lingually deaf performers, as an extension of the preceding chapter's discussion of music and deafness. More specifically, it presents *Face Opera II* as a radical instance where music exceeds the acoustical parameters of sound, where singing visibly manifests along the exterior surface of the singer's body, where in the absence of sonic cues, the body and its gesture are the music. It likewise puts into practice certain of the issues surveyed in the previous chapter's introduction in relationship to the complexities of "voice" in American Deaf culture.[1]

In recent years, music scholars have called for a holistic approach to vocality that accounts for singing as a physical, psychosensory, political, sociocultural, and relational experience, resisting the tendency in Western musical traditions and psychoanalytic thought to treat the voice as an abstraction.[2] The physical experiences of deafness in conjunction with the linguistic customs of American Deaf culture offer a unique perspective on singing: deafness can unsettle the precondition of vocalized sound in sung vocal production, the physical origins and contours of the singing voice, and the expressive divisions between non-verbal vocal utterance, speech, and song. Ultimately, deafness can engender new and unexpected types of singing within a disability aesthetics that questions the very sonic basis for music.[3] In *Face Opera II*, Kim and

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[1] I am forever indebted to Christine Sun Kim for engaging with me in a fruitful dialogue about *Face Opera II*. Our exchange culminated in a co-written set of performance notes containing Kim's reflections on the conception and performance of *Face Opera II* to which I refer throughout this article.
Material from this interlude was recently published in a peer-reviewed article in the *Journal of the American Musicological Society* and is used here with permission from the University of California Press. See Jessica A. Holmes, "Singing beyond Hearing," *Journal of the American Musicological Society* 69/2 (Summer 2016): 542-548.
[2] Eidsheim, "Sensing Voice"; and Katherine Meizel, "A Powerful Voice: Investigating Vocality and Identity," *Voice and Speech Review* 7/1 (2013): 267-74.
[3] Siebers, *Disability Aesthetics*, 19.

her collaborators defy the customary coupling of singing with audibility, and temporarily sever the related associations between the voice and vocal cords to *sing* using silent facial expressions belonging to the ASL lexicon. Kim's opera further interrogates the legacy of voice in American Deaf culture by highlighting the slippage between aestheticized and pathologized vocal sounds.

Whether in her whimsical mixed-media creations, austere sound installations, or interactive performance art pieces, Kim engages her Deaf identity ultimately to reclaim "ownership" of sound from the hearing world, often unsettling her hearing audiences by integrating obscure insider cues from Deaf culture.[4] Like many in the Deaf community, Kim communicates primarily in ASL, deliberately refraining from "voicing."[5] As previously mentioned, in ASL, as in any sign language, the voice manifests across a visual-spatial plane rather than an acoustical one: it is a language executed through a simultaneity of manual signs (i.e., handshapes) and specific facial expressions, mouth shapes, and precise head, shoulder, and body movements called "non-manual signals" (NMS, or more colloquially, "facial expressions"). The "voice" is thus a central theme of Kim's practice: she explores its many complex linguistic, symbolic, and musical constructions, only to rewrite drastically the able-bodied norms on which they are commonly founded.

From a Deaf perspective, the *singing* voice is a uniquely complex form of expression, hinging on the fraught status of music within this community (as discussed in chapter 2) as well as on the ambiguous relationship between "voicing" and song. The singing voice embodies a unique expressive paradox as it relates to the political dimensions of voice in Deaf culture: in its

[4] Kim in Todd Selby, "Todd Selby x Christine Sun Kim," Nowness website, November 9, 2011, accessed May 2, 2017, http://www.nowness.com/story/todd-selby-x-christine-sun-kim.
[5] Padden and Humphries, *Inside Deaf Culture*; Bauman, "Introduction" in *Open Your Eyes*, 1-32; and Bauman "Listening to Phonocentrism with Deaf Eyes: Derrida's Mute Philosophy of (Sign) Language," *Essays in Philosophy* 9/1 (January 2008).

distinctness from speech, it escapes some of the problems associated with "voicing," yet as a form of vocalized utterance, it arguably aligns with oralist ideals, whether as texted or nonverbal singing. Furthermore, there are certain musical conventions that might seem incongruous with d/Deaf singing—especially intonation. Although certain popular and avant-garde musics welcome and even cultivate out-of-tune singing as part of a larger aesthetic tradition of vocal affect, "correct" intonation is a basic technical requirement and aesthetic tenet of classical singing.[6] Profoundly deaf professional opera singer Janine Roebuck recounts that as her hearing loss progressed, she encountered increasing discrimination within the music industry to this effect; she was "petrified of singing out of tune," especially following her music professor's grim prognosis: "Sing while you can […] because you'll never have a career in music."[7] The critical reception of deaf American jazz singer Mandy Harvey likewise evinces a preoccupation with pitch accuracy. One headline in the *Los Angeles Times* proclaims, "Colorado Jazz Singer Hits the Right Notes, Even Though She Can't Hear Them" (January 12, 2014).

These foregoing contradictions take center stage in *Face Opera II*. The titular reference to opera is misleading, since the piece does not have characters, a narrative, or conventional vocalized singing. Instead, Kim adopts the "opera format to encourage [the audience] to 'hear' by looking at those choir singers' moving faces."[8] Throughout Acts I–IV, Kim and her eight collaborators alternate between director, conductor, and chorus roles, deploying a series of ASL facial expressions—without their accompanying manual handshapes—as a mode of singing.

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[6] Laurie Stras, "The Organ of the Soul: Voice, Damage, and Affect" in *Sounding Off*, 173-84; and Julia Davids and Stephen LaTour, *Vocal Technique: A Guide for Conductors, Teachers, and Singers* (Long Grove, IL: Wavelength Press, 2012).

[7] Janine Roebuck, "I am a Deaf Opera Singer," *The Guardian*, September 29, 2007, accessed May 3, 2017, https://www.theguardian.com/theguardian/2007/sep/29/weekend7.weekend2. To mitigate this discrimination and to supplement her own accommodations, Roebuck eventually opted to wear hearing aids.

[8] Kim in Christine Sun Kim and Jessica Holmes, "Performance Notes: *Face Opera II*," unpublished interview transcript, 2014.

Kim's motivation for isolating and aestheticizing the facial dimensions of ASL stems from their distinct expressive function in sign language: Facial expressions (or NMS) are indispensible to linguistic nuance because they contextualize handshapes, elucidate ASL grammar, and color the individual signer's personal voice.[9] The first act, "Open Eight," stages facial expressions to a series of unrelated concepts that could hypothetically be signed using the "open eight" handshape, hence the act's title. Reading from an English transcription (or gloss) of the ASL concepts, the conductor leads with her unique facial interpretations. The chorus members then respond with coordinated and precisely timed facial gestures, keeping their hands firmly stuffed into their pants pockets.[10] The gloss contains successions of closely related sentiments such as the consecutive sequencing of "early," "obsessed," and "sick," as well as many striking and oftentimes humorous juxtapositions like the immediate progression from "depressed" to "masturbate" (see Figure 2.4).

Overall, the singers' facial expressions are more animated than those typical of ASL. Kim notes that one of her Deaf friends suggested that such dramatic overemphasis was insulting to Deaf signers as it potentially reinforces misconceptions about the ostensibly "primitive" nature of sign language. She clarifies her motivations: "I didn't trust the hearing audience enough to be able to properly read our 'normal' faces…and this [facial exaggeration] is one of the ways expression is communicated in opera."[11] Though her reasoning stems in part from a place of mistrust, it also evinces a desire to establish common ground with her hearing audience; she reveals for the viewer that facial expression and bodily movement together coincide in phonetic, visual-spatial, and musical linguistic systems, helping to articulate and stabilize meaning.

[9] Susan D. Fischer and Harry van der Hulst, "Sign Language Structures," in *The Oxford Handbook of Deaf Studies, Language, and Education,* 319-31.
[10] Kim in Kim and Holmes, "Performance Notes."
[11] Kim in Kim and Holmes, "Performance Notes."

Moreover, in likening the heightened emotional display in her piece to that characteristic of opera, Kim distinguishes it from regular poetic utterance and also highlights the fact that facial expressions already serve a crucial expressive function in conventional vocalized singing.

Figure 2.4 Christine Sun Kim, *Face Opera II*, High Line Hotel, New York, May 11, 2013. Kim swipes and holds the gloss for act 1, "Open Eights," on the screen of her iPad as the conductor (not pictured) leads the chorus with her facial expressions. Photograph by Conrado Johns. Used by permission.

If singing is customarily understood as a heightened, musicalized utterance beginning at and emanating from the vocal folds (eventually incorporating bodily gesture to service its expression), the silent, gestural singing that Kim proposes in *Face Opera II* seems implausible. Maler's scholarship on song signing demonstrates that the alteration of certain components of ASL, when signed alongside a preexisting song, can convey specific musical qualities such as rhythm, pitch, and register. She provocatively asks whether gestures can "in fact communicate

musical concepts independently of sound?"[12] Kim's assertion is even more radical: she suggests that stylized, performative gesture informed by but divorced from its manual linguistic complement can communicate a sense of musicality that is actually independent from any preexisting sonic referent; Kim's is a musicality that exists along an embodied visual-spatial plane and not an aural one. As Eidsheim beautifully contends, "the ontology of singing is masked by our fetishization of sound […]. The singing body extends beyond that which we conventionally recognize as the vocal instrument."[13] Eidsheim thus explores what she dubs the "internal corporeal choreography" of voice, a host of oft-overlooked inner microphysiological activities that anticipate, engender, and comprise the singing voice before it is filtered through the vocal cords (e.g., the heartbeat, the breath, the movements of the stomach, etc.).[14] Similarly, Kim seeks to enrich dominant ideologies of voice, but through an attention to external corporeal choreographies with the ultimate goal of releasing the singing voice from its interdependence with sound and the vocal cords. By subverting the customary associations between hearing and music, the singers displace the singing voice from its assumed origin in the vocal tract (or even simply *inside* the body) to initiate and locate vocal expressivity elsewhere on the body, suggesting that singing does not require vocalized sound as a fundamental precondition for its existence. Kim thus not only draws attention to the expressive function of bodily gesture in conventional singing, but also implores her audience to consider the underlying musicality of ASL facial expressions by listening through visual-spatial attentiveness; this is an exquisite realization of a disability aesthetics where disability at once underlines and transcends aesthetic presuppositions.

[12] Maler, "Songs for Hands."
[13] Eidsheim, *Sensing Sound*, 111.
[14] Ibid.

The opera's execution changes dramatically in Act V when the foregoing "silence" gives way to a moment of deliberate sonic rupture wherein the singers use their audible voices for the first and only time in the performance: the conductor signs purposefully without facial expressions, leading the chorus in a story from Deaf folklore. In the absence of NMS to contextualize the meaning of the conductor's signs, an intermediary supplements the signing with his own improvised facial expressions and vocalizations, projecting his voice through a microphone (see Figure 2.5). The singers assemble in a line facing the conductor, laying their right hands on one another's backs to gauge the volume of their neighbor's voice as it vibrates along the spine, while simultaneously observing the intermediary's mouth shapes.

Figure 2.5 Christine Sun Kim, *Face Opera II*, High Line Hotel, New York, May 11, 2013. As part of the final act, "Soupoon," the conductor signs without accompanying ASL facial expressions, leading the chorus in a story from Deaf folklore. Photograph by Francisca Benitez. Used by permission.

They integrate this information to establish their own individual voices. Their non-verbal vocalizations occur in fits and starts, ranging from abrupt, guttural, intoned noises to sustained

howls and yells. These sounds straddle the boundaries between speech and song, recalling the practice of extended vocal techniques.

In her opera, Kim upends the sonic contours of normative vocal beauty as well as the persistent pathologization of deaf vocal utterance. This passage of Kim's opera at once recalls and inverts the performative dimensions of a speech therapy session—but, crucially, without the dramatic overstatement in previous acts. Speech-language pathology is a type of standardized clinical therapy that uses oral methods to treat many different types of speech disfluencies and disorders, a discipline with which many pre-lingually deaf people (including Kim) are intimately familiar, particularly if they were born to hearing parents.[15] The arduous repetition and phonation exercises that speech therapy entails can prove demoralizing and alienating for certain deaf patients.[16] Indeed, two of the performers in *Face Opera II* refused to use their voices on account of the complexities of "voicing" in Deaf culture. "They were uncomfortable with the idea of uttering or vocalizing something that would automatically get away from their bodies and be heard by the [hearing] audience," notes Kim.[17] But for those performers willing to sing using vocal utterance, the experience offered a special opportunity to define and reclaim an audible singing voice for themselves. Kim elaborates: "Performing this act was an amazing experience because we felt it went against what we had been taught but [was] liberating at the same time."[18] In this sense, Kim and her willing collaborators defy Deaf custom, while also resisting oralist control, effectively "reclaiming ownership over sound" by foregrounding vocalizations otherwise

[15] Elisabetta Fava, ed. *Clinical Linguistics: Theory and Applications in Speech Pathology and Therapy* (Philadelphia: John Benjamins, 2002). Speech pathology is often integrated into oralist school curricula.
[16] Arden Neisser, *The Other Side of Silence: Sign Language and the Deaf Community in America* (Washington D.C.: Gallaudet University Press, 1983).
[17] See Bauman, "Introduction" and "Listening to Phonocentrism."
[18] Kim in Kim and Holmes, "Performance Notes." See also Brenda Jo Brueggemann, "Delivering Disability, Willing Speech," in *Bodies in Commotion,* 17–29; and Michael Davidson, "Hearing Things: The Scandal of Speech in Deaf Performance," in *Concerto for the Left Hand: Disability and the Defamiliar Body* (Ann Arbor: University of Michigan Press, 2008), 80-99.

disqualified from aesthetic signification. Siebers's provocations regarding the aesthetic value of sickness in modern art ("What would it mean to call an artwork sick without it being a disqualification?") are here firmly in place: although such "extraneous," "abject" vocalizations perhaps aurally signal disability within the context of speech therapy, bodily excesses in need of correction, cure, or elimination, here they sound as valid forms of musical expression constituting singing.[19]

Ultimately, the intersections of singing and deafness index a range of d/Deaf musical experiences, the complex legacy of voice in contemporary American Deaf culture, as well as specific musical anxieties that work against d/Deaf singing. *Face Opera II* negotiates these dimensions of voice, achieving a progressive disability aesthetics of post-modernist music where silent (semantic) facial gesture intervenes in, informs, and even wholly constitutes the expressive dimensions of the singing voice; where vocalized sounds customarily signaling bodily excess translate into aesthetic beauty; and where listening to the voice engages and integrates a host of sensory modalities beyond mere hearing. Kim shows that singing already anticipates and encompasses the many slippages between speech and song; sound and silence; utterance and gesture; hearing/deafness; dis/ability; and identity, power, and difference. As disability continues to play a pivotal role in shaping the emerging interdisciplinary discourse on vocality, it is my hope that such radical performances will inspire us to listen and sing anew.

[19] Siebers, *Disability Aesthetics*, 56.

Chapter 3: Looking beyond Staring: Visible Disability in Music Performance

Gaelynn Lea

In March 2016, the popular American non-profit radio syndicator National Public Radio (NPR) announced the winner of its annual Tiny Desk Contest. The winner of this coveted distinction would be featured as a guest on NPR's iconic Tiny Desk Concert series, a twice-weekly video broadcast of performances shot from behind the desk of host and curator Bob Doilen. The series has featured a steady line-up of prominent folk, blues, indie, and country musicians including Shakey Graves, Natalie Merchant, Wilco, and Ben Folds to name but a few, and draws a large online audience. With its intersecting shelves filled with books and quirky knickknacks, white walls, and natural light, Boilen's office heightens the intimacy of its "unplugged" performances and has become a defining feature of the video broadcast. As the series steppingstone, the Tiny Desk contest aims to bring unique, undiscovered musical talent to light with an open call for video submissions from musicians around the US. The 2016 edition of the contest received over six thousand submissions which were then adjudicated by a panel of six judges. Several of the standout performances were featured in weekly video mash-ups in advance of the contest's close. In keeping with the intimacy of Boilen's office space, contestants were asked to perform an original song on video from behind a desk of their choosing.

Minnesota-based singer-songwriter and fiddle player Gaelynn Lea was the "overwhelming favourite" of all six judges who were particularly struck by the "serpentine, earworm" quality of her song's melody and her "arresting," and "unusual" voice as it intertwined with the many rich, interlocking harmonies of the violin loops. Boilen describes Lea's video submission, and original composition "Someday We'll Linger in the Sun," in his original press release:

> Following about a minute of just focusing on the desk, her video pans to a small woman in a wheelchair as she plays a violin she holds like a cello. Lea has brittle bone disease, which made it necessary for her to reinvent the ordinary --- and, in this case, a way to play the fiddle.[1]

This filming strategy makes a striking, unforgettable impression on the listener/viewer, just as Lea intended. She elaborates:

> When you have a disability, especially one like mine where it's pretty visible – I didn't want that to necessarily be the first impression. Not because I'm ashamed of it, in any way, but just because I wanted it to be about the music.[2]

The NPR recognition has thrust the formerly unknown musician into the indie music spotlight. Far from the inspirational rhetoric that so often characterizes the image and reception of the many televised singing competition stars from marginalized communities, Lea's reception, while still in its infancy, has centred on her music with a view toward respecting her unique perspective as a disabled artist. She considers going on tour and playing for live audiences all the more important because of her disability, for what it says about mobility as well as the status of disabled people in the music industry. "As an artist with a disability," she notes, "one thing I want to do is travel. I want to make sure people see it, and know that it's possible for a musician [with a disability] to have a full-fledged music career."[3]

Introduction

"As anyone with a visible disability knows," explains Garland-Thomson, "being looked at is one of the universal social experiences of being disabled."[4] Disability studies scholarship

[1] Bob Boilen, "Gaelynn Lean," NPR Music, March 11, 2016, accessed June 17, 2016, http://www.npr.org/2016/03/10/469966998/gaelynn-lea-tiny-desk-concert.
[2] Lea in NPR Staff, "Meet Gaelynn Lea, The 2016 Tiny Desk Contest Winner," NPR Music (*All Things Considered*), March 3, 2016, accessed June 17, 2016, http://www.npr.org/2016/03/03/469034857/meet-gaelynn-lea-the-2016-tiny-desk-contest-winner.
[3] Lea in Ibid.
[4] Garland-Thomson, "Seeing the Disabled: Visual Rhetorics of Disability in Popular Photography," in *The New Disability History: American Perspectives*, ed. Paul K Longmore and Lauri Umansky (New York: New York University Press, 2001), 346.

contends that the reception of disability transpires primarily across a visual plane where non-disabled viewers are necessarily attuned to the bodily differences of disabled people. A visible disability, that is, a disability that is readily apparent on the body – a mobility impairment, an amputated limb, Down syndrome, cerebral palsy, phocomelia, etc. – registers with an immediacy and intensity in the viewer, provoking an intense form of objectified looking that is oriented towards difference, what Garland-Thomson calls "staring."[5] A visual encounter with disability typically incites a range of emotions and reactions in the viewer from pity, to reverence, to fear, to outright disgust. Visibly disabled people can thus use a number of strategies for mitigating the stares of their onlookers in order to neutralize the stigma associated with their disabilities, reclaim the dignity lost in the staring exchange, and challenge passive disability stereotypes: starees can ignore their starers, they can politely acknowledge or receive them with genuine friendliness in the hopes of embarrassing them, they can use sarcasm or humour to unsettle their starers, or they can directly engage them in a staring confrontation. Garland-Thomson explains that, "refusing to wilt under another's stare is a way to insist on one's dignity and worth." Siebers adds that proudly owning one's disability through a sort of exaggeration, what he dubs "disability masquerading," is an effective strategy for curbing the stigma of the initial encounter.[6] According to this line of thinking, it is up to the disabled staree to take action and redirect the terms of the visual exchange otherwise they risk becoming "engulfed" by their disability, to borrow Garland-Thomson's word. Disability is thus ultimately performative, engaging a performance that transpires across a visual plane. Whereas Judith Butler argues that

[5] See Garland-Thomson, *Staring: How We Look* (New York: Oxford University Press, 2009).
Staring is distinct from gazing which is a specifically sexualized looking, though the subject/object and self/other dimensions remain an important continuity across both modes of looking.
[6] Siebers, *Disability Theory*, 101–103.

the performance of gender is iterative, scholars contend that the performance of disability is intensely conscious.[7] As Garland-Thomson writes,

> Disabled people must use charm, intimidation, ardour, deference, humor, or entertainment to relieve nondisabled people of their discomfort. Those of us with disabilities are supplicants and minstrels, striving to create valued representations of ourselves in our relations with the nondisabled majority.[8]

Elsewhere she has claimed that, "the world demands that all people undertake dual body and social management."[9]

This bodily and social management extends to those people who are invisibly disabled as well. To be sure, disabilities that are not readily apparent on the body such as deafness, a learning disability, or chronic pain do not immediately elicit the same degree of stigmatized looking as a visible disability. In fact, people with invisible disabilities often *pass* as able-bodied, whether involuntarily or voluntarily: because their bodies do not initially beget suspicion, pity, or revulsion in the eyes of onlookers, invisibly disabled people frequently contend with a paradoxical set of social dynamics stemming from what is known in the disability community as able-bodied privilege (a concept I discussed in relationship to my own positionality in chapter 1). Like male privilege, white privilege, and the privileges associated with other dominant social positions, able-bodied privilege seemingly affords the subject a certain degree of social normalcy. Yet able-bodied privilege is the invisible mechanism which undergirds ableism; it "allows able-bodied people to maintain experiences of superiority, perfectability, security, and

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[7] Sandahl and Auslander, eds., *Bodies in Commotion*, 2. A by now familiar "dramaturgical metaphor of identity construction," to borrow Sandahl and Auslander's wording, performativity is a cross-disciplinary social theory inherited from speech-act philosophy and literary criticism that extends to many identities beyond disability and a large number of social interactions.
[8] Garland-Thomson, *Extraordinary Bodies*, 13.
[9] Garland-Thomson, "The Story of My Work: How I Became Disabled," *Disability Studies Quarterly* 34/2 (March 18, 2014): http://dsq-sds.org/article/view/4254.

comfort."[10] And indeed, because of their inability to visibly manifest their disabilities, invisibly disabled people often have a difficult time qualifying for medical supports and workplace accommodation, and it is due to this insidious mistrust that they are often expected to perform on the same terms as able-bodied people. (These paradoxical dynamics are plainly evident in the reception of Evelyn Glennie's deafness, as discussed in Chapter 2.) Thus, in an attempt to legitimize their struggle/identity in the eyes of their able-bodied skeptics, invisibly disabled people will sometimes exaggerate the physical markers of their disabilities. Siebers writes of the ramifications: "whence the desire that people with disabilities sometimes experience to overcome their invisibility and its attendant violence by exhibiting their impairments, and the paradoxical consequence that they become even more invisible and vulnerable as a result." [11]

Scholars in disability studies contend that artistic performance, whether theatrical, musical, or otherwise, necessarily intensifies the everyday performative dynamics of disability. As Petra Kuppers writes, "[when] disabled people perform, they are often not primarily seen as performers, but as disabled people. The disabled body is *naturally* about disability."[12] Similarly, music scholars assert that the visual dimensions of live music performance automatically amplify stigmatized bodily difference, with reception typically reflecting familiar representational scripts and narratives –the obsessive avenger, the sweet innocent, the comic misadventurer, the inspirational overcomer, the freak, the monster, etc.[13] Straus elaborates,

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[10] Bob Peace, *Unlearned Privilege: Unlearned Advantage in a Divided World* (New York: Palgrave MacMillan, 2010), 158.
[11] Siebers, *Disability Theory*, 103. See also, Brune and Wilson, *Disability and Passing*.
[12] Petra Kuppers, "Deconstructing Images: Performing Disability," *Contemporary Theatre Review* 11/3–4 (2001): 26.
[13] I am deliberately using the terms scholars have used for identifying common representational scripts identified. See Martin F Norden, *The Cinema of Isolation: A History of Physical Disability in the Movies* (New Brunswick, N.J.: Rutgers University Press, 1994); Mitchell and Snyder, *Narrative Prosthesis;* Garland-Thomson, *Freakery: Cultural Spectacles of the Extraordinary Body* (New York: New York University Press, 1996); and Straus, *Extraordinary* Measures, 132.

> Disabled artists, including musicians, perform their art and their disability simultaneously… For performers with visible disabilities, audiences come not only to hear music but also to stare at the disabled body: the blind or mad or one-armed pianist, the guistarist with three fingers, the singer with vocal damage, the violinist with polio, the deaf percussionist.[14]

According to this view, audiences cannot help but indulge in the freakish spectacle that disabled music performance affords and as such, it is imperative that disabled performers anticipate this stigmatization and strategically intervene to mitigate its damaging effects.[15]

To be sure, the foregoing paradigms from disability studies are crucial for understanding the visual stigmatization of disability, and they offer empowering strategies for navigating this stigmatization from the standpoint of the disabled staree. Yet to presume that disability automatically begets stigma (save for instances of strategic intervention on the part of the staree) is to underestimate the scope and meaning of our engagements with disability as performers and audiences. It also undermines the possibility of non-engagement with disability on the parts of audiences, a position that is too easily mistaken for passing on the part of the disabled performer. While disability stereotypes and narratives have long existed, disability is by no means a coherent, conventionalized sign eliciting a naturalized set of impressions, reactions, and social interactions; the disabled body is *not* always naturally about disability, and disability discrimination is far from a universal or singular social experience. At the same time, a disabled person's so-called "management" of her/his disability does not safeguard against totalizing narratives and disability "engulfment," nor does it guarantee a viewer's respect and empathy. Furthermore, over-simplified subject-object formulations such as the starer/staree dichotomy privilege sightedness and cognitive normativity, presuming a set of neurotypical actors with a

[14] Straus, *Extraordinary Measures*, 127.
[15] See Garland-Thomson, "Dares to Stare," 30–41; Straus, "Performing Music and Performing Disability," in *Extraordinary Measures*, 125–149.

common understanding of and mastery over normative social interactions. These models also pre-emptively demonize a hypothetical able-bodied viewer, denying her/him the possibility of agency; this is a viewer who automatically fixates on the disability of the performer as a marker of ultimate difference to the exclusion of other subject positions and aesthetic considerations. After all, able-bodiedness is a necessarily precarious and temporary physiological and social position; we will all experience and encounter disability at some point in life, whether through the experiences of a loved one, personal illness or injury, or the natural process of aging. Audience members can be disabled, too. The disabled performer/able-bodied audience dialectic that undergirds much disability theory on stigma only goes so far towards explaining the relational exchange between performers and audiences. Ultimately, the politics of disability are not guaranteed in advance.

This chapter builds on the existing disability studies literature to offer a more varied account of the ways that performers approach disability – as an unavoidable performative exchange with their audiences based on a prescribed set of social cues; a visibly pronounced difference to conceal, flaunt, or neutralize; an unwelcome label and categorization to avoid; an identity politics and primary aesthetic stance; and a set of unique material advantages and limitations. Highlighting the creative endeavours of performers active in musical traditions as disparate as popera and krip hop, I also aspire to a more plural account of the ways that audience members perceive and relate to disability, often through the lens of genre, while remaining conscious of the limits of reception study. I ask, how might music performance provoke us to think beyond the precondition of stigma while still recognizing the very real oppression that stigma entails? Is disability automatically a priority for performers and for audiences, and how might it exist alongside other categories of identity and sites of oppression? How might genre put

these many variables into perspective, both from the standpoint of the performer and from the standpoints of audience members? Finally, if vision is not the social chart of modern life and if staring is not the social chart of disability, how might we use the other senses to reimagine disability and make sense of its meanings?

The inescapably multi-sensory dynamics of music performance serve as a vital entry point into imagining new ways of engaging with disability. Just as the previous chapter sought to theorize listening beyond hearing and beyond the prestige of aurality relative to the other senses in music discourse through the standpoint of deafness, this chapter uses visible disability to imagine looking not simply beyond the dynamics of staring, but beyond sight itself. The multi-sensory dimensions of music performance influence the reception of disability, often disrupting the visual bias in the aforementioned theories of disability reception: disability registers differently across different sensory modalities. People with normative sensory perception typically engage with music and thereby disability in at least two sensory domains simultaneously as live music performances often invite a multisensory focus. There are many instances in which the aurally mediated dimensions of disability bely its visual basis, as was the case with left-handed pianist Paul Wittgenstein, who gave the impression of two-handedness in his sound while his missing right arm was visible to his audiences, embodying a striking incongruity between sound and sight.[16] Blake Howe elaborates,

> These inconsistent performances of an impairment – its tendency to signify differently in sound and sight – expose the constructed nature of the disabled body: disability is not a fixed, permanent condition, but a mutable identity that performs its difference in different ways, in different sensory domains, in different cultural contexts.[17]

[16] See Howe, "Paul Wittgenstein and the Performance of Disability."
[17] Howe, "Disabling Music Performance," 192.

There are certain other disabilities that are only perceptible through aural means: rarely do bodies manifest vocal damage/trauma or disfluencies except through the sound of the voice.[18] And venue often shapes our understanding of disability as well: a visible disability might be irrelevant and invisible in the context of recorded music, though knowledge of the performer's disability might remain at the forefront of a listener's mind.

Andrea Bocelli: The "Angel-voiced Italian singer"[19]

Singers Andrea Bocelli and Sarah Brightman's international chart-topping single "Time to Say Goodbye" is the stuff of popera legend. Originally a solo on Bocelli's self-titled 1995 album, "Time to Say Goodbye/Con te Partirõ" was later rearranged and rerecorded as an English-Italian bilingual duet for Bocelli and Brightman with the accompaniment of the London Symphony Orchestra. The pair premiered the song in November 1996 as the theme music to the championship match of German boxer Henry Maske against American boxer Virgil Hill, a sporting event with a mass television broadcast providing immediate exposure for the song. In Germany alone the single sold an estimated 1.65 million copies between November 1996 and February 1997. It attained "certified gold" status in the UK, and reached peak position on the pop charts across Europe and North America. "Time to Say Goodbye" epitomizes the spirit of popera with its lush orchestral accompaniment, blending of English and Italian operatic and pop singing, corresponding his and her solo lines, climactic registral leaps in the voices, instrumental flourishes, an emphatic snare drum line, romantic lyrics, and a dramatic key change to mark the song's climax.[20] Whether as the pinnacle of popera's golden age or the quintessential emblem of

[18] See Stras, "The Organ of the Soul."
[19] E.B., "Where Have All the Young Italian Opera Singers Gone?" *The Economist*, Feb 18, 2016, accessed May 2, 2017, http://www.economist.com/blogs/prospero/2016/02/opera
[20] Because of its epic sentimentality, the song has been the subject of both serious and satirical interpretations. It is a favourite audition piece among singing contestants on the hit reality television series *American Idol, America's Got*

its cheesiness, the song has endured into the present-day and remains both Bocelli's and Brightman's most popular song with continued international radio play. Video recordings of the song's many live performances enjoy viral traction online through YouTube fan videos (there exists a single video recording with over 14 million views) and television coverage of the singers' respective world tours.[21]

Central to the song's narrative is the by now familiar formula of its repeat live performances and the role of Bocelli's blindness therein. Most performances begin with a dramatic build-up either with Brightman ushering the tenor on stage, or Bocelli awaiting Brightman at centre stage as she emerges from the wings, always to a thunderous applause or standing ovation, reaching out to touch him as she arrives at the podium to assure him of her presence. Brightman's prolonged physical displays of affection toward her collaborator throughout the performance -- including caressing his face, gently stroking his hair and chest, and longingly staring into his eyes – only heighten the song's melodrama. Bocelli's seeming inability to know Brightman's beauty except through her voice and her touch is vital to this spectacle. In fact, the pair's act recalls Brightman's iconic performance as Christine Daaé in the original cast of Andrew Lloyd Webber's hit musical *The Phantom of the Opera* (1986). A young bright-eyed soprano at the Paris Opera, Daaé attracts the attention of and is subsequently kidnapped by the opera house's resident ghost, Erik, whose disfigured visage and malevolent

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Talent, and *Britain's Got Talent,* and the all-male popera troupe Il Divo released a cover it on their 2011 album *Wicked Game*. By contrast, "Time to Say Goodbye" appeared on *The Simpsons*, and later on *South Park* when the show's main character Kenny gave a tutorial on "How to Sing like Andrea Bocelli for Dummies." In the 2008 comedy film, *Step Brothers*, actor Will Farrell's character spontaneously performed a version of the song at a social event while his drummer uttered inane comments such as "boats and hoes" into the microphone. See "Kenny Cantando Ópera – Con Te Partirò – Andrea Bocelli," YouTube video (Lourø Antøniø Channel), 0:49, May 21, 2012, accessed May 3, 2017, https://www.youtube.com/watch?v=1wl6sGP9Rp4; and "Will Ferrell Sings Por Ti Volare – Step Brothers," YouTube video (23 channel), 4:16, October 13, 2009, accessed May 3, 2017, https://www.youtube.com/watch?v=k6dE0DckMHY.

[21] "Andrea Bocelli & Sarah Brightman - Time To Say Goodbye," YouTube video, (PL Channel), July 5, 2007, accessed July 5, 2016, https://www.youtube.com/watch?v=f_JLkIOnq04.

ways only Christine's tenderness and singing can undo. No doubt these associations spill over into Brightman's performance with Bocelli, reinforcing the notion that music transcends all manner of difference.

Bocelli's public image is multivalent: he neither proudly celebrates his disability as an identity nor attempts to pass as able-bodied, though he often talks about his life more generally in an inspirational light: "I found luck in my misfortune," he notes.[22] To be sure, his blindness has no impact on the physical mechanics of his singing or the sound of his voice. And from a distance, Bocelli's disability is mostly visually discreet except when he is ushered on and offstage. He keeps his eyes closed during his performances, in portraits, and in music videos, and often wears sunglasses in interviews, facts that do not automatically signal blindness but strongly connote them, contributing to the reverence of the image he cultivates. However, the narrative of his blindness plays a pivotal role in the theatricality of his live performances. His consistent emphasis in his press materials and interviews on persevering against all odds to overcome adversity aligns squarely with the overcoming narrative. This is a common representation of disability in literature, film, the performing arts, and sports that scholars in disability studies have long rejected since its rhetoric implies that disability *ought* to be overcome, privileging able-bodiedness over disability and narratives of triumph over more banal, unpleasant experiences of disability, soothing able-bodied anxieties, as discussed in Chapter 2 of this dissertation.[23] Yet for

[22] Bocelli in Newsweek staff, "A Night At The Popera," *Newsweek*, May 9, 1999, accessed May 2, 2017, http://www.newsweek.com/night-popera-166684.
Bocelli is currently engaged in a project with MIT for designing autonomous robotic aides and prostheses for blind people. He has spoken more generally about challenging common misconceptions about blindness. See "Blind Opera Superstar Andrea Bocelli Seeks High-Tech Vision At MIT," *Commonhealth*, Dec 6, 2013, accessed May 2, 2017, http://commonhealth.wbur.org/2013/12/blind-opera-superstar-andrea-bocelli-seeks-high-tech-vision-at-mit.
[23] See Mitchell and Snyder, *Narrative Prosthesis*.
I suspect that Malcom Gladwell's best-selling 2013 book, *David and Goliath: Underdogs, Misfits, and the Art of Battling Giants* (New York: Little, Brown and Company, 2013), has gone a long way towards popularizing the overcoming narrative. Gladwell contends that setbacks, obstacles, and disadvantages of all kinds, including disability make the individual stronger and more resilient, inspiring them to accomplish great things. For a recent

Bocelli, the overcoming narrative serves as a viable and empowering representational mode: disability plays a key role in the drama of his live performances, most evident in his televised concerts with Brightman and collaborations with other female divas including Celine Dion, Christina Aguilera, and most recently, top-40 sensation Ariana Grande. By presenting his blindness in an inspirational frame, Bocelli achieves specific aesthetic and commercial ends. The formulaic ableist heteronormativity these collaborations entail – that is, the persistent association of Bocelli's masculinity with deficit and the femininity of his collaborators with charity and benevolence—intensifies the romance of music in this overcoming rhetoric: music, particularly singing, inspires love and affection between two unlikely characters, one disabled and therefore undesir*able*, the other beautiful and exceedingly desirable, even more so because of her charity.

From the standpoint of popera, this inspirational performance of disability is consistent with a larger imperative of sentimental spectacle undergirding the genre's commercial appeal. Bocelli himself has spoken about the importance of eliciting an emotional response in his audiences through musical expression. When asked about his crossover success and whether he approaches classical singing differently than pop singing, Bocelli said,

> I do my best to be a good inspiration for many people. There is a difference from the point of view of expression. Because when you sing opera you are very far from the people, you are onstage, and between you and the people there is the orchestra. So you have to launch your emotions very, very far. When you sing pop, you are singing very close – the microphone is very close to your mouth. You can whisper your emotions into the microphone.[24]

musical take on the overcoming narrative, see William Cheng, "I'm a Musician Who Can't Play Music Anymore. I Feel like I'm Letting My Heroes Down.," *The Washington Post*, Jan 20, 2016, accessed May 2, 2017, https://www.washingtonpost.com/posteverything/wp/2016/01/20/im-a-musician-who-cant-play-music-anymore-i-feel-like-im-letting-my-heroes-down/.

[24] Bocelli in, "Andrea Bocelli: 'I Do My Best to Be a Good Inspiration for Many People'," *The National*, Nov 5, 2015, accessed May 2, 2017, http://www.thenational.ae/arts-life/music/andrea-bocelli-i-do-my-best-to-be-a-good-inspiration-for-many-people.

Interestingly, one critic actually attributes the pervasiveness of sentimentality in popera to Bocelli's influence. In a notably ruthless review titled, "It's Not Too Late for Simon Cowell's Latest Victim," Steve Silverman writes of the would-be Italian divo:

> His name was Andrea Bocelli and he had one thing that not even Pavarotti in his prime possessed: blindness. Ker-ching! The marketing men went wild and the dam burst. Since then the cavalcade of "opera singers" with a USP [unique selling point] based on either a hard-luck story or their very ordinariness has been pretty much non-stop…in every case it's the same story: inadequately or prematurely trained voices delivering earnest ballads and anaemic facsimiles of arias that have as much to do with opera as a box of Chicken McNuggets has with fine dining. No matter. The viewers get to marvel at someone very ordinary doing something incredibly difficult (albeit badly), and are conned into believing that they are receiving a gentle infusion of culture.[25]

Indeed, William Cheng notes that disability, hard-luck, and ordinariness are defining characteristics of the images of many of the winning contestants on popular televised singing competitions, a venue which favours crossover genres like popera. Scottish popera singer and star of the 2009 season of *Britain's Got Talent* Susan Boyle's unassuming, quaint, and homely nature made her rise to fame all the more unlikely and touching, contributing to her popular appeal.[26] In these competitions as in Bocelli's performances, these unlikely narratives of triumph over hardship go hand in hand with the ideal of vocal transcendence, intensifying the romance of the singer's image and further securing her/his commercial viability.[27] Cheng says of this phenomenon in relation to the blind auditions held by the hit-television series *The Voice*: "It's a

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[25] Steve Silverman, "It's Not Too Late for Simon Cowell's Latest Victim," *The Telegraph*, April 6, 2012, accessed May 2, 2017, http://blogs.telegraph.co.uk/culture/stevesilverman/100062282/its-not-too-late-for-simon-cowells-latest-victim/.

[26] Following widespread speculation about her intellectual capacities in the popular press, Boyle announced that she had been diagnosed with Aspergers syndrome. See Nicola Harley, "Susan Boyle Reveals Her Struggle with Asperger's Syndrome," *The Telegraph*, Nov 15, 2014, accessed May 2, 2017, http://www.telegraph.co.uk/news/celebritynews/11233182/Susan-Boyle-reveals-her-struggle-with-Aspergers-syndrome.html.

[27] There is a longstanding musicological discourse on vocal transcendence and the immateriality of the voice. See Wayne Koestenbaum, *The Queen's Throat: Opera, Homosexuality, and the Mystery of Desire* (New York: Poseidon Press, 1993); Heather Hadlock, "Peering into 'The Queen's Throat,'" *Cambridge Opera Journal* 5/3 (1993): 265–75; Marie-France Castarède, *La Voix et ses sortilèges* (Paris: Les Belles Lettres, 1987); and Michel Poizat, *The Angel's Cry: Beyond the Pleasure Principle in Opera*, trans. Arthur Denner (Ithaca: Cornell University Press, 1992).

tantalizing and romantic gimmick: Sing beautifully enough, and you can go the distance, no matter who you are or what you look like."[28] Often the contestant emerges from behind the screen, only to reveal a marked physical difference of some kind. This incongruity can sound out aurally too: stuttering contestant Lazaro Arbos astounded judges in his audition for the twelfth season of *American Idol* with the seemingly improbable fluidity of his singing voice.[29]

There is a great deal to be said about the ethics of exploiting disability for commercial interests, particularly in televised singing competitions where it is unlikely that losing contestants receive any immediate compensation or revenue. But Bocelli gains much from capitalizing on the inspirational appeal of his disability, attracting a devoted following that has come to expect the spectacle. His sold-out stadium performances -- everything from the lights, the orchestra, the costumes, to what one critic calls the "cheap climaxes and melodramatic finales" of his "operatic crowdpleasers." The same critic continues, "the most extraordinary thing at an Andrea Bocelli concert isn't what happens onstage. It's the spectacle of thousands of women falling in love. They weep. They hum along to 'La donna è mobile.'"[30] Bocelli's performances sometimes even inspire religious devotion as is evinced by the commentary for a YouTube video showcasing his performance of "Amazing Grace" for the BBC's 50th anniversary celebration of its television series *Songs of Praise*. As one commentator put it, "A blind man singing the lyrics 'was blind, but now, I see' surely touches everyone's heart." The comments section contains a wealth of

[28] Cheng observes that the transcendent potential of voice often plays into the narrative of overcoming in televised singing competitions, specifically in the context of meritocracy and fairness: William Cheng, "Staging Overcoming: Disability, Meritocracy, and the Envoicing of American Dreams" (paper presented at the annual meeting of the American Musicological Society, Milwaukee, Wisconsin, November 6-9, 2014). See also Cheng, "This Is Still the 'Voice': New Season, Same Blind Spot?," *Pacific Standard*, Sept 25, 2015, accessed May 2, 2017, http://www.psmag.com/books-and-culture/why-nbcs-the-voice-does-blind-auditions.

[29] See "'Speaking Is a Roller Coaster': Ice Cream Man Overcomes Paralysing Stutter to Wow American Idol Judges," *Daily Mail Online*, Jan 18, 2013, accessed May 2, 2017, http://www.dailymail.co.uk/tvshowbiz/article-2264309/American-Idol-hopeful-Lazaro-Arbos-overcomes-stutter-beautiful-rendition-Bridge-Over-Troubled-Water.html.

[30] Newsweek staff, "A Night At The Popera."

evangelical affirmations: "God Lord Jesus…the world *needs* you… now more than ever….God watch over your children…*please*…."; "he is absolutely phenominal captures my very soul from his angelic voice I never get tired of listening to and watching him what a gift from god [sic]"; and, "thank you Father God for your amazing grace without it I would still be blind and lost, I love you Jesus."[31] To be sure, such comments might epitomize the saintly tropes long associated with blindness and blind musicians.[32] But there must also be some acknowledgement of Bocelli's likely role in crafting this image, where his blindness figures as an empowering asset with enduring dramatic and commercial interest.

Interestingly, Bocelli's blindness has also figured prominently in debates over the merits of his voice and his operatic credentials. If Silverman's above mentioned comments evince an elitism verging on ableism, he is in good company: Bocelli's detractors have long argued that the preoccupation with his blindness is to blame for the postponement of adequate critical evaluation of his music. His allegedly improper technique, uneven tone, choice of less demanding repertoire (i.e. pop ballads), and reliance on the microphone – critics have dubbed him "the microphone tenor" – are all taken as signs of his ineptitudes as an opera singer.[33] For critics like Silverman, Bocelli's blindness, as the ultimate unique selling point, overshadows his mediocrity and musical shortcomings, ultimately obscuring the distinctions between highbrow (i.e. opera) and lowbrow

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[31] See comments for "Songs of Praise Andrea Bocelli Amazing Grace," YouTube video, (nsotd5 Channel), 4:30, Oct 3, 2011, accessed May 2, 2017, https://www.youtube.com/watch?v=sv8UDkwQVrc.

[32] See Terry Rowden, *The Songs of Blind Folk: African American Musicians and the Cultures of Blindness* (Ann Arbor: University of Michigan Press, 2009).

[33] One impassioned Facebook reviewer, commenting in support of an article in the *San Diego Reader* outlining the reasons why "Bocelli is NOT an Opera Singer," claimed that Bocelli was nothing more than "an Italian pop lounge singer that is big because he is decent at singing Italian pop lounge songs and because he is blind… He has NO voice for Opera!": Garrett Harris, "Bocelli Is NOT an Opera Singer," December 5, 2010, accessed January 26, 2016, http://www.sandiegoreader.com/weblogs/immortal-beauty/2010/dec/05/bocelli-is-not-an-opera-singer/. See also Bernard Holland, "Spectator-Friendly, and Critic-Proof in a Sea of Approval," *The New York Times*, Sept 8, 2006, accessed May 2, 2017, http://www.nytimes.com/2006/09/08/arts/music/08boce.html; and Kevin Berger, "Beyond the Criticism: Deconstructing Andrea Bocelli's Voice," *LA Times Culture Monster* (blog), Dec 8, 2010, accessed May 2, 2017, http://latimesblogs.latimes.com/culturemonster/2010/12/beyond-the-criticisms-deconstructing-andrea-bocellis-voice.html

art (i.e. popera) in the minds of ostensibly ignorant viewers. Bocelli's remarkable success on the classical charts only perpetuates this generic masquerade, according to Silverman. One critic aptly remarked that "very few artists who sing for a living can compete with this [Bocelli's] level of commercial success. Even fewer have been more critically abused."[34] And Bernard Holland writes that the singer's continued success in the face of such "abuse" is the greatest sign of his innate talent: "There is something physical or metaphysical – something beyond music – that must draw people to Andrea Bocelli. That is a talent in itself."[35] His blindness thus inspires a sharply divided reception: if blindness plays a central role in his public image, aesthetic, and mainstream popularity, it likewise provokes contempt from critics who privilege classical "refinement" over the ostensible "low-brow" spectacle.

Bocelli's account reflects on existing theories of disability and stigma in contradictory ways. On the one hand, his performative strategies and reception affirm the enduring cultural appeal of the overcoming narrative and the recent vogue of inspiration porn, and the insidious ableist fantasies undergirding these related scripts. And yet, because his is a seemingly self-conscious, intentional performance of disability as inspiration, it cannot be easily dismissed as straightforward cultural objectification, nor as an exaggerative strategy for mitigating stigma as in Siebers' disability-as-masquerade model. Moreover, where disability is concerned, there is little about Bocelli's blindness that gets in the way of his singing; barring the minor logistical challenges of staged performances, nothing about the singer's vision loss requires physical "overcoming" for the purposes of singing itself. In fact, his blindness is arguably not stigmatized within the context of popera at all; performing "difference" of any kind as exceptionality and

[34] "Andrea Bocelli has the Last Laugh," Classic FM website, accessed December 16, 2016, http://www.classicfm.com/artists/andrea-bocelli/news/andrea-bocelli-interview/.
[35] Holland, "Spectator-Friendly, and Critic-Proof in a Sea of Approval."

inspiration is expected, formulaic even because it is a viable way of heightening the aural pageantry of popera. The association of blindness with both musical genius and religiosity symbolically heightens the sonic grandeur of popera's live stadium performances – its lush orchestration, soaring amplified vocals, dramatic key-changes, registral leaps, and thunderous applause. Further, despite the immediacy of the visual spectacle of live poperatic performance, there is a sense in which Bocelli's music seemingly transcends the limits of visual spectacle, rendering the already contested stigma associated with visible disability obsolete. It reinforces the prestige of aurality in music relative to vision, what Lydia Goehr has termed "the ideal of invisibility" already pervading classical performance, that is, the idea that the body of the performer is extraneous to the sound it produces, that performers need avoid drawing attention to themselves at the expense of the music.[36] In fact, blindness arguably symbolizes the ideal metaphysical state required of audiences to appreciate the aural splendour of Bocelli's sung performances, particularly through recordings. And yet, as listeners suspend engagement with the visual sphere, it is the veneration of Bocelli's blindness as the ultimate mark of musical genius and sentimentality that critics feel obscures the underlying musical inadequacies of the singer's voice.

As a key part of Bocelli's performance and reception, disability does three main things. First, it upsets the precondition of stigma and the power differentials present in theory on visible disability: narratives of sentimentality and inspiration can be initiated by the performer and not necessarily as a means of neutralizing stigma, but as a viable commercial strategy. And for audiences, the romance that disability elicits is not automatically rooted in stigma, but rather enhances the potential for metaphysical engagement with sung vocal performance. Secondly, and

[36] Lydia Goehr, *The Quest for Voice: On Music, Politics, and the Limits of Philosophy* (Berkeley: University of California Press, 1998), 143.

a point relatedly, Bocelli's disability arguably reinstates the traditional hierarchy between aural and visual modalities in the engagement with and reception of sung vocal performance. And in turn, the traditional primacy of the aural over the visual order in music weakens the visual construction of disability. Finally, Bocelli's disability exacerbates the underlying tensions between high-brow/low-brow divisions, pointing up the inferiority of cross-over genres relative to the prestige of classical music in the minds of the classical elite, along with the precarious inherited terms for evaluating musical ability. For instance, his dependence on a microphone violates the conventions of naturalness and immediacy associated with operatic singing over other more popular genres of singing.

Thomas Quasthoff: "A Transcendent Voice"[37]

Unlike Bocelli, internationally renowned German bass-baritone singer Thomas Quasthoff's credentials as a classical singer have never been in doubt. He has graced the stages of some of the world's most distinguished cultural institutions including Carnegie Hall, the Barbican, the Salzburg Festival, and BBC Radio 4, and has won multiple Grammys for his vocal performances on both EMI Classics and Deutsche Grammophon. Despite retirement from the concert stage in 2012, he continues to enjoy a reputation as one of the leading interpreters of German Lied and classical art song. Quasthoff's disability is plainly visible to any viewer with normative vision, particularly as he walks on and offstage. He has phocomelia, a congenital

[37] Arthur Lubow, "A Transcendent Voice," *The New York Times*, Oct 1, 2006, accessed May 2, 2017, http://www.nytimes.com/2006/10/01/magazine/01quasthoff.html?fta=y.

disorder associated with the use of Thalidomide, a drug formerly prescribed to pregnant women suffering from morning sickness that caused severe birth defects.[38]

Quasthoff's stance strikes a different chord than Bocelli's, limited in part by the generic conventions associated with the performance of classical art song, but also reflective of the performer's own priorities. At the level of his public image and self-narrative, disability is not a prime concern for Quasthoff, neither as an identity politic nor a thing to flaunt or conceal in his live performances or interviews. He has indicated that he is "deliberately not" in touch with other Thalidomide victims, and has turned down requests to be a community spokesman as "communal suffering" is "is not my thing."[39] And unlike Bocelli, he is reluctant to describe his life story and musical success as one of inspirational overcoming, instead addressing any questions about the relationship between his music and his disability frankly. Critic for *The Guardian* Stephen Moss reflects on his interview with Quasthoff: "He [Quasthoff] talks very matter of factly about his musical progress, and insists that I should not portray it as a brave struggle against fearsome odds. Indeed, he refuses to be categorised as 'disabled.'"[40] Although he prefers when audiences and critics focus exclusively on the musical aspects of his performance, Quasthoff does not deny that for some audience members there is a meaningful connection between his music and his disability that inspires feelings of awe, pity, and reverence. He pithily notes, "No one expects so many rabbits to fit in a top hat. No one expects such a mighty voice to issue from my diminutive frame."[41] He confessed in an interview with *Der Spiegel* that when he

[38] See James H. Kim and Anthony R. Scialli, "Thalidomide: The Tragedy of Birth Defects and the Effective Treatment of Disease," *Toxicological Sciences: An Official Journal of the Society of Toxicology* 122/1 (July 2011): 1–6.
[39] Thomas Quasthoff in Joachim Kronsbein, "SPIEGEL Interview with Singer Thomas Quasthoff: 'There Was Certainly a Bonus for Being Disabled,'" *Der Spiegel*, April 5, 2012, accessed May 2, 2017, http://www.spiegel.de/international/zeitgeist/spiegel-interview-with-singer-thomas-quasthoff-a-825717.html
[40] Stephen Moss, " 'I'm Lucky. Everyone Can See My Disability," *The Guardian*, Oct 20, 2000.
[41] Thomas Quasthoff, *The Voice: A Memoir* (New York: Pantheon, 2008), 91.

first started out as a singer, "there was certainly a bonus for being disabled. But you only get it once," (perhaps the same type of bonus that Bocelli's detractors suspect is behind his fame).[42] In the same interview, when the journalist asked him how long after he began singing before his audiences and critics began paying attention "to your art rather than your body," Quasthoff replied,

> Not long… you reach your audience at the moment when you really have something to say – that is, when you're not just delivering a performance. Beyond that, there is a level that can't be learned. Anneliese Rothenberger once called it the "tears in the sound." I think I had that. Perhaps it isn't innate, and perhaps there's an existential connection to my disability.[43]

Looking back on his numerous accolades, Quasthoff noted in 2000: "I don't think people are just coming because of my disability, especially in Wigmore Hall. This is a very special audience: they love lieder. I don't think they are coming for the sensation."[44]

Quasthoff's shrewd comments highlight how precariously disability figures in critical evaluations of his music: in his efforts to distinguish superficial engagements focused on his body from ostensibly more dignified evaluations centred on the merits of his voice alone, Quasthoff concedes that his disability may in fact contribute on some level to the elusive "tears in the sound," intensifying the prospect of a transcendent, disembodied voice, the most prized experience of the voice in classical art song. Indeed, the performance of art song and certain genres of classical instrumental music entail a longstanding unwritten social etiquette and set of aesthetic ideals that delimit the nature of a performer's expressive strategies, an audience's behaviour, and the dynamic between performer and audience. Reverence is observed at all costs, both by the performer and by her/his audience, as nothing should interfere with the expressive

[42] Quasthoff in Kronsbein, "SPIEGEL Interview with Singer Thomas Quasthoff."
[43] Ibid.
[44] Quasthoff in Moss, "'I'm Lucky. Everyone Can See My Disability.".

purity of the music. A singer's physical displays are limited to facial expressions, hand gestures to emphasize particularly poignant passages of music, and occasional close-range pacing. A moderate degree of emoting is welcome and expected from instrumentalists, but musicians that overdo it risk intense criticism. Audience members practice physical restraint and an observed silence.[45] Applause is withheld between movements, and saved for the ends of pieces; those that applaud prematurely or in the wrong place are typically assumed to be newcomers. This is the learned social etiquette of the concert hall, a behavioural code dictating what bodies can and cannot do, tied to the simultaneous fetishization and disavowal of the body in classical music. As Goehr writes,

> [The ideal of invisibility] embodies two demands, the second more severe than the first. The first asks that, given music's purely sonorous nature, the visual dimensions of a performance be disregarded by the audience as inessential or as necessary evils … The second demand for invisiblity is related to the first. It reminds us that what is actually heard in the concrete soundings out of the works is far less valuable than the transcendent meanings of the works the sounds are supposed to convey. Performers, should attend, therefore, to create the illusion that the work is being conveyed immediately to the audience by undermining their own presence as flawed mediators.[46]

Flaunting a disability or consciously calling attention to it would risk violating these deeply ingrained ideals. The recital hall would be loath to showcase the type of sentimental spectacle of Bocelli's stadium tours.

Perhaps in light of these aesthetic constraints, Quasthoff has also characterized his physical limitations as a unique expressive advantage:

> I am in the good position of not being able to make gestures with my hands so my voice is the only form of expression that I have… If you remain still and have only the face and

[45] Extraneous bodily noises such as loud coughing, audible whispering, and candy unwrapping during a performance are also viewed as forms of misconduct and met with disdain. The sudden ring of a cellphone is the most dreaded and grave of interruptions, sending the embarrassed audience member scrambling to "make it stop" as dozens of audience members glare on anxiously, a scene that encapsulates the type of intense self-policing between members of an audience attending a live performance of classical music.
[46] Goehr, *The Quest for Voice*, 143.

> voice, the audience has to concentrate much more so than for those who use gestures. So maybe it is also an opportunity.[47]

According to Quasthoff's logic, because his own physique prevents such gesturing, he can more readily perform a "self-annihilation" of sorts – what post-structuralist theorist Michel Poizat claims is so prized in classical singing – than his able-bodied counterparts, where the "falling away of the visual order" gives rise to a purer expression and experience of the vocal object.[48] Although disability is of little import to Quasthoff's understanding of his public image, it conveniently aligns with his expressive priorities, arguably serving as a unique advantage. He defers to a longstanding tradition of disembodied voice as a legitimate expressive device, a strategy that has less to do with managing the stigma associated with disability than it does with fulfilling the expressive demands of classical art song. That he manages to temper reception that could potentially appropriate his story for inspirational fodder in the process is merely a secondary outcome. Perhaps unexpectedly then, Quasthoff, a singer with an intensely visible disability, inadvertently challenges the visual bias in existing disability theory.

Whereas opera critics remain suspicious that Bocelli's blindness overshadows proper evaluation of his music, the ultimate proof of Quasthoff's vocal prowess lies in what critic Arthur Lubow describes as his "miraculous" ability to divert attention away from his unusual physique using the expressive purity of his voice:

> With an appearance and life story so compellingly strange, it would be easy for the miracle of his perseverance and triumph, or the miracle of such a powerful and deep voice emerging from such a small body, to overwhelm the concert experience. Instead, if there is anything miraculous about Quasthoff, it is that a few minutes into a recital you stop thinking about his physique. Without the freedom to move about the stage or to make dramatic gestures, he channels all of his feeling into his expressive face and subtly

[47] Quasthoff in Moss, "'I'm Lucky Everyone Can See my Disability.'"
[48] Poizat, *The Angel's Cry*, 35. It is interesting to note that at the same time as he distinguishes the voice from the body, Quasthoff implies that the face as an elemental part of vocal expression, a sentiment that resonates with Kim's observations regarding the significance of facial gesture in the communication of vocality and musical expression, as discussed in the preceding interlude.

> shaded voice. Unavoidably, he has grabbed your attention with the novelty of his look, but he holds you with his ability to communicate the mood and meaning of a song.[49]

Similarly, Stephen Moss concludes his piece for *The Guardian* with the following anecdote:

> Reading reviews of Quasthoff's recordings, I came across an American called Jim Leonard applauding his Winterreise as 'truly sublime.' Mr Leonard had reached his conclusion without knowing anything about Quasthoff: 'I was intrigued to learn from a friend that the man who owns this glorious voice was a Thalidomide baby. According to my friend, in concert Quasthoff's exquisite artistry banished any irrelevant considerations. Quasthoff would be very grateful, both to Mr Leonard, for making his valuation objectively, and to his friend, for judging his art rather than his life.[50]

These are but a few of the countless reviews, interviews, and blog posts highlighting the metaphysical power of the singer's voice. There is no straightforward way to evaluate this kind of reception. In one sense, it seems to capitulate to the very inspirational language that Quasthoff resents, but it paradoxically espouses the expressive ideals the singer seeks to communicate in his performances and interviews. Ultimately this criticism speaks to a complex negotiation of the visual and aural spheres of live music performance, and to the fraught role of the voice in the construction of disability. Perhaps more than in Bocelli's performances, Quasthoff's disabled body and short-stature is initially in symbolic conflict with his beautiful voice, even though his disability, like Bocelli's, does not impede his physiological capacity to sing. And yet, whether in the form of blindness or mobility impairment, a visible disability more readily establishes the sensory dominance of the aural over the visual sphere in the consumption of live classical art song. As Quasthoff himself notes, the unique physical limitations that his disability entails in fact strengthens his sung performance, eliminating the possibility of extraneous physical gestures that might otherwise distract from the purity of the voice. In Quasthoff's account, the symbolic falling away of the visual order can serve the visibly disabled artist by foregrounding his musical

[49] Lubow, "A Transcendent Voice."
[50] Moss, "I'm Lucky Everyone Can See my Disability."

craft, allowing any sensationalism associated with his disability to diminish. Furthermore, side by side, Bocelli and Quasthoff's narratives suggest that conceptions of disability rooted in inspiration and sentimentality are not necessarily linked to sensationalism, stigma, or negative othering based on a visual encounter between audience and performer, but are rather inextricably bound up with a much larger cultural fantasy about music's presumed aural capacity to render difference obsolete. In fact, disability arguably intensifies the physical intimacy between singer and audience because as a marker of difference or exceptionality, it is the ultimate reminder that music transcends physical difference – differences between audience/performer, and even between individual audience members. We know from Eidsheim, Oliveros, Glennie, and others that music is already always multisensory. In the case of singing, the music literally emanates from the body of the singer, enveloping and physically penetrating the bodies of audience members, as Poizat describes; this is an affective dynamic that is only intensified by the false impression of immediacy and naturalness that inhere in fantasies about the singing voice. When a physical disability enters into this dynamic, it has the capacity to symbolically strengthen what is a literal sonic closeness between singer and audience, a symbolic intimacy achieved as a result of this aural transmission across difference.

Bocelli and Quasthoff thus remind one of the pre-eminence of the aural over the visual in sung vocal performance, unsettling the primacy of visual-based stigma in disability theory and the presumed visual basis of disability's meaning. They also enrich foregoing understanding of disability's attendant narratives: inspiration can be a viable musical strategy initiated by the performer; it is not automatically a reflection of an underlying stigma on the part of audience members. Disability can also bolster the ritual of disembodied voice in the experience and appreciation of both popera and classical art song. And yet, disability paradoxically intensifies

the inescapably embodied dimensions of voice as it passes from performer and audience, symbolically undoing difference.

Bradford Cox: The "Dress-clad, Out-loud Singer of Queer Punks"[51]

Bradford Cox is best known as the frontman of the indie rock band Deerhunter, a five-piece group originating from Atlanta, Georgia boasting an eclectic discography spanning the last two decades — *Turn it Up Faggot* (2005), *Cryptograms* (2007), *Microcastle* (2008), *Weird Era Continued* (2008), *Halcyon Digest* (2010), *Monomania* (2013), and *Fading Frontier* (2015). A prolific songwriter, Cox has also produced three solo albums since 2008 under the moniker Atlas Sound. Cox's industriousness extends to other fields as well where he has undertaken several artistic side-projects including composing two original film scores – one for Sofia Coppola's short film *The Curve of Forgotten Things* (2011) and in 2014 for a documentary entitled *Teenage* (2014). He recently made his Hollywood acting debut in the Oscar winning film *Dallas Buyers Club* (2013), appearing in an extensive cameo as the lover to the HIV positive trans woman Rayon, played by Jared Leto.

The singer has also garnered considerable notoriety for his outrageous performance antics and eccentric, cynical persona, known among indie rockers and pundits as a "provocateur," a "controversy magnet," a "lightning rod to controversy," "bizarre," and "extremely awkward." [52] He routinely performs in costume, often donning a dress or a wig and sometimes exposing "abject" parts of his body. Cox enthralled millions of television viewers during a Deerhunter performance on the *Late Night Show with Jimmy Fallon* in 2013 to mark the release of the

[51] Michael Crumsho, "Dusted Review: Atlas Sound – Let the Blind Lead Those Who Can See But Cannot Feel," *Dusted* magazine, Feb 18, 2008, accessed May 2, 2017, http://www.dustedmagazine.com/reviews/4108.
[52] Atlas Sound website, http://4ad.com/artists/atlassound.

band's fifth album *Monomania* playing a drag character he named "Connie Lungpin." In the segment he appeared in a black wig and dressed in a fitted silk, button-down blouse, with his bloody, bandaged fingers clasping the microphone as he sang.[53] Although innocent pranks were by then routine on *Fallon* and integral to the show's unique appeal, viewers immediately took to Twitter to express their shock and horror, wondering if in fact Cox's fingers had been severed in some freakish mishap. And when interviewers pressed for more information about Connie, Cox was dismissive: "that's just something I shit out of my mouth one time, and suddenly, it's everywhere… well, everything I do is kind of like a character. I'm like a method actor."[54] Similarly, when an obnoxious concertgoer demanded the band play a cover of "My Sharona" by the Knack at a Deerhunter show in Minneapolis in 2012, a belligerent Cox replied, "Fuck you! You want to do this motherfucker?" and launched into a one hour-long rendition of "My Sharona," obscuring the beloved 70s hit as if to musically flip the heckler off.[55] In interviews, he vociferates about his artistic misgivings and lack of faith in the music industry, obscenely jeering at his interviewees; this is all part of his shtick. Cox exhibited an unabashedly callous attitude toward the media at a press conference as part of the *Monomania* (2013) album launch, once even sneering, "Have I insulted everybody? We're all just whores for a commodity market. We're all sucking the same dick," an event that some critics suspect was a publicity stunt.[56]

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[53] Matthew Perpetua, "Bradford Cox Talks Nervous Breakdown, New Atlas Sound Album," *Rolling Stone*, Nov 7, 2011, accessed May 2, 2017.
[54] Allegedly Cox had originally wanted to serenade a rat in the same segment, but NBC feared the media backlash. See Gary Canino, "Deerhunter," *BOMB*, April 8, 2013, accessed May 2, 2017, http://bombmagazine.org/article/7159/.
[55] Corban Globe, "Bradford Cox Covers 'My Sharona' For An Hour In Concert," *Stereogum*, Mar 6, 2012, accessed May 2, 2017, http://www.stereogum.com/969681/bradford-cox-covers-my-sharona-for-an-hour-in-concert/video/.
[56] Bradford Cox in Harmonicait, "15 Bizarre Quotes from Bradford Cox's Deerhunter Press Conference," Pigeonsandplanes website, May 6, 2013, accessed May 2, 2017, http://pigeonsandplanes.com/2013/05/15-weirdest-quotes-from-bradford-coxs-deerhunter-press-conference/s/goals-for-the-press-conference/.

Such posturing is an integral part of Cox's persona, making any straightforward interpretation of his disability untenable. At first glance, disability appears to be front and center in his performances: at a towering 6'4" with a thin, spindly, slouchy frame, the physical affects of his Marfan syndrome are plainly visible on his body. (Marfan syndrome is a congenital malformation of the connective tissue that causes extreme height, thinness, and curvature of the spine.)[57] As George McKay explains, in pop music "body image is both a transactional and expressive category" allowing for the "intermittent fetishizing of enfreakment."[58] Similarly, Mitzi Waltz and Martin James suggest that disability is the ultimate emblem of an artist's "outsider status," physically signaling an indisputable authenticity.[59] But it is not disability *per se* but the physical markers of Cox's disability – his *physical appearance* – that contribute to a much larger expression of defiance. If Cox's mandate as a performer is to flaunt difference and fly in the face of the mainstream, it is crucially *without* a disability identity politics. Much like Quasthoff, Cox speaks of his disability and his impressions of his reception begrudgingly and with a heavy dose of cynicism. *Pitchfork* writer Ryan Schreiber once astutely remarked to Cox in an interview that although his defiant, confrontational performance style and his physical appearance inspire strong, visceral reactions in his audiences, few fans actually recognize that he has Marfan syndrome. Affirming Schrieber's observations, Cox exclaimed:

> People think I'm a junkie… I watch them… And their eyes are glued to my fucking body. They think they're not being watched. They think that they're the audience and I'm the performer, but for me, it's always like watching a film of people. I see it on their faces, that half-smile, you know? That "what the fuck" expression, wrinkled eyebrows and half-smiles, just staring at me.[60]

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[57] It can also cause aortic enlargement, sudden lung collapse, emphysema, asthma, or sleep apnea (which all can be life-threatening if un-treated) and vision problems. See the Marfan Foundation Website, accessed May 29, 2017, http://www.marfan.org/about/marfan.
[58] McKay, *Shakin' All Over,* 18, 87.
[59] Mitzi Waltz and Martin James, "The Remarketing of Disability in Pop: Ian Curtis and Joy Division," *Popular Music* 28/3 (Oct 2009): 377.
[60] Ryan Schreiber, "Deerhunter," *Pitchfork*, Jun 11, 2007, accessed May 2, 2017, http://pitchfork.com/features/interviews/6626-deerhunter/.

Shrewdly, Cox at once reinforces and resists the dramaturgical construction of disability and the stigmatizing dynamics of its visual construction. Through his confrontational stance, he not simply reclaims the power lost in the staring exchange, but conceptually reverses the seemingly fixed terms of its object/subject dialectic, positioning himself as the audience, and the audience and their prescriptive engagement, as the performer. In another interview, he commented on the unique advantages of his physical appearance, while alluding to the androgyny of indie rock:

> Indie rock is such a bratty culture, and I don't see a lot of ugly people in it, either. I feel very proud to be hideous. Thank God I don't look like every other fucking dude wearing their girlfriend's fucking jeans out there on stage.[61]

As Cox observes, though his disability often goes *unrecognized* as a disability, it is a kind of passing that hardly protects against discrimination and speculation as to the cause of his physical appearance; he suspects that it is often read as a sign of an underlying drug addiction, a mental illness, an eating disorder, and/or a general unattractiveness. Marfan syndrome is a relatively unknown condition lacking a set of recognizably distinctive markers as with a disability like Down syndrome, for example.[62] In certain regrettable instances, people have recognized that he is disabled but doubted it to be the *true* cause of his thinness. One suspicious blogger reflects, "it's not uncommon for those suffering from both anorexia and another illness (often Crohn's Disease or IBS) to blame their low body weight on the more 'socially acceptable' sickness to hide an eating disorder."[63]

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[61] Larry Fitzmaurice, "Deerhunter," *Pitchfork,* Apr 29, 2013, accessed May 2, 2017, http://pitchfork.com/features/articles/9122-deerhunter/.

[62] "Bradford Cox Destroys a Heckler at the End of Atlas Sound Show in Phoenix," YouTube video, (Electric Mustache Channel), 6:00, Nov 6, 2009, accessed May 2, 2017, https://www.youtube.com/watch?v=KzkOhRjibs4.

[63] F. Brannigan, "Is Bradford Cox a Skinny Gay Anorexic Asexual Virgin," Legomenon website, May 27, 2013, accessed May 2, 2017, http://legomenon.com/is-bradford-cox-a-skinny-gay-anorexic-asexual-virgin.html. This blogger was reflecting on a by now legendary incident at an Atlas Sound concert in 2009 when a drunk heckler taunted, "Eat a fucking burger!" and Cox demanded the man be brought up on stage where the singer engaged him in a verbal standoff at the microphone only for the drunk heckler to fail miserably. After Cox had finished humiliating the audience member, he had him removed from the venue.

On the surface, Cox's reception is symptomatic of the stigma that customarily attaches to visible disability, even if his corporeal difference is not understood as a disability. Further, his own remarks about his disability affirm the dynamics of Garland-Thomson's starer-staree formulation and the visual basis of stigma more generally. And his performance strategy closely mirrors the exaggerated performance of disability that Siebers describes in the disability-as-masquerade model, a pre-emptive means of withholding the power otherwise lost through stigma. Yet the physical ambiguity that Cox's Marfan syndrome affords also serves the larger themes of his agenda. A self-conscious emphasis on sickness and neurosis coupled with the *impression* of self-neglect and degradation, while overlapping with disability, eclipse disability as an aesthetic priority, and also link up with the queer dimensions of his performances. Any references he might make to disability in his performances are oblique, never explicitly mentioning Marfan syndrome or calling disability by name. For instance, Cox's first solo album, *Let the Blind Lead Those Who Can See but Cannot Feel* (2008) is a concept auto-biographical album where he vividly recounts the emotional and physical trauma of his adolescence where social alienation, confusion about his sexuality and male friendships, and summer-long hospital stays were commonplace.[64] Inspired by the AIDS epidemic's impact on young children, the song "Quarantined" reflects on the loneliness of a quarantined patient, drugged-up and under close medical surveillance. The lyrics comprise a single repeated line: "quarantined and being kept so far away from my friends/waiting to be changed/I'm waiting to be changed." The narrator's longing for change in the face of quarantine is suggestive of a number of experiences including recovery from a disease or injury, rehabilitation following self-injurious behaviour, a drug

[64] Marc Hogan, "Reviews: Atlas Sound: Let the Blind Lead Those Who Can See but Cannot Feel," *Pitchfork*, Feb 19, 2008, accessed May 2, 2017, http://pitchfork.com/reviews/albums/11160-let-the-blind-lead-those-who-can-see-but-cannot-feel/.

overdose, an anorexic collapse, or even sex-reassignment surgery. The pathos of the lyrics finds respite in the drug-induced bliss of the music: gentle, tinny arpeggiated dulcimer samples recall the sound of a children's music box, memories of happier times, while filtered bells, angelic "ahhs," distortion, and reverb create the impression of weightlessness, and an inconsistent clave rhythm in the background mimics the sound of the intravenous fluid drip. Cox's singing is lethargic and deadpan and the vocal line itself is a simple melody filled with lulling gestures; his breathing is audible and laboured, at times accentuated with prolonged vocal fry as he anticipates his entries, emphasizing the sickly quality of his voice. The album cover art sets the tone for this interest in sickness and suffering: it features Cox's own punky zine-styled photograph of an illustration depicting an emaciated boy being examined by a doctor, his mother looking on in desperation. The boy's face is obscured by the camera's flash, at once protecting the child's anonymity while casting the child in a reverent, divine light. Cox establishes an autobiographical connection to this image on the cover of his 2009 solo album *Logos* (2009) which features a portrait of the singer's own nude torso from the pelvis up, his long arms and hollow chest set against a bright red backdrop, the flash obscuring his face in the same manner as the boy's in the original. (The amateurism of the photograph also reinforces Cox's punky DIY aesthetic.)

His frequent magazine appearances often intensify this *impression* of degradation and self-neglect. In one stylized, black-and-white fashion magazine snap by photographer Gregory Harris, Cox, clad in a black suit with a bow-tie undone around his neck, gazes defiantly at the camera through a blackened right eye as he wields a metal pipe across his shoulders, his wrists and spindly fingers draped across its front, looking at once like a dishevelled sinister character from a sideshow and a generic lanky runway model (see Figure 3.1). In fact, the photograph's aesthetic is reminiscent of "heroin chic," a style of fashion photography characterized by a

contrived, gritty realism achieved through the juxtaposition of haute-couture glam with slumming and self-degradation. Photographs in the heroin chic style typically feature exceptionally thin, pale, androgynous-looking models styled with minimal cosmetics, usually glancing vacantly at the camera whilst donning haute-couture clothing and pictured in settings evoking drug abuse, violence, poverty, and prostitution.[65] (Given the speculation surrounding the cause of Cox's thinness, it is significant to note that the widespread popularity of heroin chic in the 1990s sparked considerable anxiety for its glamorization of both drug abuse and anorexia.[66]) A breathtaking shot of Cox's silhouette by photographer Mark Abrahams focuses on the contours of the singer's upper body, with shadowing around the collarbones, shoulders, neck, throat, and jaw, a raw portrait that commands dignity and respect. Similarly, a second black-and-white photograph from the same shoot pictures the singer tearing off his white shirt, his chest partially exposed, drawing attention to the otherwise unsightly features of his body (see Figure 3.2). The photo's intimate composition, white backdrop, and stark lighting along with Cox's sultry pose call to mind the black-and-white Calvin Klein advertisements from the 1990s. If these photographs convey a defiance by boldly showcasing the otherwise unusual features of Cox's body, his physical appearance simultaneously enjoys a *normalcy* in a medium where extreme thinness and height are standard criteria for models in the industry.

[65] British supermodel and Calvin Klein poster-girl Kate Moss came to epitomize the heroin chic with her distinctly waifish looks, angular bone structure, and strung out appearance. The style marked a radical break with the long-standing preference for the type of classic feminine softness and vitality exuded by the then reigning supermodels Cindy Crawford, Claudia Schiffer, and Heidi Klum. The prominence of the heroin chic provoked considerable anxiety in the Western cultural imaginary regarding the concurrent glamorization of heroin use and anorexia and its potentially fatal outcomes for the fashion industry's under-age workers and impressionable consumers alike.
[66] See Mary Rizzo, "Embodying Withdrawal: Abjection and the Popularity of the Heroin Chic," *Michigan Feminist Studies* 15 (2001). Online.

Figure 3.1 Bradford Cox. Photograph by Gregory Harris. Published in *Interview* Magazine, May 6, 2013. Accessed May 31, 2017. http://www.interviewmagazine.com/music/bradford-cox-deerhunter-monomania/

Figure 3.2 Bradford Cox. Photograph by Mark Abrahams. Published in *The New York Times Style Magazine*, November 2, 2011. Accessed May 31, 2017. http://tmagazine.blogs.nytimes.com/2011/11/02/now-playing-parallax-the-new-album-by-atlas-sound/?_r=0

The obscurity of Cox's work as a solo artist relative to his more public work as the frontman of a popular indie band further enriches the ambiguity of his disability. Whereas his solo output features more explicit autobiographical references in conjunction with illness, physical suffering, and mental anguish that might lead audiences to make assumptions about his disability, the Deerhunter material centres on queercore, defiance, and punk theatricality. Far from competing, these two themes are inextricably linked: his sickness is vital to his queer identity politics and both contribute to his non-conformist stance. Cox's audacity, grotesquerie, and cross-dressing are not without precedent in the vaster landscape of pop music. And his theatrics are especially unexceptional in light of his punk and glam rock roots, two genres famed for their confrontational, non-conformist attitude and penchant for gender bending. The subcultural orientation of these genres were such that they cultivated, and in turn came to expect,

rawness and alterity, observes McKay, where "signature corporeality is a trick of the trade, and stagecraft a skill to develop, especially for the lead singer."[67] Cox glorifies his punk-rock inheritance, his interviews peppered with loving references to his punk idols Lou Reed, Joey Ramone, and Patti Smith.[68] In the same 2011 *Rolling Stone* interview where Cox famously self-identified as a queer, putting longstanding speculation about his sexuality to rest, he remarked that he was disheartened with the contemporary rock scene:

> Hetero-centric, boring, scruffy 20 year-olds are ruining the fucking face of rock and roll, you know? There are no Patti Smiths, Joey Ramones, or Lou Reeds, even… there needs to be some vital something, and I mean, I'd like to try to be that, if possible, if I may be so bold.[69]

His adulation of his punk rock heroes spills over into his drag performances. Cox's brand of drag is unkempt and bedraggled, in keeping with an aesthetic of self-degradation and heroin chic: his costumes are simple and half-assed, perfectly reflecting the DIY aesthetic of indie rock and also harkening back to the early days of punk rock, understated when compared with the ostentatious spectacle of more mainstream musical acts like Marilyn Mason, Lady Gaga, or Die Antwoord. One critic noted a resemblance between Connie Lungpin (the character on *Fallon*) and the punkers that frequented the popular 1970s New York City nightclubs.[70] Another hailed Cox as the "dress-clad, out-loud singer of queer punks."[71] If seventies glam rock bands like the New York Dolls emphasized the artificiality of their feminine personae through stylistic excess

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[67] McKay, *Shakin' All Over*, 11, 115. For example, early punk rockers often wore mowhawks, spiked hair, and make-up, and certain punk shows even included dwarfs.
[68] With reference to his punk influences, Cox once claimed, "I need punk rock. It's the medicine for me, but it's bitter and sickening:" Cox in Larry Fitzmaurice, "Bradford Cox," *Pitchfork*, Nov 10, 2011, accessed May 2, 2017, http://pitchfork.com/features/interviews/8707-bradford-cox/.
[69] Matthew Perpetua, "Bradford Cox Talks Nervous Breakdown, New Atlas Sound Album," *Rolling Stone*, Nov 7, 2011, accessed May 2, 2017.
[70] Christopher Powell, "'Interviewing' Bradford Cox of Deerhunter," *Impose*, April 29, 2013, accessed May 2, 2017, http://www.imposemagazine.com/features/bradford-cox-of-deerhunter.
[71] Crumsho, "Review."

and grotesquerie using stage make-up, platform shoes, and bouffant coifs,[72] Cox's drag exudes a naturalness that belies its artificiality, lacking the characteristic markers of an exaggerated femininity.

It is in the ironically *undisguised* quality of Cox's genderfuck drag that he uncannily resembles his punk icons Patti Smith and Joey Ramone. (A founding member of the New York punk rock scene, Smith was celebrated for her androgynous looks, defiance of feminine stereotypes, and her ability to imitate the gestures and sensibilities of her male rock heroes in live performance.[73] And the Ramones' lead singer Joey Ramone towered over his band-mates, reaching a near 6'5".) Cox actively cultivates and acknowledges these connections to his imagined precursors; he once remarked to a London audience "I love dressing like this because it makes me feel like Patti Smith."[74] He once even impersonated Ramone in a live performance of the 1958 song "Do You Wanna Dance?" at a Black Lips concert, wearing the requisite black leather jacket, ripped jeans, and a long shabby black wig. Previewing Cox's guest appearance as Ramone, the Black Lips tweeted to fans before the show: "there are rumors of a resurrected ghost making a guest appearance at tonight's show."[75] Cox has also cited Kurt Cobain, lead singer of the grunge band Nirvana, as inspiration for his drag style, who, in his ugly, sloppy drag was according to Cox, "challenging gender images" and "making gay kids feel an inch closer to

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[72] Philip Auslander, *Performing Glam Rock: Gender and Theatricality* (Ann Arbor: University of Michigan Press, 2006), 58.

[73] Smith's image was fashioned and documented extensively by her partner and photographer Robert Mapplethorpe. See Simon Hattenstone, "Patti Smith: Punk, Poet, Queen," *The Guardian*, May 25, 2013. See Sheila Whiteley, "Patti Smith: the Old Grey Whistle Test: BBC-2 TV, May 11, 1976," in *Performance and Popular Music: History, Place, and Time*, ed. Ian Inglis (Burlington, VT: Ashgate, 2006), 81-91.

[74] See Knappafire, "Deerhunter – Sleepwalking – All Tomorrow's Parties Deerhunter ATP - 23.06.13," YouTube video, (knappafire Channel), 8:18, Jul 13, 2013, accessed May 2, 2017, https://www.youtube.com/watch?v=CXT8BruHeok. Cox performed in drag at a Deerhunter show at the Austin Psych Fest: See "DEERHUNTER - LIVE APF 2013 "Sleepwalking/Back to Middle," YouTube video (PsychFestAustin Channel), 6:03, Jan 24, 2014, accessed May 2, 2017, https://www.youtube.com/watch?v=kiTNs8__At8.

[75] Mark Hogan, "Bradford Cox Fronts Black Lips as Joey Ramone," *Spin*, Sept 13, 2011, accessed May 2, 2017, http://www.spin.com/articles/bradford-cox-fronts-black-lips-joey-ramone/; and

acceptance."[76] In fact, to announce the release of their 2013 album *Monomania*, Deerhunter published a series of black-and-white photographs of the entire band dressed in textured and patterned retro frocks, photos no doubt alluding to Nirvana's black-and-white music video for their hit single "In Bloom" wherein the band sported a similarly half-hearted drag style. Cox has perspicaciously remarked that wearing a dress is often "just a funny footnote."[77] Indeed, these comical citations, both sartorial and verbal, exemplify the type of self-conscious intertextual referentiality and posturing that is central to the indie rock sensibility.[78] Cox's drag performances are thus not merely about transgression, but about flaunting difference to achieve a cross-generational continuity: in his drag performances he effortlessly distils a legacy of cross-dressing and androgyny through referencing his musical idols, inadvertently neutralizing his bodily difference in the process: in the costumes Cox fashions for himself, his body enjoys a *normalcy* in its uncanny likeness to his precursors Smith and Ramone.

As a result of these foregoing ambiguities, Cox's disability occupies a rather precarious position in his reception. As he surmises, certain audience members often presumptuously attribute his thinness to an eating disorder or a drug addiction, a marker of self-neglect and neurosis. This reflects as much on Cox playing up these associations as it does on the anxieties of

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Ryan Schreiber, "Deerhunter," *Pitchfork*, Jun 11, 2007, accessed May 2, 2017, http://pitchfork.com/features/interviews/6626-deerhunter/.
See also Fred Pfeil, *White Guys: Studies in Postmodern Domination and Difference* (New York: Verso, 1995), 99.

[76] For a discussion on Nirvana's drag style see Brian Tuttle, "Who Killed the Rock Guitar?: Virtuosity in Nineteen-Nineties Alternative Rock," (PhD Dissertation, McGill University, August 2013).

[77] Schreiber, "Deerhunter."

[78] Cox's apparent disdain for the music industry and his shrewd, albeit invective commentary in interviews encapsulates the very irony on which numerous scholars have noted indie rock is premised. Emily Dolan writes that, "In the utopian attempt to escape the mainstream market, indie musicians and producers risk being entirely defined by the market." She explains further that, "fans and indie musicians alike take an explicitly critical stance towards mainstream music – the music is often steeped with intellectualism, manifest in clever lyrics, obscure citations, satire and self-analysis": Emily Dolan, " '… This Little Ukulele Tells the Truth': Indie Pop and Kitsch Authenticity," *Popular Music* 29/1 (Oct 2010): 461.
Simiarly, Ryan Hibbett asserts that indie rock is more than merely a musical genre, but an aesthetic of social differentiation and subtle self-othering that depends on the mainstream pop music market in order to define itself and its own niche market: Ryan Hibbett, "What is Indie Rock?" *Popular Music and Society* 28/1 (Feb 2005): 55-77.

his audiences. Those savvy critics and devoted fans that are aware of his disability often remark on its sheer marketability. Referencing Cox's short-lived penchant for posting photographs of his fecal matter on his band blog, one critic noted that, "having a spindly giant with Marfan's Syndrome front and center couldn't hurt the media blitz."[79] But stigmatized looking is not a given. Certain of those responding to his disability exhibit a high degree of empathy, perhaps projecting even more personal narrative and aspirations onto Cox's image than he intends:

> I appreciate how confrontational Cox is about his body on stage, in song, and through his blog. At times he's provoked ableist discomfort from critics and concert-goers who wish the skinny white guy would obscure his form with baggy clothes…While we may live in a sartorial moment where huskier men can wear v-neck tees and tight pants, slight men remain under scrutiny for not abiding by normative ideas around masculine virility…I don't know if Cox has any interest in commenting, but would imagine that his life as a queer Southern teenager with Marfan syndrome informs the resistive artist he is today.[80]

Finally, there are many that do not see Cox as being "different" at all. And this has as much to do with the ubiquity of freakish spectacle in pop music and Cox bearing a resemblance to his punk idols as it does with the priorities and experiences of individual audience members.

Cox's account reveals much about the relationship between the aural and visual components of both music's spectacle and disability's construction. The defiant theatricality that the singer adopts in staged performances is in keeping with pop music's emphasis on overt visual spectacle and entertainment and more specifically, punk rock's known penchant for insubordination, self-enfreakment, degradation, and gender bending. And on tracks like "Quarantined," Cox's singing serves to underscore the impression of self-neglect and sickness that he cultivates through genre specific visual cues in his album art, on-stage performances, and sartorial style. Through vocal techniques and various post-production effects, Cox establishes a

[79] Michael Crumsho, "Review: Atlas Sound – Let the Blind Lead Those Who Can See But Cannot Feel," *Dusted* magazine, Feb 18, 2008, accessed May 2, 2017, http://www.dustedmagazine.com/reviews/4108.
[80] "Bradford Cox's Mission to Queer the Guitar," *Feminist Music Geek* (blog), Oct 8, 2010, accessed May 2, 2016, http://feministmusicgeek.com/2010/10/08/bradford-cox-queer-guitar.

direct link between the *look* of his body and the *sound* of his voice. And indeed, the aural dimensions of this self-neglect and freakery spill over into his public persona which has seen him embroiled in various media scandals because of his brash, belligerent remarks and cavalier attitude. As he spouts off seemingly irrationally at media personnel and unruly audience members, Cox defiantly envoices his corporeal excess, provoking confusion over his sexuality and concern over his physical and mental well-being in the process. And the singer delights in this provocation. Cox enacts a spectacle that is equal parts visual and aural, one that is circular rather than fixed: he enlists his unwitting audiences and critics in a feedback loop where there is a constant slippage between subject/object and performer/audience positions; between bodily conformity/non-conformity and ability/disability; and between engagements rooted in empathy/stigma. Furthermore, if his reception's fixation on the ostensibly disconcerting aspects of his physical appearance is symptomatic of the stigamatized looking that visible disability typically elicits, disability is an inadequate conceptual vehicle for understanding the affective dynamics of his performance. Gender, sexuality, and sickness are arguably more integral to his image and performance of difference than disability *per se*. Finally, the aural dimensions of Cox's singing and public appearances are as integral to his image as the corporeal excesses of his body and the intertextual genre-based visual references he cultivates in his sartorial style. Ultimately, Cox's account reflects the visual construction of disability even as it exceeds the construction.

The "Avant-Pop Pixie" and her "Baby Doll Lisp": Grimes and Vocal Dysfluency

With her high-pitched vocals, synth-based soundscapes, girlish looks, and whimsical fashion sense that the *New Yorker* aptly describes as "an elaboration of goth, gutter punk, high fashion, and Japanese culture," Canadian electro-pop sensation Claire Boucher, better known by

her stage name Grimes, has been heralded by critics and fans as everything from the "avant-pop pixie," a "day-glo punk elf," the "elfin queen of the hipsters," "the glitch pixie," "the quintessential manic pixie dream girl of the synth-pop world," and "Rainbow Brite."[81] Central to the femme enfant-meets-fairy queen image that Grimes embodies in the eyes and ears of her devotees and detractors is her lisp, a sonic trademark audible in speech and song that has generated endless buzz online since the release of the singer's third studio album *Visions* in 2012. The comments sections of Grimes' music videos on YouTube are filled with such affectionate remarks as, "her lisp is the cutest thing!" and "why are lisps so sweet and golden?"[82] while users on the controversial anonymous image-board site 4chan deploy an alternate spelling of the singer's stage name -- "Grimeth" – to mock the singer's lisp with derisive comments like "Grimeth tuckth" (Grimes sucks) and "betht grimeth thong right here" (best Grimes song right here). This same 4chan thread, which features new daily contributions, contains an overwhelming number of sexually violent takes on the alternate spelling, with several perverse fan fantasy poems about "Grimeth," her "tittieth" (titties), and her "puthy" (pussy). Not only is this type of brutally misogynist engagement commonplace on 4chan, it pervades Grimes' reception.[83] In a recent piece by the celebrated online music magazine *Noisey* with the rather unfortunate click-bait-ey title "Top 8 Artists Who Need Speech Therapy," writer Xavier Aaronson proffers a favourable, though notably sexual take on Grimes' lisp when he writes that:

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[81] Kelefa Sanneh, "Pop for Misfits," *The New Yorker*, September 28, 2015.
[82] See Paul Ryding, "A Life of Grimes: The Avant-Pop Pixie Does it Herself," *The Beijinger*, March 9, 2013, accessed May 2, 2017, https://www.thebeijinger.com/blog/2013/03/09/life-grimes-avant-pop-pixie-does-it-herself; Carrie Battan, "Grimes," *Pitchfork*, February 16, 2012, accessed May 2, 2017, http://pitchfork.com/features/interview/8774-grimes/; Kate Hutchison, "Free Grimes: the Hipster Equivalent of Free Deidre," *The Guardian*, September 12, 2014; "Grimes Mysteriously Tweeted the Words 'Karl Stefanovic'," *Pedestrian Daily*, July 9, 2013, accessed May 2, 2017, https://www.pedestrian.tv/news/entertainment/grimes-mysteriously-tweeted-the-words-karl-stefano/13755509-16a4-406d-879a-40d2cae419a4.htm; and Lizzy Goodman, "Immaterial Girl," *New York Magazine*, April 22, 2012.
[83] See, "Search: grimeth," on "/mu/ - Music (Temp full images)," Rebecca Black Tech Archive, accessed April 7, 2017, https://archive.rebeccablacktech.com/mu/?task=search&ghost=&search_text=grimeth.

> [Grimes] the blippity-bloop pop siren of today, straight up slaughters the letter "S." Not just in interviews, but in song too. Instead of buckling under the rumble of her "speech impediment" –which I prefer to call a "pizzazz of the mouth"—she belts it out. In her song "Oblivion," her dewy lisp is awesomely undisguised and sprinkled 23 times throughout the track. Yeah….I counted. It's so charmingly imperfect that it's all I can focus on, like an adorable pet peeve.[84]

Aaronson later goes on to refer to Grimes and her fellow lispers as those musicians "who rock crowds and *hump* our eardrums with a spritz of their scuffed-up speech."[85] The emphasis on the purity of Grimes' lisp and its centrality in her aesthetic was notably apparent in the reception of her self-produced 2015 album, *Art Angels*. Whereas certain critics praised the album for breaking, "into the more mainstream pop and electronic genres without losing the soft lisp and dreamily layered soundscapes," others proclaimed that "the singer's trademark baby doll lisp… ha[s] been replaced by purer vocals."[86] Whether as a beguiling musical asset or as a point of irritation, Grimes' voice provokes a unique genre of reception where misconceptions about feminine-coded speech patterns intersect with stereotypes about speech impediments. And ultimately, the infantilization of Grimes' speech dysfluency throughout her reception risks undermining both her authority as a producer, and the subversive power she ascribes to the femme-enfant archetype.

Indeed, the infantilization of Grimes' voice relates both to the widespread policing of women's voices in popular culture, and to the enduring pathologization of speech impediments. For instance, in recent years, the public discourse concerning the prevalence of up-talk and glottal vocal-fry among certain demographics of women reached fever pitch with detractors

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[84] Xavier Aaronson, "Top 8 Artists Who Need Speech Therapy: Kidding! We love your Lisps!" *NOISEY* magazine, June 15, 2012, accessed May 2, 2017, http://noisey.vice.com/blog/top-8-artists-who-need-speech-therapy.
[85] Ibid.
[86] Sarah Bellman, "Meet the Brilliant Female Indie Artist Who Just Rocketed into the Mainstream," Mic website, July 1, 2014, accessed May 2, 2017, https://mic.com/articles/92589/meet-the-brilliant-female-indie-artist-who-just-rocketed-into-the-mainstream#.SpZWOpphD.

maintaining that both vocal affectations reflect negatively on a woman's age, intelligence, competence, and authority in the ears of the listener and should thus be avoided. (Up-talk is characterised by a rising lilt in the voice at the ends of declarative sentences, giving the impression that they are questions.) Others contend that these negative associations are in effect reflective of an insidious, unexamined paternalism towards what are in effect feminine-*coded* speech patterns. Critics Emma Gray and Claire Fallon write, "Ultimately when you critique to death the way women speak – the way they communicate with the world – you are trying to avoid hearing what they have to say," or as one headline for the *Daily Dot* put it, "the war on female voices is just another way of telling women to shut up."[87]

Until recently, research on what are called "communicative disabilities" was limited to clinical linguistic study – empirical research on all manner of speech impediments from stuttering, cluttering, and lisping, as well as speech delays and language loss resulting from deafness and cognitive disabilities.[88] Speech pathology (or speech therapy), that is, the applied discipline of clinical linguistic study, offers therapeutic interventions for ultimately correcting "broken," "unclear," or "lost" speech. From the standpoint of speech language pathology, a lisp like Grimes' is a "misarticulation" of select speech sounds: in most instances, "s" and "sh" sounds are often pronounced like "th," audibly marking the voice of the speaker.[89] While lisping

[87] Emma Gray and Claire Fallon, "What a Lesson in How People Judge Women's Voices? Start a Podcast," *Huffington Post*, July 13, 2015, accessed April 7, 2017, http://www.huffingtonpost.com/entry/how-people-judge-womens-voices-podcasts_us_55a01ae9e4b0a47ac15c893c; and Amanda Marcotte, "The War on Female Voices is Just Another Way of Telling Women to Shut Up," *The Daily Dot*, July 24, 2015, accessed April 7, 2017, https://www.dailydot.com/via/vocal-fry-99-percent-invisible-womens-voices/.

[88] See Elisabetta Fava, ed., *Clinical Linguistics Theory and Applications in Speech Pathology and Therapy* (Amsterdam; PA: John Benjamins Pub., 2002).

[89] There is growing interest, both critical and popular, in the relationship between lisping and male homosexuality, what is popularly known as the stereotypical "gay [male] voice," though sometimes pejoratively referred to as the "gay lisp" or the "gay accent." The debate over this phenomenon throws into sharp relief the distinctions between nature/nurture with respect to language and speech patterns, particularly in relationship to code switching and sociophonetics, as well as the role of voice in stereotypes about gender, sexuality, age, race, and class. This research has complex outcomes for the critical understanding on speech dysfluencies in disability studies. For research in phonetics, see Sara Mack and Benjamin Munson, "The Influence of /s/ Quality on Ratings of Men's Sexual

is considered a normal stage of early childhood speech development, if it persists beyond what is known as "the age of speech normalization," it is thought abnormal and infantile. ("Adolescents and adults who have a lisp are often perceived negatively by typical speakers, at least initially," write Heidi Massel Lipetz and B. May Bernhart.[90]) Yet in actuality, the degree to which lisps register as so-called deviations from normal speech patterns varies immeasurably from one socio-linguistic context to the next.[91] Conceptions of "normative speech" are thus socially constructed. Indeed, recent pioneering scholarship on communicative disabilities – or speech dysfluencies – in disability studies challenges the pathologization of the voice in medical discourse; the role of speech therapy in constructing and upholding concepts like ab/normal speech and reinforcing the stigma associated with so-called speech impediments; and the enduring associations between the voice and self-hood in Western metaphysical thought.[92] Currently this research is focused primarily on stuttering, but has implications for other communicative and cognitive disabilities. Joshua St. Pierre argues that the stutterer in particular

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Orientation: Explicit and Implicit Measures of the 'Gay Lisp' Stereotype," *Journal of Phonetics* 40/1 (Jan 2012): 198-212; and J. Van Borsel et al, "The Prevalence of Lisping in Gay Men," *Journal of Communication Disorders*, 42/2, (Mar 2009): 100-106.
For more popular discussion, see David Thorpe, *Do I Sound Gay*, DVD. Directed by David Thorpe, (IFC Films/Sundance Selects: USA, 2014); Michael Schulman, "Is There a 'Gay Voice'?" *The New Yorker*, Jul 10, 2015, accessed May 2, 2017, http://www.newyorker.com/culture/culture-desk/is-there-a-gay-voice; and Anna Swanson, "Exposing the Myth of the 'Gay Voice'," *The Washington Post*, reprinted in *The Toronto Star*, Aug 2, 2015, accessed May 2, 2017, http://www.thestar.com/news/insight/2015/08/02/exposing-the-myth-of-the-gay-voice.html

[90] Heidi Massel Lipetz and B. May Bernhardt, "A Multi-Modal Approach to Intervention for One Adolescent's Frontal Lisp," *Clinical Linguistics & Phonetics* 27, no. 1 (2012): 2.

[91] Certain languages require the use of consonantal oral sounds (i.e. lisps) in their pronunciation. For example, standard Castilian Spanish (i.e. European Spanish) uses a prominent voiceless dental fricative, (e.g. a sound equivalent to the "th" in 'thing'), whereas Latin American variants of Spanish do not. This is known colloquially in the English-speaking world as the "Spanish lisp" and is one of Castilian Spanish's most distinctive and recognizable features. There is a certain linguistic superiority and social prestige associated with Castilian dialect that endures even in Latin America. See Clare Mar-Molinero, *The Spanish-speaking World: A Practical Introduction to Sociolinguistic Issues* (New York: Routledge, 1997).

[92] The 2014 Society for Disability Studies conference featured a panel titled, "Sustaining Dysfluent Speech Acts: Disrupting Informational/Communicative Albeism at the Intersection of Difference" (June 13, 2014), with the following paper presentations: "Informational Ableism and Communicative Disability," by Joshua St. Pierre; "Repairing the Textual Wholeness of the Dysfluent Voice: The Politics of Speech and Noise," Zach Richter; and "'Tongue-Tied': "Theorizing Dysfluency at the Intersection of Race, Class, Disability, and Desire in Transnational Contexts," by Nirmala Erevelles.

occupies a liminal space since s/he is neither clearly abled or disabled; a stutter is what he terms a "liminal disability," because "unlike many other disabled people, [stutterers] are often expected to perform on the same terms as the able-bodied."[93] Stutterers face an intense level of social prejudice and *moral* scrutiny for failing to master normative speech.[94] Stuttering ultimately "requires of disability studies a posture of uncertainty to appreciate the specific experience of liminal forms of oppression," writes St. Pierre.[95] While lisping is invariably different from stuttering – physiologically, sonically, and socially—it can profitably be understood as a liminal form of difference, according to St. Pierre's definition, subject to a lesser degree of social scrutiny than stuttering, but a scrutiny nonetheless.

In interviews, Grimes does not shy away from addressing the widespread fixation on her lisp both to neutralize its persistent sexualization and to demystify its impact on her singing voice. As with most lisps, Grimes' lisp does not influence the flow or intelligibility of her speech, but it is nonetheless audible when she speaks and sings, and sometimes has the effect of obscuring her lyrics, particularly when she treats her vocals with heavy reverb. Indeed, lisping often persists in singing unlike stuttering which ceases, the latter being a phenomenon perceived as a drastic incongruity. One interviewer remarked that Grimes' lyrics and vocal affectations were like "ciphers," to which Grimes added:

> I think it's probably just called a speech impediment, I have a lisp. But I also just try to obscure a bit because while meaning is important, it's more about performance for me, vocally. The lyrics are really personal, so it's good when people can't hear them.[96]

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[93] Joshua St. Pierre, "The Construction of the Disabled Speaker: Locating Stuttering in Disability Studies," *Canadian Journal of Disability Studies* 1, no. 3 (2012): 3.
[94] Ibid. St. Pierre suggests that the marginal status of scholarship on communicative disabilities within disability theory is due, in large part, to the liminality of the stutterer relative to her/his unequivocally disabled counterparts.
[95] St-Pierre, "The Construction of the Disabled Speaker," 20.
[96] Grimes in "Grimes: Blights and Blossoms," *Status* magazine, May 29, 2012, accessed April 7, 2017, http://statusmagonline.com/features/blights-and-blossoms-grimes-may-2012-interview/.

Similarly, after publically clarifying for a fan on Twitter the words to a certain lyric in her song "Kill vs. Maim" from her 2015 album *Art Angels*, Grimes reassured the embarrassed fan in a Tweet: "haha don't feel silly, it's prob my speech impediment, no 1 ever understands what I'm trying 2 say <3."[97] Grimes notes furthermore of her lisp in a recent NPR interview:

> I think my voice definitely bothers some people….[people] hate my lisp: when I was in high school, I remember people would be like, 'ugh, I don't want to talk to you! You have a lisp. It's so annoying.' But I don't know – I like having a weird voice. All of my favourite singers, even if they're not the best, they have a voice that you can immediately recognize. I think that's a really awesome trait.[98]

Grimes does not look favourably upon her reputation as the cutesy "quintessential manic pixie dream girl of synth pop," an attention she feels trivializes the power she ascribes to her image and the authority of her production credentials. In 2013, the singer penned a feminist manifesto on her popular Tumblr site, Actuallygrimes, that would later go viral wherein she detailed all manner of her experiences with sexism in the music industry. She wrote, "i don't want to be infantilized because i refuse to be sexualized," and "i'm tired of being referred to as 'cute,' as a 'waif,' etc., even when the author, fan, friend, family member etc. is being positive." She also expressed her disgust with being "molested at shows or on the street by people who perceive me as an object that exists for their personal satisfaction" and with "creeps on message boards discussing whether or not they'd like to 'fuck' me."[99] For Grimes, this sexual infantilization also corresponds to a longstanding male paternalism in the music industry and an ongoing prejudice towards women producers of electronic music. She writes that male sound engineers have, on multiple occasions, doubted her production expertise and technical prowess

[97] Grimes (@Grimzsz), Twitter post, December 10, 2015 (2:42 p.m.), accessed April 7, 2017, https://twitter.com/grimezsz/status/675083133004480514.
[98] Grimes in Marc Hogan, "Grimes' Anti-Sexism Manifesto is Required Reading (Even if You're Not a Fan)," *Spin*, Apr 24, 2013, accessed May 2, 2017, http://www.spin.com/2013/04/grimes-anti-sexism-tumblr-rant/.
[99] Grimes in Ibid.

on the basis of her gender since such technical work is typically thought "unfeminine." She elaborates:

> Going into the studios, there's all these engineers there, and they don't let you touch the equipment. I was like, 'Well, can I just edit my vocals?' And they'd be like 'No, just tell us what to do, and we'll do it.' And then a male producer would come in, and he'd be allowed to do it. It was so sexist. I was, like, aghast. And I'm tired of men who aren't professional or even accomplished musicians continually offering to 'help me out,' as if I did this by accident and I'm gonna flounder without them. Or the fact that I'm a woman makes me incapable of using technology. I have never seen this kind of thing happen to any of my male peers.[100]

In her 2015 album, *Art Angels*, she responds to this widespread paternalism: Grimes wrote, produced, mixed, and mastered all the album's tracks, designed the album art, and solicited participation from such esteemed women-only acts like Taiwanese rapper Aristophenes and R&B singer Janelle Monáe.[101]

Grimes describes her persona as one that draws inspiration from the power associated with feminine protagonists found in Japanese animation, such as Sailor Moon or Princess Zelda. (In this sense, the singer's overarching aesthetic triggers issues of cultural appropriation, and indeed, her music draws on K-pop's notably high-pitched heavily processed vocal-style, and her album covers feature Japanese lettering. Obviously this co-option is fraught for many reasons, but what is more relevant for the purposes of this discussion is how her generic appropriation of Japanese influences productively serves her understanding and projection of feminine power.) Grimes explains that she is drawn to the "Japanese archetype of a female protagonist who is very small and very cute but very physically powerful…. in Japanese culture, there are female

[100] Grimes in Tom Barnes, "Grimes Talks the Many Faces of the Music Industry's Sexism in a New Interview," *Music.Mic*, Jul 29, 2015, accessed May 2, 2017, http://mic.com/articles/123071/grimes-talks-the-many-faces-of-the-music-industry-s-sexism-in-a-new-interview#.DddNiFsp5.
[101] Jessica Hopper, "Grimes: Art Angels," *Pitchfork*, November 10, 2015, accessed April 7, 2017, http://pitchfork.com/reviews/albums/21264-art-angels/.

characters who can embody this girl uniform and still cut someone's head off with a sword."[102] She notes furthermore that the unassuming power associated with these archetypes is most evident in the music video for her 2012 song "Oblivion" where she infiltrates the hypermasculine world of college football in order to address her experiences with sexual assault and its enduring traumas.[103] Interestingly, "Oblivion" is the same song that the aforementioned *Noisey* critic Aaronson claims Grimes' "dewy lisp is awesomely undisguised and sprinkled 23 times throughout."

Underneath the veneer of the heavy reverb, soaring vocals, ethereal synths, and her so-called "dewy" "baby doll lisp," Grimes' lyrics are unmistakably confrontational, acerbic, and subversive as she tackles such topics as the paternalism of the music industry, voyeurism, sexual harassment, and sexual violence. If the music for "Oblivion" is wistful and upbeat, the lyrics are sobering, recounting a dangerous encounter after dark, riffing on what one feminist music blogger notes is the "'stranger danger' leitmotif of worn-down victim-blaming-centered warnings of rape."[104] In verses 1-2, Grimes sings: "Another walk about, after dark, it's my point of view, 'cause someone could break your neck, coming up behind you, always coming and you'd never have a clue. And now I'm left behind, all the time, I will wait forever, always looking straight, thinking, counting, all the hours you wait…" Grimes sings of her survival in verses 3 and 4 with the lines: "it's hard to understand 'cause when you're really by yourself, it's hard to find someone to hold your hand." Grimes' unknown, un-named assailant follows her into the proverbial darkness, inflicting a pain that lingers on the survivor's body and torments her

[102] Grimes in Jessica Hopper, "Grimes Comes Clean: Synth-Pop Provocateur on Her Big Year," *Spin*, December 6, 2012, accessed April 7, 2017, http://www.spin.com/2012/12/grimes-interview-2012-big-year/.
[103] Grimes in Ibid.
[104] Ragna Rök Jóns, " 'See You On A Dark Night': Grimes' 'Oblivion' Depicts Sexual Assault," *Bluestockings*, July 24, 2013, accessed April 7, 2017, http://bluestockingsmag.com/2013/07/24/see-you-on-a-dark-night-grimes-oblivion-depicting-sexual-assault/.

mind, a burden she will carry with her forever, reinforced with the lines "And now it's gonna be tough on me, I will wait forever." The song concludes with the line "I see you on a dark night," repeated over and over as the song fades into oblivion. Grimes writes of survivorship and of the process of creatively translating this experience into song:

> It would be intense if it [PTSD] were an overwhelming part of my image. I can't censor myself; it's really important for me to say how I feel. I needed to put out this song. I needed to make this song. I took one of the most shattering experiences of my life and turned it into something I can build a career on and that allows me to travel the world and play it live every night. The whole process has been positive – engaging with that subject matter and making it into something good.[105]

The juxtaposition of the music's playful, whimsical quality and the lyrics' darker tone is further underscored in the music video. On the surface, the video presents a straightforward celebration of school cheer and team spirit, with shots of Grimes participating in a McGill University pep rally on the school football field, and dancing in the stands at a Montreal motor-cross tournament, jamming-out with her boom-box and headphones. Whether dressed in an oversized coat with bleach-pink hair, leather finger gloves, or a sequined hoodie and pink tutu, Grimes is the quintessential cool hipster girl who rubs shoulders with the cheerleaders, and gets down with the dudes as they pump iron semi-nude in the men's locker room and later at a party where the celebration of homosociality culminates with a group of shirtless male athletes body-checking one another. Singing from among the pile-up of thrashing bodies, Grimes' takes a hit, a check to the shoulder: she cannot escape unscathed, but she stands tall nevertheless, a survivor. Indeed, Grimes says that the video enters

> this masculine world that is associated with sexual assault, but presented as something really welcoming and nice. The song's (sort of) about being [assaulted] – I was assaulted and I had a really hard time engaging in any types of relationships with men, because I was just so terrified of men for a while.[106]

[105] Grimes in Ibid.
[106] Grimes in Ibid.

Grimes' infiltration into this male-dominated realm is even more subversive considering McGill university's football team was, at the time of the video's production and release, at the centre of an ongoing sexual assault controversy, after three players were charged following an incident involving a Concordia University student in 2011.[107] And in fact, McGill only recently implemented a firm policy on sexual assault in the Fall of 2016 thanks to the work of student activist groups and the advocacy of several faculty members.[108] In the video, Grimes follows the Lolita/cool girl fetish to its logical conclusion, a narrative that regrettably ends in rape. Indeed, and rather disturbingly, one male fan notes in the music video's YouTube comments section that, "This woman seems like she would be the coolest person in the world to have a few beers and pizza with," to which another commenter replied, "to go to bed with would be even better."[109] By covertly infiltrating the university campus and the football team's physical space, Grimes calls attention to McGill's then neglected legacy of sexual violence while offering a scathing critique of the prevalence of on campus sexual assault more generally. Ultimately the lisping femme-enfant-meets-unassuming-assassin emerges a survivor who resists the infantilizing terms of her reception as she takes down the patriarchy, one song at a time. Grimes' lisp is a point of aural difference that both inspires and informs the singer's overarching expression of feminist resistance.

Grimes' account offers a compelling opportunity to reflect on the sonic contours of disability and how it intersects with other sites of difference that are sometimes more urgent than disability itself. Grimes' speech impediment does not musically disable her in any capacity; it

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[107] "Ex-McGill Redmen player Accused of Sexual Assault Leaves Sports Camp," CBC News, July 24, 2014, accessed April 7, 2017, http://www.cbc.ca/news/canada/montreal/ex-mcgill-redmen-player-accused-of-sexual-assault-leaves-sports-camp-1.2716472.
[108] "McGill Policy Against Sexual Violence," McGill University website, November 23, 2016, accessed April 7, 2017, https://www.mcgill.ca/secretariat/files/secretariat/policy_against_sexual_violence.pdf.
[109] Jeff Smith and Johnny Black respectively, "Grimes – Oblivion," YouTube video, (GrimesVEVO Channel), 4:11, March 2, 2012, accessed April 7, 2017, https://www.youtube.com/watch?v=JtH68PJIQLE.

merely colours the sound of her voice. Yet in so doing, it engenders an unusual reception centering primarily on gender and age: the former relating to the policing of women's voices in popular culture, the latter a holdover from the associations of lisping with childhood that result from the pathologization of the dysfluent voice throughout clinical linguistic discourse. Yet in the ears of her devotees, there is nothing about Grimes' lisp that need be eradicated: it merely intensifies certain misogynist fantasies about the links between feminine-coded speech patterns and sexuality. Indeed, discourse on Grimes' lisp is less about overcoming some stigmatized, undesirable sonic flaw, and more about the persistent sexualization of the female voice in relationship to the body and by extension, acceptable forms of female musical labour, as Grimes herself observes. Furthermore, if her voice is an aural marker of difference, it is one that intensifies the femme enfant *image* that she embodies; her lisp, mild as it may be, triggers an immediate visual frame of reference that then intensifies the "difference" associated with her lisp. This aural-visual feedback loop is integral to the meaning of Grimes' disability: her image and visual presentation inspires the desire and sexuality associated with her lisp, and vice versa. Finally, Grimes' account, more than any of the other musicians surveyed in this chapter, highlights the slippage between disability and "difference." In other words, how useful and appropriate is disability, whether as a category of identity or critical framework, for understanding such liminal, borderline forms of (aural) difference where desire, and *not* stigma, is the priority?

Conclusion: Looking Beyond Staring

This chapter brings together an unlikely cast of musicians, each with disabilities with varying degrees of visibility, as a way of augmenting the critical discourse on disabled

performance in disability studies and in music research, from the standpoint of both the performer and the audience. At first glance, Quasthoff is visibly disabled, while Bocelli and Cox's disabilities are more inconspicuous from a visual standpoint. Grimes' speech impediment is specific to the aural sphere, intensifying the hyper-sexualization of her body and its visual presentation. A fundamental aim of this chapter has been to unsettle the visual bias in existing theories of disability reception as well as the seldom-acknowledged precondition of stigma therein, revealing an enriching set of variables (such as genre and aesthetic priorities) that come to bear on the ways we perform and read disability.

Several reflections arise from the discussion pertaining to the five case studies. First, there are inevitable tensions between disability as theory and disability as a lived social and physical experience. For some musicians, disability is indeed an ongoing aspect of their public image to consciously manage. However, some musicians resist framing their disabilities in the strategic terms supplied by existing disability theory. Not all performers are motivated by a fundamental concern for the representation of their disabilities, even when those disabilities are intensely visible. Quasthoff speaks of his disability frankly, deliberately avoiding platitudes. He also anticipates how disability relates to the different angles of his reception, though he is steadfast in his reluctance to intervene: he neither downplays nor flaunts his difference, neither in interviews or performances. Cox privileges the queer sensibilities of his persona over his disability; his physical "difference" contributes to a larger aesthetic of self-neglect and freakery. Although his flaunting often obscures his disability, it seems an act motivated by his devotion to his punk roots and not by an interest in defying disability stereotypes. Performances such as these at once reinforce and resist the dramaturgical construction of disability, just as they point up the slippage between strategic posturing and earnest self-expression.

Ellen Samuels highlights the drawbacks of identity politics in her "fantasies of identification" theory:

> Fantasy forms the bridge between the social and the textual, the material body and the discourses that constrain and enable that body's intelligibility. These fantasies jarringly combine a certain wistful desire to know and understand certain identities with persistent and often violent imposition of identity upon people whose subjectivity is overruled by a homogenizing, bureaucratic imperative.[110]

Indeed, a homogenized focus on disability identity has a way of eclipsing other forms of oppression. Popular discourse on musicians like Grimes, and to a lesser degree Cox, reflects forms of prejudice and scrutiny that, while overlapping with disability, are not about disability *per se*, but other more ambiguous sites of identity and oppression. For instance, a dysfluent voice such as Grimes' relates to a more generalized scrutinizing of women's voices and intensifies what is the underlying sexual objectification of women within contemporary culture. These liminal cases ultimately challenge the inferiority of disability relative to other positions of marginality.

Genres contextualize the performance of disability, often directing the course of its affects. For example, genres can neutralize a performer's disability, attenuating what might otherwise be understood as different or abnormal: even if Cox flaunts his body in his performances, this kind of freakish spectacle is a staple of much punk music such that its shock value is arguably neutralized. My case studies also illustrate the role of disability in specific ideologies of voice, as well as the role of voice in the construction of disability. In certain instances, a physical disability intensifies the metaphysical power ascribed to the singing voice,

[110] Samuels contends further that while civil rights movements such as disability rights created alternatives to institutionalized modes of identification, they "have not functioned, either historically or in their current incarnations, to significantly disrupt or dilute the influence of fantasies of identification in American or global power structures. These fantasies have not only persisted largely unchanged despite the radical cultural shifts produced by social justice movements but have often integrated the language and goals of those movements into their discursive structures and power regimes": Ellen Jean Samuels, *Fantasies of Identification: Disability, Gender, Race* (New York: NYU Press, 2014), 3.

as with Bocelli and Quasthoff, reinforcing the voice as idealized, immaterial object. By contrast, Grimes' speech impediment is ambiguous from the standpoint of disability, though its frequent characterization as "cute" corresponds to certain sexual fantasies related to her body in the minds of certain of her fans and critics.

There are limits to reception study. The reception of disability is a complex phenomenon to quantify. And professional newspaper and magazine coverage like concert reviews, album reviews, interviews, as well as amateur, fan-based media like blogs, discussion boards, YouTube commentary, and social media barely scratch the surface. We read and experience disability in music performance through our individual experiences. Our understanding of disability depends on such factors as our exposure to and relationship with disability, our previous exposure to the identity politics and emancipatory rhetoric of disability activism and/or other activist legacies and scholarships. Furthermore, our degree of familiarity with a musician's aesthetic, their generic sensibilities, and the central themes of their reception will also come to bear on our interpretation of disability. By exploring disability from the standpoint of the musician alongside the central themes of her/his reception, I reveal that performances and performers cannot anticipate or impose the identity of the audience, nor can they dictate an audience's member's precise mode of engagement. As audience members, we are inclined to project our own anxieties and fantasies onto an artist. And sometimes our desires and aspirations are wholly at odds with the musician's own aims. After all, musicians are mediated cultural products upon which audiences inscribe a wealth of identities, associations, and meanings; disability throws this identification process into sharp relief and raises its socio-political stakes. That Grimes' audiences persist in characterizing her as "cute" because of her lisp, or that Quasthoff's audiences fixate on the inspirational dimensions of his story despite the musicians' protestations

do not necessarily constitute a misreading on the parts of audiences. In truth, there can be no definitive performance or reception of disability.

Finally, the multisensory dynamics of music performance are in constant flux. The sonic and visual contours of disability are often seemingly in conflict, as in Quasthoff's case; there are instances when they work in tandem such as with Grimes, her lisp, and her femme-enfant image; and then there are moments when they are not altogether discreet, as in Cox's case where his musical and rhetorical strategies, both audible, are wholly integral to his visual performance of difference. Genre is the third order that shapes the meanings associated with the aural and visual dynamics of disability and music performance; it directs the legibility and audibility of disability. But genre is also an inherited code that is not grasped by all audience members and so cannot guarantee the politics of disability either. Finally, aural and visual codes are informed by so-called high-brow/low-brow divisions. The prestige of aurality in music discourse can free disability from its otherwise exclusively visual construction, rendering visible disabilities irrelevant. At the same time, it serves to reinforce the perceived aesthetic inferiority of so-called "low brow" music that the novelty of a visible disability ostensibly overshadows. The pre-eminence of the aural in music then is as versatile as it is paradoxical.

Chapter 4: Performing Beyond Dis/ability: Music, Technology, and the Body

Introduction

To begin his presentation on "Accessible Music" at the 2013 PopTech conference, Canadian violinist Adrian Anantawan asks: "What happens when a person meets a musical instrument?"[1] Born with a partial amputation to the right arm, Anantawan does anything but take this physical encounter for granted. What he calls his "spatula," a custom-designed prosthetic device that consists of a wearable cast hooking into the frog of the bow, has allowed him to adapt the violin and his playing technique according to the unique needs of his body. For Anantawan, the relationship between a violin and violinist functions in much the same way as the relationship between a wearable prosthetic device and its user. He elaborates: "the violin itself is a 16th century piece of technology. It was created to extend the range of the human voice….At its best, technology serves to extend the range of human capability."[2] He explains that the initial stumbling blocks in his musical education were not the alleged shortcomings of his body, but rather, the assumptions of his educators, and the limits of traditional instrument design. "In this sense disability was not only a social identity placed upon on my character," Anantawan explains, "but also the effect of my environment upon my ceiling of potential development."[3] With his prosthetic bow arm, Anantawan sounds like any other professional violinist.

Anantawan's story points to a larger nexus of ideals regarding the types of bodies that music performance and traditional instrument design have historically privileged, and how disability, as a potential marker of bodily difference, relates to and disrupts these ideals. Moreover, it compels us to evaluate how we qualify concepts like technology and prosthesis in

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[1] "Adrian Anantawan: Accessible Music," PopTech video, 17:25, October 25, 2012, accessed February 10, 2017, http://poptech.org/popcasts/adrian_anantawan_accessible_music.
[2] Ibid.
[3] Ibid.

relationship to music performance, and how this seldom-acknowledged qualification process might expose the constructed and contextual dynamics of disability. As Anantawan suggests, acoustic instruments supplement and augment the body, extending the range of the instrumentalist's gesture and expression. (An article appearing in *The Guardian* reporting on the recent work of researchers at McGill University's Input Devices and Music Interaction Lab (IDMIL) reflects on the physical ties between bodies and instruments: "Watching accomplished musicians in action, it can often seem that their instruments are natural extensions of their bodies – as if that violin had grown from their collar bone, or the intestinal loops of that tuba had burst out of their ample gut."[4]) If music making already presupposes integrated material dependence, why should a prosthetic device be treated any differently? And at what point does technological mediation in music signal an underlying disability or lack, or pose a threat to existing notions of bodily authenticity in musical expression, or intervene in naturalized conceptions of musical ability?

Disability and prosthesis share a long and complex history. Ideas about prosthesis are bound up in several intersecting discourses including medical engineering and rehabilitation, histories of technological innovation and material culture, science fiction, and disability studies. In its most literal sense, the prosthesis is a material object that physically supports, supplements, or enhances a part of the human body, the most familiar example being a prosthetic limb for an amputee; the prosthesis also generally implies some kind of lack in the wearer and is thus stigmatized relative to other supplemental technologies, inevitably conferring stigma back onto the wearer. Developments in modern prosthetic technology in particular are tied to the history of

[4] Oliver Wainwright, "Do You Play the Spine? Introducing Prosthetic Musical Instruments," *The Guardian,* August 9, 2013, accessed May 2, 2017, http://www.theguardian.com/artanddesign/architecture-design-blog/2013/aug/09/prosthetic-musical-instruments-interactive-dance.

20th Century warfare: disability entered Western social consciousness on an unprecedented scale in the years following the first World War as public spaces bore witness to a high number of amputee-war veterans who had been maimed on the battlefield, now donning makeshift wearable prosthetic limbs.[5] These prostheses typically served a dual purpose: to mask the stunted body part while providing the wearer with a greater degree of mobility. Demands for prostheses only increased after WWII as the technological advancements of modern warfare became more destructive. Since that time, prosthetic technology has vastly improved and has come to encompass a variety of different devices, both manual and robotic. For instance, there exist sensory and neural prostheses for ameliorating hearing and vision, such as cochlear implants or retinal prostheses. And new advances in robotic, myoelectric, and biosensory technology allow for neural-electrical integration of human body and technological device with such cutting-edge implantation techniques as osseointegration and transcutaneous wireless power transfer. Furthermore, there are numerous other devices not typically considered prostheses that prosthetically refigure the body including wheelchairs and canes; what are known as alternative and augmentative communication systems (AACs), such as speech generating devices and graphic/symbol communication;[6] and smaller assistive technologies like hearing aids, mobile apps, and even eyeglasses.[7] Suffice it to say, disabled people have long deployed a variety of

[5] See Katherine Ott, David Serlin, and Stephen Mihm, eds., *Artificial Parts, Practical Lives: Modern Histories of Prosthetics* (New York: New York University Press, 2002); Elspeth Brown, "The Prosthetics of Management: Motion Study, Photography, and the Industrialized Body in World War I America," in Ibid, 249-281; Bess Williamson, "Electric Moms and Quad Drivers: People with Disabilities Buying, Making and Using Technology in Postwar America," *American Studies* 52/1 (2012): 5-29; Sarah S. Lochlann Jain, *Injury: The Politics of Product Design and Safety Law in the United States* (Princeton: Princeton University Press, 2006); and Madeline Akrich, "The De-Scription of Technical Objects," in *Shaping Technology, Building Society: Studies in Sociotechnical Change*, eds. Wiebe Bijker and J. Law (Cambridge: MIT Press, 1992), 205-24.

[6] AAC include synthetic speech generating systems such as the eye-tracking device used by Stephan Hawking, or systems that use graphic and symbol communication alongside synthetic speech cues like the products manufactured by DynaVox for persons with Cerebral palsy. See also Meryl Alper, *Giving Voice: Mobile Communication, Disability and Inequality* (Cambridge: MIT Press, 2017).

[7] There are other types of prostheses that serve a predominantly cosmetic function like prosthetic breasts for breast cancer survivors or transsexual persons. In these instances, the prosthesis enables the wearer to comply with or

prosthetic devices to negotiate the demands of daily living with the limitations of their built environments, environments that are seldom accommodating of physical difference; for many disabled people, the prosthesis is an invaluable piece of technology that facilitates greater mobility and shapes their social interactions.

The prosthesis has likewise served as a potent metaphor in Western metaphysical thought, particularly in philosophical, psychoanalytic, and post-structuralist discourses on agency and desire. This is a tradition that intensified in the wake of Donna Haraway's touchstone 1985 text "A Cyborg Manifesto" and N. Katherine Hayles celebrated monograph on posthumanism, *How We Became Posthuman*, over a decade later (1999) where the prosthesis signals a breakdown of the conceptual boundaries between humans, machines, animals, and non-physical matter.[8] Science fiction has contributed to the allure of the prosthesis, equipping characters with artificial body parts as tokens of superhuman, cyborgian power. Indeed, as an extension of its symbolic currency and the influence of science fiction thereupon, the prosthesis increasingly symbolizes human advancement and the potential of techno-human integration. As one author detailing the history of the prosthesis writes, "From the ancient pyramids to World War I, the prosthetic field has morphed into a sophisticated example of man's determination to do better."[9] However, disability studies scholars argue that as a generalized symbol, the prosthesis describes "a vague and shifting constellation of relationships among bodies, technologies, and subjectivities" at the expense of an understanding grounded in the body of the user, effectively

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transgress normative conceptions of gender and/or sexuality. See for example Emily Grabham, "Bodily Integrity and the Surgical Management of Intersex," *Body & Society* 18/2 (Jun 2012): 1-26; and Audre Lorde, "Breast Cancer: Power vs. Prosthesis," *The Cancer Journals* (Argyle, NY: Spinsters Ink, 1980), 55-77.

[8] Donna Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991), 149-181; and Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (Chicago: University of Chicago Press, 1999).

[9] Kim M. Norton, "A Brief History of Prosthetics," *inMotion* 17/7 (Nov/Dec 2007): http://www.amputee-coalition.org/inmotion/nov_dec_07/history_prosthetics.html.

displacing disabled agency in a sort of "metaphorical opportunism."[10] The prospect of augmentation through prosthetic technology in particular rings hollow in the disability community. "I really don't understand the desire for enhancement technology when we don't even have basic health care… talk about misplaced priorities" explains disability activist Patty Berne in a sobering interview for the recent documentary film *FIXED: The Science/Fiction of Human Enhancement* (2013).[11]

This chapter investigates the relationship between music, disability, and technology through the accounts of two amputee prosthesis-wearing musicians, as well as through a discussion of several different musical prostheses, including prosthetics used by non-disabled musicians in multi-media performance, and digital musical instruments used in rehabilitative health care settings. Ultimately, the musicians considered in this chapter unsettle prevailing conceptions of musical ability through their use of prosthetic technologies, enriching our understanding of music performance. In particular, prosthetic technology and disability together expose the arbitrary nature of bodily authenticity as it relates to musical technique and

[10] Vivian Sobchack, "A Leg to Stand on: Prosthetics, Metaphor, and Materiality," in *Carnal Thoughts: Embodiment and Moving Image Culture* (Berkeley: University of California Press, 2004), 207. Similarly, S. Lochlann Jain writes that the prosthesis has become "a tempting theoretical gadget with which to examine the pourous places of bodies and tools": S. Lochlann Jain, "The Prosthetic Imagination: Enabling and Disabling the Prosthesis Trope," *Science, Technology & Human Values* 24/1 (Winter 1999): 49. For further disability studies, feminist, and queer approaches to prosthesis, see also Mitchell and Snyder, "Narrative Prosthesis and the Materiality of Metaphor," in *Narrative Prosthesis*, 47-64; Margrit Shildrick, "'Why Should Our Bodies End at the Skin?': Embodiment, Boundaries, and Somatechnics," *Hypatia* 30/1 (Winter 2015): 13-29; Shildrick, "Some Reflections on the Socio-cultural and Bioscientific Limits of Bodily Integrity," *Body & Society* 16/3 (2010): 11-22; Lesley Sharp, "The Invisible Woman: The Bioaesthetics of Engineered Bodies," *Body & Society* 17/1 (2011): 1-30; Amanda K. Booher, "Docile Bodies, Supercrips, and the Plays of Prosthetics," *International Journal of Feminist Approaches to Bioethics* 3/2 (2010): 63-89; Emily Grabham, "'Flagging the Skin': Corporeal Nationalism and the Properties of Belonging," *Body & Society* 15/1 (2009): 63-82; Sharon Betcher, "Putting My Foot (Prosthesis, Crutches, Phantom) Down: Considering Technology as Transcendence in the Writings of Donna Haraway," *Women's Studies Quarterly* 29/3 (Fall/Winter 2001): 35-53; Anne Cranny-Francis, "From Extension to Engagement: Mapping the Imaginary of Wearable Technology," *Visual Communication* 7/3 (2008): 363-382; and Craig Murray, "The Social Meanings of Prosthesis Use," *Journal of Health Psychology* 10/3 (2005): 425-44.

[11] Patty Berne in *FIXED: The Science/Fiction of Human Enhancement*, directed by Regan Brashear (US: Making Change Media, 2013).

expression. By surveying a range of musical technologies, the chapter also highlights the slippage between material and metaphorical conceptions of the prosthesis, and points up the constructed dynamics of disability.

To be sure, technology is ubiquitous in both live and recorded music today – everything from basic sound amplification technologies to microphones, to digital pitch correction software and quantized time. Yet we seldom acknowledge the extent to which technology has always constituted and shaped our musical experiences: bone flutes, drums, and more modern acoustic instruments such as violins, marimbas, and pianos are all arguably "technologies." Indeed, we have arbitrary ways of qualifying what does and does not count as technological mediation as the technological dimensions of musical instruments undergo a process of assimilation and subsequent invisibilization. Perhaps we call attention to the former examples as technologies relative to acoustic instruments because acoustic instruments have simply been around for longer, having thus already undergone this inevitable process of assimilation.[12] (This process of assimilation is ultimately due to the genesis and persistence of the ideal of invisibility discussed at length in previous chapters, an ideal originating in 19th century aesthetic discourse on absolute music.) Prosthetic technologies used in musical settings seem in an altogether different class of technology: they are not part of the usual equipment required to play, perform, and record music as with the aforementioned examples, and furthermore, they seemingly reconfigure the body of the performer in a way that musical instruments, sound amplification devices, and recording and production software do not. Put differently, prosthetic devices literally supplement the flesh of

[12] See Emily Dolan, *The Orchestral Revolution: Haydn and the Technologies of Timbre* (Cambridge: Cambridge University Press, 2013); Jonathan De Souza, *Music at Hand: Instruments, Bodies, and Cognition* (Oxford: Oxford University Press, 2017). For a pertinent discussion of embodiment and electronic musical instruments see Deniz Peters, Gerhard Eckel, and Andreas Dorschel, eds., *Bodily Expression in Electronic Music: Perspectives on Reclaiming Peformativity* (New York: Routledge, 2012).

the player's body where there is an implied corporeal lack, and therefore seemingly interrupt direct, organic contact between a player's body and their instrument. It is in this sense that the prosthesis can provoke anxiety or surprise over a performer's underlying musical abilities and the integrity of their musical expression. I argue that there exists an ill-defined threshold of permissibility regarding technological intervention in music that varies from one genre to the next, particularly as it relates to the body of the performer. Often experimental and multi-media contexts are the most receptive of overt technological innovation, whereas classical music and even popular music are less forgiving, despite a broad, albeit unacknowledged network of pre-existing technological dependence. Together, disability and prosthesis only enrich our sense of embodiment and bodily authenticity in conventional music-making paradigms.

Adrian Anantawan: "The Hand is Artifice; the Talent, Quite Real"[13]

Adrian Anantawan boasts an impressive musical pedigree: he has performance degrees from the Curtis Institute of Music and Yale University, and has studied under Itzhak Perlman, Pinchas Zukerman, and Peter Oundijian. He has graced the stages at Carnegie Hall and the White House, played at the Opening Ceremonies of the 2010 Vancouver Winter Olympics, and for the Dalai Lama and the late Pope John Paul II. Incidentally, Anantawan is a foetal amputee, that is, he was born with a partial amputation; in utero, the umbilical cord wrapped around his right hand, cutting off the blood supply and preventing it from growing.

While his classmates learned the recorder, Anantawan opted to learn the violin, an instrument that offered greater opportunities for adaptation. He credits the success of this seemingly illogical decision to his parents' "ignorance" and his own resolve: "We were

[13] Peter Dobrin, "The Hand is Artifice; the Talent, Quite Real," *Philadelphia Inquirer* H.1, July 1, 2000.

successful because of that ignorance… we came from the premise of 'why not?'"[14] Anantawan's parents thus sought out skilled biomedical engineers at the Bloorview MacMillan Rehabilitation Centre in Toronto who designed a custom-fitted prosthetic device: what Anantawan calls his "spatula" is made from a plaster cast that he fastens tightly around his bicep with Velcro straps. The bottom of the spatula extends underneath and beyond the end of his arm, sliding and fastening into an aluminum bracket positioned along the top of the stick of the bow, just above the frog. The spatula can rotate on an angle such that the violinist is able to quickly and fluidly manoeuvre the bow, sensing and responding to the strings' vibrations as they pass through it (see Figure 4.1).

His prosthetic bow-arm differs from other multi-purpose prosthetic devices: this is a specialty device serving a specific function, custom-designed exclusively for playing the violin and not for generalized everyday use.[15] And in a time of technologically sophisticated and stylish designs like the haute-couture legs of Paralympic champion turned-model Aimee Mullins or UK musician Viktoria Modesta, Anantawan's spatula looks makeshift and crude. If anything, its characteristic strangeness draws attention to his amputation, readily exposing his stubby fingers. For Anantawan, the practical advantages the spatula affords take precedence over discretion and style. Yet, like most prosthetic devices, Anantawan's spatula does not offer full comprehensive

[14] Colleen Walsh, "In Tune Without Limits: Despite Lacking a Hand, Violinist Makes Beautiful Music and More," *Harvard Gazette*, March 22, 2012, accessed February 11, 2017, http://news.harvard.edu/gazette/story/2012/03/in-tune-without-limits/.

[15] Specialized adaptive upper-limb prosthetic components for sports and recreation have long existed. For example, the Hosmer-Dorrance baseball and bowling adapters were manufactured and made commercially available in the 1970s. Since then there have been many sport-specific devices designed and manufactured for archery, canoeing/kayaking, golf, waterskiing, swimming, etc. Designs have evolved and improved with the influence of the Paralympic Games and technological advancements in aerospace design. By contrast, there are fewer commercially available prosthetic devices for music-making. Nearly all prosthetic adaptations for musicians are custom-made since requirements are instrument specific, and preferences and sizing vary from player to player. See Bob Radocy, "Special Considerations: Upper-Limb Prosthetic Adaptations for Sports and Recreation," in *Atlas of Limb Prosthetics: Surgical, Prosthetic, and Rehabilitation Principles*, ed. John H Bowker and Michael JW (Rosemont, IL: American Academy of Orthopedic Surgeons, 2002): http://www.oandplibrary.org/alp/chap12-03.asp.

adaptation. He has thus developed and mastered his own set of physical adaptations alongside his prosthesis to satisfy the technical demands of classical violin playing, an intimate set of idiosyncratic learned techniques that take the mechanical constraints of the prosthetic device, the mechanical constraints of the musical instrument, and the unique material dimensions of his body into account. (As Arseli Dokumaci observes, when and where the appropriate prosthetic technology is unavailable or fails, disabled people typically devise inventive ways of adapting their environments and repurposing physical objects in unorthodox ways to better serve the unique needs of their bodies, rewriting the "choreographies" of everyday disabled living.[16])

Figure 4.1 Adrian Anantawan. Chartwell Speakers online. Accessed May 31, 2017. http://www.chartwellspeakers.com/speaker/adrian-anantawan/

[16] For instance, quadriplegic Eric Wan remembers the difficulties he had reading books as a university student several decades ago before the digitization of printed texts. A task as simple as propping open a book proved nearly impossible for Wan. He thus used a bookstand and held a pen in his mouth to turn the pages. See Vanessa Lu, "Quadriplegic engineer brings joy of music to disabled kids," *Toronto Star*, October 8, 2010, accessed February 11, 2017, http://www.thestar.com/yourtoronto/yourcitymycity/2010/10/08/quadriplegic_engineer_brings_joy_of_music_to_disabled_kids.html. Performance theorist Arseli Dokumaci calls creative self-accommodation tactics such as Wan's "radical affordances" that re-write the "choreographies" of everyday disabled living. See "Arseli Dokumaci: Disability and Affordances of the Everyday," Vimeo video, (Mobilities.ca Channel), 3:25, 2013, accessed February 11, 2017, https://vimeo.com/65867695.

For instance, since the disproportionate shortness of Anantawan's right forearm relative to the bow prevents full use of the bow, he applies more weight to the bow to lengthen its duration, and also draws it along and across the strings at unusual angles, often perpendicular to the bridge, having reset the placement of the chin rest so that it is centred with the bridge. The rate at which he alternates between up and down bows is faster than with most violinists due to the shortness of his arm.[17] By contrast, classical string players typically strive to keep the bow parallel to the bridge in order to achieve optimal sound resonance and make full use of the bow. Pizzicato and staccato initially posed considerable challenges for the young violinist since both require significant finger dexterity in the right hand. Anantawan now plays with a special spatula extension that can "pluck" the strings – which sounds "quite natural" to former teacher Ida Kassavian – and over the years he has refined his bow control, articulating clearly in the lower half of the bow, close to the frog where staccato is typically played.[18] All of these unique adaptations contribute to the characteristic harshness and rigidity of Anantawan's sound, what he calls his "sonic fingerprint," a stylistic device that falls unequivocally within the range of individual expressive liberties that classical violin playing accepts and welcomes from its players.[19]

Anantawan's prosthetic adaptation ultimately undermines the prevailing physical ideals encoded in classical string playing discourse. Indeed, he writes that classical music is "an art that relies heavily upon tradition and historical context." He continues,

> [I]n what may constitute a poetic irony, it is within the world of disability that we see through a mirror into what currently ails classical music. What is the relevance for a child

[17] Dobrin, "The Hand is Artifice," *Philadelphia Inquirer*.
[18] Ibid.
[19] That it is impossible to fully articulate and quantify this threshold of acceptability already assumes a degree of insider knowledge and privilege that is specific to classical music.

> with neuromuscular or orthopaedic condition so severe that he is unable to manipulate the physical world around him (or traditional musical instrument) in a meaningful way?[20]

(He goes on to suggest that classical music's survival hinges on making it relevant to a greater number of people through technological adaptation, enabling and equipping bodies otherwise unable to meet its intensely physical demands.[21]) In Anantawan's paradigm, the objective is not to harness the creative possibilities of the disabled body, as in Christine Sun Kim's model, but rather, to use technology to attain and uphold the aesthetic principles of classical violin performance. For Anantawan, bespoke adaptation bridges physical disability with classical music: using technology, he circumvents the constructed normalcy of the classical tradition, that is, the physical biases implicit in instrument design, conventions that enable some bodies while disabling others. In the very least, classical violin playing requires two hands to execute its dual task, fingering and bowing; without these, the player is effectively disabled, at odds with the physical norms encoded in the instrument's design. Even with two hands, consistently conforming to this constructed normalcy is a precarious endeavor as professional classical violin playing requires both finesse and physical stamina; the player need master a set of intricate corporeal techniques not easily executed by the average able-bodied person. Further, repetitive strain injury or injury of any kind, whether in the fingers, hands, arms or shoulders, can also impede a player's ability to conform to these physical demands. (In fact, repetitive strain injury is often a result of the combined ergonomics of violin design/playing, improper technique, and the stamina required of players; with classical violin playing, there is always a chance a player can acquire a disability through playing). Claims Howe, "notably, the normal [musical] performance body is much more regulated than other forms of constructed normalcy: even the

[20] Adrian Anantawan, "VMI Initiative: An Introduction," Adrian Anantawan website, July 13, 2011, accessed February 11, 2017, http://www.adriananantawan.com/disability-and-inclusion/an-introduction.
[21] Ibid.

tiniest deviations – a sore knuckle, a swollen lip, mild sinus congestion, a shortened pinky – can audibly impair a body during music performance."[22] Thus, the constructed normalcy of classical string playing does not simply privilege able-bodiedness, but arguably demands a hyper-able-bodiedness from its star performers. In Anantawan's paradigm then, the classical tradition and its demand for hyper-ablebodiedness remains the conceptual absolute and the violin its prized object, but its constructed normalcy can be circumvented through customized technological adaptation.

Through his idiosyncratic adaptations, Anantawan exposes the contrivance of expressivity in violin playing technique. The usual elusive interplay between technique and personal expression familiar to most instrumentalists is a core element of Anantawan's approach, though he does not take it for granted: "You're thinking, 'what do I want to express?' and then your body finds a way to do it. That happens with everyone. But for me, it's more explicit. I've had to really think, because there's no manual to (learn to) play with one hand."[23] The bow-grip in particular has long enjoyed pride of place in the impassioned history of classical string playing pedagogy, where the fluid motion of the wrist and fingers is believed to correspond directly to expression and tone, whether with a period or modern bow. Unequivocally, developing a proper bow grip and bowing technique are typically portrayed as the key to achieving a beautiful sound, as the bow executes precise rhythm, dynamics, articulation, and timbre.[24] For instance, in a recent blog post for *The Strad*, a popular string playing magazine, violinist Aaron Rosand writes that bow control, "rests mainly in the fingers of your right hand, as these are the principal players in this procedure." He describes the importance of wrist action in rapid détaché passages, and the

[22] Howe, "Disabled Music Performance," 197.
[23] "Adrian Anantawan," *PopTech* video.
[24] See Mark Katz, *The Violin: A Research and Information Guide* (New York: Routledge, 2006), 1.

precise positioning of the index finger: "most importantly, do not grip tightly. The hand and fingers must constantly be relaxed to produce the best results in legato or rapid passage work…the sensitivity of the fingers is the key to the mastery of the bow."[25] John Berger explains furthermore that "it is the right arm, the bowing arm, that is the living instrument of expression of the music's soul…. how sound is transformed into music."[26] The expectation is that in time, these fine movements become at once automatic and intuitive, deliberate and fluid, and above all, artful without being mechanical. This is what Pauline Lerner writes is the "interplay between technique and artistry," what is thought of as a fundamental aspect of musicianship.[27]

Despite the romanticization of technique in relationship to musical expressivity in string playing discourse and institutionalized instruction, however, the constructed normalcy of string playing is already technologically mediated in that it encompasses a long and ongoing history of technological adaptation and personalization, a tradition to which Anantawan's bowing technology and playing techniques belong. Since the 16th Century, violinists and pedagogues have sought to optimize playing technique through experimentation as the instrument's design evolved over time. It was not until the 19th Century that any semblance of a standard technical procedure crystallized. Over the course of its history, the violin has been held and continues to be held in any number of different positions – at the chest, the shoulder, and the neck. And chinrests and shoulder pads of any variety, as 19th century technological innovations, marked a departure

[25] Aaron Rosand, "Violinist Aaron Rosand on Improving Technique," *The Strad,* April 22, 2014, accessed July 13, 2016, http://www.thestrad.com/cpt-latests/violinist-aaron-rosand-on-improving-bow-technique/. The magazine has featured countless other articles addressing the bow grip, from "How to Produce a Beautiful Tone," or the "relaxation and finesse" needed "for good tone production." See for example, Aaron Rosand, " 'Every Bow Movement Should be Calculated,' says Violinist Aaron Rosand," *The Strad,* September 3, 2015, accessed July 13, 2016, http://www.thestrad.com/cpt-latests/every-bow-movement-should-be-calculated-says-violinist-aaron-rosand/.
[26] John Berger, "How to Teach Beautiful Violin Bowing," *Teach Suzuki Violin: The Guide for Teachers, Parents and Students* (blog), March 4, 2015, accessed May 2, 2017, http://teachsuzukiviolin.com/how-to-teach-beautiful-violin-bowing/.
[27] Pauline Lerner, "Brains of Violinist," *Violin Blogs* (blog), Violinist website, October 17, 2006, accessed February 11, 2017, http://www.violinist.com/blog/paulinefiddle/200610/5901/

from period playing, along with the modern bow and the modern violin. The chinrest was meant to free up the left hand as repertoire increased in technical difficulty, and the shoulder pad to offer players greater stability and comfort. While the left-sided chinrest placement eventually became standard practice, today chinrest positioning is varied and players play with any number of different chinrest shapes and sizes, depending on their individual preferences and levels of comfort. Just as some players consistently use a shoulder pad, others feel it compromises the quality of the sound. Bowing technologies have also evolved considerably over the years: the arc of a modern bow is opposite that of a Baroque bow, making it easier to sustain tone at the bow tip by pivoting hand pressure towards the index finger. But even among users of modern bows, there are different schools of thought regarding optimal bow hold. For instance, some players will hold the bow several inches up from the frog to approximate the balance of a Baroque bow, while others grip at the frog to maintain full use of the bow. Suffice it to say, that even as modern string instrument design has been standardized and presumes a set of physical preconditions for the player, the logistical dynamics and finer points of any basic technical procedure are highly variable. Thus just as Anantawan circumvents the constructed normalcy of violin playing, he exposes and extends what is a longstanding tradition of technological innovation and personalized technical skill belonging to this constructed normalcy through his bowing technology. Music's "constructed normalcy" has always been technologically mediated. After all, Anantawan reminds us that, "the violin itself is a 16th century piece of technology. It was created to extend the range of the human voice…. At its best, technology serves to extend the range of human capability."[28]

[28] Anantawan in "Adrian Anantawan: Accessible Music," PopTech video.

But Anantawan's prosthetic device is still *marked* relative to the violin and its component parts. This is because his prosthesis visibly intervenes in the mechanics of music making while the technologically mediated dimensions of violin playing have long since faded from plain sight, so to speak: his prosthesis artificially supplements a missing limb, erecting a barrier between the flesh of the player's body and the bow, thereby violating the naturalness associated with bodily authenticity in discourses on musical talent and expression. In particular, the seeming artificiality of Anantawan's prosthesis along with the visible nature of his disability mark his performance, ostensibly violating the ideal of invisibility encoded in classical music performance, at least in optical terms. But it is this very ideal of invisibility that is also behind the valorization of Anantawan's *sound*: the fact that he can render what is an intensely visible marker of artificiality and physical difference inaudible (and thereby, aesthetically irrelevant) through his near perfect sound is widely celebrated throughout his reception. For instance, Wanda Kalzuny of the Montreal Chamber Orchestra claims, "If you don't know about his arm, you're just listening to his music." Similarly, Montreal critic Claude Gringas considers how Anantawan's performance registers as an aural/visual incongruity on account of the violinist's sound when he opines that, "It is hard to assess such an achievement objectively. Would a blindfolded critic note Anantawan's simple legato style in Mozart's Violin Concerto No. 4? Or does the ear follow the evidence of the eyes and produce the audio evidence?" Finally, Arthur Kaptainis praises Anantawan's playing on the basis of his technical aptitude, one discerned exclusively through aural cues: "the young Canadian violinist Adrian Anantawan, disabled of the right hand has a lot of merit because Mozart's writing does not forgive."[29] Even more to the

[29] Wanda Kalzuny and Claude Gringas quoted in "Press and Acclaim," Adrian Anantawan website, accessed May 2, 2017, http://www.adrianananantawan.com/press.php; and Arthur Kaptainis, "Violinist Doesn't Bow to Adversity," *Montreal Gazette*, April 8, 2008.

point is one CNN music critic's suggestion that if Anantawan's "audience closed their eyes…they would never know the violinist standing before them has no right hand, only a stunted appendage with tiny stubs instead of fingers, which is fitting because Adrian Anantawan prefers to be judged for what people hear, not what they see."[30]

For Anantawan's critics, the evidence of his merits thus lie in his sound. And like many disabled musicians working in the classical tradition, Anantawan is also invested in this notion, as the CNN writer suggests above: he upholds the ideal of invisibility as a way of neutralizing the usual passive scripts and stigmatized optics that visible disabilities often elicit, ones that the spectacle of live music performance typically intensify. And it is his technical aptitude and his ability to sonically conform to the aesthetic norms of violin performance that facilitate the temporary suspension of the visual order, as Kaptainis suggests. (Indeed, John Corbett claims that the primary motivation for cultivating what he calls "correct and well-disciplined musicianship" is to "ensure the reproduction of music outside, off the surface of, away from the performer. Standard technical facility is therefore a strategy by which the instrument and performer are both denied a certain kind of presence in the performance."[31]) The abstract power of music as a sonic medium, a notion implicit in the ideal of invisibility, thus valorizes and emancipates disabled performance, shifting focus away from the stigmatized body towards to the quality of the music itself. (But the ideal of invisibility is arguably a paradoxical strategy in that it reinforces the shame associated with disability.)

Anantawan's case ultimately compels a paradigmatic shift in thinking with respect to music and embodiment: we would do well to understand seemingly overt types of technological

[30] Anantawan in Brandon Griggs, "One-handed Violinist Helps the Disabled Make Music," *CNN*, March 22, 2013, accessed May 2, 2017, http://www.cnn.com/2013/03/15/tech/innovation/adrian-anantawan-violinist/.
[31] John Corbett, "Ephemera Underscored: Writing Around Free Improvisation," in *Jazz Among the Discourses*, ed. Krin Gabbard (Durham: Duke University Press, 1995), 226-27.

mediation such as Anantawan's prosthetic bow-arm as belonging squarely within the full spectrum of human embodiment, just as they build on a longstanding tradition of technological mediation in classical music performance. Anantawan has never known full use of his missing limb: he learned to play the violin and developed his playing techniques in conjunction with his spatula. It is inseparable from his body's grasp of the violin and is as integral to his playing as the violin and the bow. His spatula fills a space between his body and his instrument, and carries with it the imprint of several decades of practice and durability; he has used it since childhood, and it has required only minor adjustments over the years, withstanding the test of time. As Tobin Siebers argues, "embodiment seen complexly understands disability as an epistemology that rejects the temptation to value the body other than what it was and that embraces what the body has become and will become relative to the demands on it, whether environmental, representational, or corporeal."[32] Anantawan's account also enriches customary notions of musical ability. Classical music is thought a meritocracy where ideas about musical ability centre on notions of bodily discipline and inborn, prodigious talent. Technology seemingly interferes with these ideals even though it is absolutely essential to them. Anantawan's prosthetic device is arguably only permissible because he is disabled; similar technological adaptation among able-bodied musicians might provoke concern over musical ability, ethics, and fairness. Even as there exists greater acceptance around adaptation in string playing due to the prevalence of repetitive strain injury among professional musicians, the onus is on the player to adapt her technique accordingly. For instance, even the violin's potentially disabling capacities, that is, the physical discomforts associated with its unique design, combined with the repetitive motions of repertoire and the stamina required of players, are not thought remedied by recourse to technological

[32] Siebers, *Disability Theory*, 27.

adaption, but by disciplining the body anew through conscious, thoughtful practice. Musical ability, it would seem, must exist independently of technological mediation.

Jason Barnes: The Cyborg Drummer

In 2012, Jason Barnes was electrocuted while cleaning out a restaurant exhaust system, a traumatic accident that he has difficulty recalling in any great detail beyond the sudden and overwhelming feeling of "fear, a loud explosion of sound, and a pink flash of light."[33] The burns Barnes suffered on his right hand as a result caused permanent nerve damage. The doctor's prognosis: Barnes would never regain use of his hand, thus amputation was the most sensible course of action and one that would facilitate the smoothest recovery. The then twenty-two-year-old had long planned to pursue a professional career in jazz drumming. Largely out of desperation and "boredom," Barnes created a makeshift drum-playing device by taping a drumstick to his right forearm. He first experimented by thrashing around on his drum kit, often playing through excruciating pain as his arm had yet to fully recover, slowly making minor improvements to the initial design. He eventually fashioned his own crude arm brace with a drumstick and springs. Music became a vital part of his rehabilitation process where the drummer was inspired to reinvent the wheel, learning and improving upon his strategies as he went along. While the accident had severely compromised the physical mechanics of his former playing technique, Barnes, through meticulous, painstaking labours, devised a new playing technique and regained such a high degree of musical aptitude that he was admitted to the Atlanta Institute of Music and Media. Under the tutelage of his drumming instructor, Eric Sanders, Barnes was able to further develop and refine his playing style. The pair surmised that

[33] Barnes in "GTCMT Robotic Musicianship Concert – Highlights," YouTube video, (Georgia Tech Center for Music Technology Channel), 17:40, April 6, 2014, accessed February 11, 2017, https://www.youtube.com/watch?v=dlSZCu5FAVM&feature=youtu.be.

Barnes would have even greater success controlling the drumstick with a custom-built myoelectric drumming device. Sanders thus sought out the expertise of Gil Weinberg of the Robotic Musicianship division at the Georgia Tech Center for Music Technology. Since Weinberg's most well-known inventions were a series of fully autonomous musical robots, Barnes presented a new opportunity for the roboticist to finally apply his insights on music and robotic technology to human beings. He reflects on that thought-process: "The next interesting step is to see what happens when you are part of the robot and the robot is part of you."[34]

Weinberg's "robotic arm" for Barnes consists of a black fibreglass cast that runs the length of the drummer's forearm with an attached robotic extension containing two drumsticks (see Figure 4.2). The prosthesis suctions to his arm (rather than attaching with straps and/or a brace) in order provide optimal suspension. With its flashing blue and red LED lights and its mechanical guts exposed -- plastic spokes, wiring, motors, springs, and metallic screws, etc. – it looks a great deal more sophisticated than Anantawan's spatula. Indeed, whereas the violinist's spatula is a bodily-powered prosthesis that relies entirely on the player's physical motions to initiate, direct, and control its movement, Barnes' drumming device is an artificial limb powered by electronic motors and uses what is called myoelectric technology (EMG): small electronic sensors at the suction point between the device and the arm detect residual neuromuscular activity in Barnes' upper arm and translate these signals into precise physical movements and gestures that the device carries out with precision and efficiency. The acuteness of these sensors means that by simply varying his muscle intensity, Barnes can achieve any number of expressive effects with the first drumstick, and can track his ongoing refinements through a computer. There

[34] Weinberg in Aviva Rutkin, "Bionic arm gives cyborg drummer superhuman skills," *New Scientist*, March 6, 2014, accessed February 11, 2017, https://www.newscientist.com/article/dn25142-bionic-arm-gives-cyborg-drummer-superhuman-skills/.

are also certain parameters that he can manually control, if he so chooses: on the arm is a knob that he can use to adjust the tightness of his stick grip. When the knob is tightened, the attack is clean and precise; once loosened, the attack is less cutting, rattling between successive drum strokes. He also has a set of electric pedals at his feet for adjusting tempi. The second stick is fully autonomous, running off its own computer: it is "an arm with a mind of its own," as the press release on the Georgia Tech Robotic Musicianship website touts.[35] Weinberg explains that "the second stick 'listens' to the music being played [by the other stick] and improvises."[36] The second stick is thus an additional, though fully integrated dimension, ideally giving Barnes a cutting edge over his drumming peers. For instance, with three drumsticks, Barnes can play three rhythms simultaneously as part of a polyrhythmic complex. And he can play a drumroll with a single arm at twenty hits per second, a speed far surpassing that of the best professional level drummers. Additionally, his second stick can be programmed in advance to execute complex rhythms and patterns (such as the signature rhythms of the late physicist/drummer Richard Feynman, as in a recent performance).[37]

[35] "GTCMT – Robotic Drum Prosthesis Project," YouTube video, (Georgia Tech Center for Music Technology Channel), 1:48, March 3, 2014, accessed February 11, 2017, https://www.youtube.com/watch?list=PLA5dALc3G8POn27MIzSNyVx2WFWm8iRWo&v=ntrlHw6f4E4.
[36] Ibid.
[37] Weinberg in "GTCMT Robotic Musicianship Concert – Highlights," YouTube video.

Figure 4.2 Jason Barnes. Photograph by Rob Felt/Georgia Tech. Published in *New Scientist*, March 6, 2014. Accessed May 31, 2017. https://www.newscientist.com/article/dn25142-bionic-arm-gives-cyborg-drummer-superhuman-skills/

The improvising second stick was a dimension Weinberg incorporated as a natural outgrowth of his pre-existing work on "artificial creativity" in musical robots. Weinberg's lab's most famous creation is "Shimon," an autonomous marimba-playing robot that can improvise alongside human musicians while also gesticulating, eerily bobbing his robotic head to the beat, or, as American television host and political satirist Stephen Colbert observes, Shimon can "dig the music, too!"[38] Weinberg admits that his interest in robotic technology is informed by a longstanding fascination with science fiction and the prospect of artificial creativity, what he suspects is a menacing prospect being that creativity is typically believed to be an exclusively human ability. Indeed, as one writer for *Gizmodo*, a popular online tech publication, comically opines as he discusses the musical robot Shimon: "it's over. Improvisational jazz was the last robot-free area humans had left, and now it's tainted by the machines… At least they'll be able

[38] Stephen Colbert in "media36," Vimeo video, (Georgia Tech – GTCMT channel), 0:28, December 2014, accessed February 11, 2017, https://vimeo.com/108660648.

to carry a tune as we march into the slave pits."[39] The writer's commentary is telling: improvisation is a mode of playing that ostensibly requires an elusive combination of intuition, spontaneity, and inventiveness; it is also ephemeral. (Consider the description on the website for McGill's Institute for Improvisation, Community, and Social Practice (ICASP): "As a form of musical practice, improvisation embodies real-time creative decision-making, risk-taking, and collaboration."[40]) An improvised line derived solely from algorithms and complex signal processing seems antithetical to the type of creative, fluid brilliance that good improvisation and musicality is customarily thought to entail. To remedy the anxieties he suspects are associated with full-scale musical mechanization and artificial creativity in robots, Weinberg suggests that "maybe if we embed this artificial creativity in humans, we should be okay," hence Barnes' drumming arm.[41]

Fittingly, Barnes' reception among tech industry enthusiasts celebrates his ostensibly superhuman abilities and his image as a bionic, cyborg drummer (what is merely another version of the disabled supercrip narrative). One headline for *Gizmodo* proclaims that, "This Bionic Drummer Arm is Like Def Leppard 2.0,"[42] suggesting that Barnes has the potential to outdo the likes of Def Leppard drummer Rick Allen. (Allen, lovingly dubbed "The Thunder God" by fans, continued to play drums after losing his left arm in a car accident, propelling the band into the most commercially prosperous phase of its career.) No doubt Barnes' reception, like Allen's, is

[39] Jack Loftus, "Shimon Robot Takes Over Jazz As Doomsday Gets a Bit More Musical," *Gizmodo*, April 26, 2009, accessed May 2, 2017, http://gizmodo.com/5228375/shimon-robot-takes-over-jazz-as-doomsday-gets-a-bit-more-musical.
[40] "Research," Improvisation, Community, and Social Practice website, accessed May 2, 2017, http://www.improvcommunity.ca/about/research.
[41] "GTCMT Robotic Musicianship Concert – Highlights," YouTube video.
[42] Andrew Liszweski, "This Bionic Drummer Arm is Like Def Leppard 2.0," *Gizmodo*, March 3, 2014, accessed February 11, 2017, http://gizmodo.com/this-bionic-drummer-arm-is-like-def-leppard-2-0-1537687653.

also tied to a hyper-masculinist virtuosity ingrained in certain heavy metal and jazz traditions.[43] Weinberg himself proclaims that Barnes is "the envy of all kinds of heavy metal drummers who would love to have his speed."[44]

There is a sense in which Barnes' disability intensifies the superhuman abilities encoded in his autonomous drum stick while also neutralizing the threat that Weinberg claims technological enhancement poses to existing conceptions of musical ability. In a recent interview about an upcoming concert featuring Barnes, Shimon, and some of the lab's other musical robots, the inventor exclaims, "I see a future whether it's sports, or music in this sense, where actually the disabled people who have lost a limb or people who had disabilities, are augmented in a way that lets them actually, maybe run faster, if we're talking about legs, or play more interesting music, is maybe the next step."[45] To be sure, Weinberg, as inventor, controls the majority of the drummer's PR. And the bulk of Barnes' performances available online come almost exclusively from tech industry expos, raising questions over the device's feasibility in a live musical setting without the inventor's direct involvement and supervision. Nevertheless, it remains to be seen whether a prosthesis bestowing such unprecedented levels of technical potential would be celebrated as readily if Barnes was not disabled, that is, if the prosthesis was worn by an able-bodied musician. It is arguably the fact that Barnes is already at a physical disadvantage compared to other drummers that renders his prosthesis acceptable in the minds of audiences and techies. The same is true of Anantawan's spatula, though unlike Barnes'

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[43] See Robert Walser, *Running with the Devil: Power, Gender, and Madness in Heavy Metal Music* (Hanover: Wesleyan University Press, 1993).
[44] Weinberg in "GTCMT Robotic Musicianship Concert."
[45] Weinberg in Jorge Branco, "Cyborg Drummer Jason Barnes Coming to Robotronica in Brisbane with Shimon Robot," *Brisbane Times,* August 14, 2015, accessed February 11, 2017, http://www.brisbanetimes.com.au/queensland/cyborg-drummer-jason-barnes-coming-to-robotronica-in-brisbane-with-shimon-robot-20150813-giyguz.html; and "25 years on, celebrating ADA's advances while facing stubborn barriers," PBS Newshour, July 23, 2015, accessed February 12, 2017, http://www.pbs.org/newshour/bb/25-years-celebrating-adas-advances-facing-stubborn-barriers/#.Vc4972NoEWw.wordpress.

drumstick, it boasts fewer explicit technical advantages. Barnes' prosthesis is a novel form of technological enhancement, whereas Anantawan's prosthetic bowing arm is merely a form of customized assistive technology, one that affords conformity with existing aesthetic conventions in violin performance. (If anything, Anantawan's spatula comes with its known share of disadvantages that the violinist has had to find ways of addressing, as with pizzicato and staccato.) And yet, Weinberg's pronouncements regarding the extraordinary, superhuman qualities of Barnes' drumming arm rely on a limited number of parameters, namely speed and rhythmic complexity. To be sure, tempo and rhythm are among a small number of truly measurable parameters constituting musical ability (other measurable parameters might include pitch and volume), as opposed to more ambiguous qualities like agility, sensitivity, and musicality. But tempo and rhythm alone are hardly a robust framework for assessing interest or advantage, as Weinberg hopes. Why ought we to privilege speed and rhythmic complexity when assessing the merits of a musical performance, or evaluating a performer's musical abilities and expressive capacities? How do we even begin to quantify what comprises musical ability? Disability and technological enhancement together thus point up the elusive nature of musical ability, and the arbitrariness of the technological variables that constitute it.

Barnes' account also presents an opportunity to consider the relationship between disability, technological enhancement, and affect. There is a sense in which prosthetic technology challenges existing conceptions of bodily authenticity and naturalness that figure in customary evaluations of musicality. The legacy of both performance enhancement and Paralympians in professional competitive sport offers some useful points of comparison in this regard. Drawing on Andreas De Block's discussion of cheating in relationship to art forgery and doping in sport, Lauri Stras, in her recent essay on Auto-Tune, explains that our aesthetic

response to art, sport, and music is "linked to our valuation of the athlete's/artist's/performer's achievement in bringing a performance – or an artwork – to fruition." When we discover that a performance has been mediated or enhanced through technology, the appraisal of the performance fixates on the prospect of deception. Stras notes furthermore that audiences/spectators are inclined to perceive something as "unnatural" when there is

> a mismatch between the body of the performer and the practice it adopts. These practices are ultimately culturally determined, so not reliant on a scientific measure of what is natural and what is artificial…the greater mismatch between the body and the practice, the more difficult it is to accord aesthetic value to that performance.[46]

With respect to aesthetic value in music performance in particular, robots, computers, and autonomous technologies are not typically thought capable of genuine feeling; the very thing that separates human performers from machines is that we have the capacity to think and *feel* intuitively, or to create music naturally (as opposed to artificially), as Weinberg would have it. Consider engineer/music composer Tom "Squarepusher" Jenkinson's own reflections following a recent commission to compose for Z-Machines, a group of Japanese designed autonomous robots that play the guitar. Certain of these robots are equipped with as many as 78 fingers and 12 picks, boasting endless potential for polyphony, rhythmic complexity, and finger interdependence within a single robotic player. Ultimately, this was an experience that, for Jenkinsen, highlighted the irreproducibility of the fundamentally human dimensions of music making:

> My take on it would be that actually it's probably not quite as compelling as watching a human being because there is no sense of struggle. It's like watching an automatic typewriter or a washing machine… Certainly when I have listened to people's appraisals of a particular musician's performance, they'll talk about ego or they'll talk about feeling

[46] Laurie Stras, "Subhuman or Superhuman?: (Musical) Assistive Technology, Performance Enhancement, and the Aesthetic/Moral Debate," in *The Oxford Handbook of Music and Disability Studies*, 176.

> or they'll talk about expression… All these things are human attributes so can we usefully employ those terms when we appraise robot performance?[47]

Playing music well is believed to involve more than mere technical aptitude – a quality easily mastered by a mechanical device. Musical talent assumes the ability to sense on a physical and emotional plane, and the ability to imbue technique, speed, and agility with feeling. And this an affect that is, ideally, readily perceptible by an audience. Further, part of the pleasure derived from witnessing a live performance is the experience of watching a musician undertake a form of intense physical labour that is not easily mastered by the average person, what Jenkinsen aptly identifies as a "sense of struggle." Fully automated robotic musical technologies ostensibly eliminate the possibility for that type of engagement.

We may learn about our potential affective responses to technological mediation in music by comparison to the negative response to technological enhancements in sport, as Stras persuasively contends. But it is also worth considering how physicality, talent, and fairness are regulated in sport to better understand the precarious physical terms of musical ability, and how technological mediation might figure in these norms. In professional sport, not only are there institutionalized ethics and guidelines outlining explicit physical criteria for determining a player's eligibility to compete in individual sporting events, but a separate class of sporting competitions for amputee athletes with all manner of prosthetic technologies. And unruly bodies that qualify through athletic ability but transgress the physical criteria defining the competitive class (gender, size, age, etc.) generate considerable scrutiny and debate over fairness. (For instance, transgender athletes provoke intense anxiety due to misconceptions regarding unfair physical advantage, particularly when male-to-female athletes qualify for women's only classes.

[47] Tom Jenkinson in Ciara Byrne, "Can Robot Musicians Play Songs that Entrance Human Ears," *Fast Company*, April 17, 2014, accessed February 11, 2017, http://www.fastcolabs.com/3029276/can-robot-musicians-play-songs-that-entrance-human-ears.

And women athletes whose bodies are somehow larger than other female athletes in their class continue to face scrutiny for the same reasons.[48]) Music is also a fiercely competitive discipline with its own set of physical standards, though unlike in sport where physicality is over-determined, scrutinized, and regulated, music's physical norms are vague, handed-down and internalized, and often vary from one genre to the next. And there is a degree to which physicality in music is more flexible than in sport: differences in age, gender, size, measured speed, and the other physically-bound criteria that are used to classify and disqualify people in professional sport are actually permitted in music in so far as the sound is right and of a high quality. Meritocracy in sport is determined through recourse to measureable, albeit constructed physical attributes and abilities, whereas meritocracy in music *ideally* defers to the aural, as is the case with blind auditions in symphony orchestra recruitment paradigms. To be sure, these aforementioned variables may indeed elicit stigma, suspicion, spectacle, and sensationalism if they diverge from the established physical norms within a given genre, but credibility and talent in music do not hinge on the appearance or the function of the body alone. Furthermore, natural physical advantage is welcomed in music and is to be cultivated through virtuosity.

Technological mediation is a variable that is distinct from those previously listed, however, because as a supplement, it seemingly exists separately from the body, one that has the potential to violate the established though nonetheless elusive terms of meritocracy in music, particularly technologies that directly intervene in the physical act of music making. At the same time,

[48] Steven Petrow, "Do Transgender Athletes Have an Unfair Advantage at the Olympics?" *The Washington Post*, August 8, 2016, accessed May 3, 2017, https://www.washingtonpost.com/lifestyle/style/do-transgender-athletes-have-an-unfair-advantage-at-the-olympics/2016/08/05/08169676-5b50-11e6-9aee-8075993d73a2_story.html?utm_term=.d8bc1e0322d0; and Heather Hargreaves, "Debunking 'Unfair Advantage' Myths about Trans Athletes," *Salon* website, June 30, 2013, accessed May 4, 2017, http://www.salon.com/2013/06/30/debunking_unfair_advantage_myths_about_trans_athletes_partner/

musicians like Anantawan and Barnes escape the questions of deception and fairness that sometimes follow from technological enhancement in sport because they are visibly disabled.

Towards an Alternative Conception of Musical Ability and Technology

Experimental and collaborative music making settings are often more receptive to the integration of technology as a natural extension of musical ability and expression than mainstream classical and popular musical genres. And in the case of certain creative projects, the appropriation of prosthetic technology does not depend on disability as a conceptual or physical starting point. Rather, much recent creative genesis around the prosthesis stems from an interest in the prosthesis as a musical instrument offering able-bodied users new forms of gestural expression. For instance, researchers at McGill University's Input Device and Music Interaction Laboratory (IDMIL) recently designed a series of LED wireless wearable musical instruments for specific body parts -- the spine, rib cage, and head. Their developments inspired *Les Gestes*, a mixed-media performance for two dancers with violin and cello accompaniment. Each of the prosthetic devices in the collection is connected to a different computer; the wireless data transfer between the device and computer is then interpreted along several parameters, and each device's interface is equipped with numerous adaptable controls within its digital interface. The dancers thus trigger pre-recorded sounds and music through their movements, subtle gestures, and even by simply touching the device in different ways through vibrotactile feedback. As both wearable, movement-tracking extensions of the body and detachable, hand-held instruments, the prosthetics "blur the boundary of when an instrument is an object and when it is part of the body," as inventor Joseph Malloch notes. "Wearing these objects, the performers have to learn new gestures and modify their own gestures accordingly. If you had an external spine, you would

move very differently."[49] Fellow collaborator Ian Hattwick elaborates, "we think instruments are less about the objects themselves than the bodily gestures they invite…we're taking that idea all the way, making instruments that are literally all about performers' movement."[50] Similarly, in a collaboration between musician/performer Tomie Hahn and engineer/composer Curtis Bahn called "SSpeaPer," Hahn wears several pressure sensors and speakers that cue different MIDI samples through gesture. Bridging Japanese pop animation with her background in *bunraku* (puppet theatre) and *nihon buyo* (Japanese traditional dance), Hahn fashions herself as a cyborg under the alias pikapika.[51] Both Hattwick & Malloch's and Bahn & Hahn's mixed-media creations playfully explore the precarious boundaries between human and machine, and prosthesis and musical instrument, and push beyond conventional musical expression towards new, experimental frontiers, devising dense multi-media soundscapes in the process. These prostheses bestow their wearers with expressive potential and newfound musical abilities not possible without. These are technologies that seek to alter the body's expressive capacities and musical gestures using technology, but without compromising any underlying sense of authenticity. In such cases, musical ability is not exclusively bound up in the body of the player, but dispersed across humans, prosthetic technologies, and traditional musical instruments.

While the aforementioned prostheses were not designed to address underlying disabilities or necessarily accommodate disabled musicians (though, they could conceivably be used by certain disabled musicians), creative interest in the prosthesis as a viable musical instrument can unite all manner of musicians across the supposed able-bodied/disabled divide by pluralizing

[49] Ian Hattwick in Oliver Wainwright, "Do You Play the Spine? Introducing Prosthetic Musical Instruments" *The Guardian*, August 9, 2013, accessed February 10, 2017, https://www.theguardian.com/artanddesign/architecture-design-blog/2013/aug/09/prosthetic-musical-instruments-interactive-dance.
[50] Joseph Malloch in Ibid.
[51] Curtis Bahn and Tomie Hahn, "Pikapika," Rensselaer Polytechnic Institute (RPI) Arts Department website, accessed February 11, 2017, http://www.arts.rpi.edu/~bahnc2/activities/SSpeaPer/pikapika.htm.

existing conceptions of musical ability and embodiment. The whimsical, futuristic design of these prostheses also potentially reduces the stigma associated with prosthetics used by disabled musicians, fostering newfound acceptance around assistive technologies in music performance.

The same shift away from technical mastery towards improvisation and freedom that is evident in *Les Gestes* and "SSpeaPer" exists in certain digital musical instruments designed for and *with* disabled users. A prime example of such an interface is the Adaptive Use Musical Instruments project (AUMI), a project initiated by the Deep Listening Institute under Oliveros' direction. (McGill University's Institute for Improvisation, Community, and Social Practice (ICASP) has also been involved in the project, along with students and educators at Montreal's MAB-Mackay Rehabilitation Centre and School.) This project utilizes digital interfacing technology and live motion capture through computer webcam to provide music-making strategies for people with significant mobility challenges like cerebral palsy, or any type of neurodivergence that might limit the range and precision of a musician's voluntary movements. AUMI enables users to engage and control a host of pre-recorded sounds from various instruments within a set of adaptable parameters. It reflects a projection of the user's face on the computer screen over which is superimposed a series of shapes, lines, or quadrants corresponding to a specific range of pre-selected sounds/music; the user is able to virtually move within these fields in order to produce and control a range of pre-selected musical sounds. These parameters can be adjusted, narrowed, and customized to best accommodate the user's unique physical needs and musical preferences. The webcam can track the movement of individual body parts (i.e. the nose, the hand, the head, etc.) or combinations of body parts, no matter how large or small the field of movement. (In the spirit of accessibility, AUMI is available for free

download online, and is compatible with Windows and Mac.)[52] While such technologies operate in service of adaptation and social integration, they also make claims about existing musical expressive frameworks (as part of Deep Listening's longstanding commitment to transforming entrenched preconceptions about listening and music). AUMI's website notes that the instrument is "an entry to improvisation that enables exploration of sounds ranging from pitches to noises rather than learning set pieces. This open approach to music enables anyone to explore and express a range of affects, both by themselves and in response to, or in conversation with, others."[53]

These projects enrich foregoing conceptions of musical ability. The musical freedom and expressive possibilities that *Les Gestes*, "SSpeaPer," and AUMI extend for able-bodied and disabled users alike do not simply reside in the technologies themselves, but are a result of the musician's unique physical engagements with the technologies. In all cases, the musician is required to exercise autonomy to make the instrument work, but her/his musical expression is inseparable from the technology. The performers engaged in these projects use technology to establish their own expressive codes in real-time, codes that centre primarily on the individual physical gestures of the user as they relate to the musical constraints of the instrument in question. At the same time, the collaborative, multi-media orientation of these projects also highlights how musical ability can exist beyond the individual player and any strict aural sense of music: musical ability encompasses the conceptual objectives of the inventor-creator, the

[52] "Tom Chau – The Virual Music Instrument: Music for People of All Abilities," University of Toronto Institute of Biomaterials & Biomedical Engineering website, accessed February 11, 2017, http://www.ibbme.utoronto.ca/alumni-2/ibbme-innovators-entrepreneurs-series/tom-chau-the-virtual-music-instrument-music-for-people-of-all-abilities/; "Virtual Music Instrument," Bloorview Research Institute website, accessed February 11, 2017, http://research.hollandbloorview.ca/Innovations/VirtualMusicInstrument; and "Adaptive Use Musical Instruments (AUMI)," Deep Listening Institute website, accessed February 11, 2017, http://deeplistening.org/site/adaptiveuse.

[53] "Adaptive Use Musical Instruments (AUMI)."

built-in constraints of the instruments, the deliberate and involuntary gestures of the user as they trigger and manipulate a number of pre-recorded sounds, and the musical contributions of other musical collaborators in the moment. Musical ability can thus be a collective assemblage. To be sure, these technologies could conceivably be "mastered" such that the player could control the movements associated with certain sounds to achieve a desired outcome just as they would with a more conventional instrument. But in these music-making frameworks, the sounds produced through unrehearsed and involuntary gesture are arguably as valuable as those executed with more deliberation and control. In these ways, these technologies, perhaps more than the custom-designed prosthetic devices worn by Anantawan and Barnes, pluralize existing conceptions of musical skill.

Conclusion: Performing beyond Ability

Music performance is no stranger to technology: the musical body is always mediated by different layers of technology. But we seldom acknowledge the degree to which technology informs our usual musical engagements. In music, technology undergoes a process of assimilation that renders the necessary technological underpinnings of music performance invisible. Disability and prosthesis shed some much-needed light on this longstanding assimilation process by exposing the arbitrary ways we determine what does and does not qualify as technology in relationship to music and musical skill. As a conceptual vehicle, the prosthesis can help deconstruct the many materially bound relationships between players, instruments, and technologies that often escape critical attention, and in so doing, create new space for bodies that might otherwise be perceived as compromising on music's deeply ingrained, albeit precarious physical norms and aesthetic codes because of their technological dependencies.

Technological adaptation takes many forms, serves myriad purposes, and facilitates several equally valid musical outcomes, as I have shown in this chapter. Music performance makes significant demands on the body that arguably justify technological integration: just as certain disabled people require prosthetic technologies and accommodations to more easily navigate the built environment, disabled musicians sometimes require technological aids to facilitate or improve their engagements with music, be they wearable prosthetic devices or digital musical instruments for those with significant mobility challenges. Such technological adaptation has the potential to democratize music performance. Yet, what the many different types of bodies and technologies surveyed in this chapter reveal is that when mechanization threatens the seeming aesthetic purity and bodily integrity of music performance, be it in classical, rock, metal, or pop, the spectre of deception, fraud, and/or inability looms large.

Disabled prosthesis-wearing musicians like Anantawan and Barnes transform how conventional musical skill is executed. And by making visible the unorthodox terms of their musical engagements, they also transform what musical ability *looks* like. But they do little to change what musical ability *sounds* like. Rather, they use their custom-designed prosthetic devices to adhere to certain generic expectations, often with an emphasis on virtuosity and technical mastery. (Even if Barnes' technology breaks with the known limits of speed and rhythmic complexity in heavy metal and rock, he produces a sound that is in keeping with the expressive frameworks within those genres, and virtuosity is a significant focus of his reception.) At the same time, by aurally conforming to pre-existing sonic codes, Anantawan and Barnes also promote interest in and foster newfound acceptance of musical assistive technology in conventional music-making scenarios, affording bodies that do not fit the mould newfound aesthetic credibility. By contrast, prosthetic technologies used in *Les Gestes*, "SSpeaPer," and

AUMI change both how musical ability looks *and sounds*: these technologies function outside of the existing expressive parameters and generic expectations encoded in classical and popular music, making new room for bodies, intermedial forms of expression, gestures, and sounds unfamiliar in more traditional music performance scenarios. Involuntary gesture that might otherwise interrupt a faithful rendering of a score is here welcomed as a viable part of the musical act, perhaps even more so than in more traditional improvisatory settings. In these examples, musical ability and the authenticity of its expression cannot be understood as a singular, rigid concept limited to a discrete, organic plane or set of generic precepts. It is rather a spectrum that encompasses humans, instruments, and technologies of all kinds, one that anticipates the interdependence of bodies and objects and their expressive gestures.

Conclusion: Music, Disability, and Embodiment in Contemporary Performance

This dissertation has brought together an unlikely cast of musicians, listeners, technologies, debates, and discourses through a cross-genre, interdisciplinary perspective with the aim of thinking beyond conventional understandings of disability as well as enriching musicology's sense of music's physical and relational dynamics. Certain musicians considered in this dissertation challenge the naturalized physical terms of musical engagement; handed-down sensory hierarchies; existing expressive paradigms; and the enduring symbolic power of the music itself. Others conform to these pillars of musical experience to establish aesthetic credibility. Each musician's account reflects on music and disability in different ways. Taken together they pluralize foregoing understanding of musical experience. These musicians work *within* and *beyond* music's existing aesthetic and material parameters as they forge new forms of disabled subjectivity.

The most radical among the musicians considered in this dissertation is sound artist Christine Sun Kim, who, by hijacking, hacking, and short-circuiting a series of musical ideals, pushes beyond music as we know as it, beyond its accepted conceptual and sensory limits towards new creative horizons, while simultaneously uncovering previously overlooked facets of more conventional musical experiences. She reveals that music is more than meets the ear, that it is rather, a multi-sensory experience; that music is wholly dependent on the bodies of musicians and listeners as they constitute musical meaning; that singing can comprise an exclusively visual-spatial experience as the voice manifests along the exterior surface of the singer's body; that in the absence of sonic cues, the body and its gesture are the music. Further, she demonstrates that the analytic primacy of the score, its symbolic prestige, and the faith vested in its abstracted symbols obscures the inescapable materiality and spatial dynamics of sound as our

bodies' physical orientation to the music's source influences its sound quality. Through her creative endeavours, Kim fosters a new understanding of Deaf subjectivity, one that challenges the customary antithetical terms of music and deafness both within music discourse and within Deaf culture. Kim situates deafness at the center of musical experience, or put differently, she situates music at the center of Deaf identity.

Adrian Anantawan, by contrast, is an example of a musician who is committed to working within classical music's existing aesthetic parameters, all the while deconstructing the built-in physical logistics of violin performance as he demystifies playing technique through technological adaptation. He reveals that technology is not simply a vital part of the violin's history, but an extension of the body's expressive facility that readily conforms to the physical and sonic demands of classical violin performance. Regarding the senses, his account paradoxically reflects on the preeminence of the aural over the visual in live music performance: because his disability and prosthesis are marked relative to the violin and its component parts, he violates the ideal of invisibility long governing classical performance. At the same time, he shows that renewed investment in the abstract power of music as a transcendent sonic medium can valorize and emancipate disabled performance, shifting focus away from the sight of the body towards to the sound of the music itself. Finally, for Anantawan, physical disability exists only in so far as the instrument's design imposes a set of corporeal demands on the musician's body. Disabled subjectivity then, is never at odds with musicality, but inspires new physical strategies for achieving conventional forms of musical expression.

Disability augments the sensory complexities of musical experience, just as music augments the sensory complexities of disability as a cultural phenomena that we perceive. In particular, disability reflects anew on the visual/aural duality encoded in live performance, and

also sheds new light on the oft-overlooked, though no less valuable multisensory strategies we utilize throughout our listening engagements. There is constant slippage between the visual and aural dimensions of live music performance in that able-bodied audiences are already negotiating these two registers in ways that defy straightforward explanation. When disability enters the equation, this already unstable, variable, and highly individual negotiation process unsettles the predominantly visual construction of disability and its associated stigmas. There exist instances where the aural dynamics of a musician's performance belie the visible markers of her/his disability; this sensory incongruity can give rise to a conceptual hierarchization of sensory registers such that the aural undermines the conceptual relevance of the visual in the minds of audience members. Indeed, often it is the sonic immediacy of music and the conceptual primacy of the aural in music discourse that frees disability from its otherwise visual objectification. For instance, in classical music, even the most visible disabilities like Quasthoff's or Anantawan's can recede into the background as the ostensible acoustic purity of the singer's voice or the violinist's playing assume the ultimate position of aesthetic authority. This shift in focus does not literally render disability invisible, but significantly diminishes the conceptual and aesthetic relevance of the sight of the performer's body, disabled or otherwise.

By contrast and perhaps paradoxically, in instances where disabilities are strictly audible and not visible, audiences are inclined to link the oral markers of difference with a visual counterpart, no matter how tenuous, as is the case with Grimes' lisp and the infantilization of her body and image throughout her reception. In other words, audiences often seek a visible corresponding physical trait as evidence of aural difference to connect the sound of the performer's voice with their body. Perhaps we do this to establish sensory continuity, a means of reconciling the sensory incongruity that the performer's difference otherwise engenders across

aural and visual registers. And in cases where a disability is both visually and aurally inconspicuous though highly "visible" within a musician's public image, we often doubt disability's existence, such as with Evelyn Glennie whose high levels of musical achievement already seem improbable in light of her profound hearing loss. We want for the disabled performer's body to bear visible and/or audible traces of alleged difference. Thus, the multisensory contours of music performance reveal that disability does not simply exceed the limits of its usual visual constructions, but the limits of sensory recognition altogether.

Finally, d/Deaf accounts of music remind us that beyond the visual/aural duality encoded in much live music performance discussed above, *listening* likewise engages vibration, movement, visual cues, silent listening, and hearing, for deaf and hearing listeners alike. Listening is a physical and affective endeavor distinct from mere hearing, which is, at best, an increasingly precarious physiological and social condition. Listening encompasses all the senses, their myriad combinations, interactions, and contextual interdependencies, including the aural/visual duality described above. But ultimately listening transcends the physiological and conceptual limits of discrete sensory types and hierarchies; listening blurs the physical and conceptual distinctions between the senses, what are in effect constructed divisions. This reconceptualization of listening is one of the most important contributions of my dissertation since it valorizes the complexities of musical engagement. Listening can undermine the hegemony of the sensory hierarchies that have excluded differently-abled bodies. At the same time, listening can embrace the value of sensory hierarchies for those that benefit from them. Listening, in all of its conceptual, intertextual, intermedial, and affective richness, is at the heart of all musical experience, and it thrives off a complex understanding of embodiment.

If listening is plural, so too is musical ability. There is a sense in which *musical* ability exists independently of the usual precarious physical and social criteria used for distinguishing ability from disability in everyday life, though it is no less fraught. The musicians featured in this dissertation all provide insight into the complex nature of musical ability, namely that musical ability is a variable, genre-dependent construct maintained through arbitrary authority. Classical music in particular is an alleged meritocracy where ideas about musical ability center on notions of bodily discipline and innate talent. When a disabled musician has risen to the upper echelons of professional classical music, seldom does disability influence their credibility, even if their disability initially provoked novel interest among critics and fans. This is because disability is only permitted in classical music when it does not threaten existing conceptions of musical ability therein. Even if disability figures prominently in his reception, Quasthoff has garnered respect among the classical elite for his undeniable artistry. Similarly, Glennie has established herself as an authority in the classical world with her numerous accolades, commissions, and public appearances. Disability remains at the forefront of these musicians' reception, though disability does not impinge on their musical craft. That technological adaptation is permissible in classical music only in so far as the musician is disabled, as with Anantawan and his prosthetic device, is further evidence that musical ability is heavily monitored in classical music. Similar technological adaptation among able-bodied musicians might provoke concern over the legitimacy of their musical ability, ethics, and fairness. The rather rigid, albeit elusive conception of musical ability in classical music is nowhere clearer than in Bocelli's account where his crossover success obscures his ostensible lack of musical talent as a classical artist. Musical ability is the precarious concept that separates so-called high-brow music from low-brow spectacle in the minds of his critics.

By contrast, Kim works within a tradition where transgression is the order of the day: musical ability is thus an open-ended category, a naturalized construction to be confronted anew through radical experimentation. Creative, avant-garde practices like Kim's, performative prosthetics like Hattwick & Malloch's, and musical assistive technologies like AUMI push the boundaries of what music is and therefore, what musical ability can be. First, such performances dissociate musical ability from strict adherence to a score or specific playing method, instead reorienting musical ability around creative freedom, playfulness, intuition, diversity, and integration. They likewise expand the physical terms of technical mastery in music performance. If musicians usually undertake a set of intricate physical labours to avoid playing the wrong note or singing out of tune, involuntary, extraneous gestures and their associated sounds are wholly part of these experimental musical paradigms, on par with rehearsed, pre-meditated movements/sounds. Indeed, in these paradigms, sound is inextricably bound up with movement and visual cues. In other words, not only sound, but also movement, and vision figure in both the musical execution *and* its resulting expression, as with the coordinated silent gesture in Kim's *Face Opera II*, or the colourful shapes and facial projections on a laptop running AUMI, or the movement of the LED prosthetic spine worn by the dancer in *Les Gestes*. To be sure, movement and visual cues also figure in more conventional music-making scenarios, but seldom are they afforded the same degree of aesthetic importance as the sound itself. The type of expansive, inclusive definition of musical ability that these projects embody thus has the potential to break down sensory hierarchies, and bridge the conceptual and physical divisions between ability and disability, engaging members from across the dis/ability spectrum.

Musicology gains from disability. Our discipline is at a moment of reckoning. The American Musicological Society becomes ever more inclusive through its ongoing efforts in

outreach, funding opportunities, and examination of disciplinary shortcomings. Our scholarship is increasingly diverse: gender, race, sexuality, and now disability are significant parts of our critical purview. At the same time, we know all too well that lingering racial injustices, institutional prejudices, gendered biases, and microaggressions remain, described by the Society's former President Ellen T. Harris as painful "accounts of marginalization."[1] Marginalization is part of musicology's inheritance, which is rooted in cultural imperialism. The same cultural imperialism that has allowed white privilege to go unchecked has determined, to borrow Born's pithy words, "what counts as music to be addressed, what's in and what's out," who does and does not qualify as a listener, and what does and does not qualify as musical expertise.[2] All manner of musical experiences belong to the full spectrum of listening, musical ability, and musical expression, and therefore to our scholarship. Disability and disabled musicians and listeners belong in musicology, and we would do well to take our cues from their expertise.

[1] Ellen T. Harris, "Letter from AMS President Ellen T. Harris: Moving Forward concerning Issues of Racial Diversity," American Musicological Society website, June 23, 2016, accessed August 8, 2016, http://www.ams-net.org/HarrisLetterJune2016.php.
[2] Born, "For a Relational Musicology," 217.

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