



Mobilizing Interference as Methodology and Metaphor in Disability Arts Inquiry

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Mobilizing interference as methodology and metaphor in disability arts inquiry

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Abstract

This article interrogates the limits and possibilities of interference as methodology and metaphor in video-based research aiming to disrupt ableist understandings of disability that create barriers to healthcare. We explore the overlapping terrain of diffractive and interference methodologies, teasing apart the metaphorical-material uses and implications of interference for video-makers in our project. Using the digital/multimedia stories created and an interview as research artifacts, we illuminate how interference manifested in disabled makers' lives, how interference operated through the research apparatus, and how the videos continue to hold agency through their durability in the virtual realm. Drawing on feminist post-philosophies of matter (Barad) and use (Ahmed), we argue that the videos disrupt the gaze that fetishizes disabled bodies, thereby interfering with cultural-clinical processes that abnormalize disability. The research apparatus interfered with makers' subjectivities yet also

brought people together to generate something new—a community that creates culture and contests its positioning as marginal.

Keywords

subtractive interference, constructive interference, disability, digital/multimedia storytelling, diffraction, use

Introduction

Diffraction (from the Latin, to break apart), a concept from physics, can be illustrated by the rolling, splitting, and re-patterning of waves when, for example, water waves hit a breakwater in the sea. According to feminist physicist Karen Barad, diffraction refers to the “bending and spreading of waves that occur when waves encounter an obstruction,” which produce new patterns in the resulting waves (2007, p. 74). Her relational ontology—or view that reality dynamically forms through intra-actions of phenomena in the world—pivots on diffraction since diffraction refers to the repatterning of waves as they pass through a barrier and to the barrier itself (de Freitas, 2017). Here the barrier operates as a diffraction-producing catalyst in interrupting old and instigating new wave patterns, and as a diffraction-measuring device insofar as it allows scientists to study the repatterning (or new reality) it generates. Barad thus understands diffraction as methodology and metaphor for how differences come to matter, for how the world materializes differently through the

entangling of forces that shape it. Diffraction critically centres the ways that human and nonhuman entities intra-act in the making of the world, which necessarily include the tools that researchers invent to make sense of phenomena even as the tools themselves co-produce the new reality that we seek to understand (Rice et al., 2021). This immanent enfolding of meaning, measuring, and matter is what Barad calls “agential realism,” her contingent ontology or quantum physics-informed explanation of the world’s materialization through the intra-actions that continually constitute it (2007, p. 381).

Diffraction as a phenomenon occurs in all types of waves: sound, light, and water. Barad notes that waves are not matter; rather, they are displacements of matter that carry energy, which means that unlike matter, they can occupy the same space at the same time. This is important since physicists who design experiments that measure water particles elicit different results than those whose experiments measure water waves, which, for Barad, points to “the inseparability of the apparatus and the observed object” or how reality (whether waves are perceived as energy or matter) changes depending upon the measures used (Dolphijn & van der Tuin, 2012, p. 61). Barad goes on to describe the distinction often made in physics between wave behaviours labelled as interference and those called diffraction but argues for using these terms interchangeably since they both refer to wave interactions, or what physicists call “superposition of waves” (2007, p. 80). She draws on physicist Richard Feynman (1963/2010) who notes:

No one has ever been able to define the difference between interference and diffraction satisfactorily. The best we can do, roughly speaking, is to say that when there are only a few sources, say two, interfering, then the result is usually called interference, but if there is a large number of them, it seems that the word diffraction is more often used (p. 30-1).

Following Feynman, Barad describes interference as the capacity of a few waves to combine and create new patterns of greater, lesser, and the same amplitude and diffraction as the capacity of multiple waves to bend and spread when encountering an obstructing object that also causes them to produce new wave patterns.

In physics, interference thus typically refers to the way in which waves from different sources mix to create a new pattern; and these re-patterning produce what are known as *constructive* and *subtractive* modes of interference (Morin, 2010). Constructive interference occurs when the crests of waves combine to create greater amplitude, or increased vibratory movement, than each alone. During this event, the crests of in-phase or in-sync waves amplify each other, generating constructive interference. Subtractive (also known as destructive) interference occurs when the troughs and crests of out-of-phase waves mix to create lesser amplitude, or diminished vibratory movement, than the original waves. For instance, when a peak and a trough of a sound wave

perfectly line up, they cancel each other out—the very premise behind noise cancelling headphones (e.g., Guldenschuh et al., 2012). Barad explains:

When the crest of one wave overlaps with the crest of another, the resultant waveform is larger than the individual component waves. On the other hand, if the crest of one wave overlaps with the trough of another, the disturbances partly or in some cases completely cancel one another out, resulting in an area of relative calm (p. 76).

What is the relationship, then, between diffraction and interference? Like Feynman, Barad (2007) understands this distinction mainly as a matter of convention: when multiple waves diffract around barriers, they produce new wave fronts that interfere with each other to create new patterns, that is, patterns of constructive and subtractive interference; yet whether waves interfere with each other or diffract around objects, each term basically names disturbances in waves that make new patterns in the world. Drawing on Barad and other theorists whose work sits at the nexus of the social and physical sciences and feminist studies, critical methodologists (e.g. Davies, 2014; Jackson & Mazzei, 2012) have applied these ideas to develop new ways of doing social inquiry that foreground the instability, relationality, and changeability of reality.

This paper examines the limits and possibilities of diffraction and interference methodologies and metaphorical concepts in a video-based research project that aimed to disrupt ableist understandings of disability that

create barriers to healthcare. We explore diffraction and interference as interrelated methodologies, and tease apart metaphorical and material implications of interference through examining the connotational and denotational weight this word holds, and its real world uses and effects for disability-identified video-makers in our study. In making this distinction, we seek to understand what interference, as metaphor and methodology, might offer that diffraction alone may not capture. Putting the concept of interference developed by Karen Barad in her physics-informed feminist theory of agential realism into conversation with artifacts generated in our research, we examine what might be lost and gained when we focus on the workings of interference throughout our research—through ableist society in disabled makers' lives, through the research apparatus itself, and through the on-going agentic effects of the videos created. We mobilize Sara Ahmed's insights into "use" as a "technique of power for shaping worlds as well as bodies" (2019, p. 12) to show how different sources of interference might mark out (make meaning of, clarify) and materialize (make real) radically different understandings of disability that have radically different implications for people's lives. Taken together, this video collection shows that whilst ablest medical systems seek to put disabled bodies to use according to colonial capitalism's instrumentalist metrics of profitability and productivity, disabled makers resist the imposition of such values by re-orienting to difference in artful, playful, and joyful ways, re-using their bodies in the creation of disability culture and justice.

The Turn to Diffractive Methodology

Diffraction has emerged as a potent concept for rethinking objectivity-subjectivity and ethics in critical research since science studies scholar Donna Haraway (1997) first made the case for replacing reflexivity (or critical reflection) with diffraction; she argued that diffraction offers a more faithful and responsible approach to knowledge generation because it recognizes the real world effects of the structures of a research project, rather than just the subjectivity of a researcher, on the phenomenon being studied. Following Haraway, in this discussion we approach reflexivity and critical reflection as interchangeable concepts; drawing on Bozalek and Zembylas (2017), we recognize that while these analytics have distinct genealogies in the social sciences, both refer to efforts to interrogate the influence of emotions, relationalities, pre-existing knowledges and embodiments on the conduct and results of research.

Barad (2007) notes that Haraway's shift from reflexivity to diffraction starts from a critique of the Cartesian idea that human minds exist independently of external reality and that we have more direct access to our thoughts than to the outside world. The premise that reflexive methodologies create more objective or ethical accounts of the world and its relationalities and materialities is grounded in the belief that researchers can produce trustworthy knowledge if we account for our partialness in interpreting what we see/record. For Haraway, while "reflexivity has been much recommended as a critical practice ...reflexivity...only displaces the same elsewhere, setting up worries about copy

and original and the search for the authentic and really real" (1997, p. 16).

Rejecting the idea that we need only account for ourselves to truly grasp reality, Haraway argues instead for diffraction: "[w]hat we need is to make a difference in material-semiotic apparatuses, to diffract the rays of technoscience so that we get more promising interference patterns on the recording films of our lives and bodies" (p. 16).

Haraway thus proposes diffraction as a promising—more responsible, faithful—methodology since it accounts not only for the researcher's subjectivity but more critically, for the effects of the whole research apparatus—understood to include the tools/measures and meaning-making systems used—on the reality that results and the knowledge generated about it. In this view, diffraction operates as both process and outcome—ontologically a being and becoming. This is why Barad (2007) describes diffraction as "ethico-onto-epistemological approach" (p. 185); in her view, a diffractive methodology presumes/enacts a relational ontology where research tools and techniques inevitably affect/reshape the flow of reality, thus entangling with the knowledge being generated and highlighting the inseparability of ethics with methods and results. In reflexive research, the researcher's mission, Barad (2014) suggests, is to represent, in the sense of mirroring, what is already there, independent of the researcher's gaze. In contrast, a diffractive methodology moves beyond tracings or reflections of the already-known to make new mappings, onto-epistemological-ethical mappings, in which the something new that is created

and claimed (made known) is also accounted for. Barad views reflective and diffractive methodologies not as opposites or mutually exclusive pathways to knowing the world but as intra-actions that highlight different patterns within it (i.e., similarities and differences).

Building on and departing from Derridian/Butlerian poststructuralism, Barad (2014) orients to diffraction as methodology in another sense: as a thinking strategy or analytic approach that does not set up one theory/discipline/field against another so much as it engages in a careful reading of the ideas of one *through* another, leading to theoretically “inventive provocations” (Dolphijn & van der Tuin, 2012, p. 50). While critical reflection orients to research as a process that mirrors reality as a more or less fixed phenomenon seen from a distance, diffraction sees research as intervening in the world and as implicated in its differential becomings (Barad, 2007). A diffractive analysis is not about a researcher interpreting what data means, where their analysis is supposed to be “out there” to be studied and known (Barad, 2007); rather, a diffractive methodology (through research design, practices, meaning-making frames) enacts flows of differences, where differences get made in the process of reading “data” into each other and identifying what diffractive patterns emerge in these readings (Lenz Taguchi & Palmer, 2013). A diffractive approach allows researchers to identify the intra-activities that emerge in between the researchers and the “data” generated.

For Barad, Haraway and others, diffractive methodology also holds promise in its affirmative approach that apprehends difference as a process of creation and proliferation rather than of separation and want/lack. In this, Barad argues that diffraction owes as much to feminist theorizing about difference as it does to physics. Here she draws on Haraway's diffractive reading of theorist Trinh Minh-ha's notion of "inappropriate/d others," (cited in Haraway, 1992, p. 299) which, Haraway argues, foregrounds how so-called others disturb and exceed Western logics of the human(ist) subject that attempt to absorb, master, fix, and subjugate their difference. Barad goes on to offer a similarly diffractive reading of the work of feminist mestiza theorist Gloria Anzaldúa, who explores how mestiza consciousness breaks down the subject-object duality and re-imagines selves not as essences but as indeterminate thresholds with different parts and possibilities for becoming (discussed in Barad, 2014). Min-ha and Anzaldúa rethink relations that make differences, envisioning these not as processes of opposing or separating from that which is considered the same (Western humanist subject) but rather as processes of being and becoming something/someone both like and unlike that which came before/to which it is related or associated. Finally, drawing from the theoretical physics of Neils Bohr, Barad (2014) notes that the diffractive patterns produced when light waves pass through the openings of barriers—which cast unexpected patterns of light in darkness and dark in lightness—are similarly fluid and provide an understanding of how binaries are queered in a relational ontology of the world, and how differences exist within and beyond boundaries.

In an effort to apply a diffractive analysis to social life, feminist researchers extend this methodology through what Elizabeth St. Pierre names post-qualitative inquiry (2019) and what Vivienne Bozalek describes as research engaging with the post-philosophies (post-humanism, post-structuralism, affect theory, post-colonialism, neomaterialism;

[https://www.youtube.com/channel/UC4P_GUK6QV2Wp_OAWEpw87Q/feature](https://www.youtube.com/channel/UC4P_GUK6QV2Wp_OAWEpw87Q/featured)

[d](https://www.youtube.com/channel/UC4P_GUK6QV2Wp_OAWEpw87Q/featured)). These scholars read research artifacts (e.g., artwork, stories, fieldnotes, empirical research, theory) in relation with each other to “think with theory” (Jackson & Mazzei, 2012, p. 17; Nxumalo et al., 2017). Using Barad’s diffractive methodology, Lisa Mazzei (2014) argues for moving away from coding methods entirely, since these operate as habitual normative reading practices, and toward diffractive readings that put research artifacts into conversation with theory and hence, move thought and experience in unpredictable ways. Similarly, Bronwyn Davies (2014) explains how a diffractive approach to analysis frees the analyst from having to follow a prescribed or methodical set of steps, thus opening the possibility of something different emerging, both in thought and in practice (see *Qualitative Inquiry*’s 2014 special issue).

Uses of Interference as Methodology and Metaphor

Barad, Haraway, and post-philosophy researchers who approach diffraction methodologically, as a theory-informed research praxis, start from the assumption that research can diffract or alter the flow of reality to produce something new. They also approach diffraction as metaphor—as figurative

language that suggests an evocative analogy to an idea—that acquires its power, in part, through mobilizing visual images (e.g., water waves bending around a breakwater) to make sense of complex processes, such as the making of the world (Lakoff & Johnson, 1980). Thus, interference and diffraction can be thought of as having uses, whether these words and the processes they describe are mobilized to make meaning (as metaphor) or make reality (as methodology).

Sara Ahmed (2019) traces the philosophical idea and everyday praxis of use in ways that can help us consider the uses, and misuses, of interference as metaphor and methodology in research. Tracing the workings of “use” in Western intellectual traditions, Ahmed argues that while scholars from a range of disciplines have made different “uses of use” (p. 3) in the development of their arguments, they have predominantly thought of the relation of use to things “as an instrumental relation” (p. 6; i.e., arguing that things acquire value to the extent that they can be used to enrich or improve individuals and societies according to certain logics). For instance, political philosopher John Locke argued that use and disuse determined the value of land and that the proper use of land was agricultural, thus creating the “justification for the colonial appropriation of land” (p. 9) that enriched Euro-Western colonial powers at the expense of colonized peoples globally. Naturalist Jean-Baptiste Lamarck later proposed that use and disuse changed the biology of organisms and played a key role in inheritance of acquired traits; use or non-use shaped the form of life

which was then biologically passed on to subsequent generations. In positing that environments impacted behaviour, and in turn, biology, Lamarckian theory justified the modern state's carceral control of disabled bodies (through forced sterilization and institutional confinement) in ways that interventionists believed would improve the nation and perfect humanity. Through tracing these genealogies, Ahmed identifies "*forness* as key to why use matters:" (p. 7, emphasis hers); *forness* matters because what something is for (e.g., the land or a body), how that something is used, and who gets to determine its use value are all questions of power.

Thinking with Ahmed, we posit that who gets to determine something's conditions of use will set certain patterns of interference in motion. When we think about use in relation to the research apparatus, for example, we might speculate that its *forness* of use (who the apparatus is for) is not determined only at one point in the research process but may be established and re-established continuously by multiple social actors who at different times use the apparatus and its outputs to different ends. In our disability arts project, for example, the research team had an overarching aim: to interfere with taken-for-granted biomedical notions of disabled bodyminds as deficient and with an ableist imaginary that oriented to disabled bodies as mal-functioning, as bodies not put to proper use. The storytellers had their own aims, and oriented video-making not only to make visible the ableism they daily encountered but further, to assert their creative capacities to mobilize experiences of difference in whimsical,

artful and exuberant—often, metaphorical—ways that crippled and queered ablest notions of use. Audiences, too, used the stories to their own ends, and some misused them by imposing ableist frames and one of the few affects allowable within those frames—disability-as-inspiration—onto the storytellers' narratives, thus re-domesticating the makers' accounts, and reimpressing dominant notions about the use/uselessness of disabled bodies unto them.

Interference surfaces as a power-saturated metaphor and methodology. Just as interfering experts can impress upon bodies of difference hegemonic ideas about their (limited) use value, storytellers re-use the knowledge-making process to challenge efficiency-based orientations to usefulness and in so doing, imbue disability with more expansive, life-affirming, justice-advancing values. As Ahmed (pp. 5-6) notes: "use radiates with potential even if we tend to associate the useful with the charmless and unadorned.... The magical and mundane can belong in the same horizon; use can be plodding and capacious at the same time." We thus consider the uses of interference as carrying possibilities and limits, since no one figure of speech or methodological approach can capture or set in motion all the features of complex phenomena (such as, in our case, the marking, making, and remaking of disability) and be simple enough to make fulsome meaning and sense of those phenomena. When thinking with the uses of interference as metaphor and methodology, we ask: what might interference offer to the understanding and materialization of disability that diffraction alone may not capture?

Accounting for Our Research Apparatus

Barad (2007) explains that the research apparatus contributes to materializing phenomena and as such needs to be considered as co-configuring the reality that it documents. Depending on the apparatus, outcomes may differ and the nature of phenomena may be differently shaped: “As specific material–discursive practices, apparatuses enact agential cuts; cuts that constitute boundaries, categories and ‘properties’ of phenomena, cuts through which specific concepts and specific material–discursive reconfigurations of the world become meaningful” (Juelskjaer, 2013, p. 757). This study uses artifacts selected from a larger participatory arts-based study entitled *Mobilizing New Meanings of Disability and Difference* (hereafter *Mobilizing New Meanings*). We mounted *Mobilizing New Meanings* in three sites across Ontario and invited folks who identified as women with disabilities and differences to join as participant-researchers. Our recruitment materials framed disability/difference in a non-deterministic way, purposefully leaving the category open in order to welcome those who self-identified as physically or developmentally disabled (e.g., spinal cord injury), sensorially disabled (e.g., D/deaf, blind), learning disabled, visibly different (e.g., scarring), with mental difference/distress (e.g., mental health issues/psychiatric labels), with chronic health conditions and more. In response to inquiries from potential participants, we opened the category of women to include those who identified as gender non-conforming. To mitigate power dynamics, all participant-researchers and research team members were invited to join three-day intensive

digital/multimedia workshops where each person made their own video on experiences of disability or difference in healthcare; those who showed interest or skill in art and videomaking were trained in the method and hired to co-facilitate workshops (for details see Rice et al., 2015, 2020). The pool of makers came to include community members, students, artists, professors, and activists; and a majority (the original team and recruited researchers) of these identified as living with disability/difference.

Mobilizing New Meanings was hosted through the Re•Vision Centre for Art and Social Justice, a research creation centre that looks at the power of the arts to open up conversations about difficult, power-infused, and sensitive topics in healthcare, education, and the arts sectors (for more information see Rice, 2020). Using the Centre's mobile media lab, participants in art- and story-making workshops create multimedia stories, which are short videos (2-3 minutes) that pair audio recordings of makers' narratives with image- and soundscapes (video clips, artwork, music, utterances, gestures, and more). Workshops include 12-15 participants and typically take place over the course of three to five days. The story-making process consists of: an in-depth framing of the themes or issues that bring story-makers together; a story circle where makers share initial ideas around an experience or moment they would like to explore; writing tutorials to help makers develop their scripts; tutorials on audio, video, and editing software and equipment; and full technical, writing, and conceptual support for the workshop's duration to support makers from script development to finished

video (Rice & Mündel, 2018; Rice, 2020). At the end of workshops, makers are invited to screen their videos, and everyone leaves the workshop as the author and owner of their video.

Artifacts and Entanglements of Interference

We have chosen to trace the makings and workings of four participant-researcher videos and a one-on-one in-person follow-up interview from the *Mobilizing New Meanings* archive (all artists use their real names except one who chose to remain anonymous) because we think these artifacts surface some of the key ways that interference operated through our research to give shape to our “results.” To follow the influence of various forces in makers’ video-work and lives, we posed three questions: How does ableism interfere with makers’ embodied experiences of difference? What are the workings of interference—both constructive and subtractive—throughout the research apparatus? How do the videos created continue to have agency—to be used and misused—by interfering with maker subjectivities and audience understandings of disability? We approach the chosen artifacts as iterative entanglements of story, maker, researcher, audience, methodology, and technology in and across spacetime. We recognize that the influence of these artifacts reaches beyond the research timeframe as the videos made continue to be screened in public and private settings, workshops, conferences, and online (e.g., YouTube; websites).

In the three-part discussion that follows, we attend to the workings of interference as both metaphor and methodology in order to surface something new about lived experiences of disability. We explore what interference offers beyond diffraction, in helping us to thicken our understanding of how researchers might attend to difference—differences that matter prior to the undertaking of a study and to the mattering of differences in the unfolding and after-effects of the study. We suggest that difference-making patterns emerge in makers' video-work through accounts of how medical and ableist systems have interfered with (mis-used) disabled bodies; how the video-making apparatus itself interfered with makers' embodied subjectivities in positive and negative ways; and how the videos continue to affect/interfere with the becoming of the makers (and of audiences) even after the workshops have ended, through their durability in the digital realm. We argue that even as the videos created by makers disrupts the gaze that fetishizes disabled bodies, thereby interfering with cultural-clinical processes that abnormalize disability, they also produce their own unforeseen and uneven effects, which have complex consequences for the representational field and for makers' bodily selves and lives.

Interference in Disabled Makers' Bodies and Lives

When used to describe human interactions, interference (from the Latin, to strike against) typically refers to the act of meddling with or hindering others in their life affairs and actions. While denoting the act/process of interfering with

someone's being or autonomy, to "interfere with" is also used as a euphemism for sexual abuse, commonly of a child by an adult or of a less by a more powerful person. Conscious of the connotative weight it carries, we use the word intentionally to jar readers into awareness of the ways that ableist systems, including healthcare regimes, routinely tamper and interfere with disabled bodies. In this instance, interference functions both as a euphemism (used to disguise or avoid directly naming a charged subject) and metaphor (used to make a subject clearer) by turning its vague connotative meaning into a vivid denotative one; in so doing, it draws attention to the violence of social-symbolic-material processes of disablement, including how medical interference (ableist medical technologies designed to eliminate disability, clinical gazes marking/making difference as aberrance) and debilitating interference (the structural impairing and sickening of certain bodies under turbo-capitalism) help to produce disability and to frame it as deficiency (Rice et al., 2020; Viscardis et al., 2019). We can also think about interference as signifying the ways that disabled people speak and act back, constructively interfering with harmful and traumatic interference (Re•Storying Autism Writing Collective, in press; Rice et al., 2015, 2017, Rice & Mündel, 2019).

Beyond metaphor, we mobilize interference as methodology by reading new materialist or agential realist theory with and through *Mobilizing New Meanings* makers' storied experiences of disablement and resistance. We think of interference as methodology in how it orients us to consider the ways in which

healthcare systems, embedded in ableist and audist culture, push to cure and rehabilitate the sensory worlds of bodyminds that our bio-medicalized and homogenized society consider pathological. Disabled people have been, and continue to be, subject to stigmatizing labels, theories, and treatments within healthcare systems, causing harm and trauma, and oftentimes leading to poor health outcomes (McColl et al., 2010). For instance, studies show that disabled women are less likely to receive preventive and screening services, and more likely to have poor health outcomes than disabled men or their non-disabled female-identified counterparts (Hassouneh-Phillips, et al., 2005; Wisdom et al., 2010). Healthcare providers (especially male doctors) tend to hold negative perceptions and contribute to the invalidation of disabled people by, for example, disbelieving their accounts and discounting their experiential knowledge (Symons et al., 2014); moreover, many providers lack awareness of and sensitivity to medical trauma—the emotional and bodily effects of repeated, invasive, and painful treatments—that many people with disabilities, especially those who have had multiple surgeries, carry as part of their embodied experience of healthcare (Rice, 2014, 2018). A neomaterialist reading allows us to understand interference as the manifold ways that ableism interferes with disabled people's embodied becoming and in the clinical context, how expert "intervention" materially (re)makes difference as disability through the medicalization, technologization and normalization of violent interference as diagnosis, fix, and cure.

In *This is My World*, a self-identified Deaf, Black and fat woman (Anonymous)¹, narrates a clinical encounter that becomes an occasion of medical interference when an ear, nose, and throat (ENT) doctor attempts to make her Deafness into disability. Anonymous describes a long-awaited appointment for a throat assessment with an ENT specialist who, rather than examining her throat, probes her ears and recommends cochlear implant surgery. She explains how in using up the brief appointment time allotted to address his concern, the doctor ran out of time to address hers. Even as she attempts to protest this misplaced focus, the doctor's flippant reply ("you should become a surgeon") invalidates her felt knowledge by using mockery disguised as humour to silence her (if you know so much, why don't you become a surgeon?). Drawing on Barad's agentic realism, we might read this interaction as an example of the force of medical interference to (re)shape reality in how the specialist discounts the experiential knowledge of Anonymous by casting doubt on her expressed needs/interests, which shuts down her self-advocacy. The doctor's recommendation of surgery obstructs her request for another kind of

¹ As part of our participatory approach, storytellers retained ownership/control of their video-work and determined how they credited themselves for their videos (using their names or a pseudonym or anonymous, etc.). They also decided under what conditions they would allow researchers to screen their videos: for education purposes only in classrooms and at conferences; for research purposes in academic articles; and/or for public and professional education on websites, at public screenings, and film festivals, etc.

assessment, thereby derailing the appointment. In pathologizing Deafness as something to be cured, this derailment wants to make Deafness into disability.

We cannot know what the physician was thinking or feeling, but we do know that doctors often perceive Deaf patients as “stupid” as a result of low English-language proficiency, and that most doctors lack awareness of the distinctive grammar and syntactical structure of ASL, which differs significantly from those of English, as well as knowledge of the reality that for many Deaf people, English is a second language (Iezzoni et al., 2004). We also know that non-deaf experts push for cochlear implant intervention early in life to “preserve” and “improve” linguistic proficiency (e.g., Martini et al., 2013). This “use it or lose it” (Ahmed, 2019, p. 4) mentality not only reproduces audism by positioning spoken language as superior to signed language but it also presumes Deafness itself to be useless, thus interfering with Deaf language and culture.

Drawing on the insights of feminist disability theorist Rosemarie Garland-Thomson (2011), Ahmed (2019) considers the operations and effects of use from a disability perspective. The built and symbolic worlds, she notes, assume a normative body form and set of functions—physically and sensorially. Physical objects such as chairs, doorways, and stairs and communication modalities such as the spoken, signed, and written word available in a space articulate in their very design who is and is not meant to use that space, and how it might use and

use up a person. Not only are physical spaces and symbolic systems determinative of who may access a space or enter into an exchange, but the lack of accessibility uses up the disabled individual—that is, the mental, physical, and emotional toll of self-advocacy reduces a person's capacity for living and creating change. As Ahmed puts it, "If a world has not been built to accommodate you, it takes much more out of you to do the same thing compared to those who are accommodated" (p. 64). This using up surfaces in the encounter Anonymous faces: the doctor uses up her time and energy by refusing to investigate the medical issues that brought her in, by focusing on her Deafness as deficiency, and by dismissing her self-advocacy and knowledge. The using up of her energy to navigate an audist system renders her spent without receiving the medical attention she originally sought. As depleting as such interference might be, the video response works to counter-balance it, thus re-energizing her. In refusing the cure narrative with its focus on fixing what she does not perceive as broken, Anonymous creates a wave of interference that works subtractively—cancelling out or at least lessening the negative effects of medical interference. She reminds us that just as Deaf bodies are interfered with by audist healthcare and technologies, so too do Deaf bodies speak and act back—though oftentimes in ways that the aural-centric world may not want to hear.

Leaving Eustachian, by white genderqueer disabled artist and Re•Vision workshop facilitator Jes Sachse, opens with footage of subway trains rapidly

arriving and leaving, synchronized with the sights and sounds of people moving in the hustle and bustle of underground city life. As the volume of the background noises of the subway station drop, Sachse draws the audience into the intimacy of their inner soundscape, telling “You should know that I can’t always hear you. My narrow ear canals have decided that while the right ear will transplant your words, the left ear will mute them, well almost.” The image of the subway tunnel seemingly symbolizing Sachse’s ear canals, they explain how their “left ear offers the sound of a squeaking rabbit down the long tunnel, instead.” Sachse facetiously opines, “I’ve thought about hearing aids, perhaps the same way that I’ve thought about a gym membership.” Leading up to the final clips of the video, they describe that when their right ear “decides to hit the pillow,” the sounds stop, “you stop [giggles].” With this final utterance, sound abruptly cuts out. The viewer is left pondering Sachse’s words as a now silent video showing trains rhythmically passing by.

Sachse takes viewers through a multi-sensorial experience of the sound- and image-scapes of their daily life, from the piercing clamor of crowded subway trains running on squealing tracks to the quiet relief from noisy/nosey people and opinions. This sensorial experience provides an alternate narrative about being hard of hearing, one that does not rely on problem or pathology-saturated framings and one that cannot be homogenized or universalized; rather their experience is particular, nuanced, contextual, fluid. By interfering with dominant constructions of disability as tragedy, deficiency, or a barrier to a

good life and offering a counter-narrative of Deafness as an escape route from an intrusive and interfering world, *Leaving Eustachian* disrupts the viewer's perceptions of difference. In Jes' artful, whimsical rendering, the capacity to "leave eustachian"—to turn off the world—materializes as useful and valuable. Just as Sachse's strain to hear those around them might use up their vital capacity for communication, they use this capacity to still the world as a way of speaking and acting-back, thus literally and symbolically silencing (cancelling out), as least for a time, those who seek to interfere with them.

Interference through the Research Apparatus

In our next interference reading, we explore how interference operates through the research apparatus itself. The apparatus included all elements—planned and unplanned—that structured the videomaking process and its afterlife: inviting participant-researchers and research team members to make videos; employing disability-identified facilitators, video-makers, and artists to lead workshops and support makers in creating aesthetic renderings; introducing the workshop process with presentations on the representational fields of bodymind difference in cultural and clinical contexts; encouraging story-makers to create stories that intervened in these received images and messages; asking makers to tell stories of healthcare experiences but also emphasizing that they could make the story that they felt most compelled to craft in that moment; running the workshop in a state-of-the-art disability studies university space that had many accessibility features (moveable furniture,

multiple screens for multiple sight-lines, mobility device user accessibility, accessible equipment); and archiving the videos and screening them with diverse audiences. Thus, our apparatus came to encompass the investigators' and participants' intentions/actions/influences, features of the space, wide-ranging artifacts drawn on or produced through the research (videos, follow-up interviews, empirical research, theory), technologies and pedagogies mobilized, and relational intra-actions (conversations, subjectivities, investments) of all engaged parties, including us as co-authors of this article.

The multi-media story-making genre itself might be understood to interfere in the work produced in how we asked people to craft short videos, thus both challenging and constraining them to distill a lifetime of experience into a highly compressed format (Rice et al., 2018). Throughout this process, we emphasised that makers had the power to decide what was told—what they concealed or revealed—and to whom it was told. We viewed this as an especially important ethic because unlike interview protocols that welcome people to expand on their experiences and direct researchers to anonymize these, our video-making processes bring makers into decision-making about whether they want to identify themselves as creators of their videos and how widely they want to release their work (e.g., to the archive, to academic audiences, to broader publics). Further, our apparatus stressed relationality, community accountability, and artistry by bringing makers together to workshop their video ideas in a group

format that included listeners with both experiential and technical expertise. All of these elements worked together to contour the videos made.

Kathleen Rockhill, a white disabled woman and retired professor decided to make *The Interior Room* in direct response to certain elements of the workshop apparatus—the physical space itself. At the start of the video, Rockhill describes a “recoil” as she enters the workshop. This reaction is due to the room’s bright fluorescent lights, and its lack of windows and lack of “space of shadow” to escape. Rockhill tells how a facilitator, noticing her distress, explains, “the fluorescents can be dimmed, but others need the light.” Rockhill continues, “We compromise. The overhead lights ignite this optic nerve. By the end of the session, my entire body is vibrating pain.” She then poses a rhetorical question, “how do you compromise disability?” The remainder of the video captures Rockhill outdoors, climbing a tree, smiling, while she describes the aching sensations of her migraine that was induced and exacerbated by the workshop space. Rockhill’s interaction with the video-making apparatus generated a new wave of experience, one that triggered adverse physical effects, that of a migraine, creating an unanticipated bodily reality and that urged Rockhill to make her video differently.

As part of the research apparatus, the physical environment mattered (in shaping meaning and reality) both in the production of the research output (i.e., the video content) and of Rockhill’s bodily state (i.e., the migraine). An

interference reading suggests that Rockhill's painful and even traumatic experience of the apparatus set her story-making in motion along a new course, that of surfacing and stressing the becoming of her bodymind with/in a space that threatened to use up Rockhill. Ahmed notes that the question of usability is also a question of accessibility: given that most university buildings have been designed with normative bodies in mind, these structures materially encode who and who is not meant to use the space (even retrofitting announces who a space is for as disability surfaces as after-thought). Ahmed likens the design of the university to that of a "well-used path" whose effectiveness might increase over time as an effect of use but whose usability "does not necessarily mean the path has become more usable for all" (p. 64). Extending this metaphor, we might view Rockhill as having to contend with the well-worn design of a classroom that does not attune to her bodymind or support her to complete the task at hand; instead, it requires her to give much more energy to the work than others in the room. As Ahmed asserts, "Those who are not quite at home—in a body, a discipline, a world—have much to teach us about how things are built, that is to say, have much to teach us about the uses of use" (2019, p.19). Rockhill's video exemplifies how the apparatus acts on and creates new experiences, and new pathways, for makers. Rather than being about her experiences as a disabled woman in the world beyond the apparatus, her video turns its embodied and enminded gaze on the apparatus itself, capturing the intensity with which the workshop space affected her and the urgency of accessibility that propelled her to re/make her story.

The Digital Object as Interference

Multimedia story-making as research apparatus creates digital artifacts that come to hold agency in the digital realm. Whether a video sits in a digital archive, is narrowly released in an academic article or circulated broadly (YouTube, Instagram), its agency (uses and misuses) has material implications for makers. Once digital artifacts enter the digital space, they can be taken up—viewed, digested, analyzed—by researchers, educators and students, and if widely released, by broader publics. In public consumption especially, neither makers nor theorists who inform the analysis are present to contextualize videos or to process intended meanings alongside audiences. The videos thus come to hold agency, for better or worse, in the way they represent the artists' stories and influence public perceptions of disability/difference. Because the genre emphasizes autobiography, the objects created also serve to fix makers' subjectivities in a particular time and space, thus in the future hampering the makers' ability to control past self-representations.

Before the current study, Sachse took part in a similar (pilot) project in which they created a video that explored the complexities of the ableist gaze and spoke back to a history of looking relations where disabled people have been put on display (e.g. freak shows) or hidden away (e.g. institutions; Rice et al., 2015, 2016). In their video, Sachse pans over photographs of their child and adult selves, lingering on images of them standing naked on a construction crane, laughing and being silly with friends, creating artwork, and walking

alongside train tracks. The tone of the video shifts as Sachse presents a series of self-studies with them lying on the floor naked in a sun-filled room striking various poses with out-stretched limbs, as a voiceover (them) dares the viewer to look closely and imagine “loving it all.” Sachse ends by calling into question the desire to stare at disability, challenging audiences to turn the gaze inward to acknowledge their own relationships with difference (Rice et al., 2015, 2016, 2018).

Much to Sachse’ surprise, this video garnered public attention (15000+ views on YouTube) and was selected to be screened at film festivals and for educational events. About six years after Sachse shared the video online, they asked first author (Rice) to stop screening it. Intrigued by this, Rice invited Sachse to take part in an interview to explore their reasons for removing the video from circulation. In the conversation, Sachse explained that while they since have become more known as an artist, they did not see the new “reality coming”—how their recognition as an artist would become entangled with their ongoing exposure as a disabled person subjected to the ableist gaze, or in their words, how “your life changes when you put yourself forward in your work like that...it invites a lot in.”

Further, Sachse expressed how the work no longer captured their subjectivity or perspectives on disability—a phenomenon that has been theorized in other video-based research (see Gachago, 2016). Sachse now

believed that the video both override difference (in their video's claim, "I am just like you"), and reproduced and even reified voyeuristic looking relations that fetishize embodied difference (in their appearing naked), the very relations they were trying to subvert. These insights point to how the video might constructively interfere with disability representation and materialization—that is, Sachse's interpreted their video as possibly amplifying harmful disability narratives in ways that could adversely affect the treatment of disabled people, including them. When screened out of context, they suggest it could reinforce damaging socio-clinical narratives about disabled bodies as "inspiration porn" in giving pleasure and permission to non-disabled audiences to further interfere:

I think about how many people got it [referring to their video], and how many people just saw it as...inspiration porn. Because I've had people kind of like, at the first screening I had this woman come up to me and was like, tears, [in teary voice] 'my daughter...' and I'm like 'okay' [laughs].

To extend this, the follow-up interview can be framed as another moment of constructive interference, where Sachse and Rice, in theorizing the digital object and its uses/viewings, created a new wave of meanings that spoke back to older representations. Here Sachse and Rice considered ways that autobiographical videos can take on a life of their own by fixing their subjects in time and space, and especially when the representations are not viewed through temporal, historical, and socio-political lenses. We might follow these

uneven uses of Sachse's video according to Ahmed's "strange temporalities of use" (2019, p. 53)—the unpredictable way that objects can become more or less useful for a specific purpose the more they are used over time. Sachse made the video to challenge audience members to see their own implicatedness in heteronormative-ablest looking relations, yet how viewers interpreted the video often veered away from Sachse's original intent. Sachse noted that the video offered up a representation that was perhaps needed at that time—that is, a narrative controlled by a disabled artist that politicized disabled experience, or as Sachse puts it, a video that "ma[de] a metaphor of my own body so that I could get...people to listen to me." Asserting that "political art isn't timeless," they further observed that the video required framing in relation to socio-political context in which it was made—revealing another problematic of the research apparatus since the context of disability politics is not always available in the moment of the screening and since disability art history itself is only now being written (Chandler et al., 2018).

While Sachse still felt at the time of the follow-up interview (2016) that parts of the work remained important, they no longer wanted it to be "out there" (which is why we do not name it in this article). However, because they uploaded the video onto an online public platform that at the time prevented creators from removing their material, it continues to have a public life, giving Sachse little autonomy over the how's, when's, and where's of its screenings. Our reading reveals how creative outputs might have agency, and different

forms of agency than other types of outputs (e.g., interview texts, academic write ups), fixing subjectivities and storylines about difference to be used by audiences in ways that makers cannot control. As Sachse sums, “[the video] doesn’t reflect my current self or politics and I don’t want it taking up space in a separate context.”

First-person videos carry the potential to fix subjects and storylines in time and place (Gachago, 2016); and the characteristics of genre means that makers can easily share their work publicly via on-line platforms, which can amplify or intensify the adverse effects of that fixing by turning living into static stories. According to Barad (2007), we never leave our pasts behind. We are always already our past, present, and future. This is because our remembered past and imagined future are always present with us, entangled in our experience of the current moment. This idea helps to deepen our understanding of the difficulties people may have with forms (e.g., video, still images) that fix their identities, and with technologies (i.e., platforms) that further freeze this fixing. Sachse, for example, has shifted to using they/them pronouns since making the video, and during the interview reflected on the complications surrounding the continued use of a video that now misgenders them: “It worries me that people hear the wrong pronouns, because I know they aren’t thinking “Oh, this is Sachse from 2007.” The video’s durability in an online platform means that Sachse cannot easily remove it or reframe it in relation to their past/present/future gendered and disabled selves. Barad notes, “Diffraction is

not a set pattern, but rather an iterative (re)configuring of patterns of differentiating-entangling. As such, there is no moving beyond, no leaving the 'old' behind. There is no absolute boundary between here-now and there-then." As much as makers' subjectivities and social worlds are fluid, this example shows how the research apparatus can interfere with that fluidity, and do so in highly problematic ways if it does not orient to the ethics of its difference-making patterns and defaults to interpreting outputs, even creative ones, as representing a fixed or stable subjectivity or reality. If we include various publics and to online platforms as part of the apparatus, then the potential for fixing/freezing ontology in ethically problem-saturated ways becomes even more aggravated.

Final Remarks

In this article, we explored the uses of interference as metaphor and methodology in the context of a video-based project that aimed to surface and change deficiency-based concepts of bodymind difference that create barriers to healthcare. We mobilized the negative connotations of interference as metaphor to surface and underscore how disabled bodies are routinely interfered with in violent ways in ableist/audist society. Anonymous's encounter with an ENT specialist exemplified how this occurs and is sanctioned through deficiency-based materialisations of difference and cure imperatives in medical systems. Approaching interference as metaphor and methodology revealed the

constructive (amplifying, intensifying) and subtractive (diminishing, canceling) interference at work and play, even simultaneously at times, before, during, and beyond the research. For example, the workshop environment (e.g., fluorescent lighting) interfered with Rockhill's video creation whilst the research team's affirmative approach to difference supported her in making the video she wanted and needed to make in that moment.

We also used interference as metaphor and as a methodology that leans into the post-philosophies of Barad and Ahmed to uncover the workings of the research apparatus in disabled makers' lives. What is the "use" of metaphor to understand disabled bodies in and through the video-making research apparatus? Ahmed's (2019) analysis of use can be applied to the use, and potential overuse, of words and images as metaphors. Metaphors are useful because they help re-signify the everyday, in our example, the everyday experience of disability. However, sometimes a metaphor is overused in ways that diminish its power and stretched beyond its use in ways cause a break down in its meaning, since concepts are not always clear cut, and to tease them apart is not always productive. When examining the artifacts in this study, sometimes it was clear which metaphor was operating—diffraction, constructive interference or subtractive interference—and how each operated as "post" methodology—as a difference-making force in the video-work of participant-researchers. Other times, it was not clear which metaphor was operating or how it was operating methodologically, and thus our exploration became tenuous.

What became more important in these moments was to consider the material impacts of the intra-actions surrounding the research on the video-maker. In Ahmed's terms, this meant exploring the uses of use in this project—the power-saturated ways that various actors (the researchers, participant researchers, audience members, the digital platform itself) uses the research apparatus and to what ends.

Metaphors are limited because they dilute the complexity of bodymind differences. In rendering their experiences artistically, the makers created works that both needed and exceeded metaphor. They mobilized metaphor (in Sachse' case, the body; in Rockhill's the windowless classroom; and in Anonymous', the cochlear implant) in order to capture something that is not well understood—in this case, experiences of disablement and resistance in a violently ableist world. Yet their work also exceeded metaphor because the affective, sensorial, and perceptual realities of (disabled) life cannot always be put into language—art supersedes the limits of words through its evocative elements. Thus, while metaphors might be useful, reducing the processual materiality of bodymind differences to a single word such as interference must be interrogated. Ahmed (2019) asserts that overused words get heavy and “weighed down by their associations” (p. 149). We intentionally worked with the connotational weight of interference to explicitly expose the ways bodymind differences are interfered with symbolically and materially across medicalized and ableist encounters and spaces.

In the social justice moves we make, there are intended and unintended consequences. We intended to proliferate difference-affirmative narratives in order to counter the then ubiquitous biomedicalized, feared, and “need to fix” discourses of disability. Further, we planned to support the coming together of a community of people who would centre experiences of difference and contest their positioning as Other through art and video-making. This disability-affirmative space embraced difference; however, during the workshops ableism continued to manifest (e.g., in the university classroom) and when these ended, the community dispersed into normative culture and healthcare systems where ableist logics continue to circulate and to shape spaces and encounters. Despite this, the project contributed to the development of disability arts in Canada, providing space, tools, and opportunities for disability-identified scholars, artists, and activists to come together to question marginal positioning of disability, Mad, and d/Deaf arts in art history and the contemporary art world (see Chandler et al., 2018; Rice et al., 2020).

An unintended (and unwanted) consequence was the net effect, or interference, of the research apparatus on Sachse and Rockhill. For instance, the impact that Sachse’ first video had on the world was unexpected and, to Sachse, undesirable, resulting in them wanting it removed from the archive. Once published online, the video became a frozen representation on the platform in which it garnered thousands of views and could not be deleted or edited. Meanwhile, Sachse’ subjectivity is not fixed (and neither is disability arts,

culture and politics), and continues to change as their life, and the collective social and political lives of disabled people, move on. The video (along with the digital platform), through its own agency, continues without its creator, through its voices, images, and narratives in the digital world. Stories are there and not there—alive in the audience's imagination, with or without the video-makers' knowledge or control (Gachago, 2016). The video-making research apparatus, like many arts-based approaches, blurs boundaries between private and public; through this blurring, we can understand interference, as metaphor and methodology, acting through, within, and beyond the stories that makers' and researchers' tell. In Rockhill's video, unintended consequences of the space included pain and the apparently incommensurate differences that surfaced within the group: Rockhill needed the fluorescent lights off to accommodate her disability; however, others needed the fluorescent lights on to see ASL interpreters (see Rice & Mündel, 2019). Rockhill's rhetorical question, "how do you compromise disability?" invites the deep question of how our research apparatuses entangle with neoliberal forces (i.e., production of "useful" outputs) to further interfere with research results.

Overall, bodies that have been coded as non-normative created something new through an apparatus that invited makers to speak back to, disrupt, and refuse medicalized, pathologized, and homogenized notions of disability. These video-makers disrupted the gaze that fetishizes disability, thereby disrupting sociocultural-clinical processes that serve to abnormalize

difference. The research apparatus brought people together as members of a community who produce disability art and culture. The difference-affirmative community created through this study may have been ephemeral, but the diffractive effects of interference has had long lasting impacts of progressive and even radical social change (see Chandler et al., 2018).

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